

SOURASHTRA COLLEGE

(AUTONOMOUS)

(A Linguistic Minority Co-Educational Institution)

Affiliated to Madurai Kamaraj University

Reaccredited with B Grade by NAAC

Vilachery Main Road, Pasumalai (PO)

MADURAI - 625 004

Vol.I



Syllabi of various Departments presented at

EIGHTH ACADEMIC COUNCIL MEETING

24.03.2017

CONTENTS
UG (I to VI SEMESTER), PG(I to IV SEMESTER)
(Syllabus Under CBCS w.e.f. 2017-18 onwards)

Sl. No.	Particulars	Page No.
Vol.I		
1.	List of the Eighth Academic Council Members	(iii)
2.	Agenda for the VIII Academic Council Meeting	(vii)
3.	Minutes of the VIII Academic Council Meeting	(ix)
4.	Syllabus – Part-I : Tamil	1
5.	Syllabus – Part-I : Hindi	11
6.	Syllabus – Part-I : Sanskrit	17
7.	Syllabus – Part-II : English	21
8.	Syllabus – B.A English	26
9.	Syllabus – Bachelor of Business Administration (B.B.A)	65
10.	Syllabus – B.Com. (Corporate Secretaryship)	96
11.	Syllabus – B.Com. Computer Applications	126
12.	Syllabus – B.Com.	164
13.	Syllabus – B.Sc. Mathematics	200
14.	Syllabus – B.Sc. Physics	237
15.	Syllabus – B.Sc. Chemistry	276
16.	Syllabus – B.Sc. Computer Science	335
17.	Syllabus – M.A. English	376
18.	Syllabus – M.Com.	400
19.	Syllabus – M.Sc. Mathematics	424
20.	Syllabus – Economics	454
21.	Syllabus – Botany	466
22.	Syllabus – NCC – Non-Major Elective	473
23.	Syllabus – Part-V : Extension Activities	476
24.	Question Pattern	
Vol.II		
25.	Syllabus – Bachelor of Computer Applications (B.C.A)	485
26.	Syllabus – B.Sc. Bio-chemistry	518
27.	Syllabus – B.Sc. Information Technology	569
28.	Syllabus – B.Sc. Microbiology	610
29.	Syllabus – B.Sc. Mathematics with Computer Applications	645
30.	Syllabus – Master of Business Administration (M.B.A)	683
31.	Syllabus – Master of Computer Applications (M.C.A)	745
32.	Syllabus – M.Com. Computer Applications	803
33.	Question Pattern – External Examinations	828
34.	Presentation of Ratifications by Chairmen of Various Boards	832

EIGHTH ACADEMIC COUNCIL MEMBERS

Chairman	: Dr. L.P. Ramalingam, Principal
Dean of Academic affairs	: Dr. V.K.Vijayakumar Associate Professor and Head, Dept.of Computer Science
Deputy Dean	: Dr. G.Sivabalan Assistant Professor, Dept. of English

MADURAI KAMARAJ UNIVERSITY NOMINEES

Dr. V. Venkataraman
Principal, Rajapalayam Raju's College,
Rajapalayam.

Dr. M. Ramakrishnan
Professor & Head, Chairperson
School of Information Technology
Madurai Kamaraj University
Madurai – 625 021

EXTERNAL EXPERTS

Thiru.M.V.Sathiyamoorthy,
Industrialist
“Mayilagam” - 5, Thirumakulam south street
(Entrance : Gokhale Road), Tallakulam
Madurai – 625 002

Thiru.S.S.Manoharan, B.Sc.,B.L.,
Advocate
28, Lakshmipuram 3rd street,
Madurai – 625 001

Thiru.A.P.Jagadeesh,
Chartered Accountant
240, Kamarajar Salai 2nd floor
Madurai – 625 009

Thiru S.Selvaraj
The Officer
Canara Bank
Sourashtra College, Pasumalai Branch
Madurai – 625 004

SPECIAL INVITEES**Prof. N.H.Saravanan**

Controller of Examinations

Prof. C.K.Sivakumar

Deputy Controller of Examinations

Dr. M.S. Balaji

Dean- Research

Lt.Dr.K.R.Srinivasan

Co-ordinator, IQAC

Dr.A.K.Balasubramanian

Associate Professor of Physics

Dr.B.Anbazhagan

Associate Professor of Business Administration

TEACHERS REPRESENTATIVES**Prof. M.R.Sridaran**

Department of Commerce

Prof. M.N.Saroja

Department of Mathematics

Dr. V. Santha

Department of Corporate Secretaryship

Dr.K.K.Vijayakumar

Department of Commerce

NAME OF THE DEPARTMENT/BOARD	CHAIRMEN
Tamil	Dr. R. Chitra
Hindi	Dr. Rohini Pandian
Sanskrit	Dr. A. Gunaseelan
English (B.A., M.A., PART-II)	Dr.M.R. Rashila
Business Administration (B.B.A)	Dr. K.P. Ganesan
Corporate Secretaryship (B.Com.(CS))	Dr. T.S. Balakrishnan
Commerce (B.Com., B.Com-CA, M.Com.,)	Prof. T.N.Babulal
Mathematics (B.Sc., M.Sc.,)	Prof. N.S. Ravindran
Physics (B.Sc.,)	Capt. T.K. Vishnuram
Chemistry (B.Sc.,)	Dr. C.R. Yuvarajan
Computer Science (B.Sc.,)	Dr. V.K. Vijayakumar
Computer Applications (B.C.A.)	Prof. O.K. Hariharan
Biochemistry with Bio-Technology (B.Sc.,)	Prof. L.ArulYesudoss
Information Technology (B.Sc.,)	Prof. T.S.B. Arunprasanth
Microbiology (B.Sc.,)	Prof. N.B. Sharmila
Mathematics with Computer Application (B.Sc.,)	Prof. S.K.Ganesh Babu
M.B.A.	Prof. K.S. Ashwath Babu
M.C.A.	Prof. S. Bharanisetupandian
M.Com.(Computer Applications)	Prof. T.K. Ravichandran
Economics	Lt.Dr. K.R.Srinivasan
Botany	Dr.M.Venkatesan
NCC	Lt.Dr.K.R. Srinivasan
Physical Education	Dr. S.R.V. Ravindran
Extension Activities – NSS, YRC, RRC, CCC, WUS, LIB	Prof.M.K.Eswarlal

STUDENTS REPRESENTATIVES

NAME OF THE STUDENT	DEPARTMENT
A.R.Jothilakshmi	III B.A. English
R.Mukesh Kannan	III B.Sc., Maths
K.R.Naga Venkatesh	III B.Sc(Physics)
M.Abinaya	III B.Sc(Chemistry)
B.K.Hariharasudhan	III B.Sc(Comp.Sc.)
O.S.Arun	III B.Com
R.Karthik Raja	III BBA
P.Madavan	III B.Com(CS)
A.Sunder	II M.A. English
M.Venkadesh	II M.Sc., Maths
T.K.Venkatesh	II M.Com
A.V.Kavitha	II M.Com.(CA)
B.B.Sivanath	II MBA
S.Gowtham	III B.Sc(Bio-Chem)
H.Vijayalakshmi	III B.Sc(Micro Bio)

EIGHTH ACADEMIC COUNCIL MEETING

AGENDA

Date: 24.03.2017

Time: 2:30 P.M.

1. Presentation of Syllabi for the forthcoming Academic year 2017-18 for all the U.G, PG Courses by Chairmen of Various Boards
2. Ratifications

Part I

- Tamil
- Hindi
- Sanskrit

Part II

- English

Part III

UG COURSES

- B.A. English
- Bachelor of Business Administration (B.B.A.)
- B.Com Corporate Secretaryship
- B.Com Computer Application
- B.Com
- B.Sc. Mathematics
- B.Sc. Physics
- B.Sc. Chemistry
- B.Sc. Computer Science
- Bachelor of Computer Applications (B.C.A.)
- B.Sc. Biochemistry with Biotechnology
- B.Sc., Information Technology
- B.Sc. Microbiology
- B.Sc. Mathematics with Computer Application

PG COURSES

- M.A. English
- M.Com
- M.Sc. Mathematics
- M.B.A
- M.C.A
- M.Com Computer Application

OTHER COURSES

- Economics
- Botany
- NCC

PART - V

- NSS
- YRC
- RRC
- CCC
- WUS
- LIB
- PHY.EDN
- NCC

The Course structure and Syllabi for the above mentioned courses from the academic year 2017 – 2018 be approved.

MINUTES OF THE MEETING

1. The meeting began with the prayer by Dr.M.R.Rashila.
2. Dr. V.K.Vijayakumar, Dean, Academic Affairs, in his welcome address, mentioned that the institution is celebrating the Golden Jubilee year 2017, by constructing an auditorium worth Rupees one Crore and a fitness centre along with equipments funded by UGC worth Rupees two and half Crores. He has also mentioned that the institution is marching towards attaining the College with Potential for Excellence.
3. The Chairman and Principal Dr. L.P. Ramalingam in his address highlighted that the syllabus had been framed to reflect the current changes in the industry and keeping the welfare of the students in mind. He expressed his thanks for the strenuous effort taken by the staff members in framing the syllabus and also for the kind cooperation extended by them. In his annual report he has mentioned about the activities performed by various Departments, NSS, NCC, Physical Education and other forums.
4. The Chairmen of all Boards, UG (I to VI Semesters) and PG (I to IV Semesters) Courses placed their syllabi before the Academic Council for approval. The course structure and syllabi of each course had already been approved in the Board of Studies Meeting of the concerned departments.
5. Dr. V.K.Vijayakumar, Dean, Academic Affairs, has moved the following resolutions.
 - a. The College has applied to start B.A.Tamil and B.Com Courses under self-financing stream from the academic year 2017-18. This is subject to the affiliation by the Madurai Kamaraj University. The proposal of introducing these two courses is placed before the Academic Council for approval.
 - b. The University in its communication dated 15-2-2017 has instructed the college to stop admission for M.Phil and Ph.D till its further information, considering UGC guidelines and minimum standards. At present the College offers four M.phil courses and these courses are temporarily stopped as per Madurai Kamaraj University instructions. The proposal of staying the courses temporarily and continuing as per MKU instructions is now placed before the Academic Council for approval.
 - c. Two subject experts for each board are nominated by the Principal of the College. The nominations of two experts in each board this year is now placed before the Academic Council for approval.

6. The Chairmen of certain courses placed their syllabi before the Academic Council for ratification.
7. Then discussions followed.
 - a. The MKU nominee, Dr.V.Venkataraman, Principal, Rajapalayam Rajus' College has appreciated that the college has achieved a significant development in this 50 years journey from 1967 to 2017.
8. Dr. G. Sivabalan, Deputy Dean, Academic Affairs, proposed a Vote of thanks.

DEAN
Academic Affairs

PRINCIPAL



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

1

PART – I தமிழ்	Title : கவிதையும் சிறுகதையும்	Subject Code : 17 UAC T11
Semester : I	HOURS : 6 Hours/Week	CREDITS : 3

கூறு 1 : புதுக்கவிதை

- 1) காக்கிச்சட்டை - அப்துல்கலாம்
- 2) சிற்பியின் கவிதை
- 3) கண்ணீர்ப்பூக்கள் - மு. மேத்தா
- 4) தமிழன்பன் கவிதைகள்
ரோகினி எழுத்து வித்தியாசம்
- 5) காதலித்துப்பார் - வைரமுத்து
- 6) பாண்டவர் பூமி - வாலி
- 7) கருவறை வாசனை - சிவகாமி
- 8) விதைகள் விழுதுகளாய் - சி. அன்னக்கொடி
- 9) ராக்கிங் - இரா.இரவி
- 10) ஆனந்த யாழை மீட்டுகின்றாய் - நா. முத்துக்குமார்

கூறு 2 : மரபுக்கவிதை

11. கண்ணன் என் காதலன் - பாரதியார்
12. தமிழ் காக்க எழுந்திரு - பாரதிதாசன்
13. ஆசியஜோதி - கவிமணி
14. நாமக்கல் கவிஞர் - பாடல்கள்
15. திருவருட்பா - வள்ளலார்
16. ஆறு மனமே ஆறு - கண்ணதாசன்
17. குங்குமச் சிமிழே ஆராரோ - பட்டுக்கோட்டை
கல்யாண சுந்தரம்

கூறு 3 : சிறுகதை

1. புனிதப் பயணம் - எ.ஏ. ஹெச்.கே. கோரி.
- 2) கடவுளும் கந்தசாமிப் பிள்ளையும் - புதுமைப்பித்தன்
- 3) தர்மம் ஜெயிக்கும் - சு. சமுத்திரம்
- 4) பிஞ்சுகளும் போரிடும் - மேலாண்மை பொன்னுசாமி
- 5) ஆயிஷா - நடராசன்



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

2

- 6) நீ என்னுடன் இருந்தால் - வரலொட்டி ரெங்கராஜன்
- 7) மாத்திரை - ஆண்டாள் பிரியதர்சினி
- 8) அவள் பெயர் ஊர்வசி - முனைவர். இரா. சித்ரா
- 9) மேன்மக்கள் - அய்க்கண்
- 10) பேராண்மை - இரா. இரமேஷ்

கூறு : 4.

முதல் எழுத்துக்கள், சார்பெழுத்துக்கள், வலிமிகு
இடங்கள், வலிமிகா இடங்கள், ஒலி வேறுபாடு,
பொருள் வேறுபாடு

கூறு : 5.

புதுக்கவிதை தோற்றமும் வளர்ச்சியும்,
மரபுக்கவிஞர்கள்,
சிறுகதை தோற்றமும் வளர்ச்சியும்
படைப்பாற்றல் - சிறுகதை படைப்பாற்றல்

பார்வை நூல்கள்

1. தமிழ் இலக்கிய வரலாறு - மு. வரதராசனார்
2. புதிய நோக்கில் தமிழ் இலக்கிய வரலாறு - தமிழண்ணல



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

3

PART – I தமிழ்	Title : சிற்றிலக்கியமும் புதினமும்	Subject Code : 17UAC T21
Semester : II	HOURS : 6 Hours/Week	CREDITS : 3

கூறு 1 : சிற்றிலக்கியம்

1. திருக்குற்றாலக் குறவஞ்சி - 10 பாடல்கள்
2. அனுமன் பிள்ளைத்தமிழ் - 5 பாடல்கள்
3. திருவரங்கக் கலம்பகம் - 10 பாடல்கள்
4. தமிழ் விடு தூது - 20 பாடல்கள்
5. மூவருலா - 5 பாடல்கள்
6. கலிங்கத்துப்பரணி - 10 பாடல்கள்
7. அந்தாதிப் பாடல்கள் - 5 பாடல்கள்

கூறு 2 : புதினம்

புதிய தடம் - சேதுமணி மணியன்

கூறு 3 : கட்டுரை

1. பான்சாய் மனிதர்கள் - அப்துல் ரகுமான்
2. இந்தியப் பெருமிதம் - **C.S.** தேவநாதன்
3. எல்லோரும் நிறை எல்லோரும் நிலை
- கீழ்குளம் வில்லவன்
4. திருவாசகத்தில் மகளிர் விளையாட்டுகள்
- முனைவர் ச. பர்வத கிருஷ்ணம்மாள்
5. இதழ்களில் விளம்பரங்களின் இடம்
- திருமதி. ப. மகேஸ்வரி
6. தமிழர் பண்பாட்டில் விருந்தோம்பல்
- திருமதி. நா. கருணாம்பிகா
7. மறக்கத் தெரிந்த மனமே
- கு.வெ. பாலசுப்பிரமணியன்



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

4

கூறு 4 : இலக்கணம்

நான்கு வகைச் சொற்கள்,
வினா விடை வகைகள்,
வேற்றுமைகள்.

அணிகள் : வேற்றுமை. உவமைகள், உருவகம்,
தற்குறிப்பேற்றம், பிறிது மொழிதல்.

கூறு 5 : இலக்கிய வரலாறு

சிற்றிலக்கிய வரலாறு ,
புதினத்தின் தோற்றமும் வளர்ச்சியும்,
உரைநடை இலக்கிய வரலாறு,
படைப்பாற்றல் - கடிதம் எழுதுதல்
(வாழ்த்துதல், புகார், விண்ணப்பம்)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

5

PART – I தமிழ்	Title : செய்யுளும் நாடகமும்	Subject Code : 17UAC T31
Semester : III	HOURS : 6 Hours/Week	CREDITS : 3

கூறு 1 : காப்பிய இலக்கியம்

1. சிலப்பதிகாரம் - மங்கல வாழ்த்துக் காதை
2. மணிமேகலை - ஆபத்திரன் திறமுரைத்த காதை
3. கம்பராமாணம் - திருவடி தொழுத படலம்
4. பெரிய புராணம் - மெய்ப்பொருள் நாயனார் புராணம்

கூறு 2 : பக்தி இலக்கியம்

5. தேவாரம் - கோளறு திருப்பதிகம்
6. திருப்பாவை - 1- 5 பாடல்கள்
7. தேம்பாவணி - நீர் வளம்
8. நாயகம் ஒரு காவியம் - திருமணத்தாது
9. நடனகோபால நாயகி சுவாமிகள் பாடல்கள்

கூறு 3 : நாடகம்

கூறு 4 : இலக்கணம்

1. அசை, சீர்
2. தொடை
3. ஆசிரியப்பா, வெண்பா

கூறு 5 : இலக்கிய வரலாறு

1. பக்தி இலக்கிய வரலாறு
2. காப்பிய இலக்கிய வரலாறு
3. நாடக இலக்கிய வரலாறு

படைப்பாற்றல் - கவிதை எழுதுதல்



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

6

PART – I தமிழ்	Title : பண்டைஇலக்கியமும் உரைநடையும்	Subject Code : 17UAC T41
Semester : IV	HOURS : 6 Hours/Week	CREDITS : 3

கூறு 1 : சங்க இலக்கியம்

1. நெடுநல்வாடை
2. திருமுருகாற்றுப்படை
3. மதுரைக் காஞ்சி
4. நற்றிணை - 1, 149, 250, 172, 142,
5. குறுந்தொகை - 3, 8, 18, 58, 140,
6. பதிற்றுப்பத்து
7. அகநானூறு - 2,4,66,149,
8. புறநானூறு -73,101,188, 191,192,

கூறு 2 : அற இலக்கியம்

9. திருக்குறள் (அருளுடைமை, ஊக்கமுடைமை)
10. பழமொழி நானூறு - 5 பாடல்கள்
11. நாலடியார் - 3 பாடல்கள்
12. மூதுரை - 5 பாடல்கள்
13. இனியவை நாற்பது - 3 பாடல்கள்
14. தனிப்பாடல்கள் - 2 பாடல்கள்

கூறு 3 : சங்க இலக்கியக் கட்டுரைகள்

1. சேரனும் கீரனும் - ரா. பி. சேதுப்பிள்ளை
2. ஒன்றினார் வாழ்க்கையே வாழ்க்கை - விராடன் இளந்திரையன்
3. பரணரின் சிந்தனைகள் - அறிவுடைநம்பி
4. முல்லையும் பூத்தியோ? - வெங்கட்ராமச் செட்டியார்
5. தமிழில் அறிவியல் - மணவை முஸ்தபா
6. கபிலரின் வாழ்வியல் சிந்தனைகள் - நிர்மலா மோகன்

கூறு 4 : இலக்கணம்

1. அகப்பொருள்
2. புறப்பொருள்

கூறு 5 : இலக்கிய வரலாறு

1. எட்டுத்தொகை
2. புத்துப்பாட்டு
3. புதினென்கீழ்க்கணக்கு
படைப்பாற்றல் - கட்டுரை எழுதுதல்



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

7

துறைசாரா மாணவர்களுக்கான விருப்பப் பாடம்

PART – IV NME	Title : எழுத்தறிதல்	Subject Code : 17UATN31
Semester : III	HOURS : 2 Hours/Week	CREDITS : 2

கூறு 1:

தமிழ் எழுத்துக்களை அறிமுகம் செய்தல் (உயிர், மெய், குறில், நெடில், வல்லினம், மெல்லினம், இடையினம்), எழுத்தொலி அளவு

கூறு 2:

உயிர்மெய் எழுத்துக்களின் வரிவடிவம்

கூறு 3:

சொல்லமைவு – ஓரெழுத்து, ஈரெழுத்துச் சொற்கள்

கூறு 4:

ஒருமை, பன்மை, திணை, பால்

கூறு 5:

மொழிபெயர்ப்பு (சொற்கள்)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

8

துறைசாரா மாணவர்களுக்கான விருப்பப் பாடம்

PART – IV NME	Title : சொல் அறிமுகம்	Subject Code : 17UATN41
Semester : IV	HOURS : 2 Hours/Week	CREDITS : 2

கூறு 1:

ஆத்தி சூடி (அ முதல் ∴ முடிய)

கூறு 2:

பெயர்ச் சொல், வினைச் சொல்.

கூறு 3:

எண்ணுப் பெயர், உறவுப் பெயர், பெயரெச்சம், வினையெச்சம்.

கூறு 4:

சேர்த்து எழுதுதல், பிரித்து எழுதுதல், வாக்கியத்தில் அமைத்தல்

கூறு 5:

மொழிபெயர்ப்பு (சொற்கள்)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

9

துறைசாரா மாணவர்களுக்கான விருப்பப் பாடம்

PART – IV NME	Title : சிறப்புத்தமிழ்	Subject Code : 17UST N31
Semester : III	HOURS : 2 Hours/Week	CREDITS : 2

- கூறு 1 : குழந்தைப் பாடல்கள்
1. ஓடி விளையாட்டு பாப்பா – பாரதியார்
 2. தலைவாரி பூச்சூடி – பாரதிதாசன்
 3. சூரியன் வருவது யாரலே –நாமக்கல் கவிஞர்
- கூறு 2 : நீதிப் பாடல்கள்
1. திருக்குறள் – வான்சிறப்பு
 2. ஆத்திச் சூடி (அ முதல் ஐ முடிய)
 3. உலகநீதி (1- 5 பாடல்கள்)
- கூறு 3 : மரியாதை ராமன் கதைகள் (10)
- கூறு 4 : இலக்கணம்
ஒருமைப்பன்மை மயக்கம், புணர்ச்சி (பயன்பாட்டு)
- கூறு 5 : இலக்கிய வரலாறு
மரபுக்கவிதைகள், சிறுகதை இலக்கிய வரலாறு,
நீதி இலக்கிய வரலாறு.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- TAMIL - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

10

துறைசாரா மாணவர்களுக்கான விருப்பப் பாடம்

PART – IV NME	Title : சிறப்புத்தமிழ்	Subject Code : 17UST N41
Semester : IV	HOURS : 2 Hours/Week	CREDITS : 2

- கூறு 1 : நாடகம்
அன்பின் மெய் - சேதுபதி
- கூறு 2 : கட்டுரைகள்
1. பாரதிதாசன் தமிழுணர்வு
2. மாமல்லபுரம்
3. காமராசர்
4. சுற்றுப்புறத் தூய்மை
5. வனவிலங்கு பாதுகாப்பு
- கூறு 3 : பக்திப்பாடல்கள்
வள்ளலார், தாயுமானவர், சித்தர் பாடல்கள்
- கூறு 4 : இலக்கணம்
சொற்றொடரைச் செம்மைப்படுத்தல்,
பிழை நீக்கி எழுதுதல் (பயன்பாட்டு நிலை)
- கூறு 5 : இலக்கிய வரலாறு
நாடக இலக்கிய வரலாறு,
உரைநடை இலக்கிய வரலாறு,
பக்தி இலக்கிய வரலாறு



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- HINDI - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

11

PART - I	Title : HINDI I	Subject Code : 17UACH11
HINDI		
Semester : I	HOURS : 6 hours / Week	CREDITS :3

(For B.A./ B.Sc./B.Com./B.Com.(CA)/BCS/BCA Courses)

Objectives

- To help the students acquire skills in reading and writing in Hindi.
- To develop their spoken skill.
- To familiarize the students with the various elements/aspects of prose & fiction.
- To increase their vocabulary and help them analyze the different writing styles of authors.

Unit I Prose

1. Dr. Abdul Kalam.
2. Chalees Kurte kahan se.
3. Bhojan aur vigyan.
4. Tamil Nadu.

Reference Book: **Subod Hindi Patmala**
Dakshin Bharat Hindi Prachar Sabha

Unit II Short Story

1. Vapasi : Usha Priyamvada.
2. Cheef ki Daavat : Bhishma Sahani.
3. Bade Ghar ki Beti : Premchad.
4. Bholaram ka jeev : Harishankar Parsai.

Reference Books: **Prathindhi Kahaniyan**
Dr. Bachan Singh
Anurag Prakashan
Chauk, Varanasi – 221001

Unit III Conversation

Conversation in Hindi from Hindi Vathayan PP: 10,11,12,31,35

Reference Books: **Hindi Vatayan**
Author, Dr. K. M. Chandra Mohan
Viswavidhalaya Prakasan
Chowk, Varanasi-221001



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-I- HINDI - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

12

Unit IV Applied Grammar

1. Gender
2. Number
3. Antonym
4. Applied Grammar (Lessons 1-10)

Reference Books:

Hindi Vatayan

Author, Dr. K.M. Chandra

Mohan, Viswavidhalaya

Prakasan Chowk, Varanasi-221001

Saral Hindi Parichay,

Dakshin Bharat Hindi Prachar Sabha

Unit V Comprehension

General Topic



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-I- HINDI - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

13

PART - I HINDI	Title : HINDI II	Subject Code : 17UACH21
Semester : II	HOURS : 6 hours / Week	CREDITS :3

(For B.A./ B.Sc./B.Com./B.Com.(CA)/BCS/BCA Courses)

Objectives

- To enhance their reading ability
- To upgrade their writing and spoken skills
- To learn the various elements of one act play & modern poetry

Unit I One Act Play

1. Do Mitra
2. Sachan Insaaf
3. Bahoo ki vida
4. Reed ki addi

Reference Books: Gadya Kusum
Subhodh Hindi Patmala 2
Subhodh Hindi Patmala 3

Unit II Modern Poetry

1. Boond : Sumitra Nandan Panth
2. Chaah : Makhan Lal Chaturvedi
3. Fasal : Nagarjum
4. Samay : Siyaram Sharan Gupt
5. Thodthi Pathar : Surya Kanth thripathi Nirala

Reference Books: Kavya Kusum
Dakshin Bharat Hindi Prachar Sabha

Unit III Letter Writing

1. Leave letter
2. Applying for A Post
3. Banking Letter
4. Personal letter

Reference Books: Hindi Vatayan, Author, Dr. K. M. Chandra Mohan
Viswavidhalaya Prakasan
Chowk, Varanasi-221001

Unit IV Applied Grammar, Lessons (10-15)

Reference Books: Saral Hindi Rachana
Dakshin Bharat Hindi Prachar Sabha

Unit V Précis Writing, Lessons (1- 5)

Reference Books: Vyavaharik Hindi



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- HINDI - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

14

PART - I HINDI	Title : HINDI III	Subject Code : 17UACH31
Semester : III	HOURS : 6 hours / Week	CREDITS :3

(For B.A./ B.Sc./B.Com./B.Com.(CA)/BCS/BCA Courses)

Objectives

- To impart an in depth knowledge of the history of Hindi literature
- To improve students writing skill Hits-Development has been introduced
- To acquaint the students with the style used in ancient poetry

Unit I Drama
Swarg ki Jhalak- Upendranaath Ashk

Unit II Ancient Poetry
Kabir ke Dohe (6)
Tulsi ke Dohe (6)
Rahim ke Dohe (6)
Reference Books: Padhya Saritha
Dakshin Bharat Hindi Prachar Sabha

Unit III History of Hindi Literature
Aadi Kaal – Aadi Kaal ka namkaran
Prithiverajraso

Bhakti Kaal- Bhakti Kaal ki visheshtaen
Sagun aur Nirgun kaya dhara ka samanya Parichay
Kabeer, Tulsi, Sur ka samanya prichey
Reference Books: Hindi Sahitya ka subodh intihaas
Dakshin Bharat Hindi Parichay Sabha

Unit IV Grammar
Sangya, Sarvanam, Kriya, Visheshan

Reference Books: Hindi vyakaran
Dakshin Bharat Hindi Prachar Sabha

Unit V Hints – Development
Reference Books: Hindi Ratnakar
Dakshin Bharat Hindi Prachar Sabha

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- HINDI - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

15

PART - I HINDI	Title : HINDI IV	Subject Code : 17UACH41
Semester : IV	HOURS : 6 hours / Week	CREDITS :3

(For B.A./ B.Sc./B.Com./B.Com.(CA)/BCS/BCA Courses)

Objectives

- To develop students writing skill
- To make the students aware of technical and administrative terms used in Hindi
- To give an in depth knowledge of the history of Hindi literature

Unit I **Novel**
Daud – Mamata Kaliya

Unit II History of Hindi Literature

Riti Kaal
Adhunik Kaal (Bharthendu Harishchandra, Jaisankar Prasad,
MahaDevi Verma, Sumitra Nundan Panth, Nirala, Premchan)
Reference Books: Hindi Sahitya ka subodh intihaas
Dakshin Bharat Hindi Prachar Sabha

Unit III **Administrative Terms & Translation**

Name of Posts (20)
Name of Ministries(10)

Reference Books: Hindi Vatayan
Author, Dr. K. M. Chandra Mohan
Viswavidhalaya Prakasan
Chowk, Varanasi-221001

Anuvad Abhyas-3 (1-5)
Dakshin Bharat Hindi Prachar Sabha

Unit IV **Grammar**
Kriyavisheshan, Sambandbodhak, Samucchay Bodhak, Vismaiyadhibodhak

Reference Book: Hindi Vyakaran
Dakshin Bharat Hindi Prachar Sabha



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- HINDI - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

16

Unit V Tourism

Kanyakomari
Meenaksh Mandir
ThajMahal
Konark Mandir
Kashmir

Reference Books: Hindi Vatayan
Author, Dr. K. M. Chandra Mohan
Viswavidhalaya Prakasan
Chowk, Varanasi-221001



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- SANSKRIT - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

17

PART - I SANSKRIT	Title : SANSKRIT I	Subject Code : 17 UAC S11
Semester : I	HOURS : 6 hours / Week	CREDITS : 3

(For B.A/B.SC./B.COM/B.COM (C.A)/BCS/BCA Courses)

Objectives

- To help the students acquire skills in reading and writing in Sanskrit.
- To familiarize the students with the various elements/aspects of poem & fiction.
- To increase their vocabulary and help them analyze the different writing styles of authors.

UNIT: I Alphabet , Declension of Rama, Sita and Phalam Sabada.

UNIT:II Conjugation of selected 5 verbs Parasmai Patham.
(Present tense) Bhu, Pac,Vad,Likha,Pad.

UNIT :III Translation
(A)Sanskrit to English (selected passages)
(B)English to Sanskrit (selected passages)

UNIT IV : Vedas and Vedangas.

UNIT V : Epics and Puranas.

TEXT BOOKS:

1. A Short History of Sanskrit Literature Publication by Dr jagadesan
2. Sahitya Rasa kana publication by Dr Jagadesan
3. Infant Reader, R S Vadayar and Sons

Unit-I : Text Book 2

Unit-II : Grammar

Unit-III : Text Book 2: page 125 to 127, Ex 2,3,4 and page 131,132 , Ex 1,2,3

Unit IV: Text Book-1: Pg.No. 1 to 8

Unit V: Text Book-1: Pg.No. 9 to 20



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- SANSKRIT - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

18

PART - I SANSKRIT	Title SANSKRIT II	Subject Code : 17 UAC S21
Semester : II	HOURS : 6 hours / Week	CREDITS :3

(For B.A/B.SC./B.COM/B.COM (C.A)/BCS/BCA Courses)

Objectives

- To help the students acquire skills in reading and writing in Sanskrit.
- To familiarize the students with the various elements/aspects of poem & fiction.
- To increase their vocabulary and help them analyze the different writing styles of authors.

Unit I: Bhagavat Gita III Chapter.

Unit II: Bhagavat Gita III Chapter.

Unit III: Bhagavat Gita III Chapter.

Unit IV: Origin and Development of Mahakavyas

**Unit V: Conjugation of selected 5 verbs Prasmai Padam.
(Future tense) Bhu, Pac, Vad, Likha, Pat.**

TEXT Books:

1. A Short History of Sanskrit Literature Publication by Dr Jadadesan
2. Gita Press, Gorakhpur.

Unit – I : Text Book:2 - Sloka 1to 9

Unit – II : Text Book:2 - Sloka 10 to 30

Unit – III : Text Book:2 - Sloka 31 to 43

Unit – IV : Text Book:1 Page 21 to 32

Unit – V : Grammar



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- SANSKRIT - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

19

PART - I SANSKRIT	Title : SANSKRIT III	Subject Code : 17 UAC S31
Semester : III	HOURS : 6 hours / Week	CREDITS :3

(For B.A/B.SC./B.COM/B.COM (C.A)/BCS/BCA Courses)

Objectives

- To help the students acquire skills in reading and writing in Sanskrit.
- To familiarize the students with the various elements/aspects of prose & fiction.
- To increase their vocabulary and help them analyze the different writing styles of authors.

Unit I : Bala Ramayanam Bala Kandanam

Unit II : Bala Ramayanam. Bala Kandanam

**Unit III : Conjugation of selected 5 verbs Parasmai Padam
(Past tense) Bhu, Pac, Vad, Likha, Pat.**

Unit IV : Upama, Rupakam, Ulleka.

Unit V : Prose Romance and Historical Kavyas

TEXT BOOKS:

1. A Short History of Sanskrit Literature Publication by Dr Jagadesan
2. Bala Kandanam publication by R.S Vadyar&sons Palakkad
3. Kuvalayanandanam publication by R.S Vadyar&sons Palakkad

Unit – I: Text Book 2

Unit – II: Text Book 2

Unit – III: Text Book 2

Unit – IV: Text Book 3

Unit – V: Text Book 1 Page 32 to 39



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-I- SANSKRIT - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

20

PART - I SANSKRIT	Title : SANSKRIT IV	Subject Code : 17 UAC S41
Semester : IV	HOURS : 6 hours / Week	CREDITS :3

(For B.A/B.SC./B.COM/B.COM (C.A)/BCS/BCA Courses)

Objective

- To help the students acquire skills in reading and writing in Sanskrit.
- To familiarize the students with the various elements/aspects of prose & fiction.
- To increase their vocabulary and help them analyze the different writing styles of authors.

Unit : I Karna Bharam

Unit : II Karna Bharam

Unit : III Karna Bharam

Unit : IV Origin and Development Drama Literature

**Unit : V Conjugation of selected 5 verbs Prasmai Padam
(Imperative) Bhu, Pac, Vad, Pad, Nai.**

Text books:

1. A Short History of Sanskrit Literature Publication by Dr jagadesan
2. KARNA BHARAM publication by R.S Vadyar and sons Palakkad

Unit I: Text Book 2

Unit II: Text Book 2

Unit III: Text Book 2

Unit IV: Text Book 1, Pg:59 to 68

Unit V: Grammar



COURSE STRUCTURE

I SEMESTER

FOR FIRST YEAR B.A./ B.B.A./B.SC/B.COM./B.COM (CS)

S.NO	SUBJECT CODE	SUBJECT TITLE	HOURS/ WEEK	DURATION OF EXAMS	CA	SE	TOT	CREDITS
1.	17UACE11	English for Enrichment -I	6	3 hrs	25	75	100	3

II SEMESTER

FOR FIRST YEAR B.A./ B.B.A./B.SC/B.COM./B.COM (CS)

S.NO	SUBJECT CODE	SUBJECT TITLE	HOURS/ WEEK	DURATION OF EXAMS	CA	SE	TOT	CREDITS
1.	17UACE21	English for Enrichment - II	6	3 hrs	25	75	100	3

III SEMESTER

FOR SECOND YEAR B.A./B.SC/B.COM (CS)

S.NO	SUBJECT CODE	SUBJECT TITLE	HOURS/ WEEK	DURATION OF EXAMS	CA	SE	TOT	CREDITS
1.	17UACE31	English for Enrichment - III	6	3 hrs	25	75	100	3

IV SEMESTER

FOR SECOND YEAR B.A./B.SC./B.COM (CS)

S.NO	SUBJECT CODE	SUBJECT TITLE	HOURS/ WEEK	DURATION OF EXAMS	CA	SE	TOT	CREDITS
1.	17UACE41	English for Enrichment - IV	6	3 hrs	25	75	100	3



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-II - ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

PART- II ENGLISH	Title : ENGLISH FOR ENRICHMENT - I	Subject Code: 17UACE11
Semester : I	Hours : 6 hours / week	CREDITS : 3

OBJECTIVE: To help the students understand the English language and motivate them to develop the language skills

UNIT I- PROSE

1. A Glory has Departed – Jawaharlal Nehru
2. With the Photographer – Stephen Leacock
3. A Snake in the Grass – R.K. Narayan
4. My Visions for India – Dr. A. P. J. Abdul Kalam
- 5.

UNIT II – SHORT STORY

1. A Grain of Mustard Seed – Ellis Peter
2. The Gift of the Magi – O.Henry
3. The Model Millionaire – Oscar Wilde
4. Karma – Khushwant Singh

UNIT III – GRAMMAR

1. Kinds of Sentence s.
2. Transformation of sentences (affirmative to negative, negative to affirmative, declarative to interrogative and interrogative to declarative)
3. Nouns
4. Pronouns
5. Articles

UNIT IV – COMMUNICATIVE SKILLS

1. Greetings
2. Introducing Oneself and Others
3. Making Request
4. Seeking Permission

UNIT V – WRITING SKILLS

1. Letter Writing – Formal and Informal
2. Comprehension
3. Arranging Sentences into a Paragraph

Text Prescribed

English for Enrichment, edited by the Department of English, Sourashtra College, Madurai.

Books Recommended

Green, David. *Contemporary English Grammar Structures and Composition*, Macmillan India Ltd., Madras: 1995.

Pillai, Radhakrishnan. *English Grammar and Composition*, Emerald Publishers, Chennai: 2003.

Dutt, Kiranmai, Geetha Rajeevan, C.L.N Prakash. *A Course in Communication Skills*, Cambridge University Press India Pvt. Ltd., New Delhi 2008.

ONLINE SOURCES

www.grammarinenglish.com/sentencepattern/?lesson=examples

<https://enotes.com/topics/gift-m>, www.letterwritingguide.com



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-II - ENGLISH - SYLLABUS (Under CBCS w.e.f. 2017 - 2018 onwards)

23

PART- II ENGLISH	Title : ENGLISH FOR ENRICHMENT - II	Subject Code:17UACE21
Semester : II	Hours : 6 hours / week	CREDITS : 3

OBJECTIVE: To help the students understand the English language and motivate them to develop the language skills.

UNIT I - POETRY

1. Sonnet 130 – William Shakespeare
2. Upon Westminster Bridge – William Wordsworth
3. A Tuft of Flowers – Robert Frost
4. The Lotus – Toru Dutt

UNIT II – ONE ACT PLAY

1. The New Hangman – Lawrence Housman
2. The Death Trap – H.H.Munro
3. The Proposal – Anton Chekhov
4. The Bishop’s Candlesticks – Norman Mckinnel

UNIT III – GRAMMAR

1. Verbs –Finite, Non – Finite, Main, Auxillaries, Modals, Transitive and Intransitive.
2. Adjective
3. Adverb
4. Preposition
5. Conjunction
6. Sentence Patterns

UNIT IV – TELEPHONE SKILLS

1. Basics of Telecommunication
2. Telephone Manners
3. Leaving a Message
4. Making Request
5. Greeting and Leave Taking
6. Asking and Giving Information and Instruction
7. Handling Tele Interviews

UNIT V – WRITING SKILLS

1. Drafting Advertisements
2. Developing Hints
3. E-mail Writing

Text Prescribed

English for Enrichment, edited by the Department of English, Sourashtra College, Madurai.

Books Recommended

Dutt, Kiranmai, Geetha Rajeevan, C.L.N Prakash. *A Course in Communication Skills*, Cambridge University Press India Pvt. Ltd., New Delhi 2008.

Green, David. *Contemporary English Grammar Structures and Composition*. Macmillan India Ltd., Madras, 1995.

Pillai,Radhakrishnan. *English Grammar and Composition*, Emerald Publishers, Chennai, 2003.

Online Sources:

<https://www.sparknotes.com/shakespeare/shakesonnets/section 9.rhtml>

https://en.wikipedia.org/wiki/modal_verb, www.k1.2 reader.com/term/transitive- and-intransitive-verbs



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-II - ENGLISH - SYLLABUS (Under CBCS w.e.f. 2017 - 2018 onwards)

24

PART- II ENGLISH	Title : ENGLISH FOR ENRICHMENT - III	Subject Code:17UACE31
Semester : III	Hours : 6 hours / week	CREDITS :3

OBJECTIVE:

To make the students enjoy English language and motivate them for further reading and thereby help them enrich their language skills.

UNIT-I: POETRY

1. John Donne - Death Be Not Proud
2. P.B. Shelley - Ozymandias
3. Chinua Achebe - Refugee Mother and Child
4. Sarojini Naidu – The Indian Weavers

UNIT-II: SHORT FICTION

1. Oscar Wilde - The Happy Prince
2. Anton Chekhov - The Lottery Ticket
3. Leo Tolstoy- Little Girls Wiser Than Men
4. Walter De La Mare – The Four Brothers

UNIT-III: GRAMMAR

1. Tenses
2. Concord
3. Active and Passive Voice
4. Degrees of Comparison

UNIT- IV: SOFT SKILLS

1. Inter and Intra personal skills
2. Verbal and Non-verbal Communication
3. Body Language

UNIT-V: WRITING SKILLS

1. Expansion of Proverbs
2. Preparing Circular, Agenda & Minutes
3. Essay Writing.

Text Prescribed

English for Enrichment, edited by the Department of English, Sourashtra College

Books Recommended

Green, David. *Contemporary English Grammar Structures and Composition*, Macmillan India Ltd., Madras: 1995.

Pillai, Radhakrishnan. *Grammar and Composition*, Emerald Publishers, Chennai: 2003

Seely,John. *The Oxford Guide to Writing and Speaking*, Oxford University Press,Oxford,1998.

Online sources:

www.englishgrammarsecrets.com, www.talkenglish.com



PART- II ENGLISH	Title : ENGLISH FOR ENRICHMENT - IV	Subject Code:17UACE41
Semester : IV	Hours : 6 hours / week	CREDITS : 3

OBJECTIVE: To develop the language skills of the students and make them gain confidence to express their knowledge in English.

UNIT - I DRAMA

Shakespeare – Taming of the Shrew

UNIT - II FICTION

R.K.Narayan –The Bachelor of Arts

UNIT - III GRAMMAR

1. Direct and Indirect Speech
2. Conditional clause
3. Participles, Gerunds
4. Question Tags

UNIT - IV CAREER SKILLS

1. Applying for job
2. Resume
3. Interviews
4. Group Discussion

UNIT - V WRITING SKILLS

1. Report Writing
2. Film Review
3. Book Review

Text Prescribed

English for Enrichment, edited by the Department of English, Sourashtra College

Books Recommended

Green, David. *Contemporary English Grammar Structures and Composition*, Macmillan India Ltd., Madras: 1995.

Narayan,R.K. *The Bachelor of Arts*. Indian Thought Publications, Chennai, 2015.

Pillai, Radhakrishnan. *English Grammar and Composition*, Emerald Publishers, Chennai: 2003.

Seely,John. *The Oxford Guide to Writing and Speaking*, Oxford University Press,Oxford,1998.

Shakespeare, William. *Taming of the Shrew*. Sterling Publications, 2004

Online Sources:

www.goodreads.com

www.shareyouressays.com

www.englishgrammarsecrets.com



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

26

I SEMESTER

S.No	Subject Code	Nature	Subject Title	Hrs/ Week	Exam (Hrs.)	CA	SE	Tot	Crd
1.	17UACT11/ H11/S11	Part - I	Tamil/Hindi/Sanskrit	6	3	25	75	100	3
2.	17UACE11	Part -II	English – I	6	3	25	75	100	3
3.	17UEHC11	Part-III Core	Prose	6	3	25	75	100	5
4.	17UEHA11	Part-III Allied	Social History of England	5	3	25	75	100	5
5.	17UEHS11	Part-IV Skilled	Introduction to PC Software and Internet (SBS)	3	3	25	75	100	3
6.			Communicative English Lab	2	-	-	-	-	-
7.	14UACVE1	Part-IV	Value Education	2	3	25	75	100	2
			TOTAL	30					21



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

27

PART-III CORE	Title : PROSE	Subject Code: 17 UEH C11
Semester : I	Hours : 6 hours / week	CREDITS : 5

OBJECTIVE: To give knowledge of select pieces of prose from all ages of English Literature.

UNIT-I

Bacon : Of Studies
Of Friendship

UNIT-II

John Bunyan : The Pilgrim's Progress

UNIT-III

Oliver Goldsmith : Man in Black
City Night Peace

UNIT-IV

Charles Lamb : A Dissertation upon a Roast Pig
Dream Children- A Reverie

UNIT-V

A.G. Gardiner : A Fellow Traveller
J.C. Hill : Good Manners
John F. Kennedy : A President Speaks

BOOKS RECOMMENDED:

1. M.G. Nayar : A Galaxy of English Essayists. Macmillan 2007.
2. Ramji Lall : Charles Lamb's Essays of Elia.
3. Ramji Lall : Bacon Essays, Rama Brothers

ONLINE SOURCES:

: <https://www.enotes.com/topics/francis-bacon-essays>
<http://telugulo-english.blogspot.in/2016/08/the-man-in-black-oliver-goldsmith.html>
https://en.wikipedia.org/wiki/Essays_of_Elia



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III ALLIED	Title : SOCIAL HISTORY OF ENGLAND	Subject Code: 17 UEH A11
Semester : I	Hours : 5 hours / week	CREDITS : 5

OBJECTIVE: To enhance the students' understanding of literature by relating it to the Social History of England.

UNIT-I

1. Renaissance in England and Its impact on English Literature
2. Reformation in England and Its impact on English Literature
3. Dissolution of Monasteries.

UNIT-II

1. Civil War
2. Puritan Rule
3. Coffee Houses
4. Colonial Expansion
5. Restoration Society.

UNIT-III

1. The Industrial Revolution
2. The Agrarian Revolution
3. Humanitarian Movements.

UNIT-IV

1. The Victorian Age
2. The Development of Transport and Communication
3. The Development of Education in 19th Century.

UNIT-V

1. Two World Wars and Their Impact on the Society
2. Trade Unionism
3. Social Security and Welfare State.

BOOKS RECOMMENDED:

1. Padmaja Ashok: The Social History of England, Orient Black Swan, 2013
2. A.G. Xavier: Introduction to the Social History of England, S.V. Publication, 1998
3. P. Thailambal: The Social History of England, Ennes Publication, Sivakasi 2010

ONLINE SOURCES : [http://www.britainexpress.com/History/Dissolution_of_the_Monasteries.](http://www.britainexpress.com/History/Dissolution_of_the_Monasteries)
<http://study.com/academy/lesson/the-agricultural-revolution-timeline-causes-inventions-effect>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

29

PART – IV SKILL BASED	Title :INTRODUCTION TO PC SOFTWARE AND INTERNET	Subject Code: 17 UEH S11
Semester : I	Hours : 3 hours / week	CREDITS : 3

Objective - To introduce the basics of computer and internet to the students.

Unit-1 Basics of Computer

1. Introduction to Computer
2. Characteristics of Computer
3. Areas of Computer application
4. Components of Computer (Input and Output devices)

Unit-II M S – Word and Excel

1. Introduction to MS Office
2. Starting a Word and Excel
3. Editing a document and excel sheet
4. Formatting a document and excel sheet

Unit-III Power point

1. Overview of PowerPoint
2. Creating a Presentation
3. Running a Slideshow
4. Introduction to Animation.

Unit-IV Internet

1. Introduction to Internet
2. Uses of Internet
3. Modem-ISDN, ADSL, Cable modems,
4. Creating blogs

Unit-V Introduction to E-Commerce

1. Creating E mail id
2. Composing a mail
3. Introduction to Online Banking
4. Benefits of Online Banking Transaction

BOOKS RECOMMENDED

1. Learning computer fundamentals, MS Office and Internet & Web technology
- Dinesh Maidasani-Firewall Media, First Edition-2005

ONLINE REFERENCE

1. www.grassrootsdesign.com
2. www.functionx.com
3. www.knowledgeway.org

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

30

PART – III CORE	Title : COMMUNICATIVE ENGLISH (LAB)	Subject Code:
Semester : I	Hours : 2 hours / week	CREDITS :

OBJECTIVE: To familiarize students with listening skills and to develop their ability to listen to face-to-face and announcements and also to improve the reading skill.

UNIT-I

1. Listening to Talks and Description
2. Listening to Advertisements.

UNIT-II

1. Listening to News on the Radio and TV
2. Listening to Casual Conversations.

UNIT-III

1. Reading News Papers
2. Reading Paragraphs.

UNIT-IV

Reading Short Stories

1. The Crow and the Kavun
2. The Parakeet and the Clay Pot
3. My Financial Career- Stephen Leacock
4. Gateman's Gift- R.K. Narayan
5. The Boy Who Broke the Bank- Ruskin Bond.

UNIT-V

1. Reading a Poem (Indian)

BOOKS RECOMMENDED:

1. P. Kiranmai Dutt, Geetha Rajeevan, C.L.N. Prakash: A Course in Communication Skills, Foundation Books, New Delhi, 2008.
2. S.P. Dhanvel: English and Soft Skills, Orient Black Swan, Hyderabad 2010.
3. V. Sashikumar, P. Kiranmai Dutt, Geetha Rajeevan: Communication Skills in English: A Course in Listening and Speaking, Foundation Books, New Delhi 2012



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

31

II SEMESTER

S.No	Subject Code	Nature	Subject Title	Hrs/Week	Exam (Hrs.)	CA	SE	Tot	Crd
1.	17UACT21/ H21/S21	Part - I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2.	17UACE21	Part -II	English – II	6	3	25	75	100	3
3.	17UEHC21	Part-III Core	Poetry	6	3	25	75	100	5
4.	17UEHA21	Part-III Allied	History of English Literature – I	5	3	25	75	100	4
5.	17UEHS21	Part-IV Skilled	Presentation and Job Seeking Skills	3	3	25	75	100	3
6.	17UEHCP1	Part-III Core	Communicative English Lab	2	3	40	60	100	2
7.	14UACES1	Part-IV	Environmental Studies	2	3	25	75	100	2
			TOTAL	30					22



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : POETRY	Subject Code:17 UEH C21
Semester : II	Hours : 6 hours / week	CREDITS :5

OBJECTIVE: To introduce poetry, one of the genres of literature through select pieces of poem from 16th C to 20th C.

UNIT-I

- | | |
|----------------------|---|
| 1. Edmund Spenser | From The Amoretti, Sonnet No. 75 |
| 2. Sir Philip Sidney | From Astrophel and Stella, Sonnet No. 1 |
| 3. Shakespeare | Sonnets No. 16, 18 |

UNIT-II

- | | |
|----------------|--|
| 1. Milton | On His Blindness
How Soon Hath Time |
| 2. John Dryden | A Song for St. Cecilia's Day |

UNIT-III

- | | |
|-------------------|---------------------------------------|
| 1. Alexander Pope | Ode on Solitude |
| 2. William Blake | The Tiger, The Lamb, A Poison Tree |
| 3. William Cowper | On the Receipt of My Mother's Picture |

UNIT-IV

- | | |
|-------------------|---------------------|
| 1. Wordsworth | Solitary Reaper |
| 2. Byron | When We Two Parted |
| 3. Tennyson | Break, Break, Break |
| 4. Matthew Arnold | Shakespeare |

UNIT-V

- | | |
|-------------------|---------------------|
| 1. T.S. Eliot | Journey of the Magi |
| 2. W.H. Auden | The Unknown Citizen |
| 3. Louis Macneice | Prayer Before Birth |
| 4. Philip Larkin | Wants |

BOOKS RECOMMENDED:

- David Green: The Winged Word, Macmillan, Chennai 2009.

WEB SOURCES: www.gradesaver.com/spensers-amoretti/study-guide/summary
www.poetseers.org/the-romantics



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART – III ALLIED	Title : HISTORY OF ENGLISH LITERATURE-I	Subject Code: 17UEHA21
Semester : II	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To brief on the historical background and the evolution of English Literature from the Age Of Chaucer to the Age of Pope.

UNIT: I- Age of Chaucer

1. Chaucer and Spenser
2. University Wits
3. The Elizabethan Sonneteers.

UNIT : 2 – Age of Shakespeare

1. Bacon
2. Ben Jonson
3. Shakespeare
4. Marlowe.

UNIT : 3 – Age of Milton

1. Milton
2. The Metaphysical poets
3. Cavalier poets.

UNIT : 4 –Age of Dryden

1. Dryden
2. William Congreve
3. John Bunyan
4. Minor prose Writers.

UNIT :5-Age of POPE AND JOHNSON

1. Restoration writers(Sheridan , Goldsmith, Oscar wilde)
2. Alexander pope
3. Periodical essayists(Addison and Steele)
4. Samuel Johnson.

BOOKS RECOMMENDED:

1. W.H.Hudson: An Outline History of English Literature, B.I. Publications, PVT.Ltd, 1986
2. D.A.Shanmugakani: A History of English Literature, Vasan Publications,2006

ONLINE SOURCES

1. www.historyworld.net/wrldhis/plaintexthistories.asp?historyid=aa08
2. www.bartleby.com › Nonfiction › Harvard Classics › Famous Prefaces



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

34

PART- IV SBS	Title : PRESENTATION AND JOB SEEKING SKILLS	Subject Code: 17 UEH S21
Semester : II	Hours : 3 hours / week	CREDITS :3

OBJECTIVE: To improve the students presentation and job seeking skills which are mandatory in today's job market.

UNIT-I

Why presentation, Effective Presentation, Types and Methods of Presentation, How to Create, Develop and Maintain Interest.

UNIT-II

Using Visual Aids for Presentation

UNIT-III

Dreaming Your Future- Setting Goal

UNIT-IV

Looking for a Job, Know Thyself- Skills, Qualities and Attitude Required- Tools for Enhancing Performance- Visualisation- Affirmations- Stages in Learning New Skills.

UNIT-V

Finding a Job, Writing How to Succeed?- Resume- Dealing with Difficult Situations.

BOOKS RECOMMENDED:

1. Roz Townsend: Presentation Skills for the Upwardly Mobile: A Guide for Young Executives, Emerald, Chennai
2. Annie Lawrence: Job Seeking Skills Handbook, Emerald, Chennai 2006.

WEB SOURCES

<https://www.skillsyouneed.com/presentation-skills.html>
career.sa.ucsb.edu/articles/10-skills-job-seekers-need



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

35

PART – III CORE	Title : COMMUNICATIVE ENGLISH (LAB)	Subject Code: 17 UEH CP1
Semester : II	Hours : 2 hours / week	CREDITS : 2

OBJECTIVE: To sensitize students the nuances of face-to-face communication with practice in small talk.

UNIT-I

1. Seeking Permission
2. Asking for Advice.

UNIT-II

1. Expressing Gratitude
2. Expressing Sympathy.

UNIT-III

1. Persuading
2. Complementing/ Congratulating.

UNIT-IV

1. Complaining? Apologising
2. Making Suggestions.

UNIT-V

1. Describing People, Place, Events
2. Some Useful Expressions.

BOOKS RECOMMENDED:

1. G. Radhakrishna Pillai, K. Rajeevan: Spoken English For You, Emerald Publishers, 2013
2. Grant Taylor: Conversation Practice, Tata McGraw- Hill Publishing Company Ltd, New Delhi 1998.
3. V. Shashikumar, P. Kiranmai Dutt, Geetha Rajveen, Communication Skills in English: A Course in Reading and Speaking, Foundation books New Delhi 2012.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

36

III SEMESTER

S.No	Subject Code	Nature	Subject Title	Hrs/Week	Exam (Hrs.)	CA	SE	Tot	Crd
1.	17UACT31/ H31/S31	Part - I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2.	17UACE31	Part -II	English – III	6	3	25	75	100	3
3.	17UEHC31	Part-III Core	Fiction	5	3	25	75	100	4
4.	17UEHC32	Part-III Core	Broadcast Journalism and News Media for Social Change	4	3	25	75	100	3
5.	17UEHA31	Part-III Allied	History of English Literature – II	4	3	25	75	100	4
6.	17UEHS31	Part-IV SBS	Word Power	3	3	25	75	100	3
7.	17UEHN31	Part-IV NME	Conversational Practice – I	2	3	25	75	100	2
			TOTAL	30					22

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

37

PART-III CORE	Title : FICTION	Subject Code: 17UEH C31
Semester : III	Hours : 6 hours / week	CREDITS :5

OBJECTIVE: To introduce the genre fiction, make the students understand the various aspects of a novel and to enhance their reading ability.

UNIT-I

Origin and Development of Fiction

UNIT-II

Daniel Defoe Robinson Crusoe

UNIT-III

Thomas Hardy Mayor of Casterbridge

UNIT-IV

George Eliot Silas Marner

UNIT-V

Jane Austen Pride and Prejudice

BOOKS RECOMMENDED:

1. B. Prasad- A Background to the Study of English Literature, Macmillan, New Delhi, 2013
2. K.R. Ramachandran Nair- Literary Forms, Emerald Publications, Chennai, 2013
3. R.J. Rees- English Literature: An Introduction for Foreign Readers, Macmillan, Chennai, 2012

WEB SOURCES:

www.sparknotes.com/lit/casterbridge
www.sparknotes.com/lit/silas
www.cliffnotes.com/literature/robinson-crusoe
www.shmoop.com/pride-and-prejudice



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

38

PART-III CORE	Title : BROADCAST JOURNALISM AND NEWS MEDIA FOR SOCIAL CHANGE	Subject Code: 17UEHC32
Semester : III	Hours : 4 hours / week	CREDITS : 3

UNIT : I Organisational structure of radio station -types of radio stations: AM and FM - Radio Programme Formats: talk, news and music formats.

UNIT : II. Writing for the ear - radio news writing - radio script writing - radio drama – documentary – feature – commentary - talk - magazine programmes - radio interviewing techniques, -news reading - Radio jockeying - online radio – new trends.

UNIT : III characteristics of television as a medium - organizational structure of a television station - cable TV - home video – DTH - television programme formats.

UNIT : IV Scripting for television programmes - TV interviewing - structure of TV news – TV news gathering - news writing - news anchoring, -video jockeying – new trends.

UNIT : V Blog - Vlog - Podcast - Search Engines - Social Media (Facebook, Whatsapp, Twitter, LinkedIn, Wikipedia)

BOOKS FOR REFERENCE

1. Joseph R.Dominick-‘**The Dynamics of Mass Communication**’.Mc Graw Hill, New Delhi.
2. Arul Aram and Nirmaldasan, ‘**Understanding News, Media**’-Vijay Nicole Imprints Pvt.Ltd.Chennai.
3. P.K Ravindranath , ‘**Broadcast Journalism**’-Author Press, New Delhi.
4. Arvind Kumar, ‘ **Digital Media & Weblog Journalism**’, Anmol Publications Pvt. Ltd. New Delhi.2006.
5. Sunil Saxena, **Web Journalism 2.0**, Tata McGraw-Hill, New Delhi.
6. <https://cie.acm.org/articles/new-media-redefining-journalism/>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

39

PART – III ALLIED	TITLE : HISTORY OF ENGLISH LITERATURE – II	Subject Code: 17 UEH A31
Semester : III	Hours : 4 hours / week	CREDITS : 4

Objective: To make the students understand the development of English Literature from Romantic period to Twentieth Century literature.

UNIT – I

1. Precursors of the Romantic Movement
2. Romantic Movement

UNIT – II

1. Romantic Poets : P.B. Shelley, Lord Byron, John Keats.
2. Novelists : Walter Scott and Jane Austen
3. Prose Writers : William Hazlitt and Charles Lamb

UNIT – III

1. Victorian Poets – Lord Tennyson, Robert Browning, Matthew Arnold
2. Victorian Prose Writers - John Ruskin, Thomas Carlyle
3. Victorian Novelists - Thomas Hardy, Charles Dickens, George Eliot

UNIT – IV

1. 20th Century Poets - T.S. Eliot, G.M. Hopkins, W.B. Yeats
2. 20th Century Novelists - James Joyce, Virginia Woolf, D.H. Lawrence
3. War Poets – Rupert Brooke, Wilfred Owen, W.H.Auden

UNIT – V

1. 20th Century Critics - T.S. Eliot, I.A. Richards, F.R. Leavis
2. Dramatists – T.S. Eliot, G.B. Shaw
3. Absurd Dramatists – Samuel Beckett, Harold Pinter, John Osborne.

BOOKS RECOMMENDED:

1. K.R. Ramachandran Nair – Essays on the History of English Literature, Emerald Publications, Chennai 2013.
2. William Henry Hudson – An Outline History of English Literature, B.I. Publications, Madras.
3. www.victorian-era.org
4. www.neoenglishsystem.blogspot.com



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

40

PART – IV SBS	TITLE : WORD POWER	Subject Code : 17 UEH S31
Semester : III	Hours : 3 hours / week	CREDITS : 3

OBJECTIVE: To enrich the vocabulary of the students and to enable them to make use of these words in appropriate context.

UNIT – I

Word formation (Prefixes, Suffixes)

UNIT – II

- a) Compound Nouns
- b) Homonyms
 - 1) Homograph
 - 2) Homophones

UNIT – III

One word substitution (Select 50 words)

- a) Domestic b) Social c) Cultural d) Spiritual e) Academic

UNIT – IV

Feelings and Actions

- a) Pleasant and Unpleasant Feelings b) Speaking
- c) What your body does? d) What animals do?

UNIT – V

Phrasal Verbs (do, make, come, go, get, put)

BOOK RECOMMENDED:

1. Michael McCarthy - English Vocabulary in Use : Upper – Intermediate, Cambridge University Press, Noida, 2013.

Online Sources:

<https://testbook.com>Blog>English>

<https://Catmentor.files.wordpress.com>

<https://www.scribd.com>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

41

Unit – III - One Word Substitution (Select 50 Words)

DOMESTIC	SOCIAL	CULTURAL	SPIRITUAL	ACADEMIC
1. Attic	11. Vandalism	21. Auspicious	31. Ascetic	41. Dissect
2. Stew	12. Wreck	22. Conservative	32. Sycophant	42. Tabloid
3. Puddle	13. Marooned	23. Dogmatic	33. Omnipotent	43. Mandatory
4. Dizzy	14. Monarchy	24. Premonition	34. Temporal	44. Slowcoach
5. Mortgage	15. Ambassador	25. Anklet	35. Sacrosanct	45. Accomplish
6. Possession	16. Constituency	26. Blasphemous	36. Renounce	46. Bibliophile
7. Fluttered	17. Burglary	27. Charisma	37. Humane	47. Anthology
8. Blisters	18. Liable	28. Myth	38. Sin	48. Provisional
9. Ladle	19. Trespassers	29. Norms	39. Boon	49. Verbatim
10. Cumin seeds	20. Downpour	30. Ethics	40. Blessing	50. Aesthetics



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

42

PART – IV NME	Title : CONVERSATIONAL PRACTICE-I	Subject Code:17UEHN31
Semester : III	Hours : 2 hours / week	CREDITS : 2

OBJECTIVE: The *objective* of this course is to increase the students' English communication skills by improving fluency through regular *practice* and speaking drills;

UNIT: I

1. Greeting and Introducing
2. Praising and Complimenting
3. Expressing Sympathy and Apologizing.

UNIT :II

1. Asking Questions
2. Seeking Permission
3. Asking for Information.

UNIT : III

1. Giving Instruction/ direction
2. Offering Suggestions/giving advice
3. Agreeing and Disagreeing.

UNIT : IV

1. Telephone Etiquette
2. Answering a call
3. Leaving a Message.

UNIT :V

1. Welcome Speech
2. Felicitation Address
3. Vote of Thanks.

ONLINE SOURCES

1. www.betteratenglish.com/practice-speaking-english-free
2. www.spokenenglishpractice.com/our-unique-approach/



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

43

IV SEMESTER

S.No	Subject Code	Nature	Subject Title	Hrs/Week	Exam (Hrs.)	CA	SE	Tot	Crd
1.	17UACT41/H41/S41	Part - I	Tamil/Hindi/Sanskrit	6	3	25	75	100	3
2.	17UACE41	Part -II	English – IV	6	3	25	75	100	3
3.	17UEHC41	Part-III Core	Drama	5	3	25	75	100	3
7.	17UEHC42	Part-III Core	Film Appreciation	4	3	25	75	100	3
4.	17UEHA41	Part-III Allied	Literary Forms	4	3	25	75	100	4
5.	17UEHS41	Part-IV SBS	English for Competitive Examinations	3	3	25	75	100	3
6.	17UEHN41	Part-IV NME	Conversational Practice - II	2	3	25	75	100	2
8.		Part-V	Extension Activities	-	-	100	-	100	1
			TOTAL	30					22

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

44

PART-III CORE	Title : DRAMA	Subject Code:17 UEH C41
Semester : IV	Hours : 5 hours / week	CREDITS : 3

Objective: To help the students learn to experiment with elements of drama and explore different dramatic contents, performance styles and theatrical conventions.

UNIT – I

The Origin and Development of Early English Tragedies

UNIT – II

The Origin and Development of Early English Comedies

UNIT – III

John Webster – The Duchess of Malfi

UNIT – IV

Sheridan – School for Scandal

UNIT – V

G.B. Shaw – Candida

BOOK RECOMMENDED:

1. William Henry Hudson – An Outline History of English Literature, B.I. Publications Pvt. Ltd. New Delhi.

ONLINE SOURCES:

- 1.<http://www.thedramateacher.com/types-of-tragedy-for-drama-class/>
- 2.<http://study.com/academy/lesson/dramatic-comedy-history-and-types.html>
3. <http://www.shmoop.com/>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

45

PART-III CORE	Title : FILM APPRECIATION	Subject Code: 17UEHC42
Semester : IV	Hours : 4 hours / week	CREDITS : 3

UNIT : I

Film as a medium- Development of Cinema as a medium of art and communication

UNIT : II

Major Film Movements - Select Great Masters (Charlie Chaplin, Dr.K.Balachandar, Balumahendra , Bharathiraja, Shankar and Bala)

UNIT : III

Indian Classic Cinema- Indian Luminaries of Film and their films.

UNIT : IV

Reading the Visual and Visualizing the Text: Film Language

UNIT : V

Film Appreciation – Concepts of Films – Identity and Issues –Criticism and Film Reviews Writing

BOOKS FOR REFERENCE

Vasudevan, S. Ravi. **Making Meaning of Indian Cinema**. Oxford University Press, New Delhi 2000.

Elango,N. **Film Appreciation for Beginners**. Manimekala Publishing House, Madurai.2009

Jain, Jasbir ed. **Films, Literature & Culture** : Deepa Mehta's Elements Rewat Publication, New Delhi 2007

Maric, Setton. **Film as an Art and Appreciation**, NCERT, New Delhi.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

46

PART-III ALLIED	Title : LITERARY FORMS	Subject Code:17 UEH A41
Semester : IV	Hours : 4 hours / week	CREDITS : 4

OBJECTIVE: To throw more light on the various genres of literature and give an in depth knowledge of assorted components of each genre.

UNIT-I

Poetry and its Kinds – Lyric, Ode, Sonnet, Ballad, Epic, Elegy

UNIT-II

Drama – Tragedy, Comedy, Tragi-Comedy and One Act Plays

UNIT-III

Novel – Kinds (Historical, Social, Picaresque, Stream of Consciousness, Detective novel, Science Fiction) and Short Story

UNIT-IV

Biography, Autobiography

UNIT-V

Essay and its Kinds

BOOKS RECOMMENDED:

1. K.R. Ramachandran Nair – Literary Forms, Emerald Publishers, Chennai, 2013
2. R.J. Rees – English Literature An Introduction for Foreign Readers, Macmillan, Chennai, 2012
3. B. Prasad – A Background to the Study of English Literature, Macmillan, New Delhi, 2013

ONLINE SOURCES:

- <https://literarydevices.net/essay/englishgrammarsecrets.com>
<https://www.britannica.com/art/biography-narrative-genre>
<http://www2.anglistik.uni-freiburg.de/intranet/englishbasics/PoetryTypes01.htm>
<http://www2.anglistik.uni-freiburg.de/intranet/englishbasics/ProseTypes.htm#typesofnovels>
<http://www.literarydevices.com/tragedy/>
<http://www2.anglistik.uni-freiburg.de/intranet/englishbasics/DramaIntro01.htm>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

47

PART-IV SBS	Title : ENGLISH FOR COMPETITIVE EXAMINATION	Subject Code: 17UEHS41
Semester : IV	Hours : 3 hours / week	CREDITS : 3

Objective: To guide the students appear for Competitive Examinations with confidence.

UNIT – I

Vocabulary (Synonyms (30), Antonyms (30), Words often confused (20))

UNIT – II

Analogy Questions

UNIT – III

Spotting Errors (Articles, Simple Prepositions, The Use of Tenses, Conditional Clauses, Question Tags, Subject – Verb Agreement)

UNIT – IV

Idioms (30)

UNIT – V Essay Writing.

BOOKS RECOMMENDED:

- 1.R.P. Bhatnagar- English for Competitive Examinations, Macmillan Publishers India Ltd. Chennai 2012.
2. Radhakrishna Pillai - English for success, Emerald Publishers, Chennai, 2014.

ONLINE SOURCES

1. www.careerride.com/.../english-mcq-for-bank-mba-cat-mat-gmat-ssc-english-for-com...
2. https://onlinecourses.nptel.ac.in/noc17_hs03



ENGLISH FOR COMPETITIVE EXAMINATIONS (SBS)

Unit – I Vocabulary

Synonyms

- | | | |
|----------------|------------------|--------------------|
| 1. Antipathy | 11. Egregious | 21. Ostentatious |
| 2. Ambivalent | 12. Feign | 22. Posthumous |
| 3. Aviary | 13. Hyperbole | 23. Polytheism |
| 4. Beneficiary | 14. Humdrum | 24. Quiver |
| 5. Brag | 15. Imbecile | 25. Recapitulate |
| 6. Chimera | 16. Jingoism | 26. Sojourn |
| 7. Conjugal | 17. Loquacious | 27. Salubrious |
| 8. Demeanour | 18. Meticulous | 28. Upbraid |
| 9. Elucidate | 19. Multifarious | 29. Valour |
| 10. Eulogy | 20. Nihilism | 30. Valetudinarian |

Antonyms

- | | | |
|----------------|----------------|------------------|
| 1. Altruism | 11. Frugal | 21. Pragmatic |
| 2. Ambiguity | 12. Garrulous | 22. Robust |
| 3. Amplify | 13. Hazardous | 23. Recluse |
| 4. Bifurcate | 14. Impromptu | 24. Sagacious |
| 5. Cacophonous | 15. Laconic | 25. Seldom |
| 6. Celebrity | 16. Lanky | 26. Sinister |
| 7. Dormant | 17. Lenient | 27. Teeto taller |
| 8. Extempore | 18. Melancholy | 28. Winsome |
| 9. Fabulous | 19. Miserable | 29. Xenophobia |
| 10. Fraternal | 20. Nebulous | 30. Yearn |

Words often confused

1. Accept, except, expect
2. Adapt, adopt, adept
3. Affection, affectation
4. Berth, birth
5. Beside, Besides
6. Confidant, Confident
7. Dessert, desert
8. Effectual, effective, efficacious, efficient
9. Eminent, imminent
10. Facilitate, felicitate
11. Honorary, honourable
12. Human, humane



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

49

13. Idle, idol, ideal
14. Industrial, industrious
15. Official, officious
16. Persecute, Prosecute
17. Popular, populous, populist
18. Race, raise, raze
19. Verbal, verbose
20. Willing, willful

UNIT – IV- IDIOMS

1. an absent-minded person
2. an arm chair critique
3. a brain wave
3. a big shot
4. a burning question
5. a cock and bull story
6. crocodile tears
7. a dark horse
8. fast living
9. fish out of water
10. a flying visit
11. gift of the gab
12. a hard and fast rule
13. hush money
14. the last straw
15. laughing stock
16. maiden speech
17. a raw deal
18. raining cats and dogs
19. a square deal
20. a tall order
21. teething troubles
22. tall talk
23. the lion's share
24. a wild goose chase
25. add insult to injury
26. the apple of one's eyes
27. shot in the arm
28. storm in a teacup
29. to make both ends meet
30. the fourth estate



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART-IV NME	Title : CONVERSATIONAL PRACTICE-II	Subject Code: 17UEHN41
Semester : IV	Hours : 2 hours / week	CREDITS : 2

OBJECTIVE: The *objective* of this course is to increase the students' English communication skills by improving fluency through regular *practice* and speaking drills;

UNIT: I- Introduction

1. Introducing Oneself
2. Introducing your friend/brother/sister
3. Introducing a famous personality
4. Introducing a chief guest.

UNIT : 2- Description

1. Describing an interesting neighbor you have had.
2. Describing a memorable place
3. Describing your school days
4. Describing an event.

UNIT : 3 – Situation

1. If you were late for an important appointment....
2. If your car tires got flat on the free way
3. If you got lost in an unfamiliar city
4. If you were to interview the Prime Minister...

UNIT : 4 – Narration

1. Narrate a story
2. Film you recently watch
3. Recent interview
4. An interesting Incident.

UNIT :5 - Opinion

1. Your Opinion on Cashless transactions
2. Environment Protection
3. Merits and Demerits of Social media/mass media
4. Youth in Politics

Books Recommended: To be framed

Online Sources

1. www.betteratenglish.com/practice-speaking-english-free
2. www.spokenenglishpractice.com/our-unique-approach/



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

51

V SEMESTER

S.No	Subject Code	Nature	Subject Title	Hrs/Week	Exam (Hrs.)	CA	SE	Tot	Crd
1.	17UEHC51	Part-III Core	Shakespeare	5	3	25	75	100	5
2.	17UEHC52	Part-III Core	Indian Writing in English	5	3	25	75	100	4
3.	17UEHC53	Part-III Core	Twentieth Century Literature	5	3	25	75	100	4
4.	17UEHC54	Part-III Core	English Grammar and Usage	5	3	25	75	100	4
5.	17UEHC55	Part-III Core	Introduction to Literary Criticism	5	3	25	75	100	5
6.	17UEHE51	Part-III Elective	English Language Teaching	5	3	25	75	100	5
7.	16USSS51	SELF STUDY	Soft Skills	-	-	-	100	100	-
			TOTAL	30					27



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

52

PART-III CORE	Title : SHAKESPEARE	Subject Code:17 UEH C51
Semester : V	Hours : 5 hours / week	CREDITS : 5

OBJECTIVE: To introduce the greatness of Shakespeare to the students.

UNIT-I

Twelfth Night.

UNIT-II

Macbeth.

UNIT-III

Richard II.

UNIT-IV

The Tempest.

UNIT-V

1. Theatre and Audience
2. Women in Shakespeare
3. A.C. Bradley's Criticism on Shakespeare.

BOOKS RECOMMENDED:

1. The select topics by Irving Ribner in his *William Shakespeare: Life and Theatres*, Wiley Easter Ltd., New Delhi.
2. Prasad. B, *An Introduction to English Criticism*, Macmillan, 2003

Online Sources

www.gradesaver.com>study-guide

www.cliffnotes.com>twelfth-night

<http://www.sparknotes.com/ntc/tempest>

<http://www.sparknotes.com/shakespeare/richardii>



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : INDIAN WRITING IN ENGLISH	Subject Code: 17UEHC52
Semester : V	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To introduce the students the eminent writers of Indian Writing in English through the study of select literary texts and to help them understand the different genres.

UNIT-I Poetry

- Keki. N. Dhuruwala - Graft
- Nissim Ezekiel - The Night of the Scorpion
- Gieve Patil - On Killing a Tree
- Aurobindo Ghose - The Tiger and the Deer
- Tagore - Gitanjali (35,36)

UNIT-II Prose

- Jawaharlal Nehru - Letters From a Father to His Daughter
 a) The Coming of Man, b) What is Civilization?, c) How Religion Began and Divisions of Labour
- Arundhati Roy - Greater Common Good

UNIT-III Short Story

- R.K. Narayan - An Astrologer's Day
- Rabindranath Tagore - My Lord, The Baby
- Jayanta Mahapatra - The Trunk of Ganesha
- Flora Anne Steel - The Wrestler, A Story of Heroes

UNIT-IV Fiction

- Anita Desai - The Village by the Sea

UNIT-V Drama

- Girish Karnad - Fire and the Rain

BOOKS RECOMMENDED:

1. An Anthology of Indian English Poetry, Orient Longman, 1989.
2. Sheshadri. K.G., Twelve Tales. Anuradha Publications, 2015.
3. Nehru, Jawaharlal, Letters from a Father to His Daughter, Puffin Books, 2004.
4. Gunasekaran. K et.al Eight Short Stories, Pavai Publication, June 2005.

ONLINE SOURCES

- <http://www.gradesaver.com/the-village-by-the-sea/study-guide/summary>
- <http://www.mouthshut.com/review/Letters-From-a-Father-to-His-Daughter-Jawaharlal-Nehru-review-otsurlqrsm>



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : TWENTIETH CENTURY LITERATURE	Subject Code: 17UEHC53
Semester : V	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To make the students understand the importance of modern English writers and their writings and to introduce the different genres of literature.

UNIT-I Poetry

- T.S. Eliot - The Hollow Man
- W.B. Yeats - Easter 1916
- G.M. Hopkins - Windhover
- Wilfred Owen - Anthem for Doom'd Youth

UNIT-II Essay

- D.H. Lawrence - Why the Novel Matters?

UNIT-III Short story

- Somerset Maugham - The Ant and the Grasshopper
- Doris Lessing - To Room 19
- Virginia Woolf - A Haunted House

UNIT-IV Fiction

- George Orwell - Animal Farm

UNIT-V Drama

- G.B. Shaw - Pygmalion

BOOKS RECOMMENDED:

1. Thomas CT, et al, Twentieth Century Verse, Macmillan 2007
2. Abrams, M.H. et al. The Norton Anthology of English Literature, Vol. II, New York, WW. Norton&Co. Inc., 1962

ONLINE SOURCES

- <https://www.cliffsnotes.com/literature/a/animal-farm/about-animal-farm>
- <http://www.sparknotes.com/lit/pygmalion/summary.html>
- <http://www.supersummary.com/to-room-nineteen/summary/>
- <http://www.shmoop.com/hollow-men/summary.html>
- <http://www.englishnotes.in/2016/12/why-novel-matters-dh-lawrence.html>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : ENGLISH GRAMMAR AND USAGE	Subject Code:17 UEH C54
Semester : V	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To make the students understand the nuances of Grammar this will in turn augment them to improve their communication skills.

UNIT-I

The Sentence
 Kinds of Sentences
 Parts of Speech
 Sentence Pattern (SV, SVO, SVC, SVA, SVOC, SVOA, SVIDO)

UNIT-II

Noun-Kinds, Numbers, Gender, Case
 Pronoun- Kinds
 Adjectives — Kinds
 Adverbs — Position of Adverbs

UNIT-III

Verbs- Transitive, Intransitive. Main, Auxiliary
 Tenses and their Usage
 Conjunction
 Voice

UNIT-IV

Prepositions
 Reported Speech
 Degrees of Comparison

UNIT-V

Figures of Speech (Simile, Metaphor, Personification, Metonymy, Synecdoche, Transferred Epithet, Euphemism, Hyperbole, Irony, Pun, Alliteration, Onomatopoeia, Oxymoron, Epigram, Exclamation)

BOOKS RECOMMENDED:

Martin. M, P.C. Wren, High School English Grammar and Composition, S.Chand Publishing, 2005. Radhakrishna Pillai. G, English Grammar and Composition, Emerald Publishers
 Radhakrishna Pillai. G, English for Success, Emerald Publishers

ONLINE SOURCES:

<http://www.enkivillage.com/figure-of-speech.html>
<http://literarydevices.net>

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

56

PART-III CORE	Title : INTRODUCTION TO LITERARY CRITICISM	Subject Code: 17UEHC55
Semester : V	Hours : 5 hours / week	CREDITS : 5

OBJECTIVE: To trace the evolution of literary criticism from the classical period.

UNIT-I

Plato, Aristotle

UNIT-II

Philip Sidney, John Dryden

UNIT-III

Wordsworth, Matthew Arnold

UNIT-IV

T.S. Eliot, I.A. Richards

UNIT-V

Moralistic Approach
Sociological Approach
Psychological Approach

BOOKS RECOMMENDED:

Prasad. B. An Introduction to English Criticism, Macmillan, 2003.
Nagarajan M.S, English Literary Criticism and Theory, Orient Blackswan, 2012
Scott, Wilbur.S, Five Approaches of Literary Criticism, Collier Macmillan, 1962

WEB SOURCES:

<https://www.saylor.org/site/wp-content/uploads/2011/09/ENGL301-The-Early-Origins-of-Literary-Theory.pdf>
http://www.newworldencyclopedia.org/entry/Philip_Sidney
<http://shiraz.fars.pnu.ac.ir/Portal/File/ShowFile.aspx?ID=e95be9b2-622c-422f-a038-896ebe350d58>
<http://home.olemiss.edu/~egibp/spring97/litcrit.html>
<http://www.slideshare.net/JamesLeeOwenTubo/james-16315745>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

57

PART-III ELECTIVE	Title : ENGLISH LANGUAGE TEACHING	Subject Code: 17UEHE51
Semester : V	Hours : 5 hours / week	CREDITS : 5

OBJECTIVE: To trace the evolution of literary criticism from the classical period.

UNIT-I Methods and Approaches

The Translation Method
The Direct Method
Audio Lingual Method
Communicative Approach
Structural Approach

UNIT-II Teaching English at various levels

Different Levels — Aims and Methods
Primary Level
Secondary Level
Tertiary Level

UNIT-III Problems of Teaching English

Teaching of Prose
Teaching of Poetry
Reading and Writing
Formal Grammar

UNIT-IV Material Aids in Teaching English

Charts, Flashcards, Electronic Gadgets

UNIT-V Teaching and Evaluation

Testing and Evaluation Method

BOOKS RECOMMENDED:

Lakshmi, Sharma. K.L., Methods of Teaching English in India, Narain Agarwal, 1970.

WEB SOURCES:

https://en.wikipedia.org/wiki/Language_pedagogy

startalk.ncolctl.org/files/Methods-of-language-teaching.ppt

faculty.mu.edu.sa/download.php?fid=20520

ell.ibu.edu.ba/assets/userfiles/ell/EnglanguageTestingNEvaluation.ppt

<http://www.iosrjournals.org/iosr-jrme/papers/Vol-1%20Issue-2/F0123133.pdf?id=1662>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

58

VI SEMESTER

S. No	Subject Code	Nature	Subject Title	Hrs/Week	Exam (Hrs.)	CA	SE	Tot	Crd
1.	17UEHC61	Part-III Core	Post Colonial Literature	5	3	25	75	100	5
2.	17UEHC62	Part-III Core	Phonetics and Spoken English	5	3	25	75	100	5
3.	17UEHC63	Part-III Core	American Literature	5	3	25	75	100	4
4.	17UEHC64	Part-III Core	Translation Studies: Theory and Practice	5	3	25	75	100	4
5.	17UEHE61	Part-III Elective	Introduction to Literary Theories	5	3	25	75	100	4
6.	17UEHEV1	Part-III Elective	Project & Viva Voce	5	3	40	60	100	4
7.	16UGKB61	SELF STUDY	General Knowledge	-	-	-	100	100	-
			TOTAL	30					26



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : POSTCOLONIAL LITERATURE	Subject Code: 17UEHC61
Semester : VI	Hours : 5 hours / week	CREDITS : 5

OBJECTIVE: To make the students familiar with Postcolonial Literature.

UNIT-I Poetry

- Gabriel Okara - Once Upon a Time
- Allen Cumow - Time
- Taufiq Rafat - The Medal
- Judith Wright - The Harp and the King
- P.K.Page - Adolescence

UNIT-II Poetry

- A.D.Hope - The Death of a Bird
- Noemia De Sousa - If You Want to Know Me
- Yasmine Goonarame - There was a Country
- Lakshmi Kannan - She

UNIT-III Prose

- Ngugi Wa Thiong'o - The Quest for Relevance (Chapter 4-Decolonising the mind)
- Chinua Achebe - My Home Under Imperial Fire Part-I

UNIT-IV Fiction

- Shashi Deshpande - That Long Silence

UNIT-V Drama

- George Ryga - The Ecstasy of Rita Joe

BOOKS RECOMMENDED:

1. Narasimhaiah. C.D, An Anthology of Commonwealth Poetry, Madras, Macmillan India Limited,1990.
2. Thiong'o, Ngugi wa, Decolonising the Mind: the Politics of Language and African Literature, Oxford, 2006
3. Achebe, Chinua, Home and Exile, Oxford University Press, 2000.

WEB SOURCES:

- <https://beamingnotes.com/2015/02/24/upon-time-summary-gabriel-okara/>
- <http://www.bookrags.com/essay-2004/9/25/195959/088/#gsc.tab=0>
- <https://www.enotes.com/homework-help/poem-time-by-allen-curnow-where-some-examples-432803>
- <http://lakshman-gamingworld.blogspot.in/2014/04/the-death-of-bird-d-hopes-death-of-bird.html>
- <https://afrilingual.wordpress.com/2014/01/01/if-you-want-to-know-me-noemia-de-souza/>
- <https://www.enotes.com/topics/ecstasy-rita-joe/critical-essays>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : PHONETICS AND SPOKEN ENGLISH	Subject Code: 17UEHC62
Semester : VI	Hours : 5 hours / week	CREDITS : 5

OBJECTIVE: To make the students familiar with speech organs and phonetic symbols and to train them to transcribe simple words and also to train them to speak simple sentences in English.

UNIT-I

The Organs of Speech
 Speech Mechanism

UNIT-II

Vowels, Semi Vowels, Consonants and its Classification

UNIT-III

Phonetic Transcription of words (Select 100)
 Sentences (Formed out of the given 100 Words)

UNIT-IV

Talking about Weather
 Describing an Experience
 Describing People, Place and Events
 Giving Directions
 Describing Daily Routines

UNIT-V

Group Discussion for Placement
 Job Interviews
 Public Speaking (Welcome Address, Vote of Thanks, Introduction of the Chief Guest)

BOOKS RECOMMENDED:

1. O'Connor. J.D. Better English Pronunciation, Cambridge University Press, 2005
2. Kansakar. T.R, A Course in English Phonetics, Orient Blackswan, 1998
3. Mandal. S.K., How to Succeed in Group Discussions & Personal haerviews, Jaico Publishing House, 2006
4. Balasubramanian.T, A Textbook of English Phonetics for Indian Students, Trinity press, 2014
5. Jones, Daniel, English Pronouncing Dictionary, The English Language Book Society and J.M. Dent & Sons Ltd, 1980

ONLINE SOURCES

www.flf.vu.lt/dokumentai/.../el.../A_Course_in_English_Phonetics.pdf
www.studyenglishtoday.net/english-phonetics.html
<https://www.youtube.com/watch?v=MPsz6QVZeVE>
www.abebooks.com › AbeBooks › Edited by Murali Manohar



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

61

PART-III CORE	Title : AMERICAN LITERATURE	Subject Code: 17 UEHC63
Semester : VI	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To introduce the students the writings of major American writers and to motivate them to understand the different genres of American Literature.

UNIT-I Poetry

Edgar Allen Poe	- A Dream Within a Dream
Emily Dickinson	- I'm Nobody, Who Are You?
Walt Whitman	- O Captain! My Captain!
Wallace Stevens	- The Emperor of Ice Cream
Sylvia Plath	- Lady Lazarus
Robert Frost	- The Gift Outright

UNIT-II Prose

H.D. Thoreau	- Civil Disobedience
Robert Frost	- The Figure a Poem Makes

UNIT-III Short Story

O' Henry	- Ransom of Red Chief
Edgar Allen Poe	- The Black Cat

UNIT-IV Fiction

Ernest Hemingway	- The Old Man and the Sea
------------------	---------------------------

UNIT-V Drama

Arthur Miller	- All My Sons
---------------	---------------

BOOKS RECOMMENDED:

Baym, Nina. Ed. The Norton Anthology of American Literature. Vol.B London: WW.Norton and Company,2003.

Online Sources:

www.sparknotes.com/lit/oldman

www.gradesaver.com/study-guide/

www.universalteacher.org.uk/gcsc/all



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : TRANSLATION STUDIES THEORY AND PRACTICE	Subject Code: 17 UEH C64
Semester : VI	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To give the students an understanding of translation and the various concepts involved in translation and to give hands – on experience in translation by guiding them to translate sentence.

UNIT I- Definition, Methods and Procedures

Definition
 Methods of Translation
 Translation Procedures (Transliteration, Transference, Transcreation, Transposition)
 Translation – Science or Art.

UNIT II –Translation Theories

Dryden
 Roman Jakobsen
 Catford
 Eugene Nida.

UNIT III – History of Translation Theory

Bible Translation
 Translation in 16th, 17th and 18th Century
 Translation in 19th and 20th Century.

UNIT IV – Translating Text

Prose
 Poetry
 Drama
 Science Texts.

UNIT V – Practice

Translation of Sentences from Tamil to English and English to Tamil.

BOOKS RECOMMENDED :

1. Bassnet, Susan Mcguire and Harish Trivedi, Post – colonial Translation : Theory and Practice, London : Routledge 2000
2. S. Kanagaraj and Samuel Kirubakar, The Anatomy of Translation.
3. Dr. S. Kanagaraj, Dr. N. Kalaithaasan, Translatology, Prem Publishers, Madurai – 2003.

Online Sources : https://en.m.wikipedia.org/wiki/Translation_studies
https://en.m.wikipedia.org/wiki/Bible_-_translations_into_English
www.translationdirectory.com/article640



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

63

PART -III ELECTIVE	Title : INTRODUCTION TO LITERARY THEORIES	Subject Code: 17UEHE61
Semester : V1	Hours : 5 hours / week	CREDITS : 4

OBJECTIVE: To introduce the important literary theories to the students.

UNIT I

Introduction to Modernism
Introduction to Postmodernism

UNIT II

Introduction to Structuralism
Introduction to Post Structuralism

UNIT III

Introduction to Post Colonialism

UNIT IV

Introduction to Feminism

UNIT V

Introduction to New Historicism

BOOKS RECOMMENDED

1. Krishnaswamy. N.et al., Contemporary Literary Theory : A Students Companion Macmillan India Ltd, 2001

WEB SOURCES:

www.iep.utm.edu/literary

www.smartmontgomery.com/feminism/



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

64

PART - III ELECTIVE	Title : PROJECT & VIVA- VOCE	Subject Code : 17 UEHEV1
Semester : VI	HOURS : 5 hours / Week	CREDITS : 4

Objectives:

- To make the students concentrate on a particular work of a literary writer.
 - To critically think on a particular idea or theme.
 - To encourage the students to express their ideas on stage.
1. Students must undertake the project work under the guidance of a faculty member.
 2. Report has to be submitted to the guide periodically.
 3. The internal test mark is 40 and the criteria is as follows,
 - a. Two Presentations - 2x10=20marks
 - b. Submission of Project - 10 marks
 - c. Internal Viva-voce - 10 marks
 4. The external examination will be conducted by the external examiners.
 5. The students must submit 2 copies of their Project Report two weeks before the external examination.
 6. The maximum marks for the external examination is 60 and the criteria is as follows,
 - a. Project Report - 20 marks
 - b. Project Presentation - 20 marks
 - c. Project Viva-voce - 20 marks



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

65

I SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs Week	Durati on of exams	CA	SE	Tot	Cre dits
1	17UBNV11	PART – I	வணிகக் கடிதங்கள்	6	3	25	75	100	3
2	17UAC E11	PART – II	English – I	6	3	25	75	100	3
3	17UBNC11	PART – III CORE	Business Environment (Eco.Dept)	6	3	25	75	100	5
4	17UBNA11	PART – III ALLIED	Business Economics (Eco.Dept)	6	3	25	75	100	5
5	17UBNS11	PART – IV SKILL	Financial Accounting Skills	3+1	3	25	75	100	3
6	14UACVE1	PART – IV	Value Education	2	3	25	75	100	2
			Total	30				600	21

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

66

PART - I	Title : வணிகக் கடிதங்கள்	Subject Code : 17 UBNV11
Semester : I	HOURS : 6 hours / Week	CREDITS :3

- Objectives: 1. To make the students, understand the basics of Business Letters**
2. To provide practice in writing Business letters in specific situations

பகுதி 1

வணிகக் கடிதங்கள் - தேவை மற்றும் முக்கியத்துவம் - நோக்கங்கள் - வணிகக் கடிதங்களின் அடிப்படைக் கூறுகள் - வணிகக் கடிதங்கள் பொது அமைப்பு மற்றும் படிவங்கள் - சிறப்புக் கூறுகள் - கடித வகைகள்

பகுதி 2

வியாபாரக் கடிதங்கள் - முனைவு கடிதங்கள் மற்றும் விசாரணைகள்- விலைப்புள்ளிகள் - ஆணையுறுக்கள் - “ஆணையுறு நிறைவேற்றுதல்” - சரக்கு பெற்றுக்கொண்டதை உறுதி செய்தல்.

பகுதி 3

வணிகர் விசாரணை கடிதங்கள் - வியாபார விசாரணை மற்றும் வங்கி விசாரணை – புகார்களும் சரிக்கட்டலும் - நிலுவைத் தொகை நினைவுறுத்தல் - வசூல் செய்தல்.

பகுதி 4

சுற்றுக் கடிதங்கள் - விற்பனைக் கடிதங்கள் - அரசுத்துறை மற்றும் பொதுசேவை அமைப்பு சார்ந்த கடிதங்கள்

பகுதி 5

வங்கிக் கடிதங்கள் - வேலை வேண்டி விண்ணப்பக் கடிதம் - பத்திரிக்கை ஆசிரியருக்கு கடிதங்கள்

குறிப்பு

வணிக நிர்வாகவியல் ஆசிரியர்கள் மட்டுமே இந்தப் பாடத்தை நடத்தவும் விடைத்தாள் மதிப்பீடு செய்யவும் பரிந்துரைக்கப்படுகிறது.

Text Book

1. “வணிகக்கடிதங்கள் ”; - Dr. K. Anbazhagan and Dr. S. Ramar, Merit India Publications, Eighteenth Edition

Reference

1. Commercial Correspondence & Office Management - R.S.N. Pillai & Baghavathi
2. Business communication – by Sharma Gupta- Kalyani publishers.

	Book Title	Chapters
I	“வணிகக்கடிதங்கள் ”; - Dr. K. Anbazhagan and Dr. S. Ramar	I
II	“வணிகக்கடிதங்கள் ”; - Dr. K. Anbazhagan and Dr. S. Ramar	5, 6, 7
III	“வணிகக்கடிதங்கள் ”; - Dr. K. Anbazhagan and Dr. S. Ramar	9, 10, 11
IV	“வணிகக்கடிதங்கள் ”; - Dr. K. Anbazhagan and Dr. S. Ramar	14, 22, 21
V	“வணிகக்கடிதங்கள் ”; - Dr. K. Anbazhagan and Dr. S. Ramar	15, 26,

Websites

1. www.scribd.com
2. <https://www.youtube.com/watch?v=egeyiUpFsaw>
3. <http://www.goodletterwriting.com/formal-letters.html>
4. <http://www.wikihow.com/Write-a-Business-Letter>



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : FINANCIAL	Subject Code : 17 UBN S11
SKILL BASED	ACCOUNTING SKILLS	
Semester : I	HOURS : 4 hours / Week	CREDITS : 3

Objectives: 1. To develop basic accounting skills
To practice book keeping methods

UNIT-I:

Fundamentals of Book Keeping –Meaning - Accounting concepts and conventions- kinds of Accounts –Journalizing Rules – Journal entry.

UNIT-II:

Ledger Postings –Trial Balance.

UNIT-III:

Format of final accounts (Manufacturing, Trading, Profit and Loss Account and Balance Sheet).

UNIT-IV:

Final Accounts- Elementary problems with simple adjustments (Closing Stock, Outstanding Expenses, Prepaid Expenses, Accrued Incomes, Incomes received in Advance, Interest on Capital, Interest on Drawings, Interest on Loan, Interest on Investment, Depreciation, Bad debts)

UNIT-V:

Depreciation- Meaning- Causes and need- Methods-Straight Line Method and WDV Method only

Note: Questions must be asked 60% on problems & 40% on theory.

TEXT BOOKS:

1. Financial Accounting- S.P. Jain, K.L. Narang, Kalyani Publishers, Fifth Edition

REFERENCE BOOKS:

1. Advanced Accounts - R.L.Gupta
2. Advanced Accounts - Arulanandham

Units	Book Title	Chapters
I	Financial Accounting -Jain and Narang.	1
II	Financial Accounting -Jain and Narang.	2
III	Financial Accounting -Jain and Narang.	3
IV	Financial Accounting -Jain and Narang.	3
V	Financial Accounting -Jain and Narang.	4

Websites:

- <https://www.moneyinstructor.com/accounting.asp>
- <http://www.learnaccountingforfree.com/>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 - 2018 onwards)

68

II SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs Week	Durati on of exams	CA	SE	Tot	Cre dits
1	17 UBN V21	PART – I	அலுவலக மேலாண்மை	6	3	25	75	100	3
2	17 UAC E21	PART – II	English – II	6	3	25	75	100	3
3	17 UBN C21	PART – III CORE	Indian Economic System(Eco.Dept)	6	3	25	75	100	5
4	17 UBN A21	PART – III ALLIED	Money and Banking(Eco.Dept)	6	3	25	75	100	5
5	17 UBN S21	PART – IV SKILL	Cost Accounting skills	3 + 1	3	25	75	100	3
6	14 UAC ES1	PART – IV	Environmental Studies	2	3	25	75	100	2
			Total	30				600	21

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

69

PART - I	Title : அலுவலக மேலாண்மை	Subject Code:17UBNV21
Semester : II	HOURS : 6 hours / Week	CREDITS: 3

- Objectives:** 1. To make the students understand the basics of an office and its management.
2. To provide exposure on office functions and
3. To introduce them to the filing systems in office.

பகுதி 1

அலுவலக மேலாண்மை - இலக்கணம் - நவீன அலுவலகத்தின் அமைப்பு முறைகள்:நவீன அலுவலகத்தின் இலக்கணம் செயல்பாடுகள் மற்றும் முக்கியத்துவம்

பகுதி 2

அலுவலக இடவசதி- அலுவலக அமைப்புத்திட்டம். -பணிக்கேற்ற சூழ்நிலை - பணியை எளிதாக்குதல் - தபால்களைக் கையாளுதல் - மையப்படுத்தப்பட்ட அஞ்சல் பணி - உள்வரும் மற்றும் வெளி தொடர்பு

பகுதி 3

கோப்பிலிடுதல் : நல்ல கோப்பீடு முறையின் முக்கிய அம்சங்கள் - கோப்பீட்டு முறைகள் - மையக் கோப்பீட்டு முறை மற்றும் பரவலாக்கப்பட்ட கோப்பீட்டு முறை - கட்டகராதியின் பல்வேறு வகைகள்.

பகுதி 4

அலுவலக இயந்திரங்களும் சாதனங்களும் : பல்வேறு சாதனங்களின் தேவைகள் - அலுவலக இயந்திரங்களைத் தேர்ந்தெடுப்பதற்கான அடிப்படைக் கோட்பாடுகள் - கணிப்பொறி மற்றும் புள்ளி விவரங்களைத் தொகுத்தளிக்கும் இயந்திரம்.

பகுதி 5

அலுவலக அறிக்கைகள் : அறிக்கைகளின் வகைகள் - அமைப்பு மற்றும் அறிக்கைகளின் செயலாக்கம்.

குறிப்பு : வணிக நிர்வாகவியல் ஆசிரியர்கள் மட்டுமே இந்தப் பாடத்தை நடத்தவும் விடைத்தாள் மதிப்பீடு செய்யவும் பரிந்துரைக்கப்படுகிறது.

Text Book

1. அலுவலக மேலாண்மை – By S.M. Sundaram, Sri Meenakshi Publications, 2015 Edition.

Reference

1. Commercial Correspondance & Office Management - R.S.N. Pillai & Baghavathi
2. Office Management – Sharma-Gupta, Kalyani Publishers.

	Book Title	Chapters
I	அலுவலக மேலாண்மை – By S.M. Sundaram	I-1,2,3
II	அலுவலக மேலாண்மை – By S.M. Sundaram	I- 4,5, II
III	அலுவலக மேலாண்மை – By S.M. Sundaram	IV, V
IV	அலுவலக மேலாண்மை – By S.M. Sundaram	VI
V	அலுவலக மேலாண்மை – By S.M. Sundaram	VII

Websites:

- <http://www.himpub.com/documents/Chapter871.pdf>
<https://www.youtube.com/watch?v=Q5n31ABrN2s>
<https://www.youtube.com/watch?v=FrrN6VY6K6w>
<https://www.youtube.com/channel/UCJMaTIs47vKdWxPk3nNcC3w>
<http://bieap.gov.in/Pdf/OAPaperIIIYR2.pdf>



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : COST ACCOUNTING SKILLS	Subject Code : 17 UBN S21
SKILL BASED		
Semester : II	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

1. To make the students understand the basics of cost accounting.
2. To develop their skills in preparing cost sheet.
3. To expose them moderately to various elements of cost.

UNIT-I:

Cost Accounting –meaning- objectives–cost Accounting Vs Financial Accounting – Advantages and limitations of cost accounting

UNIT-II:

Material control-EOQ- Bin card-Stores ledger –material issues – FIFO, LIFO, simple average and weighted average methods.

UNIT-III:

Methods of wage payments- Elementary problems

UNIT-IV:

Overhead –Meaning- allocation and apportionment –Apportionment problem.

UNIT-V:

Unit or output costing –meaning –cost sheet

Note: Question must be asked 60% on problems & 40%on theory

TEXT BOOK:

1.Cost Accounting- R.S.N. Pillai and V. Bagavathi, S. Chand and Company, Recent Edition

REFERENCE BOOKS:

1. Studies in Cost Accounting – Das Gupta
2. Cost Accounting – Dr. L.P. Ramalingam
3. Cost Accounting – Dr. Ramasamy

Units	Book Title	Chapters
I	Cost Accounting- R.S.N. Pillai and V. Bagavathi	1,2
II	Cost Accounting- R.S.N. Pillai and V. Bagavathi	3,5
III	Cost Accounting- R.S.N. Pillai and V. Bagavathi	8
IV	Cost Accounting- R.S.N. Pillai and V. Bagavathi	10
V	Cost Accounting- R.S.N. Pillai and V. Bagavathi	17

Websites:

- www.wiziq.com/tutorials/cost-accounting
<http://www.cimaglobal.com/>



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)

(Syllabus under CBCS w.e.f. 2017 - 2018 onwards)

71

III SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs/Week	Duration of exams	C A	SE	Tot	Credits
1.	17UBNC31	PART – III CORE	Principles of Management	6	3 hrs	25	75	100	4
2.	17UBNC32	PART – III CORE	Modern Banking (Eco. Dept.)	6	3 hrs	25	75	100	4
3.	17UBNC33	PART – III CORE	Organisational Behaviour	6	3 hrs	25	75	100	5
4.	17UBNA31	PART – III ALLIED	Business Statistics	6	3 hrs	25	75	100	5
5.	17UBNS31	PART – IV SKILL	Computers for Managers	4	3 hrs	25	75	100	3
6.	17UBNN31	PART – IV NME	Basic Principles of Management	2	3 hrs	25	75	100	2
			Total	30				600	23

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : PRINCIPLES OF MANAGEMENT	Subject Code : 17 UBN C31
Semester : III	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

1. To make the students understand the basic concepts of management.
2. To make the students aware of the major functions of Management.

UNIT-I: Management – Definition – Nature of Management – Management as an Art – Management as a Science – Management as a Profession – Levels of Management – Pioneers of Management thought – F.W. Taylor, Henry Fayol and Peter F. Drucker.

Unit-II: Planning – Definition – Nature – Advantages and Disadvantages of Planning – Types of Planning – Steps in Planning – Types of Plans.

UNIT-III: Organising - Definition –Nature – Importance - Steps in the process of organising- Formal and Informal Organisation – Distinction– Departmentation– Meaning – Importance – Types – Organisation Structure- Line, Functional, Line and Staff – Committee Organisation.

UNIT-IV: Staffing – Definition- Recruitment – Definition- Selection Definition – Directing – Meaning – Nature – Principles of Directing – Motivation – Meaning – Importance – Leadership – Meaning – Importance – Styles of Leadership.

UNIT-V: Controlling – Definition – Nature – Control Process – Characteristics of an Ideal Control System – Benefits of Controlling.

TEXT BOOK:

1. Business Management- Dr. C. B. Gupta – Sultan Chand & Sons. 8th Revised Edition.

REFERENCE BOOKS:

1. Principles of Management- Dr. T. Ramasamy.
2. Principles of Management- Dr. K.P. Ganesan and Natarajan.
3. Principles of Management- L.M.Prasad.

Units	Book Title	Chapters
I	Business Management- Dr. C. B. Gupta	1,3
II	Business Management- Dr. C. B. Gupta	5,6
III	Business Management- Dr. C. B. Gupta	9,11,15
IV	Business Management- Dr. C. B. Gupta	18,19,20,22,25
V	Business Management- Dr. C. B. Gupta	27

Websites:

- mbaexamnotes.com/principles-of-management.html
sjecnotes.weebly.com/principle-of-management.html

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : ORGANISATIONAL BEHAVIOUR	Subject Code : 17 UBN C33
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To impart basic knowledge on Organisational Behaviour.
2. To make them understand the methods of Morale building and Motivation.

UNIT-I: Organizational behaviour – definition – features of Organizational behaviour –various approaches to study of Organizational behaviour –process of Behaviour- Models of Organizational behavior.

UNIT-II: Group dynamics-definition –types of groups –theories of group formation –problems of informal groups –group norms -types - meaning of group cohesiveness –five stages of group development.

UNIT-III: Definition of Motivation -Theories of motivation – Maslow’s needs Hierarchy theory, Alfred’s ERG theory, Herzberg motivation theory- Motivational techniques.

Unit -IV: Definition of morale-factors affecting morale –cause of low morale – factors improving morale – Measurement of Morale.

UNIT-V: Meaning of Change –forces for changes –types of changes –managing planned change –planning, assessing and implementing the change –causes of resistance to change –overcoming resistance to change.

TEXT BOOK:

1. Organisational Behaviour- L.M.Prasad, Sultan Chand & Sons

REFERENCE BOOKS:

1. Organisational Behaviour – Shashi k.Gupta& Rosy Joshi, Kalayani publishers, New Delhi.
2. Organisational Behaviour- Dr. P.C. Sekar..
3. Organisational Behaviour – Fred Luthans.

Units	Book Title	Chapters
I	Organisational Behaviour- L.M.Prasad	1,6
II	Organisational Behaviour- L.M.Prasad	15
III	Organisational Behaviour- L.M.Prasad	11
IV	Organisational Behaviour- L.M.Prasad	12
V	Organisational Behaviour- L.M.Prasad	25

Websites:

- <https://en.m.wikipedia.org>
- [www.investopedia.com>terms>organizational behaviour](http://www.investopedia.com/terms/organizational_behaviour)
- www.yourarticle.com>organization



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : BUSINESS STATISTICS	Subject Code : 17 UBN A31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To develop statistical basic knowledge for business purpose.
2. To teach the basic tools for Analysis of Data.

UNIT-I: Introduction - Definition – Application of statistics in various fields- Collection of Data – Primary and Secondary data – Framing a Questionnaire – Sampling – Methods of Sampling – Classification – Characteristics- Objects- Types – Frequency Distribution – Cumulative Frequency Distribution – Tabulation – Types – Simple Problems.

UNIT-II : Diagrammatic Presentation – Types – Line Diagram, Bar Diagram, Pie Diagram – Graphic Presentation – Graphs of Frequency Distribution – Histogram, Frequency Polygon, Frequency curves, Ogives – Simple Problems.

UNIT-III : Measures of Central Tendency – Mean, Median, Mode – Geometric mean, Harmonic Mean – Combined mean- correcting incorrect mean (Individual series only) – Merits and Demerits – Problems.

UNIT-IV : Measures of Dispersion – Methods of Measuring Dispersion – Range, Mean Deviation, Standard Deviation, Lorenz Curve – Coefficient of Variation – Consistency of Data.

UNIT-V : Index Numbers – Types - Simple Aggregate Method, Simple Average of Price Relatives – Weighted Index Numbers – Laspeyre’s, Bowley’s Fischer’s and Marshall – Edgeworth Index Numbers – Advantages of index numbers.

Note: 70% of the marks are allotted to problems and 30% to theory

TEXT BOOKS:

1. Elementary Statistical Method: S.P.Gupta, Sultan Chand & Sons, New Delhi.

REFERENCE BOOKS:

1. Business Statistics – R. S. N. Pillai and Bhagavathi.

Units	Book Title	Chapters
I	Elementary Statistical Method: S.P.Gupta	Vol I 1,3,4,5
II	Elementary Statistical Method: S.P.Gupta	6
III	Elementary Statistical Method: S.P.Gupta	7
IV	Elementary Statistical Method: S.P.Gupta	8
V	Elementary Statistical Method: S.P.Gupta	13

Websites:

www.personal.kent.edu/~mshanker/.../Business%20Statistics%20Chapter%20Notes.html

gurukpo.com/business-statistics



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

75

PART - IV	Title : COMPUTERS	Subject Code : 17 UBN S31
SKILL BASED	FOR MANAGERS	
Semester : III	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

1. To train the basic Computer Concepts.
2. To develop the understanding of MS- Office

Unit – I : INTRODUCTION TO COMPUTERS : Definition – Characteristics and capabilities of computers – Generations of computers – classification of computers – Types of computers – Basic principles of operation of a digital computer – Block diagram of computer System – Hardware – CPU, memory (Primary and Secondary) – Input devices, output devices – uses and applications of Computers.

UNIT-II: WINDOWS XP – Introduction to Windows XP - Features – Basic components: Desktop, Icons, Task bar and Channel bar – Start menu – Files and Folders – Windows Explorer – Internet Explorer – Control Panel – Shortcuts – Briefcase.

UNIT-III: MS WORD – Introduction to word processing and MS WORD – Components of Word opening Screen – Creating Word documents- Entering, Editing, Creating bulleted and numbered lists – types of views – spell checker and Grammar – Auto format - Copying and moving text – Applying Fonts and Font - Styles – Aligning and formatting Text – AutoCorrect – Creating Tables and working with tables – mail merge.

UNIT-IV: MS – EXCEL: Introduction to spread sheet – components of EXCEL Opening Screen – Building worksheet. Entering data in worksheet – Editing, Deleting, Copying and moving cells and ranges – Adjusting column width and row height – inserting and deleting cells, rows and columns – using auto-fill - creating and working with formula – functions in Excel - Database in EXCEL – Graphs and charts : Types of charts – Element of a chart – Creating a chart.

UNIT V: MS POWERPOINT: Meaning and Features – Presentation: Creating a presentation using Auto content wizard, Design templates and Blank presentation – Types of views – Opening an existing presentation – editing saving and closing a presentation – Enhancing presentation: Applying Transition effects and animation effects – Spell checking the presentation and adding speaker notes – Inserting objects: Inserting a graph, organization chart, clip Art, sound and video – Running slide show.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

76

TEXT BOOKS:

1. Fundamentals of Computing: P.Sudharsan, RBA Publications, First Edition.
2. M.S.Office, Plain & Simple : Carol Brown & Resources

REFERENCE BOOKS:

1. Fundamentals of Computers: P.K. Sinha.
2. MICRO SOFT OFFICE: Gini Courter and Annette Margins, Publications, New Delhi.
3. MICRO SOFT OFFICE FOR WINDOWS: Steve Saga, Peachpit Press.
4. Fundamentals of Computer: V. Rajaraman, Prentice Hall of India.

Units	Book Title	Chapters
I	Fundamentals of Computing: P.Sudharsan	1
II	Fundamentals of Computing: P.Sudharsan	4
III	Fundamentals of Computing: P.Sudharsan	4
IV	Fundamentals of Computing: P.Sudharsan	4
V	M.S.Office, Plain & Simple : Carol Brown & Resources	14

Websites: www.slideshare.net/hanneq1/pc-for-managers

https://www.studentscholarships.org/.../computer_and_information_systems_manager



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME	Title : BASIC PRINCIPLES OF MANAGEMENT	Subject Code : 17 UBN N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

1. To make the students understand the basic elements of Management.
2. To expose Managerial functions for other major students.

UNIT-I: Management – Definition – Characteristics- Levels.

UNIT-II: Planning – Definition, Characteristic, Advantages and Limitations – Steps in planning.

UNIT-III: Organising - Definition – Steps in organizing - Types (Line, Functional, Line and Staff, Committee) – Delegation of authority.

UNIT-IV: Staffing – Definition, Importance. Directing – Definition, Need.

UNIT-V: Controlling – Meaning, Steps in controlling, Benefits of controlling.

TEXT BOOK:

1. Principles of Management- T. Ramasamy, Himalaya Publishing House, Latest Edition.

REFERENCE BOOKS:

1. Principles of Management- C.B.Gupta
2. Principles of Management- Dr. K.P. Ganesan and Natarajan.
3. Principles of Management- L.M.Prasad

Units	Book Title	Chapters
I	Principles of Management- T. Ramasamy	1,3
II	Principles of Management- T. Ramasamy	6,10
III	Principles of Management- T. Ramasamy	12,13,14
IV	Principles of Management- T. Ramasamy	16,17,18,20
V	Principles of Management- T. Ramasamy	21

Websites:

- mbaexamnotes.com/principles-of-management.html
sjecnotes.weebly.com/principle-of-management.html



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)

(Syllabus under CBCS w.e.f. 2017 - 2018 onwards)

78

IV SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs Week	Duration of exams	CA	SE	Tot	Crd
1.	17UBNC41	PART – III CORE	Elements of Mercantile Law	6	3 hrs	25	75	100	5
2.	17UBNC42	PART – III CORE	Marketing Management	6	3 hrs	25	75	100	5
3.	17UBNC43	PART – III CORE	Industrial Relations (Eco.Dept.)	6	3 hrs	25	75	100	4
4.	17UBNA41	PART – III ALLIED	Business Mathematics	6	3 hrs	25	75	100	5
5.	17UBNS41	PART – IV SKILL	E- Commerce	4	3 hrs	25	75	100	3
6.	17UBNN41	PART – IV NME	Basics of Organizational Behaviour	2	3 hrs	25	75	100	2
7.		PART-V	Extension Activities	-	-	25	75	100	1
			Total	30				700	25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : ELEMENTS OF MERCANTILE LAW	Subject Code : 17 UBN C41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To introduce the basic business laws to the students.
2. To make the students aware of basic labour laws.

UNIT-I : Law of Contract – Definition of Contract – Essential Elements of a valid contract – Classification of Contracts.

UNIT-II : Offer – Meaning – Legal rules as to Offer – Acceptance – Meaning – Legal Rules as to Acceptance – Consideration – Meaning - Legal rules as to consideration

UNIT-III : Stranger to Contract – Discharge of Contract – Remedies for Breach of Contract.

UNIT-IV : Factories Act, 1948 – Definitions – Health – Safety – Welfare – Rules relating to employment and working hours of young persons, adult and women.

UNIT-V:

Trade Unions Act, 1926 – Definitions – Registrations- Cancellation- Rights and Privileges of Registered Trade Union – Amalgamation and Dissolution.

TEXT BOOK:

1. Elements of Mercantile Law – N.D.Kapoor, Sultan Chand and Sons, Recent Edition.

REFERENCE BOOKS:

1. Industrial Law – N.D. Kapoor, Sultan Chand & Sons.
2. Indian Mercantile Law – Davar.
3. Business Law–II -K.C. Garg, V.K. Sareen, Mukesh Sharma

Units	Book Title	Chapters
I	Business Law – N.D. Kapoor	1
II	Business Law – N.D. Kapoor	2,3
III	Business Law – N.D. Kapoor	10,11
IV	Business Law–II - K.C. Garg, V.K. Sareen, Mukesh Sharma	1
V	Business Law–II - K.C. Garg, V.K. Sareen, Mukesh Sharma	4

Websites:

www.sheir.org/mercantile_law_notes.html

<https://www.scribd.com/doc/80682277/Mercantile-Law-Short-Notes-by-Syed-Ali-Raza>



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

80

PART - III CORE	Title : MARKETING MANAGEMENT	Subject Code : 17 UBN C42
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To prepare the students for Marketing field.
2. To make them understand basic elements of Marketing.

UNIT-I: Marketing –definition –nature and scope of marketing –concepts of marketing mix – consumers behavior - buying motives – consumer decision making.

UNIT-II: Product –product classification –product policies –product planning and development - product mix - product life cycle - branding and packing.

UNIT-III: Pricing –pricing objectives –kinds of pricing –new product pricing, Steps in price determination.

Unit -IV: Channels of distribution –channel functions – factors considered in channel selection – retailing and whole selling.

UNIT-V: Sales promotion –objectives –kinds of sales promotion.

TEXT BOOK:

1. Marketing Management – Dr. S.P. Bansal, Kalyani Publications, New Delhi.

REFERENCE BOOKS:

1. Marketing management- Philip Kotler
2. Fundamentals of Marketing –William J.Stanton.
3. Marketing Mangement – R.S.N. Pillai and Bhawathi

Units	Book Title	Chapters
I	Marketing Management – Dr. S.P. Bansal	1,2,3,4
II	Marketing Management – Dr. S.P. Bansal	5,6
III	Marketing Management – Dr. S.P. Bansal	7
IV	Marketing Management – Dr. S.P. Bansal	10,11
V	Marketing Management – Dr. S.P. Bansal	8,9

Websites:

[https://en.m.wikipedia.org/wiki/Marketing Management](https://en.m.wikipedia.org/wiki/Marketing_Management)
www.enotesmba.com/2012/09/mba-n...



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : BUSINESS MATHEMATICS	Subject Code : 17 UBN A41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To develop Quantitative aptitude.
2. To train them on five areas in Business Mathematics.

Unit – I : Set Theory – Set Definition – Operations on sets – Venn diagram – Laws of Sets – Verification of Laws by Venn diagrams and Examples – Solving problems using set theory.

Unit - II: Elements of co-ordinate geometry- Distance between two points – Equation of straight line: Point slope form, Slope intercept form, two point form only – Intersection of lines- Break Even Analysis.

Unit – III: Differentiation – Formulae – Applications of Derivative – UV method – U/V method, function of function (Simple problems)

Unit – IV: Application of Differentiation - Marginal Cost – Marginal Revenue – Elasticity – Maxima and Minima Conditions – Simple Problems.

Unit – V : Matrix – Definition – Types – Addition, Subtraction, Multiplication of Matrices – Matrix Equation – Transpose of Matrix, Inverse of Matrix – Solving Simultaneous Equations by Matrix inverse Method.

Note:

70% of the marks are allotted to problems and 30% to theory.

TEXT BOOK:

1. Business Mathematics – N.K. Nag, Kalyani Publications, New Delhi (Recent edition)
2. Business Mathematics – Sundaresan, Jeyaseelan, S. Chand Company Ltd., New Delhi.

REFERENCE BOOKS:

Units	Book Title	Chapters
I	Business Mathematics – Sundaresan, Jeyaseelan	1
II	Business Mathematics – Sundaresan, Jeyaseelan	1
III	Business Mathematics – Sundaresan, Jeyaseelan	3,4,5,6
IV	Business Mathematics – Sundaresan, Jeyaseelan	7,8,9
V	Business Mathematics – Sundaresan, Jeyaseelan	10

Websites:

- Study.com/academy/course/business-math.html
www.lse.ac.uk/study/undergraduate/.../GONO_BSc_BMS.aspx



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV SKILL BASED	Title : E-COMMERCE	Subject Code : 17 UBN S41
Semester : IV	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

1. To prepare the students for Digital age.
2. To develop knowledge on awareness for E-Commerce.

Unit –I: E-Commerce-Meaning, definition, Pure Vs Partial Electronic Commerce, Driving forces behind E- Commerce, Impact of Electronic Commerce.

Unit – II : Benefits of E – Commerce to Business, Benefits of E – Commerce to Consumers, Disadvantages of E – Commerce, Types of E – Commerce.

Unit – III: Business to Consumer (B2C) Electronic commerce – Factors that influence to buy, Impact of E – Commerce on Traditional Retailing System, On –Line Purchasing Process, Customer service in E- Commerce transactions.

Unit IV: Business to Business (B2B) Electronic Commerce, Difference between B2C buyers and B2B Buyers, Supplier- Oriented B2B E –Commerce, Buyer oriented B2B E – Commerce, Intermediary oriented B2B E – Commerce, On- Line banking, advantages of On- Line banking.

Unit – V: Electronic Payment Systems – Meaning, Types of Electronic payment system, Electronic cash, Electronic cheques and Credit card based Electronic Payment Systems, Smart cards, Electronic Purses.

TEXT BOOK:

E- Commerce –MamtaBhusry, Firewal Media, (An Imprint of Laxmi Publications Pvt Ltd)

REFERENCE BOOKS:

1. E-Commerce – RitendraGoel – New Age International Publisher’s
2. E- Commerce – Strategy, Technologies and Applications – David Whiteley – Tata Mc. Graw Hill Edition.

Units	Book Title	Chapters
I	E- Commerce – MamtaBhusry	1
II	E- Commerce – MamtaBhusry	1
III	E- Commerce – MamtaBhusry	2
IV	E- Commerce – MamtaBhusry	3
V	E- Commerce – MamtaBhusry	9

Websites:

- <https://en.wikipedia.org/wiki/E-Commerce>
www.investopedia.com/terms/e/ecommerce.asp



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

83

PART - IV NME	Title : BASICS OF ORGANISATIONAL BEHAVIOUR	Subject Code : 17 UBN N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

1. To train the students for basic life skills.
To make them develop their personality and quality of life.

Unit – I:Introduction – meaning – scope – goals – role.

Unit – II: Individual behaviour – Personal factor, Environmental factors.

Unit - III: Motivation – Nature, Importance, Techniques.

Unit – IV: Change – Meaning – forces – types – barriers – Techniques to overcome the barriers.

Unit – V:Leadership – Nature, Characteristics, Styles, Functions

TEXT BOOK:

1. Organizational Behaviour- Shashi K. Gupta & Rosy joshi- Kalyani publishers, New Delhi.

REFERENCE BOOKS:

- 1.Organizational Behaviour- L.M. Prasad –Sultan Chand & Sons.
- 2.Personality Development – Dr.T.Bharathi&EG.Pameswaran

Units	Book Title	Chapters
I	Organizational Behaviour- Shashi K. Gupta & Rosy joshi	1
II	Organizational Behaviour- Shashi K. Gupta & Rosy joshi	2
III	Organizational Behaviour- Shashi K. Gupta & Rosy joshi	3,4
IV	Organizational Behaviour- Shashi K. Gupta & Rosy joshi	8
V	Organizational Behaviour- Shashi K. Gupta & Rosy joshi	10

Websites:

- <https://en.m.wikipedia.org>
[www.investopedia.com>terms>organizational behaviour](http://www.investopedia.com/terms/organizational_behaviour)
www.yourarticle.com>organization



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

84

V SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs Week	Duration of exams	CA	SE	Tot	Credits
1.	17UBNC51	PART – III CORE	Operations Management	6	3 hrs	25	75	100	5
2.	17UBNC52	PART – III CORE	Human Resources Management	6	3 hrs	25	75	100	5
3.	17UBNC53	PART – III CORE	Case Analysis	6	3 hrs	25	75	100	5
4.	17UBNE51	PART – III Elective	Financial Management	6	3 hrs	25	75	100	5
5.	17UBNE52	PART – III Elective	Summer Training Report	6	-	25	75	100	5
6.	16USS S51	Self Study	Soft Skills	-	-	-	-	100	-
			Total	30				600	25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

85

PART - III CORE	Title : OPERATIONS MANAGEMENT	Subject Code : 17 UBN C51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To expose the students about the basic concepts of Operations Management.
2. To develop basic awareness on Operations Management.

UNIT-I:Operations management-definition - importance – functions – advantages - production systems - intermittent –continuous –scheduling – meaning – scheduling procedures.

UNIT-II:Plant location-factors affecting plant location-plant layout –principles-types of layout – product-process-combination layout.

UNIT-III:Plant maintenance-merits and demerits - Production planning and control –objectives – functions-work study-method study and work measurement.

UNIT-IV:Purchasing of materials –objectives –procedure – Inventory control techniques –ABC analysis - Productivity improvement and operations strategy –six basic components of operation strategy.

UNIT-V: Material handling-objectives –principles-equipments –quality control-SQC-control charts - value analysis and waste control.

TEXT BOOK:

1. Production and Operation Management- Dr.K. Aswathappa and Prof. K. Shridharabhat, Himalaya Publishing House, Recent Edition.

REFERENCE BOOKS:

1. Production and Operation Management- Dr.B.S.Goel(PragatiPrakashan Publication)
2. Production Management – Elwood Buffa(Johnuron)
3. Integrated Materials Management-Gopalakrishnan(Tata McGraw Hill)

Units	Book Title	Chapters
I	Production and Operation Management- Dr.K. Aswathappa and Prof. K. Shridharabhat	1,4
II	Production and Operation Management- Dr.K. Aswathappa and Prof. K. Shridharabhat	8,9
III	Production and Operation Management- Dr.K. Aswathappa and Prof. K. Shridharabhat	10,18
IV	Production and Operation Management- Dr.K. Aswathappa and Prof. K. Shridharabhat	2,21
V	Production and Operation Management- Dr.K. Aswathappa and Prof. K. Shridharabhat	22,17

Websites:

https://en.wikipedia.org/wiki/Operations_management
www.investopedia.com/terms/o/operations-management



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : HUMAN RESOURCE MANAGEMENT	Subject Code : 17 UBN C52
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To develop human skills in students.
2. To expose students on basic HRM functions.

UNIT-I:

Human resource management –meaning and definition–objectives–scope–functions.Human resource planning –definition –objectives –need and importance –human resource planning process.

UNIT-II:

Job analysis- job description- Job specification and job evaluation- Recruitment –factors affecting recruitment –sources of recruitment –recruitment process- Definition of selection – selection methods and process- placement Induction.

UNIT-III:

Definition of training –need and importance –steps in training programme –types of Training – Training Methods.

UNIT-IV:

Wage and salary administration-objectives and principles of wage and salary administration –components –methods of wage payments.

UNIT-V:

Performance appraisal –meaning and methods of performance appraisal.

TEXT BOOK:

1. Human Resource Management – S.S. Khanka, S.Chand Publications.

REFERENCE BOOKS:

1. Human Resource Management- Subba Rao
2. Human Resource Management- ShasiK.Gupta&Rosy Joshi- Kalyani Publishers
3. Personal management & Industrial Relations-Tripati& Reddy Himalaya publishing house

Units	Book Title	Chapters
I	Human Resource Management – S.S. Khanka	1,4
II	Human Resource Management – S.S. Khanka	5,6,7,8,14
III	Human Resource Management – S.S. Khanka	10,15
IV	Human Resource Management – S.S. Khanka	15
V	Human Resource Management – S.S. Khanka	28

Websites:

- https://en.wikipedia.org/wiki/Human_resource_management
www.inc.com/encyclopedia/human-resource-management.html



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

87

PART - III CORE	Title : CASE ANALYSIS	Subject Code : 17 UBN C53
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

The main objectives of this course is to make the students get into the habit of diagnosing problems, analyzing and evaluating alternatives and formulating workable plans of actions through classroom participation and discussion.

One case per week has to be discussed by the students. Approximately 12-13 cases will be discussed during the semester. The cases should be distributed by the teacher concerned on the different functional areas of the management.

The students should be trained to discuss the cases in small groups and develop analytical thinking and to present the findings to the common class. The chairmanship should be rotated among the students. This is to develop conference leadership. They should also be trained to write case reports.

The examiner should give a case or case let and asks the students to identify the problem in the case. Analyse the causes and suggest suitable alternative courses of action after considering the relative merits and demerits of each alternative.

AREA OF CASES DEALT:

- i. General Management Cases
- ii. Cases from Organisational Behaviour
- iii. Cases from Marketing Management
- iv. Cases from Human Resource Management

Question Paper Pattern:

“Analyse the following case and write your report”.

The marks may be allocated as follows:

1. Summary of case facts and identifying the problem situation of issues (10 Marks).
2. Analyzing the cause of the problem situation of issues (10 Marks)
3. Stating the various alternative courses of action possible (15 Marks)
4. Discussing the relative merits and demerits of each alternatives (15 Marks)
5. Choosing the best alternative course of action and stating the reason for the choice (10 Marks)
6. Report format and conclusions and overall presentation (15 Marks).

REFERENCE BOOKS:

1. Principles and Practices - Dinakar Pagare
2. Marketing Management - C.B. Mamoria & Satish Mamoria
3. Human Resource Management - C.B. Gupta
4. Organisational Behaviour - B.P. Singh & T.N. Chabbria



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : FINANCIAL MANAGEMENT	Subject Code : 17 UBN E51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To teach basics of Financial Management.
2. To develop working knowledge on basic Financial Management concepts.
3. To introduce them with various Corporate Financing Options.

UNIT-I:

Nature of financial management – objectives of the firm- profit maximization Vs wealth maximization- Functions of finance – Organisation of finance function – Controller Vs treasurer - Investment decision- financing decision and dividend decision.

UNIT-II:

Sources of capital –long term, intermediate term and short term -types of securities- debt, equity and preferred stock -capital structure planning - EBIT - EPS analysis.

UNIT-III:

Working capital and cash management –working capital policies- Management and determinants of working capital-Estimation of Working Capital and cash budget.

UNIT-IV:

Cost of capital- cost of debt- cost of equity- cost of retained earnings and weighted average cost of capital.

Dividend decision –factors affecting dividend decision –alternative forms of dividends.

UNIT-V:

Techniques of capital budgeting –capital budgeting process- time value of money – investment evaluation methods- payback period, accounting rate of return, net present value and internal rate of return. (Problem on IRR to be excluded).

NOTE: Question must be asked 60% on theory 40% on problems.

TEXT BOOK: Financial management-Shasi Gupta Sharma, Kalyani Publishers, New Delhi. (recent edition)

REFERENCE BOOKS:

1. Financial Management –I.M. Pandey
2. Financial Management- Khan and Jain

Units	Book Title	Chapters
I	Financial management- Shasi Gupta Sharma	1
II	Financial management- Shasi Gupta Sharma	2,3
III	Financial management- Shasi Gupta Sharma	4,5
IV	Financial management- Shasi Gupta Sharma	7
V	Financial management- Shasi Gupta Sharma	9.10

Websites:

- www.managementstudyguide.com/financial-management.htm
www.yourarticlelibrary.com/financial-management/financial-manage...



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

89

PART - III ELECTIVE	Title : SUMMER TRAINING REPORT	Subject Code : 17 UBN E52
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To get the students exposed to various business practices being performed in different industrial units
2. To make the students aware of challenges in running an enterprise and have them to gain first hand knowledge on how to ward off such challenges.

RULES GOVERNING PROJECT (INSTITUTIONAL TRAINING)

- i. Each student should undergo 4 weeks institutional training under a manager during the fourth semester summer vacation and attendance certificate from the organisation is to be submitted to the H.O.D. through the Faculty Guide and it is to be inserted in the report.
- ii. He/ She shall undergo the above training in the organisation approved by the Faculty Guide.
- iii. The student has to submit two copies of the report in not less than 50 word document pages.
- iv. During the work load allotted for Project (Institutional Training) (5hrs/week) the following activities must be undertaken:
 - a. Report Discussion by the guide and student.
 - b. Report writing
 - c. Report presentation by the students in the class for general discussion.
- v. The Project (Institutional Training) report will be evaluated by the Faculty Guide. The student has to appear for a Viva-Voce. The Viva-Voce panel will consist of the Faculty Guide and H.O.D.
- vi. The Project (Institutional Training) shall be evaluated for a total of 100 marks as specified below.

Internal = 25 Marks (Viva – Voce = 25)	External = 75 Marks (Report Writing = 75)
---	--
- vii. If any candidates fail to secure pass in Project (Institutional Training) he/she has to undergo the institutional training once again after the completion of the course.
- viii. The training report must contain the following:
Introduction, Reason for selecting particular firm, Industry Profile, Company profile, Product Profile, Purchase procedures of raw material – Form of Organisation, Functions of various departments, Details of marketing of the products, Remarks and Conclusion.



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)

(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

90

VI SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs/Week	Duration of exams	CA	SE	Tot	Credits
1.	17UBNC61	PART – III CORE	Entrepreneurship Development	6	3 hrs	25	75	100	5
2.	17UBNC62	PART – III CORE	Management Accounting	6	3 hrs	25	75	100	5
3.	17UBNC63	PART – III CORE	Services Marketing	6	3 hrs	25	75	100	5
4.	17UBNC64	PART – III CORE	Research Methodology	6	3 hrs	25	75	100	5
5.	17UBNE61	PART – III Elective	Project work	6	-	25	75	100	5
6.	16UGKB61	Self Study	General Knowledge	-	-	-	-	100	-
			Total	30				600	25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : ENTREPRENEURSHIP DEVELOPMENT	Subject Code : 17 UBN C61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To make the students aware of the basic concepts of Entrepreneurship.
2. To get them exposed to various institutions helping Entrepreneurs.

UNIT-I: Entrepreneur – Definitions – Characteristics of an Entrepreneur – Functions of an Entrepreneur – Entrepreneur Vs Manger - Types of Entrepreneurs.

UNIT-II: Women Entrepreneurs – Concepts – Factors influencing women entrepreneurs – types of women entrepreneurs – problems of women entrepreneurs – Remedial measures

UNIT-III: Project Identification – Meaning and Definition of Project – Project Classification – Project Life Cycle. Project Report – Meaning – Components of Project report.

UNIT-IV: Institutional Support to Entrepreneurs – Institutions at National Level – Industry Associations – Industry Related Research Institutions – Specialized Training Institutes – Institutions at Tamil Nadu. Institutional Finance to Entrepreneurs – State Financial Corporations (SFCs) – Small Industries Development Bank of India (SIDBI) – Commercial Banks.

UNIT-V: Incentives for Small-Scale Units – Meaning – Objectives – Subsidy – Meaning – Central Government Subsidy Schemes – Tax Concessions – Assistance – Subsidy Schemes of Government of Tamil Nadu. Sickness in Micro, Small and Medium- Definition of Sick unit – Causes of Industrial Sickness - Measures to Prevent Sickness

TEXT BOOK:

Entrepreneurship Development – E. Gordan, K. Natarajan, Himalaya Publishing House, 5th Revised Edition.

REFERENCE BOOKS: ENTREPRENEURSHIP DEVELOPMENT: P.Saravanavel

ENTREPRENEURSHIP DEVELOPMENT: Jeyashree Suresh

Units	Book Title	Chapters
I	Entrepreneurship Development – E. Gordan, K. Natarajan	1
II	Entrepreneurship Development – E. Gordan, K. Natarajan	5
III	Entrepreneurship Development – E. Gordan, K. Natarajan	8
IV	Entrepreneurship Development – E. Gordan, K. Natarajan	12,13
V	Entrepreneurship Development – E. Gordan, K. Natarajan	14,18

Websites:

- https://www.tutorialpoint.com/entrepreneurship_development/entrepreneur...
- https://en.wikipedia.org/.../Entrepreneurship_Development_institute_of



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : MANAGEMENT ACCOUNTING	Subject Code : 17 UBN C62
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To teach basic tools for Managerial Decision Making.
2. To impart working knowledge on basic FSA.

UNIT-I: Management accounting – meaning- nature- functions- scope- advantages and disadvantages- management accounting Vs Financial accounting- financial statement analysis-comparative- common size trend percentages.

UNIT-II: Ratio analysis – meaning- mode of expression- merits and demerits –classification of ratios (Simple problems only) - DuPont control chart.

UNIT-III: Fund flow statement – meaning- merits and demerits – preparation of fund flow statement without adjustment - Cash flow statement – meaning merits and demerits - preparation of cash flow statement (Simple problems only).

UNIT-IV: Marginal costing – meaning - merits and demerits - Breakeven point - Application of marginal costing.

UNIT-V: Budgetary control – meaning – objectives- merits and demerits- steps in Budgetary control –classification of budgets simple problems on cash budget, flexible budget, production budget, and sales budget- zero base budgeting.

Note:60% Marks for theory and 40% marks for problems.

TEXTBOOK:

1. Management Accounting- Shashi Gupta, Sharma, Neeti Gupta, Kalyani Publishers, New Delhi. Edition: 2013.

REFERENCE BOOKS:

1. Management Accounting - R.S.N.Pillai and Bagavathi
2. Management Accounting - S.N. Maheswari

Units	Book Title	Chapters
I	Management Accounting- Shashi Gupta, Sharma, Neeti Gupta	1,2,3
II	Management Accounting- Shashi Gupta, Sharma, Neeti Gupta	4
III	Management Accounting- Shashi Gupta, Sharma, Neeti Gupta	5,6
IV	Management Accounting- Shashi Gupta, Sharma, Neeti Gupta	7
V	Management Accounting- Shashi Gupta, Sharma, Neeti Gupta	8

Websites:

www.careerride.com/fa-management-accounting.aspx
icai.org/post.html?post_id=10161



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : SERVICES MARKETING	Subject Code : 17 UBN C63
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. Considering the importance of Services Marketing and Scope for employment in Industry, the course is offered to teach Services Marketing Mix.

UNIT-I: Services Marketing – Introduction - types – nature – characteristics – classification of services – difference between services and products – managing demand and supply in services.

UNIT-II: Services marketing mix – Overview.

Product: Core Services, Peripheral Services.

Pricing: Basis of Pricing.

Promotion: Marketing Communication Mix, Promotion Techniques.

UNIT-III: Place: Channels of Distribution – Types.

People: Developing Customer Conscious Employees – Empowering People – Benefits.

Physical Evidence: Peripheral Evidence – Essential Evidence.

UNIT-IV: Process: Designing the process – services as a system- Automation-Customisation.

Marketing Strategy- External Marketing- Internal Marketing.

UNIT-V: Service Quality – Dimensions – Influencing expectations – Customer Expected Quality – Tools for achieving Service Quality – Causes of Service Quality problem – Principles guiding Improving of Service Quality.

TEXTBOOK:

1. Services Marketing – Appaniah, Reddy, Anil Kumar, Nirmala - Himalaya Publishing House

REFERENCE BOOKS:

1. Services Marketing – S.M. Jha - Himalaya Publishing House
 Services Marketing - Vasanti Venugopal, Raghu, V.H - Himalaya Publishing House

Units	Book Title	Chapters
I	Services Marketing – Appaniah, Reddy, Anil Kumar, Nirmala	1,2,3
II	Services Marketing – Appaniah, Reddy, Anil Kumar, Nirmala	4,5,6,7
III	Services Marketing – Appaniah, Reddy, Anil Kumar, Nirmala	8,9,10
IV	Services Marketing – Appaniah, Reddy, Anil Kumar, Nirmala	11,13
V	Services Marketing – Appaniah, Reddy, Anil Kumar, Nirmala	14

Websites:

- www.marketing-schools.org/types-of-marketing/services-marketing.html
www.marketingteacher.com/introduction-to-services-marketing/



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
(Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

94

PART - III CORE	Title : RESEARCH METHODOLOGY	Subject Code : 17 UBN C64
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To teach them basic Research methodology
2. To prepare them theoretically for their Field Work.

UNIT-I:

Research Methodology – An Introduction – Meaning – Objectives – Types – Significance – Problems encountered by Researchers in India – Criteria of Good Research- Research Process – Important Concepts relating to Research Design.

UNIT-II:

Sampling Fundamentals – Samples Design - Measurement and scaling Techniques.

UNIT-III:

Methods of Data Collection - Questionnaire Construction – Methods.

UNIT-IV:

Processing and Analysis of Data - Hypothesis functions – Importance – Types – Characteristics.

UNIT-V: Interpretation and report writing - Use of library and internet in Research.

TEXT BOOK:

Research Methodology, Methods & Techniques – Kothari – Wiley Easter Ltd., Publications (Second Edition)

REFERENCE BOOKS:

1. Research Methods in Social Sciences – Dr. S. Nakkiran Dr. R. Selvaraju – Himalaya Publishing House.
2. Research Methodology – Dr. A. Mustafa – Nayas Publications, Madurai.

Units	Book Title	Chapters
I	Research Methodology, Methods & Techniques – Kothari	1,2,3
II	Research Methodology, Methods & Techniques – Kothari	4,5
III	Research Methodology, Methods & Techniques – Kothari	6
IV	Research Methodology, Methods & Techniques – Kothari	7,9
V	Research Methodology, Methods & Techniques – Kothari	14

Websites:

- www.modares.ac.ir/uploads/Agr.Oth.Lib.17.pdf
<https://en.wikipedia.org/wiki/Methodology>



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF BUSINESS ADMINISTRATION(B.B.A)
 (Syllabus under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : PROJECT WORK	Subject Code : 17 UBN E61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

1. To impart practical knowledge on business field.
2. To encourage them to undertake a mini project.

RULES GOVERNING FIELD STUDY IN VI SEMESTER

1. Each student should undergo 3 weeks field study in any area during middle of the VI semester outside the college.
2. The student has to submit the field study report in two copies in not less than 50 type written pages.
3. The student must decide the topic, construct the questionnaire if any and get the approval of the guide before leaving for field work.
4. The field study report will be evaluated by the faculty guide, the H.O.D and another faculty. The student has to appear for a viva voce that will be conducted before end of the march. Presence of External examiner in Viva panel is optional.
5. If the student fails to make the field study and fails to submit the report, he will not be permitted to appear for the 6th semester examinations.
6. The field study project report must contain the following:
 - a. Introduction
 - b. Objectives
 - c. Methodology
 - d. Data analysis
 - e. Findings
 - f. Suggestions
7. The report submitted will be evaluated as follows.

Report writing -	75
Viva-voce -	25

Total =	100

8. 40% of the aggregate (Project evaluation + Viva-voce) is passing minimum.
9. No separate pass minimum for the viva – voce.
10. 27 Marks out of 75 is the pass minimum for the project evaluation.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

96

I SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17UACT11	Part - I	Tamil	6	3	25	75	100	3
	17UACH11		Hindi						
	17UACS11		Sanskrit						
2	17 UAC E11	Part -II	English	6	3	25	75	100	3
3	17 UCP C11	Core – 1	Commercial Law	7	3	25	75	100	5
4	17 UCP A11	Allied-1	Financial Accounting I	6	3	25	75	100	5
5	17 UCP S11	SBS-1	Basic Management Concepts	3	3	25	75	100	3
6	14 UAC VE1		Value Education	2	3	25	75	100	2
			Total	30					21

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

97

PART - III CORE	Title : COMMERCIAL LAW	Subject Code : 17 UCP C11
Semester : I	HOURS : 7 hours / Week	CREDITS : 5

Objectives:

- To make the students understand the basic concepts of business laws.
- To familiarize with the subjects meant for ACS Executive Programme.

Unit I:

Commercial Law – Meaning – Formation of Contract, Essential Elements of Contract
Consensus – ad idem, Proposal and Acceptance, Conclusion of Contract Lawful Consideration,
Capacity of Parties, Free and real consent – Mistake Misrepresentation, Fraud, Co-ercion, Undue
influence, Lawful Object.

Unit II:

Classification of Contract – Express and Implied Tacit, Valid, Void and Voidable
executed and Executory, Unilateral and Bilateral, Quasi-Contract. Discharge of Contract,
Performance, Tender, Novation, Impossibility, Operation of Law, Breach of Contract.

Unit III:

Remedies for Breach of Contract, Damages –types of damages, Specific Performance
and Injunction.

Unit IV:

Special contracts – Indemnity - Meeing and differences between Indemnity and
Guarantee, Rights of surety, discharge of surety.

Unit V:

Bailment- Meaning – Types – Rights and duties of bailor and bailee – Pledge – Rights
and duties of Pawnor and Pawnee – Pledge by non – owners.

Text Book: Elements of Mercantile Law – N.D. Kapoor

Books Recommended:

Commercial Law – Sen & Mitra
Business Law – R.S.N. Pillai & Bhagawathi

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

98

PART - III ALLIED	Title : FINANCIAL ACCOUNTING- I	Subject Code : 17 UCP A11
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To introduce the basic concepts of Accountancy.
- To make them understand Accounting concepts and conversions, principles, Rules etc.

Unit I:

Accounting concepts and conventions, Principles concepts, Postulates, Double Entry System of Book keeping, Rules, Limitation, Collection & Recording of Financial Data, Journal, Ledger sub-division of journal, Trial Balance.

Unit II:

Final Accounts of sole traders – Profit and loss a/c and Balance Sheet.

Unit III:

Bills of Exchange, Trading & Accommodation Bills, Renewal Dishonour due to insolvency of returning of Bills.

Unit IV:

Account current- Average due date, Bank Reconciliation statement.

Unit V:

Depreciation and rates of Depreciation, Straight Line Method, Written Down Value, Rate of Depreciation, Annuity method - Sinking fund methods only.

Text Book: Advanced accountancy – Reddy moorthy

RECOMMENDED BOOKS:

Advanced accountancy – R.L.Gupta & Radhaswamy.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

99

PART - IV	Title : BASIC MANAGEMENT	Subject Code : 17 UCP S11
SKILL BASED	CONCEPTS	
Semester : I	HOURS : 3 hours / Week	CREDITS : 3

BASIC MANAGEMENT CONCEPTS

Objectives:

- To make the students understand the functions of the Management and theories of the Management.
- To make the students learn about the types of originations.

1. Management -Definition, Management Vs Administration – Importance – Functions of Management.
2. Planning – Definition – Features – Merits and demerits.
3. Organization – Types of organization only
4. Communication – Types of Communication only
5. Motivation – Theories of motivation only.

Text Book: Business Management -Dinkar Pagare

BOOKS RECOMMENDED:

1. Principles and practice of management” -L.M.Prasad.
2. Principles of management – Dr. K. Natarajan & K.P. Ganesan.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

100

II SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17UACT21	Part - I	Tamil	6	3	25	75	100	3
	17UACH21		Hindi						
	17UACS21		Sanskrit						
2	17 UAC E21	Part -II	English	6	3	25	75	100	3
3	17 UCP C21	Core – 2	Industrial Law	7	3	25	75	100	6
4	17 UCP A21	Allied-2	Financial Accounting – II	6	3	25	75	100	5
5	17 UCP S21	SBS-2	Business Correspondence and Report Writing	3	3	25	75	100	3
6	14 UAC ES1		Environmental Studies	2	3	25	75	100	2
			Total	30					22

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

101

PART - III CORE	Title : INDUSTRIAL LAW	Subject Code : 17 UCP C21
Semester : II	HOURS : 7 hours / Week	CREDITS : 6

Objectives:

- **To make the students aware of the Rules and Regulations governing the Industries in India and the various important laws relating to the workmen.**

Unit I:

Factories Act – Definition – Health, Safety Welfare measures, working hours, Annual Leave with wages, Women and Young workers

Unit II:

The workmen's compensation Act 1923 – Definition- Disablement – Methods of calculating compensation – Rules and Payment of Compensation.

Unit III:

The Employee's State Insurance Act 1948, Definition- ESI Fund and its uses, Benefits provided in the Act.

Unit IV:

The payment of Gratuity Act 1972 – Definition – Nomination – Payment of Gratuity, Trade Unions Act 1926. Definition – Registration of TV – Privileges of registered TV.

Unit V:

The Industrial Disputes Act 1947 – Definition of Individual and Collective disputes, Strike- lock out and Lay Off – Machineries for settling of Industrial disputes.

Text Books:

1. Industrial law – N.D. Kapoor.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

102

PART - III	Title : FINANCIAL ACCOUNTING- II	Subject Code : 17 UCP A21
ALLIED		
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To make the students learn more about the Accountancy Practices of various
- Trading and non Trading organizations and various forms of the business.

Unit I:

Accounts of Non-Trading concerns – Income & Expenditure A/c, Receipts & Payments Accounts.

Unit II:

Consignment Accounts, Normal Loss and abnormal Loss – Value of Closing Stock (Cost Price & Invoice Price Methods)

Unit III:

Joint venture- Methods – Individual Venture Book, Memorandum Methods – Separate set of books

Unit IV:

Voyage Accounts- Complete and Incomplete Voyage- Investment A/c.

Unit V:

Single Entry System – Statement of Affairs Method, Conversion Method-simple Problems only.

Text Book: Advanced accounts – Reddy & Moorthy.

Books for study:

Advanced accounts – R.L. Gupta & Radhaswamy.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

103

PART - IV SKILL BASED	Title : BUSINESS CORRESPONDENCE AND REPORT WRITING	Subject Code : 17 UCP S21
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To make the students learn about the Preparation of business letters and Report writing and its types.

Unit I:

Business letters – Qualities of a business letter – Structure of a business letter – Kinds of business letter.

Unit II:

Application letters- Difference between Application and sales letter – Types of Application letters.

Unit III:

Orders – Contents of an order letter – Complains – Causes for Complains- letter of Complaint.

Unit IV:

Collection letters – Stages in Collection letters – Circular letters – Objectives- Situations for writing a circular latter.

Unit V:

Report – Meaning – Definition – Characteristics of a good report – Importance of Reports – Classification of Reports.

Text Book: Modern Commercial Correspondence – S. Chand. R.S.N.Pillai Bagavathi.

Books for Reference:

1. Business correspondence – Rajendra paul & Korlahalli.
2. Business correspondence – R.S.N. Pillai & Bhagavathi.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

104

III SEMESTER

Sl. No .	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	C A	SE	Tot	Crd
1	17UACT31 /H31 /S31/	Part - I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	17UACE31	Part -II	English	6	3	25	75	100	3
3	17UCPC31	Core - 3	Company Law & Secretarial Practice - I	4	3	25	75	100	3
4	17UCPC32	Core - 4	Advanced Financial Accounting - I	4	3	25	75	100	4
5	17UCPA31	Allied-3	Managerial Economics (Eco. Dept)	5	3	25	75	100	5
6	17UCPS31	SBS-3	Company Administration	3	3	25	75	100	3
7	17UCPN31	NME-1	Basic Marketing concepts.	2	3	25	75	100	2
			Total	30					23

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

105

PART - III CORE	Title : COMPANY LAW & SECRETARIAL PRACTICE – I	Subject Code : 17 UCP C31
Semester : III	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

- To make the students realize the role of the secretaries in companies and duties of the secretary at the incorporation pre and post, allotment of shares etc.

UNIT – I

Company Definition and Characteristics - Types of companies- Privileges enjoyed by a Private Company.

UNIT – II

Promotion – Promoters – Functions of Promoters – Preliminary contacts – Memorandum of Association – Articles of Association – Alteration of Memorandum of Association and Articles of Association.

UNIT – III

Prospectus – Commencement of business – Duties of secretary at pre and post Incorporation stages.

UNIT – IV

Shares – Types – Transfer and transmission of shares – Allotment of shares.

UNIT – V

Allotment of shares- irregular allotment – effects of irregular allotment – secretarial duties.

Text Book : Company and Secretarial Practice - P.K. Ghosh & Dr. V.Balachandran

Reference Books:

Company Law & Practice - N.D. Kapoor

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

106

PART - III CORE	Title : ADVANCED FINANCIAL ACCOUNTING - 1	Subject Code : 17 UCP C32
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- **To make the students learn about the secretary, methods suitable for the branches, departmental stores, hire purchase systems, Instalment system and Royalty etc.**

UNIT – I

Branch Accounts – Methods – Cost price, Invoice Price.(Excluding foreign branches)

UNIT – II

Departmental Accounts – Bases Of Apportionment, Trading and P&L account, Inter Departmental Transfer @ cost Price Only.

UNIT – III

Hire Purchase Accounts (Excluding HP Trading Account)- Default and Repossession- Partial and Full Possession.

UNIT – IV

Instalment System, Insurance Claims (excluding Loss of profit)

UNIT - V

Royalty Account (Excluding Sub-Lease) – in the books of lesser and lessee.

Text Book : 1. Advanced Accountancy – R.L. Gupta and M. Radhaswamy

Reference Books:

1. Advanced Accounts – M.C. Shukla and T.S. Grewal
2. Advanced Accountancy – M.A. Arulandandam and K.S. Raman



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

107

PART - IV SKILL BASED	Title : COMPANY ADMINISTRATION	Subject Code : 17 UCP S31
Semester : III	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- **To make the students familiar with the history and growth and development of company law Administration and various functions such as Registrar, Regional Director, Tribunal Secretary and Managing Director.**

UNIT – I Company Law Administration – History and Growth.

UNIT – II Registrar of companies – Regional Directors – Company Law Tribunal – Advisory committees.

UNIT – III Secretary – Meaning – Different types of secretaries – Functions of Company Secretary.

UNIT – IV Managerial Remuneration -Ceilings under the Companies Act 2013.

UNIT – V Managing Director – Appointment- Powers of Managing Director.

Text Book : Company Secretarial Practice- P.K. Ghosh & Dr. V. Balakrishnan

Reference Books:

Company Law and Secretarial Practice- N.D. Kapoor

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

108

PART - IV NME	Title : BASIC MARKETING CONCEPTS	Subject Code : 17 UCP N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To impart knowledge to the students about marketing.
- To equip them to appear for MBA with marketing as specialization.

UNIT – I

Marketing -Meaning, Definition, Importance, Nature, Market- Meaning, Classification Advantages & Disadvantages of marketing.

UNIT – II

Function of Marketing- Buying – meaning, types, importance salesmanship meaning, Selling – meaning, , standardization, Grading and warehousing.

UNIT – III

Branding – meaning, types, importance, Packaging- importance in modern marketing, Transportation –utilities to product, types, merits, financing – meaning, Importance, Risk bearing – meaning importance.

UNIT – IV

Channels of Distribution – Direct Selling, Manufacturer- Wholesaler, Consumer, Manufacturer, Retailer, consumer.

UNIT – V

Marketing mix – 4Ps, of Marketing Product, Price, Promotion and physical distribution, Their importance, Merits & Demerits Product Life Cycle.

Text Book: 1. Dr.N.Rajan Nair, Marketing, Sultan Chand Publishers.

Reference Books:

1. J.C.Sinha, Principles of Marketing and Salesmanship. R.Chand & Co
2. Modern Marketing, Principles and practices – R.S.N.Pillai, Bagavathy, Sulthan Chand & sons, New Delhi -110055.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

109

IV SEMESTER

Sl. No .	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17UACT41 /H41/S41	Part - I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	17UACE41	Part -II	English	6	3	25	75	100	3
3	17UCPC41	Core - 5	Company Law& Secretarial Practice II	4	3	25	75	100	3
4	17UCPC42	Core -6	Advanced Financial Accounting - II	4	3	25	75	100	4
5	17UCPA41	Allied-4	Business Statistics (Eco.Dept)	5	3	25	75	100	5
6	17UCPS41	SBS-4	Meeting & proceedings	3	3	25	75	100	3
7	17UCPN41	NME-2	Advertising and Salesmanship	2	3	25	75	100	2
8			Extension Activities					100	1
			Total	30					24

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

110

PART - III CORE	Title : COMPANY LAW & SECRETARIAL PRACTICE – II	Subject Code : 17 UCP C41
Semester : IV	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

- To make students learn about the various types of debentures development appointment of auditors and its types and winding up of companies.

UNIT – I

Debentures – Types of debentures- Debenture Trust Deed.

UNIT – II

Dividend – Provisios relating to declaration and Payment of dividend – Difference between interest and dividend.

UNIT – III

Accounts and Audit – Appointment of auditors – Rights , duties and liabilities of auditors.

UNIT – IV

Special audit – Circumstances of Special audit – Cost audit – Qualifications & Disqualifications of auditor.

UNIT – V

Winding up – Types – Winding up by the order of the National Company Law Tribunal – Members Voluntary Winding up and Creditors Voluntary Winding up.

Text book : Company and Secretarial Practice - P.K. Ghosh & Dr. V.Balachandran

Reference Books:

1. Company Law & Practice - N.D. Kapoor
2. General Law - N.D. Kapoor

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

111

PART - III CORE	Title : ADVANCED FINANCIAL ACCOUNTING - II	Subject Code : 17 UCP C42
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To make the students learn how to distribute the profits among the provisions and Appropriation as per law and to learn the treatment of goodwill.

Unit I

Partnership – Introduction – P&L Appropriation Account, Capital Account, Fixed & Fluctuating, Interest On Sacrificing Ratio, Drawings, Interest on Capital – Gaining Ratio.

Unit II

Admission of Partners –Treatment of Goodwill and Methods - Accumulated P&L Account.

Unit III

Retirement of Partners - Death of Partners - Revaluation Account, Calculation of Amount to Retiring Partners.

Unit IV

Dissolution of Firm – Meaning and Definition.

Unit V

Insolvency – Garner Vs Murray, Insolvency of one Partner Only (Excluding Piece Meal- Maximum Loss Method.

Text Book : 1. Advanced Accountancy – R.L. Gupta and M. Radhaswamy

Books for Reference:

1. Advanced Accounts – M.C. Shukla and T.S. Grewal
2. Advanced Accountancy – M.A. Arulandandam and K.S. Raman



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

112

PART - IV SKILL BASED	Title : MEETING & PROCEEDINGS	Subject Code : 17 UCP S41
Semester : IV	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- **To make the students learn how to conduct the company meetings and the Secretarial duties regarding the conduct of Board of Direction meeting and other meetings.**

UNIT – I

Company Meetings – Types of Meetings – Requisites of a valid Meeting.

UNIT – II

General Meetings – Annual General meeting – Duties of Company Secretary

UNIT – III

Extra-Ordinary General Meeting – Secretarial Duties

UNIT – IV

Directors Meeting – Board Meetings & Committee Meetings.

UNIT – V

Creditors and Debenture Holders Meetings – Class meetings.

Text Book : Company and Secretarial Practice - P.K. Ghosh & Dr. V.Balachandran

Reference Books:

1. Company Law & Practice - N.D. Kapoor
2. General Law - N.D. Kapoor

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

113

PART - IV NME	Title : ADVERTISING AND SALESMANSHIP	Subject Code : 17 UCP N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To make the Students learn more about the increasing role of advertisement in the competitive Business world and also about the different types of salesmens Remuneration methods.

UNIT – I

Advertising – meaning – Merits and evil effects.

UNIT – II

Media of Advertising – Merits and demerits.

UNIT – III

Personal selling – Differences between personal selling and impersonal selling.

UNIT - IV

Recruitment, Selection and training of salesmen- Various Steps in recruitment and selection – Various methods of Training.

UNIT – V

Compensation of salesmen – Different Methods of Remuneration.

Text Book : Dr.N.Rajan Nair, Marketing, Sultan Chand Publishers.

Reference Book:

1. Advertising and salesmanship – P.Saravanel, S.Sumathi , Margam Publication, Chennai – 17.
2. J.C.Sinha, Principles of Marketing and Salesmanship. R.Chand & Co.
3. Modern Marketing, Principles and practices – R.S.N.Pillai, Bagavathy, Sulthan Chand & sons, New Delhi -110055.

Indian Contitutions – M.V.K.Moorthy.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

114

V SEMESTER

Sl. No .	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1.	17UCPC51	Core-7	Practical Costing	6	3 hrs	25	75	100	5
2.	17UCPC52	Core-8	Corporate Accounting –I	6	3 hrs	25	75	100	5
3.	17UCPC53	Core-9	Income Tax Law & Practice I	6	3 hrs	25	75	100	5
4.	17UCPE51	Elective-1	Economic Legislation	6	3 hrs	25	75	100	5
5.	17UCPE52	Elective-2	Banking Law & Practice	6	3 hrs	25	75	100	5
6.	16USS S51	SELF STUDY	Soft Skills	-	-	-	-	100	-
			Total	30					25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

115

PART - III CORE	Title : PRACTICAL COSTING	Subject Code : 17 UCP C51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To make the students learn about the various elements of cost, types of cost methods applicable for different types of business.**

UNIT – I

Financial Accounting Vs Cost Accounting – cost classification – Installation of Costing system – cost unit cost centre, preparation of cost sheet – Methods of costing.

UNIT – II

Material – Direct and indirect – Stock Levels – EOQ, ABC, WED, Methods of Pricing of issue of materials – FIFO, LIFO and Simple average.

UNIT – III

Labour – Direct and Indirect – Labour Turnover – Idle Time – Overtime Methods of remuneration and Incentive schemes – Time Rate, Piece Rate, Taylor's Differential Piece Rate, Halsey and Rowan schemes.

UNIT – IV

Overheads – Allocation – Apportionment (Primary and Secondary) – Repeated Distribution, Step method, Simultaneous Equation Method – Absorption – Over and under absorption.

UNIT - V

Process Costing – Normal Loss, Abnormal Loss – Abnormal Gain, (Simple Problems only).

Text Book : Cost Accounting-Ramachandran and Srinivasan

Reference Books:

1. Advanced Costing – Jain & Narang
2. Problems & Solution in cost accounting – S.N.Maheswari
3. Cost Accounting –Nigam, Naranga and Seghal

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

116

PART - III CORE	Title : CORPORATE ACCOUNTING - I	Subject Code : 17 UCP C52
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To make the students learn that the issue of shares and the procedures, various types of shares and the redemption as per The Companies Act 2013.

UNIT – I

Issue of shares – Forfeiture of shares – Reissue of forfeited shares – Bonus shares

UNIT – II

Redemption of Preference shares – Under-writing of shares – Types of underwriting.

UNIT – III

Debentures – Issue and redemption – Purchase of own debentures and Sinking fund methods only.

UNIT – IV

Final Accounts of Companies – New format of Balance Sheet as per the Companies Act, 2013.

UNIT - V

Amalgamation and absorption. (Excluding internal Reconstruction) – Accounting Standard 14 – simple problems only.

Text Book : Corporate Accounting – Reddy and Moorthy.

Reference Books:

1. Corporate Accounting – R.L. Gupta and Radhaswamy



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

117

PART - III CORE	Title : INCOME TAX LAW AND PRACTICE- I	Subject Code : 17 UCP C53
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- The students should know the basic concepts and Residential statuses of Income Tax and also different types of incomes.

UNIT – I

Basic concepts – History of Income Tax in India – objectives of Taxation – Definition of Important terms.

UNIT – II

Residential status and Incidence of Tax.

UNIT – III

Exempted Incomes – Classification of Exempted Incomes – Income absolutely exempt from Tax

UNIT – IV

Income under the Head salaries.

UNIT – V

Income under the Head House Property.

Text Book : Income Tax – Reddy & Murthy.

Reference Books:

1. Income Tax – Gaur & Narang.
2. Income Tax – Vinod singania.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

118

PART - III Elective	Title : ECONOMIC LEGISLATION	Subject Code : 17 UCP E51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To make the students learn more about the economic laws such as Foreign Exchange Management Act, Trade Mark Indian Act, the Secretes contract (Reg) Act, and The Depositories Act 1996**

UNIT – I

Foreign Exchange Management Act 1999 – Title, definition, regulation, Management of Foreign exchange, authorized person, types of bank accounts, (Sections: 3,4,5,6,7,10)

UNIT – II

The Trade Marks Act 1999, Objective, definition, registration, advantages of registration, qualities of good Trade Mark, Use of Trade Mark, Assignment and Transmission permitted to use, infringement, passing off.

UNIT – III

The Indian Stamp Act 1899 – Scope, definition – instruments chargeable to duty person liable to pay duty, Adjudication, impounding of Instruments, refund of duty.

UNIT – IV

The Securities Contract (Regulation) Act 1956 – Objectives, recognition of stock exchange, bye-laws of stock exchange, Contracts & Options in securities, Listing & de-listing, NSE, OTCEI.

UNIT – V

The Depositories Act 1996 – (NSDL & CDSL) Dematerialisation - Depositories – Depository Participants – Functions – Rematerialisation

Text Book : Economic & Other Legislations – S.S. Gulshan & G.K. Kapoor.

Reference Books:

- Bare Act
- Taxmann – Corporate Economic & other Legislations.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

119

PART - III Elective	Title : BANKING LAW AND PRACTICE	Subject Code : 17 UCP E52
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To make the students learn about the Banking procedures, new banking practices, RBI, Ombudsman etc so that banking services will be effectively utilized.

UNIT – I

Definition of banking -Origin of Banking – Bankers- The relationship between a banker and a customer – Special relationship.

UNIT II:

Negotiable Instruments – Features – Types – Classification of Negotiable Instruments - Cheque – Crossing – Types – Difference between a cheque and Bill of Exchange- Promissory Note.

UNIT III:

Privatisation of Banks – Meaning – New Guidelines for private sector Banks – Factors favouring Privatisation - Against Privatisation – Progress and Performance of private sector Banks - Present Issues.

UNIT IV:

E-Banking – Traditional Banking vs E-Banking Electronic Delivery Channels – Truncated cheque and Electronic cheque – Features and Merits – Advantages of E-Banking – RTGS.

UNIT V:

Reserve Bank of India – Constitution – Functions Banking Ombudsman Scheme – Objects – Appointment of Ombudsman – Powers and Duties of Banking ombudsman.

Text Book : Banking Theory Law of Practice - Gordan K.Natarajan., Himalaya Publishing House.

BOOKS RECOMMENDED: Banking Theory Law of Practice - Dr.S.Gurusamy.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

120

VI SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs/Week	Exam Hrs	CA	SE	Tot	Crd
1.	17UCPC61	Core-10	Corporate Accounting - II	6	3 hrs	25	75	100	5
2.	17UCPC62	Core-11	Management Accounting	6	3 hrs	25	75	100	5
3.	17UCPC63	Core-12	Indirect Taxation	6	3 hrs	25	75	100	5
4.	17UCPC64	Core-13	General Law	6	3 hrs	25	75	100	5
5.	17UCPE61	Elective-3	Income Tax Law and Practice II	6	3 hrs	25	75	100	5
6	16UGKB61	SELF STUDY	General Knowledge	-	-	-	-	100	-
			Total	30					25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

121

PART - III CORE	Title : CORPORATE ACCOUNTING - II	Subject Code : 17 UCP C61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To make the students learn about the Valuation of goodwill and shares, accounts of Banking Companies, Accounting standards etc.**

UNIT – I

Valuation of goodwill – Different methods of valuation of goodwill – Super Profit, annuity and Capitalization methods- Valuation of Shares – Intrinsic Value and yield method.

UNIT – II

Consolidated balance sheet – Simple problems excluding inter-company holdings.

UNIT – III

Liquidation of Companies – Liquidators Final Statement of account as per the legal format only.

UNIT – IV

Accounts of Banking Companies- Profit & loss a/c & Balance Sheet as per new format – Different schedules.

UNIT - V

Accounting standards – Application – Formation of Audit committee – Accounting Standards – with reference to valuation of EPS, interim reporting and segment reporting only.

Text Book : Corporate Accounting – R.L. Gupta and Radhaswamy

Reference Books:

1. Corporate Accounting – Reddy and Moorthy.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

122

PART - III CORE	Title : MANAGEMENT ACCOUNTING	Subject Code : 17 UCP C62
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To make students learn about the role of Management Accounting in the decision making process and various tools such as Ratio Analysis, Budgets, Fund Flow, Cash Flow analysis.**

UNIT – I

Management Accounting – Definition - Scope and Objectives – Tools – Utility and limitations of Management accounting

UNIT – II

Ratio Analysis – Significance – utility – limitations of ratio analysis- Profitability ratio, Turnover ratios, Solvency, Liquidity ratios.

UNIT – III

Cost – Volume – Profit Analysis – Marginal costing , Break Even Point – P/V ratio- Application of Marginal Costing – Keyfactor – Suitable Sales Mix.

UNIT – IV

Budgetary control – Budgeting – Budget – Advantages – Limitations (Excluding Working Capital Budgets) – Purchase Budget – Production Budget- Sales Budget – Flexible Budget and Cash Budget.

UNIT - V

Fund flow and cash flow Analysis (Simple Problems only) – Preparation of Schedules of changes in working capital, Funds from Operation – Adjusted P & L A/C, Cashflow & fundflow Statements.

Text Book : Management Accounting – S.N.Maheswari

Reference Books:

Management Accounting – R.S.N.Pillai.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : INDIRECT TAXATION	Subject Code : 17 UCP C63
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To make the students learn about the Indirect Taxation System, Customs Law, Central sales Tax, Vat etc.

UNIT – I

Indirect Taxes – An introduction, Special features – Indirect Tax Levies – Role of Indirect taxation, Merits and Demerits of Indirect Taxation – Reforms in Indirect Taxation.

UNIT II:

Central Excise Law – Meaning of Central Excise – Nature of levy – Bases of Excise Duty, Kinds of Excise Duty – Manufacture and Manufacturer – Excisable goods – Classification of Excise, Valuation of Excisable goods – Essentials – Excise duty based on MRP – Registration procedure in Central Excise.

UNIT III:

Customs Law – Key definitions, Levy and collection of Customs Duty – Types of Customs Duty – Reasons for and restrictions for import and export of goods – List of goods prohibited – Notified goods – Valuation of goods under Customs Act – Rules for valuation.

UNIT IV:

Central Sales Tax - Levy and collection of CST – Inter-state sale and Intra-State sale – Deemed sale – Sale in the course of Export/Import – penultimate sale – liability to Tax – Subsequent sales – Registration of dealers – Registration procedure – Rate of Tax.

UNIT V:

Introduction to VAT – VAT in Central Excise Law – MODVAT, CENVAT – TNVAT – introduction – MODVAT, CENVAT, VAT - Meaning – Objectives – Advantages – TNVAT – Schedules – Registration of dealers.

Text Book : Indirect Taxes

- V.S. Datey

BOOKS RECOMMENDED:

1. Indirect Taxation

- V. Balachandran

2. Central Excise Manual

- R.K. Jain.

3. TNVT Value Added Tax Rates in TN 2007

- Nagas

Publication.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

124

PART - III CORE	Title : GENERAL LAW	Subject Code : 17 UCP C64
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **Students will learn about the sources of law, Indian constitution, Parliament System, the President etc.**

UNIT – I

Sources of law – English Law, Customs, Judicial precedents, Legislation, Personal Law of parties.

UNIT – II

Indian constitution – Introduction, Federal – features, pre-amble – Fundamental Rights, Fundamental Duties.

UNIT – III

Parliament – Lok Sabha, Rajya Sabha, Members – Election of President, Vice President, Prime Minister, Speaker, Council of Ministers – their responsibilities – collective – individual.

UNIT – IV

Power of President – Legislative, Judiciary, Ancillary.

UNIT – V

Transfer of Property Act – Transfer of Properties restricted to sale, Mortgage, Lease, Charge and Gift.

Text Book : General Law - Rajini Abbey & N.D. Kapoor.

Reference Books: Indian Constitutions – M.V.K.Moorthy.

Bare Acts

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com.(CORPORATE SECRETARYSHIP)-SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

125

PART - III Elective	Title : Income Tax Law and Practice II	Subject Code : 17 UCP E61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives;

- **To make the students aware of the various heads of income and to have a basic knowledge of calculation of I.T.**

UNIT – I

Income under the Head Profits and Gains of Business or Profession.

UNIT – II

Capital Gain – Meaning or Capital Assets – Exempted Assets – kinds of capital Assets, Procedure for computing capital gains.

UNIT – III

Income from other sources – Income chargeable to Tax. Procedure and format for computing income from other sources.

UNIT – IV

Set – off and Carry – forward of Losses.

UNIT – V

Deductions from Gross Total Income.

Text Book : T.S.Reddy & Y.Hari Prasad Reddy

Books Recommended – IncomTax – Theory, Law. Gaur and Narang



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

126

I SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hrs/Week	Duration of Exam (hrs)	CA	SE	Tot	Credits
1	17UACT11/ H11/V11	Part -I	Tamil/ Hindi/ Vaniga Kadithangal	6	3	25	75	100	3
2	17 UAC E11	Part -II	English	6	3	25	75	100	3
3	17 UCE C11/ 17 UCC C11	Part-III Core 1	Financial Accounting I	7	3	25	75	100	4
4	17UCCA11	Part-III Allied 1	Fundamentals of Computers*	6	3	25	75	100	5
5	17 UCC SP1	Part-IV SBS 1	HTML Lab*	3	3	40	60	100	3
6	14 UAC VE1	Part-IV	Value Education	2	3	25	75	100	2
			Total	30					20

* Denotes alternative paper for Computer papers in B.Com (CA) course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

127

PART - I	Title: வணிகக் கடிதங்கள்	Subject Code : 17 UACA11
Semester : I	HOURS : 6 hours / Week	CREDITS :3

நோக்கங்கள் - 1.வணிகக் கடிதங்களின் முக்கியத்துவத்தை அறிந்து கொள்ள,
2,வணிகக்கடிதங்களை எழுதுவதற்காக, 3,வங்கி கடிதங்கள் மற்றும் வேலை வேண்டி
விண்ணப்பிப்பதை அறிந்து கொள்ள

அலகு 1

வணிகக் கடிதங்கள் - தேவை மற்றும் முக்கியத்துவம் - நோக்கங்கள் வணிகக் கடிதங்களின் அடிப்படைக் கூறுகள் - வணிகக் கடிதங்கள் பொது அமைப்பு மற்றும் படிவங்கள் - சிறப்புக் கூறுகள் கடித வகைகள்

அலகு 2

வியாபாரக் கடிதங்கள் - முனைவுக் கடிதங்கள் மற்றும் விசாரணைகள் - விலைப் புள்ளிகள் . ஆணையறுக்கள் - ஆணைகளை நிறைவேற்றுதல் - சரக்கு பெற்றுக் கொண்டதை உறுதி செய்தல்

அலகு 3

வணிக விசாரணைக் கடிதங்கள் - வியாபார விசாரணை மற்றும் வங்கி விசாரணை - புகார்களும் சரிக் கட்டுதல்களும் - நிலுவைத் தொகை நினைவூட்டுதல் - வசூல் செய்தல் - கணக்கை நேர் செய்தல்

அலகு 4

சுற்றுக் கடிதங்கள் - விற்பனைக் கடிதங்கள் - அரசுத்துறை மற்றும் பொது சேவை அமைப்பு சார்ந்த கடிதங்கள்

அலகு 5

வங்கிக் கடிதங்கள் - வேலை வேண்டி விண்ணப்பம் - பத்திரிகை ஆசிரியருக்கு கடிதங்கள்

Book for Study:

வணிகத் தகவல் தொடர்பு -Dr.ராதா - பிரசன்னா பப்ளிஷர்

Books for Reference:

வணிகக் கடிதங்கள் -Dr.K.அன்பழகன் &S,ராமர் - மெரிட் இந்தியா பப்ளிகேஷன்

வணிகக் கடிதங்கள் -Dr.E.முருகேசன் & வி.ராமர் - எம்.எம். பப்ளிஷர்



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

128

PART - III CORE	Title : FINANCIAL ACCOUNTING I	Subject Code : 17 UCE C11 : 17UCC C11
Semester : I	HOURS : 7 hours / Week	CREDITS : 4

Objectives:

- To know the fundamentals of accounting
- To understand the basic concept of final accounts
- To enrich the knowledge of depreciation

Unit: 1 Evolution of accounting-purpose of accounting-accounting principles - Concepts - Conventions - Double Entry System of Accounting - Journal - Ledger –subsidiary books- Trial Balance.

Unit: 2 Errors – Types – Errors disclosed and not disclosed by trial balance – Suspense account – Rectification of errors – Bank Reconciliation Statement.

Unit: 3 Final accounts of sole trading concerns –trading account-profit and loss account-without and with adjustments.

Unit: 4 **Consignment accounts** – Invoicing goods at cost price – at invoice Price – Valuation of unsold stock – Loss of stock – Accounting treatment of normal loss and abnormal loss.
Joint venture accounts -Recording in individual venturer's book – Recording in separate set of books

Unit: 5 Depreciation-meaning-causes-need-methods of depreciation– problems in Straight line method, – Written down value method (excluding changes in methods of depreciations)– Annuity method – Depreciation fund method.

Note: Question should cover 30% theory and 70% problems.

Book for study:

1. Advanced Accountancy – T.S. Reddy and A. Murthy

Books for reference:

1. Advanced Accounts – M.C. Shukla and T.S. Grewal
2. Introduction to Accountancy – T.S. Grewal.
3. Advanced Accountancy – R.L. Gupta and Radha Swamy
4. Advanced Accounts – S.P. Jain and K.L. Narang
5. Advanced Accountancy – M.A. Arulanandam and K.S. Raman
6. Advanced Accountancy – S.N. Maheswari and S.K. Maheswari
7. Advanced Accountancy – P.C. Tulsian

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : FUNDAMENTALS OF COMPUTER	Subject Code : 17 UCC A11
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know about the fundamentals and various I/p and O/p devices.
- To understand the basic concepts of operating systems and functions.
- To enrich the basic knowledge of computer networks and Topologies.

Unit-1

Introduction to Computers: Types of Computers-Characteristics of Computers-Classifications of Digital Computers-Functions and Components of Computers – Block Diagram

Unit-2

Memory and Number system: Introduction-Types of Memory- Magnetic tape-Hard disk-Optical disks –Binary number system- Decimal to Binary ,Binary to Decimal, 1’s compliments, 2’s Compliments, 9’s and 10’s Compliments.

Unit-3

Input / Output Devices: **Input Devices:** Mouse, Touch Screens, And Keyboard-Trackball-Scanner-MICR: OCR, OMR **-Output Devices:** Monitor, Audio Devices-Printers: Dot-Matrix, Ink-Jet Printer, Laser Printer

Unit-4

Introduction to Operating System: Disk operating system-Basic Disk operating commands-Windows Operating System Basics

Unit-5

Basics of Computer Networks: Overview of Network-Communication Media-Types of Network-Network Topology-Network Architecture

Books for study:

Introduction to Computers-Alexion Leon, Mathews Leon,
DOS Manual (Study Material)

UNIT – I: **Chapter 1:** Pages 1.1 - 1.4 **Chapter 3:** Pages 3.1 – 3.4,
Chapter 4: Pages 4.1 – 4.4

UNIT – II: **Chapter 6:** Pages 6.1 – 6.9 **Chapter 8:** Pages 8.1 – 8.3
Chapter 9: Pages 9.1 to 9.8

UNIT – III: **Chapter 10:** Pages 10.1. - 10.6, 11.1, 11.7- 11.10

UNIT – IV: **Chapter 14:** Pages 14.1, 14.4.- 14.6, **DOS Manual**

UNIT – V: **Chapter 19:** Pages 19.1 – 19.12



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

130

PART - IV SKILL BASED	Title : HTML Lab	Subject Code : 17 UCC SP1
Semester : I	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To understand the basic concept of HTML tags
 - To know about the concepts of designing forms in web pages.
 - To develop the web designing knowledge using HTML
1. Format the given page using basic Formatting tags (Paragraph, Font, Pre, Header, Br, Ruler, Marquee)
 2. Define the following terms (Operating System, Network, Protocol, CUI, GUI) using definition list
 3. List various courses offered by the college using list (orderd,unordered)
 4. Design your Department Time Table, Fees Structure and Mark Statement Using Table Tags
 5. Manipulating Images using image tag
 6. Design your Department Webpage using Frames with Link Tags
 7. Design Input Forms using Form Tag
 8. Design the Google Home Page using Style Sheet
 9. Arithmetic Operations and image size Modification using Mouse Events (Click, Hover)
 10. Validation Of User Name, Password and Credit Card Number using Regular Expressions

Note: INTERNAL-40 Marks and EXTERNAL 60 Marks



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

131

II SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hrs/Week	Duration of Exam (hrs)	CA	SE	Total	Credits
1	17UACT21/H21/A21	Part -I	Tamil/ Hindi/ Aluvalaga Melanmai	6	3	25	75	100	3
2	17 UAC E21	Part -II	English	6	3	25	75	100	3
3	17 UCC C21/ 17 UCE C21	Part-III Core 2	Financial Accounting II	7	3	25	75	100	4
4	17 UCC A21	Part-III Allied 2	Business Application Programming*	6	3	25	75	100	5
5	17 UCC SP2	Part-IV SBS 2	Programming in C Lab*	3	3	40	60	100	3
6	14 UAC ES1	Part-IV	Environmental Studies	2	3	25	75	100	2
			Total	30					20

* Denotes alternative paper for Computer papers in B.Com (CA) course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

132

PART - I	Title : அலுவலக மேலாண்மை	Subject Code : 17 UAC A21
Semester : II	HOURS : 6 hours / Week	CREDITS :3

நோக்கங்கள்- 1.அலுவலகம் மற்றும் அலுவலக மேலாண்மை அறிதல், 2,கோப்பில் இருதல் மற்றும் முறைகள் அறிந்து கொள்ள, 3,அலுவலக அறிக்கைகள் தயார் செய்ய

அலகு 1

அலுவலக மேலாண்மை - இலக்கணம் - நவீன அலுவலகத்தின் அமைப்பு முறைகள் - நவீன அலுவலகத்தின் இலக்கணம் - செயல்பாடுகள் மற்றும் முக்கியத்துவம் . அலுவலக இடவசதி - அலுவலக வரைபடம்,

அலகு 2

பணிக்கேற்ற சூழ்நிலை - பணியை எளிதாக்குதல் - அஞ்சலக முறை - கடிதப் போக்குவரத்து மற்றும் பதிவேடுகளைப் பராமரித்தல் - தபால்களைக் கையாளுதல் - தபால் துறையை அமைத்தல் - மையப் படுத்தப்பட்ட அஞ்சல் பணி - உள் வரும் மற்றும் வெளிச் செல்லும் கடிதங்கள் - வாய்மொழி மற்றும் எழுத்துவழி தகவல் தொடர்புகள்,

அலகு 3

கோப்பில் இருதல் - நல்ல கோப்பு முறையின் முக்கிய அம்சங்கள் - வகைப் படுத்துதல் - வரிசைப்படுத்துதல் - கோப்பு முறைகள் - மையக் கோப்பு முறை - பரவலாக்கப்பட்ட கோப்பு முறை - சுட்டகராதீ கோப்பு வகை,

அலகு 4

அலுவலக இயந்திரங்களும் சாதனங்களும் - பல்வேறு சாதனங்களின் தேவைகள் - அலுவலக இயந்திரங்களை தேர்ந்தெடுப்பதற்கான அடிப்படைக் கோட்பாடுகள் - கணிப்பொறி மற்றும் புள்ளி விவரங்களை தொகுத்தளிக்கும் இயந்திரம்- அலுவலக இயந்திரங்களின் வகைகள்,

அலகு 5

அலுவலக அறிக்கைகள் - முக்கியத்துவம் - வகைகள் - வடிவங்கள் - அறிக்கைகளின் செயலாக்கம் - பொது வணிகச் சொற்கள்.

Book for Study

அலுவலக மேலாண்மை - Dr.ராதா -பிரசன்னா பப்ளிஷர்

Books for Reference

அலுவலக முறைகள்- எ.எம்.சுந்தரம்- மீனாட்சி பப்ளிகேஷன்

Office Management - S.Kathiresan & Dr.V.Radha - Prasanna Publishers & Distributors

Office Management - R.K.Chopra - Himalaya Publishing House

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Com., (COMPUTER APPLICATIONS) - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

PART - III CORE	Title : FINANCIAL ACCOUNTING II	Subject Code : 17 UCE C21 : 17UCC C21
Semester : II	HOURS : 7 hours / Week	CREDITS : 4

Objectives:

- To Know about the fundamentals of bills
- To understand the methods of calculation of interest
- To enrich the knowledge of clubs and associations

Unit: 1

Bills of Exchange – Trading and Accommodation bills – Renewals – Dishonour due to insolvency.

Unit: 2

Account Current – Methods of Calculation of Interest – Product method – Red Ink Interest method – Epoque method – Periodic balance method-**Average due date** – Calculation of due date based on holidays intervention – Interest Calculation.

Unit: 3

Self balancing system – Meaning – Procedure – Self balancing journal entries – Self balancing ledgers – Transfer from one ledger to another – Accounting for goods sent on “sale or return basis”.

Unit: 4

Accounts of Non-Trading Concerns (Clubs and Associations only) – Preparation of Receipts & Payments account, Income & Expenditure account and Balance Sheet.

Unit: 5

Accounts from incomplete records (single entry system) – Methods of ascertainment of profit – Net Worth method – Conversion method.

Note: Question should cover 30% theory and 70% problems.

Book for Study:

Advanced Accountancy – T.S. Reddy and A. Murthy – Margham Publications.

Books for Reference:

1. Advanced Accounts – M.C. Shukla and T.S. Grewal
2. Introduction to Accountancy – T.S. Grewal.
3. Advanced Accountancy – R.L. Gupta and Radha Swamy
4. Advanced Accounts – S.P. Jain and K.L. Narang
5. Advanced Accountancy – M.A. Arulanandam and K.S. Raman
6. Advanced Accountancy – S.N. Maheswari and S.K. Maheswari
7. Advanced Accountancy – P.C. Tulsian



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III	Title : BUSINESS APPLICATION PROGRAMMING	Subject Code : 17 UCC A21
ALLIED		
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know about the fundamentals of C programming.
- To understand the basic concepts of C programming.
- To enrich the structure and processor in C Programming.

Unit-I

C Fundamentals: Significance of C-Character set-Token-Identifiers-Keywords-Data types-Variables-Operators-Expressions and Type conversion-Input and Output operations.

Unit-II

Control Statements: Conditional Statements-Loops statements-Multi branching statement-Break-Continue, go to statements.

Unit –III

Functions and Arrays: Defining a Function-Category of Function-Nesting of Function-Recursive Function-Library Function-Array declaration-Single, 2D and Multi dimensional arrays –Sorting (bubble)-Storage Classes- modifiers.

Unit-IV

Character Handling in C: Declaration of String variables-Reading and writing String-String handling Functions-Arrays of Strings-String library Functions.

Unit-V

Preprocessor and Structure: Preprocessor directives-Macros-# Operator-Structure declaration-Arrays of structure-Arrays within structures-enumerated data type

Book for Study: S.Ramasamy, P.Radhaganesan

UNIT-I	:	1.1-1.9, 2.1-2.24, 3.1-3.6
UNIT-II	:	4.1-4.16
UNIT-III	:	5.1-5.7, 6.1-6.9
UNIT-IV	:	7.1-7.6
UNIT-V	:	9.1-9.7, 10.1-10.7, 10.13

Book for Reference:

Programming and problem solving through C language-Based on DOEACC III Revised syllabi- O&A levels



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : PROGRAMMING IN C	Subject Code : 17 UCC SP2
SKILL BASED	LAB	
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To know about the basic concepts of 'C' Language programming
- To understand the basic knowledge of programming skills.
- To develop the knowledge in arrays and function, pointers, structure and union.

List of 'C' Programs

1. Arithmetic Operations of given any two numbers.
2. Calculation of Simple Interest and Compound Interest
3. Sum and Average of "N" numbers.
4. Salesman Commission Calculation.
5. Calculation of Electricity Bill
6. E.O.Q Calculation
7. Depreciation under Annuity methods.
8. Break-Even analysis.
9. Sum of Series
10. Sum of digits
11. Investment calculation(Interest Table preparation)
12. Fibonacci Sequence
13. Armstrong number or not
14. Ascending order
15. Linear search
16. Payroll preparation
17. Matrix Addition
18. Factorial of a given number using recursion.
19. Call by value (swapping two numbers using value)
20. Employee Details (using Array of Structure)

Note: INTERNAL-40 MARKS and EXTERNAL 60 MARKS



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

III SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hours/Week	Duration of Exam (hrs)	CA	SE	Tot	Credits
1	17UCCC31/ 17UCEC31	Part-III Core 3	Promotional Marketing	6	3	25	75	100	4
2	17UCCC32/ 17UCEC32	Part-III Core 4	Accounting for Firms	5	3	25	75	100	4
3	17UCCC33	Part-III Core 5	Data Base Management System*	4	3	25	75	100	4
4	17UCCCP1	Part-III Core 6	RDBMS LAB*	4	3	40	60	100	4
5	17UCCA31/ 17UCEA31	Part-III Allied3	Statistical Methods I	6	3	25	75	100	5
6	17UCCSP3	Part-IV SBS 3	OOPS LAB(C++)*	3	3	40	60	100	3
7	17UCCN31/ 17UCEN31	Part-IV NME 1	Salesmanship	2	3	25	75	100	2
Total				30					26

* Denotes alternative paper for Computer papers in B.Com (CA) course.



PART - III CORE	Title : PROMOTIONAL MARKETING	Subject Code :17UCC C31/ 17UCE C31
Semester : III	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- **To know the fundamental concepts of salesmanship.**
- **To enrich the knowledge of in personal selling.**

Unit I Promotional Mix

Introduction – promotional activities – selling, promotion and sales promotion - Need and objectives of promotional activities – major promotional tools – forms of sales promotion.

Unit II Personal selling

Salesmanship – Introduction – Definition – objectives of personal selling – duties of a salesman – qualities of a successful salesman – physical, mental, social and moral qualities – types of salesmen – process of personal selling – reasons for failure of salesman. Sales manager – qualities, duties and responsibilities.

Unit III Sales Promotion

Introduction – Definition – Importance – objectives – reasons for growth – advantages and limitations – kinds of sales promotion – consumer, dealer and sales force promotion.

Unit IV Advertising

Introduction – Definition – Objectives – Advantages and Limitations. Types of Advertising - Advertising and salesmanship – Advertising and sales promotion – Failure of Advertising - Advertisement copy – qualities – elements. Advertising agency – selection.

Unit V Advertising Media

Introduction – selection of advertising media – kinds of media – Indoor advertising – outdoor advertising – direct advertising – promotional advertising – merits and limitations of advertising.

Book for Study:

R.S.N.Pillai & Bagavathi, Modern Marketing Principles and Practices, Sultan chand publishers, New Delhi.

Books for Reference:

1. Marketing, Dr.N.Rajan Nair, Sultan Chand Publishers.
2. Principles of Marketing and Salesmanship. J.C.Sinha, R.Chand & Co



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

138

PART - III CORE	Title : ACCOUNTING FOR FIRMS	Subject Code :17UCC C32 / 17UCE C32
Semester : III	HOURS : 5 hours / Week	CREDITS : 4

Objectives:

- **To know the concepts of partnership firm.**
- **To enrich the knowledge of partnership accounting including insolvency.**

Unit I

Partnership Accounts – Partnership – Definition – partners – types – provisions relating to partnership accounting – capital and current accounts of partners – fixed and fluctuating – Appropriation of profits – past adjustment and guarantee.

Unit II

Admission of partners – calculation of new profit sharing ratio – adjustment of undistributed profits, losses and reserves – revaluation of assets and liabilities – treatment of goodwill – adjustment of capital of partners after admission.

Unit III

Retirement of partners – Transfer of balance due to retired partner – Purchase of retired partner's share by the remaining partners – Death of a partner – settlement of amount due to legal representatives of deceased partner.

Unit IV

Sale of firm to a company – dissolution of firm – accounting treatment.

Unit V

Insolvency of a partner – decision in Garner Vs Murray case – insolvency of all partners – piece meal distribution – proportionate capital method – maximum loss method.

Question Paper Pattern : 70% Problem, 30% Theory

Book for Study:

Advanced accountancy - T.S.Reddy and A.Murthy, Margam Publications.

Books For Reference:

1. Advanced accountancy - M.A.Arulanandam and K.S.Raman.
2. Advanced accountancy - R.L.Gupta and Radhaswamy.
3. Partnership accounting - L.P.Ramalingam and T.S.Jeya kumar.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : DATA BASE MANAGEMENT SYSTEM	Subject Code :17UCC C33
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To know the importance of Data Base Management.
- To understand the Basic concepts of RDBMS.
- To develop the knowledge of SQL / PL

Unit I Data, Information and Information Processing

Definition of Data, information – history of information – quality of information – information processing – integrated management information.

Unit II Introduction to DBMS

Introduction – Why a data base? – characteristics of data in a database – database management system – why DBMS? – Types of database management system: hierarchical model – network model – relational model.

Unit III Entity-Relationship(E-R) modeling and Data Normalization

Introduction to E-R modeling – definition of E-R model – Components of E-R model. Introduction to Normalization –First Normal Form (1NF), Second Normal Form(2NF), Third Normal Form(3NF).

Unit IV Introduction to RDBMS

RDBMS Terminology -The relational Data Structure – Tables - Views –Queries and Sub Queries – Aggregate Functions.

Unit V Introduction to PL/SQL

PL/SQL Variables – PL/SQL data types – Control Structures – Cursors – PL/SQL Triggers.

Book for Study:

Alexis Leon & Mathews Leon – Data base management systems – Leon Vikas Publishing, Chennai, 2002.

Books for Reference:

1. Database Management Systems – Raghu Ramakrishnan / Johannes Gehrke – Mc Graw Hill, Third Edition, 2003.
2. Modern Database Management – Fred R. Mc Fadden, Jeffrey A. Hoffer & Maruy B. Precott – 5th Edition, Pearson Education Asia, 2001.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

140

PART - III CORE	Title : RDBMS LAB	Subject Code :17UCC CP1
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To understand the concepts of Table creation in SQL.
- To manipulate the data from the table.
- To develop programming using SQL/PL.

SQL – Table Creation, Queries and Subqueries

1. Create an Employee, Programmer, Software and Studies Table.
2. Implementation of Queries and Subqueries – at least 10 queries.

PL/SQL Programs

3. To find the Biggest of Three numbers.
4. To check Leap year or not.
5. To find the Factorial of a given number.
6. To find the sum of digits of a given number.
7. To Reverse the given string.
8. Programs using explicit cursors and implicit cursors.
9. Programs using Procedure and Function.
10. Programs using database Triggers.

Note : Internal – 40 marks and External – 60 marks.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Com., (COMPUTER APPLICATIONS) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : STATISTICAL METHODS-I	Subject Code : 17 UCC A31/ 17 UCE A31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the basic function of statistics.
- To do the statistical problems of measure of central tendency, dispersion and skewness.
- To understand Time – Series.

Unit I Introduction

Statistics-meaning, definition, growth and functions – Importance, limitations, misuse of statistics – statistical methods – formation of frequency distribution.

Unit II Measures of Central Tendency

Introduction, Types of Averages- Arithmetic mean, median, mode, Geometric mean and Harmonic mean.

Unit III Measures of Dispersion

Introduction, Importance of dispersion- methods of measuring dispersion - Range, Quartile deviation, mean deviation, standard deviation, combined standard deviation - co-efficient of variation.

Unit IV Measures of Skewness

Introduction, definition – measures of skewness - absolute skewness and relative measures– Karl pearson’s co-efficient of skewness – Bowley’s measure of skewness - Kelley’s co-efficient of skewness.

Unit V Time series

Introduction – Components of Time series – Secular trend – Seasonal variation – Cyclical variation – Irregular variation – Measurement of Trend – semi-average method – moving average method – method of least squares.

Question Paper Pattern : 70% Problem, 30% Theory

Book for study:

Statistical Methods – Theory and Practice – Dr.M.Manoharan, Palani paramount publications.

Books for reference:

1. Statistical Methods – S.P.Gupta, Sultan chand & sons
2. Statistics – R.S.N. Pillai & Bagavathi



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

142

PART - IV SKILL BASED	Title : OBJECT ORIENTED PROGRAMMING (OOP) in C++ LAB	Subject Code : 17 UCC SP3
Semester : III	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- **To understand basic concepts of OOPS with C++.**
 - **To enrich the programming knowledge.**
 - **To go through the OOPS Programming.**
1. Arithmetic Operations of given any two numbers.
 2. Calculation of Simple Interest and Compound Interest
 3. Sum and Average of "N" numbers.
 4. Calculation of Electricity Bill
 5. Sum of Series
 6. Sum of digits
 7. Fibonacci Series
 8. Armstrong number or not
 9. Ascending order
 10. Factorial of a given number
 11. Programs using Class and Object
 12. Programs using Inheritance

Note : Internal – 40 marks and External – 60 marks.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

143

PART - IV NME	Title : SALESMANSHIP	Subject Code : 17 UCC N31/ 17 UCE N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- **To understand the components of Personal Selling.**
- **To enrich the knowledge of salesmanship.**

Unit I

Personal selling-definition- objectives of personal selling- components of personal selling- salesmanship- definition- features-objectives- Is salesmanship an art or science?- Is salesmanship productive? – selling methods (tender, selling through discussion, door to door selling and over the counter selling (OTC)).

Unit II

Benefits of salesmanship- advantages of salesmanship to –producers, distributors, consumers, community and salesman-duties of salesman- characteristics of a successful salesman- criticism against salesmanship.

Unit III

Qualities of a good salesman-physical, mental, social, character or moral.

Unit IV

Types of salesmanship and salesmen-order taking salesmanship- creative salesmen ship – competitive salesmanship- classification of salesmen:- manufacturers salesman, wholesaler (merchant) salesmen, retailers (consumers) salesmen, specialty salesmen, service salesmen, functions, duties and responsibilities of a salesmen.

Unit V

Remuneration to salesmen- good remuneration plan- objectives- essentials – methods.

Book for Study:

Advertising and salesmanship – P.Saravanel, S.Sumathi , Margam Publication, Chennai17.

Book for Reference:

Modern Marketing, Principles and practices – R.S.N.Pillai, Bagavathy, Sulthan Chand & sons, New Delhi -110 055.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

144

IV SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hours/Week	Duration of Exam (hrs)	CA	SE	Tot	Credits
1	17UCCC41/ 17UCE C41	Part-III Core 7	Special Accounts	5	3	25	75	100	5
2	17UCCC42/ 17UCE C42	Part-III Core 8	Entrepreneurship	6	3	40	60	100	4
3	17UCCC43	Part-III Core 9	Visual programming*	4	3	25	75	100	4
4	17UCCCP2	Part-III Core 10	Visual Basic Lab*	4	3	25	75	100	4
5	17UCCA41/ 17UCE A41	Part-III Allied 4	Statistical Methods II	6	3	25	75	100	5
6	17UCCSP4/ 17UCESP2	Part-IV Skilled 4	Commerce Practical Lab	3	3	40	60	100	3
7	17UCCN41/ 17UCE N41	Part-IV NME 2	Advertising	2	3	25	75	100	2
8		Part-V	Extension Activities					100	1
			Total	30					28

* Denotes alternative paper for Computer papers in B.Com (CA) course.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : SPECIAL ACCOUNTS	Subject Code :17UCC C41/ 17UCE C41
Semester : IV	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- **To enrich the knowledge of accounting on special concerns.**
- **To understand the accounting procedure of branch, Hire Purchase and Royalties.**
- **To know how to make fire claims.**

Unit I

Fire insurance claims – need – types of fire insurance policies – loss of stock claim – loss of profits claim - computation of claims – Average clause.

Unit II

Hire purchase accounting – features – accounting treatment – calculation of interest – cash price – default and repossession – Hire purchase trading accounts – debtors method only – Instalment purchase system – Hire purchase Vs Instalment system – Accounting treatment in the books of Buyers and Vendors.

Unit III

Branch accounting – objects – types of branches – accounting treatment in respect of dependent branches – Debtors’ system – Goods invoiced at cost – Goods invoiced at selling price – Stock and Debtors system – (Excluding Wholesale branch,Independent and Foreign branches) – Departmental accounting – need – advantages – distinction between departments and branches – methods and techniques of departmental accounting – apportionment of expenses – Interdepartmental transfers – at cost price – at selling price – stock reserve.

Unit IV

Royalty accounts – meaning of terms Minimum rent, Short working and recoupment of short working – Accounting treatment in the books of lessor and lessee(Excluding sublease).

Unit V

Insolvency accounts – Individual and firms – Distinction between balance sheet and statement of affairs – preparation of statement of affairs and deficiency accounts.

Note: Question Paper Pattern: 70% Problems, 30% Theory

Book for study:

Advanced Accountancy – T.S.Reddy & A.Murthy, Margham Publications.

Books for Reference:

1. Advanced Accountancy - R.L.Gupta & Rahaswamy
2. Advanced Accountancy – M.A.Arulanandam and K.S.Raman
3. Advanced Accountancy – Jain & Narang.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

146

PART - III CORE	Title : ENTREPRENEURSHIP	Subject Code :17 UCC C42/ 17 UCE C42
Semester : IV	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To understand the importance of entrepreneurship.
- To know the functions and role of women in entrepreneurship.
- To enrich the knowledge of project formulation.

Unit I

Entrepreneurship – meaning –definition – importance- entrepreneur –meaning – definition – function- qualities – types – distinction between an entrepreneur and manager – entrepreneur competencies – role for entrepreneurs in economic development.

Unit II

Women entrepreneurs – concept – functions and role of women entrepreneurs –qualities – reasons for starting an enterprise – problems of women entrepreneurs – factors affecting entrepreneurial growth – economic and non-economic factors – personality, psychological, sociological factors.

Unit III

Institutional finance to entrepreneurs – State financial corporations’ – State industrial development corporations – the Tamilnadu Industrial Investment Corporation limited – commercial banks – institutions assisting entrepreneur – District industries centre – organizational set up – functions – industrial estates – meaning – types.

Unit IV

Incentives and subsidies – need for incentives – advantages and problems – schemes of incentives in operation – incentives to small scale industries – state incentives – central incentives – taxation benefits to SSI.

Unit V

Project formulation – significance – stages of project formulation – project report – meaning – need- preparation of project report – contents of a good project report.

Book for Study:

Entrepreneurial Development – Dr.L. Rengarajan

Books for Reference:

1. Entrepreneurial Development – C.P. Gupta & N.P. Srinivasan
2. Entrepreneurial Development - Gordon & Natarajan
3. Entrepreneurial Development – Jayashree Suresh.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
 (Under CBCS w.e.f. 2017 - 2018 onwards)

PART - III CORE	Title : VISUAL PROGRAMMING	Subject Code :17UCC C43
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To understand the visual programming concept.
- To understand the forms using control.
- To know fundamentals of VB Project.

Unit I Introduction

Starting & Exiting Visual Basic – Using Project Explorer – Working with Forms – Using Toolbox.

Unit II Using Intrinsic Visual Basic Controls

Labels and Textbox controls – Using Command Button control – Using Frame, Checkbox, option Button controls – List Box and Combo Box controls.

Unit III Using Control Statements

if – Select Case – Do - For – Exit Statements.

Unit IV Using Dialogue Boxes

MsgBox – Input Box – Common Dialogue controls – Open & Save as Dialog Boxes

Unit V Using Menus

Creating Menus – Adding code to Menu – Creating Shortcut Menu.

Books for study:

Teach Yourself Vb 6 – Scott Warner -Tata Mc Graw Hill, New Delhi, 1999

Books for reference:

1. Mastering Visual Basic 6 – Evangel Pertoutsos – BPB Publishers
2. Visual Basic 6 from the Ground up – Gray Cornell – TMH, New Delhi, 1999



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

148

PART - III CORE	Title : VISUAL BASIC LAB	Subject Code :17UCC CP2
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To develop a VB Project using forms.
 - To enrich the knowledge of Programming in VB.
 - To understand the Database connection.
1. To Display Welcome Message using Command button & Text Box.
 2. Simple Arithmetic operations and check odd or even no.
 3. Checking Armstrong number or not.
 4. To generate Fibonacci Series
 5. To display DATE and TIME using Timer Control.
 6. To change form Background color using HScroll/VScroll
 7. To change form Background color using Menu Editor.
 8. Menu Editor using MDI Form
 9. To Add item and Delete item using List Box
 10. To prepare Electricity Bill (EB) calculation.
 11. String Manipulations.
 12. To calculating Students Mark List
 13. To Create user Login and Password
 14. Employee Details using DAO control

Note : Internal 40 Marks and External 60 Marks.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III ALLIED	Title : STATISTICAL METHODS-II	Subject Code : 17 UCC A41/ 17 UCE A41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To have a study on Correction and Regression analysis.
- To understand the concepts of Association of Attributes and index numbers.
- To know the features of vital statistics.

UNIT I Correlation Analysis

Meaning, definition, types of correlation - Positive and negative, Simple and Total, Partial and multiple, linear and non-linear. Methods of studying correlation - Scatter diagram, Karl pearson, rank correlation and concurrent deviation method.

UNIT II Regression Analysis Introduction, Meaning, Correlation Vs regression, regression line, Regression equation - Least square method - Deviations taken from arithmetic means of x and y - Deviations taken from assumed mean.

UNIT III Association of Attributes Introduction, Types of Association - Positive Association, Negative Association, Independent Association. Methods of studying Association - Frequency method, Proportion Method, Yule’s Co-efficient of Association.

UNIT IV Index Numbers Introduction, Types of Index numbers - Price Index, Quantity Index, Value index - Problems in the construction of index numbers - Methods of Constructing Index numbers - Quantity or volume index numbers, value index numbers. Laspeyre, Paasche, Bolwey, Fisher Ideal and Kelly’s methods.

UNIT V Vital Statistics Introduction, Methods of obtaining vital statistics – Census method, Registration method, Analytical method, Measurement of fertility – Crude birth rate, General fertility rate, specific fertility rate, Total fertility rate - Reproduction rates – Gross Reproduction Rate, Net Reproduction Rate – Measurement of mortality – Crude death rate and specific death rate.

Note: Question Paper Pattern: 70% Problems , 30% Theory.

Books for Study:

Statistical Methods-Theory and Practice – Dr.M.Manoharan, Paramount publications, Palani, Tamilnadu.

Books for Reference:

1. Statistical Methods – S.P.Gupta, Sultan Chand & Sons, New Delhi.
2. Statistics – R.S.N.Pillai & Bagavathi, S.Chand & Company Pvt Ltd, New Delhi.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

150

PART - IV	Title : COMMERCE	Subject Code : 17 UCC SP4
SKILL BASED	PRACTICAL - LAB	
Semester : IV	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To enrich the knowledge of commercial practices.
- To provide practical experience in filling up of commercial forms.
- To know the real meaning of Advertisement.

Unit I

Layout of a business Letter – Designing of forms for office purpose – Preparation of Vouchers, Invoice, Cash receipts, Debit Note, Credit Note, Promissory Note.

Unit II

Format of Joint Stock Company Balance Sheet – model of Partnership Deed - statement of affairs of an insolvent – Specimen of Cost Sheet – Payroll and Wage sheet – Form of Bin card – Filling of material order form – material requisition form.

Unit III

Filling up Equity share Application form – mutual fund form – specimen of share certificate, Mutual fund certificate, Bond certificate – Filling up of Share Transfer Deed for name transfer and proxy form.

Unit IV

Collection of different types of advertisements – Preparation of an advertisement copy – analyzing brand names – Introduction of a product in the market – Currencies of different countries.

Unit V

Filling up of Insurance Policy Proposals, Nomination form, Assignment form, medical form – format of premium receipt – Filling up of Income Tax returns – PAN card application – Applying for Income Tax Refund – Specimen of Passport form – Filling up of know your customer form.

Note: Students have to submit a Practical Note Book/File consisting of the specimen format of all the above documents mentioned in the syllabus. (Internal 40, External 60 marks)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

151

PART - IV NME	Title : ADVERTISING	Subject Code : 17 UCC N41/ 17 UCE N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To enrich the knowledge of advertising.
- To study the different aspects of advertising.

Unit I

Introduction-Evolution-Definition-Basic features- meaning of advertising- objectives of advertising- advertising and advertisement-advertising and publicity-advertising and salesmanship-advertising and promotion.

Unit II

Functions of advertising- commercial functions- economic functions-psychological functions-social functions- primary and secondary functions of advertising-specific reasons for advertising.

Unit III

Benefits of advertising-advantages –to the manufacturers-to the wholesalers-to the retailers-to the salesmen-to the consumers and to the community.

Unit IV

Criticism of advertising-Is advertising an economic waste?-Kinds of advertising-product, institutional, commercial, Non-commercial, relational and emotional, National and local advertising; Advertisement copy-qualities of a good advertisement copy.

Unit V

Advertising Media- Indoor-Outdoor advertising- Merits and demerits.

Book for Study:

Advertising and salesmanship – P.Saravanel,S.Sumathi ,Margam Publication, Chennai.

Book for Reference:

Modern Marketing, Principles and practices – R.S.N.Pillai, Bagavathy, Sulthan Chand & sons, New Delhi -110055.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

152

V –SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs/ Week	Duration of Exam Hrs	C A	SE	Tot	Credits
1	17UCCC51/ 17UCE C51	Part-III Core	Corporate Accounting	6	3	25	75	100	5
2	17UCCC52/ 17UCE C52	Part-III Core	Income Tax Law and Practice I	6	3	25	75	100	4
3	17UCCC53	Part-III Core	Introduction to Multimedia *	6	3	25	75	100	4
4	17UCCE51/ 17UCE E51	Part-III Elective	Practical Costing	6	3	25	75	100	5
5	17UCCEP1	Part-III Elective	Multimedia Lab *	6	3	40	60	100	5
6	16USS S51	Self Study	Soft Skills	-	-	-	-	100	-
Total				30					23

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

153

PART - III CORE	Title : CORPORATE ACCOUNTING	Subject Code :17 UCC C51/ 17 UCE C51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To provide knowledge of corporate accounting.
- To know about the accounting aspects of shares and debentures.
- To do Problems on Amalgamation, Absorption and Reconstruction.

UNIT I

Shares – Introduction – types of shares – accounting procedures for issue of equity and preference shares at par, at discount and at premium – calls-in-arrears – calls-in-advance - forfeiture and reissue – rights issue – bonus issue – issue of shares for consideration other than cash.

UNIT II

Redemption of preference shares and debentures – Introduction – accounting procedure for issue of debenture at par, at discount and at premium – redemption of debentures – methods – installment – lottery – sinking fund (simple problems only)

UNIT III

Profit or loss prior to incorporation – final accounts of joint stock – companies excluding managerial remuneration.

UNIT IV

Amalgamation , absorption and external reconstruction of joint stock companies.

UNIT V

Alteration of share capital and internal reconstruction – reorganization through surrender of shares.

Note : Question Paper Pattern : 70% Problems , 30% Theory.

Book for study

Advanced Accountancy – T.S. Reddy and A.Murthy

Books for Reference :

1. Advanced Accountancy – M.A.Arulanandam and K.S.Raman
2. Advanced Accountancy – R.L.Gupta and Radhaswamy

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

154

PART - III CORE	Title : INCOME TAX LAW AND PRACTICE – I	Subject Code :17 UCC C52/ 17 UCE C52
Semester : V	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To know the concept of Income Tax Act.
- To understand the exempted income U/S 10.
- To do Problems on computation of taxable income.

UNIT I

Income Tax Act, 1961-Definition-Income-Assessment-Assessment Year-Previous Year-Person-Assessee-Resident-Resident but not ordinarily resident-Non-resident-Deemed Income-Capital receipts and Revenue Receipts-Capital expenditure and Revenue expenditure

UNIT II

Exempted Incomes u/s 10, Exempted income on free trade zones u/s 10A, Special economic zones u/s 10AA, Export oriented zones u/s 10B, 10BA, charitable trust u/s 11, 12, and 13, political parties u/s 13A.

UNIT III

Computation of taxable income-Income from Salary-Provident fund-Allowances-Perquisites-Deduction u/s 16/-Income from House Property.

UNIT IV

Profits and gains from Business or Profession-Depreciation and other deductions.

UNIT V

Capital Gains-Exemptions STCG, LTCG-income from other sources.

Note: Question Paper Pattern : 70% Problems, 30% Theory.

Book for Study:

Income Tax Theory, Law and Practice-T.S.Reddy and Y.Hari Prasad Reddy

Books for Reference:

1. Student Guide to Income Tax-Vinod K.Singhania
2. Income Tax Law and Practice-Bagavathi Prasad

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : INTRODUCTION TO MULTIMEDIA	Subject Code :17 UCC C53
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To understand the basic concepts of multimedia.
- To know about us age of multimedia in current Trend.
- To enrich the knowledge of Current multimedia.

Unit I

INTRODUCTION

Products and Evaluation – Hardware, Operating Systems and Software – Objectives – Brief History of Multimedia – What is Multimedia? – Resources of Multimedia Developers.

Unit II

TYPES OF PRODUCTS

Evaluation – Computer Architecture – Computer Architecture Standards – Operating Systems : Definition – Functions - Types.

Unit III

TEXT AND GRAPHICS

Elements of Text – Hypertext – Elements of Graphics – Images and Color – Graphics File and Application Formats.

Unit IV

DIGITAL AUDIO & VIDEO

Characteristics of Sound and Digital Audio – MIDI – Audio File Formats – Background on Video – Characteristics of Digital Video.

Unit V

PRODUCT DESIGN & AUTHORING TOOLS

Classes of Products – Content Organizational strategies – Storyboarding – Categories of Authoring Tools.

Book for Study:

Multimedia Technology and Applications – David Hillman – Galgotia Publications Private Ltd., New Delhi, First Edition, 1998, Reprint 2002

Book for Reference :

Multimedia System Design – Prabhat K. Andleigh and Kiran Thakrar – PHI.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : MULTIMEDIA LAB	Subject Code : 17 UCC EP1
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To develop programming in Multimedia using Flash.**
- **To create a multimedia Project.**
- **To understand a animation concept.**

MULTIMEDIA LAB CYCLE
(Flash 8)

Flash

1. Create an object and moving an object using motion tween.
2. Create a Text animation using create motion tween to increase font size.
3. Create an object and moving an object along a given path using Guide Layer.
4. Create an object and moving an object using Shape tweening.
5. Demonstrate Masking Technique in Flash.
6. Demonstrate Text Animation in Flash.
7. Demonstrate Rotating an object.
8. Demonstrate Blinking an Image.
9. Create a movie which includes Scrolling text effects
10. Create a movie which includes Dangling text effects
11. Create a movie which includes Glowing text effects
12. Create a movie which includes Fading text effects
13. Create an appealing animation movie of your choice combining both motion tweening and shape tweening.
14. Add appropriate sound effects for the above animation.
15. Create an object using Action Script.

Note : Internal 40 Marks and External 60 Marks.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : PRACTICAL COSTING	Subject Code : 17 UCC E51/ 17 UCE E51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To provide knowledge of cost Accounting.
- To understand the elements of cost Accounting.
- To know the different methods of cost Accounting.

UNIT I

Cost accounting-meaning-objectives-importance-cost accounting Vs financial accounting-classification and elements of cost-preparation of cost sheet.

UNIT II

Material-purchase of materials-purchases procedure-store keeping-different level of stock-methods of pricing material issues: FIFO,LIFO,Simple and Weighted average.
Labour : Methods of remunerating labour-incentives wage plans-ascertaining labour cost-chargeable expenses-meaning and examples.

UNIT III

Overheads-meaning-classification-allocation-apportionment-absorption(Simple problems only)-machine hour rate.

UNIT IV

Methods of costing-job costing-process costing-normal and abnormal loss-joint product and by product.

UNIT V

Reconciliation of cost and financial accounting-reasons-procedure for reconciliation-operating costing : Hotel-Cinema-Transport.

Note: Question Paper Pattern : 70% Problems, 30% Theory.

Book for Study:

1. Cost Accounting-Reddy and Murthy, Margham Publishers, Chennai.

Books for Reference:

1. Cost Accounting-Ramachandran and Srinivasan
2. Cost Accounting –Nigam, Naranga and Seghal



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

158

VI –SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs/ Week	Duration of Exam Hrs	C A	SE	Total	Credits
1	17UCCC61/ 17UCE C61	Part-III Core	Income Tax Law and Practice II	6	3	25	75	100	5
2	17UCCC62/ 17UCE C62	Part-III Core	Services Accounting	6	3	25	75	100	4
3	17UCCC63	Part-III Core	E-Commerce *	6	3	25	75	100	4
4	17UCCCV1	Part-III Core	Project Work *	6	3	40	60	100	5
5	17UCCE61/ 17UCEE61	Part-III Elective	Accounting for Managers	6	3	25	75	100	5
6	16UGKB61	Self Study	General Knowledge	-	-	-	-	100	-
Total				30					23

* Denotes alternative paper for Computer papers in B.Com (CA) course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

159

PART - III CORE	Title : INCOME TAX LAW AND PRACTICE - II	Subject Code :17 UCC C61/ 17 UCE C61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the assessment procedure for different assessee.
- To gain knowledge of filing of Returns and deductions.

UNIT I

Clubbing of Income-Set-off and Carry forward of Losses-Deductions from Gross Total Income u/s 80C, 80D; 80DD, 80E, 80G, 80GGB, 80QQB, 80U.

UNIT II

Assessment of Individual and Hindu Undivided Family.

UNIT III

Assessment of Partnership firm and Association of persons.

UNIT IV

Return of Income-Submission of return of Income-Return of Loss-Related Return-Revised return-Procedure for assessment-Self assessment-Re-assessment-Best judgment assessment-Ex-party assessment-Rectification of mistakes-Reopening of assessment.

UNIT V

Deduction and Collection of Tax at Source-Advance Payment-Tax refunds-Income under 'Net of Tax'-Consequences of failure to deduct or pay tax-Tax credit certificate-Tax clearance certificate.

Note: Question Paper Pattern: 70% Problems, 30% Theory.

Book for Study:

Income Tax Theory, Law and Practice-T.S. Reddy and Y. Hari Prasad Reddy.

Books for Reference:

1. Students Guide to Income Tax-Vinod K.Singhania
2. Income Tax Law and Practice-Bhagavathi Prasad

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-credited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : SERVICES ACCOUNTING	Subject Code :17 UCC C62/ 17 UCE C62
Semester : VI	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- **To enrich accounting knowledge for service sector.**
- **To Gain knowledge of accounting specifically on insurance, Voyage, educational institutions, hospitals and others.**

UNIT I:

Accounts of Charitable trusts and libraries – Capital expenditure and Revenue expenditure – Capital receipts and Revenue receipts – Preparation of final accounts.

UNIT II:

Accounts of Educational Institutions - Preparation of final accounts. Accounts of Hospitals-preparation of final accounts.

UNIT III:

Contract Account of Builders-Important terms-Profit or Loss on incomplete Contracts and contract nearing completion-Preparation of Contract Account and Balance Sheet.

UNIT IV:

Voyage Accounts -Introduction-Specialised terms used in Voyage Accounts-Preparation of voyage Account-Unfinished voyage.

UNIT V:

Insurance Company Accounts - Introduction -Preparation of final Accounts of Life Insurance companies-Revenue Account-Profit and Loss Account and Balance Sheet. Accounts of General Insurance companies-Preparation of final Accounts.

Question Paper Pattern : 70% Problem, 30% Theory

Book for Study:

1. T.S.Reddy and A.Murthy-‘Advanced Accountancy’-Margham Publications

Books for Reference:

1. S.P. Jain and K.L.Narang-‘Advanced Accountancy’-Kalyani Publications, Ludhiana.
2. S.P. Jain and K.L.Narang- Practical Problems in Advanced Accounting Volume-I Kalyani Publisher.



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Com., (COMPUTER APPLICATIONS) - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

PART - III CORE	Title : E-COMMERCE	Subject Code :17UCC C63
Semester : VI	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To know about basic concept of Electronic concept.
- To understand the Electronic Payment system.
- To enrich the usage of Various Smartcards.

UNIT I

Introduction: E-Commerce Framework-Anatomy of E-commerce Applications-
Network Infrastructure for E-Commerce: Components of 1-Way-Network Access Equipment-Internet Terminology.

UNIT II Electronic Payment Systems: Types-Digital Token-Based Electronic Payment Systems-Smart Cards and Credit Card Electronic payment system-Risk-Designing electronic payment system.

UNIT III Electronic Data Interchange: EDI; Legal, Security and Privacy issues-EDI Software Implementation-value-Added Network- Internet Based EDI.

UNIT IV Consumer-Oriented Electronic Commerce: Consumer-Oriented Applications-Mercantile process Models-Mercantile Models From the Consumer’s Perspective-Mercantile Models from the Merchant’s perspective.

UNIT V Network Security and Fire Walls: Client Server Network Security-Emerging Client server security Threads-Firewalls and Network Security-Data and Message Security-Encrypted Documents and Electronic Mails.

E-Commerce and www: Hypertext publishing-Technology Behind the Web-Security and the Web.

Unit I : 1.1, 1.3, 2.2,2.3 **Unit II:** 8.1 to 8.6 **Unit III:** 9.1,9.3,10.2,10.4 & 10.5

Unit IV: 7.1 to 7.4 **Unit V:** 5.1 to 5.4, 5.6, 6.3 to 6.5

Book for study:

Ravi Kala Kota & Andrew B Winston-“Frontiers of Electronic commerce”

Books for Reference:

1. Bharat Bhasker , “Electronic Commerce”, TMH Publishing Co Ltd – 2006
2. Dr.C.S.Rayudu, “E-Commerce & E-Business”, Himalaya publication – 2004



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : PROJECT WORK	Subject Code :17UCC CV1
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To provide knowledge for preparing a Project.
- To give practical experience for preparing & project.
- To enrich the programming knowledge while developing a project.

PROJECT WORK & VIVA-VOCE

Total Marks = 100
(Internal: 40 Marks & External: 60 Marks)

Internal Marks Distribution:

1. First Review	= 20 Marks
2. Second Review	= 20 Marks

Total	= 40 Marks

External Marks Distribution:

1. Project Report	= 20 Marks
2. Presentation	= 20 Marks
3. Viva – Voce	= 20 Marks

Total	= 60 Marks



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-credited with 'B' grade by NAAC)
B.Com., (COMPUTER APPLICATIONS) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : ACCOUNTING FOR MANAGERS	Subject Code : 17 UCC E61/ 17 UCE E61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the concepts of management accounting.
- To Gain knowledge of Ratio Analysis, cash and fund flow and bud jets.
- To understand marginal costing.

UNIT I

Management Accounting-Meaning-Definition-Characteristics-Scope-Objectives and Functions-Distinction between Financial Accounting and Management Accounting-Distinction between Management Accounting and Cost Accounting.

UNIT II

Ratio analysis-meaning-advantages-limitations-classification of ratios-computation of profitability ratios-turnover ratios-solvency ratios.

UNIT III

Funds Flow Statement-importance-limitations-Preparation of schedule of changes in working capital-calculation of funds from operations-funds flow statements(simple problem only)

Cash flow statement-meaning-importance-difference between funds flow and cash flow analysis-advantages-limitations-computation of cash from operations-cash flow statement as per AS3 (simple problems only)

UNIT IV

Cost-volume-profit analysis: Marginal cost and Break-Even analysis (including the application of Marginal costing for managerial decisions)

UNIT V

Budgeting and Budgetary control-meaning-objectives-advantages-limitations-essentials of successful budgetary control-classification of budgets-preparation of sales budget, production budget, cash budget and flexible budget.

Note : Question Paper Pattern : 70% problems, 30% Theory.

Book for study:

1. Management Accounting-Ramachandran & Srinivasan.

Books for reference:

1. Management Accounting-R.N.Antony.
Management Accounting-T.S.Reddy & Y. Hari Prasad Reddy.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

164

I SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs / Week	Duration of Exam Hrs	C A	SE	Tot	Crd
1	17UACT11	Part -I	Tamil	6	3	25	75	100	3
	17UACH11		Hindi						
	17UACS11		Sanskrit						
	17UACA11		Vaniga Kadithangal						
2	17 UAC E11	Part -II	English	6	3	25	75	100	3
3	17 UCE C11/ 17 UCC C11	Part-III Core	Financial Accounting I	7	3	25	75	100	4
4	17 UCE A11	Part-III Allied	Managerial Economics*	6	3	25	75	100	5
5	17 UCE S11	Part-IV Skilled	Company Organization*	3	3	25	75	100	3
6	14 UAC VE1	Part-IV	Value Education	2	3	25	75	100	2
			Total	30					20

* Denotes alternative paper for Computer papers in B.Com course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

165

PART - I	Title: வணிகக் கடிதங்கள்	Subject Code : 17 UACA11
Semester : I	HOURS : 6 hours / Week	CREDITS :3

நோக்கங்கள் - 1.வணிகக் கடிதங்களின் முக்கியத்துவத்தை அறிந்து கொள்ள,
2.வணிகக்கடிதங்களை எழுதுவதற்காக, 3,வங்கி கடிதங்கள் மற்றும் வேலை வேண்டி
விண்ணப்பிப்பதை அறிந்து கொள்ள

அலகு 1

வணிகக் கடிதங்கள் - தேவை மற்றும் முக்கியத்துவம் - நோக்கங்கள் வணிகக் கடிதங்களின் அடிப்படைக் கூறுகள் - வணிகக் கடிதங்கள் பொது அமைப்பு மற்றும் படிவங்கள் - சிறப்புக் கூறுகள் கடித வகைகள்

அலகு 2

வியாபாரக் கடிதங்கள் - முனைவுக் கடிதங்கள் மற்றும் விசாரணைகள் - விலைப் புள்ளிகள் . ஆணையுறுக்கள் - ஆணைகளை நிறைவேற்றுதல் - சரக்கு பெற்றுக் கொண்டதை உறுதி செய்தல்

அலகு 3

வணிக விசாரணைக் கடிதங்கள் - வியாபார விசாரணை மற்றும் வங்கி விசாரணை - புகார்களும் சரிக் கட்டுதல்களும் - நிலுவைத் தொகை நினைவூட்டுதல் - வசூல் செய்தல் - கணக்கை நேர் செய்தல்

அலகு 4

சுற்றுக் கடிதங்கள் - விற்பனைக் கடிதங்கள் - அரசத்துறை மற்றும் பொது சேவை அமைப்பு சார்ந்த கடிதங்கள்

அலகு 5

வங்கிக் கடிதங்கள் - வேலை வேண்டி விண்ணப்பம் - பத்திரிகை ஆசிரியருக்கு கடிதங்கள்

Book for Study:

வணிகத் தகவல் தொடர்பு -Dr.ராதா - பிரசன்னா பப்ளிஷர்

Books for Reference:

வணிகக் கடிதங்கள் -Dr.K.அன்பழகன் &S,ராமர் - மெரிட் இந்தியா பப்ளிகேஷன்

வணிகக் கடிதங்கள் -Dr.E.முருகேசன் & வி.ராமர் - எம்.எம். பப்ளிஷர்



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : FINANCIAL ACCOUNTING I	Subject Code : 17 UCE C11/ 17UCC C11
Semester : I	HOURS : 7 hours / Week	CREDITS : 4

Objectives:

- **To know the fundamentals of accounting**
- **To understand the basic concept of final accounts**
- **To enrich the knowledge of depreciation**

Unit: 1

Evolution of accounting-purpose of accounting-accounting principles - Concepts - Conventions - Double Entry System of Accounting - Journal - Ledger –subsidiary books- Trial Balance.

Unit: 2

Errors – Types – Errors disclosed and not disclosed by trial balance – Suspense account – Rectification of errors – Bank Reconciliation Statement.

Unit: 3

Final accounts of sole trading concerns –trading account-profit and loss account-without and with adjustments.

Unit: 4

Consignment accounts – Invoicing goods at cost price – at invoice Price – Valuation of unsold stock – Loss of stock – Accounting treatment of normal loss and abnormal loss.

Joint venture accounts -Recording in individual venturer’s book – Recording in separate set of books

Unit: 5

Depreciation-meaning-causes-need-methods of depreciation– problems in Straight line method, – Written down value method (excluding changes in methods of depreciation)– Annuity method – Depreciation fund method.

Note: Question should cover 30% theory and 70% problems.

Book for study:

1. Advanced Accountancy – T.S. Reddy and A. Murthy

Books for reference:

1. Advanced Accounts – M.C. Shukla and T.S. Grewal
2. Introduction to Accountancy – T.S. Grewal.
3. Advanced Accountancy – R.L. Gupta and Radha Swamy
4. Advanced Accounts – S.P. Jain and K.L. Narang
5. Advanced Accountancy – M.A. Arulanandam and K.S. Raman
6. Advanced Accountancy – S.N. Maheswari and S.K. Maheswari
7. Advanced Accountancy – P.C. Tulsian



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

167

PART - IV	Title : COMPANY	Subject Code :
SKILL BASED	ORGANIZATION	17 UCE S11
Semester : I	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To develop the basic concepts of company
- To understand the basic documents of company
- To enrich the knowledge of meetings and resolution

Unit: 1

Company – Definition and meaning – classification of companies – Differences between Private Company and Public Company

Unit: 2

Incorporation of a company – company secretary-duties of company secretary in connection with formation of company-Memorandum of Association – Articles of Association.

Unit: 3

Prospectus – Meaning – Contents – Liabilities for misstatements in prospectus – Statements in lieu of prospectus – Differences between shares and debentures – Differences between equity shares and preference shares .

Unit: 4

Meetings – Types of meetings – Resolution – Types of Resolution – Ordinary Resolution – Special Resolution, Resolution by Circulars.

Unit: 5

Winding up of a company – Members' voluntary winding up – Creditors' Voluntary winding up – Winding up subject to the supervision of the court.

Book for study:

Company Law –Prof. N.D. Kapoor, Sultan Chand Publications.

Books for reference:

1. Secretarial Practice – Prof. S.S.M. Sundaram & Dr. M. Muthupandi
2. Company Organization; Bharani Publications – Dr. V.M. Selvaraj.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

168

II SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs / Week	Duration of Exam Hrs	CA	SE	Tot	Crd
1	17UACT21	Part -I	Tamil	6	3	25	75	100	3
	17UACH21		Hindi						
	17UACS21		Sanskrit						
	17UACA21		Aluvalaga Melanmai						
2	17 UAC E21	Part -II	English	6	3	25	75	100	3
3	17 UCE C21/ 17 UCC C21	Part-III Core	Financial Accounting - II	7	3	25	75	100	4
4	17 UCE A21	Part-III Allied	Economic Development of India*	6	3	25	75	100	5
5	17 UCE S21	Part-IV Skilled	Principles of Insurance*	3	3	25	75	100	3
6	14 UAC ES1	Part-IV	Environmental Studies	2	3	25	75	100	2
			Total	30					20

* Denotes alternative paper for Computer papers in B.Com course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

169

PART - I	Title : அலுவலக மேலாண்மை	Subject Code : 17 UAC A21
Semester : II	HOURS : 6 hours / Week	CREDITS :3

நோக்கங்கள்- 1.அலுவலகம் மற்றும் அலுவலக மேலாண்மை அறிதல், 2,கோப்பில் இருதல் மற்றும் முறைகள் அறிந்து கொள்ள, 3,அலுவலக அறிக்கைகள் தயார் செய்ய

அலகு 1

அலுவலக மேலாண்மை - இலக்கணம் - நவீன அலுவலகத்தின் அமைப்பு முறைகள் - நவீன அலுவலகத்தின் இலக்கணம் - செயல்பாடுகள் மற்றும் முக்கியத்துவம் . அலுவலக இடவசதி - அலுவலக வரைபடம்,

அலகு 2

பணிக்கேற்ற தீர்மானம் - பணியை எளிதாக்குதல் - அஞ்சலக முறை - கடிதப் போக்குவரத்து மற்றும் பதிவேடுகளைப் பராமரித்தல் - தபால்களைக் கையாளுதல் - தபால் துறையை அமைத்தல் - மையப் படுத்தப்பட்ட அஞ்சல் பணி - உள் வரும் மற்றும் வெளிச் செல்லும் கடிதங்கள் - வாய்மொழி மற்றும் எழுத்துவழி தகவல் தொடர்புகள்,

அலகு 3

கோப்பில் இருதல் - நல்ல கோப்பு முறையின் முக்கிய அம்சங்கள் - வகைப் படுத்துதல் - வரிசைப்படுத்துதல் - கோப்பு முறைகள் - மையக் கோப்பு முறை - பரவலாக்கப்பட்ட கோப்பு முறை - சுட்டகராதி கோப்பு வகை,

அலகு 4

அலுவலக இயந்திரங்களும் சாதனங்களும் - பல்வேறு சாதனங்களின் தேவைகள் - அலுவலக இயந்திரங்களை தேர்ந்தெடுப்பதற்கான அடிப்படைக் கோட்பாடுகள் - கணிப்பொறி மற்றும் புள்ளி விவரங்களை தொகுத்தளிக்கும் இயந்திரம்- அலுவலக இயந்திரங்களின் வகைகள்,

அலகு 5

அலுவலக அறிக்கைகள் - முக்கியத்துவம் - வகைகள் - வடிவங்கள் - அறிக்கைகளின் செயலாக்கம் - பொது வணிகச் சொற்கள்.

Book for Study

அலுவலக மேலாண்மை - Dr.ராதா -பிரசன்னா பப்ளிஷர்

Books for Reference

அலுவலக முறைகள்- எ.எம்.சுந்தரம்- மீனாட்சி பப்ளிகேஷன்

Office Management - S.Kathiresan & Dr.V.Radha - Prasanna Publishers & Distributors

Office Management - R.K.Chopra - Himalaya Publishing House

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

170

PART - III CORE	Title : FINANCIAL ACCOUNTING II	Subject Code : 17 UCE C21/ 17UCC C21
Semester : II	HOURS : 7 hours / Week	CREDITS : 4

Objectives:

- **To Know about the fundamentals of bills**
- **To understand the methods of calculation of interest**
- **To enrich the knowledge of clubs and associations**

Unit: 1 Bills of Exchange – Trading and Accommodation bills – Renewals – Dishonour due to insolvency.

Unit: 2 Account Current – Methods of Calculation of Interest – Product method – Red Ink Interest method – Epoque method – Periodic balance method-**Average due date** – Calculation of due date based on holidays intervention – Interest Calculation.

Unit: 3 Self balancing system – Meaning – Procedure – Self balancing journal entries – Self balancing ledgers – Transfer from one ledger to another – Accounting for goods sent on “sale or return basis”.

Unit: 4 Accounts of Non-Trading Concerns (Clubs and Associations only) – Preparation of Receipts & Payments account, Income & Expenditure account and Balance Sheet.

Unit: 5 Accounts from incomplete records (single entry system) – Methods of ascertainment of profit – Net Worth method – Conversion method.

Note: Question should cover 30% theory and 70% problems.

Book for Study:

Advanced Accountancy – T.S. Reddy and A. Murthy – Margham Publications.

Books for Reference:

1. Advanced Accounts – M.C. Shukla and T.S. Grewal
2. Introduction to Accountancy – T.S. Grewal.
3. Advanced Accountancy – R.L. Gupta and Radha Swamy
4. Advanced Accounts – S.P. Jain and K.L. Narang
5. Advanced Accountancy – M.A. Arulanandam and K.S. Raman
6. Advanced Accountancy – S.N. Maheswari and S.K. Maheswari
7. Advanced Accountancy – P.C. Tulsian

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

171

PART - IV SKILL BASED	Title : PRINCIPLES OF INSURANCE	Subject Code : 17 UCE S21
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- **To understand the fundamental principles of insurance**
- **To know the procedure for taking a policy**
- **To enrich the knowledge of procedure for settlement of claims**

Unit – 1 Insurance - Origin – Meaning – Types of Insurance – Fundamental Principles of Insurance – Functions and importance of Insurance.

Unit – 2 Life Insurance – Fundamental principles of Life Insurance – Types of Life Insurance policies – Procedure for taking a Life policy – Modes of Premium Single, annual, half - yearly, quarterly and monthly.

Unit – 3 Life Insurance policy conditions – Lost policies – Assignment – Nomination – Settlement of claim – Lapse of Life Insurance policy – Revival of policy – Rebating – Surrender value – Loan on Life Insurance policies.

Unit – 4 Marine Insurance – Meaning – Types of Marine policies – Conditions of Marine policy – Marine losses – settlement of claims.

Unit – 5 Fire Insurance – Meaning – Types of Fire Insurance policies – Conditions of Fire Insurance policy – Procedure for settlement of claim – Reinsurance- meaning of motor insurance, burglary insurance, personal accident insurance and sports insurance

Book for Study:

Insurance – Principles and Practices – M.N. Mishra, S.Chand and company

Books for Reference:

Principles Practice & Law of Insurance – Ghosh & Agarwal

Life insurance in India – Dr. R.M. Ray

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

172

III SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs / Week	Duration of Exam Hrs	C A	SE	Tot	Crd
1	17UCEC31/ 17UCC C31	Part-III Core	Promotional Marketing	6	3	25	75	100	4
2	17UCEC32/ 17UCC C32	Part-III Core	Accounting for Firms	5	3	25	75	100	4
3	17UCEC33	Part-III Core	Modern Banking*	4	3	25	75	100	4
4	17UCEC34	Part-III Core	Principles of Management*	4	3	25	75	100	4
5	17UCEA31/ 17UCC A31	Part-III Allied	Statistical Methods I	6	3	25	75	100	5
6	17UCESP1	Part-IV Skilled	Banking Practical Lab*	3	3	40	60	100	3
7	17UCEN31/ 17UCCN31	Part-IV NME	Salesmanship	2	3	25	75	100	2
			Total	30					26

* Denotes alternative paper for Computer papers in B.Com course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

173

PART - III CORE	Title : PROMOTIONAL MARKETING	Subject Code : 17 UCE C31/ 17 UCC C31
Semester : III	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To know the fundamental concepts of Salesmanship.
- To enrich the knowledge of impersonal Selling.

Unit I Promotional Mix

Introduction – promotional activities – selling, promotion and sales promotion - Need and objectives of promotional activities – major promotional tools – forms of sales promotion.

Unit II Personal selling

Salesmanship – Introduction – Definition – objectives of personal selling – duties of a salesman – qualities of a successful salesman – physical, mental, social and moral qualities – types of salesmen – process of personal selling – reasons for failure of salesman. Sales manager – qualities, duties and responsibilities.

Unit III Sales Promotion

Introduction – Definition – Importance – objectives – reasons for growth – advantages and limitations – kinds of sales promotion – consumer, dealer and sales force promotion.

Unit IV Advertising

Introduction – Definition – Objectives – Advantages and Limitations. Types of Advertising - Advertising and salesmanship – Advertising and sales promotion – Failure of Advertising - Advertisement copy – qualities – elements. Advertising agency – selection.

Unit V Advertising Media

Introduction – selection of advertising media – kinds of media – Indoor advertising – outdoor advertising – direct advertising – promotional advertising – merits and limitations of advertising.

Book for Study:

1. R.S.N.Pillai & Bagavathi, Modern Marketing Principles and Practices, Sultan chand publishers, New Delhi.

Books for Reference:

1. Dr.N.Rajan Nair, Marketing, Sultan Chand Publishers.
2. J.C.Sinha, Principles of Marketing and Salesmanship. R.Chand & Co

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

174

PART - III CORE	Title : ACCOUNTING FOR FIRMS	Subject Code : 17 UCE C32/ 17 UCC C32
Semester : III	HOURS : 5 hours / Week	CREDITS : 4

Objectives:

- To know the concepts of partnership firm.
- To enrich the knowledge of partnership accounting including insurgency.

Unit I

Partnership Accounts – Partnership – Definition – partners – types – provisions relating to partnership accounting – capital and current accounts of partners – fixed and fluctuating – Appropriation of profits – past adjustment and guarantee.

Unit II

Admission of partners – calculation of new profit sharing ratio – adjustment of undistributed profits, losses and reserves – revaluation of assets and liabilities – treatment of goodwill – adjustment of capital of partners after admission.

Unit III

Retirement of partners – Transfer of balance due to retired partner – Purchase of retired partner's share by the remaining partners – Death of a partner – settlement of amount due to legal representatives of deceased partner.

Unit IV

Sale of firm to a company – dissolution of firm – accounting treatment.

Unit V

Insolvency of a partner – decision in Garner Vs Murray case – insolvency of all partners – piece meal distribution – proportionate capital method – maximum loss method.

Question Paper Pattern : 70% Problem, 30% Theory

Book for Study:

Advanced accountancy - T.S.Reddy and A.Murthy, Margam Publications

Books For Reference:

1. Advanced accountancy - M.A.Arulandam and K.S.Raman.
2. Advanced accountancy - R.L.Gupta and Radhaswamy.
3. Partnership accounting - L.P.Ramalingam and T.S.Jeya kumar.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : MODERN BANKING	Subject Code : 17 UCE C33
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To enrich the knowledge of Indian Banking System.
- To know about the uses of Innovative Banking.

Unit I

Introduction: Origin of Banking – Classification of Banks – Banker and Customer : Definition of Banker and Customer – General Relationship – Obligations of a Banker – Rights of a Banker.

Unit II

Types of Accounts: Fixed deposit-Savings Deposit-Recurring Deposit-Current Deposit- New deposit schemes-Deposit schemes for NRI.Opening and Closing of a bank account.

Unit III

Cheque: Meaning-Defintion-features-drawing up of a cheque-sec:138 of N.I.Act-material alteration. Crossing: Meaning – Definition – Forms – Significance. Endorsement: Meaning – Definition – Types – Significance.

Unit IV

Paying Banker: Meaning – Duties – statutory protection – payment in due course. Collecting Banker: Meaning – Duties – Statutory protection – concept of negligence – Holder in due course.

Unit V

Innovative banking: E-Banking: Meaning – services – merits and demerits. Internet Banking: Meaning – Services – Merits and Demerits. Mobile Banking: Meaning – Services – Merits and Demerits. E-Money: Meaning – Definition – categories – Merits and Demerits. ATM: Meaning – Concept – Features – PIN – Importance - ATM cards.

Books for Study:

1. Banking Theory Law and Practice - Dr.S.Gurusamy
2. Banking Theory Law and Practice - C.Jeevanandam
3. Banking Theory Law and Practice - Dr. V.Radha

Books for Reference:

1. Banking Theory Law and Practice - K.P.M.Sundaram & P.N.Varshney
2. Banking Theory Law and Practice - E. Gordan & K.Natarajan



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

176

PART - III CORE	Title : PRINCIPLES OF MANAGEMENT	Subject Code : 17 UCE C34
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To know the concepts of management.
- To understand the management functions.

Unit I : Management – meaning – definitions – nature – importance – administration and management – Is management an art or science or profession? – Levels of management – Scientific management – important aspects – Henry Fayol’s Principles of management - Management by objectives – merits.

Unit II : Functions of Management – planning – definitions – nature – steps in planning – merits – limitations of planning - Decision-making – steps – merits and problems in decision making – Types of decisions.

Unit III : Organising – definitions – process of organisation – importance – Organisation Chart – formal organization and informal organization – Delegation of Authority – process – merits – obstacles – measures to effective delegation, delegation and decentralization – departmentation – bases – span of control.

Unit IV : Staffing – meaning – recruitment – sources of recruitment - merits and demerits – directing – characteristics – importance – communication – importance – elements – types – formal and informal, Oral and written – upward and downward – personal barriers and mechanical barriers in communication – motivation – importance – financial and non-financial incentives – Maslow’s theory and McGregor’s X and Y theories.

Unit V : Leadership – definitions – Leadership styles – autocratic, democratic and laissez-faire Leadership – controlling – definitions – nature – steps in controlling -benefits – problems in control – co-ordination – importance – problems in co-ordination.

Text Book : Principles of Management – Dr. J. Jayasankar – Margham Publication.

Reference Books:

1. Principles of Management – Dr. T.Ramasamy-Himalaya Publishing House.
2. Management – Principles & Practices – Lallan Prasad and Gulshan, S.Chand & Co.
3. Principles of Management – Dr. K. Natarajan and Dr. KP Ganesan–Himalaya Publishing House

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

177

PART - III ALLIED	Title : STATISTICAL METHODS-I	Subject Code : 17 UCE A31/ 17 UCC A31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the basic functions of statistics.
- To do the statistical problems of measure of central tendency.
- To understand Dispersion and Skewness Time series.

Unit I Introduction

Statistics-meaning, definition, growth and functions – Importance, limitations, misuse of statistics – statistical methods – formation of frequency distribution.

Unit II Measures of Central Tendency

Introduction, Types of Averages- Arithmetic mean median, mode, Geometric mean and Harmonic mean.

Unit III Measures of Dispersion

Introduction, Importance of dispersion- methods of measuring dispersion - Range, Quartile deviation, mean deviation, standard deviation, combined standard deviation - co-efficient of variation.

Unit IV Measures of Skewness

Introduction, definition – measures of skewness - absolute skewness and relative measures– Karl pearson's co-efficient of skewness – Bowley's measure of skewness - Kelley's co-efficient of skewness.

UNIT V Time series

Introduction – Components of Time series – Secular trend – Seasonal variation – Cyclical variation – Irregular variation – Measurement of Trend – semi-average method – moving average method – method of least squares.

Question Paper Pattern: 70% Problem, 30% Theory

Book for Study:

1. Statistical Methods – Theory and Practice – Dr.M.Manoharan, Palani paramount publications.

Books for Reference:

1. Statistical Methods – S.P.Gupta, Sultan chand & sons
2. Statistics – R.S.N. Pillai & Bagavathi.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

178

PART - IV	Title : BANKING PRATICAL -	Subject Code : 17 UCE SP1
SKILL BASED	LAB	
Semester : III	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To know and use the forms available in the banks.
 - To know about the Practical Banking.
1. Chart of Organisation structure of R.B.I and a Modern Bank.
 2. Procedure for opening of an bank account – Documents required
 3. Filling up of common account opening form
 4. List out the special types of customers.
 5. List of Nationalised Banks
 6. Filling up of pay in slip for cash deposit/cheque deposit and loan remittances.
 7. Filling up of online transaction application form.
 8. Filling up of Nomination form.
 9. Filling up of KYC form.
 10. Filling up of ATM card Requisition form.
 11. Specimen of Fixed Deposit Receipt
 12. Specimen of safe custody deposit receipt
 13. Specimen of Demand Draft and Bankers Cheque
 14. Specimen of Return memo
 15. Specimen of a cheque
 16. Speciman of loan application form for Housing, Vehicle and Education.
 17. Drawing up of promissory note
 18. Model of Bill of Exchange
 19. Model of Letter of Credit
 20. Forms of Letter of Credit
 21. List of Bank charges
 22. List of ATM charges
 23. Specimen of debit card and credit card
 24. Model Pass book
 25. Model of Statement of Account given to customers.
 26. Format of Guarantee
 27. Format of Railway Receipt and Lorry Receipt
 28. Format and specimen of Bank Balance sheet
 29. Currencies of different countries
 30. Exchange value of foreign currencies.

Note: Students have to submit a practical note book / file consisting of the specimen / format of all the above documents. (Internal – 40 External – 60 marks)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

179

PART - IV NME	Title : SALESMANSHIP	Subject Code : 17 UCE N31/ 17 UCC N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To understand the Components of Personal Selling.
- To enrich the knowledge of Salesmanship.

Unit I

Personal selling-definition- objectives of personal selling- components of personal selling- salesmanship- definition- features-objectives- Is salesmanship an art or science?- Is salesmanship productive? – selling methods (tender, selling through discussion, door to door selling and Over the Counter Selling (OTCS)).

Unit II

Benefits of salesmanship- advantages of salesmanship to –producers, distributors, consumers, community and salesman-duties of salesman- characteristics of a successful salesman- criticism against salesmanship.

Unit III

Qualities of a good salesman-physical, mental, social, character or moral.

Unit IV

Types of salesmanship and salesmen-order taking salesmanship- creative salesmen ship – competitive salesmanship- classification of salesmen:- manufacturers salesman, wholesaler (merchant) salesmen, retailers (consumers) salesmen, specialty salesmen, service salesmen, functions, duties and responsibilities of a salesmen.

Unit V

Remuneration to salesmen- good remuneration plan- objectives- essentials – methods.

Book for Study:

1. Advertising and salesmanship – P.Saravanel, S.Sumathi , Margam Publication, Chennai – 17.

Book for Reference:

2. Modern Marketing, Principles and practices – R.S.N.Pillai, Bagavathy, Sulthan Chand & sons, New Delhi -110055.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

180

IV SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs / Week	Duration of Exam Hrs	CA	SE	Tot	Crd
1	17UCEC41/ 17UCC C41	Part-III Core	Special Accounts	5	3	25	75	100	5
2	17UCEC42/ 17UCC C42	Part-III Core	Entrepreneurship	6	3	25	75	100	4
3	17UCEC43	Part-III Core	Auditing*	4	3	25	75	100	4
4	17UCEC44	Part-III Core	Industrial Organization*	4	3	25	75	100	4
5	17UCEA41/ 17UCCA41	Part-III Allied	Statistical Methods II	6	3	25	75	100	5
6	17UCESP2/ 17UCCSP4	Part-IV Skilled	Commerce Practical Lab	3	3	40	60	100	3
7	17UCEN41/ 17UCCN41	Part-IV NME	Advertising	2	3	25	75	100	2
8		Part-V	Extension Activities					100	1
			Total	30					28

* Denotes alternative paper for Computer papers in B.Com course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

181

PART - III CORE	Title : SPECIAL ACCOUNTS	Subject Code : 17 UCE C41/ 17 UCC C41
Semester : IV	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To enrich the knowledge of accounting on special concerns.
- To understand the accounting problems of Branch, Hire Practical and Royalties.
- To know how to make fir claims.

Unit I

Fire insurance claims – need – types of fire insurance policies – loss of stock claim – loss of profits claim - computation of claims – Average clause.

Unit II

Hire purchase accounting – features – accounting treatment – calculation of interest – cash price – default and repossession – Hire purchase trading accounts – debtors method only – Instalment purchase system – Hire purchase Vs Instalment system – Accounting treatment in the books of Buyers and Vendors.

Unit III

Branch accounting – objects – types of branches – accounting treatment in respect of dependent branches – Debtors' system – Goods invoiced at cost – Goods invoiced at selling price – Stock and Debtors system – (Excluding Wholesale branch, Independent and Foreign branches) – Departmental accounting – need – advantages – distinction between departments and branches – methods of departmental accounting – apportionment of expenses – Interdepartmental transfers – at cost price – at selling price – stock reserve.

Unit IV

Royalty accounts – meaning of terms Minimum rent, Short working and recoupment of short working – Accounting treatment in the books of lessor and lessee(Excluding sublease).

Unit V

Insolvency accounts – Individual and firms – Distinction between balance sheet and statement of affairs – preparation of statement of affairs and deficiency accounts.

Note: Question Paper Pattern: 70% Problems, 30% Theory

Book for study:

Advanced Accountancy – T.S.Reddy & A.Murthy, Margham Publications.

Books for Reference:

1. Advanced Accountancy - R.L.Gupta & Rahaswamy
2. Advanced Accountancy – M.A.Arulanandam and K.S.Raman
3. Advanced Accountancy – Jain & Narang.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

182

PART - III CORE	Title : ENTREPRENEURSHIP	Subject Code : 17 UCE C42/ 17 UCC C42
Semester : IV	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To understand the importance of entrepreneurship.
- To know the functions and role of women in entrepreneurship.
- To enrich the knowledge on project formulation.

Unit I

Entrepreneurship – meaning –definition – importance- entrepreneur –meaning – definition – function- qualities – types – distinction between an entrepreneur and manager – entrepreneur competencies – role for entrepreneurs in economic development.

Unit II

Women entrepreneurs – concept – functions and role of women entrepreneurs –qualities – reasons for starting an enterprise – problems of women entrepreneurs – factors affecting entrepreneurial growth – economic and non-economic factors – personality, psychological, sociological factors.

Unit III

Institutional finance to entrepreneurs – State financial corporations – State industrial development corporations – Tamilnadu Industrial Investment Corporation Limited – Commercial Banks – institutions assisting entrepreneur – District Industries Centre – Organizational set up – functions – industrial estates – meaning – types.

Unit IV

Incentives and subsidies – need for incentives – advantages and problems – schemes of incentives in operation – incentives to small scale industries – state incentives – central incentives – taxation benefits to SSI.

Unit V

Project formulation – significance – stages of project formulation – project report – meaning – need- preparation of project report – contents of a good project report.

Book for Study:

Entrepreneurial Development – Dr.L. Rengarajan

Books for Reference:

Entrepreneurial Development – C.P. Gupta & N.P. Srinivasan

Entrepreneurial Development - Gordon & Natarajan

Entrepreneurial Development – Jayashree suresh.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

183

PART - III CORE	Title : AUDITING	Subject Code : 17 UCE C43
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To know the fundamentals of auditing.
- To enrich the knowledge about audit and auditor.

Unit I

Audit – Basic Principles – Definition – Objects – differences between auditing and investigation – advantages of audit – qualities of an auditor – detection of errors and frauds – various types of audit – preparation before audit – audit programme – audit notebook – working papers – procedure for audit.

Unit II

Internal control – meaning and definition – internal check – test check – Objects of internal check – auditors' duty as regards internal check as to purchases, sales, wages and cash receipts and cash payments.

Unit III

Vouching – meaning – definition – importance – duties of an auditor – vouching of cash transactions – vouching of trading transactions – vouching of impersonal ledger.

Unit IV

Verification and valuation of assets – general principles – fixed assets – wasting assets – investments – inventories – freehold and leasehold properties – loans – bills receivable – sundry debtors – plant and machinery – patents – verification and valuation of liabilities – duties of an auditor.

Unit V

Audit report – Liabilities of auditor – liabilities for negligence – liabilities for misfeasance – civil, criminal liability – liability to third party – legal position.

Books for Study:

1. Auditing – Principles and Practices – Jagedish Prakash
2. Principles and Practice of Auditing – Dinkar pagare

Books for Reference:

1. Practical Auditing – B.N. Tandon
2. Principles and Practices of Auditing – R.G.Saxena
3. Auditing – Rup Ram Gupta

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : INDUSTRIAL ORGANIZATION	Subject Code : 17 UCE C44
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To understand the Features of modern industry.
- To enrich the knowledge of different concepts of Industry.

Unit I

Evolution of modern industry –Handicraft production – Factory system – Industrial system preceding and present methods – Industrial Revolution – features –effects.

Unit II

Establishing a new undertaking – promotion – meaning and important steps in promotion. Plant location – steps in the selection of the plant site – present trends in plant location – meaning, importance and principles of layout, procedure – Design of industrial buildings – Size of business units – Factors that affect size – Optimum size – Factors affecting the optimum size.

Unit III

Industrial combinations – type of combinations – conditions that led to combinations – Reasons for the slow growth of combinations – Control of combination with specific reference to the Monopolistic and Restrictive Trade Practices Act.

Unit IV

Principles of Organization – Basic principles of organization - Organization Charts - Systems of organization – Line or Military organization – Functional organization – Line and staff Organisation – Advantages and Disadvantages of various systems – Delegation and decentralization.

Unit V

Organization of Finance – over capitalization and under capitalization – Meaning, cause and effects of over capitalization and under capitalization – Remedies – capital Gearing – Sources of long, medium and short term Finance.

Text Book

1. Industrial Organization and Management- Sherlekar, S.A Etc, Himalaya Publishing House, 1973

Reference Books

1. Industrial Organization and Management- Y.K.Bhushan, and P.Unnikrishnan
2. Industrial Organization and Management-Sherlekar, S.A.Himalaya Publishing House, 1981



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

185

PART - III ALLIED	Title : STATISTICAL METHODS-II	Subject Code : 17 UCE A41/ 17 UCC A41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To have a study on correlation and Regression analysis.
- To understand the concepts of Associations Staff Attributes and Index Numbers.
- To know the teatimes of Vital statistics.

UNIT I Correlation Analysis

Meaning, definition, types of correlation - Positive and negative, Simple and Total, Partial and multiple, linear and non-linear. Methods of studying correlation - Scatter diagram, Karl pearson, rank correlation and concurrent deviation method.

UNIT II Regression Analysis

Introduction, Meaning, Correlation Vs regression, regression line, Regression equation - Least square method - Deviations taken from arithmetic means of x and y - Deviations taken from assumed mean.

UNIT III Association of Attributes

Introduction, Types of Association - Positive Association, Negative Association, Independent Association. Methods of studying Association - Frequency method, Proportion Method, Yule's Co-efficient of Association.

UNIT IV Index Numbers

Introduction, Types of Index numbers - Price Index, Quantity Index, Value index - Problems in the construction of index numbers - Methods of Constructing Index numbers - Quantity or volume index numbers, value index numbers. Laspeyre, Paasche, Bowley, Fisher Ideal and Kelly's methods.

UNIT V Vital Statistics

Introduction, Methods of obtaining vital statistics – Census method, Registration method, Analytical method, Measurement of fertility – Crude birth rate, General fertility rate, specific fertility rate, Total fertility rate - Reproduction rates – Gross Reproduction Rate, Net Reproduction Rate – Measurement of mortality – Crude death rate and specific death rate.

Note: Question Paper Pattern : 70% Problems , 30% Theory.

Books for Study:

Statistical Methods-Theory and Practice – Dr.M.Manoharan, Paramount publications,
Palani, Tamilnadu.

Books for Reference:

1. Statistical Methods – S.P.Gupta, Sultan Chand & Sons, New Delhi.
2. Statistics – R.S.N.Pillai & Bagavathi, S.Chand & Company Pvt Ltd, New Delhi.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

186

PART - IV	Title : COMMERCE	Subject Code : 17 UCE SP2
SKILL BASED	PRACTICAL - LAB	
Semester : IV	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To enrich the knowledge on commercial practices.
- To Provide Practical experience in filling up of commercial forms.
- To know the real meaning of Advertisement.

Unit I

Layout of a business Letter – Designing of forms for office purpose – Preparation of Vouchers, Invoice, Cash receipts, Debit Note, Credit Note, Promissory Note.

Unit II

Format of Joint Stock Company Balance Sheet – model of Partnership Deed - statement of affairs of an insolvent – Specimen of Cost Sheet – Payroll and Wage sheet – Form of Bin card – Filling of material order form – material requisition form.

Unit III

Filling up Equity share Application form – mutual fund form – specimen of share certificate, Mutual fund certificate, Bond certificate – Filling up of Share Transfer Deed for name transfer and proxy form.

Unit IV

Collection of different types of advertisements – Preparation of an advertisement copy – analyzing brand names – Introduction of a product in the market – Currencies of different countries.

Unit V

Filling up of Insurance Policy Proposals, Nomination form, Assignment form, medical form – format of premium receipt – Filling up of Income Tax returns – PAN card application – Applying for Income Tax Refund – Specimen of Passport form –Filling up of Know Your Customer form.

Note: Students have to submit a Practical Note Book/File consisting of the specimen format of all the above documents mentioned in the syllabus. (Internal 40marks, External 60 marks)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

187

PART - IV NME	Title : ADVERTISING	Subject Code : 17 UCE N41/ 17 UCC N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To enrich the knowledge of advertising.
- To study the different as reports of advertising.

Unit I

Introduction-Evolution-Definition-Basic features- meaning of advertising- objectives of advertising- advertising and advertisement-advertising and publicity-advertising and salesmanship-advertising and promotion.

Unit II

Functions of advertising- commercial functions- economic functions-psychological functions-social functions- primary and secondary functions of advertising-specific reasons for advertising.

Unit III

Benefits of advertising-advantages –to manufacturers-to wholesalers-to retailers-to salesmen-to consumers and to the community.

Unit IV

Criticism of advertising-Is advertising an economic waste?-kinds of advertising-product, institutional, commercial, Non-commercial, relational and emotional, National and local advertising; Advertisement copy-qualities of a good advertisement copy.

Unit V

Advertising Media- Indoor-Outdoor advertising- Merits and demerits.

Books for Study:

Adverrtising and salesmanship – P.Saravanel,S.Sumathi , Margam Publication, Chennai – 17.

Books for Reference:

Modern Marketing, Principles and practices – R.S.N.Pillai, Bagavathy, Sulthan Chand & sons, New Delhi -110055.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

188

V –SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs / Week	Duration of Exam Hrs	C A	SE	Tot	Crd
1	17UCEC51/ 17UCC C51	Part-III Core	Corporate Accounting	6	3	25	75	100	5
2	17UCEC52/ 17UCC C52	Part-III Core	Income Tax Law and Practice I	6	3	25	75	100	4
3	17UCEC53	Part-III Core	Business Legislation I*	6	3	25	75	100	4
4	17UCCE51/ 17UCE E51	Part-III Elective	Practical Costing	6	3	25	75	100	5
5	17UCEE52	Part-III Elective	Financial Markets and Services*	6	3	25	75	100	5
6	16USS S51	Self study	Soft Skills	-	-	-	-	100	-
Total				30					23

* Denotes alternative paper for Computer papers in B.Com course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

189

PART - III CORE	Title : CORPORATE ACCOUNTING	Subject Code : 17 UCE C51/ 17UCC C51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To Provide knowledge of Corporate Accounting.
- To know about the accounting aspects of shares and debentures
- To do Problems on Amalgamate, Abfortion and Reconstruction.

UNIT I

Shares – Introduction – types of shares – accounting procedures for issue of equity and preference shares at par, at discount and at premium – calls-in-arrears – calls-in-advance - forfeiture and reissue – rights issue – bonus issue – issue of shares for consideration other than cash.

UNIT II

Redemption of preference shares and debentures – Introduction – accounting procedure for issue of debenture at par, at discount and at premium – redemption of debentures – methods – installment – lottery – sinking fund (simple problems only)

UNIT III

Profit or loss prior to incorporation – final accounts of joint stock – companies excluding managerial remuneration.

UNIT IV

Amalgamation , absorption and external reconstruction of joint stock companies.

UNIT V

Alteration of share capital and internal reconstruction – reorganization through surrender of shares.

Note: Question Paper Pattern : 70% Problems , 30% Theory.

Book for study

Advanced Accountancy – T.S. Reddy and A.Murthy

Books for Reference:

1. Advanced Accountancy – M.A.Arulanandam and K.S.Raman
2. Advanced Accountancy – R.L.Gupta and Radhaswamy

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

190

PART - III CORE	Title : INCOME TAX LAW AND PRACTICE - I	Subject Code : 17 UCE C52/ 17 UCC C52
Semester : V	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To know the concept of Income Tax Act
- To understand the exempted income u/s10.
- To do Problems on Computation of Taxable income.

UNIT I

Income Tax Act, 1961-Definition-Income-Assessment-Assessment Year-Previous Year-Person-Assessee-Resident-Resident but not ordinarily resident-Nonresident-Deemed Income-Capital receipts and Revenue Receipts-Capital expenditure and Revenue expenditure

UNIT II

Exempted Incomes u/s 10, Exempted income on free trade zones u/s 10A, Special economic zones u/s 10AA, Export oriented zones u/s 10B, 10BA, charitable trust u/s 11, 12, and 13, political parties u/s 13A.

UNIT III

Computation of taxable income-Income from Salary-Provident fund-Allowances-Perquisites-Deduction u/s 16/-Income from House Property.

UNIT IV

Profits and gains from Business or Profession-Depreciation and other deductions.

UNIT V

Capital Gains-Exemptions STCG, LTCG-income from other sources.

Note: Question Paper Pattern : 70% Problems, 30% Theory.

Book for Study:

Income Tax Theory, Law and Practice-T.S.Reddy and Y.Hari Prasad Reddy

Books for Reference:

1. Student Guide to Income Tax-Vinod K.Singhania
2. Income Tax Law and Practice-Bagavathi Prasad

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

191

PART - III CORE	Title : BUSINESS LEGISLATION - I	Subject Code : 17 UCE C53
Semester : V	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To gain knowledge of Law of Contracts and Special contracts.
- To understand the legal meaning of Bailment and Agency.

UNIT: I Law of Contract

Objects of the law of contract, Indian Contract Act 1872, Sources of Mercantile Law- Definition of contract, essential elements of a valid contract, consensus ad- idem.

UNIT: II Classification of contract Classification according to validity, formation, performance – Void agreement and void contract – Executed contract, Executory contract – legal rules to offer and acceptance – Cross offers – communication of offer, Acceptance and Revocation – when will an offer come to an end? Definition of consideration, Legal Rules as to consideration – A contract without consideration is void – exceptions – capacity of contract with minors – persons of unsound mind – other persons - free consent – Meaning – flow in consent – Difference between coercion And undue Influence – Misrepresentation & Fraud Contingent Contracts.

UNIT: III Special contract Contract of indemnity – Rights of Indemnity holder when sued. Contract of Guarantee – Distinction between Indemnity and Guarantee – Specific Guarantee – Continuing Guarantee – Kinds of Surety – Rights against creditor – Rights against principal debtors – Rights against co-sureties – Discharge by revocation, conduct of the creditors, invalidations of contract.

UNIT: IV Bailment Definition, classification, rights and duties of bailor and bailee. Lien, Particular lien, General lien, Distinction between Particular lien and General lien. Finder of Lost goods - Obligation of finder of goods. Termination of Bailment.

UNIT: V Law of Agency Definition of Agent and Principal – Rules of Agency – Who can employ an agent? Who may be an agent? Creation of agency – by- express agreement, implied Agreement, Ratification of Agency – Delegation of Authority to sub-agent, co-agent (or) Substituted agent. Differences between sub-agent and substituted agent. Relation of Principal and Agent – Duties and Rights of Agent, Duties and Rights of principal – Relation of principal with Third parties – Personal Liability of Agent - Termination of Agency – By Act of parties, By operation of Law, Irrevocable Agency.

Books for Study

1. Elements of Mercantile Law – N.D.Kapoor

Book for Reference 1. Business Law – R.S.N. Pillai & Bagawathi 2. Business Law – M.R. Sreenivasan

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

192

PART - III ELECTIVE	Title : PRACTICAL COSTING	Subject Code : 17 UCE E51/ 17 UCC E51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To Provide knowledge of cost Accounting.**
- **To understand the elements of cost Accounting.**
- **To know the different methods of cost Accounting.**

UNIT I

Cost accounting-meaning-objectives-importance-cost accounting Vs financial accounting-classification and elements of cost, preparation of cost sheet.

UNIT II

Material-purchase of materials-purchases procedure-store keeping-different level of stock-methods of pricing material issues: FIFO,LIFO,Simple and Weighted average.
Labour : Methods of remunerating labour - incentives, wage plans-ascertaining labour cost-chargeable expenses-meaning and examples.

UNIT III

Overheads-meaning-classification-allocation-apportionment-absorption(Simple problems only)-machine hour rate.

UNIT IV

Methods of costing-job costing-process costing-normal and abnormal loss-joint product and by products.

UNIT V

Reconciliation of cost and financial accounting-reasons-procedure for reconciliation-operating costing : Hotel-Cinema-Transport.

Note: Question Paper Pattern : 70% Problems, 30% Theory.

Book for Study:

1. Cost Accounting-Reddy and Murthy, Margham Publishers, Chennai.

Books for Reference:

1. Cost Accounting-Ramachandran and Srinivasan.
2. Cost Accounting –Nigam, Naranga and Seghal.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : FINANCIAL MARKETS AND SERVICES	Subject Code : 17 UCE E52
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To Provide knowledge of financial markets.
- To understand the function of SEBI.
- To enrich the knowledge of financial services.

Unit I

Financial System in India-Functions of financial system-Financial concepts-Financial Assets-Financial Intermediaries-Financial markets-Classification-Organized market-Capital market-Importance- Money market- Meaning-features-Classification of money market-Difference between money market and capital market.

Unit II

New Issue market-Meaning-Stock exchange-Distinction and relationship between New Issue market and Stock Exchange-functions of New Issue market-Instruments of Issue-Players in the New Issue market-Recent trends-Reasons for poor Performance

Unit III

Securities and Exchange Board of India- Capital Issues Act-Controller of Capital Issues-Securities Contract Act-Malpractices in the Securities Market-Deficiencies-SEBI-Objectives-Functions-Powers-Organization-SEBI and the Central Government-SEBI Guidelines-Primary and secondary market-Brokers and Underwriters-Investors Protection.

Unit IV

Financial Services-Meaning-Scope-Features-Importance- Mutual Funds-Meaning-Fund Unit Vs Share-Origin of the fund-Types-Classification-Importance of Mutual funds-Organization of the fund-Operation-Net Asset value-Facilities available to Investors.

Unit V

Venture capital-Meaning-Features-Scope of Venture Capital-Importance-Origin-Initiative in India-Venture capital Guidelines-Method of Venture financing in India -Suggestions for the growth of Venture capital.

Book for Study:

Financial Markets and Services – Dr.E.GORDON and NATARAJAN, 9th edition 2014 Himalaya Publishing House..

Books for Reference:

1. Financial Services – Dr.S.GURUSAMY.
2. FinancialServices-B.Santhanam-MarghamPublications.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

194

VI –SEMESTER

Sl. No	Sub Code	Nature	Subject Title	Hrs / Week	Duration of Exam Hrs	C A	SE	Tot	Crd
1	17UCEC61/ 17UCC C61	Part-III Core	Income Tax Law and Practice II	6	3	25	75	100	4
2	17UCEC62/ 17UCC C62	Part-III Core	Services Accounting	6	3	25	75	100	5
3	17UCEC63	Part-III Core	Business Legislation II*	6	3	25	75	100	4
4	17UCEC64	Part-III Core	Management of Human Resource *	6	3	25	75	100	5
5	17UCEE61/ 17UCC E61	Part-III Elective	Accounting for Managers	6	3	25	75	100	5
6	16UGKB61	Self study	General Knowledge	-	-	-	-	100	-
Total				30					23
Total Credits : 140									

* Denotes alternative paper for Computer papers in B.Com course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

195

PART - III CORE	Title : INCOME TAX LAW AND PRACTICE - II	Subject Code : 17 UCE C61/ 17 UCC C61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To know the assessment Procedure for deferent assessee.
- To gain knowledge of filing of Returns and deductions.

UNIT: I

Clubbing of Income-Set-off and Carry Forward of Losses-Deductions from Gross Total Income u/s 80C, 80D; 80DD, 80E, 80G, 80GGB, 80QQB, 80U.

UNIT: II

Assessment of Individual and Hindu Undivided Family.

UNIT: III

Assessment of Partnership firm and Association of persons.

UNIT: IV

Return of Income-Submission of return of Income-Return of Loss-Related Return-Revised return-Procedure for assessment-Self assessment-Re-assessment-Best judgment assessment-Ex-party assessment-Rectification of mistakes-Reopening of assessment.

UNIT: V

Deduction and Collection of Tax at Source-Advance Payment-Tax refunds-Income under 'Net of Tax'-Consequences of failure to deduct or pay tax-Tax credit certificate-Tax clearance certificate.

Note: Question Paper Pattern : 70% Problems, 30% Theory.

Book for Study:

Income Tax Theory, Law and Practice-T.S. Reddy and Y. Hari Parsed Reddy.

Books for Reference:

1. Students Guide to Income Tax-Vinod K.Singhania.
2. Income Tax Law and Practice-Bhagavathi Prasad.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

196

PART - III CORE	Title : SERVICES ACCOUNTING	Subject Code : 17 UCE C62/ 17 UCC C62
Semester : VI	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To enrich accounting knowledge for service sector.
- To gain knowledge of accounting specifically on Insurance, voyage, educational institutions, hospitals and others.

UNIT I:

Accounts of Charitable trusts and libraries – Capital expenditure and Revenue expenditure – Capital receipts and Revenue receipts – Preparation of final accounts.

UNIT II:

Accounts of Educational Institutions - Preparation of final accounts. Accounts of Hospitals-preparation of final accounts.

UNIT III:

Contract Account of Builders-Important terms-Profit or Loss on incomplete Contracts and contract nearing completion-Preparation of Contract Account and Balance Sheet.

UNIT IV:

Voyage Accounts-Introduction - Specialised terms used in Voyage Accounts-Preparation of voyage Account-Unfinished voyage.

UNIT V:

Insurance company Accounts - Introduction -Preparation of final Accounts of Life Insurance companies-Revenue Account-Profit and Loss Account and Balance Sheet. Accounts of General Insurance companies-Preparation of final Accounts.

Question Paper Pattern: 70% Problem, 30% Theory

Book for Study:

1. T.S.Reddy and A.Murthy-'Advanced Accountancy'-Margham Publications

Books for Reference:

1. S.P. Jain and K.L.Narang-'Advanced Accountancy'-Kalyani Publications, Ludhiana.
2. R.L. Gupta and Radhasamy-'Advanced Accounting'.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

197

PART - III CORE	Title : BUSINESS LEGISLATION - II	Subject Code : 17 UCE C63
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the bank relating to sale of Goods, carriage of Goods and essential commodities.
- To understand the legal provisions relating to Arbitration and consumer protection.

UNIT I Sale of Goods Act: Formation of Contract of Sale-Contract of: Goods. Sale and Agreement to Sell-Sale and Hire Purchase Agreement-Sale and Bailment-Subject matter of Contract of Sale-Documents of Title to Goods-Stipulation as to Time.

UNIT II Carriage of Goods Act: Classification of Carriers-Common Carrier-Private Carrier-Rights of common Carrier-Duties of Common Carrier-Private Carrier-Carriage by Rail, Responsibility of Railways as a Carrier.

Carriage By Sea: Contract of Freight -Charter Party-Bill of Lading-Contents of Bill of Lading-Kinds of Bill of Lading.

Carriage By Air: Definition-Documents of Carriage, Passenger, Ticket, Baggage Check. International Carriage by Air-Liability of Air Carrier.

UNIT III Arbitration :

Meaning, Arbitration, Agreement, Advantages and Disadvantages of Arbitration. Matters Which can be referred to Arbitration, Matters which cannot be referred To Arbitration-Arbitrator-Appointment, Powers and Duties-Arbitrator's Awards.

UNIT IV Consumer Protection Act 1986 :

Definition-Central Consumer Protection Council-State Consumer Protection Council-Consumer Disputes Redressal Agencies-Consumer Disputes Redressal Forum-Consumer Disputes Redressal Commission-The State Commission-National Consumer Dispute Redressal Commission.

UNIT V Essential Commodities Act 1955:

Definition-Objectives-Power to Control Production-Supply and Distribution-Penalties for violation.

Book for Study:

1. Business Law-M.R. Sreenivasan

Books for Reference

- 1 Business Law-S.S. Gulshan & G.K. Kapoor.
2. Elements of Mercantile Law-N.D. Kapoor .

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

198

PART - III CORE	Title : MANAGEMENT OF HUMAN RESOURCE	Subject Code : 17 UCE C64
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To understand the concepts of HRM.
- To gain knowledge of performance management and compensation management.

UNIT I

Human Resource Management-Meaning-Nature, Definition, Scope, Functions-Environmental Influences on Human Resource Management-Importance-Differences between Human Resource Management and Personnel Management.

UNIT II

Human Resource Planning-Importance-Responsibility for Human Resource Planning-Human Resource Planning Process-Forecasting-Needs for Human Resource-Identification of Human Resource Gap-Techniques for forecasting Human Resource.

UNIT III

Job Design and Job Analysis-Meaning-Merits and Demerits of Job Analysis-Job Evaluation-Meaning and Objectives-Problems in Job Evaluation-Process and Methods of Job Evaluation-Recruitment-Concept-Purpose and Importance of Recruitment-Factors Affecting Recruitment Policy and Programmed Sources of Recruitment-Selection-Selection Process-Tests-Types - Interview-Types.

UNIT IV

Performance Management-Meaning, Features-Performance Appraisal-Meaning and Objectives-Strategic use of Performance Appraisal-Methods of Performance Appraisal.

UNIT V

Compensation management-Concept of Compensation-Objectives-Wages Structure-Minimum Wage-Living Wage-Fair Wage-Methods of Wage Payment-Incentives and Benefits-Concept of Incentives.

Book for Study:

1. Human Resource Management, L.M.Prasad-Sultan Chand & Sons, Educational Publishers, New Delhi,2010

Books for Reference:

1. Human Resource Management-C.B.Gupta.
2. Human Resource and Personnel Management-K.Aswathappa.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BACHELOR OF COMMERCE (B.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

199

PART - III ELECTIVE	Title : ACCOUNTING FOR MANAGERS	Subject Code : 17 UCE E61/ 17 UCC E61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the concepts of management accounting.
- To gain knowledge of Ratio analysis, cash and fund flow and Budgets.
- To understand marginal costing.

UNIT I

Management Accounting-Meaning-Definition-Characteristics-Scope-Objectives and Functions-Distinction between Financial Accounting and Management Accounting-Distinction between Management Accounting and Cost Accounting.

UNIT II

Ratio analysis-meaning-advantages-limitations-classification of ratios-computation of profitability ratios-turnover ratios-solvency ratios.

UNIT III

Funds Flow Statement-importance-limitations-Preparation of schedule of changes in working capital-calculation of funds from operations-funds flow statements(simple problem only)

Cash flow statement-meaning-importance-difference between funds flow and cash flow analysis-advantages-limitations-computation of cash from operations-cash flow statement as per AS3.(simple problems only)

UNIT IV

Cost-volume-profit analysis: Marginal cost and Break-Even analysis application of Marginal costing for managerial decisions)

UNIT V

Budgeting and Budgetary control-meaning-objectives-advantages-limitations-essentials of successful budgetary control-classification of budgets-preparation of sales budget, production budget, cash budget and flexible budget.

Note : Question Paper Pattern : 70% problems, 30% Theory.

Book for study:

1. Management Accounting-Ramachandran & Srinivasan.

Books for reference:

1. Management Accounting-R.N.Antony.
2. Management Accounting-T.S.Reddy & Y. Hari Prasad Reddy.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Sc., MATHEMATICS- SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

200

I SEMESTER

Sl. No.	Sub. Code	Nature	Subject Title	Hrs / Week	Duration of Exam (hrs)	CA	SE	Tot	Crd
1	17UACT11	Part I	Tamil	6	3	25	75	100	3
	17UACH11		Hindi						
	17UACS11		Sanskrit						
2	17UAC E11	Part II	English	6	3	25	75	100	3
3	17 UMS C11	Core1	Calculus	7	3	25	75	100	5
4	17 UMS S11	SBS1	Arithmetic Ability	3	3	25	75	100	3
5	17 UMS A11	Allied1	Mathematics – I	6	3	25	75	100	5
6	14 UAC VE1	Part IV	Value Education	2	3	25	75	100	2
			Total	30					21

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

201

PART - III CORE	Title : CALCULUS	Subject Code : 17 UMS C11
Semester : I	HOURS : 7 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge of differential and integral calculus. To understand the concepts of curvatures, tangents and normal.

Unit – 1

Successive Differentiation – Expansion of functions – Leibnitz Formula – Maxima and Minima of functions of two variables.

Unit – 2

Polar Co-ordinates – Angle between the radius vector and the tangent – Slope of the tangent – Angle of intersection of two curves – Polar sub tangent and Polar subnormal – length of arc.

Unit – 3

Envelopes – Curvatures – Circle, radius and centre of curvature – Radius of curvature in Polar Co-ordinates - Evolutes.

Unit – 4

Definite Integrals and their properties- double and triple integral simple problems only (change the order of integration is excluded)

Unit – 5

Reduction Formulae for $\sin^n x$, $\cos^n x$, $\tan^n x$, $\operatorname{cosec}^n x$, $\sec^n x$, $\sin^n x \cos^m x$ – Bernoulli's formula – Beta and Gamma functions and its properties.

Text Book:

Calculus Volume I by T.K.Manivasagam Pillay & S.Narayanan .

Publications : S.Viswanathan, 2011. (unit – 1,2,3)

Calculus Volume II by T.K.Manivasagam Pillay & S.Narayanan .

Publications : S.Viswanathan, 2014.(unit – 4,5)

Unit-1 chapter 3 (page number 69 to 81), Chapter 5 (page number 226 to 236), chapter 7 (page number 163 to 175).

Unit -2 chapter 9 (page number 267 to 280)

Unit –3 chapter 10 (page number 281 to 308)

Unit -4 chapter 1 (page number 66 to 73), chapter 5 (page number 207 to 212 and 221 to 223).

Unit -5 chapter 1 (page number 79 to 100), chapter 7 (page number 279 to 290).

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

202

PART - IV SKILL BASED	Title : ARITHMETIC ABILITY	Subject Code : 17 UMS S11
Semester : I	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

To enable the students to acquire the knowledge of arithmetic ability. To make the students to understand the basic concepts in arithmetic for real world problems.

UNIT I:

Problems on numbers, Logarithms.

UNIT II:

Problems on ages, Area.

UNIT III:

Ratio and proportion, Volume

UNIT IV:

Time and distance, Surface Area.

UNIT V:

Problems on trains, Probability.

Text Book: Quantitative Aptitude by R.S. AGGARWAL (Example Problems Only)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

203

PART - III ALLIED	Title : MATHEMATICS-I	Subject Code : 17 UMS A11
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in fourier series, correlation and matrices.

Unit I:

Correlation – Rank Correlation – Theory of Attributes (Simple problem only).

Unit II:

Fourier series – even and odd functions – sine & cosine series.

Unit III:

Index numbers.

Unit IV:

Matrices – Rank of a matrix- Consistency of equations.

Unit V:

Cayley – Hamilton theorem. Eigen values and Eigen vectors.

Text Book:

Ancillary Mathematics – Paper II & III (Revised) by Dr. S. Arumugam & Issac



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

204

II SEMESTER

Sl. No.	Sub. Code	Nature	Subject Title	Hrs / Week	Duration of Exam (hrs)	CA	SE	Tot	Crd
1	17UACT21	Part I	Tamil	6	3	25	75	100	3
	17UACH21		Hindi						
	17UACS21		Sanskrit						
2	17 UAC E21	Part II	English	6	3	25	75	100	3
3	17 UMS C21	Core2	Theory of Equations and Trigonometry	7	3	25	75	100	5
4	17 UMS A21	Allied2	Mathematics – II	6	3	25	75	100	5
5	17 UMS S21	SBS2	Vector Analysis and Fourier Series	3	3	25	75	100	3
6	14 UAC ES1	Part IV	Environmental studies	2	3	25	75	100	2
			Total	30					21

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

205

PART - III CORE	Title : THEORY OF EQUATIONS AND TRIGONOMETRY	Subject Code : 17 UMS C21
Semester : II	HOURS : 7 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in theory of equations and trigonometry. To understand the concepts of relation between the roots and coefficients, symmetric functions and hyperbolic functions.

UNIT-1:

Theory of Equations – Imaginary roots – Rational roots – Relation between the roots and coefficients – Symmetric functions of the roots.

UNIT-2:

Sum of the powers of the roots of an equation-Newton's Theorem – Transformations of equations – Roots multiplied by a given number – Reciprocal roots – Reciprocal equations – Standard forms to increase and decrease the roots of a given equation by a given quantity.

UNIT-3:

Removal of terms – Descartes' rule of sign – General solution of cubic equations – Cardon's method – Horner's Method.

UNIT-4:

Ferrari's method of solving biquadratic equation – Expansions of $\sin nx$, $\cos nx$, and $\tan nx$ -
Expansions of $\sin^n x$, $\cos^n x$, $\tan^n x$, - Expansions of $\sin x$, $\cos x$, $\tan x$ in powers of x .

UNIT-5:

Hyperbolic functions – Inverse Hyperbolic functions – Logarithm of Complex numbers .

Text Books:

1. Algebra Vol T.K.M. Pillay and T.Natarajan.
2. Trigonometry by S.Arumugam and Isaac

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

206

PART - III ALLIED	Title : MATHEMATICS-II	Subject Code : 17 UMS A21
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge of LPP various methods, transportation problems and assignment problems.

Unit – I

Introduction - Definition of a LPP – Formulation of LPP – Mathematical formulation of LPP (simple problems only) – Slack and surplus variables - Definition of a Standard linear programming problem.
(Pages 3-1 to 3-8, 3-31 to 3-41).

Unit – II

Solutions of a LPP - Definition of Basic solution -Basic feasible solution – Optional Solution – Optimum basic feasible solution – Degenerate solutions of a LPP (Theorems not included) – Graphical solution of a LPP.
(Pages 3-42 to 3-47, 3-68 to 3-81).

Unit – III

– Simplex method (simple problems only) - Big – M method (Method of penalties) (simple problems only).
(Pages 3-86 to 3-101, 3-107 to 3-111, 3-116 to 3-144).

Unit – IV

Transportation problem – Finding IBFS by North West Corner method, and Vogel's Approximation method – Solving by MODI method
(Only minimization cases) (Pages 4-1 to 4-27, 4-38-4-49)

Unit – V

Assignment problem – Solving Assignment Problem by Hungarian method.
(Pages 5-1 to 5-6, 5-8 to 5-24).

Text Book : Topics in Operations Research by Arumugam and Isaac

Unit – I : Chapter 3 : Sections 3.1, 3.2.(Theorems not included)

Unit – II : Chapter 3: Sections 3.3 (Theorems not included), 3.4 (Problems only)

Unit – III : Chapter 3: Sections 3.5, 3.6

Unit – IV : Chapter 4: Sections 4.0, 4.1

Unit – V : Chapter 5: Sections 5.0,5.1,5.2.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

207

PART - IV SKILL BASED	Title : VECTOR ANALYSIS AND FOURIER SERIES	Subject Code : 17 UMS S21
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

To enable the students to acquire the knowledge of vector analysis and fourier series.
To understand the concepts of gradient, divergence, curl and its properties.

UNIT – I:

Gradient – Divergence and Curl – Theorems and Problems.

UNIT-II :

Vector integration – Line integrals- Surface integrals.

UNIT III:

Green's Theorem, Stoke's Theorem, Gauss Divergence Theorem (Statement only) – Simple problems.

UNIT IV:

Fourier series- Definitions, Problems, Even and odd functions – Definition and problems.

UNIT V:

Half range Fourier Sine and Cosine series.

TextBook 1:

Analytical Geometry and Vector Calculus by Arumugam and Issac (unit 1,2,3)

Text book II :

Trigonometry and fourier series by Arumugam and Issac (Unit 4,5)



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Sc., MATHEMATICS- SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

208

III SEMESTER

Sl. No	Sub. Code	Nature	Subject Title	Hrs / Week	Duration of Exam (hrs)	CA	SE	Tot	Crd
1	17UACT31/ H31/S31	Part I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	17UACE31	Part II	English	6	3	25	75	100	3
3	17UMSC31	Core 3	Mechanics	4	3	25	75	100	4
4	17UMSC32	Core 4	Analytical Geometry of 3D	4	3	25	75	100	4
5	17UMSSP1	SBS3	MS Office LAB	3	3	40	60	100	3
6	17UMSA31	Allied3	Graph theory	5	3	25	75	100	5
7	17UMSN31	NME 1	Fundamentals of Mathematics - I	2	3	25	75	100	2
			Total	30					24

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III CORE	Title : MECHANICS	Subject Code : 17 UMS C31
Semester : III	HOURS : 4 hours /week	CREDITS : 4

Objectives:

To enable the students to acquire the knowledge of Application of Mathematics in various field.

Unit I Forces acting at a point – Resultant and components – Parallelogram Law of forces – Triangle law of forces – Converse of Triangle law of forces – Lami's theorem.

Unit II Resolution of a force – Theorems of resolved parts – Resultant of Any number of forces – Condition of equilibrium

Unit III Parallel forces – Resultant of two like and unlike parallel forces – Moment of a force – Varignon's theorem.

Unit IV Projectile- Path of a projectile – Maximum height – Time taken by a particle – Time of flight – Horizontal Range – Simple problems.

Unit V Simple Harmonic motions – equation of motion – composition of two SHM.

TEXT BOOK:

Statics and Dynamics by M. K. VENKATARAMAN Publication: Agasthiyar

STATICS:

Unit – I : Chapter 2 (Section: 1 to 9, Page:1 to 20)

Unit – II : Chapter 2 (Section: 11 to 16, Page:36 to 47)

Unit – III : Chapter 3 (Section: 1 to 13, Page:52 to 74)

DYNAMICS:

Unit – IV : Chapter 6, (6.1 to 6.8, Page: 139 to 151, 156 to 161)

Unit – V : Chapter 10 (10.1 to 10.7, Pages: 309 to 330)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

210

PART - III CORE	Title : ANALYTICAL GEOMETRY OF THREE DIMENSIONS	Subject Code : 17 UMS C32
Semester : III	HOURS : 4 hours /week	CREDITS : 4

Objectives:

To study Analytical geometry and to develop the skill on problems in straight line and sphere.

Unit I

The plane – Angle between two planes – Length of perpendicular – Bisecting Plane – Distance between two planes

Unit II

The straight line – symmetric form – Image of a point – Image of a line about a plane.

Unit III

The plane and straight line – Angle between a plane and straight line. Coplanar lines – Shortest distance between two lines – Skew lines.

Unit IV

The sphere – Equation of the sphere – Equation of the tangent plane – Simple Problems.

Unit V

Right circular cone- Right circular cylinder

TEXT BOOK:

1. THREE DIMENSION ANALYTICAL GEOMETRY AND VECTOR CALCULUS by Dr.S. Arumugam Issac Publication: New gamma, 2006
2. Text book of Analytical geometry three dimension (For Unit V only) by T.K.M. Pillai and T. Natrajan

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

211

PART - IV Skill Based	Title : MICROSOFT OFFICE PRACTICAL	Subject Code : 17 UMS SP1
Semester : III	HOURS : 3 hours /week	CREDITS : 3

OBJECTIVES:

To enable the students to acquire the knowledge of use of office softwares.

LIST OF PROGRAMS

1. Design a document with at least two pages using MS word with different font style, different font sizes, header and footer, with page number.
2. Design an invitation with two column break, use word to insert picture, design border and shading.
3. Create a daily attendance sheet of a class room for a week with heading, day, period etc.
4. Create a main document and database of addresses and merge them using Mail-merge tools.
5. Create a yearly salary report in Excel worksheet, use auto fill to enter the month and to sum the column and row total, to calculate DA and others, to insert data and time function in the footer.
6. Create Students Mark list for three subjects and to list the result and rank by using string function and logical function.
7. Create a yearly budget of a company and create different types of chart for the data.
8. Present the college details or any publishing work using Auto content wizard.
9. Create a slide show using blank representation with at least 10 slides.
10. Creating a data base (student marks) and queries

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

212

PART - III ALLIED	Title : GRAPH THEORY	Subject Code : 17 UMS A31
Semester : III	HOURS : 5 hours /week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge of graphs and coloring.

UNIT – I

Graphs – Degrees – subgraph, isomorphism – Ramsey numbers – independent sets and Coverings – Intersection graphs and linegraphs.

UNIT – II

Matrix of graphs – operations on graphs – Degree Sequences – Graphic Sequences – Walks, trails and paths – Connectedness and components Blocks – Connectivity.

UNIT – III

Eulerian graphs – Hamiltonian graphs – Tress – characterization of trees – center of tree.

UNIT - IV

Matching – Matching in bipartite graphs planar graphs and properties – characterization of planes graphs

UNIT - V

Chromatic numbers and index – Five colour theorem – Four colour theorem – chromatic polynomials.

Text Book:

Invitation to Graph Theory by S.Arumugam and others (Sci - Tech Publications)

- UNIT I : Units 2.0 to 2.7 (pages : 5 to 24)
- UNIT II : Units 3.0 to 4.4 (pages : 24 to 47) & Section 2.8, 2.9
- UNIT III : Units 5.0 to 6.2 (pages : 48 to 65)
- UNIT IV : Units 7.0 to 8.3 (pages : 66 to 82)
- UNIT V : Units 9.0 to 9.4 (pages : 85 to 98)



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Sc., MATHEMATICS- SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

213

PART - IV NME	Title : FUNDAMENTALS OF MATHEMATICS – I	Subject Code : 17 UMS N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

To enable the students to acquire the basic knowledge in Calculus and matrices.

Unit I

Theory of indices, ratio and proportion.(Page 54 to 65 in Text Book)

Unit II

Differential calculus and Integral calculus (Simple problems). (Page 192 to 235 and Page 283 to 308 in Text Book)

Unit III

Theory of Matrices-Addition, Multiplication of two matrices. (Page 329 to 375 in Text Book)

Unit IV

Finding the nth term and sum to n terms of an A.P and G.P-Arithmetic mean.

Unit V

Solving the quadratic equations-finding the roots- forming the equation when roots are given (only second degree).

TEXT BOOK:

Business mathematics by .M.Manoharan, Dr.C.Elango and K.L.Eswaran,Paramount publications-Reprint 2007.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

214

IV SEMESTER

Sl. No	Sub. Code	Nature	Subject Title	Hrs / Week	Duration of Exam (hrs)	CA	SE	Tot	Crd
1	17UACT31/ H31/S31	Part I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	17UACE41	Part II	English	6	3	25	75	100	3
3	17UMSC41	Core 5	Differential Equations	4	3	25	75	100	4
4	17UMSC42	Core 6	Programing in C Theory	4	3	25	75	100	4
4	17UMSSP1	SBS4	Programing in C Practical	3	3	40	60	100	3
5	17UMSA41	Allied4	Sequense and series	5	3	25	75	100	5
6	17UMSN41	NME2	Fundamentals of mathematics II (For Science)	2	3	25	75	100	2
	17UMSN42		Fundamentals of mathematics II (For Arts)						
7		Part-V	Extension Activities					100	1
			Total	30					25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

215

PART - III	Title : DIFFERENTIAL	Subject Code : 17 UMS C41
CORE	EQUATIONS	
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

To study some important technique in solving differential equations and its applications.

Unit I

Exact differential equations of first order but of higher degree – Equations solvable for y – Equations solvable for x – Clairaut's form

Unit II

Linear Equations with constant coefficients – Equations reducible to the linear homogeneous equations.

Unit III

Simultaneous Linear differential equations – First order and first degree – Linear equations of the second order

Unit IV

Partial differential equations of the first order – Derivation of partial differential equations – Lagrange method of solving linear equations.

Unit V

Standard forms – equations reducible to the standard forms

TEXT BOOK:

Differential equations and its Applications by T.K.Manicavasagam Pillai&S.Narayanan. Publication: S.Viswanathan,(Reprint 2015)

- UNIT – I : Chapter I, Section: 6.1 to 6.3
Chapter IV & Chapter V, Sections: 1,2,3,4.
- UNIT – II : Chapter V, Sections: 4,5,6
Chapter VI, Sections: 1 to 6
- UNIT – III : ChapterVIII , Sections: 1 to 3
- UNIT – IV : Chapter XII, sections: 1,2,3,4,5.5
- UNIT – V : ChapterXII, Section 6
Unit – 5: Chapter 9 (Sections 9.13), Chapter 10 (Sections 10.2 – 10.9)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

216

PART - III CORE	Title : PROGRAMMING IN C THEORY	Subject Code : 17 UMS C42
Semester : IV	HOURS : 4 hours /week	CREDITS : 4

Objectives:

To enable the students to be familiar with programming in C and learn to use Arrays, strings, functions and structures.

Unit I

Constants, Variables and data types – operators and expressions.

Unit II

Managing input and output operators, decision making and branching.

Unit III

Decision making and looping – arrays.

Unit IV

Handling of character strings – user defined functions.

Unit V

Recursion – Structures

TEXT BOOK:

Programming in ANSI C by E.Balagurusamy.

Unit – 1: Chapters 2 : (Sec 2.2 to 2.10) Chapter 3: (Sec 3.1 to 3.12, 3.14 to 3.16)

Unit – 2: Chapters 4: (Sec 4.2 to 4.5), Chapter 5:(Sec 5.2to 5.7,5.9).

Unit – 3: Chapters 6:(Sec6.2to6.5), Chppter 7 (Sec 7.1 to 7.5)

Unit – 4: Chapters 9 (Sections 9.2 – 9.10) Chapter 8 (Sec 8.2 to 8.5,8.7,8.8)

Unit – 5: Chapter 9 (Sections 9.13) , Chapter 10 (Sections 10.2 – 10.9)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV Skill Based	Title : PROGRAMMING IN C PRACTICAL	Subject Code : 17 UMS SP1
Semester : IV	HOURS : 3 hours /week	CREDITS : 3

OBJECTIVES:

To enable the students to design and implement C programs for simple applications.

PROGRAMMING IN C – LIST OF PROGRAMS

- 1) Write a program to calculate Simple Interest and Compound Interest
- 2) Write a program to calculate Compound Interest
- 3) Write a program to find the biggest number among 3 numbers
- 4) Write a program to calculate the temperature from Celsius to Fahrenheit
- 5) Write a program to calculate the temperature from Fahrenheit to Celsius
- 6) Write a program to solve quadratic equation
- 7) Write a program for Salesman's salary
- 8) Write a program for pay-bill calculation
- 9) Write a program to print multiplication table
- 10) Write a program to print 10x10 binomial coefficients
- 11) Write a program to arrange the numbers in ascending order.
- 12) Write a program to find mean and standard deviation
- 13) Write a program to find median
- 14) Write a program to find the product of two n x n matrices.
- 15) Write a program to produce a table showing popularity of various cars in 4 cities

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

218

PART - III	Title : SEQUENCES AND	Subject Code : 17 UMS A41
ALLIED	SERIES	
Semester : IV	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

To provide the students an idea about the principle of sequence and series.

Unit I

Sequences – Bounded sequences – monotone sequences – convergent sequences – Divergent and oscillating sequences

Unit II

The Algebra of limits – Behavior of monotone sequences

Unit III

Cauchy's first limit theorem – Cauchy's second limit theorem – Cauchy's sequences

Unit IV

Infinite series – comparison test – Kummer's test

Unit V

Root test and condensation test – Alternating series – absolute convergence

Text Book:

Sequences and Series by S. ARUMUGAM & ISSAC

Unit – 1: Chapter 3 (Sections 3.1 – 3.5)

Unit – 2: Chapter 3 (Sections 3.6 – 3.7)

Unit – 3: Chapter 3 (Sections 3.8 – 3.11)

Unit – 4: Chapter 4 (Sections 4.1 – 4.3)

Unit – 5: Chapter 4 (Sections 4.4), Chapter 5 (Sections 5.1 – 5.2)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

219

PART - IV NME	Title : FUNDAMENTALS OF MATHEMATICS – II (NME for Science)	Subject Code : 17 UMS N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

To enable the students to acquire the basic knowledge in statistics

UNIT I:

Mean, median, mode (problems only)

UNIT II:

Geometric mean, Harmonic mean, range, quartile deviation (problems only)

UNIT III:

Mean deviation, standard deviation (problems only)

UNIT IV:

Curve fitting (linear and quadratic only) (Simple Problems only).

UNIT V:

Analysis of Time series (linear trend method and seasonal variation) (problems only)

Text Book:

Statistics by S.Arumugam and Isaac, New Gamma Publications

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

220

PART - IV NME	Title : FUNDAMENTALS OF MATHEMATICS – II (NME for Arts)	Subject Code : 17 UMS N42
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

To enable the students to acquire the knowledge of mathematics for competitive exams.

UNIT I:

H.C.F and L.C.M of numbers (Examples only)

UNIT II:

Profit and loss (Examples only)

UNIT III:

Ratio and proportion (Examples only)

UNIT IV:

Transportation problem – Finding IBFS using North West Corner Method and Least Cost Entry Methods only (Simple Problems only).

UNIT V:

Assignments problem (minimization case only) (simple problems only)

Text Books:

1. Quantitative Aptitude by R.S.Agarwal, Publishers: S.Chand & Co., Reprint 2009.
(Units 1, 2 and 3)
2. Linear Programming by S.Arumugam and Isaac, New Gamma Publications
(Units 4 and 5)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

221

V SEMESTER

Sl. No	Sub. Code	Nature	Subject Title	Hrs / Week	Duration of Exam (hrs)	CA	S E	Tot	Crd
1	17UMSC51	Core 7	Modern Algebra	6	3	25	75	100	5
2	17UMSC52	Core 8	Real analysis	6	3	25	75	100	5
3	17UMSC53	Core 9	Numerical Analysis	6	3	25	75	100	4
4	17UMSE51	Elective 1 *	Statistics I	6	3	25	75	100	5
5	17UMSE52	Elective 2 *	Programming C++ (Theory)	4	3	25	75	100	3
	17UMSEP1	Elective 2	Programming in C++ (Practical)	2	3	40	60	100	2
6	17UMSE53	Elective 3 *	Boolean Algebra & Logic	6	3	25	75	100	5
7	16USS S51		Soft Skills	-	-	-	-	100	-
TOTAL				30					24

***Note: Two Elective subjects to be chosen from the three elective subjects.**

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

222

PART - III CORE	Title : MODERN ALGEBRA	Subject Code : 17 UMS C51
Semester : V	HOURS : 6 hours /week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in groups and its properties.

Review:

Groups – definitions and examples (not for examination)

UNIT I:

Subgroups – Definitions and examples – Center – Normalizer – Intersection and Union of Subgroups – Permutations – Cycles and Transpositions – Even and odd permutations – S_n and A_n .

UNIT II:

Cyclic groups – order of an element – Cosets and Lagrange's theorem

UNIT III:

Normal subgroups and quotient groups – Homomorphisms

UNIT IV:

Isomorphisms – rings – definition and examples.

UNIT V:

Elementary properties of rings – isomorphism – types of rings

TEXT BOOK:

Modern Algebra by Dr.S.Arumugam & A.T.Isacc—Scitech Publications—Reprint—July 2008

Unit – 1 : Sections - 3.4 and 3.5

Unit – 2 : Sections - 3.6 to 3.8

Unit – 3 : Sections -3.9 and 3.11

Unit – 4 : Sections – 3.10 and 4.1

Unit—5 : Sections - 4.2 to 4.4

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

223

PART - III CORE	Title : REAL ANALYSIS	Subject Code : 17 UMS C52
Semester : V	HOURS : 6 hours /week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in metric space and continuity.

Unit I

Countable and uncountable sets-Holder's and Minkowski's inequalities-Metric space-Definition and examples- Open sets and closed sets(Definitions and examples only).

Unit II

Completeness- Definitions and examples-Cantor's intersection theorem and Baire's category theorem.

Unit III

Continuity- Definitions and examples-Homeomorphism-Uniform Continuity

Unit IV

Connected- Definitions and examples-Connected subsets of \mathbb{R} -Connectedness and continuity-Intermediate value theorem.

Unit V

Compactness-Definition and examples-Compact subsets of \mathbb{R} -Equivalent Characterization of compactness.

Text Book:

Analysis - Dr.S.Arumugam, New Gamma Publications 2005.

- Unit 1: Chapter 1-Sections 1.2-1.4
Chapter 2-Sections 2.1, 2.4, 2.7
- Unit-2: Chapter 3
- Unit-3: Chapter 4-Section 4.1-4.3
- Unit-4: Chapter 5
- Unit-5: Chapter 6-Sections 6.1-6.3

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

224

PART - III CORE	Title : NUMERICAL ANALYSIS	Subject Code : 17 UMS C53
Semester : V	HOURS : 6 hours /week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in interpolations and difference equations.

UNIT-1:

Numerical solutions of Algebraic and Transcendental equations-Iteration method – Newton –Raphson - Method of false positions- Solutions of Simultaneous linear equations- Gauss elimination method-Gauss' Jordan method- Gauss Seidel method.

UNIT-2:

Finite differences-forward difference and backward differences- Finite differences-operators- relations-properties-Finding missing terms-Inverse operators-Factorial Notation.

UNIT-3:

Interpolation and Newton's forward and backward formulae-divided differences and properties- Newton's divided differences formula - Gauss formula - Stirling formula - Bessel formula - Lagrange formula - Simple problems - Inverse interpolation using Lagrange formula.

UNIT-4:

Numerical differentiation - Finding the first and second derivatives - Maximum and minimum values of a function for a given data.

UNIT-5:

Numerical Integration- Newton's Cote's formula-Trapezoidal rule- Simpson's one third rule- Simpson's three eight rule-Weddels rule.

TEXT BOOK:

Numerical Analysis by Dr.S.Arumugam,Thangapandi Issac and A.Somasundaram New Gamma Publications,edition 2006.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

225

PART - III ELECTIVE	Title : STATISTICS - I	Subject Code : 17 UMS E51
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To acquire the students the knowledge in correlation and probability.

UNIT-1:

Central tendencies - Measures of dispersion- moment, skewness and kurtosis.

UNIT-2:

Curvefitting(all types of curves)

UNIT-3:

Correlation and regression

UNIT - 4:

Theory of Probability-Sample Space- Probability function-Laws of Addition-Boole's inequality-Law of multiplication-Baye's theorem-Problems.

UNIT - 5:

Random Variables-Distribution function-Discrete and continuous random variables-Probability density function-Mathematical Expectation(One dimensional only).

TEXT BOOK:

STATISTICS by Dr.S.Arumugam, A.Thangapandi Isaac Publishers: New Gamma Publishing House—July--2013.

Unit – 1 : Chapters 2,3,4

Unit – 2 : Chapter 5

Unit – 3 : Chapters 6

Unit - 4 : Chapter 11

Unit - 5 : Chapter 12 sections 12.1-12.4

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

226

PART - III ELECTIVE	Title : PROGRAMMING IN C++	Subject Code : 17 UMS E52
Semester : V	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

To enable the students to be familiar with the basic C++ concepts of constructors, destructors and inheritance.

UNIT I:

Tokens, expressions and control structures

UNIT II:

Functions in C++, classes and objects

UNIT III:

Constructors and destructors

UNIT IV:

Operator overloading and type conversion

UNIT V:

Inheritance

TEXT BOOK:

Object oriented programming in C++ by E.Balagurusamy.

Unit – 1 : Chapter 3(Sec 3.2 to 3.20,3.24)

Unit – 2 : Chapters 4 (Sec 4.3 to 4.11) Chapter 5 (Sec 5.3 to 5.16)

Unit – 3 : Chapter 6 (Sections 6.2 – 6.11)

Unit – 4 : Chapter 7 (Sections 7.2 – 7.8)

Unit – 5 : Chapter 8 (Sections 8.2 – 8.12)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

227

PART - III ELECTIVE	Title : PROGRAMMING IN C++ LAB	Subject Code : 17 UMS EP1
Semester : V	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

To enable the students to design and implement C++ programs for simple applications.

- 1) Write a program to calculate Simple Interest and Compound Interest
- 2) Write a program for shopping list
- 3) Write a program to find the biggest number using class
- 4) Write a program to overload unary minus operator
- 5) Write a program to overload binary plus operator
- 6) Write a program to add two complex numbers using friend function
- 7) Write a program to add two time and hours.
- 8) Write a program to calculate EB charge
- 9) Write a program to calculate product of two complex numbers
- 10) Write a program for employee details
- 11) Write a program for bank transaction
- 12) Write a program for students file

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

228

PART - III ELECTIVE	Title : BOOLEAN ALGEBRA AND LOGIC	Subject Code : 17 UMS E53
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in discrete mathematics.

UNIT I:

Propositional Calculus - Statements, Basic operations-Truth value of compound Statements- Propositions and Truth tables.

UNIT II:

Tautologies and contradictions-Logical equivalence- Negation, DeMorgan's Laws- Algebra of Propositions-Conditionals, $p \rightarrow q$.

UNIT III:

Biconditional $p \leftrightarrow q$. Arguments, Arguments and statements-Logical Implication-Quantifiers.

UNIT IV:

Boolean Algebra, Logic Gates: Basic definitions and theorems-order and Boolean Algebras- Boolean Expressions, Sum of-products form.

UNIT V:

Logic gates-Logic circuits-Minimal Boolean Expressions, Prime implicants-Karnaugh maps-Minimal AND-OR circuits.

TEXT BOOK:

Discrete Mathematics, Seymour Lipschutz, Marcs Lars Lipson, Schaum's series, McGraw-Hill, International Editions 1999.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



VI SEMESTER

Sl. No.	Sub. Code	Nature	Subject Title	Hrs / Week	Durati on of Exam (hrs)	CA	SE	Tot	Crd
1	17UMSC61	Core 10	Linear Algebra	6	3	25	75	100	5
2	17UMSC62	Core 11	Complex Analysis	6	3	25	75	100	5
3	17UMSC63	Core 12	Operations Research	6	3	25	75	100	5
4	17UMSC64	Core 13	Programming in JAVA (Theory)	4	3	25	75	100	3
5	17UMSCP1	Core 13	Programming in JAVA (Practical)	2	3	40	60	100	2
5	17UMSE61	Elective 4 *	Statistics II	6	3	25	75	100	5
	17UMSE62	Elective 5 *	Discrete Mathematics						
6	16UGK B61		General Knowledge	-	-	-	-	100	-
TOTAL				30					25

***Note: One Elective subjects to be chosen from the two elective subjects.**



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

230

PART - III	Title : LINEAR ALGEBRA	Subject Code : 17 UMS C61
CORE		
Semester : VI	HOURS : 6 hours /week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge vector space and inner product space.

UNIT-1:

Vector Spaces-Definition and examples- Sub Spaces-Linear Transformation- Fundamental theorem of Homomorphism.

UNIT-2:

Span of a set-Linear independence-Basis and Dimension-Rank and Nullity-Matrix of a Linear Transformations.

UNIT-3:

Inner product Space- Definition and examples-Orthogonality –Orthogonal complement.

UNIT-4:

Matrices-Elementary Transformation-Inverse -Rank-Test for consistency-Solving linear equations-Cayley's Hamilton's theorem-Eigen values and Eigen vectors.

UNIT-5:

Bilinear forms-Matrix of a Bilinear form-Quadratic forms – Reduction to Quadratic forms.

TEXTBOOK:

Modern Algebra by Dr.S.Arumugam and A.T.Isaac Publications: SCITECH,2008.

Unit-1—Chapters 5, 5.0,5.1,5.2,5.3

Unit-2---Chapter 5, 5.4 ,5.5,5.6,5.7,5.8

Unit—3---Chapters 6,6.0,6.1,6.2,6.3

Unit—4—Chapter 7, 7.3,7.4,7.5 7.6,7.7,7.8

Unit—5—Chapter 8, 8.1,8.2

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

231

PART - III CORE	Title : COMPLEX ANALYSIS	Subject Code : 17 UMS C62
Semester : VI	HOURS : 6 hours /week	CREDITS : 5

Objectives:

To provide the students a comprehensive idea about analytic functions and residues.

UNIT-1:

Analytic function-C-R-equations-Sufficient conditions-Harmonic functions.

UNIT-2:

Elementary Transformation-Bilinear Transformation-Cross ratio-fixed points-Special Bilinear Transformation –Real axis to axis-Unit circle to unit circle and real axis to unit circle only.

UNIT-3:

Cauchy's Fundamental theorem- Cauchy's integral formulae and formulae for derivatives-Morera's theorem-Cauchy's inequality-Liouville's theorem-Fundamental theorem of algebra.

UNIT-4:

Taylor's theorem, Laurent's theorem (Statement only) - Singular points – Poles - Argument principle - Rouché's Theorem.

UNIT-5:

Calculus of residues - Evaluation of definite integral (the following types only) $\int_0^{2\pi} f(\cos\theta, \sin\theta) d\theta$ and $\int_{-\infty}^{\infty} f(x) dx$ where $f(x) = \frac{g(x)}{h(x)}$ and $g(x), h(x)$ are polynomials in x and degree of $h(x)$ exceeds that of $g(x)$ by at least two.

TEXT BOOK:

Complex Analysis by Dr.S.Arumugam, Thanga pandi Issac and A.Somasundaram.
Publishers: SciTech.

- Unit-1 – Chapters 2 (sections 2.6, 2.7, 2.8)
- Unit-2 - Chapter 3 (sections 3.1 to 3.5)
- Unit-3 - Chapters 6 (sections 6.1 to 6.4)
- Unit - 4 - Chapter 7 (sections 7.1 to 7.4)
- Unit - 5 - Chapter 8 (sections 8.1 to 8.3)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

232

PART - III CORE	Title : OPERATIONS RESEARCH	Subject Code : 17 UMS C63
Semester : VI	HOURS : 6 hours /week	CREDITS : 5

Objectives:

To enable the students to acquire the basic knowledge in operations research. To make the students to understand the concepts of linear programming problem, Graphical solution to linear programming problem, the simplex method, duality, transportation problem and assignment problem

UNIT-1:

Introduction- Mathematical formulation of Lpp – simple examples of LPP – Graphical solutions – Simplex method.

UNIT-2:

Charne's method of penalties – Two phase simplex method (Simple Problems only) – Duality – Dual of the dual is primal.

UNIT-3:

Transportation problem – Finding IBFS using North West Corner method, Least cost Method and Vogel's Approximation Method – Degeneracy in Transportation problem – MODI Method.

UNIT-4:

Assignment problem – Mathematical formulation of AP – getting initial solution using Hungarian method – getting optimal solution of an assignment problems – Maximization case also included.

UNIT-5:

Game theory – Two persons zero sum games – saddle point – Games with saddle point – solution of Games without saddle point by using Formula method, Graphical Method and method of Dominance

TEXTBOOK:

Operations Research by Kanti Swarup, P.K. Gupta, Man mohan Publications: Sultan chand & sons.



PART - III CORE	Title : JAVA PROGRAMMING	Subject Code : 17 UMS C64
Semester : VI	HOURS : 4 hours /week	CREDITS : 3

Objectives:

To enable the students to learn the basic concepts of java programming.

UNIT I: Overview of Java Language: Simple Java Program – Java Program Structure – Java Tokens – Java Statements – Implementing a Java Program – Java Virtual Machine – Command Line Arguments. Constants – Variables – Data types – Declaration of Variables – Giving Values to variables – Scope of Variables – Symbolic Constants – Type Casting.

UNIT II: Operators and Expressions: Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators – Bitwise Operators – Special Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operators – Operator Precedence And Associativity – Mathematical Functions. Decision Making and Branching: Decision Making with If statement – Simple. If Statement – If else Statement – Nesting If Else Statement – the ElseIf Ladder – The switch Statement – The?: operator. Decision Making and Looping: The while statement – The do statement – The for statement – Jumps in Loops.

UNIT III: Class, Objects and Methods: Defining a Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing class members – Constructors – Methods Overloading – Static Members – Nesting of Methods – Inheritance. Arrays and Strings : One-dimensional Arrays – creating an Array – Two Dimensional Arrays – Strings.

UNIT IV: Interfaces: Multiple Inheritance: Defining Interfaces – Extending Interfaces – Implementing Interfaces – Accessing Interface Variables.

Packages: Java API Packages – Using system Packages _ Naming Conventions – Creating Packages – Accessing a Package – Using a Package – Adding a class to a Package.

UNIT V: Multithreaded Programming: Creating Threads – Extending the Thread Class – Stopping and Blocking a Thread – Life Cycle of a Thread – Using Thread Methods – Thread Exceptions – Thread Priority. Managing Errors and Exceptions: Types of Errors – Exceptions – Syntax of Exception Handling Code – Multiple Catch Statements – Using Finally Statement – Throwing our own Exceptions – Using Exceptions for debugging.

Text Book

1. Programming with Java, A Primer, 3e, E.Blagurusamy, TATA McGraw-Hill Company, 2008.

- UNIT I : Chapters : 3,4
- UNIT II : Chapters : 5,6,7
- UNIT III : Chapters : 8,9
- UNIT IV : Chapters : 10,11
- UNIT V : Chapters : 12,13



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

234

PART - III CORE	Title : JAVA PROGRAMMING LAB	Subject Code : 17 UMS CP1
Semester : VI	HOURS : 2 hours /week	CREDITS : 2

OBJECTIVES:

To enable the students to learn the basic concepts of java Lab

LIST OF PROGRAMS

Write programs in Java for the following:

1. To perform addition of complex numbers using class and objects.
2. To perform multiplication of matrices using class and objects.
3. To perform volume calculation using method overloading.
4. Using command line arguments, test if the given string is palindrome or not.
5. Write a program to fill names into a list. Also, copy them in reverse order into another List. If the name contains any numeric value throw an exception "InvalidName".
6. Using multilevel inheritance process student marks
7. Implement multiple inheritance for payroll processing
8. Create a package called "Arithmetic" that contains methods to deal with all Arithmetic operations. Also, write a program to use the package
9. Create two threads such that one of the thread print even no's and another prints Odd no's up to a given range.
10. Define an exception called "Marks Out of Bound" Exception, that is thrown if the Entered marks are greater than 100.
11. String manipulation using string methods (Use of any five string methods preferred)
12. Write a program in Java to grade the students using Switch statement
13. Write a program in Java to calculate the Simple interest and Compound Interest

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

235

PART - III ELECTIVE	Title : STATISTICS - II	Subject Code : 17 UMS E61
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in sampling theory.

UNIT - 1:

Theory of attributes

UNIT - 2:

Index numbers.

UNIT-3:

Moment generating function-Cumulants- theoretical distributions-Binomial –Poisson-Normal.

UNIT-4:

Test of Significance of Large samples.

UNIT-5:

Test of Significance of small samples.- t, F and Chi-square.

TEXTBOOK:

STATISTICS by Dr.S.Arumugam, A.Thangapandi Isaac Publishers: New Gamma Publishing House—July--2013.

Unit—1—Chapter 8

Unit—2—Chapter 9

Unit—3---Chapters 12 sections 12.5-12.6, Chapter 13

Unit—4—Chapter 14

Unit—5—Chapter 15,16

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

236

PART - III ELECTIVE	Title : DISCRETE MATHEMATICS	Subject Code : 17 UMS E62
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in automata theory and lattice theory.

UNIT -I

RELATIONS: Cartesian product of two sets- Relations- Representation of relations- Operations of relations- Composite relations- Equivalence relations.

UNIT-II

CODING THEORY: Introduction- Hamming distance- Encoding message- Group codes- Decoding and error correction-An example of single error – Correcting code.

UNIT-III

True false statements – connectives – Atomic compound statements – Parsing trees – Truth table of formula – Tautology – Tautological implementations and formulae – Replacement process.

UNIT-IV

Normal forms – Disjunctive normal form and conjunctive normal form – Principle disjunctive normal form and principle conjunctive normal form.

UNIT-V

Lattices – Hasse diagram – Properties of Lattices – New lattices – Lattice homomorphism.

TEXT BOOK: DISCRETE MATHEMATICS

AUTHOR : Dr.M.K.VENKADARAMAN, Dr.N.SRIDHARAN, V.CHANDRASEKARAN.

PUBLICATIONS: THE NATIONAL PUBLISHING COMPANY-2012

UNIT	CHAPTER	SECTION
I	2	2,3,4,5
II	8	1-7
III	9	2-9
IV	9	11-12
V	10	1-3

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

SEMESTER –I

S. No.	Sub.code	Nature	Sub.Title	Hrs/week	Exam Hrs	C A	SE	Tot	Crd
1	17UACT11/ H11/S11	Part – I	Tamil/Hind/Sanskrit	6	3	25	75	100	3
2	17UACE11	Part - II	English	6	3	25	75	100	3
3	17UPSC11	Part-III Core	MECHANICS & PROPERTIES OF MATTER	4	3	25	75	100	4
4		Part-III Core	Core Practicals- I	3	-	-	-	-	0
5	17UPSS11	Part-IV SBS	LASER AND SPECTROSCOPY	3	3	25	75	100	3
6	17UPSA11/ 17UPS A31	Part-III Ancillary	MECHANICS, PROPERTIES OF MATTER AND THERMAL PHYSICS	4	3	25	75	100	4
7		Part-III Ancillary	Ancillary practical-I	2	-	-	-	-	0
8	14 UAC VE1	Part-IV	Value Education	2	3	25	75	100	2
			Total	30					19

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : MECHANICS & PROPERTIES OF MATTER	Subject Code : 17 UPS C11
Semester : I	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

To understand the basic concepts in Mechanics.

To learn the various properties of matter

To gain knowledge about Earth's gravity.

UNIT I Newton's laws of motion – momentum and impulse – Law of conservation of linear momentum – collision – Elastic and Inelastic collision – Newton's law of impact – coefficient of restitution – impact of moving sphere on a fixed plane – Direct and Oblique impact of moving two smooth spheres – calculation of final velocity of the spheres – loss of kinetic energy.

UNIT II Moment on Inertia – parallel and perpendicular axes theorems – moment of inertia of circular disc, solid cylinder about an axis passing through its centre and perpendicular to its own axis – moment of inertia of a solid sphere about all axes – Angular momentum and torque – Relation between angular momentum and torque – kinetic energy of rotation – kinetic energy of a body having both translatory and rotatory motion – Expression for the acceleration of a body rolling down an inclined plane.

UNIT III Elastic moduli — relation between them – Poisson's ratio- Bending of beams – Expression for bending moment – Determination of Young's modulus by uniform and non uniform bending – cantilever – Theory and Experiment – Torsion – Expression for torque per unit twist – Torsional oscillations of a body – Rigidity modulus of the wire by torsion pendulum(dynamic torsion).

UNIT IV Viscosity – coefficient of viscosity – Streamline flow and turbulent flow – Derivation of Poiseuille's formula – Comparison of viscosities – Ostwald's Viscometer – Motion of a body in a viscous medium – Stoke's formula – Expression for terminal velocity - Stoke's method for the coefficient of viscosity of liquid.

UNIT V Newton's law of gravitation – Kepler's laws of motion – mass and density of the earth – Determination of Gravitational constant G by Boy's method – variation of g with altitude, depth and latitude – Compound Pendulum – Theory and experiment to find the value of 'g' at a given place. To gain knowledge about Earth's gravity.

BOOKS FOR STUDY

Mechanics: Unit 1&Unit 2

Properties of Matter-Unit 3,Unit 4& Unit 5

Unit: 1. Chapter. 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.10.

Unit: 2. Chapter. 5.1, 5.2, 5.3, 5.4, 5.5, 5.8, 5.10, 5.11, 5.12, 5.15.

Unit: 3. Chapter.1.1, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.12, 1.13, 1.14.

Unit: 4. Chapter. 3 Full except Viscosity of Gases.

Unit: 5. Chapter .5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8..

REFERENCE BOOKS:

1. Mechanics By D.S.Mathur, S.Chand & Sons, New Delhi

2.Properties of Matter By Brijlal and Subramanian, S.Chand & Sons. New Delhi.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV SKILL BASED	Title : LASER AND SPECTROSCOPY	Subject Code : 17 UPS S11
Semester : I	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To understand the basic information in laser
- To learn the properties and various application in laser
- To perceive the basic concept of spectroscopy
- To gain the theory concept of photo electricity and related applications

UNIT Introduction – characteristics of laser – Difference between light and laser – Principle of laser action – population inversion – pumping methods – Optical resonator.

UNIT II Types of Laser – Ruby laser – construction and its application – He – Ne laser – construction and its application – Theory of LED – LED materials – Laser diode – Homo junction semiconductor laser (Ga As laser)

UNIT III Application of lasers – Holography – Theory and its application – Difference between holography and photography.

UNIT IV Introduction – Electromagnetic spectrum – IR radiations – properties, production, detection and uses – UV radiations – properties, production, detection and uses – Raman effect – Theory and experimental study – Applications.

UNIT V Photo electricity – Laws of photo electricity – Einstein's photo electric equation – photo electric cells – Types – application of photo electric cells

BOOKS FOR STUDY:

- Engineering Physics – I by G.Senthilkumar VRB publishers (p) ltd; Unit I to III
- Unit: 1. Chapter. 2.1, 2.2, 2.3, 2.6, 2.7, 2.8, 2.9
- Unit: 2. Chapter. 2.11, 2.13, 2.16
- Unit: 3. Chapter. 2.19, 2.20, 2.21
- Unit: 4. Chapter. 5.1, 5.2, 5.3, 5.5
- Unit: 5. Chapter. 4.9,4.10,4.11,4.12,4.13,4.14
- 2. Optics and Spectroscopy by R.Murugesan, S.Chand & Sons, New Delhi ,Unit IV
- 3. Modern Physics R.Murugesan, S.Chand & Sons, New Delhi, Unit V

REFERENCE BOOKS:

1. Optics and Spectroscopy By Brijlal and Subramanian, S.Chand & Sons. New Delhi
2. Engineering Physics –I by Dr. P. Mani Dhanam Publications, Chennai.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : Mechanics, properties of matter and thermal physics ANCILLARY FOR: Maths I yr Chem II yr	Subject Code : 17 UPS A11/ 17 UPS A31
Semester : I& III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To understand the basic concepts in Mechanics.
- To learn the various properties of matter
- To gain knowledge about Earth's gravity.
- To Understand the concept of heat

Unit I – Mechanics: Uniform circular motion – Normal acceleration and centripetal force (no derivation) – Torque – Work and power in rotational motion – Torque and angular acceleration – Angular momentum and angular impulse – Kinetic energy of rotation – Motion along the inclined plane.

Unit II – Properties of matter: Elastic moduli – Bending of beams – Expression for bending of beams – Young's modulus by uniform bending and non uniform bending (theory and experiment) – I Section grids – Torsion – Expression for couple per unit twist – Work done in twisting – Torsion pendulum (theory and experiment) – Compound pendulum – Expression for period – Experiment to determine "g".

Unit III – Thermal Physics: Expansion of solids – Expansion of crystals – Determination of linear expansion of solids by air wedge method – Solids of low expansivity and their uses – thermostat – hotwire ammeter – Isothermal and adiabatic changes – Derivation of equation for both C_p and C_v of a gas – Experimental determination of C_v by Joly's method – Determination of C_p by Regnault's method.

Unit IV – Heat Transfer: Conduction – Lee's disc method for conductivity of bad conductor – Analogy between heat flow and current flow – Convection in atmosphere – Stability of the atmosphere – Lapse rate – Radiation – Determination of Stefan's constant – Filament heating method.

Unit V – Thermodynamics: Isothermal process – Adiabatic process – Equation to an adiabatic change – Work done during an isothermal change, adiabatic change – Laws of thermodynamics – Zeroth law – First law – Second law – Carnot's theorem – Entropy – Change of Entropy in Carnot's cycle – Change of entropy when ice is converted into steam.

Books for study:

1. Ancillary Physics – Thermal Physics by N. Venkatachalam, Year of Publication Sep 2000.
2. Mechanics Properties of matter by R. Murugesan, First edition 1994.

Reference books:

1. Heat and Thermodynamics by Brijlal & N. Subramanian
2. Mechanics by D.S. Mathur

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



241

SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

SEMESTER –II

S. No.	Sub.code	Nature	Sub.Title	Hrs/ week	Exam Hours	C A	SE	Tot	Crd
1	17UACT21/ H21/S21	Part – I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	17UACE21	Part - II	English	6	3	25	75	100	3
3	17UPSC21	Part-III Core	THERMAL PHYSICS	4	3	25	75	100	4
4	17 UPS CP1	Part-III Core	Core Practicals- I	3	3	40	60	100	3
5	17UPSS21	Part-IV SBS	ENERGY SCIENCE	3	3	25	75	100	3
6	17UPS A21/ 17UPS A41	Part-III Ancillary	OPTICS, ELECTRICITY & ELECTRONICS	4	3	25	75	100	4
7	17 UPS AP1	Part-III Ancillary	Ancillary Practical-I	2	3	40	60	100	2
8	14UACES1	Part-IV	Environmental Studies	2	3	25	75	100	2
			Total	30					24

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : THERMAL PHYSICS	Subject Code : 17 UPS C21
Semester : II	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To understand the basic concepts in Heat.
- To learn the various properties of Heat
- To gain knowledge about Flow of heat
- To Understand the concept of Low Temperature

Unit – I Thermometry - Expansion of crystals – Coefficient of expansion of a crystal (Fizeau's method) – Expansion of liquids - Coefficient of expansion of a liquid (Dulong and Petit's method) – Anomalous expansion of water – Isothermal and adiabatic changes – Equations for C_p and C_v of a gas – Relation between them – Experimental determination of C_p by Regnault's method – Determination of C_v by Joly's method.

Unit – II Kinetic theory of gases – Mean free path – Transport phenomena: Thermal conductivity, viscosity and diffusion – Maxwell's law of distribution of molecular speed – Experimental verification – Degrees of freedom – Law of Equipartition of energy – Calculation of C_p , C_v and γ for monoatomic, diatomic and triatomic gases.

Unit – III Thermal conductivity – Lee's disc method for conductivity of bad conductor – air and cardboard / Ebonite – Analogy between heat flow and electric current – Wiedemann – Franz law – Convection in atmosphere – Lapse rate – Stability of atmosphere – Green house effect – Atmospheric pollution.

Unit – IV Radiation – Stefan's law of radiation – Derivation; Newton's law from Stefan's law – Solar constant measurement (Water flow Pyroheliometer and Angstrom's Pyroheliometer) – Temperature of the Sun – Solar spectrum – Energy distribution in black body spectrum – Planck's law of radiation – Derivation of Wien's and Rayleigh Jeans law from Planck's law.

Unit – V Thermodynamics – Zeroth law – I, II and III law of thermodynamics – Entropy – Change of entropy in reversible and irreversible process – Joule Kelvin effect – Porous plug experiment – Theory – Van der waals gas equation - Liquefaction of Oxygen and Helium – Properties of Helium 1 and Helium 2.

Text Book:

Heat and Thermodynamics by Brijlal & Subramaniam – S. Chand & Co, 1998 edition.

Unit: 1. Chapter. 1.2, 2.13, 2.14, 2.16, 2.20, 2.24, 6.11, 6.12, 3.10, 3.11, 3.12

Unit: 2. Chapter. 5.10, 5.25, 5.26, 5.27, 5.28, 5.23, 5.24, 5.21

Unit: 3. Chapter. 8.2, 8.8, 8.17, 8.24

Unit: 4. Chapter. 8.30, 8.35, 8.37, 8.45, 8.46, 8.44, 8.48, 8.42

Unit: 5. Chapter. 6.1, 6.2, 6.8, 6.25, 6.47, 6.44, 6.45, 6.46, 6.58, 5.44, 5.36, 7.2, 7.4, 7.7, 7.8

Reference Book.

1. Heat and Thermodynamics by D.S. Mathur – S. Chand & Co.
2. Heat and Thermodynamics by R. Murugesan – S. Chand & Co.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : ENERGY SCIENCE	Subject Code : 17 UPS S21
SKILL BASED		
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

1. To introduce aspects of energy
2. To give basic idea regarding the solar cells
3. To impart knowledge on Conventional and non-conventional sources.
4. To give knowledge on solar thermal systems.

Unit:1 Fundamentals of Energy Science and Technology and Energy Storage

Introduction—Classification of energy resources—Importance of Non-conventional energy sources—Energy Chain—Common forms of energy—Advantages and disadvantages of Conventional and non-conventional energy sources. Necessity of energy storage—Energy Storage methods—Pumped storage—Batteries Storage—Hydrogen Storage—Biological Storage.

Unit:2 Solar Energy--basics

Introduction—The Sun—The Earth—Solar time—Basic Sun Earth angles—Measurement of solar radiation date—Solar cell fundamentals—Characteristics—Solar PV applications.

Unit:3 Solar Thermal Systems

Introduction--Solar collectors—Flat Plate collectors—Solar Water Heaters—Solar cookers(box type and dish type)—Solar furnaces

Unit:4 Wind Energy

Introduction--Origin of winds—Applications of wind power—Environmental aspects—Wind energy programme in India.

Unit:5 Bio-mass Energy

Introduction—Photosynthesis process—Bio-fuels—Bio-mass resources—Biomass gasification—Biomass energy programme in India.

TEXTBOOK:

Non-conventional Energy Resources by B.H.KHAN, Tata McGraw-Hill Publishing Company Limited, New Delhi. Second edition.

UNIT CHAPTERS

- I Ch.1: Sections (1.1,1.3,1.5,1.6,1.7,1.8 1.9), Ch.3: Sections (3.1, 3.2, 3.2.1a, 3.2.2 a,b, 3.2.6)
- II Ch:4: Sections(4.1,4.2,4.3,4.7,4.8 4.10), Ch:6 Sections (6.1,6.2.1,6.2.2, 6.4.2,6.4.3, 6.4.4)
- III Ch:5: Sections(5.1,5.2,5.6,5.7)
- IV Ch:7: Sections(7.1, 7.4,7.12, 7.13)
- V Ch:8: Sections (8.1, 8.2, 8.3, 8.6, 8.11)

REFERENCE BOOK:

1. Solar Energy Utilisation by G.D.Rai – Vth edition.
2. Solar energy by S.P.Sukhatme Tata McGraw-Hill Publishing Company 1997.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : Optics, Electricity & Electronics ANCILLARY FOR: Maths I yr Chem II yr	Subject Code : 17 UPS A21/ 17 UPS A41
Semester : II& IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

1. To introduce aspects of Light and Electricity
2. To give basic idea regarding the semiconductor devices
3. To impart knowledge on properties of light and current.

UNIT I Geometrical optics: Deviation produced by a thin lens – focal length of two lenses in and out of contact - chromatic aberration in lenses and its removal - spherical aberration in lenses and its removal - refraction through a thin prism - dispersion - dispersive power - combination of thin prisms to produce deviation without dispersion and dispersion without deviation.

UNIT II Physical optics: Interference in thin films - Air wedge - Newton's rings (reflected beam only)– Theory of plane transmission grating – (normal incidence only) – experiment to determine wavelength – double refraction – Nicol prism – optical activity (no theory).

UNIT III Electrostatics: Electric field – flux – Gauss's law – application of Gauss's law – field due to a charged sphere – electric potential – equipotential surface – relation between electric field and electric potential – electric potential energy – capacitors – principle of a capacitor – capacitance of a spherical capacitor – energy stored in a capacitor.

UNIT IV Current Electricity and Magnetic effect: Kirchoff's laws--Carey Foster bridge – measurement of resistance and temperature coefficient of resistance – potentiometer – principle of a potentiometer – calibration of low range voltmeter – calibration of ammeter - torque on a current loop – mirror galvanometer – dead beat and ballistic – experiment to determine current sensitiveness.

UNIT V Electronics: Junction diodes – forward and reverse bias – diode characteristics – types of diodes – (LED and Zener diodes) – bridge rectifier using junction diodes – transistor characteristics (CE mode only) – binary number systems – reason for using binary numbers – binary to decimal , decimal to binary – Boolean algebra, De Morgan's theorem – basic logic gates (AND, OR, NOT) – NAND and NOR as Universal gates.

BOOKS FOR STUDY:

Optics and spectroscopy – R.Murugesan
 Electricity and Electronics – R.Murugesan

REFERENCE BOOKS:

Optics and spectroscopy – Brijlal and Subramaniam
 Electricity and Electromagnetism – Brijlal and Subramaniam

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III	Title : CORE PRACTICALS- I	Subject Code : 17 UPS CP1
CORE		
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

LIST OF EXPERIMENTS

Any Fourteen experiments:

1. Young's Modulus of Elasticity by Uniform Bending (Pin & Microscope)
2. Young's Modulus of Elasticity by Non-Uniform Bending (Optic Lever)
3. Young's Modulus of Elasticity by Cantilever (Pin & Microscope)
4. Young's Modulus of Elasticity by Cantilever (Dynamic Method)
5. Rigidity Modulus of Elasticity by Static Torsion (Searl's Method)
6. Rigidity Modulus of Elasticity by using Torsion Pendulum (with loads)
7. Moment of Inertia of circular disc by Torsion Pendulum
8. Determination of viscosity of water by Poiseuille's method
9. Specific heat capacity of solid by method of mixtures.
10. Thermal conductivity of a bad conductor by Lee's disc method.
11. q, n, σ by Searl's method.
12. Specific heat capacity of liquid by Joule heating method.
13. Calibration of Low Range voltmeter using potentiometer
14. Calibration of Ammeter using potentiometer.
15. Determination of acceleration due to gravity by using compound pendulum.
16. Surface Tension by Drop Weight method.
17. Refractive index of a Prism
18. Wavelength of the Spectral lines by using Grating.



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : Ancillary Practical - I ANCILLARY FOR: Maths I yr Chem II yr	Subject Code : 17 UPS AP1
Semester : II& IV	HOURS : 2 hours / Week	CREDITS : 2

LIST OF EXPERIMENTS

Any Fourteen Experiments

1. Non – Uniform Bending – Optic lever.
2. Uniform Bending – Pin & Microscope.
3. Determination of 'g' – Compound Pendulum.
4. Thermal Conductivity – Lee's disc
5. Calibration of Low - Range Voltmeter by Potentiometer.
6. Comparison of Capacities by Spot Galvanometer.
7. Resistance and Resistivity – Carey – Foster's bridge.
8. Refractive index of a prism – Spectrometer.
9. Grating N and λ – Spectrometer.
10. LCR – Series Resonance.
11. Newton's Ring's - Radius of curvature of a lens.
12. Bridge Rectifier.
13. Logic Gates OR, AND, NOT – Discrete components.
14. Zener diode – Characteristics.
15. Logic gates OR, AND, NOT using IC
16. Air Wedge – Thickness of a wire.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

III SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hrs / Week	Exam Hrs	C A	SE	Tot	Cr d
1	17UACT31/ H31/S31	Part – I	Tamil/Hindi/Sanskrit	6	3	25	75	100	3
2	17UACE31	Part - II	English	6	3	25	75	100	3
3	17 UPS C31	Part-III Core	Electricity and Electromagnetism	5	3	25	75	100	5
4	17 UPS S31	Part-IV SBS	Mathematical methods	3	3	25	75	100	3
5	17 UPS N31	Part-IV NME	Basic Physics -I	2	3	25	75	100	2
6	17 UPS A11/ 17UPS A31	Part-III Ancillary	Mechanics, Properties of Matter & Thermal Physics	4	3	25	75	100	4
7		Part-III Core	Core Practical	2	-	-	-	-	0
8		Part-III Ancillary	Ancillary Practical	2	-	-	-	-	0
			Total	30					20

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : ELECTRICITY AND ELECTROMAGNETISM	Subject Code : 17 UPS C31
Semester : III	HOURS : 5 hours / Week	CREDITS : 5

Objectives: 1. To understand the fundamentals of electrostatics
 2. To learn the importance of capacitors
 3. To gain knowledge about transient currents.

Unit – I

Coulomb's Law – Electric field – flux of electric field - Gauss law – its proof – Applications of Gauss's law – Electric field due to charged sphere (a) at a point outside (b) at a point inside (c) at a point on the surface of the sphere. Electric field due to plane sheet of charged conductor – Coulomb's theorem – Mechanical force on the surface of charged conductor —Electric potential - relation between electric field and potential – Potential due to charged spherical conductor at a point (a) outside (b) on the surface and (c) inside.

Unit – II Capacitance – Principle of capacitor – expressions for the capacitance - Spherical capacitor – Cylindrical Capacitor – Parallel Plate Capacitor with and without partly filled dielectric – Energy of capacitor – Loss of energy, when two charged conductors share the charges – Types of capacitors, fixed capacitor, variable capacitor, electric capacitors and sliding capacitor.

Unit – III Kirchoff's laws in AC circuits – applications of Kirchoff's in AC bridges (Owen's bridge, Anderson's bridge, Maxwell's bridge- Carey Foster's Bridge – Determination of the resistance of the given wire with the necessary theory – Principle of Potentiometer – Determination of internal resistance of the cell using Potentiometer – calibration of ammeter and voltmeter – low & high range.

Unit – IV Biot – Savart's Law – Its application - long straight wire of infinite length- Ampere's Theorem – magnetic field along the axis of a coil carrying current – solenoid – Ballistic Galvanometer-theory – Damping correction – Comparison between deadbeat and Ballistic galvanometer-determination of the absolute capacity of condenser, using B.G. (theory) and experiment.--Determination of high resistance by leakage.

Unit –V Mean value of alternating emf-RMS value of the alternating current/voltage – Alternating current applied to LR,CR and LCR circuits – Series resonance circuit and parallel resonance circuit - Power in an ac circuit – Wattless current – Power factor – Q factor – Choke coil.

TEXT BOOK

Electricity and electromagnetism -RMURUGESAN First edition –July2007.

Unit -1: 1.1-1.19(page no.1-87)

Unit-2: 2.9-2.9 (page no.38-60)

Unit-3: 3.14-3.17(page no.237-241),3.5-3.10(page no.73-80)

Unit-4: 4.4.5, 4.10, 4.12,4.16,4.19(Page no.86-123)&2.4(Page no.87,88)

Unit-5 :3.1,3.2,3.3,3.5,3.6-3.9(Page no.204-231)

REFERENCE BOOKS:

1. Electricity and Magnetism -Brijlal N Subramanian- First edition 1964
2. Electricity and Magnetism -Dr.K.K.Tiwari S.Chand&Co.2002

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV SKILL BASED	Title : MATHEMATICAL METHODS	Subject Code : 17 UPS S31
Semester : III	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To understand the fundamentals of vectors.
- To learn the application of mathematical methods.
- To gain knowledge about Mathematical methods.

Unit I: Vector analysis: Scalar and Vector fields – Gradient of scalar field – Line, Surface and Volume integrals – Divergence of a vector function – expression in Cartesian coordinates – Curl of a vector function – expression in Cartesian coordinates – physical significance of curl – important vector identities – simple problems.

Unit II: Vector theorems: Gauss divergence theorem – statement and proof – Stoke's theorem – statement and proof – Green's theorem – statement and proof – Applications – equation of continuity – Euler's equation of motion – Bernoulli's equation

Unit III: Matrices: Eigen values and eigen vectors – Cayley Hamilton theorem – Theorems on eigen values and eigen vectors – diagonalisation of matrices – simple problems

Unit IV: Beta and gamma functions: Definitions of beta and gamma functions – symmetry property of beta function – evaluation of beta function – other forms of beta function – evaluation of gamma function – value of $\gamma_{1/2}$ - other forms of gamma function – Relation between beta and gamma function - simple problems

Unit V: Centre of gravity: Introduction – distinction between C.G and C.M – centre of gravity of a right solid cone – hollow right circular cone – solid hemisphere – hollow hemisphere – solid tetrahedron – compound body – simple examples.

Books for study :

1. Mechanics and Mathematical methods by R.Murugesan – S.Chand & co.Ltd.
 - Unit I: Chapter 7 (Section 7.1 to 7.9)
 - Unit II: Chapter 7 (Section 7.10 to 7.13)
 - Unit III: Chapter 8 (Section 8.1 to 8.4)
 - Unit IV: Chapter 9 (Section 9.1 to 9.8)
 - Unit V: Chapter 3 (Section 3.1 to 3.8)

Reference Books:

1. Mathematical Physics by B.S.Rajput, Himalaya Publications.
2. Mathematical Physics by H.D.Das, Sultan Chand & sons Co.,
3. Mathematical Physics by Satya Prakash by Sultan Chand & Sons Co.,

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

250

PART - IV NME	Title : BASIC PHYSICS - I	Subject Code : 17 UPS N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To get basic idea about household wiring system
- To get training for handling domestic devices
- To understand the involvement of physics in daily life.

Unit I FUNDAMENTALS OF ELECTRICITY

Electric Current -A.C. Voltage- rms voltage-conductor and insulator- resistor-resistors in series and parallel combination- inductor- ohm's law

Unit II HOUSE WIRING

Switches- plug wires –phase neutral and earth wire cables- fuse- lamp holders- distribution of electricity in a house- transformer- inverter-UPS

Unit III WORKING PRINCIPLE OF BULB AND MOTORS

Working principle of CFL- tube light-electric motor- mixer and grinder

Unit IV HOME APPLIANCES

Electric cooker-iron box-water heart-washing machine-refrigerator

Unit V PRINCIPLES OF TROUBLE SHOOTING AND REPAIRING

Use of multimeter and line tester-tube light circuits-iron box connection- switches board wiring – fan-regulator condition.

REFERENCE

1. Haper, How things work vol I and II. The universal encyclopedia of machines, Collin. Pub. India PVT. Ltd (1992).
2. Manahar Lottia, Modern mobile phone service system, BPB Publication, New Delhi (2001)
3. Anwani I.M, Electrical Appliances: Theory and Repair, R.B. Publication, Enlarged and new Edition, Delhi (1981)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : MECHANICS, PROPERTIES OF MATTER AND THERMAL PHYSICS	Subject Code : 17 UPS A11/ 17 UPS A31
		Ancillary
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To understand the basic concepts of Physics.
- To know the basic ideas regarding heat.

Unit I - Mechanics:

Uniform circular motion-Normal acceleration and centripetal force (no derivation)-Torque-Work and power in rotational motion- Torque and angular acceleration-Angular momentum and angular impulse-Kinetic energy of rotation-Motion along the inclined plane

Unit II – Properties of matter:

Elastic moduli-Bending of beams-Expressions for bending of beams-Young's modulus by uniform bending and non uniform bending(theory and experiment)-I section girders-Torsion-expression for couple unit-work done in twisting –Torsion pendulum(theory and experiment)-compound pendulum-expression for period- experiment to determine "g".

Unit III –Thermal Physics:

Expansion of solids-expansion of crystals-Determination of linear expansion of solids by air wedge method-solids of low expansivity and their uses- thermostat- hotwire ammeter-Isothermal and adiabatic changes-Derivation of equation for both Cp and Cv of a gas-experimental determination of Cv by Joly's method-determination of Cp by Regnault's method.

Unit IV –Heat Transfer:

Conduction – Lees's disc method for conductivity of bad conductor –analogy between heat flow and current flow –Convection in atmosphere – stability of the atmosphere-Lapse rate- radiation-determination of Stefan's constant-filament heating method.

Unit V- Thermodynamics :

Isothermal process- adiabatic process –equation to an adiabatic change –work done during an isothermal change, adiabatic change- Law's of thermodynamics-zeroth law-First law –Second law-carnot's theorem-Entropy-change of entropy in carnot's cycle-change of entropy when ice is converted into steam.

Books for study:

- 1) Thermal Physics by N.Venkatachalam, , Year of publication Sep 2000
- 2) Mechanics& Properties of matter by R .Murugasen, First edition 1994

Reference books:

- 1)Heat and Thermodynamics by Brijlal & N Subramanian
- 2) Mechanics by D.S.Mathur

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



252

SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

IV SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hours / Week	Exam Hrs	C A	S E	Tot	Crd
1	17UACT31/ H31/S31	Part – I	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	17UACE41	Part - II	English	6	3	25	75	100	3
3	17 UPS C41	Part-III Core	Optics	5	3	25	75	100	5
4	17 UPS S41	Part-IV SBS	C-Programming	3	3	25	75	100	3
5	17 UPS N41	Part-IV NME	Basic Physics -II	2	3	25	75	100	2
6	17 UPS A21/ 17UPS A41	Part-III Ancillary	Optics, Electricity & Electronics	4	3	25	75	100	4
7	17 UPS CP2	Part-III Core	Core Practical	2	3	40	60	100	2
8	17 UPS AP2	Part-III Ancillary	Ancillary Practical	2	3	40	60	100	2
9		Part-V	Extension activities					100	1
			Total	30					25

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : OPTICS	Subject Code : 17 UPS C41
Semester : IV	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

1. To introduce the aspects of Light.
2. To understand the basic concepts in Geometrical and Physical Optics.
3. To impart knowledge on properties of light.
4. To give an idea about interference, diffraction and polarization

Unit I Lenses - Refraction through lenses – equivalent focal length of the system of two thin lenses in and out of contact – cardinal points of the lens system – Aberrations – Spherical aberration and chromatic aberration in lenses – Method of removal of aberrations – Achromatism in lenses – in and out of contact – Rainbow – Theory of Primary and Secondary rainbows.

Unit II Refraction through a thin prism – Dispersion – Dispersive power – Deviation without dispersion – dispersion without deviation – Direct vision spectroscope – Eye pieces – Ramsden’s eyepiece and Huygen’s eyepieces- Comparison.

Unit III Interference – Theory of interference fringes – Colors in thin films – Air Wedge – Determination of diameter of a thin wire - Newton’s Rings – Determination of refractive(interference by reflection & transmission) index of liquid – Michelson’s interferometer – Applications – Determination of wavelength – Resolution of spectral lines.

Unit IV Diffraction – Fresnel and Fraunhofer diffractions – Fresnel’s explanation of rectilinear propagation of light – Zone plate – Theory – comparison of zone plate with convex lens – Fresnel’s diffraction at a straight edge – Theory of plane transmission grating – determination of wavelength – dispersive power – Rayleigh’s criterion for resolving power of grating - comparison of prism and grating spectra.

Unit V Polarization – Polarizer and analyzer – Polaroid’s and its applications – Double refraction – Nicol prism – Huygen’s explanation of double refraction – Production, detection and analysis of plane, circularly and elliptically polarized light – QWP and HWP – Optical activity – Specific rotation – Laurent’s half shade polarimeter.

Book for Study:

Optics and spectroscopy by R.Murugesan, S.Chand & Co.

Unit: 1. Chapter.1 Sections (1.1 to 1.12, 1.29 to 1.31)

Unit: 2. Chapter.1 Sections (1.21 to 1.24, 1.17 to 1.20)

Unit: 3. Chapter. 2 Sections (2.8 to 2.17)

Unit: 4. Chapter. 3 Sections (3.1 to 3.15)

Unit: 5. Chapter. 3 Sections (3.16 to 3.29, 3.33, 3.34, 3.35)

Reference Books:

1. A text book of Optics by Brijlal and Subramanian S.Chand & Co.
2. Optics by M.Nagaratnam and V.Gosakan, National publishing company, 1990.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV SKILL BASED	Title : C - PROGRAMMING	Subject Code : 17 UPS S41
Semester : IV	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- 1.. To introduce the Programming language
2. To understand the basic concepts in C-Language.
3. To impart knowledge on solving problems with C

Unit –I: Introduction Introduction to C – Character set, identifiers and keywords – Date Types – Variables and constants – Various types of Operators – Arithmetic – Expressions – Input and Output operations. Simple programs - To find the volume of sphere, Area of the triangle and circle.

Unit – II: Control Statements Simple IF statement – simple IF, ELSE statement – Block IF statement – Block IF ELSE statement - The ELSE if ladder statement - looping operation using while statement – for statement – Break statement – Continue statement – Switch statement – Goto statement – exit function - To find the factorial of a number – To find the Fibonacci series – To evaluate $\sin x$ - To find the roots of a quadratic equation $ax^2+bx+c=0$.

Unit – III: Arrays Defining an Array – Processing an array – one dimensional array, two dimensional arrays – Multidimensional arrays. To multiply two matrices of order (1xm) and (mxn) – To add and subtract two matrices – To arrange the given set of numbers in ascending order – To arrange given set of numbers in descending order. To find the arithmetic mean, geometric mean and harmonic mean of a given set of Numbers.

Unit – IV: Functions Defining a function - Accessing a function - Category of functions – Passing arguments to function – Recursion – Library functions – Storage class modifiers – Auto, Global, Static and Register types –Using function to sort in the ascending and descending order of magnitude of a given set of numbers – Using function to sum integer values between 1-N recursion technique – To find binomial coefficient – to check whether a given number is odd or even – To sort names in a alphabetical.

Unit – V : Structures and Unions Defining a structure – Processing a structure – Arrays of Structures – Arrays within structures – Unions – bit fields – programmes using structure – to print currently date and time using functions. Pointers- fundamentals – Pointer declarations – pointers and simple variables.

Book for Study 1. Programming in C – E. Balagurusamy – Third Edition – Tata Mcgraw Hill 2004

- Unit I: Chapter 2 (2.1 to 2.8)
Chapter 3 (3.1 to 3.11)
Chapter 4 (4.4 to 4.5)
- Unit II: Chapter 5 (5.1 to 5.9)
Chapter 6 (6.1 to 6.5)
- Unit III: Chapter 7 (7.1 to 7.5)
- Unit IV: Chapter 9 (9.4.9.6,9.13&9.15)
- Unit V: Chapter 10 (10.1 to 10.7 and 10.10 to 10.12)

2. Programming in C by S. Ramasamy and P. Radhaganesan, Scitech Publications (India) Private Limited, Chennai and Hyderabad 2006.

Reference Books Theory and problems of Programming with C – By Byron Gottfried – Second edition – Tata Mcgraw Hill 2006.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME	Title : BASIC PHYSICS - II	Subject Code : 17 UPS N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To gain knowledge of measurement systems
- To know the significant about energy science
- To study about various state of matter

Unit – I

S.I. Units – measurements of length, mass time and other Physical quantities – Dimensional formula for area, volume, density and force – Uses of dimension- measurement conversion

Unit – II

Matter – Solid, Liquid, Gas and Plasma – change of state – specific heat capacity - specific latent heat of ice and steam.

Unit – III

Kinds of energy – Mechanical energy, Thermal energy, Optical energy, Sound energy, Electrical energy, Atomic and Nuclear energy. (Examples) – Conservation of energy.

Unit – IV

Renewable and non-renewable energy – Fossil fuel – coal- Oil - Solar – Wind – Biomass – OTEC.

Unit – V

Alternating current generating by hydro, thermal and atomic power stations- measurement of electric current by wattmeter- wattless current- power factor

Book for Study

- 1 First Year B.Sc Physics – B.V. Narayan Rao, New Age International (P) Ltd, 1998.

Reference Books

- 1 Mechanics – D.S. Mathur – S.Chand & Co.,2002
- 2 Properties of matter - D.S. Mathur- S.Chand & Co., 2002.
- 3 Properties of matter – Brijlal Subramanian – S.Chand & Co., 2006.
4. Electricity and magnetism – R. Murugesan- S. Chand & Co 2004

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : OPTICS, ELECTRICITY AND ELECTRONICS	Subject Code : 17 UPS A21 / 17 UPS A41
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

1. To introduce aspects of Light and Electricity
2. To give basic idea regarding the semiconductor devices
3. To impart knowledge on properties of light and current.

UNIT I: Geometrical optics

Deviation produced by a thin lens –focal length of two thin lenses in and out of contact –chromatic aberration in lenses and its removal –spherical aberration in lenses and its removal –refraction through a thin prism- dispersion –dispersive power –combination of thin prisms to produce deviation without dispersion and dispersion without deviation

UNIT II: Physical optics

Interference in thin films –air wedge –Newton's rings (reflected beam only)
 –principle and uses –theory of plane transmission grating –(normal incidence only) –experiment to determine wavelength –double refraction –Nicol prism –optical activity(no theory)

UNIT III: Electrostatics

Electric field –flux –Gauss's law –application of Gauss's law –field due to a charged sphere –electric potential equipotential surface –relation between electric field and electric potential –electric potential energy –capacitors principle of a capacitor –capacitance of a spherical capacitor –energy stored in a capacitor.

UNIT IV : Current electricity and magnetic effect

Kirchhoff's law - Carey Foster bridge –measurement of resistance and temperature coefficient of resistance –potentiometer –principle of a potentiometer –calibration of low range voltmeter –calibration of ammeter – torque on a current loop –mirror galvanometer –dead beat and ballistic –experiment to determine current sensitiveness.

UNIT V: Electronics

Junction diodes –forward and reverse bias –diode characteristics –types of diodes –(LED and Zener diodes) –bridge rectifier using junction diodes –transistor characteristics (CE mode only) –binary number systems-reason for using binary numbers –binary to decimal decimal to binary –addition and subtraction of binary numbers –Boolean algebra De Morgan's theorem – basic logic gates(AND ,OR ,NOT) NAND & NOR gates.

BOOKS FOR STUDY:

1. Optics and spectroscopy – N.Venkatachalam
2. Electricity and Electronics --N.Venkatachalam

REFERENCE BOOKS:

1. Optics and spectroscopy –Brijlal & N Subramanian, Sultan Chand & Co.,
2. Electricity and electromagnetism –Brijlal N Subramanian, Sultan Chand & Co.,

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : CORE PRACTICALS	Subject Code : 17 UPS CP2
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

LIST OF EXPERIMENTS

Any Fourteen experiments

1. Determination of M and B_H – Tan C Method
2. Potentiometer – Comparison of EMFs
3. Figure of Merit – Spot Galvanometer
4. Comparison of Capacities – Spot Galvanometer
5. Refractive index of a Prism – Spectrometer
6. Grating N and λ – Spectrometer
7. Air-Wedge – Thickness of a wire
8. Newton's Rings – Radius of curvature of a lens
9. LCR – Series Resonance
10. LCR – Parallel Resonance
11. Determination of Mutual Inductance – Spot Galvanometer
12. High Resistance by leakage – Spot Galvanometer
13. Self Inductance – Anderson's Bridge.
14. Determination of resistance and resistivity- Carey Foster Bridge.
15. A.C Frequency by Sonometer.
16. Melde's string – Frequency of tuning fork.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : Ancillary Practical Ancillary Practical for I Maths &II chem	Subject Code : 17 UPS AP2
SEMESTER: IV	HOURS : 2 hours / Week	CREDITS : 2

ANCILLARY PRACTICAL

List of Experiments

Any Fourteen experiments.

1. Non-Uniform Bending – Optic Lever
2. Uniform Bending – Pin and Microscope
3. Determination of 'g' – Compound Pendulum
4. Thermal Conductivity – Lee's disc
5. Calibration of Low – Range Voltmeter by Potentiometer
6. Comparison of Capacities by Spot Galvanometer
7. Resistance and Resistivity – Carey-Foster's bridge
8. Refractive index of a prism – Spectrometer
9. Grating N and λ – Spectrometer
10. LCR – Series Resonance
11. Newton's Rings – Radius of curvature of a lens
12. Bridge Rectifier
13. Logic Gates OR,AND, NOT – Discrete components
14. Zener diode – Characteristics.
15. Logic Gates OR,AND, NOT using IC.
16. Air-Wedge- Thickness of a wire.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

V SEMESTER

Sl. No	Sub. Code	Nature	Subject Title	Hrs / Week	Exam Hrs	C A	S E	Tot	Crd
1	17 UPS C51	Part – III Core	Nuclear Physics	4	3	25	75	100	4
2	17 UPS C52	Part – III Core	Bio Physics	4	3	25	75	100	4
3	17 UPS E51	Part – III Elective	Atomic Physics & Quantum Mechanics*	5	3	25	75	100	5
4	17 UPS E52	Part – III Elective	Analog Electronics*	5	3	25	75	100	5
5	17 UPS E53	Part – III Elective	Microprocessors 8085*	5	3	25	75	100	5
6	17 UPS CP3	Part – III Core	Core Practicals- Analog Electronics	6	3	40	60	100	4
7	17 UPS CP4	Part – III Core	Core Practicals- Bio Physics / Project	6	3	40	60	100	4
8	16USS S51	Self Study	Soft Skills		-	-	-	100	-
			Total	30					26

***Two papers to be chosen out of three elective papers**

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : NUCLEAR PHYSICS	Subject Code : 17 UPS C51
Semester : V	HOURS : 4 hours / Week	CREDITS : 4

- OBJECTIVES :**
1. To introduce the concept of Nucleus
 2. To impart knowledge on Accelerators and detectors
 3. To introduce the origin of Cosmic rays
 4. To give an idea of Nuclear Fission and Fusion.

Unit: 1 Introduction to Nucleus

Introduction—Classification of Nuclei—General Properties—Binding Energy—Nuclear Stability—Proton-Electron Hypothesis—Proton-Neutron hypothesis—Nuclear Forces—Meson theory(no derivation)—Mass of Meson—Liquid drop model—The Shell Model.

Unit:2 Particle Accelerators and Detectors:

Introduction—The Linear accelerator—Energy of the ion--Cyclotron—Betatron—Wilson cloud Chamber—Advantages and limitations—Bubble Chamber—Advantages —Nuclear Emulsions.

Unit:3 Radioactivity:

Introduction—Natural Radioactivity—Properties of alpha, beta and gamma rays—Velocity and Range of alpha particles—Experimental determination –Geiger Nuttal experiment—Geiger law—Geiger-Nuttal law—Alpha particle disintegration energy— e/m ratio of beta particles using Kaufmann's experiment—Origin of line and continuous spectrum—Neutrino theory--K-electron Capture—Wavelength of Gamma rays— Origin of gamma rays -- Internal Conversion.

Unit: 4 Nuclear Fission and Fusion

Introduction—Nuclear Fission—Energy released—Bohr and Wheeler theory—Atom bomb—Nuclear Fusion—Source of Stellar energy—Thermo nuclear reaction—Hydrogen Bomb—Transuranic elements—Nuclear Reactors.

Unit:5 Neutrons, Cosmic rays and Elementary Particles:

Discovery of neutrons—Basic Properties—Classifications—Neutron detection—Cosmic Rays—Latitude Effect—East-West effect—Altitude effect—Longitude effect—Primary and Secondary Cosmic rays—Cosmic Ray Showers—Elementary particles—Particles and Anti-particles.

Books for Study:

1. **MODERN PHYSICS** by R.MURUGESHAN & KIRUTHIGA SIVAPRASATH, S.Chand & Company Ltd., Fifteenth Revised Multicolored Edition 2010.

Unit :1 Ch: 27: Sections (27.1 To 27.5, 27.7 to 27.11)

Unit : 2Ch:30: Sections (30.1, 30.3, 30.4, 30.6) **Chapter 29:** Sections (29.7, 29.9, 29.1

Unit : 3Ch: 31: Sections (31.1 To 31.6 31.9, 31.10,31.11 (ii), 31.12,31.17, 31.21 To31.25 and 31.27)

Unit ; 4Chapter 35: Sections (35.1 to 35.3, 31.5 to 35.10)

Unit: 5Chapter 34 : Sections (34..12 To34.16)

Chapter 37: Sections (37.1 To37.7)

Chapter 38: Sections (38.1 and 38.2)

Reference Books:

1. Perspective of Modern physics by Arther Beiser, Tata McGraw Hill Ltd., 1969.
2. Nuclear Physics by D.C.Tayal- Himalaya publishing House, New Delhi,1998.
3. Introduction to Modern Physics by Ritchmer, Kennard and Cooper, Tata McGraw Hill Ltd., 1998.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : BIO PHYSICS	Subject Code : 17 UPS C52
Semester : V	HOURS : 4 hours / Week	CREDITS : 4

OBJECTIVES

- To create the basic knowledge in Bio-Physics.
- To understand the activity of living organisms with physics concepts.
- To give an awareness of environmental issues.

Unit I Bio-Mechanics:

Introduction – Biostatics – forces and torques – Bio physics of muscles – Muscle power – Mass specific muscle power – Strength of bones – Bio dynamics – Newton's Laws – Frictional forces and Stokes law – Locomotion on land – walking, jumping and propelling

Unit II Bio physics and fluid flow:

Introduction – Steady laminar flow - Coefficient of viscosity – temperature dependence – Poiseuilli's formula – velocity profile – continuity equation – energetics of fluid flow – fluid flow in plants – Xylem transport – resistivity – pressure gradient – negative pressure – Phloem transport.

Unit III Bio physics and gas transport

Introduction – Ideal gas – Solutions and Henry's law - convective transport of gases – Airway resistance – transport of O₂ in Blood – transport of CO₂ in blood – diffusion of gases – gas exchange in lungs, tissues – Physiology of respiration – Physics of Alveoli

Unit IV Bio physics and Audition

Introduction - transverse and longitudinal waves – pressure waves – wave velocity – Intensity of waves – physiological characteristics of sound – Human ear – Phase sensitivity and determination of direction – Non linearity of ear response - Doppler effect

Unit V Bio physics and Vision

Introduction – wave nature of light – Geometrical optics – Refraction – Gradient - index lens – Spherical aberration – Chromatic aberration - refractive power of eye – refractive errors – retina and photoreceptors – photoreceptors and Fibre optics – Fibre Optics – resolving power of eye – Polarisation and vision

Books for study:

Elementary Biophysics by P.K.Srivastava, Narosa publishing house pvt Ltd., reprint 2006.

Unit: 1 Chapter 1: Sections (1.1, 1.1a, 1.2, 1.2a, 1.2b, 1.3, 1.4a, 1.4b, 1.5)

Unit: 2 Chapter 2: Sections(2.1, 2.1a, 2.1b, 2.2, 2.2a, 2.2b, 2.3, 2.6, 2.6a, 2.6b, 2.6c, 2.6d, 2.6e)

Unit: 3 Chapter 3: Sections (3.1, 3.1c, 3.2, 3.2a, 3.2b, 3.2c, 3.3, 3.3a, 3.3b, 3.4, 3.4a)

Unit: 4 Chapter 4: Sections (4.1, 4.1a, 4.1b, 4.1c, 4.2, 4.3, 4.4a, 4.4b, 4.5)

Unit: 5 Chapter 5: Sections (5.1, 5.1a, 5.1b, 5.2, 5.2a, 5.2b, 5.2c, 5.2d, 5.3a, 5.3d, 5.4, 5.5, 5.5a, 5.6, 5.7, 5.7a, 5.7b)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : ATOMIC PHYSICS AND QUANTUM MECHANICS	Subject Code : 17 UPS E51
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

1. To give an introductory account of the basic principles of atomic physics.
2. To impart knowledge on the structure of the atom.
3. To introduce the origin of Quantum theory.

Unit I

Introduction – Thomson’s atom model – Rutherford model of the atom – Theory of alpha particle scattering – Rutherford scattering formula - Bohr atom model –Bohr’s theory of Hydrogen atom – Energy levels and Excitation potential and Ionization potential – Davis and Goucher’s method –Bohr Sommerfield theory - Sommerfield’s relativistic atom model – Explanation for the fine structure of H α line – vector atom model - Relativistic variation of atomic mass – application to fine structure of spectral lines – Vector atom model– Quantum numbers – coupling schemes – Pauli’s exclusion principle – Arrangement of electrons in atoms

Unit II Magnetic dipole moment due to orbital motion of the electron – magnetic dipole moment due to electron spin - Stern and Gerlach experiment - Optical spectra – spectral terms and notations – selection rules -Fine structure of sodium D lines –Zeeman effect – theory and experiment – quantum theory of Zeemann effect – Anamolous Zeemann effect – Stark effect – Paschen Back effect

Unit III Planck’s quantum theory of radiation – Dual nature of matter and radiation – De-Broglie’s hypothesis of matter waves – Expression for wavelength – Davisson’s and Germer experiment – G.P.Thomson experiment with relativistic correction – concept of wave packet – Group velocity and wave velocity and their relation – Heisenberg’s Uncertainty principle – Experimental illustration – Determination of position with γ – Ray microscope- Diffraction of an electron beam by a single slit.

Unit IV Basic postulates of quantum mechanics – Derivation of time dependent and time independent Schrodinger’s equations –properties of wave function - Physical significance of wave function–orthogonal and normalized wave functions– Eigen functions and Eigen values.

Unit V Simple applications of Schrodinger wave equation- The particle in a Box – Infinite square well potential – The Barrier penetration problem - Linear harmonic oscillator – The rigid rotator .

Text Book:

Modern Physics (sixth revised edition 1998 – S.Chand & Company Ltd.) by R.Murugesan

Unit: 1. Chapter.4 Sections (4.1 to 4.5, 4.8, 4.10(2), 4.11 to 4.16)

Unit: 2. Chapter.4 Sections (4.18 to 4.20, 4.22, 4.23, 4.26 to 4.28)

Unit: 3. Chapter. 7 Sections (7.1 to 7.4)

Unit: 4. Chapter. 7 Sections (7.7 to 7.9)

Unit: 5. Chapter. 7 Sections (7.10, 7.12, 7.13, 7.15)

Reference Books:

1. Modern Physics by Seighal Chopra and Seighal
2. Quantum Mechanics by Satyaprakash

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : ANALOG ELECTRONICS	Subject Code : 17 UPS E52
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To understand the basic concepts in Analog Electronics.
- To learn about the principles of oscillators and amplifiers.
- To gain knowledge about electronic equipments.

Unit – I

Voltage and Current sources – Conversion of voltage source into current source - Thevenin's theorem – Norton's Theorem – Two port Network – Analysis – 'h' parameters only - Filter circuits – General theory – low pass, high pass, Band pass and band elimination filters.

Unit – II

Transistor – three types of configuration – relation between α , β , and γ – Load line (DC & AC) and operating point – Biasing circuits – base bias – collector feedback bias – Voltage divider bias – emitter bias – FET static characteristics – Determination of FET parameters.

Unit – III

Small signal CE amplifier – calculation of voltage gain, current gain and power gain – input & output impedance using h parameters – frequency response of an amplifier – Single stage amplifier – push pull amplifier – OP AMP characteristics – Gain of an OPAMP inverting mode - application as adder, subtractor – integrator & differentiator.

Unit – IV

Feedback – Positive & Negative feedbacks – Principle of negative feedback in amplifiers – Advantages of negative feedback - Barkhausen's criterion – transistor oscillators – Hartley, Colpitt & phase shift oscillator with mathematical analysis.

Unit – V

Modulation – types of modulation – amplitude modulation – Percentage of modulation - modulated power output – modulation index – frequency modulation (qualitative) – digital modulation (qualitative) – Types of Antenna - block diagram of AM & FM transmitters.

Books for Study

1. Principles of Electronics - V.K. Metha- S. Chand & Co., 2012.
 Unit-I: Chapter: 1 Section - 1.8, 1.9, 1.10, 1.11, 1.13, 1.14, 1.15, 1.16
 Unit II: Chapter: 8 Section-8.1-8.4, 8.7-8.10, 8.12-8.14, 8.17, 8.18
 Chapter: 9 Section- 9.2, 9.4, 9.6, 9.7-9.12.
 Chapter : 19 Section - 19.1, 19.2, 19.3, 19.8, 19.9, 19.10
 Unit. III: Chapter 10: Section --10.1, 10.2, 10.4.
 Chapter 12: 12.2, 12.7
 Chapter 25: 25.1-25.4, 25.7, 25.15, 25.24, 25.26, 25.33, 25.34, 25.35.
2. Basic Electronics & Applied Electronics- A. Ubald Raj & G. Jose Robin 2004 Indira Publications
 Unit-1: Chapter: 2 Page No. 85-88, Unit-IV: Chapter: 2 Page No. 168-171, 184-199
 Unit-V: Chapter: 3 Page No. 244-251.
3. Basic Electronics - B.L. Theraja – S. Chand & Co., 2003.
 Unit-I: Chapter: 12 Section – 12.14 to 12.19
4. Electronics Devices & Circuits- Salivahanan, Sureshkumar, Vallavaraj, Tata Mc Graw Hill- 2004.
 UNIT -III: Section 9.41-9.49.

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : MICROPROCESSOR 8085	Subject Code : 17 UPS E53
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- 1) To understand working of digital computer
- 2) To gain knowledge about types of computer languages.
- 3) To gain knowledge about microprocessor
- 4) To clarify the concepts of peripherals and interfaces.

Unit I Introduction to digital computers:

Introduction – The history of computers- Computer generation – Computer classification - Components of digital computer –Typical microcomputer organization.

Unit II Computer languages:

Machine language – Assembly language – High level language – Compiler – interpreter – types of software – Computer applications.

Unit III Microprocessors:

Introduction and evolution – Microprocessor architecture – Microprocessor bus organization – Functional block diagram of 8085 Microprocessor – pin out diagram of 8085 – Microprocessor programming.

Unit IV Instruction set of 8085:

Data transfer group – Arithmetic group – Logic group –Branch group – Stack, I/O and Machine control group.

Unit V Peripherals and Interfaces:

Input/output ports – Intel's 8212 – Programmable I/O ports and timer 8155 chip – Programmable peripheral interface 8255A – Programmable communication interface USART 8251A – Programmable keyboard/display interface 8279.

Text Book:

Digital Electronics Circuits and systems (third reprint 2001 – Tata McGraw-hill publishing company Ltd.) by V.K. Puri.

Unit I: Chapter 10.1 to 10.6 ,

Unit II: Chapter 10.7 to 10.9

Unit III: Chapter 11.1 to 11.6

Unit IV: Chapter 11.7

Unit V: Chapter 11.11

Reference Books:

- 1) Microprocessor/Architecture Programming and applications with 8085 by Ramesh Gaonkar. III Edition.
- 2) Microprocessors and Micro controllers – A Nagoor Kani.
- 3) Fundamentals of Microprocessors and Microcontrollers – B. Ram.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : ANALOG ELECTRONICS CORE PRACTICAL	Subject Code : 17UPS CP3
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

LIST OF EXPERIMENTS

1. Transistor characteristics CE mode
2. FET characteristics
3. Zener diode characteristics
4. Bridge rectifier with II section filter
5. Zener Voltage regulator
6. Voltage doubler and Tripler
7. Single stage amplifier – Gain and bandwidth
8. Two stage amplifier without feedback
9. Hartley Oscillator
10. Colpitt's Oscillator
11. Astable multivibrator using discrete components
12. Clipper and Clamper circuit using discrete components
13. Differentiator and Integrator using discrete components
14. Phase shift oscillator
15. Logic gates – Discrete components

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : BIO-PHYSICS CORE PRACTICALS	Subject Code : 17UPS CP4
Semester : V	HOURS : 6 hours / Week	CREDITS : 5

MAJOR PRACTICALS –Bio Physics/Project

LIST OF EXPERIMENTS

1. Determine the refractive index of different Bio-fluids using a hollow prism
2. Effect of temperature on viscosity using Ostwald viscometer.
3. Measurement of blood pressure –demonstration and interpretation.
4. Determination of velocity of Bio-fluids using Ultrasonic interferometer.
5. Draw equipotential lines for a bio fluid.
6. Polari meter experiment – Determination of specific rotatory power of glucose solution.
7. Comparison of S.T. of Bio-fluid using capillary rise method.
8. Surface Tension of a Bio-fluid using drop weight method.
9. Determination of Co-efficient of viscosity using Poiseuille's flow method.
10. Determination of relative density of a Bio-fluid using Melde's apparatus.
11. Electrolytic conductivity of a Bio-fluid using Kohlraush Bridge.
12. Interfacial S.T. of a bio-fluid by the method of drops.
13. Refractive index of a solid and a liquid using vernier microscope.
14. Specific heat capacity of a liquid using Newton's law of cooling.
15. Coefficient of viscosity of a liquid using Stokes method.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



267

SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

VI SEMESTER

S. No	Sub. Code	Nature	Subject Title	Hrs / Week	Exam Hrs	CA	SE	Tot	Crd
1	17 UPS C61	Part – III Core	Solid State Physics	4	3	25	75	100	4
2	17 UPS C62	Part – III Core	Classical and Statistical Mechanics	4	3	25	75	100	4
3	17 UPS C63	Part – III Core	Bio- Medical Instrumentation	3	3	25	75	100	3
4	17 UPS E61	Part – III Elective	Digital Electronics**	5	3	25	75	100	5
5	17 UPS E62	Part – III Elective	Nano materials**	5	3	25	75	100	5
6	17 UPS CP5	Part – III Core	Core Practicals-Digital	6	3	40	60	100	4
7	17 UPS CP6	Part – III Core	Core Practicals-General	6	3	40	60	100	4
8	17UPS VV1	Part – III Core	Viva-voce	2	3	50	50	100	2
9	16UGKB61	Self Study	General Knowledge	-	-	-	-	100	-
			Total	30					26

****One paper has to be chosen out of two elective papers**

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : SOLID STATE PHYSICS	Subject Code : 17 UPS C61
Semester : VI	HOURS : 4 hours / Week	CREDITS : 4

OBJECTIVES

- To create the basic knowledge in Crystallography
- To understand the scientific perspective of crystals.
- To identify the techniques suitable for crystal structure.
- To know the significance of Magnetic and dielectric materials

Unit I : Bonding in solids – Types of bonds – ionic, covalent, metallic and vander wall's bonds – Binding energy of ionic crystals – Crystal structure – crystal lattice and Unit cell - Bravais lattice – Classification of crystals – Miller indices – simple structures – packing factor - structure of diamond and zinc blende – lattice vibrations – thermal properties – concept of phonons – Heat capacity of solids – classical theory – Limitations - Einstein's and Debye's theories of lattice specific heat capacity.

Unit II : X-rays - production and properties – continuous and characteristic x-ray spectra – main features – Duane and Hunt law – Mosley's law and its importance – Compton effect – theory and experiment – X-ray diffraction – Laue pattern – Bragg's law – Bragg's x-ray spectrometer for wavelength measurement – Powder crystal method.

Unit III : Free electron theory of metals – Drude-Lorentz theory – Drift, mobility, mean free path, relaxation time of free electrons – electrical and thermal conductivities of metals – Weidemann and Franz law – sources of resistivity of metals – superconductivity – Types – Meissner effect – BCS theory – applications.

Unit IV : Magnetic materials – Types – properties and applications – Hard and soft magnetic materials – Different types of magnetism – dia, para, ferro, antiferro and ferri magnetism – Langevin's theory of dia and para magnetism – Weiss theory of ferromagnetism – magnetostriction materials.

Unit V : Dielectrics – polarization – Polar and non-polar dielectrics – Different types of polarization – electronic, ionic, orientational and space charge – Polarisability – Clausius-Mossotti relation – dependence of polarization on frequency and temperature – Dielectric materials – properties and applications – active and passive materials – Ferro electric and Piezo electric materials.

BOOK FOR STUDY:

Solid State Physics by **Prof. P.K.Palanisamy**, Scitech Publications (India) Pvt Ltd. Chennai.2006

Unit: I : **Ch:1:** Sections (1.1,1.2,1.3,1.4,1.7), **Ch: 6:** Sections (6.1 to 6.10), **Ch: 7:** Sections (7.1 to 7.3)

Unit III : **Chapter 8:** Sections (8.1 to 8.3, 8.9,8.10), **Unit: IV** : **Ch:4:** Sec. (4.1 to 4.6, 4.8 and 4.8.3)

Unit: V : **Chapter 5:** Sections (5.1 to 5.7)

Modern Physics by **R.Murugesan**, S.Chand and company Ltd, RamNagar, New Delhi

Unit: II **Chapter 5:** Sections (5.1 to 5.14)

Solid state physics by **Saxena Gupta and Saxena** from **Prakati Prakashan Publications Pvt Ltd.,**

Unit: III **Chapter 8:** Pages from 259 to 264

REFERENCE BOOKS: 1. Introduction to solid state physics by C.Kittel V edition

2.Solid State Physics by V.K. Puri and Babber

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : CLASSICAL AND STATISTICAL MECHANICS	Subject Code : 17 UPS C62
SEMESTER : VI	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

1. To understand the basic concepts in Classical and Statistical Mechanics
2. To apply classical mechanics to solve problems.
3. To impart knowledge on electron and photon gas.

Unit:1 Mechanics of particles and system of particles:

Introduction—Mechanics of a particle—Conservation of linear momentum—conservation of angular momentum—Conservation of energy—mechanics of a system of particles--Conservation of linear momentum—conservation of angular momentum—Conservation of energy.

Unit:2 Constraints and Lagrangian Formulation:

Constraints—Types with examples—degrees of freedom—Generalized co-ordinates—generalized displacement—generalized velocity and momenta—Principle of virtual work—D'Alembert's principle—Lagrangian equation of motion from D'Alembert's principle—applications to simple pendulum, compound pendulum, linear harmonic oscillator and Atwood's machine.

Unit:3 Hamiltonian formulation of Mechanics:

Hamilton's principle—Hamilton's canonical equations of motion—Physical significance of H—Deduction of canonical equations from a variational principle—applications to simple pendulum, compound pendulum, linear harmonic oscillator and particle in a central force of field.

Unit:4 Statistical Thermodynamics:

Introduction—Statistical Mechanics—Statistical Equilibrium—Probability theorems—Maxwell-Boltzmann distribution law—M.B. law in terms of temperature—application to ideal gas.

Unit:5 Quantum Statistics:

Introduction—Phase Space—Fermi-Dirac distribution law—Application to electron gas—Bose-Einstein distribution law—application to photon gas--Comparison of three Statistics.

Books for study:

1. Classical Mechanics by **Gupta, Kumar and Sharma**, Pragati prakashan
Seventeenth edition 2000. (For first three units)

2. Heat and thermodynamics by **Brijlal and N.Subramanyam**, S.Chand & company Ltd reprinted
1998 edition. (For last two units)

Unit:1	Chapter:1	Sections (1.1, 1.3 and 1.4)
Unit:2	Chapter:1	Sections (1.5, 1.6 and 1.7)
	Chapter:2	Sections (2.5, 2.9.1, 2.9.2, 2.9.9 and 2.9.10)
Unit:3	Chapter:3	Sections (3.3, 3.4, 3.5, 3.7, 3.9.1, 3.9.2 and 3.9.6)
Unit:4	Chapter:9	Sections (9.1, 9.2, 9.3, 9.4, 9.5, and 9.6)
Unit:5	Chapter:9	Sections (9.7, 9.8, 9.9, 9.10, 9.11, 9.12 and 9.13)

Books for reference:

1. Classical Mechanics by Goldstein, Narosa Publishing House, New Delhi.
2. Classical Mechanics by Biswas, Books and Allied (P) Ltd., Calcutta.
3. Statistical and Thermodynamics by Agarwal, S.Chand and Co., New Delhi.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



270

SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : BIOMEDICAL INSTRUMENTATION	Subject Code : 17 UPS C63
SEMESTER : VI	HOURS : 3 hours / Week	CREDITS : 3

OBJECTIVES

- To understand the physics concepts involving in biomedical instruments.
- To create the knowledge about biomedical tool for major disease diagnosis.
- Try to correlate the ECG output
- To know the lead position of ECG and EEG

Unit I:

Transducer – performance of characteristics of transducer – static and dynamic active transducer – (a) magnetic induction type (b) piezo – electro type (c) photo voltaic type (d) thermo electric type.

Unit II: Passive transducer – (a) resistive type – effect and sensitivity of a bridge (b) capacitive transducer – (c) linear variable different transformer – LVDT

Unit III: Characteristics of basic recording system – origin electro cardio graphy (ECG) – block diagram – ECG Leads – unipolar and bipolar – ECG recording setup

Unit IV: Electro Encephalo Graph (EEG) – Origin – Block diagram of EEG unit – Electro Myograph (EMG) – Block diagram EMG records

Unit V: Digital Thermometer – Computer Tomography (CT) principle – Block diagram of CT Scanner.

Book for study:

Biomedical Instrumentation, ED II, 1994, Dr. M.Arumugam
 Anuradha Agencies Revised Edition 1997

Unit:1	Chapter:2	Sections (2.5, 2.5.1, 2.5.2, 2.5.3, 2.5.4, 2.5.5)
Unit:2	Chapter:2	Sections (2.5.6, 2.5.7, 2.5.8, 2.5.13, 2.5.15)
Unit:3	Chapter:4	Sections (4.2, 4.3, 4.3.2, 4.3.3)
Unit:4	Chapter:4	Sections (4.4, 4.4.1, 4.4.4, 4.5, 4.5.1)
Unit:5	Chapter:7	Sections (7.6)
	Chapter:10	Sections (10.7)

Reference Books:

Handbook of Biomedical Instrumentation, R.S.Khandpur, 1999, Tata McGraw Hill.

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : DIGITAL ELECTRONICS	Subject Code : 17 UPS E61
SEMESTER : VI	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To understand the basic concepts in Digital Electronics.
- To learn the number systems and their applications.
- To acquire the basic ideas about Boolean algebra, Logic gates and Karnaugh mapping.

Unit – I Number system – Binary, decimal , Octal , hexadecimal – Conversion from one another – Binary addition, subtraction, multiplication, division – Binary subtraction by 1's and 2's complement – Basic laws of Boolean Algebra – Boolean Addition – Laws of Boolean Algebra – De Morgan's theorem - Statement and proof.

Unit – II Positive and Negative logic – Logic gates – OR, AND ,NOT, NOR NAND and EX-OR- Universality of NAND and NOR gates (7400 & 7402) – Logic families using discrete components – Sum of products(SOP) and Product of sums(POS) – Karnaugh map – 2variable , 3variable and 4 variable – simplification using K-map.

Unit – III Half adder – Full adder – 4bit binary adder – Half subtractor – Full subtractor – 4 bit parallel subtractor – BCD adder - Multiplexer (MUX) – 4 to 1 MUX - De multiplexer (DMUX) – 1 to 4 DMUX – Encoder – 8 to 3 encoder – Decimal to BCD encoder – Decoder – 3 to 8 decoder, BCD to decimal decoder – BCD to seven segment decoder.

Unit – IV Timer circuit – Theory - IC 555 mono and astable multivibrators Schmitt trigger – Flip Flops – R-S Flip flops- clocked R-S flip flop- J-K flip flop – J-K master Slave flip flop – D flip flop- T Flip flop - application of flip flops.

Unit – V Register – Shift register – Classification – Serial in – Serial out (SISO), Serial in –parallel out shift registers- Counters – Ring Counter, 4 bit binary ripple counter – decade counter – Digital to Analog converter (D/A) – Binary ladder type – Analog to Digital converter (A/D)- Successive approximation type.

Books for Study

1 Digital Fundamentals; V. Vijayendran , S. Viswanathan Publication – 2007.

Unit1:Chapter 1: Page no: 1-17, Chapter 2: Page no:21-30, Chapter5: Page no:92-111

Unit :3:Chapter8: Page no:200-209,216-224, Chapter 9: Page no: 230-251

Unit 4: Chapter 10: Page no:272-287

Unit :2 Chapter : 4 Section : 4.4, 4.5,4.6, Chapter :6 Section : 6.2,6.3,6.4, 6.5

2. Basic Electronics & Applied Electronics- A. Ubald Raj & G. Jose Robin 2004 Indira Publications

Unit :2 Chapter : 5B Page No. 357-376, 386-391,402-407

Unit :5 Chapter : 5B Page No. 453-456, 459-471

3.Digital Principles and applications 4th Edition ; Leech , Malvino and Saha.

Fourth Edition Tata Mc-Graw Hill 1995.

Unit :5 Chapter : 10 Section : 10.1, 10.2

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : NANO MATERIALS	Subject Code : 17 UPS E62
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

OBJECTIVES

- To create the basic knowledge in nanomaterials.
- To understand the scientific perspective of nanomaterials.
- To identify the techniques suitable for nanomaterial synthesis.
- To know the significance of nanomaterials.

Unit I Introduction to Nanomaterials

History of Nanoscience – Definition of Nanometer, Nanoscience and Nanotechnology – Classification of Nanomaterials – Examples of nanostructured materials - Wigner-Seitz cell – Two dimensional lattice type – Primitive cells of three dimensional lattices.

Unit II Nano scale properties: Effect of size reduction on Bulk properties – Opto electronic property of bulk and nanostructures – Electronic structure of Nanomaterials and the Fermisurface – Fermisurface – Size effect on Electron- Phonon coupling – Size effect on physical properties.

Unit III Synthesis and Processing of nanomaterials Synthesis techniques for the preparation of nanoparticles – Bottom-up approach – Sol-Gel synthesis – Hydrothermal Growth – Thin film growth – Physical Vapour Deposition (PVD) – Chemical Vapour Deposition (CVD) – Top-Down approach – Ball Milling – Microfabrication – Lithography.

Unit IV Characterization tools Introduction – X-ray diffraction and Scherrer method – Calculation of lattice parameter – Size/Strain analysis: Peak broadening – Scanning Electron Microscopy (SEM) – Electron interaction with matter – Mechanism involved in imaging with SEM – Transmission Electron Microscopy (TEM) – Stoichiometry study by Energy-Dispersive X-ray analysis (EDAX).

Unit V Application of nano materials Introduction – Applications in Materials Science – Applications in Biology and Medicine – Biocompatibility and toxicity in nanoparticles – Cytotoxicity in Nanoparticles – Neurotoxicity in nanoparticles – Applications in surface science – Applications in Energy and Environment – Applications in nanostructured thin film.

Book for study:

Nanoscience and Nanotechnology: Fundamentals to Frontiers by M.S. Ramachandra Rao, Shubra Singh, Wiley India pvt. Ltd., New Delhi. (2013).

Unit: 1 Chapter 1: Sections (1.1, 1.2, 1.3, 1.3.1)

Chapter 2: Sections (2.2.2, 2.2.3, 2.2.4)

Unit: 2 Chapter 2: Sections(2.7, 2.8, 2.9, 2.9.1, 2.9.2, 2.9.3)

Unit: 3 Chapter 4: Sections (4.4, 4.4.1, 4.4.1.1, 4.4.1.2, 4.4.1.3, 4.4.2, 4.4.2.1, 4.4.2.2, 4.4.2.3)

Unit: 4 Chapter 8: Sections (8.1, 8.2, 8.2.1, 8.2.2, 8.3, 8.3.1, 8.3.2, 8.4, 8.5)

Unit: 5 Chapter 10: Sections (10.1, 10.2, 10.3, 10.3.1, 10.3.2, 10.3.3, 10.4, 10.5, 10.6)

Reference:

- 1) T. Pradeep, Nano: The Essentials, Tata Mc.Graw Hill company Ltd (2007)
- 2) C. N. R. Rao, A. Müller, A. K. Cheetham, *The Chemistry of Nanomaterials :Synthesis, Properties and Applications*, Volume 1, Wiley-VCH, Verlag GmbH, Germany (2004).

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III	Title : Core Practical	Subject Code : 17 UPS CP5
CORE	DIGITAL ELECTRONICS	
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

Major Practical Digital

List of Experiments for III year Practical

1. Dual power supply using IC
2. IC 7805 Regulated Power supply
3. OP AMP – Integrator and differentiator
4. OP AMP – Adder and Subtractor
5. Astable multivibrator using OP AMP
6. Astable multivibrator using IC 555
7. Schmitt Trigger using IC 555
8. Universality of NAND and NOR gates
9. Half adder and Full adder using NAND
10. 4-bit Binary Adder and Subtractor
11. Shift Register
12. Ring Counter
13. 4-bit Binary counter
14. BCD counter
15. Verification of De-Morgan's laws

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : Core Practical - General	Subject Code : 17 UPS CP6
Semester : VI	HOURS : 6 hours / Week	CREDITS : 5

General– V

List of Experiments for III year Practical

1. Spectrometer – Small angled prism
2. Spectrometer – i-i' curve
3. Spectrometer – Grating minimum deviation
4. Spectrometer – Cauchy's constants
5. Spot Galvanometer – Comparison of Mutual inductances
6. Rayleigh bridge – Self inductance
7. Maxwell's bridge – Self inductance
8. Owen's bridge
9. De-sauty's bridge – Comparison of capacities
10. Impedance and Power factor – LR circuit
11. Impedance and Power factor – CR circuit
12. Spot Galvanometer – comparison of emfs
13. Spot Galvanometer – Thermo emf
14. Potentiometer – Thermo emf

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc., – PHYSICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : Viva Voce	Subject Code : 17UPSVM1
Semester : VI	HOURS : 2 hours / Week	CREDITS : 2

Evaluation Procedure:

Questions will be asked from all the semester papers already studied by the students.

Marks : Internal 50
 External 50

External examination will be conducted at the end of the VI semester after the external practical

Examination by an external examiner along with the internal examiner.

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

276

I SEMESTER

S. No	PART	Sub. Code	Subject Title	Hrs/ Wk	Exam hrs	C A	SE	Tot	Crd
1	PART - I	17UACT11/ H11/S11	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	PART - II	17UACE11	English	6	3	25	75	100	3
3	PART - III CORE	17UCYC11	Inorganic Chemistry - I	5	3	25	75	100	4
4	PART - III CORE		Inorg. sm qual. Analysis	2	0	0	0	0	0
5	PART - III ALLIED	17UMSA11/ 17UBYA11	Maths/Botany	6	3	25	75	100	5
6	PART - IV SBS	17UCYS11	Laboratory techniques	3	3	25	75	100	3
7	PART - IV	14UACVE1	Value Education	2	3	25	75	100	2
Total				30					20

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

277

PART - III CORE	Title : INORGANIC CHEMISTRY- I	Subject Code : 17UCYC11
Semester : I	HOURS : 5 hours / Week	CREDITS :4

Objectives

To acquire the knowledge of constituents of atom, union of atoms, the position, properties and metallurgical process of elements. To understand chemistry of nucleus.

UNIT - I STRUCTURE OF ATOM (15 hrs)

An outline of constituents of atom (elementary idea) –Model of atom : Rutherford and its drawbacks - Quantum theory: Photoelectric effect – Compton effect - Bohr model of atom: postulates – Bohr's radius and energy of electron (no derivation) - Origin of hydrogen spectrum – dual character of electron – Heisenberg's uncertainty principle - Quantum numbers – Pauli's exclusion principle – Aufbau principle- Hund's rule – electronic configuration of atoms.

UNIT - II PERIODIC TABLE AND ATOMIC PROPERTIES (15 hrs)

Modern Periodic Table – its salient features – classification and characterization of s, p, d and f block elements – periodicity and its causes - atomic properties: atomic radii, ionic radii, ionization energy, electron affinity and electronegativity – Factors governing them and their periodic – scales of electronegativity : Pauling, Mulliken and Allred & Rochow – applications of electronegativity.

UNIT - III CHEMICAL BONDING (15 hrs)

Cause of chemical bonding - Octet rule - Ionic bond – Covalent bond – Valence Bond approach – its limitations – Fajan's rule – VSEPR theory : Postulates and applications – hybridization – sp , sp^2 , sp^3 , sp^3d and sp^3d^2 (BeF_2 , BCl_3 , CH_4 , PCl_5 , SF_6) – Molecular Orbital theory – LCAO method - MO diagram for homonuclear and heteronuclear diatomic molecules – H_2 , He_2 , Li_2 , Be_2 , B_2 , C_2 , N_2 , O_2 , F_2 , CO , NO and HF – determination of magnetic property and bond order.



UNIT - IV NUCLEAR CHEMISTRY

(15 hrs)

Fundamental particles of nucleus – Nuclides – concept – isotope, isobar and isotones – nuclear forces – nuclear stability: Meson theory, Liquid drop model, shell model and n/p ratio – binding energy – mass defect – packing fraction – natural radioactivity - artificial radioactivity – nuclear reactions: spallation, nuclear fission and nuclear fusion – radioactive isotopes and its applications in medicine, agriculture, archaeology, biology and analytical chemistry.

UNIT - V METALLURGY

(15 hrs)

Occurrence of metals – minerals – ores - types of ores – various steps involved in metallurgy- concentration of ore : physical and chemical methods - calcination - roasting - reduction methods : smelting, alumino-thermic, air and electrolytic methods - refining methods : cupellation, electrolytic, zone refining and vapour phase method.

Extraction of Vanadium, Molybdenum and Tungsten from their ores.

Text books:

1. Principles of Inorganic Chemistry by Puri, Sharma & Kalia, Milestone publisher & distributor (2009).
2. Text book of Inorganic Chemistry by P. L. Soni and M. Katyal, 20th Edition, Sultan chand & Sons (2013).

Reference books:

1. Concise Inorganic Chemistry by J.D. Lee, 5th Edition, Wiley India (2009).
2. Modern Inorganic Chemistry by R.D. Madan S. Chand and Co. Ltd. (2012).
3. UGC Inorganic Chemistry-I by H. C. Khera, 3rd Edition, Pragati Prakashan (2012).



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

279

PART - IV SBS	Title:LABORATORY TECHNIQUES - Principles & Practice	Subject Code : 17UCYS11
Semester : I	HOURS : 3 hours / Week	CREDITS :3

Objectives

To get awareness on laboratory chemicals and safety, to acquire the thorough knowledge about solutions, to know the principles of inorganic qualitative analysis and knowledge about volumetric titrimetry principles.

To know about separation and purification techniques.

UNIT - I LABORATORY HYGIENE AND SAFETY (9 hrs)

Storage and handling of chemicals – Carcinogenic chemicals – Toxic and poisonous chemicals – Waste disposal – Fume disposal – General precautions for avoiding accidents – First aid techniques – Poisoning – methods to avoid poisoning – Treatment for specific poison–antidotes– Laboratory safety measures.

UNIT - II SOLUTIONS (9 hrs)

Ways of expressing concentration : molarity – molality - normality – percentage - numerical problems based on these. Acids and bases: Arrhenius, Bronsted and Lowry, Lewis and Lux-Flood – relative strength of acids and bases.pH of solutions: pH scale and numerical problems based on it. Buffer solutions: definition and types – calculation of pH by Henderson equation – biological importance.

UNIT - III INORGANIC QUALITATIVE ANALYSIS (9 hrs)

Aims of semi micro methods – Types of reactions – dry reactions – precipitation reactions – complexation reactions – oxidation and reduction reactions – Flame test, borax bead test, charcoal cavity test and cobalt nitrate test - chemistry of interfering anions and their removal in the analysis of cations: oxalate, borate, fluoride, phosphate and chromate – solubility product principle and its applications in the separation of cations.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

280

UNIT - IV VOLUMETRIC ANALYSIS (9 hrs)

TITRIMETRY : Titration – analyte and titrant – equivalence point – standard solutions: primary and secondary standards – volumetric titrations: types – acid-base titrations (choice of indicator and its theory) – redox titrations (permanganometry, iodometry and iodimetry) and complexometric titrations (EDTA only).

UNIT - V PURIFICATION TECHNIQUES (9 hrs)

Purification Methods: Types – criteria of purity - principle – detailed study of crystallisation – sublimation - distillation and its types (steam, fractional and reduced pressure distillations) – extraction techniques.

Text books:

1. Elements of Analytical Chemistry by R.Gopalan, P.S.Subramanian and K.Rengarajan, Sultan Chand & Sons, (2000)
2. Principles of Inorganic Chemistry by Puri, Sharma & Kalia, Milestone publisher & distributor (2009).

Reference books:

1. Vogel's textbook of Quantitative Inorganic Analysis 4th edition.(1978)
2. Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl and G.T.Tuli - S.Chand and Co.Ltd., (2012)
3. Basic Principles of Practical Chemistry by V.Venkateswaran,R.Veerasingam & A.R.Kulandaivelu, Sultan Chand & sons, (2002)

.....



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

281

II SEMESTER

S. No	PART	Sub. Code	Subject Title	Hrs/ Wk	Exam hrs	C A	SE	Tot	Crd
1	PART - I	17UACT21/ H21/S21	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	PART - II	17UACE21	English	6	3	25	75	100	3
3	PART - III CORE	17UCYC21	Physical Chemistry -I	5	3	25	75	100	4
4	PART - III CORE	17UCYCP1	Inorg. sm qual. Analysis	2	3	40	60	100	2
5	PART - III ALLIED	17UCYA21	Maths/Botany	6	3	25	75	100	5
6	PART - IV SBS	17UCYS21	Applied chemistry - I	3	3	25	75	100	3
7	PART - IV	14 UACES1	EVS	2	3	25	75	100	2
Total				30					22

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

282

PART - III CORE	Title : PHYSICAL CHEMISTRY – I	Subject Code : 17UCYC21
Semester : II	HOURS : 5 hours / Week	CREDITS :4

Objectives

To acquire a thorough knowledge of the three states of matter with colloids and interaction of matter on surface.

UNIT – I GASEOUS STATE (15hrs)

Gas Laws – Ideal gas equation - kinetic theory of gases : Postulates – derivation of ideal gas laws – deviations - Vander Waals' equation - Maxwell distribution of molecular velocities (no derivation) - graphical representation – effect of temperature on various velocities – Law of corresponding states – Boyle and inversion temperatures of gases.

Mean free path – viscosity of gases – collision number – Brownian movement – Avogadro number – determination of avogadro number – Loschmidt number – principle of equipartition energy.

UNIT – II LIQUID STATE (15 hrs)

Intermolecular forces in liquids – dipole-dipole attractions, London forces and hydrogen bonding - Heat of vapourisation - Trouton's rule and its significance – molar volume and its applications – surface tension - effect of temperature on surface tension – parachor – atomic and structural parachors - their applications- viscosity – effect of temperature on viscosity – measurement of viscosity – Ostwald method - Reynold's number. Liquid Crystals – classification – smectic – nematic - cholesteric - disc shaped and polymer liquid crystals – LCDs and the Seven Segment cell - applications.

UNIT – III SOLID STATE (15 hrs)

Introduction – types of solids: amorphous and crystalline solids - size and shape of crystals – symmetry of crystals – law of rational indices - space lattice and unit cells – types of unit cells – Miller indices- Bragg's equation –derivation- measurement of diffraction angle : rotating crystal method– Ionic crystals : sodium chloride, caesium chloride – crystal defects : vacancy defect, interstitial defect and impurity defect.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

283

UNIT – IV SURFACE CHEMISTRY (15 hrs)

Catalysis : Definition – characteristics of catalytic reactions –Homogeneous catalysis : Acid-base catalysis-enzyme catalysis-Michaelis-Menten equation-autocatalysis-Heterogeneous catalysis – surface catalytic reactions – promoters- catalytic poison – theories of catalysis .

Adsorption : Definition – various terms involved in adsorption – types of adsorption : physical and chemical adsorption – difference between them - factors influencing adsorption–Adsorption Isotherms: Freundlich adsorption isotherm and Langmuir adsorption isotherm- derivation - applications of adsorption.

UNIT – V COLLOIDS (15 hrs)

Definition – classification- lyophilic and lyophobic sols – comparison between them – preparation of sols – dispersion methods: Bredig's Arc , peptization methods – aggregation methods – Purification of sols: dialysis – Optical properties of sols:Tyndall effect – Kinetic properties of sols: Brownian movement – Electrical properties of sols : Electrophoresis – Gold number –Emulsions: definition – types – Gels: definition - types – applications of colloids .

Text books:

1. Principles of Physical Chemistry by B. R. Puri, L. R. Sharma & S. Pathania, Vishal Publishing Co. (2011).
2. Text book Physical Chemistry by P.L.Soni, O.P.Dharmarha & U.N.Dash,S.Chand,(2011)

Reference books:

1. Essentials of Physical Chemistry by B. S. Bahl, Arun Bahl and G. D. Tuli, S. Chand and Co. Ltd. (2012).
2. Advanced Physical Chemistry by D. A. Bajpai, S. Chand and Co. Ltd. 3rd Edition.
3. A text book of Physical Chemistry by S. Glasstone, Macmillan (India) Ltd. (1976).



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

284

PART - IV SBS	Title: APPLIED CHEMISTRY-I	Subject Code : 17UCYS21
Semester : II	HOURS : 3 hours / Week	CREDITS :3

Objectives

To know the chemistry of water, fertilizers, cement, ceramics, fireworks, explosives, paints and pigments.

UNIT – I WATER TREATMENT (9 hrs)

Characteristics of water – hardness of water: types – unit and its estimation – removal of hardness – industrial implications - elementary study of water parameters like acidity, alkalinity, pH, DO, TDS, BOD, COD- treatment of water for domestic supply – treatment of sewage water.

UNIT – II AGRO CHEMICALS (9 hrs)

Fertilizers : role of macro nutrients in plant growth- requisites of a good fertilizer — manufacture and uses of urea, super phosphate of lime, muriate of potash and mixed fertilizers - adverse effects of fertilizers on the environment. Pesticides: Definition and classification – Insecticides: Manufacture and uses of Bordeaux mixture, DDT, BHC - Modern insecticides : organophosphorous and carbamates.

UNIT –III SILICATE INDUSTRY (9 hrs)

Cement: composition – manufacturing process – setting of cement – white cement – concrete. Glass : Raw materials – manufacturing process – characteristics - types of glasses. Ceramics : Raw materials - Permeable and impermeable wares – manufacturing process - plasticity of clays – white pottery glazing - earthenwares and stonewares – optical fibres.

UNIT –IV MATCH INDUSTRY, PYROTECHNY AND EXPLOSIVES (9 hrs)

Match Industry: Classification - match head and striking surface – manufacture of safety matches- chemistry of lighting of match stick.

Pyrotechny: composition of fireworks – coloured smokes – coloured matches.

Explosives: Classification – preparation and applications of gun powder, smokeless powder, lead azide, mercury fulminate, TNT,GTN, picric acid and dynamite.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

285

UNIT –V PAINTS AND PIGMENTS

(9 hrs)

Paints : Ingredients - characteristics of good paint - manufacture – setting of paints - paint failure . Pigments: Elementary study of zinc white, lithophone, ultramarines, carbon black, red lead and chrome green. Varnishes : manufacture – enamels – lacquers – solvents and thinner – oils.

Text books:

1. Industrial Chemistry by B. K. Sharma Goel publishing House (2008).
2. Applied Chemistry by K. Bagavathi Sundari, MJP publishers (2008).

Reference books:

1. Fundamental concepts of Applied Chemistry by Jeyashree Ghosh, S. Chand and Co. Ltd. (2006).
2. Principles of Inorganic Chemistry by Puri, Sharma & Kalia, Milestone publisher & distributor (2009).
3. Text book of Inorganic Chemistry by P. L. Soni and M. Katyal, 20th Edition, Sultan chand & Sons (2013).

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

287

III SEMESTER

S.No	PART	Sub. Code	Subject Title	Hrs/Wk	Exam hrs	C A	SE	Tot	Crd
1	PART – I	17UACT21/ H21/S21	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	PART – II	17UACE31	English	6	3	25	75	100	3
3	PART – III CORE	17UCYC31	Organic Chemistry -I	5	3	25	75	100	4
4	PART – III CORE		Volumetric Estimation (Practicals)	2	0	0	0	0	0
5	PART – III ALLIED	17UPSA31	Allied subject – II Physics	4	3	25	75	100	4
6	PART – III ALLIED		Allied subject - II Physics Practicals	2	3	0	0	0	0
7	PART – IV SBS	17UCYS31	Applied Chemistry - II	3	3	25	75	100	3
8	PART – IV NME	17UCYN31	CHEMISTRY IN EVERYDAY LIFE - I	2	3	25	75	100	2
			Total	30					19

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

288

PART - III	Title : ORGANIC CHEMISTRY-I	Subject Code :
CORE		17UCYC31
Semester : III	HOURS : 5 hours / Week	CREDITS :4

Objectives

To have a thorough knowledge of basic principles of organic reactions, a detailed study of aliphatic hydrocarbons and aromatic hydrocarbons. To acquire the knowledge of various types of reactions in aromatic and aliphatic compounds with their orientation. To study a detailed and comparative study of halogenated and hydroxyl compounds of both aromatic and aliphatic nature.

Unit I Basic concepts of organic chemistry (15 hrs)

- Characteristics of organic compounds – catenation – classification of organic compounds –
homologous series – functional groups – nomenclature – IUPAC system – Empirical formula
– molecular formula – problems.
- Tetrahedral valency of carbon – homolytic and heterolytic fissions of C-C bond – formation
and stability of carbonium ions, carbanions and free radicals – electrophilic and nucleophilic
reagents.
- Electronic effects : inductive effect – mesomeric effect – electromeric effect - resonance
effect – hyperconjugation effect.
- Types of organic reactions – substitution – addition – elimination – rearrangement – examples (mechanism not required).

Unit II Aliphatic hydrocarbons (15 hrs)

- Alkanes** : Preparation by Sabatier-Senderen, Wurtz, Corey-House, Kolbe, Duma and reduction methods – General properties.
- Alkenes** : General methods of preparation - general properties – regioselectivity in addition reactions viz., syn- and anti, Markovnikov rule and Kharasch effect – detection and location of double bond – simple problems - preparation and properties of 1,3-butadiene.
- Alkynes** : General methods of preparation – properties - acidic character of acetylene – structure.

Unit III Aromatic compounds (15 hrs)

- Introduction – sources – characteristics . Benzene: structure – Kekule and Molecular orbital models. Aromaticity – Huckel's rule – its applications – Non aromatic and anti-aromatic compounds.
- Aromatic electrophilic substitution reactions – mechanisms, orientation effect and reactivity – Disubstitution : directive influence of substituents - Trisubstitution : rules and steric hinderence.
- Aromatic nucleophilic substitution : unimolecular, bimolecular and benzyne mechanisms.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

289

Unit IV Organo halogen compounds (15 hrs)

- Alkyl halides** : General methods of preparation – general properties – detailed mechanisms of nucleophilic substitution and elimination reactions. Fluorocarbons: Westron and Freon – preparation, uses and their impact on environment.
- Aryl halides** : Preparation by halogenation, Sandmeyer and Hunsdiecker reactions – general properties – halogenated insecticides: preparation, uses of BHC and DDT.
- Aralkyl halides** : Benzyl chloride – preparation and properties – comparison between aryl halide and aralkyl halide.

Unit V : Organo hydroxy compounds (15 hrs)

- Alcohols** : Preparation from alkenes by hydration, hydroboration-oxidation and oxymercuration-demercuration methods – general properties. Ethylene glycols: Preparation and properties – Glycerol : Preparation and properties – Nitroglycerins and their applications.
- Phenols** : General methods of preparation – properties – acidity of phenol and effect of substituents – reactions of analytical importance.
- Aromatic alcohol** : Benzyl alcohol - Preparation and properties – comparison with phenols.

Text books:

- Modern Organic Chemistry by M.K.Jain and S.C.Sharama,Vishal Publishing co.4thedn. (2014)
- A Text book of Organic Chemistry by K.S. Tewari and N. K. Vishnoi - Vikas Publishing House pvt. Ltd. 3rd Edn. (2006)

Reference books:

- Organic Chemistry by I.L.Finar (Volume I) Pearson Education Ltd. (2012)
- Advanced Organic Chemistry by Arun Bahl and B. S. Bahl, S. Chand Publishing (2014)
- Organic Chemistry by Bhupinder Mehta and Manju Mehta ,Eastern Economy Edition,(2010)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

290

PART - IV SBS	Title : APPLIED CHEMISTRY - II	Subject Code : 17UCYS31
Semester : III	HOURS :3 hours / Week	CREDITS :3

Objectives : *To know the chemistry of milk with their milk products, sugar, paper, petrochemicals and polymers.*

UNIT – I DAIRY CHEMISTRY (9 hrs)

Milk – constituents of milk – physical properties of milk – effects of heating - pasteurization and its types. Types of milk: homogenized milk – flavoured milk – vitaminised milk - toned milk and condensed milk. Milk products: Cream, Butter , Ghee , Ice cream and milk powder.

UNIT – II SUGAR TECHNOLOGY (9 hrs)

Sources – manufacture of cane sugar: Extraction of juice, purification by defecation, sulphitation and carbonation, concentration, crystallization, separation and refining – manufacture of sucrose from beet root - testing of sugar.

UNIT –III PAPER INDUSTRY (9 hrs)

Introduction – various raw materials – manufacture of pulp: mechanical and chemical process – rag pulp – beating, refining, filling, sizing and colouring – manufacture of paper - calendering.

UNIT –IV PETROCHEMICALS (9 hrs)

Crude oil – fractional distillation - chemicals from crude oil – natural gas – LPG – aviation fuel – fuels used in locomotives – trucks and ships – fuels used in light commercial vehicles – octane number and cetane number – anti knocking agents.

UNIT –V POLYMER CHEMISTRY (9 hrs)

Introduction – classification of polymers - Natural polymers : rubber, starch, proteins and cellulose - Synthetic polymers: polymerization and its types – Techniques of polymerization: bulk and emulsion polymerization – Plastics: thermosetting and thermoplastics – preparation and uses of bakelite, nylon 6 6, teflon and epoxy resin.

Text books:

1. Industrial Chemistry by B. K. Sharma Goel publishing House (2008).
2. Applied Chemistry by K. Bagavathi Sundari, MJP publishers (2008).

Reference books:

1. Fundamental concepts of Applied Chemistry by Jeyashree Ghosh, S. Chand and Co. Ltd. (2006).
 2. Advanced Organic Chemistry by Arun Bahl and B. S. Bahl, S. Chand Publishing (2014)
 3. Food Science by Norman N.P. & Joseph H.H, 5th edition ,CBS pub.& dist.,(1997)
-

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

291

IV SEMESTER

S.No	PART	Sub. Code	Subject Title	Hrs/Wk	Exam hrs	C A	SE	Tot	Crd
1	PART – I	17UACT21/ H21/S21	Tamil/Hindi/ Sanskrit	6	3	25	75	100	3
2	PART – II	17UACE41	English	6	3	25	75	100	3
3	PART – III CORE	17UCYC41	Inorganic Chemistry - II	5	3	25	75	100	4
4	PART – III CORE	17UCYCP2	Volumetric Estimation (Practicals)	2	3	40	60	100	2
5	PART – III ALLIED	17UPSA41	Allied subject-II Physics	4	3	25	75	100	4
6	PART – III ALLIED	17UPSAP1	Allied subject-II Physics Practicals	2	3	40	60	100	2
7	PART – IV SBS	17UCYS41	Pharmaceutical Chemistry	3	3	25	75	100	3
8	PART – IV NME	17UCYN41	CHEMISTRY IN EVERYDAY LIFE - II	2	3	25	75	100	2
9	PART-V		Extension Activities					100	1
			Total	30					24

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

292

PART - III CORE	Title : INORGANIC CHEMISTRY-II	Subject Code : 17UCYC41
Semester : IV	HOURS : 5 hours / Week	CREDITS :4

Objectives : *To acquire the knowledge of chemistry of s, p and d-block elements for their general characteristics with comparative studies among group elements and applications of the industrially important compounds.*

Unit –I s - Block Elements

(15 hrs)

- Hydrogen:** Occurrence – preparation- isotopes & its applications – hydrides – types- preparation –properties – uses.
- Group 1 Elements:** General characteristics : Electronic configuration, metallic character, flame colouration, oxidation state and reducing property – Anomalous properties of Lithium –Diagonal relationship and resemblance of Li & Mg – causes – Preparation, Properties and uses of Lithium carbonate, Sodium hydroxide and Potassium iodide.
- Group 2 Elements:** General characteristics : Electronic configuration, metallic character, flame colouration, oxidation state and reducing property – Anomalous behaviour of Be – Diagonal relationship of Be & Al. - Preparation and properties and uses of Beryllium chloride, Magnesium sulphate, Calcium carbide and Barium sulphate – Uses of Radium salts.

Unit –II p - Block Elements – I

(15 hrs)

- Group 13 Elements:** General characteristics : Electronic configuration, metallic character, oxidation states, formation of trihalides and hydrides - Diagonal relationship of B & Si - Preparation, properties and uses of Diborane, Borax, Borazine and $AlCl_3$ – Structure of Diborane, BF_3 and $AlCl_3$ – Ceramics industry : manufacture of Whiteware.
- Group 14 Elements:** General characteristics : Electronic configuration, allotropy, metallic and non-metallic character, oxidation states and catenation – allotropes of carbon – detailed study of Carbides and Silicates – Preparation, properties and uses of Silicones, Carborundum, Stannous chloride, Red Lead and White Lead.

Unit –III p - Block Elements – II

(15 hrs)

- Group 15 Elements:** General characteristics : Electronic configuration, metallic and non-metallic character, allotropy, oxidation states and catenation - Nitrides: classification - Allotropic modifications of phosphorus – Difference between red and white phosphorus – metalloid character of Arsenic – alloys of bismuth – preparation, properties and uses of microcosmic salt, Graham's salt and tartar emetic.
- Group 16 Elements:** General characteristics : Electronic configuration, metallic and non-metallic character, atomicity, polymorphism, catenation and oxidation states – Anomalous behavior of oxygen - Uncommon feature of liquid sulphur- unique feature of SF_4 – preparation, properties and uses of Caro's acid and Marshall's acid – Properties of selenium, Tellurium and Polonium.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

293

Unit –IV p - Block Elements – III

(15 hrs)

- a) **Group 17 Elements:** General characteristics : Electronic configuration, colour, oxidation states, non-metallic character, electronegativity and electron affinity – isolation of fluorine – peculiarities of fluorine – oxyacids of halogens: preparation, properties and structure of hypochlorous acid and periodic acid - electropositive character of Iodine – interhalogens: types – preparation, properties & structure of ICl, BrF₃, ClF₅ and IF₇– pseudohalogens – preparation, properties of cyanogens and thiocyanogen.
- b) **Group 18 Elements:** occurrence – isolation of noble gases from dry air – compounds of Xenon: preparation, properties and structure of XeF₄ and XeOF₄ – clathrates.

Unit –V d - Block Elements

(15 hrs)

- a) **The Transition Elements:** Definition- metallic character- oxidation states- reducing properties – colour – magnetic properties- complex formation.
- b) **First Transition Series:** Preparation, properties and uses of TiCl₄, V₂O₅, KMnO₄, K₃[Fe(CN)₆], Na₃[Co(NO₂)₆] and cupric acetate – Alloys of Nickel .
- c) **Second Transition Series:** Preparation, properties of Mo₂O₅, molybdenum blues, pertechnic acid and pertechnetates, RuO₄, Wilkinson's catalyst– Role of AgBr in photography.
- d) **Third Transition Series:** : Preparation and uses of Tungsten bronzes, cisplatin, Chloroplatinic acid, Colloidal gold and purple of cassius, Fulminating gold - distinction between AgCl & Hg₂Cl₂.

TEXT BOOKS:

1. Principles of Inorganic Chemistry by Puri, Sharma and Kalia, Milestone Publisher (2013)
2. Modern Inorganic Chemistry by R. D. Madan and Satya Prakash, S. Chand and Co, 3rd edn. (2014)

REFERENCE BOOKS:

1. Advanced Inorganic Chemistry by F. A. Cotton and G. Wilkinson, John Wiley and sons Inc., 6th edn. (2006)
2. Inorganic Chemistry: A Unified Approach by W.W. Porterfield, Academic Press, California 2nd edn (2005)
3. Inorganic Chemistry by J. E. Huheey et. al, Pearson Education Pvt. Ltd., 4th edn. (2004)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

294

PART - IV SBS	Title : PHARMACEUTICAL CHEMISTRY	Subject Code : 17UCYS41
Semester : IV	HOURS : 3 hours / Week	CREDITS :3

Objectives

To gain the knowledge of biochemistry aspects of drugs and their formulation with usage in various forms also in various fields like surgery. To have a complete knowledge about the analysis of blood and urine.

UNIT – I Study of drugs

(9 hrs)

- Introduction – Terminologies – micro-organisms, pharmacology, pharmacodynamics, pharmacokinetics, pharmacopoeia - Importance of drugs.
- Classification of drugs :- Biological and Chemical.
- Different dosage forms of drugs: tablet, capsules, ointment and liquid dosage forms

UNIT – II Pharmaceutical Aids

(9 hrs)

- Organic pharmaceutical aids: Preservatives, antioxidants, emulsifying agents, colouring, flavouring and sweetening agents, stabilizing agents, ointment bases, solvents. (Explanation of the above terms and examples)
- Organic diagnostic agents: Drugs used for X- ray contrast media (Barium sulphate, Sodium diatrizoate injection), drugs used to test organ function (Fluorescein Sodium, Sulphobromophthalein sodium), determination of blood volume and hemopoietic function.

UNIT – III Anaesthetics

(9 hrs)

- Anaesthetics – definition – mode of action – classification.
- General anaesthetics – Types - Inhalation anaesthetics , Intravenous anaesthetics and Basal anaesthetics (two examples for each category)
- Local anaesthetics – Types - Natural and Synthetic local anaesthetics (two examples for each category)



UNIT – IV Chemotherapy

(9 hrs)

- a) Antibiotics - Definition – Classification - SAR and uses of fluoroquinolones
- b) Antipyretics, Analgesics and anti-inflammatory agents - an elementary idea
- c) Sulphonamide – Drug actions – structure, adverse effect and uses of Sulphanilamide, Prontosil
- d) Antimalarials - Study of Quinine and chloroquine
- e) Arsenical drugs - Study of Salvarson-606 and Neosalvarsan.

UNIT – V Clinical Chemistry

(9 hrs)

- a) Blood: composition – Blood grouping and Rh factor- anticoagulants
- b) Analysis of blood: Determination of Glucose by Folin and WU method – Estimation of cholesterol - Estimation of Haemoglobin concentration by Sahi method – Erythrocyte count by Haemocytometry
- c) Urine: Routine examination of urine - determination of glucose in urine by Benedict's reagent–
GTT .

Text books:

- 1. A Text book of Pharmaceutical Chemistry by Jayashree Ghosh, S.Chand & Co. Ltd,(2012)
- 2. Pharmaceutical Chemistry by S.Lakshmi, Sultan Chand & Sons, (2004)

Reference books:

- 1. Burger's Medicinal Chemistry by J. G. Cannon, John Wiley and Sons,Inc., 5th edn. (1995)
 - 2. Medicinal Chemistry by Ashutosh Kar, New Age International (P) Ltd. 5th edn. (2010)
 - 3. Industrial Chemistry– B.K.Sharma – Goel Publishing House. 13th Edition (2008)
-



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : Lab: Volumetric Estimation	Subject Code : 17UCYCP2
Semester : IV	HOURS : 2 hours / Week	CREDITS :2

Objective : *To practice the quantitative estimation of substances by titration methods.*

A double titration involving the making up of the solution to be estimated and the preparation of a primary standard solution.

LIST OF EXPERIEMENTS:

- I. **ACIDMETRY AND ALKALIMETRY**
 - 1. Estimation of Na₂CO₃
 - 2. Estimation of NaOH/KOH
 - 3. Estimation of Oxalic acid.
- II. **REDOX TITRATIONS**
 - a. **Permanganimetry**
 - 1. Estimation of ferrous ion
 - 2. Estimation of Oxalic acid
 - 3. Estimation of calcium(direct method)
 - b. **Dichrometry**
 - 1. Estimation of ferrous ion
 - 2. Estimation of ferric ion using external indicator
- III. **IODOMETRY AND IODIMETRY**
 - 1. Estimation of potassium dichromate
 - 2. Estimation of potassium permanganate
 - 3. Estimation of copper
- IV. **EDTA Titration**
 - 1. Estimation of Hardness of water using EDTA.
 - 2. Estimation of Calcium.
 - 3. Estimation of Magnesium

.....
 Distribution of Marks: Internal - 40 Marks External - 60 Marks

Internal

Class Experiments : 30 marks
 Viva-voce : 10 marks
 Total : 40 marks

External examination

Record Notebook : 10 marks
 Procedure writing : 10 marks
 Experiment : 40 marks
 Total : 60 marks

For Estimation, if the student has

- < 1% error - 40 marks
- 1-2% error - 30 marks
- 2-3% error - 20 marks
- 3-5%error - 10 marks
- > 5% error - 8 marks

*

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

297

V - SEMESTER

Sl. No	PART	Sub. Code	Subject Title	Hrs / Wk	Exam hrs	CA	SE	Tot	Crd
1	PART-III CORE	17UCYC51	Inorganic Chemistry - II	5	3	25	75	100	5
2	PART-III CORE	17UCYC52	Organic Chemistry – II	5	3	25	75	100	5
3	PART-III CORE	17UCYC53	Physical Chemistry – II	6	3	25	75	100	5
4	PART-III CORE	17UCYCP3	Physical Chemistry Experiments	6	6	40	60	100	5
5	PART-III CORE	17UCYCP4	Organic Estimation and preparation	3	3	40	60	100	2
6	PART-III ELECTIVE	17UCYE51	Analytical Chemistry and Computer applications in chemistry	5	3	25	75	100	5
7	SELF STUDY	16USSS51	Soft Skills	-	-	-	-	100	-
			Total	30					27

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

298

PART - III CORE	Title : INORGANIC CHEMISTRY – III	Subject Code : 17UCYC51
Semester : V	HOURS : 5 hours / Week	CREDITS :5

Objectives

To acquire the knowledge of chemistry of f-block elements among the groups and detailed study of metal complexes involving bonding, structure and isomerism. To learn the essentials of organometallics compounds and importance of metal ions in biological aspects.

Unit –I Inner-transition elements (f-block Elements) (15 hrs)

- (a) **The Lanthanide Series** : occurrence - electronic configuration – position in periodic table – oxidation states – magnetic properties – Lanthanide contraction – causes and its consequences – colour – complex formation – Extraction and uses of Lanthanides.
- (b) **The Actinide Series** : trans-uranic elements : definition, sources and preparation - position in periodic table - electronic configuration – oxidation states – ionic radii - actinide contraction – colour – formation of complexes – properties - comparison with lanthanides – Extraction and uses of thorium.

Unit –II Coordination Chemistry – I (15 hrs)

Double salts and coordination compounds – terminology: coordination sphere, coordination number, ligand and its types – nomenclature - **Isomerism**: structural isomerism and stereo isomerism - stability: thermodynamic and kinetic stability - factors affecting the stability of metal complexes – Experimental determination of composition of complexes by Job's method – **Chelates**: classification – chelate effect and application of the formation of chelated complexes in analytical chemistry.

Unit –III Coordination Chemistry – II (15 hrs)

Werner's coordination theory: postulates and experiment evidence - Sidgwick's concept: EAN rule – applications and limitations - Valence Bond Theory: assumptions and illustration to 4- and 6- coordination ions - hybridization and geometry - limitations - Crystal Field Theory: salient features - orbital splitting as applied to octahedral, tetrahedral and square planar complexes - CFSE and its calculation - spectrochemical series- magnetic moments and color of transition metal complexes.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

299

Unit –IV Organometallic Chemistry (15 hrs)

Organometallic compounds: definition – classification - hapticity of ligands -18 electron rule and its exceptions– nomenclature - bonding in organometallic compounds – transition metal alkene complexes: Zeise's salt – preparation – properties – structure and bonding - Cyclopentadienyl complexes: ferrocene - preparation- properties - structure and bonding- catalytic activity of organometallic compounds - Wilkinson's catalyst in hydrogenation of alkene.

Unit –V Bioinorganic Chemistry (15 hrs)

Essential and trace elements: Introduction and their classification - Metalloporphyrins: definition - hemoglobin and myoglobin - structure and function - cooperative and non-cooperative binding - Hill constant -Bohr effect - CO poisoning of Hb - chlorophyll-structure and its functions.

Role of Na⁺ and K⁺ ions in biological system - Na-K pump- role of calcium in biology -rickets - osteoporosis - hypercalcemia and hypocalcemia - comparison of biochemistry of Ca²⁺ and Mg²⁺ - Biological role of elements viz., Fe, Cu, Zn, Ni, Cr, F, Cl, I.

Text books:

1. Principles of Inorganic Chemistry by B.R.Puri, L.R. Sharma and K.C.Kalia – Milestone Publishers 31st Edn. (2012)
2. Modern Inorganic Chemistry by R. D. Madan and Satya Prakash -S.Chand and Co, 3rd Edn. (2014)

Reference books:

1. Inorganic Chemistry by J. E. Huheey et. al,- Pearson Education Pvt. Ltd., 4th Edn. (2004)
2. Organometallic Compounds by Indrajeet Kumar – Pragati Prakasan,2nd Edn. (2010)
3. Bioinorganic Chemistry by K.Hussain Reddy,New age international,(2007)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

300

PART - III CORE	Title : ORGANIC CHEMISTRY – II	Subject Code : 17UCYC52
Semester : V	HOURS : 5 hours / Week	CREDITS :5

Objectives

To learn the general behavior of organic reactions with mechanism of aliphatic and aromatic carbonyl compounds, organo acids such as aliphatic, aromatic carboxylic acids, sulphonic acids and dicarboxylic acid. To get hold of the knowledge of synthetic designing of various organic compounds using organometallics and active methylene compounds.

Unit –I ALIPHATIC CARBONYL COMPOUNDS (15 hrs)

(a) Preparation from nitriles, carboxylic acid, 1,3-dithianes, organometallics (magnesium, cadmium and lithium), hydrolysis, oxidation reactions & reduction reactions – structure and reactivity of carbonyl group - acidity of α -hydrogens.

Nucleophilic addition reactions (HCN, GR, ammonia and its derivatives) – relative reactivities of aldehydes and ketones in nucleophilic addition reactions - condensation reactions (aldol, Cannizzaro and Mannich) with their mechanisms – reaction with phosphine derivatives – oxidation reactions (including haloform reaction) - reduction reactions (MPV, Clemmensen, Wolf-Kishner, catalytic and metal hydrides) and polymerisation reactions – distinguishing reactions between aldehydes and ketones.

(b) preparation, properties and uses of acrolein, crotonaldehyde, acetylacetone.

Unit –II AROMATIC CARBONYL COMPOUNDS: (15 hrs)

(a) Preparation from carboxylic acids, Grignard reagent, nitrile (Stephen reaction) and electrophilic

substitutions of aromatic hydrocarbons (Gattermann, Gattermann-Koch, Reimer-Tiemann, Friedel-Crafts reactions), oxidation and reduction reactions - reactivity of carbonyl group and its

comparison with aliphatic aldehydes and ketones .

Nucleophilic addition reactions - condensation reactions (Cannizzaro, Claisen-Schmidt, Perkin,

Benzoin, Knoevenagel and Stobbe) with their mechanisms – electrophilic substitution reactions –

oxidation and reduction reactions.

(b) preparation, properties and uses of cinnamaldehyde, vanillin, phloroacetophenone.

Unit –III ORGANO ACIDS - I (15 hrs)

(a) **Aliphatic carboxylic acids** : Preparation by oxidation, hydrolysis, carbonylation and haloform reactions – acidic character – effect of substituents on acidic strength – chemical properties : reaction with bases, metals, reduction reactions, conversion into derivatives viz., acid chlorides, amides, esters, acid anhydrides, Hunsdiecker, Curtius and HVZ reactions, decarboxylation reactions.

(b) **Aromatic carboxylic acids** : Preparation by oxidation, hydrolysis, carbonylation and haloform reactions – acidic character – effect of substituents on acidic strength – chemical properties : reaction with bases, metals, conversion into derivatives viz., acid chlorides, amides, esters, acid anhydrides, decarboxylation, reduction and electrophilic substitution reactions.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

301

Unit –IV ORGANO ACIDS - II (15 hrs)

- (a) **Substituted Carboxylic acids** : Preparation, properties and uses of chloroacetic acid, lactic acid and pyruvic acid – distinction between among various halo acids, hydroxy acids and keto acids - preparation, properties and uses of salicylic acid.
- (b) **Aromatic sulphonic acids** : Preparation and properties of benzene sulphonic acid – comparison of acidity with carboxylic acid – electrophilic and nucleophilic substitution reactions – Preparation and properties of benzene sulphonyl chloride and sulphanilic acid –preparation and uses of saccharin, chloramine-T.
- (c) **Dicarboxylic acids** : General methods of preparation and properties of aliphatic saturated dicarboxylic acids (upto glutaric acid) – preparation and properties of maleic acid and fumaric acid – preparation of citric acid and its importance – preparation and properties of phthalic acid.

Unit –V STEREOCHEMISTRY (15 hrs)

- (a) **Optical isomerism** : optical activity – definition and its determination - asymmetry, dissymmetry and chirality – enantiomerism and diastereomerism - absolute and relative configurations – Cahn Ingold Prelog system of assigning R and S system – racemisation – resolution – asymmetric synthesis – Walden inversion – a brief study about the stereochemistry of allenes, spirans and biphenyl systems.
- (b) **Geometrical isomerism** : condition for existence – cis & trans system and syn & anti system – determination of configuration present in maleic acid and fumaric acid, aldoximes and ketoximes – E and Z nomenclature.

Text books:

1. Modern Organic Chemistry by M. K. Jain and S. C. Sharama -Vishal Publishing Co. 4th Edn. (2014)
2. Organic Chemistry by Bhupinder Mehta and Manju Mehta –Eastern Economy Edition,(2010)

Reference books:

1. Organic Chemistry by I.L.Finar (Vol. I & Vol.II) - Pearson Education Ltd. (2012)
2. A Text book of Organic chemistry by K.S. Tewari and N. K.Vishnoi - Vikas Publishing House pvt. Ltd. 3rd Edn. (2006)
3. Text Book of Organic Chemistry by P.L.Soni and H. M Chawla - Sultan Chand & sons 29th Edn. (2012)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

302

PART - III CORE	Title : PHYSICAL CHEMISTRY-II	Subject Code : 17UCYC53
Semester : V	HOURS : 6 hours / Week	CREDITS :5

Objectives : *To acquire the knowledge of analyzing various aspects of solid systems through phase rule and distribution law. To have a thorough knowledge of energetic and kinetics of reactions by detailed study of laws of thermodynamics and chemical kinetics.*

Unit –I PHASE RULE & DISTRIBUTION LAW (18 hrs)

(a) **Phase rule:** Definition of the terms phase, component and degrees of freedom – conditions for equilibria between phases – derivation of Gibb's phase rule – eutectic point, congruent melting point and incongruent melting point .

One component system: H₂O, Sulphur and CO₂ systems – reduced phase rule - two component system: Lead – Silver, potassium iodide –water, Zinc – Magnesium and Sodium sulphate - water systems.

(b) **Distribution law:** statement – thermodynamic derivation – conditions – limitations – solvent extraction – applications.

Unit –II CHEMICAL KINETICS (18 hrs)

Introduction – rate of reaction – rate law and rate constant – order and molecularity – first order reactions – examples – rate equation – derivation - half life period - second order reactions - examples – rate equations – derivation - half life period - zero order and third order reactions - examples – rate equations (no derivation required) - determination of order of a reaction.

Influence of temperature on the rate of reaction – Arrhenius rate equation and its significance – theory of reaction rates – Bimolecular collision theory – Unimolecular reactions – Lindemann's hypothesis – Absolute Reaction Rate Theory - kinetics of fast reactions – flow methods for fast reactions – stopped flow method.

Unit –III THERMODYNAMICS – I (18 hrs)

(a) Introduction – energy and its units – mechanical work and heat – thermodynamic systems – properties of systems – state function and path function – thermodynamic processes.

(b) **First Law** : statement – mathematical formulation – changes in internal energy and enthalpy – heat changes at constant volume and at constant pressure – Cp, Cv relationship – work done in isothermal reversible expansion and compression of an ideal gas- calculation of ΔE , ΔH , q and w for isothermal and adiabatic expansion of an ideal gas – reversible

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

303

adiabatic expansion (P, V and T relationships) – Joule – Thomson effect for an ideal gas – Joule-Thomson co-efficient in ideal and real gases – inversion temperature and significance.

(c) **Thermochemistry**: variation of enthalpies with temperature – Kirchoff's equation – Hess's law of heat summation - statement and applications.

Unit –IV THERMODYNAMICS - II (18 hrs)

(a) **Second Law of Thermodynamics** : Different ways of stating II law of thermodynamics – conversion of heat into work – Carnot's cycle – Carnot's theorem – thermodynamic efficiency - entropy – definition – derivation of the concept of entropy – entropy changes in reversible and irreversible processes – entropy change for an ideal gas - physical significance of entropy.

(b) Free energy function – Gibb's free energy – Helmholtz free energy – variation of free energy change with temperature and pressure – Gibb's -Helmholtz equation and its applications – Clapeyron-Clausius equation and its applications – Maxwell's relationships.

(c) **Chemical Potential** : Definition – significance – Gibb's-Duhem equation – variation of chemical potential with temperature and pressure.

Unit –V THERMODYNAMICS – III (18 hrs)

(a) Application of thermodynamics to various types of equilibria - equilibrium constant and free energy changes – Van't Hoff reaction isotherm – Van't Hoff reaction isochore-thermodynamic interpretation of law of mass action and Lechatelier's principle.

(b) Nernst heat theorem and its applications – Third law of thermodynamics – statement-determination of absolute entropy

(c) Colligative properties – vapour pressure lowering – osmotic pressure(definition only) – depression of freezing point –elevation of boiling point -thermodynamic derivation.

TEXT BOOKS:

1. Principles of Physical Chemistry by B.R.Puri, L.R.Sharma and S.Pathania - Vishal Publishing Co. (2011)
2. Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl and G.T.Tuli - S.Chand and Co.Ltd., (2012)

REFERENCE BOOKS:

1. A Textbook of Physical Chemistry by S.Glasstone - Macmillan (India) Ltd. (1976)
2. Advanced Physical Chemistry by D.A.Bajpai- S.Chand and Co.Ltd., 3rd Edn. 39th edition(2014).
3. Chemical Kinetics by K. J. Laidler, Pearson Edition (2008).

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

304

PART - III CORE	Title : Lab: PHYSICAL CHEMISTRY EXPERIMENTS	Subject Code : 17UCYCP3
Semester : V	HOURS : 6 hours / Week	CREDITS :5

Objectives:

To practice the kinetics, phase rule, electro analytical methods involved in the chemical reactions.

PHYSICAL CHEMISTRY EXPERIMENTS

1. Determination of molecular weight by Rast's macro method.
2. Determination of molecular weight by Transition temperature method.
3. Phase Diagram involving a) simple eutectic. b) compound formation.
4. Heat of solution by solubility method.
5. Determination of strength of the given KI by Equilibrium constant method.
6. Conductometric titration- Strong Acid vs Strong Base.
7. Potentiometric Redox titrations: a) FeSO_4 vs KMnO_4 . b) FeSO_4 vs. $\text{K}_2\text{Cr}_2\text{O}_7$.
8. Colorimetric estimation of Nickel.
9. Colorimetric estimation of Iron.
10. Preparation of various Buffer mixtures and comparing their pH values with theoretical values using pH meter.
11. pH titration - Strong Acid vs Strong Base.
12. pH titration - Weak Acid vs Strong Base.
13. Determination of relative strength of acid catalysed hydrolysis of ester.
14. Determination of Co-efficient of Viscosity.
15. Determination of CST on Phenol-water system and effect on impurity on CST-strength of NaCl.

Distribution of Marks Internal – 40 Marks External – 60 Marks

External Examination

Viva voce - 10 marks
Record Notebook - 10 marks
For completion of the experiment - 20 marks
Graph - 5 marks
Tabulation & Calculation - 5 marks
Result - 10 marks

Total -----
60 marks

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

305

PART - III CORE	Title : Lab: ORGANIC ESTIMATION AND ORGANIC PREPARATION	Subject Code : 17UCYCP4
Semester : V	HOURS : 3 hours / Week	CREDITS :2

Objectives

To practice the preparative method and quantitative estimation of organic substances.

ORGANIC ESTIMATION AND ORGANIC PREPARATION

I. ORGANIC ESTIMATION

1. Estimation of phenol.
2. Estimation of aniline.
3. Estimation of glycine.

II. ORGANIC PREPARATION

1. Preparation of p-bromo acetanilide from acetanilide (bromination)
2. Preparation of benzoic acid from benzamide.(hydrolysis)
3. Preparation of m-dinitrobenzene from nitrobenzene.(nitration)
4. Preparation of benzoic acid from benzaldehyde.(oxidation)
5. Preparation of benzoic acid from ethylbenzoate.(hydrolysis)

Distribution of Marks

Internal – 40 Marks

External – 60 Marks

External Examination

(Choice of choosing any one category of the above two

)

Record Note book - 10 marks

Organic Preparation - 50 marks

- Procedure - 10 marks
- Crude sample - 30 marks
- Recrystallisation - 10 marks

Organic Estimation – 50 marks

- Procedure - 10 marks
- Estimation - 40 marks
 - < 2% Error - 40 marks
 - 2-3% Error - 30 marks
 - 3-4% Error - 20 marks
 - 4-5% Error - 15 marks
 - > 5% Error - 10 marks

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

306

PART - III ELECTIVE	Title : ANALYTICAL CHEMISTRY AND COMPUTER APPLICATION IN CHEMISTRY	Subject Code : 17UCYE51
Semester : V	HOURS : 5 hours / Week	CREDITS :5

Objectives

To learn the accuracy and analysis of quantitative data, separation and purification methods, quantitative estimation of complexes by photometric methods, principles of gravimetric estimation. To acquire the knowledge of spectroscopic methods used for analysis of organic substances. To expose the preliminary knowledge of computer programming using C language, particularly applicable for basic chemical concepts.

Unit –I DATA ANALYSIS & CHROMATOGRAPHY (15hrs)

(a) **Data Analysis** : Mean – median- precision & accuracy – confidence limits – ‘t’ test - Errors & its types – rules for improving accuracy of data – rejection and reporting of data – method of least squares – significant figures.

(b) **Chromatography** : Explanation – principle & terminology - classification – detailed study of column, paper, thin layer, gas and ion exchange chromatographic techniques – an elementary idea about HPLC.

Unit –II COLORIMETRY & GRAVIMETRY (15 hrs)

(a) **Colorimetry** : Principle – techniques for colour comparison – visual colorimetric methods: Duboscq colorimeter, Photoelectric colorimeter and Spectrophotometer – criteria for satisfactory colorimetric estimation – Estimation of Iron, Nickel and Chromium.

(b) **Gravimetry** : Principle - methods of obtaining precipitate – precipitants and its types – sequestering agents – solubility product and precipitation –theories of precipitation – Co-precipitation and Post-precipitation – digestion and its effect – general rules of precipitation - precipitation from homogeneous medium – washing and drying of precipitate.

Unit III SPECTROSCOPY - I (15 hrs)

Electromagnetic spectrum – Introduction.

UV-Visible spectroscopy: Principle – absorption law –measurement of absorption intensity – instrumentation – types of electronic excitation – transition probability – chromophore and auxochrome – absorption and intensity shifts – Woodward-Fieser rules

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

307

for calculating absorption maximum for conjugated dienes and α,β unsaturated carbonyl compounds - applications.

IR spectroscopy: Principle – theory of molecular vibration – number of fundamental vibrations – vibrational frequency – factors influencing vibrational frequencies: Fermi resonance, electronic effects and hydrogen bonding — Instrumentation – Sampling techniques – Finger-print region - applications.

Unit –IV Spectroscopy – II (15 hrs)

PMR spectroscopy : Principle – Instrumentation – solvents and reference chemicals – number of signals - chemical shift – factors affecting chemical shift: shielding and deshielding effects – proton counting – splitting of signals – spin-spin coupling and coupling constant – applications of the following molecules: ethanol, toluene, ethyl acetate, acetophenone, p-anisidine, benzaldehyde and α -bromo butanoic acid.

Unit – V COMPUTER APPLICATION IN CHEMISTRY (15 hrs)

C language – History – Important features of 'C' – steps involved in a 'C' program - C tokens – Operators (Arithmetic, Assignment, Comparison, Logical) - Header Files: stdio.h – conio.h -math.h –data input – scanf function – data output – print function - Control Statements: If statement – If-else statement – Repetition Control Statements – While-loop statement – do-while statement.

C programs in Chemistry: RMS velocity, Normality, pH calculation from H^+ concentration and finding acidic, basic or neutral nature, Vander Waals constants and half life period.

Text books:

1. Elements of Analytical Chemistry by R.Gopalan,P.S.Subramanian & K.Rengarajan – Sultan Chand & sons- reprint of 3rd Edn.(2011)
2. Elementary Organic Spectroscopy by Y.R.Sharma – S Chand & Co,5th revised Ed.,(2013)
3. Computers for Chemists by Pundir and Bansal – Pragati Prakashan Publishers (2007)

Reference books:

1. Spectrometric identification of Organic Compounds by R.M.Silverstein and G.C.Bassler – Wiley,(1964)
2. Introduction to computers by N. Subramanian, Tata McGraw-Hill Publishing company Ltd. (1986)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

308

VI SEMESTER

Sl. No	PART	Sub. Code	Subject Title	Hrs/ Wk	Exam hrs	CA	SE	Tot	Crd
1	PART-III CORE	17UCYC61	Physical Chemistry – III	5	3	25	75	100	5
2	PART-III CORE	17UCYC62	Organic Chemistry – III	5	3	25	75	100	5
3	PART-III CORE	17UCYCP5	Gravimetric Estimation and Inorganic complexes preparation	5	6	40	60	100	4
4	PART-III CORE	17UCYCP6	Organic Analysis	3	3	40	60	100	2
5	PART-III CORE	17UCYCV1	Objective Chemistry viva-voce	2	3	50	50	100	2
6	PART-III ELECTIVE	17UCYE61	Chemistry of Biomolecules	5	3	25	75	100	5
7	PART-III ELECTIVE	17UCYE62	Newer Aspects of Chemistry	5	3	25	75	100	5
8	SELF STUDY	16UGKB61	General Knowledge	-	-	-	-	100	-
			TOTAL	30					28

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

309

PART - III CORE	Title : PHYSICAL CHEMISTRY-III	Subject Code : 17UCYC61
Semester : VI	HOURS : 5 hours / Week	CREDITS :5

Objectives

To learn the preliminary idea about group theory and quantum mechanics.

To get exposed of the principles and applications of electrochemistry and theoretical aspects of molecular spectroscopy.

Unit –I QUNATUM MECHANICS & GROUP THEORY (15hrs)

(a) Quantum mechanics: Limitations of classical mechanics – Schrodinger wave equation – derivation – Eigen values and Eigen functions – significance of wave function and probability – particle in a one dimensional box and its derivation.

(b) Group Thoery: symmetry elements and its types - symmetry operations and the products of symmetry operations – Groups - properties and its types — group multiplication table – C_{2V} and C_{3V} - classes and sub groups. Point groups: explanation and classification - study of the following with examples: C_{2V} , C_{3V} , D_{2h} , and D_{6h} .

UNIT – II ELECTROCHEMISTRY – I (15 hrs)

Electrolytic conductance-Faraday's laws of electrolysis – specific conductance – equivalent conductance – molar conductance – variation of equivalent conductance with dilution – Electrolytes and its types – Arrhenius theory of ionization - postulates – limitations – degree of dissociation – factor influencing degree of dissociation – Ostwald's dilution law – theory of strong electrolytes – Debye-Huckel-Onsagar theory -Transport number – determination transport number : Moving boundary method – Kohlrausch's law of ionic mobilities – applications – applications of conductance measurements : conductometric titrations: neutralization and precipitation.

UNIT – III ELECTROCHEMISTRY – II (15 hrs)

Galvanic Cells –half reactions and reversible electrodes – single electrode potential – thermodynamics of reversible electrodes and cells - The Nernst equation – standard electrode potentials: electrochemical series – concentration cells: electrode and electrolyte concentration cells – types of concentration cells: concentration cells without and with transference – liquid junction potential –fuel cell: Hydrogen–Oxygen – applications of emf measurements : determination of pH using quinhydrone electrode –potentiometric titrations : acid – base, redox and precipitation.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

310

UNIT – IV PHOTOCHEMISTRY (15 hrs)

Introduction – comparison of thermal reactions and photochemical reactions – consequences of light absorption :– laws of photochemistry : Grotthus–Draper law, Einstein law of photochemical equivalence – quantum efficiency – experimental determination of quantum efficiency – kinetics of photochemical reactions: formation of HCl, HBr and decomposition of HI – photochemical equilibrium – photosensitization - Jablonski diagram - photophysical processes: fluorescence - phosphorescence - chemiluminescence – bioluminescence -- flash photolysis.

UNIT – V SPECTROSCOPY AND ITS APPLICATIONS (15 hrs)

- (a) Rotational spectra of diatomic molecules: rigid rotator – selection rule – determination of moment of inertia and bond length – intensities of spectral lines – effect of isotopic substitution.
- (b) Vibrational spectra : Hooke's law – simple harmonic oscillator - force constant – selection rule Vibrational rotational spectra: P,Q,R bands- applications of IR spectra.
- (c) Electronic spectra : Frank - Condon principle.
- (d) Raman spectra: Raman effect – stokes and anti stokes lines, quantum theory of Raman effect – comparison between IR and Raman spectra – applications of Raman spectra.

Text books:

1. Principles of Physical Chemistry by B.R.Puri, L.R.Sharma and S.Pathania - Vishal Publishing Co. (2011).
2. Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl and G.T.Tuli - S.Chand and Co.Ltd., (2012).

Reference books:

1. A Textbook of Physical Chemistry by S.Glasstone - Macmillan (India) Ltd. (1976).
 2. Advanced Physical Chemistry by Gurdeep Raj - Krishna Prakashan Media (P) Ltd 39th Edn. (2014).
 3. Advanced Physical Chemistry by D.N. Bajpai- S.Chand and Co.Ltd., 3rd Edn.(1992).
-



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

311

PART - III CORE	Title : ORGANIC CHEMISTRY – III	Subject Code : 17UCYC62
Semester : VI	HOURS : 5 hours / Week	CREDITS :5

Objectives

To learn the chemistry of nitro and amino containing compounds, polynuclear hydrocarbons, cycloalkanes and heterocyclic compounds. To get hold of the brief knowledge of stereoisomerism and molecular rearrangements.

Unit –I NITROGEN CONTAINING COMPOUNDS (15 hrs)

- (a) **Aliphatic nature :** (i) Preparation and properties of nitroethane and ethyl nitrite, ethylcyanide and ethyl isocyanide – elementary study of methyl isocyanate and its toxicity. (ii) Amines : Preparation of 1, 2, 3 amines by reductive amination, Hofmann degradation, Curtius, Leuckart, Gabriel Phthalimide and Hofmann elimination methods – basicity of amines – general chemical properties. (iii) Diazomethane : preparation and its synthetic applications.
- (b) **Aromatic nature :** (i) General methods of preparation and properties (due to nitro group and benzene ring and reduction reactions) of nitrobenzene. (ii) General methods of preparation and properties (due to amino group and benzene ring) of aniline including a detailed study of the basicity with the influence of substituents on N atom and in the ring. (iii) Benzenediazonium chloride : Preparation and synthetic applications.

Unit –II POLYNUCLEAR HYDROCARBONS (15 hrs)

- (a) **Isolated systems :** Preparation and properties of biphenyl, diphenylmethane and tririphenylmethane including the study of dyes viz., Malachite green, Pararosaniline, Rosaniline and crystal violet.
- (b) **Fused systems :** Isolation, synthesis, properties and structure of naphthalene and anthracene – preparation and properties of derivatives of naphthalene derivatives viz., naphthols, naphthylamines and naphthaquinones including the study of the dyes (Naphthol yellow S, Naphthol green Y, Maritius Yellow, Orange II, congo red and alizarin – **Phenanthrene** : properties and its importance.

Unit –III HETEROCYCLIC COMPOUNDS (15 hrs)

- (a) **Monocyclic systems:** Nomenclature. (i) Pyrrole, Furan and Thiophene: a comparative study of their preparation and general properties viz., electrophilic substitution, nucleophilic substitution, addition, acidic and basic characters, oxidation, reduction and their interconversion. (ii) Pyridine: synthesis and its general properties viz., basic character, electrophilic substitution, nucleophilic substitution, reduction and oxidation reactions. (iii) Comparative study of preparation of pyrazole, thiazole and oxazole and the study of their basic character.
- (b) **Condensed systems:** Preparation, and general properties of indole, quinoline and isoquinoline – preparation of purine and pyrimidine – importance of heterocyclic compounds in medicine and biochemistry.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

312

Unit – IV ORGANOMETALLIC & ACTIVE METHYLENE COMPOUNDS (15 hrs)

- (a) **Organometallic compounds** : Preparation, properties and synthetic applications of Grignard reagent, Frankland reagent, Gilman reagent and organo lithium compounds.
- (b) **Active methylene compounds** : Preparation, properties and synthetic applications of malonic ester and acetoacetic ester

Unit –V MOLECULAR REARRANGEMENTS AND CYCLOALKANES (15 hrs)

- (a) **Molecular rearrangements** : Definition and its types – detailed study of the following mechanisms of the rearrangements – Pinacol-pinacolone, Hofmann, Claisen, Fries, Beckmann, Baeyer-Villiger, and Wagner-Meerwin.
- (b) **Cycloalkanes** : General methods of preparation – properties – stability : Bayer's strain theory and its modification. Conformation : Definition – conformational analysis of ethane, n-butane, cyclohexane and methyl cyclohexane.

Text books:

1. Modern Organic Chemistry by M. K. Jain and S. C. Sharma - Vishal Publishing co. 4th Edn. (2014).
2. A Text book of Organic chemistry by K.S. Tewari and N. K. Vishnoi - Vikas Publishing House pvt. Ltd. 3rd Edn. (2006).
3. Text Book of Organic Chemistry by P.L.Soni and H. M Chawla - Sultan Chand & sons 29th Edn. (2012).

Reference books:

1. Organic Chemistry by I.L.Finar (Vol. I & Vol.II) - Pearson Education Ltd. (2012).
 2. Advanced Organic Chemistry: Reactions, Mechanisms and Structure by Jerry March, 4th Edn.
-



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : Lab: GRAVIMETRIC ESTIMATION AND INORGANIC COMPLEXES PREPARATION	Subject Code : 17UCYCP5
Semester : VI	HOURS : 5 hours / Week	CREDITS :4

Objectives : *To practice the preparative methods and estimation by gravimetric method of some inorganic compounds including complex*

GRAVIMETRIC ESTIMATION AND INORGANIC COMPLEXES PREPARATION

I. GRAVIMETRIC ESTIMATION

1. Estimation of Lead as lead chromate
2. Estimation of Barium as barium chromate
3. Estimation of Calcium as calcium oxalate monohydrate
4. Estimation of Nickel as Ni-DMG complex.
5. Estimation of Calcium as calcium carbonate.

II. INORGANIC COMPLEXES PREPARATION

1. Preparation of ammonium hexachlorostannate(IV)
2. Preparation of Sodium nitroprusside.
3. Preparation of Tetraamminecopper(II) sulphate
4. Preparation of Potassium trioxalatochromate(III)
5. Preparation of Potassium trioxalatoaluminate (III).

Distribution of Marks	Internal – 40 Marks	External – 60 Marks
<u>External Examination</u>		
Record Note book	- 10 marks	
Viva voce	- 10 marks	
Inorganic Preparation	- 15 marks	Procedure - 5 marks Crude sample - 10 marks
Gravimetric Estimation	-25 marks	Procedure - 5 marks Estimation - 20 marks
-----		< 2% Error - 20 marks
	60 marks	2-3% Error - 15 marks
-----		3-5% Error - 10 marks
		> 5% Error - 8 marks

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : Lab: ORGANIC ANALYSIS	Subject Code : 17UCYCP6
Semester : VI	HOURS : 3 hours / Week	CREDITS :2

Objectives : To analyze the functional group of organic compounds and preparation of solid derivative.

ORGANIC ANALYSIS

Analysis of the given organic compound containing one or two functional groups and confirmation by the preparation of a solid derivative.

Functional groups to be analysed : acids, phenols, aldehydes, ketones, esters, nitro compounds, amines (primary, secondary and tertiary), amides, anilides, aliphatic diamide, side chain and nuclear halogen compounds, aliphatic diamide containing sulphur and monosaccharides.

Distribution of Marks	Internal – 40 Marks	External – 60 Marks
<u>External Examination</u>		
Record Notebook	- 10 marks	
Preliminary reactions	- 15 marks	
Elements present	- 9 marks	
Aliphatic or aromatic	- 3 marks	
Saturated / Unsaturated	- 3 marks	
Functional group	- 15 marks	
Derivative	- 5 marks	

	60 marks	

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

315

PART - III ELECTIVE	Title : CHEMISTRY OF BIOMOLECULES	Subject Code : 17UCYE61
Semester : VI	HOURS : 5 hours / Week	CREDITS :5

Objectives

To gain the knowledge of Biomolecules in the aspects of steroids, hormones, nucleic acids, amino acids, proteins, enzymes, carbohydrates, alkaloids and terpenes.

Unit –I CARBOHYDRATES (15 hrs)

- (a) Biological importance – Classification – analytical tests.
- (b) **Monosaccharides:** Glucose and Fructose – preparation, properties, structure (open chain configuration and ring structure), mutarotation, epimerization and interconversion – ascending and descending of aldose and ketose.
- (c) **Disaccharides:** Sucrose – manufacture, properties, structure and uses – a brief study about lactose. **Polysaccharides:** A general study of starch and cellulose – Industrial applications of cellulose derivatives.

Unit – II ALKALOIDS AND VITAMINS (15 hrs)

(a) **Alkaloids :** Introduction - biological importance - occurrence – extraction - general methods of determining the structure - general properties. Isolation, properties, uses, constitution and synthesis of nicotine, atropine and quinine.

(b) **Vitamins :** Introduction - classification - source, structure (only), biological role, daily requirement and deficiency manifestation of vitamins A, D, E, K, C and B complex (B1, B2, B3, B6, B12 and niacin).

Unit – III TERPENES AND LIPIDS (15 hrs)

(a) **Terpenes :** Introduction - biological importance – isoprene rule – classification - isolation and extraction of terpenes - general methods of determining the structure - Isolation, structure, synthesis and uses of citral, menthol and camphor. **Polyterpene:** an elementary study of natural rubber

(b) **Lipids :** Introduction - biological functions – classification. Simple lipids : Fats and oils – composition – isolation - general properties – hydrolysis, hydrogenation, hydrogenolysis and trans-esterification – Flavour changes in oils and fats – analytical characterization of fats and oils – Acid value, RM value, saponification value and iodine number. A brief study about compound lipids.

Unit - IV AMINO ACIDS, PROTEINS AND ENZYMES (15 hrs)

- (a) **Amino acids :** Introduction - Essential and non-essential amino acids -classification - synthesis by Gabriel, Strecker and Erlenmeyer methods – isoelectric point - zwitter ion - general chemical properties. Peptides : introduction - synthesis by carbobenzoxy method and Sheehan method.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

316

- (b) **Proteins** : Introduction - classification by chemical, composition and molecular shape - isolation - determination of structure by terminal residue analysis - types of structures - general properties - analytical reactions.
- (c) **Enzymes**: Introduction – classification – sources – mode of action – salient characteristics – uses.

Unit - V STEROIDS, HORMONES AND NUCLEIC ACIDS (15 hrs)

(a) **Steroids** : Introduction - biological importance - classification - biosynthesis - occurrence,

properties, structure (no elucidation), tests and physiological activity of cholesterol.

(b) **Hormones** : Introduction - chemical classification - biosynthesis - structure (no elucidation)

and biological importance of thyroid, pituitary, pancreatic and sex hormones - distinction with steroids.

(c) **Nucleic acids** : Introduction – constituents of nucleic acids – Ribonucleosides and ribonucleotides – composition of RNA and DNA - the double helical structure of DNA (Watson-Crick model).

Text books:

1. A Text book of Organic chemistry by K.S. Tewari and N. K. Vishnoi - Vikas Publishing House Pvt. Ltd. 3rd Edn. (2006).
2. Modern Organic Chemistry by M. K. Jain and S. C. Sharama - Vishal Publishing Co. 4th Edn. (2014).

Reference books:

1. Natural Products Chemistry by Jagdamaba Singh, S. M. Ali and Jaya Singh – Pragati Prakashan First edn. (2010).
2. Outlines of Biochemistry by E.E. Conn, P.K. Stumpf, G. Bruening and R. H. Doi – Wiley-India 5th Edn. (2007).
3. Organic Chemistry by I.L. Finar (Vol. I & Vol. II) - Pearson Education Ltd. (2012).



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

317

PART - III ELECTIVE	Title : NEWER ASPECTS OF CHEMISTRY	Subject Code : 17UCYE62
Semester : VI	HOURS : 5 hours / Week	CREDITS :5

Objectives

To acquire the recent advancements in chemistry in the field of green chemistry, nanomaterials and supramolecular chemistry.

Unit –I Green Chemistry – I

(15 hrs)

Definition – the need for green chemistry – goals of green chemistry – limitations of obstacles – twelve principles of green chemistry – concept of atom economy – rearrangement, addition, substitution and elimination reactions – green solvents – supercritical CO₂, ionic liquids as green solvents, use of H₂O as solvent.

Unit II Green Chemistry – II

(15 hrs)

Designing a green synthesis – choice of starting materials – choice of reagents – choice of catalysts – choice of solvents – examples of green synthesis: synthesis of adipic acid, synthesis of BHT, synthesis of Urethane – Microwave assisted reactions in water – Microwave assisted reactions in organic solvents – Ultra sound assisted reactions : esterification, saponification, Substitution, oxidation, cannizzaro reactions.

Unit III Nano technology-I

(15 hrs)

Nanomaterials: Introduction - Characterization - Synthesis by chemical methods viz., Thermolysis, Sonochemical Approach, Reduction by hydrogen, Reduction by methanol, Borohydride reduction and alkali metal reductions – Biosynthesis of Nano particles.

Unit IV Nano technology-II

(15 hrs)

Synthesis of Nanosized semiconductors by precipitation methods and thermal decomposition of complex precursors – Synthesis of ceramics by physical methods viz., Gas condensation method and Laser method and chemical methods (Sol-Gel synthesis) - Applications of Nanomaterials.

Unit V Supramolecular Chemistry

(15 hrs)

- Introduction – Host – guest chemistry. Theory and Examples.
- Organic host molecules - Cyclodextrins:** Introduction - properties - structure – applications in organic selective and specific reactions. Fullerenes : Introduction - types - structure - applications.
- Inorganic host molecules - Clay:** types and applications. Zeolite : types – modifications of zeolites – applications.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

318

Text Books :

1. Green chemistry by V.K.Ahluwalia, M.Kidwai- Anamaya publishers, Revised Edn. (2004).
2. Nanotechnology by S. Shanmugam –MJP Publishers-(2011).
- Supramolecular Chemistry by J.W.Steed and J.K.Atwood –Wiley Sons Ltd.,Second Edn. (2009).

Reference books:

1. Green Chemistry –Environment Friendly Alternatives by Rashmi Sanghi and M M Srivastava - Narosa Publishing House,(2003).
 2. Nano: The Essentials of Understanding Nanoscience and Nanotechnology by T .Pradeep- Tata Mc Graw Hill Publishing Company Ltd.,1st Edn.(2007).
-

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

319

PART - III	Title : Objective Chemistry (viva-voce)	Subject Code :
CORE		17UCYCV1
Semester : VI	HOURS : 2 hours / Week	CREDITS :2

Objectives : *To refresh all the aspects of chemistry studied during three years of course.*

Unit –I Physical Chemistry (6 hrs)

Basic laws pertained gaseous states – crystals - Energetics and dynamics of chemical reactions – photo chemical reactions – electrochemical cells –knowledge of liquid crystals – radioactivity – colloidal states.

Unit II Organic Chemistry (6 hrs)

Common names and IUPAC names of organic compounds – electronic effects – stereochemistry - petroleum and its products – use of reagents such as organometallics, active methylene compounds in the synthesis of various compounds – utility of natural products such as steroids, alkaloids, vitamins etc.- common name reaction

Unit III Inorganic Chemistry (6 hrs)

Atomic structure and chemical bonding – acids and bases –types of reactions – periodic table and properties – minerals and common inorganic substances used in day to day life – uses of coordination compounds

Unit IV Analytical Chemistry (6 hrs)

Knowledge of preparation of solutions using various concepts -types of reactions involved in the analysis of raw materials used in industries - assay determination – knowledge of indicators – electronic instruments including spectrometers used in analysis and their utility.

Unit V Pharmaceutical Chemistry (6 hrs)

Important terms and their explanation - knowledge of drugs commonly used for various diseases - preliminary ideas about formulation of various drugs viz. tablets, syrups, injections, etc. Organic pharmaceutical aids: Preservatives, antioxidants, emulsifying agents, colouring, flavouring and sweetening agents, stabilizing agents, ointment bases, solvents.

Reference Books :

1. A Text book of Organic chemistry by K.S. Tewari and N. K. Vishnoi - Vikas Publishing House pvt. Ltd. 3rd Edn. (2006).
2. Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl and G.T.Tuli - S.Chand and Co.Ltd., (2012).
3. Principles of Inorganic Chemistry by Puri, Sharma & Kalia, Milestone publisher & distributor (2009).
4. Analytical Chemistry by Gurdeep R.Chatwal – Himalaya Publishing House, 1st Edn.(2008).
5. A Text book of Pharmaceutical Chemistry by Jayashree Ghosh, S.Chand & Co. Ltd, (2012).

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 - 2018 onwards)

320

Department of Chemistry

**Chemistry papers offered to other B.Sc., courses as
Ancillary subjects and NME
(w.e.f. 2017-2018 onwards)**

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

321

PART - III ALLIED To B.Sc(PHY)	Title : GENERAL CHEMISTRY – I	Subject Code : 17UCYA31
Semester : III	HOURS : 4 hours / Week	CREDITS :4

Objective

*To acquire the knowledge of the theories of union of atoms, its rate of the reaction.
To have basic knowledge of gaseous state of the matter, carbon chemistry and metal complexes.*

Unit – I Chemical Bonding (12 hrs)

VB Theory: Postulates of VB theory – Application to the formation of simple molecules like H_2 and O_2 – overlap of atomic orbitals and its types - s-s, s-p and p-p overlap – Principle of hybridization – SP , SP^2 and SP^3 hybridisation – VSEPR theory and its applications .

M.O.Theory: Formation of M.O's by LCAO method – bonding, antibonding and non-bonding M.O's - M.O. diagram for H_2 , He_2 , O_2 and F_2 .

Unit-II Gaseous state (12 hrs)

Postulates of kinetic theory of gases – derivation of expression for pressure of an ideal gas on the basis of kinetic theory – deducing the basis gas laws. Deviation of real gases from ideal behavior – derivation of vander Waals gas equation - explanation of behavior of real gases on the basis of vander Waals equation. Average, Root Mean Square and Most Probable Velocities (no derivations):definition,equations and their relationship.

Unit – III Chemical kinetics (12 hrs)

Introduction – rate of reaction – rate law and rate constant – order and molecularity – first order reactions – examples – rate equation – derivation - half life period - second order reactions - examples – rate equations – derivation - half life period - zero order and third order reactions - examples – rate equations (no derivation required) - determination of order of a reaction.

Unit – IV Organic Chemistry (12 hrs)

- Nature of valency of carbon in organic compounds – tetrahedral arrangement of valency of carbon – bond breaking and bond forming in organic reactions – homolytic cleavage – heterolytic cleavage – reaction intermediates – formation, stability and reactions of carbocation, carbanion and free radicals.
- Reagents: Nucleophilic and Electrophilic - types and examples.
- Type of reactions: substitution – addition – elimination – rearrangement and polymerization – illustration with examples.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

322

Unit –V Coordination Chemistry

(12 hrs)

Double salts and coordination compounds – terminology: coordination sphere, coordination number, ligand and its types – Werner's coordination theory: postulates - EAN rule – applications and limitations. Valence Bond Theory: postulates and applications to $[\text{Ni}(\text{CN})_4]^{2-}$, $[\text{CuCl}_4]^{2-}$, $[\text{Fe}(\text{CN})_6]^{3-}$, and $[\text{Fe}(\text{H}_2\text{O})_6]^{2-}$ complexes - **Chelates**: definition and its applications.

Text books:

1. Principles of Inorganic Chemistry by Puri, Sharma and kalia, Vishal Publishing co., (2016).
2. Elements of Physical Chemistry by Puri, Sharma and Pathania, Vishal Publishing co. (2005).

Reference books:

1. A Text book of Organic Chemistry by B.S.Bahl and Arun Bahl. S.Chand & Co. Ltd.(1996).
2. Modern Organic Chemistry by M. K. Jain and S. C. Sharama, Vishal Publishing co. 4th edn. (2014).
3. Principles of Physical Chemistry by Puri, Sharma and Pathania, Vishal Publishing co., (2011).



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

323

PART - III ALLIED To B.Sc(PHY)	Title : GENERAL CHEMISTRY – II	Subject Code : 17UCYA41
Semester : IV	HOURS : 4 hours / Week	CREDITS :4

Objective : *To acquire the knowledge of solid state of matter and the basic concepts of spectroscopy. To impart the knowledge of electrochemical aspects of chemistry and some important polymers and industrially useful compounds.*

Unit-I Solid State (12 hrs)

Types of crystals – ionic, molecular, covalent and metallic crystals – structure of NaCl – structure of H₂O in the solid state – structure of diamond and graphite – metallic bond in metals – conductors, insulators and semiconductors – band theory.

Unit-II Electrochemistry (12 hrs)

Electrochemical cell – Nernst equation – convention regarding the sign of EMF of a cell – Electrodes – Reference electrodes – hydrogen and calomel electrodes – types of electrodes – metal-metal ion electrodes – metal-metal insoluble salt electrodes – metal- glass and ion selective electrodes – pH measurement using glass electrode – membrane potential – H₂-O₂ fuel cell.

Unit-III Polymer Chemistry (12 hrs)

Introduction: classification of polymers – natural and synthetic; thermoplastic and thermosetting. Types and mechanism of polymerization: addition, condensation and copolymerization. Techniques of polymerization : bulk, emulsion, solution and suspension. Preparation, properties and uses of Nylon and Epoxy resin.

Unit-IV Spectroscopy (12 hrs)

Basic principles of UV and IR spectroscopy – Identification of simple organic molecules: Ethylene, cis and trans butane, ethanol, dimethyl ether, acetaldehyde, acetone, methylamine and dimethylamine. NMR spectroscopy: Principle and spectrum of ethanol.

Unit-V Industrial Chemistry (12 hrs)

- Petroleum industry:** Composition of petroleum – Refining of petroleum – various fractions of refining and their uses.
- Silicate industry:** Cement and ceramics – raw materials and manufacture.
- Fertilizer industry:** Various types and artificial fertilizers – preparation and significance.

Text books:

- Elements of Physical Chemistry by Puri, Sharma and Pathania, Vishal Publishing Co. (2005).
- Modern Inorganic Chemistry by R. D. Madan and Satya Prakash, S. Chand and Co, 3rd edn. (2014).

Reference books:

- Essentials of Physical Chemistry by B.S.Bahl, G.D.Tuli and Arun Bahl, S.Chand & Co. Ltd. (2004).
- Industrial Chemistry– B.K.Sharma – Goel Publishing House. 13th Edition (2008).
- Elementary Organic Spectroscopy by Y. R. Sharma, S.Chand & Co. Ltd. (2012).

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED To B.Sc(PHY)	Title : VOULMETRIC ANALYSIS	Subject Code : 17UCYAP1
Semester:III& IV	HOURS : 2 hours / Week	CREDITS :2

Objective

To practice the quantitative estimation of substances by titration methods.

A double titration involving making up of the solution to be estimated or single titration involving making up of the solution to be estimated and the preparation of a primary standard.

A. ACIDIMETRY AND ALKALIMETRY

1. Titrations between a strong acid and strong base.
2. Titrations between a strong acid and weak base.
3. Titrations between a weak acid and strong base.

B. PERMANGANIMETRY

Titrations between potassium permanganate and oxalic acid, ferrous sulphate and ferrous ammonium sulphate (Mohr's salt)

C. IODOMETRY

Titrations of sodium thiosulphate with potassium permanganate and potassium dichromate.

Summative Examination at the end of semester IV

Max.marks-100

Distribution of Marks: Internal - 40 Marks
 External - 60 Marks

Duration of Examination: 3 hrs

Internal

Class Experiments : 30 marks
 Viva-voce : 10 marks
 Total : 40 marks

External examination

Record Notebook : 10 marks
 Procedure writing : 10 marks
 Experiment : 40 marks
 Total : 60 marks

For Analysis, if the student has

- < 2% error - 40 marks
- 2-3% error - 30 marks
- 3-5% error - 20 marks
- > 5% error 10 marks

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME-I To B.Sc(Maths)	Title : CHEMISTRY IN EVERYDAY LIFE - I	Subject Code : 17UCYN31
Semester:III	HOURS : 2 hours / Week	CREDITS :2

Objective

To acquire the knowledge about the chemicals used in day-today life.

Unit I Petrochemicals (6 hrs)

Definition – origin – composition-chemicals from natural gas - petroleum - light naphtha - kerosene.
 synthetic gasoline. LPG – biodiesel – gobar gas.

Unit II Food Chemistry (6 hrs)

Oils and fats – rancidity – refining – hydrogenation changes in vegetables on cooking – food processing food-additives – synthetic flavouring agents - food preservation and food adulteration.

Unit III Colloids (6 hrs)

Definition – types of colloidal systems – sols: definition – classification- dialysis – electrophoresis – electro osmosis – gold number. Emulsion and gel (definition only) – applications of colloids.

Unit IV Soaps and detergents (6 hrs)

Soaps: Composition – manufacture of soap – types of soaps.
 Detergents: Definition - synthetic cleansing action of soaps and detergents.

Unit V Dyes (6 hrs)

Definition – classification of dyes – preparation and uses of the following dyes: methyl orange, malachite green, bismarck brown and Indigo dye

Text books :

1. Foods – facts and principles, N. Shakuntala and Co. Wiley eastern Ltd. 3rd edition (2008).
2. Industrial Chemistry– B.K.Sharma – Goel Publishing House. 13th Edition 2008.

Reference books:

1. Advanced Organic Chemistry by Bahl and Arun Bahl, S. Chand and Co. Ltd., New Delhi (2007).
2. Organic Chemistry by K.S. Tewari, Vikas Publications House Pvt. Ltd. (2006).
3. Medicinal Chemistry by Ashutosh Kar, New Age International (P) Ltd. 5th edn. 2010.

Passed in the BOS Meeting
 held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc. CHEMISTRY - SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME-II To B.Sc(Maths)	Title : CHEMISTRY IN EVERYDAY LIFE - II	Subject Code : 17UCYN32
Semester:IV	HOURS : 2 hours / Week	CREDITS :2

Objective

To acquire the knowledge about the chemicals used in day-today life and a complete analysis of water

Unit I Water analysis (6 hrs)

An elementary idea about the parameters: pH, acidity, alkalinity, Total dissolved salts(TDS), hardness, Dissolved oxygen(DO), Biochemical oxygen demand(BOD), Chemical oxygen demand(COD).

Unit II Match and Silicate industries (6 hrs)

Match industry: lucifer and safety matches – Pyrotechny: composition of fireworks – coloured smokes – coloured matches. Explosives – gun powder – Trinitrotoluene (TNT)
Silicate industry: Raw materials and manufacture of Cement, Glass and Ceramics.

Unit III Paints and Pigments (6 hrs)

Manufacture of paints and pigments – setting of paints – characteristics of a good paint – paint failure – varnishes – pigments – zinc white – lithophone – ultramarines – carbon black – red lead – chrome green.

Unit IV Corrosion (6 hrs)

Introduction – differentiate the dry and wet corrosion – factors influencing corrosion- corrosion control.

Unit V Some small scale chemical units (6 hrs)

Safety matches – agarbatties – naphthalene balls – wax candles – shoe polish – gum paste – chalk crayons - plaster of paris.

Text books :

1. Organic Chemistry by K.S. Tewari, Vikas Publications House Pvt. Ltd. (2006).
2. Engineering Chemistry by Jain and Jain, Dhanpat Raj Publishing Co. Pvt. Ltd. (2007).

Reference books:

1. Industrial Chemistry– B.K.Sharma – Goel Publishing House. 13th Edition 2008.
2. A Text book of Pharmaceutical Chemistry by Jayashree Ghosh, S.Chand & Co. Ltd, 2012.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD

**B.Sc. CHEMISTRY - SYLLABUS****(Under CBCS w.e.f. 2017 – 2018 onwards)**

Degree :	B.Sc.	Branch :	BIOCHEMISTRY	PART III
Subject Code :	17UCYA11	Title of the Paper :	CHEMISTRY FOR BIOCHEMISTS - I	ALLIED
Semester :	I	No. of Hours / Week :	4 HOURS	No. of Credits: 4
OBJECTIVES: To impart the knowledge of ❖ Basic concepts in organic chemistry and stereochemistry. ❖ Concept of acids & bases, biological importance of osmosis & basic concepts in thermodynamics.				
UNIT – I :	FUNDAMENTAL CONCEPTS OF ORGANIC CHEMISTRY (12 Hours) Vital force theory – Tetravalency of carbon – Catenation – Classification and characterization of Organic Compounds – Functional groups and its characteristics – Organic reagents and its classification – Organic reactions and its types: addition, substitution, elimination, rearrangement & polymerization (examples only) – Nomenclature of Organic compounds (aliphatic only) – Trivial names – IUPAC system.			
UNIT – II :	STEREOMERISM (12 Hours) a) <u>Optical Isomerism</u> : Chiral Centre – Conditions – Enantiomers – Diastereomers – Epimers and Anomers – Optical isomerism of lactic acid and tartaric acid – Racemisation – Resolution of racemic mixture b) <u>Geometrical Isomerism</u> : Conditions for existence – Cis-trans isomerism of maleic acid and fumaric acid.			
UNIT – III :	CONCEPT OF ACIDS & BASES (12 Hours) Arrhenius, Bronsted-Lowry and Lewis Concept – Relative strength of acids and bases – Ionic product of water – pH and pOH – pH meter – Buffer solutions and its types – Henderson equation – Biological applications of buffer solutions – Basic concept of Electrolytes and their ionization – Significance of Electrolytes in human body.			
UNIT – IV :	SOLUTIONS (12 Hours) Definition – Types of solutions – Concentration – Solvent – Solute – Molecular weight – Equivalent weight – Various ways of expressing concentration – w/w, w/v, v/v, %, ppm, molarity, molality and normality (Problems involving direct substitution only) – Osmosis and its applications – Isotonic solutions and its biological importance – Hypertonic and Hypotonic solutions – Reverse Osmosis and its applications.			
UNIT – V :	THERMODYNAMICS (12 Hours) Importance – Terms used in Thermodynamics – Open, Closed & Isolated system – State function and Path function – Extensive and Intensive properties – Reversible and Irreversible processes – Statement and Mathematical form of First Law of Thermodynamics – Limitation of First Law of Thermodynamics – Statement of Second Law of Thermodynamics – Spontaneous process – Entropy – Physical significance of Entropy – Gibb's free energy and its significance.			
References: 1) A Text Book of Organic Chemistry by B.S.Bahl & Arun Bahl, S.Chand & Co. Ltd., 1996. 2) Text Book of Organic Chemistry by P.L.Soni & H.M.Chawla, Sultan Chand & Sons – 29 th Edition 2012. 3) Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl & G.T.Tuli, S.Chand & Co. Ltd., 2012. 4) Principles of Physical Chemistry by Puri, Sharma & Pathania, Vishal Publishing Co., 2011.				



Degree	: B.Sc.	Branch	: BIOCHEMISTRY	PART III
Subject Code	: 17UCYA21	Title of the Paper	: CHEMISTRY FOR BIOCHEMISTS - II	ALLIED
Semester	: II	No. of Hours / Week	: 4 HOURS	No. of Credits: 4
OBJECTIVES	:	To impart the knowledge of ❖ Pharmaceutical aids, therapeutic uses of drugs and biological importance of alkaloids & terpenoids. ❖ Surface chemistry & applications of colloids.		
UNIT – I	:	<u>ALKALOIDS AND TERPENOIDS</u>		(12 Hours)
		a) <u>Alkaloids</u> : Definition – Occurrence – Extraction – Functions – General properties – Classification – Structure and biological importance of the following alkaloids: Cocaine, Nicotine, Morphine, Piperine and Atropine. b) <u>Terpenoids</u> : Definition – Occurrence – Isolation – Isoprene rule – Classification – General properties – Structure and biological importance of the following Terpenoids: Citral, Geraniol, Menthol and Camphor.		
UNIT – II	:	<u>DRUGS</u>		(12 Hours)
		a) <u>Antibiotics</u> : Definition – Condition – Classification – Structure and Therapeutic uses of Penicillin, Streptomycin, erythromycin & Ofloxacin. b) <u>Antipyretics & Analgesics</u> : Definition – Structure and uses of Aspirin, Paracetamol, Morphine, Pethidine. c) <u>Antimalarials</u> : Study of Chloroquine, Quinine. d) <u>Arsenical Drugs</u> : Study of Salvarsan-606 & Neosalvarsan.		
UNIT – III	:	<u>PHARMACEUTICAL AIDS</u>		(12 Hours)
		a) <u>Organic Pharmaceutical Aids</u> : Preservation, Antioxidants, Emulsifying agents, Colouring, Flavouring and Sweetening Agents, Stabilizing Agents, Ointment bases and solvents (Explanation with example) b) <u>Organic Diagnostic Aids</u> : Drugs used for X-ray Contrast Media (BaSO ₄), Sodium diatrizoate Injection – Drugs used to test organ function (Fluorescein Sodium, Sulfobromophthalein Sodium) – Determination of blood volume and Haemopoietic Function.		
UNIT – IV	:	<u>SURFACE CHEMISTRY</u>		(12 Hours)
		a) <u>Adsorption</u> : Definition – Mechanism of adsorption – Types of adsorption – Physical and chemical adsorption – Factors influencing adsorption – Adsorption of solutes from solution – Application of adsorption – Ion-exchange adsorption and its application. b) <u>Catalysis</u> : Definition – General characteristics of catalytic reactions – Types of catalysts (Positive, negative, auto) – Types of catalysis (Homogeneous and Heterogeneous) – Acid-base catalysis – Theories of catalysis (adsorption and intermediate compound formation theory) – Catalytic poisons – Catalytic promoters – Enzyme catalysis.		



UNIT – V	: <u>COLLOIDS</u>	(12 Hours)
	a) Colloidal state of matter – Various types – Classification. b) Sols – Characteristics of lyophilic and lyophobic sols – Dialysis – Electro osmosis – Electrophoresis – Protective action – Hardy-Schulze law – Gold number. c) <u>Emulsion</u> : Definition – Types – Emulsifier with examples. d) <u>Gels</u> : Classification and preparation. e) Application of colloids (Smoke precipitation, Sewage disposal, Artificial rain, Classification of municipal water, Cleaning action of soap).	
References	1) Natural Products Chemistry by Jagdamba Singh, S.M.Ali & Jaya Singh, Pragati Prakashan, 1 st Edition, 2010. 2) Text Book of Organic Chemistry by P.L.Soni & H.M.Chawla, Sultan Chand & Sons – 29 th Edition 2012. 3) A Text Book of Pharmaceutical Chemistry by Jayashree Ghosh, S.Chand & Co. Ltd., 2012. 4) Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl & G.T.Tuli, S.Chand & Co. Ltd., 2012. 5) Principles of Physical Chemistry by Puri, Sharma & Pathania, Vishal Publishing Co., 2011.	

**B.Sc. CHEMISTRY - SYLLABUS****(Under CBCS w.e.f. 2017 – 2018 onwards)**

Degree :	B.Sc.	Branch :	BIOCHEMISTRY	PART III
Subject Code :	17UCYAP1	Title of the Paper :	VOLUMETRIC ANALYSIS	ALLIED
Semester :	II	No. of Hours / Week :	2 HOURS	No. of Credits:2
Objective:	<u>VOLUMETRIC ANALYSIS</u> (2 Hours / Week) A double titration involving making up of the solution to be estimated or single titration involving making up of the solution to be estimated and the preparation of a primary standard.			
I	<u>ACIDIMETRY & ALKALIMETRY</u> 1) Titration between a strong acid and strong base. 2) Titration between a strong acid and weak base. 3) Titration between a weak acid and strong base.			
II	<u>PERMANGANIMETRY</u> 4) Titration between Potassium Permanganate and Oxalic Acid. 5) Titration between Potassium Permanganate and Ferrous Sulphate. 6) Titration between Potassium Permanganate and Mohr's Salt.			
III	<u>EDTA TITRATIONS (Demonstration only)</u> 7) Estimation of Ca ²⁺ present in water using EDTA. 8) Estimation of Mg ²⁺ present in water using EDTA.			
(SUMMATIVE EXAMINATION WILL BE HELD AT THE END OF SECOND SEMESTER)				

Summative Examination at the end of semester II

Max.marks-100

Distribution of Marks: Internal - 40 Marks, External - 60 Marks, Duration of Examination: **3hrs****External examination**

Record Notebook : 10 marks

Procedure writing : 10 marks

Experiment : 40 marks

Total : 60 marks

For Analysis, if the student has

< 2% error - 40 marks

2-3% error - 30 marks

3-5% error - 20 marks

> 5% error 10 marks

**B.Sc. CHEMISTRY - SYLLABUS****(Under CBCS w.e.f. 2017 - 2018 onwards)**

Degree	B.Sc.	Branch	:	MICROBIOLOGY	PART III
Subject Code	17UCYA12	Title of the Paper	:	CHEMISTRY FOR BIOLOGISTS - I	ALLIED
Semester	I	No. of Hours / Week	:	4 HOURS	No. of Credits:4
OBJECTIVES To impart the knowledge of ❖ Atomic structure, application of radioisotopes, biological importance of osmosis, concept of acids and bases and buffer solutions. ❖ Basic concepts of organic chemistry and pharmaceutical aids.					
UNIT - I: <u>ATOMIC STRUCTURE AND RADIOACTIVITY</u> (12 Hours) Constituents of Atom – Atomic number – Mass number – Isotopes – Isobars – Shapes of orbitals – Aufbau principle – Hund's rule – Pauli's exclusion principle – Electronic configuration of atoms – Salient features of modern periodic table. Radioisotopes – Tracer technique – Applications in the field of Medicine, Biology, Agriculture and Industry.					
UNIT - II: <u>CONCEPT OF ACIDS AND BASES</u> (12 Hours) Arrhenius, Bronsted-Lowry and Lewis Concept – Relative strength of acids and bases – Ionic product of water – pH and pOH – pH meter – Buffer solutions and its types – Henderson equation – Biological applications of buffer solutions – Basic concept of Electrolytes and their ionization – Significance of Electrolytes in human body.					
UNIT - III <u>SOLUTIONS</u> (12 Hours) Definition – Types of solutions – Concentration – Solvent – Solute – Molecular weight – Equivalent weight – Various ways of expressing concentration – w/w, w/v, v/v, %, ppm, molarity, molality and normality (Problems involving direct substitution only) – Osmosis and its applications – Isotonic solutions and its biological importance – Hypertonic and Hypotonic solutions – Reverse Osmosis and its applications.					
UNIT - IV <u>FUNDAMENTAL CONCEPT OF ORGANIC CHEMISTRY</u> (12 Hours) Vital force theory – Tetravalency of carbon – Catenation – Classification and characterization of Organic Compounds – Functional groups and its characteristics – Organic reagents and its classification – Organic reactions and its types: addition, substitution, elimination, rearrangement & polymerization (examples only) – Nomenclature of Organic compounds (aliphatic only) – Trivial names – IUPAC system.					
UNIT - V: <u>PHARMACEUTICAL AIDS</u> (12 Hours) a) <u>Organic Pharmaceutical Aids:</u> Preservation, Antioxidants, Emulsifying agents, Colouring, Flavouring and Sweetening Agents, Stabilizing Agents, Ointment bases and solvents (Explanation with example) b) <u>Organic Diagnostic Aids:</u> Drugs used for X-ray Contrast Media (BaSO ₄), Sodium diatrizoate Injection – Drugs used to test organ function (Fluorescein Sodium, Sulfobromophthalein Sodium) – Determination of blood volume and Haemopoietic Function.					



REFERENCES:

- 1) Essentials of Physical Chemistry by B.S.Bahl, Arun Bahl & G.T.Tuli, S.Chand & Co. Ltd., 2012.
- 2) A Text Book of Pharmaceutical Chemistry by Jeyashree Ghosh, S.Chand & Co. Ltd., 2012.
- 3) A Text Book of Organic Chemistry by B.S.Bahl & Arun Bahl., S.Chand & Co. Ltd., 1996.
- 4) Principles of Physical Chemistry by Puri, Sharma & Pathania, Vishal Publishing Co., 2011.



Degree : B.Sc.	Branch : MICROBIOLOGY	PART III
Subject Code : 17UCYA22	Title of the Paper : CHEMISTRY FOR BIOLOGISTS – II	ALLIED
Semester : II	No. of Hrs/Week : 4 HOURS	No. of Credits:4

OBJECTIVES:

To impart the knowledge of

- ❖ Biomolecules like alkaloids, terpenoids, carbohydrates, amino acids, proteins and nucleic acids.
- ❖ Basic principles & instrumentation of biochemical techniques, colorimetry & chromatography.

UNIT – I: BIOMOLECULES-I (12 Hours)

Carbohydrates: Definition – Classification – Mono-saccharides – Characteristic properties of glucose and fructose – Uses – Disaccharides – Sucrose and maltose – Manufacture and properties – Polysaccharides – Study of starch and cellulose (Structure only) – applications – Colour reactions.

UNIT – II: BIOMOLECULES-II (12 Hours)

Amino Acids: Definition – Essential and non-essential amino acids – Classification – Properties – Zwitterion and isoelectric point.

Proteins: Definition – Various classification – Detailed study of structure – Biological functions – Colour reactions.

Nucleic Acids: Types – RNA & DNA – Differences between them – Elementary idea about their biological functions.

UNIT – III: BIOMOLECULES-III (12 Hours)

a) Alkaloids: Definition – Occurrence – Extraction – Functions – General properties – Classification – Structure and biological importance of the following alkaloids: Cocaine, Nicotine, Morphine, Piperine and Atropine.

b) Terpenoids: Definition – Occurrence – Isolation – Isoprene rule – Classification – General properties – Structure and biological importance of the following Terpenoids: Citral, Geraniol, Menthol and Camphor.

UNIT – IV: COLORIMETRY (12 Hours)

Light spectrum – Its wave length region – Principle of colorimetry – Beer Lambert's law – Molar extinction coefficient – Instrumentation – Methods of colour measurement – Colorimeter – Photoelectric Colorimeter – Spectrophotometer – Applications.

UNIT – V: CHROMATOGRAPHY (12 Hours)

Introduction – Classification – Principle and detailed study of column, thin layer, paper and gas chromatography – Gel electrophoresis.

REFERENCES:

- 1) A Text Book of Organic Chemistry by B.S.Bahl & Arun Bahl., S.Chand & Co. Ltd., 1996.
- 2) Text Book of Organic Chemistry by P.L.Soni & H.M.Chawla, Sultan Chand & Sons–29th Edition 2012.
- 3) Natural Products Chemistry by Jagdamba Singh, S.M.Ali & Jaya Singh, Pragati Prakashan, 1st Ed, 2010.
- 4) Elements of Analytical Chemistry by R.Gopalan, P.S.Subramanian & K.Rengarajan, Sultan Chand & Sons – Reprint of 3rd Edition, 2011.
- 5) Analytical Chemistry by Gurdeep.R.Chatwal, Himalaya Publishing House, 1st Edition, 2008.



Degree	: B.Sc.	Branch	: MICROBIOLOGY	PART III
Subject Code	: 17UCYAP1	Title of the Paper	: VOLUMETRIC ANALYSIS	ALLIED
Semester	: II	No. of Hrs/Week	: 2 HOURS	No. of Credits: 2
VOLUMETRIC ANALYSIS (2 Hours / Week)				
A double titration involving making up of the solution to be estimated or single titration involving making up of the solution to be estimated and the preparation of a primary standard.				
I	<u>ACIDIMETRY & ALKALIMETRY</u>			
	1) Titration between a strong acid and strong base.			
	2) Titration between a strong acid and weak base.			
	3) Titration between a weak acid and strong base.			
II	<u>PERMANGANIMETRY</u>			
	4) Titration between Potassium Permanganate and Oxalic Acid.			
	5) Titration between Potassium Permanganate and Ferrous Sulphate.			
	6) Titration between Potassium Permanganate and Mohr's Salt.			
III	<u>EDTA TITRATIONS (Demonstration only)</u>			
	7) Estimation of Ca ²⁺ present in water using EDTA.			
	8) Estimation of Mg ²⁺ present in water using EDTA.			

Summative Examination at the end of semester II

Max.marks-100

Distribution of Marks: Internal - 40 Marks External - 60 Marks

Duration of Examination: **3hrs****External examination**

Record Notebook : 10 marks

Procedure writing : 10 marks

Experiment : 40 marks

Total : 60 marks

For Analysis, if the student has

< 2% error - 40 marks

2-3% error - 30 marks

3-5% error - 20 marks

> 5% error 10 marks



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

335

I SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hrs per Week	Exam (Hrs)	CA	SE	Tot	Crd
1	17UACT11	Part - I	Tamil	6	3	25	75	100	3
	17UACH11		Hindi						
	17UACS11		Sanskrit						
2	17UACE11	Part - II	English	6	3	25	75	100	3
3	17UCSC11	Part-III Core	Programming in C	4	3	25	75	100	4
4	17UCSCP1	Part-III Core	Lab 1: Programming in C Lab	5	3	40	60	100	3
5	17UCSA11	Part-III Allied	Discrete Mathematics	4	3	25	75	100	4
6	17UCSS11	Part-IV SBS	Digital Principles & Its applications	3	3	25	75	100	3
7	14UACVE1	Part-IV	Value Education	2	3	25	75	100	2
			Total	30				700	22



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

336

PART - III CORE	Title : Programming in C	Subject Code : 17 UCS C11
Semester : I	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To inculcate knowledge in fundamentals of computers.
- To provide knowledge in algorithm design and flowcharts.
- To make understand the concepts and features of C programming and to enrich the logical skill of the students.

UNIT I : Overview of C: History of C – Importance of C – Basic structure of C – Programming style – Constants, variables and Data types – declaration of variables, storage class – defining symbolic constants – declaring a variable as constant, volatile – overflow and underflow of data. Operators and expressions: arithmetic, relational, logical, assignment operators – increment and decrement operators, conditional operators, bitwise operators, special operators – arithmetic expression – evaluation of expressions – precedence of arithmetic operators – type conversions in expression – operator precedence and associativity – mathematical functions – managing I/O operations: reading and writing a character – formatted input, output.

UNIT II : Decision making and branching: if statement, if...else statement – nesting of if ...else statement – Else if Ladder – Switch statement – the?: operator – goto statement. The While statement – do statement – The for statement – jumps in loops

UNIT III : Arrays: one dimensional array – declaration, initialisation – two dimensional array – multi dimensional array – dynamic arrays – initialisation. Strings: declaration, initialisation of string variables – reading and writing string – arithmetic operations on strings – putting strings together – comparison – string handling function – table of strings – features of string.

UNIT IV : User defined functions: need – multi function program – elements of user defined function – definition – return values and their types – function calls, declaration, category – all types of arguments and return values – nesting of functions – recursion – passing arrays, strings to functions – scope visibility and life time of variables – multi file programs. Structures and unions: defining a structure – declaring structure variables – accessing structure members – initialisation – copying and comparing – operations on individual members – arrays of structures – arrays within structures – structures within structures – structures and functions – Unions – size of structures – bit fields.

UNIT V : Pointers: accessing the address of a variable – declaring, initialisation of pointer variables – accessing a variable through its pointer – chain of pointers – pointer expressions – pointer increment and scale factors – pointers and arrays – pointers and character strings – array of pointers – pointers as function arguments – function returning pointers – pointers to functions – pointers and structures. Files: defining, opening, closing a file. I/O operations on files – error handling during I/O operations – random access to file – command line arguments.

Text Book:

1. E. Balagurusamy, "Programming in ANSI C", Edition 3, Tata McGraw Hill Publishing Company, 2005.

UNIT I : Chapters: 1 – 4 UNIT II : Chapter 5,6 UNIT III : Chapters 7, 8 UNIT IV : Chapters 9, 10

UNIT V : Chapter 11, 12

Reference Book: Programming with C (Schaum's Outline Series), Gottfried, Tata McGraw Hill, 2006.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : PROGRAMMING IN C LAB	Subject Code : 17 UCS CP1
Semester : I	HOURS : 5 hours / Week	CREDITS : 3

LIST OF EXPERIMENTS

Expression Evaluation

1. Finding Simple Interest and Compound Interest
2. Centigrade to Farenheit and Farenheit to Centigrade
3. Finding roots of a quadratic equation

Conditional Statements

4. EB Bill Generation
5. Print Grade of a student
6. Checking Prime Number

Looping Statements

7. Sum of the digits of a number
8. Evaluate Sine Series
9. Finding Standard Deviation and Variance

Array

9. Searching an element in an array
10. Array Sorting
11. Matrix Addition
12. Matrix Multiplication
13. Finding sum of the diagonal elements of a matrix

String Array

14. Reverse a String and Palindrome Checking
15. Using string built-in functions
16. Finding number of words in a sentence

Functions

17. Finding Factorial
18. Finding NCP value using recursion
19. Finding biggest element

Structures

20. Mark Sheet Preparation using structure
21. Paybill Preparation using structure

Files

22. Inventory Control using files
23. Maintaining Book Information using files



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III	Title : DISCRETE MATHEMATICS	Subject Code :
ALLIED		17 UCS A11
Semester : I	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To teach the basic concepts of Set theory and Relations
- To impart knowledge on solving problems using logic
- To solve various problems using matrices.
- To give the basic concepts of Graph theory and its applications

UNIT I

Set Theory: Sets – Notation and Description of sets – Subsets – Venn-Euler diagram – Operations on sets – Properties on Set operations – Verification of the Basic Laws of Algebra by Venn diagrams – The Principle of Duality

Relations : Relations – Representation of a Relation – Operations on Relations –Equivalence Relation .

UNIT II

Matrix Algebra: Introduction – Matrix operations – Inverse of a square matrix – Elementary operations and Rank of a Matrix – Simultaneous equations – Eigen values and Eigen vectors.

UNIT III

Logic: Introduction – TF statements - Connectives – Atomic and Compound statements – Well formed Formulae - The Truth Table of a Formula – Tautological Implications and Equivalence of Formulae implication and equivalence of formulae.

UNIT IV

Graph theory: Introduction – Definition and Examples – Degrees and Subgraphs – Matrices - Connectedness: Walks, Trials and Paths, Connectedness and Components.

UNIT V

Eulerian graphs – Trees: Characterization of trees, Centre of a tree.

Text Books:

1. **Discrete Mathematics**, Dr.M.K.Venkaatraman, Dr.N.Sridharan and Dr.N.Chandrasekaran, National Publishing Company, 2000. (for Units I, II and III)
2. **Invitation to Graph Theory**, S.Arumugam and S.Ramachandran , Scitech Publications, 2005, Chennai. (for Units IV and V)
 UNIT I : Chapters 1 and 2: Pages: 1.1 – 1.31, 2.6-2.27
 UNIT II : Chapter 6: Pages: 6.1- 6.31, 6.37-6.44
UNIT III : Chapter 9: Pages: 9.1-9.34
 UNIT IV : Chapters 2.1, 2.2, 2.3, 2.8, 4.0, 4.1, 4.2
UNIT V : Chapters 5 and 6

Reference Books:

1. **Modern Algebra**, S. Arumugam & A. Thangapandi Issac, Scitech publications, 2005



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV SKILL BASED	Title : DIGITAL PRINCIPLES AND ITS APPLICATIONS	Subject Code : 17 UCS S11
Semester : I	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To give knowledge about Binary, Octal, Decimal, Hexadecimal number system
- To inculcate knowledge on logic gates and Boolean algebra
- To give knowledge on the physical components of computers like Registers, Multiplexers, Decoders, Flipflops, and counters

UNIT I:

Binary number system-Binary to Decimal conversions-Decimal to Binary-Octal-Hexadecimal numbers-ASCII code-Excess-3 code-Gray code-The basic gates- Inverter-OR Gates-AND Gates- Universal logic gates-NOR Gates-NAND Gates

UNIT II:

Boolean laws and theorems-Sum of Products Method-K map-Truth Tables-Pairs, Quads, Octets-K map simplifications-Don't care conditions-Product of sum methods-Product of sum simplifications.

UNIT III:

Multiplexers-De-Multiplexers-1-of-16-Decoders-BCD-to-Decimal Decoders- 7-segment decoders-Encoders-Exclusive-OR Gates-Parity Generators-Checkers

UNIT IV:

Binary Addition-Binary Subtraction-2's & 1's complement representation-2's Complement Arithmetic-Arithmetic building blocks-RS-flip flop-D-Flip Flop-JK Flip Flop- JK Master Slave Flip Flop.

UNIT V:

Types of Registers-Serial in Serial out-Serial in Parallel out-Parallel in Serial out-Parallel in parallel out-Ripple Counter-Synchronous Counter.

Text Book:

Digital Principles and Applications by Albert Paul Malvino and Donald P. Leach
 Sixth Edition Tata McGraw-Hill-Edition

UNIT I : Chapters: 2.1 to 2.3, 5.1 to 5.8

UNIT II : Chapters: 3.1 to 3.8

UNIT III: Chapters: 4.1 to 4.8

UNIT IV: Chapters: 6.1 to 6.8, 8.1, 8.3, 8.4, 8.5, 8.7

UNIT V : Chapters: 9.1 to 9.5, 10.1, 10.3

Reference Books:

1. Digital Computer Fundamentals ,Thomas C.Bartee TMH 2007.
2. Digital Circuits and Design,S.Salivahanan and S.Arivazhagan ,Vikas Publishers.2005



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

340

II SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17UACT21	Part - I	Tamil	6	3	25	75	100	3
	17UACH21		Hindi						
	17UACS21		Sanskrit						
2	17UACE21	Part - II	English	6	3	25	75	100	3
3	17 UCSC21	Part-III Core	Object oriented programming using C++	4	3	25	75	100	4
4	17UCSCP2	Part-III Core	Lab 2: OOP using C++ Lab	5	3	40	60	100	3
5	17 UCS A21	Part-III Allied	Probability and Statistics	4	3	25	75	100	4
6	17 UCS S21	Part-IV SBS	Computer Organization	3	3	25	75	100	3
7	14UACES1	Part-IV	Environmental Studies	2	3	25	75	100	2
			Total	30				700	22

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

341

PART - III CORE	Title : OBJECT ORIENTED PROGRAMMING USING C++	Subject Code : 17 UCS C21
Semester : II	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To inculcate knowledge in object oriented programming concepts.
- To enrich the knowledge in inheritance and virtual functions
- To give knowledge on file handling

UNIT I:

Principles of object oriented programming(OOP):Software evolution – OOP Paradigm – Basic concepts of OOP – Benefits of OOP – Object Oriented Languages – Applications of OOP. Introduction to C++: Tokens, Keywords, Identifiers, Variables, Operators, Manipulators, Expressions and Control Structures in C++.

UNIT II:

Function in C++ - Main Function – Function Prototyping – Call by reference – Return by reference – Function Overloading – Friend and Virtual Functions.

UNIT III: Classes and objects-Constructors and Destructors – Operator overloading.

UNIT IV: Inheritance – Single inheritance – Multilevel inheritance – Multiple inheritance – Hierarchical inheritance– Hybrid inheritance. Pointers,Virtual Functions and Polymorphism- Managing I/O Operations.

UNIT V: Working with Files : Classes for File Stream Operations – Opening and Closing a File – End-of-file deletion – File pointers – Updating a File – Error Handling during File Operations Command line Arguments.

Text Book:

E. Balagurusamy, Object Oriented Programming With C++, 4th Edition, Tata McGraw-Hill, New Delhi, 2008

Chapters:

Unit I : Chapter 1 – 3

Unit II: Chapter 4

Unit IV: Chapters 8-10

Unit III: Chapter 5- 7

Unit V: Chapters 11

Reference Books:

1. Object-Oriented Programming With C++, Poornachandra Sarang, 2nd Edition, PHI Learning Private Limited, New Delhi, 2009
2. Object-Oriented Programming Using C++, Alok Kumar Jagadev, Amiya Kumar Rath and Satchidananda Dehuri, Prentice-Hall of India Private Limited, New Delhi, 2007
3. Al Stevens, C++ Programming , 7th Edition, Wiley DreamTech India Pvt Ltd , 2003
4. Classical Data Structures – D.Samanta, PHI, 2008



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : OBJECT ORIENTED PROGRAMMING USING C++ LAB	Subject Code : 17 UCS CP2
Semester : II	HOURS : 5 hours / Week	CREDITS : 3

LIST OF EXPERIMENTS

Write programs in C++ to solve the following Problems:

1. To perform Area calculation using Function overloading (Min three functions).
2. To perform String manipulation (three different types) using function overloading.
3. To swap two values between two class objects using friend function.
4. To find minimum of two numbers between two class objects using friend function.
5. To overload unary minus operator which changes sign of given vector (3 elements)
6. To overload Binary + operator which adds two complex numbers.
7. To process students mark list using multiple inheritance
8. To Process employee details using hierarchical inheritance
9. To process family details using hybrid inheritance.
10. To process electricity billing using binary file.
11. To process mark listing using binary file.
12. To perform stack operations.
13. To perform queue operations.
14. To manipulate singly linked list



PART - III ALLIED	Title : PROBABILITY AND STATISTICS	Subject Code : 17 UCS A21
Semester : II	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To give knowledge about various types of statistical measures such as mean, median, mode, geometric mean, harmonic mean, standard deviation etc.,
- To give a foundation in statistical data analysis
- To solve real life problems using Correlation coefficient, regression, and theoretical probability distributions.

UNIT –I : CENTRAL TENDENCIES: Introduction –Arithmetic Mean (AM) – Partition values (Median, Quartiles, Deciles and Percentiles) – Geometric Mean and Harmonic Mean – Relative advantages of different averages.

UNIT – II : MEASURES OF DISPERSION: Introduction – Measures of Dispersion - Measures of dispersion – Range – Quartile Deviation – Mean Deviation – Standard deviation and Root mean square deviation – Coefficient of dispersion - Coefficient of variation – relative advantages of different measures of dispersion - Moments – Skewness – Kurtosis

UNIT – III : CURVE FITTING: Introduction – Principle of Least squares - Fitting of a straight line - Fitting of second degree parabola. **CORRELATION AND REGRESSION:** Introduction – Correlation - Karl Pearson coefficient of correlation – Rank Correlation – Repeated ranks – Regression – Lines of regression

UNIT – IV : PROBABILITY: Introduction - Probability – Conditional Probability - Example Problems only. **RANDOM VARIABLES:** Introduction - Random Variables – Discrete Random variable - Continuous random variable – Mathematical Expectations – Solved Problems only.

UNIT –V : SOME SPECIAL DISTRIBUTIONS: Introduction - Binomial distribution – Moments of Binomial distribution – MGF of Binomial distributions - Poisson distribution – MGF of Poisson distributions - Moments of Poisson distribution - Normal distribution – Moments of Normal distribution - MGF of Normal distributions.

(Excluding the Topics: Median, Mode, Cumulants, Recurrence formula, Fitting distributions, Characteristic functions, Additive Property)

(Units I,II,III,IV,V: Problems – Solved Problems only, Theorems- Statements only)

TEXT BOOK:

STATISTICS, By “Dr.S.ARUMUGAM & A.THANGAPANDI ISSAC”, NEW GAMMA PUBLISHING HOUSE,2002

Unit I : 2.0 – 2.5 : Pages: 11-59

Unit II : 3.0-3.2, 4.0-4.2 : Pages: 60-94

Unit III: 5.0, 5.1, 6.0, 6.1, 6.2, 6.3 : Pages :95-141

Unit IV: 11.0, 11.1 , 11.2, 12.0, 12.1, 12.2, 12.3, 12.4 : Pages: 274-300, 304-328

Unit V: 13.0, 13.1, 13.2, 13.3

REFERENCE BOOKS:

1. **FUNDAMENTALS OF MATHEMATICAL STATISTICS** by **S.C.GUPTA & V.K.KAPOOR**, SULTAN CHAND AND SONS, 2004.

2. **ELEMENTS OF MATHEMATICAL STATISTICS** by **S.C.GUPTA & V.K.KAPOOR**, SULTAN CHAND & SONS, THIRD EDITION, 2000



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV SKILL BASED	Title : COMPUTER ORGANIZATION	Subject Code : 17 UCS S21
Semester : II	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To enrich the knowledge on hardware components of a computer
- To have knowledge on Instruction formats and addressing modes
- To inculcate knowledge on working concepts of Input/output devices.
- To give knowledge on various types of memory and their hierarchies.

Unit I Instruction Codes _ Computer Registers – Computer Instructions – Timing and Control – Instruction Cycle.

Unit II General Register Organization – Stack Organization – Instruction Formats – Addressing Modes.

Unit III Parallel processing-Pipelining-Arithmetic and Instruction pipeline-Vector processing-Vector operation-memory interleaving- Super Computer.

Unit IV I/O Interface – Asynchronous Data Transfer- Modes of I/O transfer - Direct Memory Access.

Unit V Memory Hierarchy – Main Memory - Auxillary Memory – Associative Memory – Cache Memory – Virtual Memory.

Text Book:

Computer System Architecture – M. Morris Mano 3rd Edition

Unit I	Chapters:	5.1 - 5.5
Unit II	Chapters:	8.1 - 8.5
Unit III	Chapters:	9.1 - 9.4, 9.6
Unit IV	Chapters:	11.2 - 11.4, 11.6
Unit V	Chapters:	12.1 - 12.6

Reference Books:

Computer Organization V. Carl Hamacher, Zconko G. Vranesic, Safwat G. Zaky 4th Edition, McGraw-Hill International Editions.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

345

III SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hrs/Week	Exam Hrs	CA	SE	Tot	Crd
1	17UACT31/ H31/ S31	Part - I	Tamil/Hindi /Sanskrit	6	3	25	75	100	3
2	17 UACE31	Part - II	English	6	3	25	75	100	3
3	17 UCSC31	Part-III Core	JAVA Programming	4	3	25	75	100	4
4	17 UCS CP3	Part-III Core	Lab 3: JAVA Programming Lab	5	3	40	60	100	3
5	17 UCSA31	Part-III Allied	Operations Research	4	3	25	75	100	4
6	17 UCS SP1	Part-IV SBS	Lab 4: Linux and shell programming Lab	3	3	40	60	100	3
7	17 UCSN31	Part-IV NME	Introduction to Computers and Office Automation	2	3	25	75	100	2
			Total	30				700	22

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : JAVA PROGRAMMING	Subject Code : 17 UCS C31
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To give knowledge about OOP concepts using JAVA language
- To make understand the features of JAVA as a Platform independent Language
- To train the students by solving various problems using JAVA

UNIT 1 : Creation of Java – Why Java is Important to the Internet – Java’s Byte Code – Java’s Buzzwords -OOP’s Principles – Compiling the program – Lexical Issues – Simple Data Types – Literals – Variables – Type Conversion and Casting – Operators – Control Statements – Selection Statements – Iterative Statements – Jump Statements

UNIT 2 : Class – Objects – Methods – Constructors – this keyword – Garbage Collection – finalize – Overloading Methods – Overloading Constructors – Recursion – Access Control – static – final – nested and Inner Classes – String Class – using Command Line Arguments – StringBuffer Class

UNIT 3 : Inheritance – Using Super – Method Overriding – dynamic method dispatch – using Abstract Classes – using final to prevent overriding – using final to prevent inheritance – Packages and Interfaces – Simple Wrapper Classes

UNIT 4 : Exceptions Handling – try – catch – finally – throw – throws – Java’s Built in exceptions – user defined exceptions – Java’s Thread Model – Thread Class – Creating Thread – Java I/O classes - Serialization

UNIT 5 : Applet Basics- Architecture – Skeleton – Applet Class – Html’s applet tag – passing parameters to applets – Event Handling – Delegation Event Model – Event Classes – Sources of Events – Event Listener Interfaces – Adapter Classes – AWT Controls

TEXT BOOK :

The Complete Reference – Java2 – 3rd Edition – Patrick Naughton and Herbert Schildt, Tata Mc Graw Hill

UNIT 1 : Chapters 1,2,3,4,5

UNIT 2 : Chapters 6,7,13

UNIT 3 : Chapters 8,9,14

UNIT 4 : Chapters 10,11,17

UNIT 5 : Chapters 19,20,22

REFERENCE BOOKS

1.Programming with Java, A primer, 3e, E.Balagurusamy, TMH Co. 2008.

2. Java and Object-Oriented Programming Paradigm, Debasish Jana, Prentice-Hall of India Private Limited, New Delhi, 2008.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

347

PART - III CORE	Title : JAVA PROGRAMMING LAB	Subject Code : 17 UCS CP3
Semester : III	HOURS : 5 hours / Week	CREDITS : 3

Simple Java Programs

1. Generate Fibonacci Series
2. Implementing Bitwise Logical AND,OR,NOT,XOR Operator
3. Display EB Bill Amount using Switch Statement
4. Array – Searching and Array – Sorting
5. Matrix – RowSum, Column Sum
6. Pattern Display using break and continue
7. Finding Factorial using Recursion

Using Classes and Objects

8. Volume of a box using simple class
9. Employee Details using array of objects
10. Student information using Constructor Overloading
11. Finding area using Method Overloading
12. Single Inheritance
13. Adding int, float numbers using Method Overriding

String and StringBuffer

14. String Handling Methods & StringBuffer Class Methods

Package and Interfaces

15. Arithmetic Calculation using packages
16. Banking Operations using Interface

Exceptions

17. Built in exceptions handling & User Defined Exceptions handling

Thread

18. Thread Handling

I/O

19. File Handling
20. Using CharacterArray Reader
21. Using Wrapper Classes

Applets and AWT Controls

22. Mouse Event Handling
23. Keyboard Event Handling
24. Passing Parameters to Applets
25. Draw a toy
26. Create a Login Page
27. Display Registration Form
28. Display Order Form



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

348

PART - III	Title : OPERATIONS RESEARCH	Subject Code : 17 UCS A31
ALLIED		
Semester : III	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To solve Assignment problems and Transportation problems using OR techniques
- To solve LPP using Graphical, Simplex, Big-M methods
- To impart knowledge on Characteristics and Techniques of OR

UNIT I:

Development of OR – Definition of OR – Modeling – Characteristics & Phases – tools, techniques & methods – Scope of OR.

UNIT II:

Linear Programming Problem – Formulation – Slack & Surplus variables – Graphical solution of LPP.

UNIT III:

Simplex method – Computational procedure – Artificial variables techniques – Big M Method.

UNIT IV:

Mathematical formulation of assignment problem – Methods for solving the assignment problems.

UNIT V:

Mathematical formulation of transportation problem – Methods for solving the transportation problem.

Text Book:

Operation Research, S. D. Sharma, Kedar Nath Ram Nath & Co, 2004

Reference Books:

1. Operations Research, Man Mohan Gupta and Gandhi Swarup, Sultan Chand Publications.
 2. Problems and Solutions in Operation Research, Man Mohan Gupta and Gandhi Swarup, Sultan Chand Publications
- UNIT I : Chapter 1 (1.1, 1.2, 1.4, 1.5, 1.8, 1.9, 1.10, 1.11)
UNIT II : Chapter 3 (3.1, 3.2, 3.3, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.4, 3.5)
UNIT III : Chapter 5 (5.1, 5.2, 5.2.1, 5.3, 5.4, 5.5, 5.5.1, 5.5.2, 5.5.3, 5.5.4)
UNIT IV : Chapter 11 (11.2, 11.3 and 11.4)
UNIT V : Chapter 12 (12.2 to 12.8)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : LINUX AND SHELL	Subject Code : 17 UCS SP1
SKILL BASED	PROGRAMMING LAB	
Semester : III	HOURS : 3 hours / Week	CREDITS : 3

LIST OF EXPERIMENTS

1. Find the sum of the digits of a given number
2. Find the reverse of a number
3. Perform basic arithmetic operations using case
4. Display multiplication table
5. Check whether a number is prime or not using while
6. Convert lowercase to uppercase using tr statement
7. Check for an adam number
8. Check pattern matching using grep
9. Find the number of users who have logged in
10. Check for palindrome
11. Find age of a person using set date
12. Write a menu driven program to display today's date,
Processes of the system, user's of the system, list files of the system
13. Read 10 names from a file and sort in
a. Ascending order b. Descending order
14. Write a menu driven program to check for file existence, file readable or not,
file writeable or not,
15. Get mark details of a student and display total and grade
16. Prepare electricity bill
17. To set the attributes of a given file
18. Check the given file is a directory or not
19. To create and append a file
20. To compare two files
21. To perform string manipulation



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

350

PART - IV NME	Title : INTRODUCTION TO COMPUTERS AND OFFICE AUTOMATIONS	Subject Code : 17 UCS N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To create an awareness about fundamentals of computers to Non-Comp.Sc. students
- To give knowledge about document handling using MS-WORD, creating worksheets and graphs using MS-EXCEL
- To impart knowledge on Slide presentation using MS-POWER POINT

UNIT I: Computer Fundamentals: History, Generations - Classification of Computers –Windows Operating System

Introduction to Microsoft Office 2000 – Microsoft Word Screen – File Menu – Edit Menu – View Menu –Insert Menu – Format Menu.

UNIT II: Tools Menu – Table Menu – Window Menu – Help Menu – Formatting the Text –Alignment of Text – Applying Fonts – Size of Text – Font of the Text – Colour of the Text.

UNIT III: Spreadsheets & Microsoft Excel: Understanding Microsoft Excel for Windows –Starting Microsoft Excel 2000 – Understanding Spreadsheets – File Menu – Edit Menu – Insert Menu – Data Menu – Window Menu.

UNIT IV: Creating a Worksheet in Excel for Windows – Copying Formula –Functions in Excel – Using Autosum – Using autocalculate – References – Sum Function – Average Function – Creating Charts in Excel –Creating Graphs .

UNIT V: Power Point – How to create a new power point presentation – Adding a new slide – Insert Table, picture, clip art, shapes, chart, header, footer, Word Art / Date & Time, Slide – Slide Layout.

Text Book:

Learning computer Fundamentals, MS Office and Internet & Web Technology - Dinesh Maidasani – FIREWALL MEDIA, First Edition 2005.

Reference Book:

A Beginners Guide to Computers – Alexis Leon & Mathews Leon-Vikas Publishing House Pvt Ltd.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

351

IV SEMESTER

Sl. No	Subject Code	Nature	Subject Title	Hrs/Week	Exam Hrs	CA	SE	Tot	Crd
1	17 UAC T41/H41/S41	Part - I	Tamil/Hindi/Sanskrit	6	3	25	75	100	3
2	17 UAC E41	Part - II	English	6	3	25	75	100	3
3	17 UCS C41	Part-III Core	Data Structures and Algorithms	4	3	25	75	100	4
4	17 UCS CP4	Part-III Core	Lab 5: Visual Programming lab	5	3	40	60	100	3
5	17 UCS A41	Part-III Allied	Numerical Methods	4	3	25	75	100	4
6	17 UCS S41	Part-IV SBS	Quantitative Aptitude	3	3	25	75	100	3
7	17 UCS N41	Part-IV NME	Introduction to Internet	2	3	25	75	100	2
8		Part-V	Extension Activities	-				100	1
			Total	30				800	23

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

352

PART - III	Title : DATA STRUCTURES	Subject Code : 17 UCS C41
CORE	AND ALGORITHMS	
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To give knowledge on the concepts and applications of (i) linear data structures viz., arrays, stacks, queues (ii) linked linear data structures viz., linked lists, linked stacks and linked queues and (iii) Non-linear data structures viz., trees, binary trees
- To give knowledge on various sorting and searching algorithms
- To impart knowledge on solving problems using algorithmic techniques viz., Divide and Conquer, Greedy Approach, Dynamic Programming and Backtracking

Unit I:

Introduction to Data Structures: Introduction – Linear arrays- Representation of linear arrays in memory- Bubble sort- Linear search- Multidimensional arrays.

Introduction – Linked Lists- Representation of ;linked lists in memory- insertion into a linked list- deletion from a linked lists.

Unit II:

Introduction –Stack — Array representation of Stack- Linked representation of Stack- Arithmetic expressions; Polish Notation – Recursion – Recursion –Towers of Hanoi.

Unit III:

Trees – Introduction – Binary Trees– Representation of Binary Trees in memorys – Traversing binary trees- Traversal algorithms using stack – Sorting – Insertion sort- Selection Sort – Merge Sort.

UNIT IV:

Algorithms: Importance of developing efficient algorithms – Analysis – Order - Divide and conquer: Binary search – Merge sort – Quick sort - Dynamic Programming: Binomial coefficients – Floyds algorithm for shortest paths – chained matrix multiplication

UNIT V:

Greedy Approach: Minimum spanning trees – Dijkstra’s algorithm for single source shortest path.

Backtracking: The Backtracking techniques – The n- Queens Problem –The Sum of Subsets problems - Graph Colouring .

Text Books:

1. Data Structures – Seymour Lipschutz- Tata MCGraw hill – year 2006.
2. Foundations of Algorithms Using C++ Pseudocode, Third edition, Richard Neapolitan, Kumars Naimipour.Narosa publication, 2004.

Reference Books:

1. Classical Data Structures – D.Samanta, PHI, 2008
2. Fundamentals of computer algorithms, Ellis Horowitz and sartaj sahani, Galgotia book house.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

353

PART - III	Title : VISUAL PROGRAMMING	Subject Code : 17 UCS CP4
CORE	LAB	
Semester : IV	HOURS : 5 hours / Week	CREDITS : 3

1. To check whether a given number is
 - a. Prime or not
 - b. Armstrong or not
2. Program to perform
 - a. Reverse the string
 - b. Length of the string
3. Program to find
 - a. Current date & time
 - b. Day of the given date
4. To generate fibonacci series using recursion
5. To find the value of ncr using function
6. To print multiplication table
7. Creation of arithmetic calculator
8. Preparation of questionnaire
9. Program to draw geometric shapes
10. Program to create a mousedown event
11. Program to create color mixture using scroll bar control
12. Program to change text attributes
13. Program using common dialog control to open a file & save a file
14. Program using timer control to animate an object
15. Program to create a file open dialog to load a picture
16. Program to design analog clock
17. Program to prepare eb bill using msflexgrid control
18. Program using text box to validate its content
19. Program to create a menu with simple file & edit options
20. Program for sequential file writing & reading
21. Processing Of Telephone Bill Using Data Control.
22. Processing Of Student Mark List Using Data Control.
23. Processing Of Employee Paybill Using Ado Control.
24. Creation Of A Simple Address Book Using Ado Control.
25. Creation Of Student Information System Using Dao Control.
26. Program Using Activex Control.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

354

PART - III	Title : NUMERICAL METHODS	Subject Code : 17 UCS A41
ALLIED		
Semester : IV	HOURS : 4 hours / Week	CREDITS : 4

Objectives:

- To give knowledge on solving algebraic & Transcendental equations using various methods
- To impart knowledge on solving simultaneous equations using various methods
- To practice students on solving problems using Interpolation, Numerical differentiation, Numerical Integration and Numerical differential equations

UNIT I:

Errors in computer Arithmetic – Algebraic and Transcendental Equations: Iteration method – Bisection method – Regula Falsi method – Newton Raphson method.

UNIT II:

Simultaneous Equations: Gauss elimination method –Gauss Jordan, Gauss Seidel iteration methods.

UNIT III:

Interpolation: Newton's interpolation formulae – Central difference interpolation formulae – Lagrange's interpolation formula – Inverse interpolation.

UNIT IV:

Numerical differentiation: Newton's Forward and Backward difference formulae – Numerical Integration: Trapezoidal rule – Simpson's rule. Eigen values and Eigen vectors of a matrix.

UNIT V:

Numerical solution of differential equations: Euler's method – Taylor's series method – Range – Kutta methods.

Text book:

Numerical Methods, T. Veerarajan and T. Ramachandran, 2nd edition, Tata McGraw Hill, 2006

Reference Books:

1. Numerical Methods by S. Arumugam & A. Thangapandi Issac, A. Somasundaram, Sci Tech Publication, Chennai, 2002.
2. Introductory Methods of Numerical Analysis, S.S.Sastry, Prentice Hall of India Pvt.Ltd, New Delhi, 4th Edition, 2008.
3. Computer – Oriented Numerical Methods, P.Thangaraj, Prentice Hall of India Pvt.Ltd, New Delhi, 2008



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

355

PART - IV SKILL BASED	Title : QUANTITATIVE APTITUDE	Subject Code : 17 UCS S41
Semester : IV	HOURS : 3 hours / Week	CREDITS : 3

Objectives:

- To give numerical aptitude and to prepare students for competitive examinations
- To impart knowledge on solving various types of numerical problems
- To practice students by giving variety of problems and enrich their analytical skills

UNIT I:

Numbers – HCF & LCM of numbers – Decimal Fractions.

UNIT II:

Square roots & Cube roots – Average – Problems on Numbers – Problems on Ages.

UNIT III:

Percentage – Profit & Loss – Ratio & Proportion.

UNIT IV:

Time & Work – Time & Distance.

UNIT V:

Simple Interest – Compound Interest – Area – Volume & Surface areas.

Text Book

Quantitative Aptitude, R.S.Aggarwal, Reprint 2007, S.Chand & Company Ltd,

Unit I : Chapters: 1,2,3

Unit II : Chapters: 5,6,7,8

Unit III : Chapters: 10,11,12

Unit IV : Chapters: 15,17

Unit V : Chapters: 21,22,24,25



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : INTRODUCTION TO	Subject Code : 17 UCS N41
NME	INTERNET	
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

- To teach the basic concepts of Internet.
- To teach various HTML tags for creating web pages
- To test students creativity by giving real life problems in web page design

UNIT I:

Introduction - Internet – History – How the Web Works – Web Server and Clients – Connections – ISDN – Dialup or leased – DNS – Registering – Intranet – Overview of Web Browsers.

UNIT II:

HTML – Basic Components of HTML - Formatting - URL – PROTOCOL – Server Name - Linking to other HTML Documents – Linking Inside the same document – FTP – GOPHER – FTP Commands.

UNIT III:

Lists – Ordered lists – Unordered lists – Directory lists – Definition lists – Combining List types – Graphics and Web pages

UNIT IV:

Image Formats – Graphics In HTML – Images and Hyper link anchors – Image Maps. Tables –Frames In HTML – Frame set Container.

UNIT V

HTML Forms – Input tag – Form elements – Background graphics and color – MS Internet – Extensions – Font Tag – Scrolling Marquees - Introduction to social network – Face book , Twitter, Whatsapp, Viber – Introduction to E-shopping.

TEXT BOOK:

Computer Fundamentals and Windows with Internet Technology. By N.KRISHNAN, PUBLISHER SCITECH

REFERENCE BOOKS:

1. The Internet Book, Douglas E.Comer Fourth Edition, PHI Learning Pvt.Ltd, New Delhi-2009.
2. Using the Internet the easy way, Young Kai Seng Minerva Publications, First Edition, 2000.
3. www.Wikipedia.Com , www.W3Schools.Com, www.webopedia.com



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

V SEMESTER

Sl. No .	Subject Code	Nature	Subject Title	Hrs per Week	Exam Hrs	CA	SE	Tot	Crd
1	17UCSC51	Part-III Core	Relational Database Management System	5	3	25	75	100	4
2	17UCSC52	Part-III Core	Operating System Concepts	5	3	25	75	100	5
3	17UCSC53	Part-III Core	Software Engineering Concepts	5	3	25	75	100	5
4	17UCS CP5	Part-III Core	Lab 6 : RDBMS Lab	5	3	40	60	100	3
5	17UCS CP6	Part-III Core	Lab 7: Multimedia & PHP Lab	5	3	40	60	100	3
6	17UCSE51*	Part-III Elective	Advanced Java Programming	5	3	25	75	100	5
	17UCSE52*		Mobile Computing						
	17UCSE53*		Data Communication and Computer Network						
7	16USS S51		Soft Skills	-	-	-	-	100	-
Total				30				700	25

*One elective to be selected from 17UCSE51,E52,E53.



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : RELATIONAL DATABASE MANAGEMENT SYSTEM	Subject Code : 17 UCS C51
Semester : V	HOURS : 5 hours / Week	CREDITS : 4

Objectives:

- To give knowledge about the basic concepts of Database management systems
- To make understand the need of normalization using various normal forms
- To give knowledge about SQL and on-line Transaction processing

UNIT I:

Introduction to Database Systems: Purpose of a Database System, Database Systems versus File Systems – View of Data – Data Models – Database Languages – Database Users and Administrators, Transaction Management, Database System Structure, Application Architectures.

Entity – Relationship Model: Basic Concepts – Mapping Constraints – Keys – Design Issues – Entity Relationship Diagram – Weak Entity Sets – Design of an E-R Database Schema – Reduction of an E-R Schema to Tables.

UNIT II:

Relational Model: Structure of Relational Databases – The Relational Algebra – Extended. Relational Algebra Operations – Modification of the Database – Views – The Tuple Relational Calculus, The Domain Relational Calculus.

UNIT III:

SQL: Basic Structure – Set Operations – Aggregate functions – Nested Queries – Derived Relations – Views – Modification of the database – Data Definition Language – Embedded SQL – Other SQL Features.

UNIT IV:

Relational Database Design: First Normal Form – Pitfalls in Relational Database Design – Normalization Using Functional Dependencies – Decomposition – Desirable properties of decomposition Normalization using Multivalued Dependencies.

UNIT V:

Transaction concept – Transaction State – Implementation of Atomicity and Durability – Concurrent Executions – Recoverability Concurrency control – Lock –Based Protocols – Timestamp – based Protocols – Validation based Protocols.

TEXT BOOK:

A. Silberschatz, H.Korth and S.Sudarsan, Database System Concepts, TATA McGraw Hill Inc., 2002, Fourth Edition.

- UNIT I : Chapter 1.1 to 1.9 and Chapter 2.1, 2.3 to 2.9, 2.9.1
- UNIT II : Chapter 3.1 to 3.4
- UNIT III : Chapter 4.2 , 4.3 , 4.4 , 4.6 , 4.9
- UNIT IV : Chapter 7.1 to 7.4
- UNIT V : Chapter 13.1to 13.4,13.6,14.1 to 14.3

REFERENCE BOOKS:

1. Bipin. C. Desai, An Introduction to Database System, West Publishing Company, 2004.
2. C. J. Date, An Introduction to Database Systems, Addition – Wesley, 2007, Eighth Edition.



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : OPERATING SYSTEM CONCEPTS	Subject Code : 17 UCS C52
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give knowledge on the various concepts of Operating systems
- To impart knowledge on Deadlock, Processor scheduling, Memory management and disk scheduling
- To introduce the basic concepts of Android operating system

UNIT I: Introduction to Operating Systems: Introduction, What is an Operating systems, Operating system components and goals, Operating systems architecture. Process Concepts: Introduction, Process States, Process Management, Interrupts, Interprocess Communication.

UNIT II: Asynchronous Concurrent Execution: Introduction, Mutual Exclusion, Implementing Mutual Exclusion Primitives, Software solutions to the Mutual Exclusion Problem, Hardware solution to the Mutual Exclusion Problem, Semaphores. Concurrent Programming: Introduction Monitors.

UNIT III: Deadlock and Indefinite Postponement: Introduction, Examples of Deadlock, Related Problem Indefinite Postponement, Resource concepts, Four Necessary conditions for Deadlock, Deadlock solution, Deadlock Prevention, Deadlock Avoidance with Dijkstra's Banker's algorithm, Deadlock Detection, Deadlock Recovery.

Processor Scheduling: Introduction, Scheduling levels, Preemptive Vs Non-Preemptive Scheduling Priorities, Scheduling objective, Scheduling criteria, Scheduling algorithms.

UNIT IV: Real Memory Organization and Management: Introduction, Memory organization, Memory Management, Memory Hierarchy, Memory Management Strategies, Contiguous Vs Non – Contiguous Memory allocation, Fixed Partition Multiprogramming, Variable Partition multiprogramming.

Virtual Memory Management: Introduction, Page Replacement, Page Replacement Strategies, Page Fault Frequency (PFF) Page replacement, Page Release, Page Size.

UNIT V: Disk Performance Optimization: Introduction, Why Disk Scheduling is necessary, Disk Scheduling strategies, Rotational optimization.

File and Database Systems: Introduction, Data Hierarchy, Files, File Systems, File Organization.

Basics of Android: Introduction to Android – What is Android- Android Platform – Components – Applications – Components life cycle – Life cycle states – Life cycle events – Application life time – Life cycle method

TEXT BOOK:

Operating Systems by DeitelDeitelChoffnes – Pearson education Third edition

UNIT I: Chapter 1: 1.1,1.2,1.12,1.13,Chapter 3: 3.1,3.2,3.3,3.4,3.5

UNIT II: Chapter 5: 5.1, 5.2, 5.3, 5.4 (upto5.4.2), 5.5, 5.6, Chapter 6: 6.1, 6.2

UNIT III: Chapter 7: 7.1,7.2,7.3,7.4,7.5,7.6,7.7,7.8,7.9,7.10, Chapter 8: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7

UNIT IV: Chapter 9: 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.8, 9.9, Chapter 11: 11.1, 11.5, 11.6, 11.8, 11.9, 11.10

UNIT V: Chapter 12: 12.1, 12.4, 12.5, 12.6 Chapter 13: 13.1, 13.2, 13.3, 13.4, 13.5

REFERENCE BOOK:

An introduction to Operating systems concepts and Practice by Pramod Chandra P.Bhatt – PHI 2nd Edition



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : SOFTWARE ENGINEERING CONCEPTS	Subject Code : 17 UCS C53
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To impart knowledge on systematic way of software development and Maintenance
- To give knowledge about the important activities of the various phases of Software life cycle
- To introduce the basic concepts of Software project Management

UNIT I: Introduction to Software Engineering: Some Definitions – Some Size factors – Quality and Productivity Factors – Managerial Issues. **Planning a Software Project:** Defining the Problem – Developing a Solution Strategy – Planning the Development Process – Planning an Organizational Structure – Other Planning Activities.

UNIT II: Software Cost Estimation: Software Cost Factors – Software Cost Estimation Techniques – Staffing – Level Estimation – Estimating Software Maintenance Costs.

UNIT III: Software Requirements Definitions: The Software Requirements Specification – Formal Specification Techniques – Relational Notations – State-Oriented notations – Languages and Processors for Requirements Specification - PSL/PSA – SSA – GIST.

UNIT IV: Software Design: Fundamental Design Concepts – Modules and Modularization Criteria – Design Notations – Design Techniques – Detailed Design Considerations – Real – Time and Distributed System Design – Test Plans – Milestones, Walkthroughs, and Inspections – Design Guidelines.

Verification and Validation Techniques: Quality Assurance – Unit Testing and Debugging – System Testing .

UNIT V: Software Maintenance: Enhancing Maintainability During Development – Managerial Aspects of Software Maintenance – Configuration Management – Source – Code Metrics

Introduction to Software Project Management (SPM): Introduction – What is a project – Software projects Vs Other types of project – Activities covered by SPM – Some ways of categorizing software projects – The project as a system – What is Management? – Problems with software projects – Management control – Stakeholders

TEXT BOOKS:

1. SOFTWARE ENGINEERING CONCEPTS – RICHARD E.FAIRLEY – Tata McGraw - Hill Publishing Company Limited, New Delhi 1997.
2. SOFTWARE PROJECT MANAGEMENT – MIKE COTTERELL and BOB HUGHES, International Thomson Publishing

<u>Text Book:1</u>	<u>Text Book:2</u>
Unit – I : 1.1 – 1.4, 2.1-2.5	Unit V – Ch. 1
Unit – II : 3.1 - 3.4	
Unit – III : 4.1, 4.2, 4.3.1, 4.3.4, 4.3.5	
Unit – IV : 5.1 – 5.9, 8.1, 8.5, 8.6	
Unit – V : 9.1 – 9.4	

REFERENCE BOOKS:

1. SOFTWARE ENGINEERING – K.L.JAMES, Prentice Hall of India Pvt. Ltd., New Delhi – 2009.
2. SOFTWARE ENGINEERING by PRESSMAN.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

361

PART - III CORE	Title : RDBMS LAB	Subject Code : 17 UCS CP5
Semester : V	HOURS : 5 hours / Week	CREDITS : 3

LIST OF EXPERIMENTS

PL/SQL

1. Program Using Conditional Control, Iterative Controls.
2. Program Using Sequence Control.
3. Programs Using Exception Handling.
4. Program Using Cursors(Implicit&Explicit).
5. Program Using Pl/Sql Tables.
6. Program Using Database Triggers.
7. Programs To Design Procedures Using In.Out.Inout Parameter.
8. Program To Design Procedures Using Functions.
9. Program To Design Procedures Using Packages.
10. Table Handling Using Queries.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

362

PART - III CORE	Title : MULTIMEDIA AND PHP LAB	Subject Code : 17 UCS CP6
Semester : V	HOURS : 5 hours / Week	CREDITS : 3

LIST OF EXPERIMENTS

1. Firing Text
2. Picture Masking
3. Shape Morphing
4. Text Morphing
5. Bounce a Ball
6. Blinking an object
7. PHP program using decision making with branching
8. PHP program using decision making with looping
9. PHP program using functions
10. PHP program using Arrays and strings
11. PHP program using forms
12. PHP program using GET and Post Method



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : ADVANCED JAVA PROGRAMMING	Subject Code : 17 UCS E51
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give knowledge on the various concepts of Advanced Java viz., Applets, Event handling, Event Listener Interfaces, AWT controls, Swing and RMI

UNIT I:

Packages – Defining a Package – Example – Access Protection – Importing Packages – Interfaces – Defining an interface – Implementing interface – variables in interfaces – variables in interfaces – Example.

Exception Handling – Fundamentals – Exception types – using try and catch – multiple catch – throw – finally – built in exception – creating your own exceptions.

UNIT II:

Applet – Basics – Architecture – Skeleton- Overriding update () – display methods – repaint () – html applet tag – passing parameters to applet – get document base – get code base ().

Event handling – event delegation model – events – event sources – event listeners – event classes-action event class – adjustment event class – component event class – container event class – focus event class – input event class – item event class – key event class – mouse event class – text event class – window event class.

UNIT III:

Event Listener Interfaces – Action Listener Interface – Adjustment Listener Interface – Component Listener Interface – Container Listener Interface – Focus Listener Interface – Item Listener Interface – Key Listener Interface – Mouse Listener Interface – Mouse Motion Listener Interface – Text Listener Interface – Windows focus Listener Interface

AWT classes – windows – frame window – working with graphics – working with color – working with fonts.

UNIT IV:

AWT Controls – Buttons – check box- check box group – choice – list – scroll bar – text field – text area. Layout managers – flow layout – border layout – grid layout – card layout – menu board – menu – file – dialog Image file format – creating an image – loading – displaying.

UNIT V:

Swing – Japplet – Icons – Labels – Textfields – button – jbutton – checkbox – radio – combo box – tabbed panes – scroll pane – trees – table.

RMI – Client/server Application using RMI – Java Beans – Advantages – using JDK – JAR files – Introspection – Developing simple bean using JDK – Bean properties – Bean Info interface – Constrained property – persistence – customizers.

TEXT BOOK:

The Complete Reference – Java 2 – V Edition – Herbert Schildt – Tata McGraw Hill Edition.

Unit I : Chapters 9,10 - Unit II : Chapters 19,20 - Unit III : Chapters 20,21

Unit IV : Chapters 22,23 - Unit V : Chapters 26,25,24

REFERENCE BOOK:

Java and Object – Oriented Programming Paradigm, Debasish Jana, Prentice – Hall of India Private Limited, New Delhi, 2008.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

364

PART - III ELECTIVE	Title : MOBILE COMPUTING	Subject Code : 17 UCS E52
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To understand the functions of Mobile devices
- To learn about WAP Architecture
- To learn about the functions of embedded systems

Unit I

Information Access Devices – Handheld Computers – Palm OS – Based Devices – Windows CE – Based Handheld Computers – EPOC Based Handheld Computers – Sub notebooks – Phones – Cellular Phones – Data transmission capabilities – Smart Phones –Screen phones.

Unit II

Smart Identification-Smart cards – smart labels – smart Tokens – **Embedded Controls**- Smart sensors and Actuators – Smart Appliances – Appliances and home networking –Automotive computing.

Unit III

Internet Protocols and Formats – HTTP- HTML-XML-Xforms-**Mobile Internet**-WAP 1.1 Architecture –Wireless Application Environment 1.1 –WAP 2.0 Architecture –i-node.

Unit IV

Voice –Voice Technology Trends –Voice on the web – Standardization.

Unit V

Connectivity - Wireless Wide Area Networks – Short Range Wireless Communication.

Text Book:

Principles of Mobile Computing –Uwe Hansmann, Lothar Merk, Martin S.Nicklous, Thomas Stober – Springer – Second Edition – 2003.



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : DATA COMMUNICATION AND COMPUTER NETWORKS	Subject Code : 17 UCS E53
Semester : V	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To teach various types of networking technology
- To impart knowledge on various issues of the different layers of OSI
- To introduce the basic concepts of Cryptography

UNIT I : Introduction: A Brief History – Applications – Computer Networks - Topology – Categories of Networks – Standards and Standards Organizations – Network Architecture – Open Systems and OSI Model – TCP/IP Architecture.

Communication Media and Data Transmission: Fourier Analysis – Analog and Digital Data Transmission – Modulation and Demodulation – Transmission Media – Wireless Communications – Data Transmission Basics – Transmission Mode – Interfacing.

Data Link Control and Protocol Concepts: Flow Control – Error Control – Asynchronous Protocols – Synchronous Protocols – High-Level Data Link Control (HDLC).

UNIT II : Local Area Networks: Types of Networks and Topology –LAN Transmission Equipment – LAN Installation and Performance.

Ethernet: IEEE Standard 802.3 **Token Bus:** IEEE Standard 802.4 **Token Ring:** IEEE Standard 802.5 – Fiber Distributed Data Interface (FDDI) – **Distributed Queue Dual Bus (DQDB):** IEEE Standard 802.6 – LAN Operating Systems and Protocols – Ethernet Technologies.

Wide Area Networks: WAN Transmission Methods – WAN Carrier Types – WAN Transmission Equipments – WAN Design and Multicast Considerations – WAN Protocols.

UNIT III : Integrated Services and Routing Protocols: Integrating Services – ISDN Services – ISDN Topology – ISDN Protocols – Broadband ISDN – Asynchronous Transfer Mode (ATM) – Principal Characteristics of ATM – Frame Relay – Comparison of ISDN, ATM and Frame Relay.

Wireless LANS: WLAN Applications – Wireless LAN Requirements – Planning for Wireless LANs – Wireless LAN Architecture – IEEE 802.11 Protocol Layer – IEEE 802.11 Physical Layer – Designing the Wireless LAN Layout – WAP Services.



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

B.Sc – COMPUTER SCIENCE- SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

366

UNIT IV: Internet Working: Principles of Internet Working – Routing Principles – Internetwork Protocols (IP) – Shortcomings of IPv4 – IP Next Generation.

TCP Reliable Transport Service: Transport Protocols – The Service TCP Provides to Applications – End-to-End Service and Datagrams – Transmission Control Protocol – User Datagram Protocol.

UNIT V: Network Applications: Client-Server Model – Domain Name System (DNS) – Telnet – File Transfer and Remote File access – Electronic Mail – World Wide Web (WWW)

Cryptography

Network Security: Cryptography- Introduction- Symmetric key-Asymmetric key- Security services- Messages Confidentiality-Message Integrity-Message authentication –Digital Signature- Entity Authentication.

TEXT BOOKS:

1. Data Communications and Computer Networks, Brijendra Singh ,Second Edition, PHI, 2006.

UNIT I: Chapter - 1,2,3,5 UNIT II: Chapter - 6, 7 UNIT III: Chapter - 8, 9

UNIT IV: Chapter - 10, 11 UNIT V: Chapter – 12,13

2.Data Communication and Networking – IV edition – Behrouz a Forouzhan – Tata McGraw-Hill Chapter:31 (UNIT-V)

REFERENCE BOOKS:

1. Computer Networks, Andrew S Tanenbaum, 4th Ed, Prentice Hall of India, 2006.

2. Data Communications and Computer Networks , Prakash C. Gupta, Prentice Hall of India, 2005.



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

VI SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hrs per Week	Exam (Hrs)	CA	SE	Tot	Crd
1	17UCSC61	Part-III Core	Data Mining and its Applications	5	3	25	75	100	5
2	17UCSC62	Part-III Core	Computer Graphics	5	3	25	75	100	5
3	17UCS CP7	Part-III Core	Lab 8 : Web Design Lab (HTML / DHTML / JAVA,VB Script / XML)	5	3	40	60	100	3
4	17UCS CP8	Part-III Core	Lab 9 : Advanced Visual Programming Lab	5	3	40	60	100	3
5	17UCSE61	Part-III Elective	Multimedia Technology and Applications	5	3	25	75	100	5
	17UCSE62		Software Testing						
	17UCSE63		Web Technology						
6	17UCSEV1	Part-III Elective	Project & Viva-Voce	5	3	40	60	100	5
7	16UGK B61		General Knowledge	-	-	-	-	100	-
Total				30				700	26

*One elective to be selected from 17UCSE61,E62,E63.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

368

PART - III CORE	Title : DATA MINING AND ITS APPLICATIONS	Subject Code : 17 UCS C61
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give knowledge in Data Mining and Data Warehousing
- To inculcate knowledge on Association Rule mining, Clustering and Classification techniques
- To learn various applications of data mining techniques

UNIT I: Introduction: What motivated data mining? Why it is important? – What is data mining? - Data mining – on what kind of data? – Relational databases – Data Warehouses – Transactional databases – Advanced data and Information systems and Advanced Applications – Data mining Functionalities – What kind of patterns can be mined?: Concept/Class Description: Characterization and Discrimination – Mining Frequent Patterns, Associations, and Correlations – Classification and Prediction – Cluster Analysis – Outlier Analysis – Evolution Analysis – Classification of Data mining systems.

UNIT II: Mining frequent patterns , Associations and Correlations : Basic concepts and Road Maps – Market Basket Analysis: A motivating example – Frequent itemsets, Closed itemsets, and Association Rules – Frequent pattern mining: A Road Map – Efficient and scalable frequent itemset mining methods – The Apriori algorithm – Generating association rules from frequent itemsets – Improving the efficiency of Apriori – Mining frequent itemsets without candidate generation

UNIT III: Classification and Prediction: What is classification? What is prediction? – Issues regarding classification and predictions: Preparing the data for classification and prediction – Comparing classification and prediction methods – Classification by decision tree induction: Decision tree induction – Attribute selection measures – Tree pruning – Scalability and decision tree induction – Bayesian classification: Bayes theorem – Naïve Bayesian classification

UNIT IV: Cluster analysis : What is cluster analysis – Types of data in cluster analysis: Interval – Scaled variables – Binary Variables – Categorical, Ordinal and Ratio-Scaled variables – Variables of mixed types – Vector objects - A categorization of Major clustering methods – Partitioning methods: Classical partitioning methods : k-Means and k-Medoids

UNIT – V: Applications and Trends in Data mining – Data mining applications: Data Mining for Financial data analysis – Data Mining for the Retail Industry – Data Mining for the Telecommunication industry – Data Mining for Biological data analysis – Data Mining in other scientific applications – Data Mining for Intrusion Detection – Trends in Data Mining.

TEXT BOOK:

“ **Data Mining – Concepts and Techniques** ” by Jiawei Han and Micheline Kamber, Second Edition, Morgan Kaufmann Publishers, 2006

Unit I: Chapter:1

Unit IV: Chapter:7

Unit II: Chapter:5

Unit III: Chapter:6

Unit V: Chapter:11

REFERENCE BOOKS:

1. “Principles of Data Mining” by D.Hand, H.Mannila and P.Smyth, Second Edition, PHI Pvt.Ltd., New Delhi, 2006
2. “Data Mining: Introduction and Advanced Topics” by M.H.Dunham, Second Edition, Pearson Education Pvt. Ltd., New Delhi, 2004



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : COMPUTER GRAPHICS	Subject Code : 17 UCS C62
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give knowledge about various display devices, input devices on Graphic systems
- To impart knowledge on various algorithms for line drawing, circle generating, ellipse generating, polygon filling, and clipping
- To make understand two-dimensional transformations like scaling, rotation, translation, etc., and Window-to-Viewport coordinate transformation.

UNIT I:

A survey of computer graphics: Computer-Aided Design – Presentation Graphics – Computer Art – Entertainment – Education and Training – Visualization – Image Processing – Graphical User Interfaces. **Overview of Graphics Systems:** Video Display Devices – Raster Scan Systems – Random Scan Systems – Input Devices – Hard Copy Devices.

UNIT II:

Output Primitives: Points and Lines – Line Drawing Algorithms – Circle Generating Algorithms – Ellipse Generating Algorithms – Filled Area primitives.

UNIT III:

Attributes of Output Primitives: Line Attributes – Curve Attributes – Color and Gray Scale Levels – Area Fill Attributes – Character Attributes – Bundled Attributes – Inquiry Functions – Antialiasing.

UNIT IV:

Two – Dimensional Geometric Transformations: Basic Transformations – Matrix Representations – Composite Transformations – Other Transformations – Transformations Between Coordinate Systems.

UNIT V:

Two – Dimensional Viewing: The Viewing Pipeline – Viewing Coordinate Reference Frame – Window –to- Viewport Coordinate Transformation – Two-Dimensional Viewing Functions – Clipping Operations – Point Clipping – Line Clipping – Polygon Clipping – Curve Clipping – Text Clipping – Exterior Clipping.

Text Book

COMPUTER GRAPHICS – DONALD HEARN , M.PAULINE BAKER
 Prentice Hall of India Pvt. Ltd., New Delhi ,SECOND EDITION, 1994

Chapters

Unit – I : 1.1 – 1.8, 2.1-2.3, 2.5, 2.6 Unit – II : 3.1, 3.2, 3.5-3.7, 3.11
 Unit – III : 4.1 – 4.8 Unit – IV : 5.1 – 5.5
 Unit – V : 6.1 – 6.11

Reference Books:

1. COMPUTER GRAPHICS, MULTIMEDIA and ANIMATION – MALAY K.PAKHIRA, Prentice Hall of India Pvt. Ltd., New Delhi – 2008
2. FUNDAMENTALS OF COMPUTER GRAPHICS and MULTIMEDIA – D.P.MUKHERJEE, Prentice Hall of India Pvt. Ltd., New Delhi – 1999



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

370

PART - III CORE	Title : WEB DESIGN LAB	Subject Code : 17 UCS CP7
Semester : VI	HOURS : 5 hours / Week	CREDITS : 3

HTML:

1. Display your own Resume.
2. Display Your Department timetable and Syllabus using Internal & External Links.
3. Display Your College Website.
4. Display Railway Reservation From.
5. Display Designing an Advertisement.

JAVA SCRIPT:

6. Login ID Validation
7. Handling Mouse Events
8. Creating Cookies
9. Background Color Changing
10. Evaluate an Expression.

VB SCRIPT

11. Performing Arithmetic Operation.
12. Performing String Operation.
13. EB Bill Calculation.
14. Cinema Ticket Booking.

DHTML

15. Display Various Fonts Using DHTML.
16. Display Text Mirror, Vertical, Horizontal using DHTML.
17. Display paragraph using DHTML.
18. Display Student ID Card using XML



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : ADVANCED VISUAL PROGRAMMING LAB	Subject Code : 17 UCS CP8
Semester : VI	HOURS : 5 hours / Week	CREDITS : 3

1. Write a program in VB.Net to perform String Operations.
2. Write a program in VB.Net to perform Listbox Operations.
3. Write a program in VB.Net to perform Array List Operations.
4. Write a program in VB.Net to perform Binary Search.
5. Write a program in VB.Net to demonstrate Constructor Overloading.
6. Write a program in VB.Net to draw Shapes using Enumeration.
7. Develop a VB.Net application using Datagrid to display records.
8. Write a program in VB.Net to perform Number Checking.
(Armstrong, Adam, Palindrome, Sum of Digits)
9. Write a program in VB.Net to design a Calculator.
10. Write a program in VB.Net to perform Bank Transaction using Constructor.
11. Develop a VB.Net Quiz application.
12. Write a program in VB.Net to display Student Mark List Using Exception.
13. Write a program in VB.Net to show Car Show Room Details using Property.
14. Develop a VB.Net application for Hospital Management using Interface.
15. Write a program in VB.Net to perform Payroll Calculation of Employees using Inheritance.
16. Write a program in VB.Net to implement Operator Overloading.
17. Develop a database application to perform insert, modify, update and delete operations.



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : MULTIMEDIA TECHNOLOGY AND APPLICATIONS	Subject Code : 17 UCS E61
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give knowledge on multimedia concepts viz., Text, Audio, Video, Images and Graphics
- To impart knowledge on Digital Audio and Digital Video systems
- To inculcate knowledge on multimedia tools and its usage on internet

Unit-I:

Introduction : Brief History of Multimedia - What is Multimedia? -The Multimedia Market – Production and evaluation:Types of Products – Evaluation - Computer Architecture - Operating Systems and Software - Multimedia Computer Architecture - Software Executables and Libraries - Software Drivers

Unit-II:

Text: Elements of Text - Text Data Files -Using Text in Multimedia Applications –Hypertext – Graphics: Element of Graphics -Images and Color - Graphics File and Application Formats - Obtaining Images for Multimedia Use- Using a Graphics in Multimedia Applications

Unit-III:

Digital Audio: Characteristics of Sound and Digital Audio - Digital Audio Systems – MIDI - Audio File Formats - Using Audio in Multimedia Applications

Unit-IV:

Digital video and Animation: Background on Video - Characteristics of Digital Video - Digital Video Data Sizing - Video Capture and Playback Systems - Computer Animation

Unit-V:

Authoring Tools: Multimedia Tool Selection - Multimedia Tool Features - Categories of Authoring Tools – Multimedia and Internet - HTML and Web Authoring - Multimedia Considerations for the Internet.

Text Book:

Multimedia Technology and Applications – David Hillman published by Suneel Galgotia publications Pvt Ltd

UNIT I: Chapters 1,2,3

UNIT II: Chapters 4,5

UNIT III: Chapters 6

UNIT IV: Chapters 7

UNIT V: Chapters 9,10

Reference Books:

1. Tay Vaughan , Multimedia making it work, V edition TMH ,New Delhi
2. Ranjan Parekh , Principles of Multimedia , TMH



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

373

PART - III ELECTIVE	Title : SOFTWARE TESTING	Subject Code : 17 UCS E62
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

OBJECTIVES:

1. To make understand Basic Testing Concepts
2. To give knowledge on Various Testing strategies
3. To inculcate knowledge on the Execution and Reporting

UNIT I: Software Development Life Cycle models:

Phases of Software project – Quality, Quality Assurance, Quality control – Testing, Verification and Validation – Process Model to represent Different Phases - Life Cycle models. **White-Box Testing:** Static Testing – Structural Testing –Challenges in White-Box Testing.

UNIT II: Black-Box Testing:

What is Black-Box Testing? – Why Black-Box Testing? – When to do Black-Box Testing? – How to do Black-Box Testing? – Challenges in White Box Testing – Integration Testing: Integration Testing as Type of Testing – Integration Testing as a Phase of Testing – Scenario Testing – Defect Bash.

UNIT III: System and Acceptance Testing:

System Testing Overview – Why System testing is done? – Functional versus Non-functional Testing – Functional testing – Nonfunctional Testing – Acceptance Testing – Summary of Testing Phases.

UNIT IV: Performance Testing:

Factors governing Performance Testing – Methodology of Performance Testing – tools for Performance Testing – Process for Performance Testing – Challenges. **Regression Testing:** What is Regression Testing? – Types of Regression Testing – When to do Regression Testing – How to do Regression Testing – Best Practices in Regression Testing.

UNIT V: Test Planning, Management, Execution and Reporting:

Test Planning – Test Management – Test Process – Test Reporting –Best Practices. **Test Metrics and Measurements:** Project Metrics – Progress Metrics – Productivity Metrics – Release Metrics.

TEXT BOOK:

1. **SOFTWARE TESTING Principles and Practices – Srinivasan Desikan & Gopalswamy Ramesh**, 2006, Pearson Education.

(UNIT-I: 2.1-2.5, 3.1-3.4 UNIT-II: 4.1-4.4, 5.1-5.5 UNIT III: 6.1-6.7

(UNIT IV: 7.1-7.6, 8.1-8.5 UNIT-V: 15.1-15.6, 17.4-17.7)

REFERENCE BOOKS:

1. **EFFECTIVE METHODS OF SOFTWARE TESTING–William E.Perry**, 3rd ed, Wiley India.

2.**SOFTWARE TESTING – Renu Rajani, Pradeep Oak**, 2007, TMH.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : WEB TECHNOLOGY	Subject Code : 17 UCS E63
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give knowledge on web page designing using HTML
- To impart knowledge on the various concepts of JAVASCRIPT, VBSCRIPT and SERVLETS
- To inculcate knowledge on JSP

UNIT I:

Introduction – History of the Internet – Services and Accessibility – uses, Protocols, Web Concepts – Internet Standards. **HTML** – Introduction – SGML – HTML document – Head section – Body section – HTML Forms.

UNIT II:

JAVASCRIPT – Introduction – Language Elements-Identifiers- Expressions – keywords – operators – statements – conditional statements – looping statements – break- continue – functions – Objects of JavaScript - window object – document object – forms – textbox – textarea – buttons – radiobutton – checkbox – select – Other Objects –Date object – String Object – Math Object - Arrays.

UNIT III:

VBSCRIPT – Introduction – Embedding VBScript Code in an HTML Document – Comments-Variables – Operators – Procedures – Conditional Statements – Looping constructs – Objects and VBScript – Cookies.

UNIT IV:

SERVLETS – Introduction – Advantages of Servlets over CGI – Installing Servlets – The Servlet Life Cycle – Servlet API – A Simple Servlet – Handling HTTP GET Requests – Handling HTTP POST Requests – Cookies – Session Tracking – Multi-tier Applications Using Database Connectivity – Servlet Chaining.

UNIT V:

JAVA SERVER PAGES (JSP) – Introduction – Advantages of JSP – Developing First JSP – Components of JSP – Reading Request Information – Retrieving the Data Posted from a HTML File to a JSP File – JSP Sessions – Cookies – Disabling Sessions.

Text Book:

1. **Web Technology – A Developer’s Perspective** ,N.P.Gopalan and J.Akilandeswari, Prentice-Hall of India Pvt. Ltd, New Delhi, 2008.
UNIT I : Chapters 1 and 4 UNIT II : Chapter 5
UNIT III : Chapter 6 UNIT IV : Chapter 10
UNIT V : Chapter 11

Reference Books :

1. Mastering Javascript, J.Jaworski, BPB Publications, 1999.
2. Java Servlet Programming, Jason Hunter, 2nd Edition, 2001, Shroff Publishers, New Delhi.
3. Web Enable Commercial Application Development Using HTML, DHTML, Javascript, Perl, CGI - I.Bayross, BPB Publications, 2000.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
B.Sc – COMPUTER SCIENCE- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

375

PART - III ELECTIVE	Title : PROJECT & VIVA-VOCE	Subject Code : 17 UCS EV1
Semester : VI	HOURS : 5 hours / Week	CREDITS : 5

Objectives:

- To give exposure on software development and maintenance
 - To train students, a systematic way of Report writing
 - To practice students for project presentation
1. A maximum of two students can join to do the project work
 2. Students must undertake the project work under the guidance of a faculty member
 3. Progressive reports have to be submitted to the guide periodically
 4. The internal test marks is 40 and is divided into the following components.
 - (i) Two Presentations - 2 X 10 = 20 marks
 - (ii) Progressive Reports - 10 marks
 - (iii) Internal Viva-voce - 10 marks
 5. The external examination will be jointly conducted by both the Internal and external examiners
 6. The students must submit 3 copies (2 copies for 2 students + 1 copy for the Dept.) of their Project Report two weeks before the external examination.
 7. The maximum marks for the external examination is 60 and it may be divided into the following components.
 - (i) Project Report - 20 marks
 - (ii) Project Presentation - 20 marks
 - (iii) Project viva-voce - 20 marks



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS (Under CBCS w.e.f. 2017 - 2018 onwards)

376

I SEMESTER

S. No	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17PEHC11	Core	Modern Literature I	6	3	25	75	100	5
2	17PEHC12	Core	Indian Writing in English	6	3	25	75	100	5
3	17PEHC13	Core	English Grammar and its Usage	6	3	25	75	100	5
4	17PEHC14	Core	American Literature	6	3	25	75	100	4
5	17PEHE11	Elective	Journalism and Mass Communication	6	3	25	75	100	4
Total				30				500	23



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS (Under CBCS w.e.f. 2017 - 2018 onwards)

377

PART-III CORE	Title : MODERN LITERATURE - I	Subject Code:17PEHC11
Semester : I	Hours : 6 hours / week	CREDITS : 5

OBJECTIVE: This paper aims at introducing 16th Century English writers to the students.

UNIT-I - Poetry

Edmund Spenser - Faerie Queene, Book-1, Cantos - I and II

UNIT-II - Prose

Francis Bacon
- Of Parents and Children
- Of Love
- Of Truth
- Of Unity in Religion
- Of Nature in Men

UNIT-III - Prose

Thomas More - Utopia - Book I

UNIT-IV - Drama

Christopher Marlowe - Edward II

UNIT-V - Drama

Ben Jonson - Volpone

BOOKS RECOMMENDED

1. Thomas, ed. Chaucer to Houseman. Madras B.I. Publication, 1987.
2. Greene, David, ed. The Winged Word. Macmillian India limited, 2009.
3. More, Thomas. Utopia, edited by P.Rengasamy, Macmillian India limited, 1980.
4. Marlowe, Christopher. Edward II. CreateSpace Independent Publishing Platform, 2016.

Online Sources: <http://www.sparknotes.com/poetry/fqueen/>
<https://www.enotes.com/topics/edward-ii>
<http://www.sparknotes.com/drama/volpone/summary.html>



PART-III CORE	Title : INDIAN WRITING IN ENGLISH	Subject Code: 17PEHC12
Semester : I	Hours : 6 hours / week	CREDITS :5

OBJECTIVE: This paper aims at introducing writers of different genres from Indian Writing in English.

UNIT-I - Poetry

Keki.N. Daruwalla	- Death of the Bird
R.Parthasarathy	- River Once
Dilip Chitre	- Father Returning Home
Gieve Patel	- Servants
Agha Shahid Ali	- Snowmen

UNIT-II - Prose

Jawarharlal Nehru	- The Discovery of India (Chapter-IV)
-------------------	---------------------------------------

UNIT- III- Short Story

Chitra Banerjee	- A Perfect Life
Jhumpa Lahiri	- The Interpreter of Maladies
Shashi Tharoor	- The Five Dollar Smile
Ruskin Bond	- A Tiger in the House

UNIT-IV – Fiction

Salman Rushdie	- Midnight's Children
Anita Nair	- The Better Man

UNIT-V - Drama

Mahesh Dattani	- Final Solutions
----------------	-------------------

BOOKS RECOMMENDED

1. Preeradina, Saleem,. ed. Contemporary Indian Poetry in English: An Assessment and Selection. Macmillan Co.of India, 1972.
2. R. Parthasarathy,. ed. Ten Twentieth Century Indian Poets. Oxford University Press, 1999.
3. Nehru, Jawarharlal. The Discovery of India. Penguin India, 2008.
4. Rushdie, Salman. Midnight's Children. RHUK; Flim Tie- In, 2013.
5. Nair, Anita. The Better Man. Penguin Books ltd, 2015.

ONLINE SOURCES:

www.poets.org

<http://www.bookgeeks.in/entries/blog/best-indian-authors-and-their-novels->



PART-III CORE	Title : ENGLISH GRAMMAR AND ITS USAGE	Subject Code:17PEHC13
Semester : I	Hours : 6 hours / week	CREDITS :5

Objective: This paper aims at introducing the nuances of English Grammar to students.

UNIT – I

Noun, Adjective, Degrees of Comparison

UNIT – II

Verb, Main and Auxiliary, Strong and Weak, Transitive and Intransitive, Finite and Non Finite, Modals, Tenses, Concord

UNIT – III

Adverb, Articles, Preposition and Conjunction – Definition, Kinds and Uses

UNIT – IV

Transformation of Sentences – Reported Speech, Voice, Simple, Compound, Complex, Clauses and Phrases.

UNIT – V

Error Analysis, Sentence Patterns (SV, SVO, SVC, SVA, SVOC, SVOA, SVIODO, SVDOIO, ASVO, ASVOC, ASDOC, SVAC, ASVC, SVCA, SVOCA)

BOOKS RECOMMENDED

1. Green, David. Contemporary English Grammar Structures and Composition. Laxmi Publications, 2000.
2. Allen, William Stannard. Living English Structure. Orient Longman, New Delhi, 1994.
3. Murphy, Raymond. Essential English Grammar. Cambridge University Press, New Delhi, 2012.

Online Sources:

www.englishgrammar.org>lessons

www.weblearn.in

www.e4thai.com>images

www.grammarbank.com



M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : AMERICAN LITERATURE	Subject Code:17PEHC14
Semester : I	Hours : 6 hours / week	CREDITS :4

Objective: This paper aims at introducing American writers and their select works to the students.

UNIT – I : Poetry

- Walt Whitman - Out of the Cradle Endlessly Rocking
- Ralph Waldo Emerson - Brahma
- Edgar Allan Poe - Annabel Lee
- Carl Sandberg - Chicago
- Wallace Stevens - Of Modern Poetry
- Sylvia Plath - Daddy

UNIT – III : Prose

- Henry David Thoreau – Where I lived What I lived for
- Ralph Waldo Emerson – Self Reliance

UNIT – III : Short Story

- Mark Twain - The Man that Corrupted
- Gabriel Garcia Marquez -A Very Old Man with Enormous Wings
- Nathaniel Hawthorne - Young Goodman Brown
- Henry James - The Altar of the Dead

UNIT – IV : Fiction

- Alice Walker – The Color Purple
- J.D.Salinger – The Catcher in the Rye

UNIT – V : Drama

- Eugene O’ Neil – Long Days’ Journey into Night

BOOKS RECOMMENDED

1. Oliver, Egbert S., ed. An Anthology: American Literature 1890-1965. New Delhi: Eurasia Publishing House (Pvt) Ltd., Print.
2. Ramanan, Mohan., ed. Four centuries of American Literature. Chennai: Macmillan, 1996.
3. Sachidanandan. American Literature, Prose and Poetry Selections. Emerald, Chennai.

Online Sources: www.bartleby.com www.transcendentalists.com www.gradesaver.com
www.study.com>academy>lesson



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

381

PART-III ELECTIVE	Title : JOURNALISM AND MASS COMMUNICATION	Subject Code: 17PEHE11
Semester : I	Hours : 6 hours / week	CREDITS :4

OBJECTIVE: To enable the students understand the aspects of Journalism and Mass Communication.

UNIT-I History and Development of Journalism in India

Pioneering Efforts - Trumpets of Nationalism - Confrontation with Government

UNIT-II Audio - Video Media

Radio, TV, Photo, Web

UNIT-III The Editorial Department

The Editor - The News Editor - The Chief Sub-Editor - The Sub-Editor

UNIT-IV Art of Writing a Newspaper Story, The Journalistic Style

The news story's three parts - The news feature of a story - Main types of leads. Writing Procedures - Organizing the Writing - Specialization - style - 3 formulae

UNIT-V Mass Communication and Mass Media, Society and Development

1. The Facts and Meaning of Mass Communication
2. Types of Communication - Mass Media - Uses and Effects - Socialization effects of media
3. Society and Mass communication - Global trends in Media - Communication and Development – Development- The Indian Experience.

BOOKS RECOMMENDED

1. Ahuja, B.N. Theory and practice of Journalism. Surjeet publications, 2007.
2. Keval, J. Kumar. Mass communication in India. Jaico publishing House, 1989.

ONLINE SOURCES:

<http://notes.tyrocitcity.com/difference-between-communication-mass-communication-and-journalism/>

<http://www.theforthright.com/career-choice-journalism-or-mass-communication/>



II SEMESTER

S. No	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17PEHC21	Core	Modern Literature II	6	3	25	75	100	5
2	17PEHC22	Core	History of English Language & ELT	6	3	25	75	100	5
3	17PEHC23	Core	Women's Studies	6	3	25	75	100	4
4	17PEHC24	Core	Literary Criticism	6	3	25	75	100	4
5	17PEHE21	Elective	Introduction to Technical Writing	6	3	25	75	100	4
Total				30				500	22



PART –III CORE	Title : MODERN LITERATURE - II	Subject Code: 17PEHC21
Semester : II	Hours : 6 hours / week	CREDITS : 5

OBJECTIVE: This paper aims at introducing English writers from 16th Century to 18th Century to the students.

UNIT-I - Poetry

John Milton
John Donne

- Paradise Lost Book IX
- Valediction: Forbidding Mourning.

UNIT-II - Poetry

John Dryden
Alexander Pope

- Mac Flecknoe
- An Epistle to Dr. Arbuthnot.

UNIT-III - Prose

Addison and Steele

- Coverley Papers, Essays:
 1. Coverley Household
 2. Character of Will Wimble
 3. On the Shame and Fear of Poverty
 4. Visit to Westminster Abbey
 5. Sir Roger at the Assizes

UNIT-IV - Fiction

Oliver Goldsmith

- The Vicar of the Wakefield.

UNIT-V - Drama

R.B. Sheridan
William Congreve

- The Rivals
- The Way of the World

BOOKS RECOMMENDED

1. Addison, Joseph. Coverley Papers from the Spectator. Macmillan, 1987.
2. Milton, John. Paradise Lost and Paradise Regained. edited by Ricks Christopher,. Signet Classic, Nal penguin INC, 2010.
3. Greene, David,. ed. The Winged Word. Macmillan India limited, 2009.

ONLINE SOURCES

- www.sparknotes.com › SparkNotes › Poetry Study Guides
- www.bachelorandmaster.com/.../mac-flecknoe.html
- <https://www.enotes.com> › Study Guides
- www.ebooksread.com/...addison/coverley-papers.../1-coverley-papers-fr
- <https://www.enotes.com> › Study Guides
- www.brighthubeducation.com › ... › Literature Study Guides



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

384

PART-III CORE	Title : HISTORY OF ENGLISH LANGUAGE & LANGUAGE TEACHING	Subject Code: 17PEHC22
Semester : II	Hours : 6 hours / week	CREDITS : 5

OBJECTIVE: To introduce to the students the origin and the growth of English Language and the various methods of Language Teaching.

UNIT: I

Indo-European family of language – Grimm's Law, Verner's Law.

UNIT: II

Word Making, Changes in the meaning and Value of words – Contribution of English vocabulary from French/Latin and Indian Languages – The Language of the Bible.

UNIT: III

History of English Language Teaching in India – The importance of English in India – the use of English in cyber world.

UNIT: IV

Direct Method – Bi-lingual Method – Audio Visual Method – Communicative Method.

UNIT: V

Techniques in Teaching Poetry, Prose and Grammar.

BOOKS RECOMMENDED

1. Palmer, Frank. Grammar. Penguin books, 1972.
2. Frederick.T.Woods. Outline History of English Language. Laxmi publications, 2000.
3. R.N.Ghose. Introduction to English Language Teaching. Mc Graw Hills, 2007.

Online Sources : www.studyenglishtoday.net
www.thehistoryofenglish.com
www.esl.fis.edu/teacher/support/method



PART-III CORE	Title : WOMEN'S STUDIES	Subject Code:17PEHC23
Semester : II	Hours : 6 hours / week	CREDITS :4

OBJECTIVE: This paper introduces feminine perspectives as projected by the women writers.

UNIT-I - Poetry

- Kamala Das - An Introduction
- Wong May - The Shroud
- Judith Wright - Woman to Man
- Maya Angeleou - Phenomenal Woman
- Razia Khan - My Daughter's Boy Friend

UNIT-II - Prose

- Simone de Beauvoir - The Second Sex: 'The Woman as 'Other'
- Elaine Showalter - Towards Feminist Poetics

UNIT-III - Short Story

- Anita Desai - A Devoted Son
- Katherine Mansfield - Daughters of the Late Colonel
- Mahasweta Devi - The Breast – Giver
- Alice Walker - Her Sweet Jerome

UNIT-IV - Fiction

- Arundhati Roy - The God of Small Things
- Margaret Atwood - Surfacing

UNIT-V - Drama

- Manjula Padmanabhan - Harvest

BOOKS RECOMMENDED

1. Claire, Ed Buck. Guide to Women's Literature throughout the world. Bloomsbury; 1st Edition, 1992.
2. Sage, Lorna. The Cambridge Guide to Woman's writing in English. Cambridge University Press; 1st Paperback Edition edition (October 13, 1999).

ONLINE SOURCES:

- www.enotes.com/topics/second-sex
- www.study.com/academy/lesson/the-god-of-small-things
- www.bookrags.com/studyguide-harvest
- www.bachelorandmaster.com/articaltheories
- www.academia.edu/woman-to-man
- www.shmoop.com/daddy-sylvia-plath



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

386

PART - III CORE	Title : LITERARY CRITICISM	Subject Code : 17PEHC24
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

OBJECTIVE: This paper aims at introducing English criticism from 16th Century to 20th Century to the students.

UNIT-I

Sir Philip Sidney - An Apology for Poetry

UNIT-II

John Dryden - Preface to the Fables
Dr. Johnson - Preface to Shakespeare

UNIT-III

William Wordsworth - Preface to Lyrical Ballads
S.T. Coleridge - Biographia Literaria, Chapters — XVII,
XVIII

UNIT-IV

Matthew Arnold - The Function of Criticism at the Present Time
- The Study of Poetry

UNIT-V

T.S. Eliot - Tradition and the Individual Talent
F.R. Leavis - First Chapter from 'The Great Tradition'

BOOKS RECOMMENDED

Ernest De Chickera and D.J.Enright. English Critical Texts. Oxford University Press, 1979.

ONLINE SOURCES:

www.bachelorandmaster.com/criticaltheories/an-apology-for-poetry.html
www.bartleby.com › Nonfiction › Harvard Classics › Famous Prefaces
<https://www.enotes.com> › Study Guides
<http://literarism.blogspot.in/2012/08/wordsworth-preface-to-lyrical-ballads.html>
www.online-literature.com › Samuel Taylor Coleridge › Biographia Literaria
fortnightlyreview.co.uk/the-function-of-criticism-at-the-present-time/
<https://www.timeshighereducation.com/...the-great-tradition-by...leavis/406552.article>



PART-III ELECTIVE	Title : INTRODUCTION TO TECHNICAL WRITING	Subject Code: 17PEHE21
Semester : II	Hours : 6 hours / week	CREDITS : 4

OBJECTIVE: To introduce the basics of Technical writing to the students.

UNIT-I: Introduction to Technical Communication

What is technical writing — perception and understanding — documentation - development cycle — goals and objectives — tasks of a technical writer — technical writing as a career.

UNIT-II: The writing process

Soft skills for writing — thinking skills — analytical skills — creativity — approach to writing a document — importance of soft skills — technical writing tools — electronic documents vs. hyper documents (web pages)

UNIT-III: Editing and Proofreading

Purpose, documents, audience and situation — the writer's role and the process — content — common mistakes with prepositions — agreement between subject and verb — avoid exist language — don't waste words — wordy phrases.

UNIT-IV: Online Documentation

Concepts of online documentation — types of online documents — advantages — disadvantages — categories of users — developing online documents — preparing user-manuals — preparing and designing web documents- links and writing styles — the world wide web.

UNIT-V: Ethics and Legal issues in writing and publishing

Ethical issues — copyright label — limits to free expression — Indian laws.

BOOKS RECOMMENDED

1. Technical Communication, Society of Technical Communication, Washington
Arthur Plotnik, The Elements of Editing: A Modern Guide for Editors and Journalists, Macmillan Publishing Company, New York.
2. Alan, S. Pringle. Technical Writing 101: A Real World Guide to Planning and Writing Technical Content. UBSPD Publications.
3. S. Gary Blake. Element of Technical Writing. (Elements of Series)

ONLINE SOURCES:

- <http://confai.com/introduction-technical-writing/>
<http://study.com/academy/lesson/the-technical-writing-process-prewriting-writing-rewriting.html>
<http://writingcenter.unc.edu/handouts/editing-and-proofreading/>



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

388

III SEMESTER

S. No	Subject Code	Nature	Subject Title	Hrs/Week	Exam Hrs	CA	SE	Tot	Crd
1	17PEHC31	Core	Modern Literature III	6	3	25	75	100	5
2	17PEHC32	Core	Shakespeare	6	3	25	75	100	5
3	17PEHC33	Core	Modern Literary Theories	6	3	25	75	100	5
4	17PEHE31	Elective	Comparative Literature and Translation Studies	6	3	25	75	100	4
5	17PEHN31	NME	English for Effective Communication	6	3	25	75	100	4
Total				30				500	23



PART CORE – III	Title : MODERN LITERATURE - III	Subject Code: 17PEHC31
Semester : III	Hours : 6 hours / week	CREDITS :5

OBJECTIVE: To familiarize the students different genres of literature flourished during the Romantic period.

UNIT-I - Poetry

William Wordsworth

- Resolution and Independence
- Tables Turned

S. T. Coleridge

- Dejection: An Ode
- Reflections on Having Left A Place of Retirement

UNIT-II - Poetry

John Keats

- Ode on a Grecian Urn, Ode to Psyche

P. B. Shelley

- The Cloud

Lord Byron

- The Prisoner of Chillon.

UNIT-III - Prose

Charles Lamb

- a) In Praise of Chimney Sweepers
- b) South Sea House

William Hazlitt

- My First Acquaintance with Poets.

UNIT-IV - Pros

P. B. Shelley

- A Defence of Poetry.

UNIT-V - Fiction

Jane Austen

- Sense and Sensibility

Walter Scott

- Ivanhoe

BOOKS RECOMMENDED

1. Abrams.M.H. Norton Anthology of English Literature. W.W. Norton & Co, New York, 1979.
2. Wordsworth, William. The Collected poems of William Wordsworth. Wordsworth Editions Ltd; New ed.,1994.
3. Keats. A Keats Selection. Howlings, Norman., ed., Macmillan, 1966.
4. S. Ramaswamy and V.S. Sethuraman., ed. The English Critical Tradition: An Anthology of English Literary Criticis Vol 1. Macmillan Publishers India Ltd, Chennai, 2012.

ONLINE SOURCES:

- www.reference.com/art-literature/romantic-poetry
- www.janeausten.co.uk
- www.easyliteraturenotes.blogspot.com



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

390

PART - III CORE	Title : SHAKESPEARE	Subject Code : 17PEHC32
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

OBJECTIVE: To introduce the students the dramatic works of Shakespeare.

UNIT-I

King Lear

UNIT-II

A Midsummer Night's Dream

UNIT-III

Henry IV – Part 1

UNIT-IV

The Winter's Tale

UNIT-V

General Shakespeare

- Women Characters
- Fools
- Supernatural Elements
- History Plays
- Villains

BOOKS RECOMMENDED

- Ribner, Irving. William Shakespeare: an Introduction to his Life, Times & Theatre. Blaisdell publications Co., 1969.

ONLINE SOURCES:

<https://www.cliffsnotes.com/literature/h/kinglear/play-summary>

shakespeare.mit.edu/merchant/full.html

http://www.sparknotes.com/shakespeare/romeojuliet/

shakespeare.mit.edu/winters tale/



PART - III CORE	Title : MODERN LITERARY THEORIES	Subject Code : 17PEHC33
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

OBJECTIVE: To introduce modern literary theories to the students.

UNIT-I

Ferdinand de Saussure: A Course in General Linguistics: Nature of the Linguistics Sign.
Text –
Literary Theory: An Anthology. (P.76 – 90)

UNIT-II

Jacques Derrida – Structure, Sign and Play in the Discourse of Human Sciences.
Text–Modern Criticism and Theory.

UNIT-III

Bill Ashcraft et al. The Empire Writes Back: Theory and practice in Postcolonial Literatures –
Introduction (P. 1-30)

UNIT-IV

Audre Lorde – Age, Race, Class and Sex: Women Redefining Difference Text – Literary
Theory : An Anthology, (P.392 – 403)

UNIT-V

Stanley Fish - Is there a Text in the Class?
Cleanth Brooks - The Primacy of the Reader.

BOOKS RECOMMENDED

The Empire Writes Back: Theory and Practice in Postcolonial Literatures, Bill Ashcroft et al.
Postcolonial Discourses: An Anthology, Gregory Castle ed. Oxford Blackwell Publishers.
Modern, Criticism and Theory: A Reader, David Lodge & Nigel Wood, Eds, 2nd Edition
Delhi Pearson Education Pvt. Ltd., 2003 Print.
Literary Theory An Anthology. Massachusetts: Julie Rivkin and Michael Ryan. Ed.
Blackwell Publishers Inc., 2002. Print.



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

392

PART-III ELECTIVE	Title : COMPARATIVE LITERATURE & TRANSLATION STUDIES	Subject Code: 17PEHE31
Semester : III	Hours : 6 hours / week	CREDITS : 4

OBJECTIVE: To brief on literatures of different linguistics, cultural or national groups and to give a wide knowledge on translation studies.

UNIT: I – Comparative Literature

Definition and Scope

History of Comparative Literature – The American, French and Indian Schools of Comparative Literature

UNIT: II – Historical Comparisons

Influence and Reception

Epoch, Period, Generation and Movement

Genre

UNIT: III – Aesthetic Comparisons

Thematology

Translation

UNIT: IV – History of Translation Theory

Problems of Period Study

The Romans

Bible Translations

English Translation through the Ages

UNIT: V – Classics in Translation

Bhagavad Gita – Thirukkural - Shield of Achilles - Shakunthala

BOOKS RECOMMENDED

1. Bassnett, Susan. Translation Studies. Routledge, London, 2003.
2. Srinivasan, Padma., Balakrishnan and N.Subramanian, Editors. Introduction to Comparative Literature – Theory and Practice. Jeeril Publications, 1995.
3. Wellek, Rene and Warren, Austin. Theory of Literature. (New York – Harcourt, Brace and World Inc, 1942) 3rd Revised Edition, 1996.
4. Perundevi, Lakshmi., Haemalatha, Editors. Classics in Translation – A Glimpse. Vivaswan Publications, 2000.

On line Sources : www.asymptotejournal.com

www.researchgate.net



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

393

PART – IV NME	TITLE : ENGLISH FOR EFFECTIVE COMMUNICATION	Subject Code: 17PEHE31
Semester : III	Hours : 6 hours / week	CREDITS : 4

Objective: To develop communication skills and to prepare the students to face interviews effectively.

UNIT – I

1. Importance of Communication
2. Types of Communication
3. Barriers to Communication
4. Non-verbal Communication (Personal appearance, postures, gestures, facial expressions, eye-contact)

UNIT – II

1. Listening skills
2. Types of listening skills
3. Telephonic conversation
4. Interviews, Types of interviews
5. Face to face conversation

UNIT – III

1. Introducing oneself and others
2. Describing people and places
3. Asking for information
4. Asking for permission
5. Giving suggestion
6. Expressing apology and sympathy
7. Asking for and giving opinion

UNIT – IV

1. Brain Storming
2. Role Play
3. Group Discussion
4. Preparing the introduction of the presentation – body of the presentation – conclusion of the presentation

UNIT – V

1. Writing Advertisements
2. Notices, Agenda, Minutes writing
3. Resume writing
4. E-mail Drafting

Books Recommended

1. T.M. Farhathullah. Communication Skills Undergraduates. RBA publication ,2005.
2. Mohan Krishna and Banerji, Meera. Developing communication skills. Macmillan India Ltd, 2002.
3. S. Vincent. Let's Speak English "A course in spoken English". Soundara Publication, Madurai, 2004.

ONLINE SOURCES:

www.skillsyouneed.com , www.managementstudyguide.com



IV SEMESTER

S. No	Subject Code	Nature	Subject Title	Hrs/ Week	Exam Hrs	CA	SE	Tot	Crd
1	17PEHC41	Core	Modern Literature IV	6	3	25	75	100	5
2	17PEHC42	Core	Modern Literature V	6	3	25	75	100	5
3	17PEHC43	Core	New Literatures in English	6	3	25	75	100	4
4	17PEHC44	Core	Research Methodology	6	3	25	75	100	4
5	17PEHEV1	Elective	Project and Viva-voce	6	3	25	75	100	4
Total				30				500	22



PART –III CORE	Title : MODERN LITERATURE- IV	Subject Code:17PEHC41
Semester : IV	Hours : 6 hours / week	CREDITS : 5

Objective: To enhance the students' understanding of the writings in the Victorian period.

UNIT – I – Poetry

- Lord Tennyson – Tithonus
Matthew Arnold - Dover Beach,
A Wish
G.M. Hopkins – The Wreck of the Deutschland
Rossetti – The Blessed Damozel

UNIT-II – Prose

- Matthew Arnold - Preface to 1853 Poems

UNIT-III-Short Story

- Charles Dickens - The Bloomsbury Christening
Mary de Morgan - A Toy Princess
Arthur Conan Doyle - A Scandal in Bohemia
Anthony Trollope - George Walker at Suez

UNIT-IV-Fiction

- Charles Dickens - Great Expectations
George Eliot - Mill on the Floss

UNIT – V – Drama

- Oscar Wilde – Lady Windermere's Fan

BOOKS RECOMMENDED

- 1.S. Ramaswami and V.S. Sethuraman,. ed. The English Critical Tradition : An Anthology of English Literary Criticism Vol. II. Macmillan India Ltd. Chennai 2004.
2. Robert, Michael,. Ed. The Faber Book of Modern Verse. Faber & Faber, London, 1940.

ONLINE SOURCES:

1. <https://www.poets.org/poetsorg>
2. <http://www.english-literature.org/essays>
3. <http://www.victorianweb.org>



PART -III CORE	Title : MODERN LITERATURE- V	Subject Code:17PEHC42
Semester : IV	Hours : 6 hours / week	CREDITS : 5

Objective: To make the students understand how the new millennium era has been portrayed by the writers through various genres.

UNIT – I – Poetry

- T.S. Eliot – The Waste Land
- W.B. Yeats – A Prayer for My Daughter
- Philip Larkin – Wants

UNIT – II – Prose

- T.S. Eliot – The Social Function of Poetry
- F.R. Leavis – Literary Criticism and Philosophy

UNIT – III – Short Story

- Graham Greene – The Destroyers
- E.M.Forster – The Road from Colonus
- Muriel Spark – The House of the Famous Poet
- Virginia Woolf – The Haunted House

UNIT – IV – Fiction

- Joseph Conrad – The Heart of Darkness

UNIT – V – Drama

- T.S. Eliot - Murder in the Cathedral
- Harold Pinter – The Birthday Party

BOOKS RECOMMENDED

1. T.S.Eliot. On Poetry and Poets. Farrar, Straus and Giroux, 2009.
2. S. Ramaswami & V.S. Sethuraman,. Ed.The English Critical Tradition : An Anthology of English Literary Criticism Vol. II. Macmillan India Ltd, Chennai, 2004.

ONLINE SOURCES:

1. <https://interestingliterature.com>
2. <https://www.buffalolib.org>
3. <http://www.shmoop.com/>



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

M.A. ENGLISH - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

397

PART - III CORE	Title : NEW LITERATURES IN ENGLISH	Subject Code : 17PEHC43
Semester : IV	HOURS : 6 hours / Week	CREDITS : 4

OBJECTIVE: To make the students familiar with New Literatures in English.

UNIT-I – Poetry

- | | |
|-----------------------|--|
| 1. Gabriel Okara | - The Mystic Drum |
| 2. Derek Walcott | - A Far Cry from Africa |
| 3. Mervyn Morris | - To an Expatriate Friend |
| 4. Margaret Atwood | - Journey to the Interior |
| 5. Jasmine Goonaratne | - On an Asian poet fallen Among American |
- Translators

UNIT-II – Prose

- Chinua Achebe - Thoughts on the African Novel.

UNIT-III – Short Story

- | | |
|---------------------------|-------------------------------|
| Samuel Selvon (Trinidad) | - Brackley and the Bed |
| Ngugi wa Thiong'o (Kenya) | - Goodbye Africa |
| Bharati Mukherjee (India) | - Hindus |
| Jack Davis (Australia) | - White Fantasy – Black Fact. |

UNIT-IV - Fiction

- | | |
|--------------|----------------------------|
| Alan Paton | - Cry, the Beloved Country |
| Albert Camus | - The Outsider. |

UNIT-V Drama

- Sharon Pollock – The Blood Relations

BOOKS RECOMMENDED

1. C.D. Narasimhaiah. An Anthology of Commonwealth Poetry. Macmillan, Chennai, 2013.
2. Victor J. Ramraj,. Editor. Concert of voices: A Anthology of World Writing in English. Broadview Press, 2nd edition, 2009.

ONLINE SOURCES:

- www.poetryfoundation.org
www.booktopedia.com.au
www.poetryarchive.org
www.bookrags.com
literatureworms.blogspot.in
<https://worldliterature2012.wikispaces.com>
<https://en.wikipedia.org/wiki/chinuaachebe>
<https://www.enotes.com/topics/edible-woman>



M.A. ENGLISH - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-III CORE	Title : RESEARCH METHODOLOGY	Subject Code:17PEHC44
Semester : IV	Hours : 6 hours / week	CREDITS :4

OBJECTIVE: This paper aims to introduce the students the stages and methods involved in Research.

UNIT-I

Identifying the research topic - using the library / digital library / internet - preparing a working bibliography.

UNIT-II

Plagiarism, Mechanics of writing.

UNIT-III

Format of the research paper.

UNIT-IV

Citing Source, abbreviations and other systems of documentation.

UNIT-V

Organizing the thesis - computing - proof-reading - bibliography / select bibliography / works cited.

BOOKS RECOMMENDED

1. Gibaldi, Joseph. MLA Handbook for writers of Research Papers. First East - West Press, 7th Edition, 2009.
2. MLA Style Sheet.

ONLINE SOURCES:

<http://study.com/academy/lesson/research-methodology-approaches-techniques-quiz.html>

<https://www.slideshare.net/anilkumarkhadka/research-methodology-notes>



PART-III ELECTIVE	Title: PROJECT & VIVA-VOCE	Subject Code:17PEHEV1
Semester : IV	Hours : 6 hours / week	CREDITS : 4

Objectives:

- To make the students apply the methodology of research in their writing.
 - To make an in depth study of a particular literary writer.
- i. Students must undertake the project work under the guidance of a faculty member.
- ii. Report has to be submitted to the guide periodically.
- iii. The internal test mark is 40 and the criteria is as follows,
- a. Two Presentations - 2x10=20marks
 - b. Submission of Project – 10marks
 - c. Internal Viva-voce - 10marks
- iv. The external examination will be conducted by the external examiners.
- v. The students must submit 3 copies of their Project Report two weeks before the external examination.
- vi. The maximum marks for the external examination is 60 and the criteria is as follows,
- d. Project Report - 20marks
 - e. Project Presentation - 20marks
 - f. Project Viva-voce 20marks



SOURASHTRA COLLEGE, MADURAI- 625004

400

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

I SEMESTER

Sl. No.	Subject Code	Nature	Subject Title	Hours / Week	Exam (Hrs)	C A	SE	Tot	Crd
1	17PCE C11/ 17PCC C11	Core 1	Advanced Cost Accounting	6	3	25	75	100	3
2	17PCE C12/ 17 PCC C12	Core 2	Financial Markets and Services	6	3	25	75	100	3
3	17 PCE C13/ 17 PCC C13	Core 3	Advanced Accounts	6	3	25	75	100	4
4	17 PCE C14	Core 4	Project Management*	6	3	25	75	100	4
5	17 PCE E11	Elective 1	Advanced Business Statistics*	6	3	25	75	100	5
			TOTAL	30					19

* Denotes alternative paper for Computer papers in M.Com (CA) course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III CORE	Title : ADVANCED COST ACCOUNTING	Subject Code : 17 PCE C11/ 17PCC C11
Semester : I	HOURS : 6 hours / Week	CREDITS : 3

Objectives:

- **To know the advanced concept in cost accounting**
- **To know the different methods of costing**
- **To understand the preparation of budgets**

Unit 1 :

Cost Accounting - meaning – Objectives – Financial Accounting Vs Cost Accounting – Advantages – Limitations – Essentials of Good Costing System – Installation – Cost unit – cost centre – Profit Centre – Ascertainment of Cost – Cost Control – Cost Reduction – methods of costing – types of costing – classification of Cost – Elements of cost.

Unit 2:

Unit or output costing – meaning - features – collection of cost – cost sheet – production account – tender – scrap – defective – Job costing – meaning - features – batch costing – meaning – Economic Batch Quantity(EBQ).

Unit 3:

Operating Costing – Meaning – composite - Cost Unit- Characteristics – Transport Costing – Features - Power House Costing – Cinema House Costing – Hospital Costing – Canteen Costing.

Unit 4:

Process Costing – Features – Advantages – Disadvantages – Costing Procedure – Normal Loss – Scrap - Abnormal Loss – Abnormal Gain – Defectives – By-Products - Joint Products – Inter-Process Profit – Equivalent Production.

Unit 5:

Budgetary Control – Meaning - Characteristics – Advantages – Limitations – Classification – Fixed and Flexible – Budgets – Sales Budget – Production Budget – Cash Budget – Master Budget – Zero Base Budgeting.

Note: Question paper should cover 30% Theory and 70% Problems.

Book for Study:

Advanced Cost Accounting - S.P. Jain & K.L. Narang

Books Recommended :

Advanced Cost Accounting - S.P. Jain & K.L. Narang

Cost Accounting - VSP. Rao

Advanced Cost Accounting – Dr S.N. Maheshwan

Cost Accounting - R.S.N. Pillai & V. Bagavathi



PART - III CORE	Title : FINANCIAL MARKETS AND SERVICES	Subject Code : 17 PCE C12 17 PCC C12
Semester : I	HOURS : 6 hours / Week	CREDITS : 3

Objectives:

- **To know the Indian financial systems**
- **To know the financial markets in India**
- **To know the financial services in India**

Unit 1: The Financial System in India – Functions of the Financial System – Financial Concepts – Financial Markets – Classification of Financial Markets – Development of Financial System in India – Weaknesses of Indian Financial System.

Unit 2: Money Market – Meaning -Objectives, Characteristics and Importance – Composition of Money Market – Call Money Market, Commercial Bills Market or Discount Market, Acceptance Market and Treasury Bill Market – Money Market Instruments – Commercial Papers, Certificate of Deposit – Deficiency of Indian Money Market – Recent Developments.

Unit 3: New Issue Market –Meaning- Functions – Origination, Underwriting, and Distribution – Methods of Floating New Issues – Public Issue, Offer for Sales, Placement, Bonus Issue and Rights Issues – Recent Trends in New Issue Market – Secondary Market – Control Over Secondary Market – Recognition of Stock Exchanges,, and Registration of Brokers – Depository System – Objectives and Activities of a Depository – Benefits of Depository System.

Unit 4: Financial Services – Meaning - Scope and Innovation – Causes for Financial Innovation. Merchant Banking – Meaning, Definition and Services of Merchant Banks – Qualities required for Merchant Bankers – Scope for Merchant Banking in India. Mutual Funds – Meaning, Definition and Classification of Funds – Close-ended Funds and Open-ended funds –Merits and Demerits of Mutual Funds – Reasons for Slow Growth of Mutual Fund Industry.

Unit 5: Credit Rating – Meaning and Definition – Functions of Credit Rating – Origin – Credit Ratings in India – Benefits – Credit Rating Agencies in India – Credit Rating Information Service Ltd. (CRISIL), Investment Information and Credit Rating Agencies of India (ICRA), and Credit Analysis and Research (CARE) – SEBI Guide lines– Limitations of Rating – Future of Credit Rating in India.

Book for Study: Financial Markets and Services – E. Gordon and K. Natarajan (Himalaya Publishing House, Mumbai)

Books for Reference:

1. Financial Markets and Institutions – Dr. S. Gurusamy, Thomson Business Information India Pvt. Ltd., India.
2. Financial Services – Joseph Anbarasu & Boominathan (Sultan Chand & Sons, New Delhi).



PART - III CORE	Title : ADVANCED ACCOUNTS	Subject Code : 17 PCE C13 17 PCC C13
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- **To know the advanced concepts in accounts**
- **To enrich the knowledge of insolvency act**
- **To understand the computation of claims for loss of stock**

Unit 1:

Final Accounts of Sole Trader- Trading a/c ; profit & loss a/c – balance sheet . Opening entries, closing entries and adjusting entries.

Unit -2

Accounting for non-trading organization – meaning and treatment of special items Single entry – net-worth method – conversion method

Unit 3

Branch accounts – accounting in respect of dependent branches including stock and debtors system – independent branches- Departmental accounts- departmentalization of expenses – inter departmental transfers – preparation of trading account, profit & loss account and balance sheet.

Unit 4

Insolvency accounts – procedure under Insolvency Acts – distinction between insolvency of an individual and partnership firm – preparation of statement of affairs and deficiency accounts of sole trader and partnership firm.

Unit 5

Insurance claims – computation of claims to be lodged for loss of stock and for loss of profit – average clause. Hire purchase and instalment system – accounting treatment for hire purchase system – default and repossession – hire purchase trading account. Instalment purchase system – Accounting treatment.

Note: Question paper should cover 30% theory and 70% problems

Books for study:

1. Advanced Accountancy – T.S.Reddy & A.Murthy
2. Advanced Accountancy – S.P.Jain & Narang

Books for reference:

1. Advanced Accountancy – M.A.ArulanANDam & K.S.Raman
2. Advanced Accountancy - R.L.Gupta & Radhaswamy
3. Advanced Accountancy – M.C.Shukla & T.S.Agarwal



PART - III CORE	Title : PROJECT MANAGEMENT	Subject Code : 17 PCE C14
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- **To know the project management concept**
- **To understand the project identification**
- **To enrich the knowledge of collection of data**

Unit 1:

Project - Concept – Characteristics of Project – Classification Based on Location, Based on Activity, Based on Project Completion Time, Based on Ownership, Based on size, Based on Purpose – Life Cycle – Management – Organisation.

Unit 2:

Project Identification - Meaning – Generation of ideas – Preliminary Screening – Project Rating Index- Benefits of Project Definition Rating Index.

Unit 3 :

Market and Demand Analysis - Meaning- Collection of Data- Primary Sources- Secondary Sources- Market Survey- Market Planning- Marketing Environment- Project Risk Analysis: General Economic Conditions- Kinds of Project Risks-Demand Forecasting Techniques and Methods.

Unit4:

Technical Analysis – meaning - Selection of Technology- Material Input and Utilities- Plant Capacity- Location and Site- Machinery and Equipments – Structures and Civil Works- Environmental Aspect-Project Chart and Layouts. Financial Estimation: Project cost- sources of Finance.

Unit5:

Project Implementation – Meaning-Schedule-Project planning- Project Control- Human aspects of Project Management-Team Building- High Performance Team.

NOTE: Question paper should cover 100 % theory

Book for study:

Project Management by Shilpi Jauhari & S.K.Chaturvedi-Himalaya Publishing House.

Books Recommended:

Project Management by Shilpi Jauhari & S.K.Chaturvedi-Himalaya Publishing House.

Project Management By Vasant Desai – Himalaya Publishing House.

Project Management Principles & Techniques By B B Goel-Deep &Deep Publications Pvt Ltd.,

Project Management By Rajeev M.Gupta- Eastern Economy Edition.

Project Management- A Life Cycle Approach by Arun Kanda- Eastern Economy Edition.



PART - III ELECTIVE	Title : ADVANCED BUSINESS STATISTICS	Subject Code : 17 PCE E11
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To develop the knowledge in business statistics**
- **To know about the statistical tools used in social research**

Unit 1

Correlation analysis – type of correlation – methods of studying correlation – Karl Pearson’s co-efficient of correlation rank correlation- multiple correlation. Regression analysis – importance – difference between correlation and Regression- Regression equation – least square methods , deviations taken from arithmetic mean, and deviations taken from assumed mean – multiple Regression.

Unit 2

Analysis of time series – components of time series – measurement of trend – semi – average method, moving average methods, and method of least square –methods of measuring seasonal variations – method of simple averages, ratios-to-trend method , and ratios-to-moving average method.

Unit 3

Theoretical distribution or probability – random variables – types of probability distribution – discrete probability distribution – binomial and poisson- normal probability distribution –(simple problems only)

Unit 4

Sampling and tests of significance – steps in tests of hypothesis – tests of significance of large samples – testing the difference between means of two samples – test of significance between small samples – student’s t-distribution – application of the t-distribution – the variance – ratio test or F-Test.

Unit 5

Analysis of variance (ANOVA) – ‘F’ Test - Chi-square test – Characteristic and Conditions of chi-square test – degree of freedom – uses of chi-square test – application of chi-square test in research – yate’s correction.

Note: Question paper should cover 30% theory and 70% problems.

Book for Study:

1. Statistical methods –Dr.M.Manoharan (palani paramount publications , palani)

Books for Reference:

1. Business statistics – S.P.Gupta and M.P.Gupta (sultan chand & sons, new delhi)
2. Statistics methods – S.P.Gupta (sultan chand & sons, new delhi)
3. Statistics – D.C.Sancheti and V.K.Kapoor (sultan chand & sons, new delhi)

**SOURASHTRA COLLEGE, MADURAI- 625004**

406

*(An Autonomous Institution Re-accredited with 'B' grade by NAAC)***MASTER OF COMMERCE(M.Com.) - SYLLABUS****(Under CBCS w.e.f. 2017 – 2018 onwards)****II SEMESTER**

Sl. No.	Subject Code	Nature	Subject Title	Hrs/Week	Exam (Hrs)	CA	SE	Tot	Crd
1	17 PCE C21/ 17 PCC C21	Core 5	Customer Relationship Management	6	3	25	75	100	3
2	17 PCE C22/ 17 PCC C22	Core 6	Management Accounting	6	3	25	75	100	3
3	17 PCE C23/ 17 PCC C23	Core 7	Banking Technology	6	3	25	75	100	4
4	17 PCE C24	Core 8	Security Analysis and Portfolio Management*	6	3	25	75	100	4
5	17 PCE E21	Elective 2	Business Environment and Policy*	6	3	25	75	100	5
			TOTAL	30					19

* Denotes alternative paper for Computer papers in M.Com (CA) course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004

407

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

PART - III CORE	Title : CUSTOMER RELATIONSHIP MANAGEMENT	Subject Code : 17 PCE C21/ 17PCC C21
Semester : II	HOURS : 6 hours / Week	CREDITS : 3

Objectives:

- To know development in marketing technique
- To study the modern concept of marketing

Unit 1

CRM-Meaning –Significance – Reasons for loss of customers – strategies for building relationship – Attention on changing requirements of Customers – developing total care programmers.

Unit 2

Customer acquisition – Meaning-input of acquisition – requisites for effective acquisition – attention on adoption process.

Unit 3

Customer Interaction Management(CIM) – Meaning -Routes to CIM – factors influencing CIM- Electronic data interchange (EDI) –specific skills for CIM.

Unit 4

e-CRM(e-Customer Relation Management)- Meaning- Evolving e-CRM- CRM vs e-CRM –need to move to online CRM- Basic Requirements of e-CRM – e-CRM dimensions – Features of e-CRM.

Unit 5

Integration of CRM with ERP(Enterprise Resource Planning) System –Meaning-CRM Integration – cost – time work Involved – Efficiency –CRM ERP Integration – ERP vendors Deal with CRM –Optimum Integration with CRM – Optimum Integration with ERP and CRM via web.

Book for study:

Customer Relationship Management – A step by-step approach

H.Peeru Mohammed,A.Sagadevan,Vikas publishing pvt ltd

Books for Reference

1. Alexis leon,2005, Enterprise Resource Planning, Tata Mc Graw Hill Publications company, ltd., New delhi
2. Anderson, Kristin , Kenr, Carol,2003, Cumtomer Relationship
3. Gosney Roberts, Philips,2003, customer Relationship Management, Prentice Hall of India.
4. Graham Roberts , Philips,2003, customer Relationship Management,viva books pvt ltd., Chennai.



SOURASHTRA COLLEGE, MADURAI- 625004

408

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : MANAGEMENT ACCOUNTING	Subject Code : 17 PCE C22/ 17PCC C22
Semester : II	HOURS : 6 hours / Week	CREDITS : 3

Objectives:

- To develop the managerial skill in accounting
- To know about the decision making concepts

Unit 1

Management accounting – meaning – objectives – functions – financial statement analysis – nature – limitations – analysis and interpretation – comparative statement- common size statement - trend analysis .

Unit 2

Working capital – meaning – importance - advantages –Types- Gross working capital – Net working capital - working capital cycle – Estimation of working capital required.

Unit 3

Funds flow statement – Importance – Limitations – Preparation of schedule of changes in working capital -calculation of funds from operations - Cash flow statement – Importance – Limitations – Computation of cash from operations-preparations of cash flow statement.

Unit 4

Marginal costing – definition-features – merits and demerits – fixed cost –variable cost – contribution – break – even point – margin of safety – profit volume ratio – cost – volume profit analysis – applications of Marginal Costing.

Unit 5

Standard costing – definition – advantages – limitations – variances – materials, Labour, Overheads and Sales variances.

Note: Question paper should cover 30% theory and 70% problems.

Books for Study

Management accounting – T.S.Reddy & Y.Hari Prasad Reddy

Management accounting- Rama chandran & Srinivasan.

Books for reference:

Management accounting – M.Y.Khan & P.K.Jain

Management accounting – R.K.Gupta

Management accounting – N.K.Kalshresthar

Management accounting - R.N.Antheny.



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : BANKING TECHNOLOGY	Subject Code : 17 PCE C23 17PCC C23
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- To know the technological concepts in banking
- To introduce the new banking concepts in the modern world

Unit 1:

Banking Technology:Introduction- Evolution – Concept- computers and computerisations- Introduction- Technology adoption in Banks-Classification of Computers- Computer Languages.

Unit 2:

Network and Networking: Server-Meaning-Types. Network-Meaning- Topology- Components - Types-Natives in India and Abroad – Bank Net, RBINET, Data Net, INET Bank Branch Network.

Unit 3:

Computerized Banking :Internet Banking-Features-Regulations and control- Products and Services – Levels of Internet Banking- Core Banking- Any Where Banking- Any time Banking- Mobile Banking.

Unit 4:

Electronic Fund Transfer:ATM-Debit Card-Credit Cards-Smart Cards- Prepaid Payment Instruments- Emerging Technologies and Application- E-Payments- Advantages- Channels- Payment Gateways- ECS-NEFT-RTGS-Other information technology enabled services.

Unit 5:

Data Management and Security:Data Management-Organisation- Types- DBMS-Functions- Utility- Structures- Models- Decision Support Resources- Data Base Administrator (DBA)-Functions- Objectives - Data engine-Risks and security- Regulation- RBI Guidelines- Security standards –Risks- Types-Cryptography-Digital Signatures-Physical Security – Cyber Attach- Cyber Law.

Note: Question paper should cover 100% theory.

Books for Study :

1. Banking Technology Dr A.Rama New century Book House (P) LTD Chennai.
Dr A.Arunadevi
2. Technology is Banking C.S.Ram and S.Arunajotesam Margham Publication Chennai.

Books for Reference:

1. Banking Theory Law and Practice Dr S.Gurusamy Vinay article imprint(P) ltd Chennai.
2. Electronic Banking and Information Technology IIB Computers Network Archrews .



PART - III CORE	Title : SECURITY ANALYSIS & PORTFOLIO MANAGEMENT	Subject Code : 17 PCE C24
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

- **To develop the skill of students in investment market**
- **To know about investment management**

Unit 1:

Investment-Meaning – Classification – Investment and Speculation- Factors favouring Investment – Investment objectives- Essential features of an investment programme – Investment alternatives- Real Investments – Contingent Investment- Titular Investments.

Unit 2:

Primary market- Parties Involved in the new issue- Book Building – Investors Protection in the primary market- secondary market- functions of stock exchange – Listing of securities – merits and demerits – Qualification for listing – Listing Procedure – Application- Delisting .

Unit 3:

Stock market indices – BSE sensitivity Index-NSE 50 Index- CNX nifty junior – STPLNX50-SEBI-Objectives – Functions- SEBI’s role in the Primary market, Secondary market, Mutual funds, and the FII’s .

Unit 4:

Security analysis – fundamental analysis – Industry analysis – company analysis – Technical analysis- Assumptions – Dow theory – Technical Indicators – Charts-Line chart, Bar chart, Candle stick chart.

Unit 5:

Portfolio management- Meaning – Portfolio management process – factors contributing - Principles – Policies –Problems of portfolio revision – Techniques – Format plan- Constant rupee value – Constant ratio – Variable ratio plan- Rupee cost average.

Note: Question paper should cover 100% theory only.

Books for study

- 1) Security Analysis and Portfolio - Punithavathy pandian- Vikas Publishing House Private Ltd.
- 2) Investment Management-Dr.L. Natarajan-Margham Publications.

Books for reference :

- 1) Fundamental of Investment Management – V.K.Bhalla- S.Chand &company Ltd.
- 2) Investment management Theory & Practice R.P.Rustagi- Sultan chand & sons



SOURASHTRA COLLEGE, MADURAI- 625004

411

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : BUSINESS ENVIRONMENT AND POLICY	Subject Code : 17 PCE E21
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the business environment
- To understand the industrial policies and related aspects

Unit 1:

Business: Meaning- Scope- Characteristics of Business Environment: Significance – Elements of External and Internal Environment.

Unit 2:

External factors Affecting Business- Legal, Economical, Social & Cultural and technological Factors- SWOT Analysis.

Unit 3:

Industrial Polices Since Independence – Recent Changes in Industrial Licensing system- IDR Act, 1951- Privatization of Public Sector Undertakings- Forms of Privatization – Arguments for & against Privatization.

Unit 4:

Consumer Protection Act, 1986- consumer Rights- Consumer Protection Councils – Three tier Structure of Grievances redressal machinery – Their Comporition- Jurisdiction – Procedure on Admission of complaint . Social Responsibility of Business – Dimensions of social responsibilities- Arguments for & Against Social responsibility of Business.

Unit 5:

Industrial Sickness- Causes- sick industrial Company's Act, (Special Provisions) Act,1985- BIFR-Reference to BIFR- Inquiries and schemes. Small Scale Sector- Definition – Problems of small scale industries- Incentives to small scale sector- Industrial sickness in small scale sector.

Book for Study:

Francis Cherunilam – Business Environment , Himalaya Publishers.

Books Recommended:

W.F. Glneck - Business Policy and strategic management Tata Mc Grass Hill.

K. Chidambaram And V. Alagappan - Business Environment Vikas Publishers.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
MASTER OF COMMERCE(M.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

412

III SEMESTER

Sl. No .	Subject Code	Nature	Subject Title	Hours / Week	Exam (Hrs)	C A	SE	Tot	Crd
1	17PCEC31/ 17PCC C31	Core 9	Overseas Marketing	6	3	25	75	100	5
2	17PCEC32/ 17PCC C32	Core 10	Advanced Company Accounts	6	3	25	75	100	5
3	17PCEC33	Core 11	Principles of Information Technology*	6	3	25	75	100	5
4	17PCEE31	Elective 3	Taxation*	6	3	25	75	100	5
5	17PCEN31/ 17PCCN31	NME 1	Tourism Development	6	3	25	75	100	5
			Total	30					25

*** Denotes alternative paper for Computer papers in M.Com (CA) course.**

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III CORE	Title : OVERSEAS MARKETING	Subject Code : 17 PCE C31/ 17 PCC C31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To understand the concepts of International Marketing.**
- **To enrich the knowledge of International business.**

Unit I

International Marketing- Definition- Scope of Overseas marketing- International Marketing Vs Domestic Marketing- objectives of International Business- Export procedures and documents- Foreign Trade (Development and Regulation) Act, 1992 – Main provisions.

Unit II

Overseas Market Entry and overseas distribution system- Direct Exporting – Indirect Exporting – Forms of direct exporting - Forms of organization in Foreign markets- Export Distribution channel – Foreign Market Entry New Strategies – counter trade – Licensing – Third country location – Mergers and Acquisition – Strategic Alliance.

Unit III

Overseas Product Strategies – product communication strategies – Straight Extension, product extension, product Adaptation, Dual Adaptation, Product Invention – Branding – Branding problems in International Marketing – packaging and Labeling – Special consideration in International packaging – pricing strategies – pricing methods – steps in pricing – Retrograde pricing – Transfer pricing – Dumping – Export price quotations.

Unit IV

Overseas Distribution logistics for exports – promoting products internationally – management of risks in international marketing.

Unit V

Overseas (International) Trade Financing – Institutional finance for export – forfeiting – Letter of Credit – types – EXIM Bank – Export Credit Risk Insurance – ECGC – Quality control – objectives – Role of Bureau of Indian Standards – The Foreign Exchange Management Act – objectives – main provisions.

Books for Study:

1. Francis Cherunilam – International Business, Prentice Hall. New Delhi
2. L.E. Varshney & B. Bhattacharya – International Marketing, Sultan Chand–New Delhi

Books for Reference:

1. International Marketing – P.K.Vasudeva, Excel Books, New Delhi.
2. International Marketing – V.H.Kirpalani, Prentice Hall of India Pvt Ltd, New Delhi.
3. International Trade and Export Management – Francis Cherunilam, Himal Pub House.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
MASTER OF COMMERCE(M.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

414

PART - III CORE	Title : ADVANCED COMPANY ACCOUNTS	Subject Code : 17 PCE C32 17 PCC C32
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the significance of Accounting Standards.
- To gain the knowledge of latest companies Act.
- To apply the latest laws in to Practical Problems.

Unit I

Accounting Standards: Meaning – objectives – need – Significance - Accounting Standards Board (ASB): Formation – functions – scope Indian Accounting Standards: AS-1 Disclosure of Accounting policies – AS-2 (Revised) valuation of inventories – AS-10 Accounting for Fixed Assets – AS-13 Accounting for Investments .

Unit II

Company Final Accounts including managerial remuneration computation – valuation of Goodwill – methods- valuation of shares- methods.

Unit III

Underwriting of shares including firm underwriting - Accounts of holding and subsidiary companies – Calculation of Goodwill, Capital reserve, minority interest - Consolidated Balance sheet.

Unit IV

Final Accounts of Banking Companies (New format) – Accounting for price level changes – Human Resource Accounting – objectives – Advantages and Disadvantages.

Unit V

Final Accounts of Insurance Companies of Life, Fire and Marine – Social responsibility Accounting – meaning – importance.

Question Paper Pattern: 70% Problems, 30% Theory

Book for Study

Corporate Accounting, T.S.Reddy & A.Murthy, Margham Publications.

Books for Reference

1. Advanced Accounts, R.L.Gupta & M.Radhaswamy.
2. Advanced Accounts, M.C.Shukla & T.S. Graval.
3. Advanced Accounts, S.P.Jain & K.L.Narang.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III CORE	Title : PRINCIPLES OF INFORMATION TECHNOLOGY	Subject Code : 17 PCE C33
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To know about the computer technology in the digital era.**
- **To apply the usage of Internet in the day to day life.**

Unit I Introduction to Computers

Introduction – Importance of Computers – Characteristics of Computers – Classification of Computers – Uses of Computers – Generation of Modern Computers.

Unit II Input and Output Devices

Introduction – Basic Input Devices: Keyboard, Mouse, Track ball, Game Controllers, Barcode Reader, Card Reader – Basic Output Devices: Monitor, Printer: Ink-jet Printer and Laser Printer – Plotter – Multi-media Projector.

Unit III Introduction to Internet

Introduction – Internet Access: Dial-up Connection and Direct Connection – Internet Addressing – World Wide Web (WWW)

Unit IV Overview of E-Mail

Introduction – How E-mail works? – Why use E-mail – E-Mail – Names and Addresses – Address Book – Replying and Forwarding E-Mail Messages – E-Mail Ethics.

Unit V Introduction to MultiMedia

Introduction – uses of Multimedia – Multimedia System – Multimedia Elements – Multimedia Education and Training – Multimedia in Marketing.

Book for Study:

Fundamentals of Information Technology – Alexis Leon and Mathews Leon - Vikas Publishing House, Noida.

Book for Reference:

Introduction to Computers - Alexis Leon and Mathews Leon.



SOURASHTRA COLLEGE, MADURAI- 625004

416

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : TAXATION	Subject Code : 17 PCE E31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To understand the fundamental concepts in I.T. Act, 1961.
- To know, how to complete the taxable income.

Unit I

Income Tax Act 1961 – Definition – Basis of Charge – Residential Status – Capital and Revenue Receipts and Expenditure– Exempted Incomes.

Unit II

Computation of taxable income under various heads – Salary -Provident Fund – Allowances – Perquisites – Deduction u/s 16 – House property.

Unit III

Profits and Gains from Business or Professions – Capital Gains – Other sources.

Unit IV

Set-off and carry forward of losses – Deductions from Gross Total Income.

Unit V

Assessment of Individuals – Hindu Undivided Family, Partnership firm – Company

Question Paper Pattern: 70% Problems, 30% Theory

Book for Study:

Income Tax Theory, Law and Practice – T.S.Reddy and Y.Hari Prasad Reddy

Books for Reference:

1. Direct Taxes Law and Practice – Vinod k.Singhania.
2. Income Taxes Law and Practice – Mehrotra and Goyal.
3. Income Taxes Law and Practice – Bhagwati Prasad.



SOURASHTRA COLLEGE, MADURAI- 625004

417

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 - 2018 onwards)

PART - IV NME	Title : TOURISM DEVELOPMENT	Subject Code : 17 PCE N31/ 17 PCC N31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know about the tourism industry.
- To gain the knowledge of the growth and development of tourism in India.

Unit I Introduction of Tourism

Introduction – Meaning - nature of Tourism – Elements of Tourism – An ancient phenomenon, Accounts of famous travellers – The Grand Tour – paid holidays – Types of Tourism.

Unit II Growth of Tourism in India

A land for all seasons – Development of Tourism in India – the formation of the Ministry of Tourism – setting up of the development of Tourism.

Unit III Tourism Marketing

Marketing in Tourism – The Tourist product – Tourist market – market segmentation – Marketing process and functions.

Unit IV Tourism Promotion

Advertising – sales support – public relations – Tourist Publicity – Evolution and modern trends.

Unit V International Organisations in Tourism

International union of official travel organisation (IUOTO), WTO – PATA – IATA – ICAO – constitution – objectives – services.

Book for study:

Tourism Development – A.K.Bhatia

Book for Reference:

Tourism Development – R.ABBAS



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
MASTER OF COMMERCE(M.Com.) - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

418

IV SEMESTER

Sl. No .	Subject Code	Nature	Subject Title	Hours/ Week	Exam (Hrs)	CA	SE	Tot	Crd
1	17PCEC41/ 17PCC C41	Core 12	Financial Management	6	3	25	75	100	6
2	17PCEC42/ 17PCC C42	Core 13	Strategic Management	6	3	25	75	100	6
3	17PCEC43/ 17PCC C43	Core 14	Executive Communication	6	3	25	75	100	5
4	17PCEC44	Core 15	Research Methodology*	6	3	25	75	100	5
5	17PCEC45	Core 16	Retail Management*	6	3	25	75	100	5
			Total	30					27

* Denotes alternative paper for Computer papers in M.Com (CA) course.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III CORE	Title : FINANCIAL M ANAGEMENT	Subject Code : 17 PCE C41/ 17 PCC C41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 6

Objectives:

- **To understand the concepts of Financial Management.**
- **To gain the technical knowledge in Financial Management.**

Unit I

Financial management – Introduction, Definition, Nature, Scope and Objectives, key objectives of financial management – financial function – approaches of financial functions – types of financial decision – functions of finance manager – organisation of finance section.

Unit II

Working Capital Management – Introduction, Definition, Importance, Classification – Dangers of Inadequate Capital and Excess Capital – Determinants of working capital – Computation of working capital – Working capital financing – Trade Credit – Bank Credit – Advances – factoring – Commercial paper – Installment credit.

Unit III

Capital Budgeting – Introduction – Significance – Capital Budgeting process – factors affecting Capital Investment Decision – Principles and Techniques – Pay Back Method – Discounted Cash flow method – Net present value method – Average rate of return method – Internal rate of return – Profitability Index method.

Unit IV

Financing Decision – Introduction – Capital Structure – factors influencing financial decisions – Theories of capital structure – Capital Gearing – Financial leverage and Operating leverage. Cost of capital – Meaning, Definition, and Importance – computation of cost of equity and cost of debt.

Unit V

Dividend and Dividend policy – Introduction, Classification, sources of dividend – factors influencing dividend policy / Theories of Dividend decision – Irrelevance and relevance theory – Walter’s Model only

Question Paper Pattern : 70% Problems, 30% Theory

Text Book:

Dr.S.N.Maheshwari, Financial Management – Principles and Practice, Sultan Chand Publishers.

Reference Books:

1. I.M.Pandey, Financial Management
2. Shashi.K.Gupta. R.K.Sharma, Financial Management, Kalyani Publishers.
3. Khan & Jain Financial Management – Tata Mcgraw hill.
4. Ravi & M.Kishore Financial Management – Taxman.



SOURASHTRA COLLEGE, MADURAI- 625004

420

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : STRATEGIC MANAGEMENT	Subject Code : 17 PCE C42/ 17 PCC C42
Semester : IV	HOURS : 6 hours / Week	CREDITS : 6

Objectives:

- To understand the concepts of strategic Management.
- To enrich the knowledge of features of Strategic Management.

Unit I : Introduction

Nature and scope of modern business – characteristics of business – objectives – differences between objectives and goals - objectives setting and guidelines – Definitions and meaning of strategy and strategic management – difference between strategy and tactics – levels of strategy.

Unit II : Environmental Scanning

Environmental scanning – its approach – gathering information for environmental analysis – SWOT analysis.

Unit III : Strategy Formulation

Strategy formulation and choice of Alternatives, Strategic Alternatives - stability strategy , its variants – Expansion or Growth Strategy, its types – Retrenchment Strategy, Form of adopting Retrenchment Strategy – Combination strategy.

Unit IV : Strategy Implementation :

Definition – Mc Kinsey's 7's model, - Inter-relationship between formulation and implementation of strategy – Issues in implementation – Structural Implementation and Organizational Structure – Entrepreneurial structure - Functional structure – Divisional structure – Behavioral, functional and operational implementation.

Unit V : Strategy Evaluation and Control :

Process of Evaluation – Elements in process of evaluation – Barriers – Requirements – Types of strategic control.

Books for Study:

1. Strategic Management – Dr.S.Sankaran
2. Strategic Management - Dr.V.Balu, Sri Venkateswara Publications.

Books for Reference:

1. Strategic Management – P.K.Ghosh & Azon Kazwa
2. Cases in Strategic Management - Budhiraja S.B. and Athreya M.B., Tata Mc-Graw Hill, New Delhi.



SOURASHTRA COLLEGE, MADURAI- 625004

421

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

MASTER OF COMMERCE(M.Com.) - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : EXECUTIVE COMMUNICATION	Subject Code : 17 PCE C43/ 17 PCC C43
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- To know the importance of communication from the Executives point of view.
- To gain knowledge of the different types of communication.

UNIT I

Executive Communication – meaning – Elements, objective, process of executive communication – Directions of executive Communication – Downward, upward, horizontal, diagonal – channels of communications – Formal and Informal Communication – Essentials of effective writing – Layout of a Business Letter – Non-verbal Communication – Merits and demerits of each - Body Language – Paralanguage – Tele-conferences – websites.

UNIT II

Personnel Executive's communication – Job application with curriculum vitae – drafting interview letters, making enquiries about appointment, Confirmation, Promotion, Warning memo – Letters of appreciation – Letters of sympathy – Invitations to speak in meetings, seminars and conferences- reply letters.

UNIT III

Sales Executive's Letters – Features – Personalized Sales promotion letters –introducing new products – festival offers – Follow-up letters – Circulars to sales force – informing sales targets, prizes, meetings, overseas trips – Sales promotion through Tele-shopping, mobile.

UNIT IV

Company secretary's Correspondence, Notice for a meeting – Agenda – Conduct of meeting – minutes – Resolution – Correspondence with directors, shareholders and government officials – Business communication in a Hi-tech environment – Fax, Computers, Internet, e-mail ID, advantages and limitations.

UNIT V Executive Report writing – Report as a Communication tool – necessity of reports – kinds of executive reports – Progress reports – Guidelines to be followed to make a report effective.

Book for Study:

- 1) Raghunathan N.S. & Santhanam B. – “**Business Communication**”, Margham Publications,
T.Nagar, Chennai

Books for Reference:

- 1) WOOL COTT & UNWIN – Mastering “Business Communication”, MC Millan.
- 2) Rajendrapaul and Korlahalli – “Business Communication”.
- 3) “Basic Business Communication” Lesikar and Flatly: T.M.H Public, New Delhi.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



PART - III CORE	Title : RESEARCH METHODOLOGY	Subject Code : 17 PCE C44
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To know the concepts of Research and methods of data collection.**
- **To apply the research techniques to the Practical research work.**

UNIT I

Introduction to Research – Meaning – Types of Research – Pure and Applied Research – Experimental and Non- experimental Research – Research Design – Steps in Preparing a research design – The Problem – Criteria of a Problem – Hypothesis – Advantages of Hypothesis – Criteria of a good Hypothesis – Types of research hypothesis.

UNIT II

Methods of Data collection – Field Method – Sample Survey Method – Steps in conducting a Survey – Pilot Survey – Advantages of Pilot Survey – Case Study Method – Advantages and limitations of case study – Primary and secondary data – Techniques of data collection – Questionnaire and Schedule – Difference between a schedule and a questionnaire – Guidelines for designing a good questionnaire – Pre-testing – Advantages of pre-test – Advantages and limitations of a questionnaire – Interview – Types of interviews – Advantages and limitations of interview technique – Observation – Types of observation.

UNIT III

Sampling Techniques – Sampling Process – Methods – Random or probability sampling Methods – Non-probability methods- Sample Size – Sampling and non-sampling errors.

UNIT IV

Data Processing – Editing – Coding – Tabulation - Measurement of Scale – Rating Scales and Attitude Scales – Types – Likert’s Summated Rating Scales – Thurstone’s Equal Appearing Interval Scale – Guttman’s cumulative Scale.

UNIT V

Report writing – Types of research reports – Outline/contents of a research report – Guidelines for writing the research report.

Book for Study:

Research Methodology in Social Sciences – P.C. Tripathi

Books for Reference:

- 1) Business Research Methods – Donald R. Cooper & Pamela & Schindler
- 2) Thesis and Assignment writing – J. Anderson
- 3) Methodology of Research in Social Science – O.R. Krishna Swami.



PART - III CORE	Title : RETAIL MANAGEMENT	Subject Code : 17 PCE C45
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

- **To understand the concepts of Retail Marketing.**
- **To enrich the knowledge of the concepts of Retail Management.**

Unit I

An introduction to retailing- retailer- characteristics, functions of retailing- concepts in retailing – retail mix.

Unit II

Retailing and consumer behavior – influence of environment – social forces – economic forces – technological forces – competitive forces – consumer behavior – consumer decision process – problem reorganization – information search – evaluation of alternatives – purchase decision – post purchase behavior – influence of culture – influence of social class.

Unit III

Retail store location – location – evaluation of trading area – determination of trading areas – new retail destination – selection of trading area – general location – isolated store – unplanned business district – central business district – secondary business district – neighborhood business district – planned shopping centre – regional shopping centre – community shopping centre – neighbourhood shopping centre – site.

Unit IV

Supply chain management and Logistics management — order processing – warehousing - transportation – inventory management – use of information technology in SCM – process automation, data collection, data mining, data communication, decision support system, wholesaling, retailing through internet.

Unit V

Research in retail – an introduction – consumer research process – identifying the research problem and defining the research objectives – collecting secondary data – designing primary research – data collection methods and instruments – sampling plan – data collection and analysis – presentation of finding.

Book for Study:

Retail Marketing, B.B.Mishra, Manit Mishra, Vrinda Publications Pvt.ltd.

Book for Reference:

Retail Management, Chetan Bajaj, Rajnish Tuli, Nidhi varma srivastava, Oxford University Press.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

424

I SEMESTER

Sl. No.	Subject Code	Nature of Subject	Subject Title	Hours / Week	Duration of exams	CA	SE	Tot	Credits
1	17 PMS C11	Core1	Algebra 1	6	3	25	75	100	4
2	17 PMS C12	Core2	Analysis – I	6	3	25	75	100	4
3	17 PMS C13	Core3	Discrete Mathematics	6	3	25	75	100	4
4	17 PMS C14	Core4	Topology	6	3	25	75	100	4
5	17 PMS E11	Elective1*	Graph theory	6	3	25	75	100	4
6	17 PMS E12	Elective2*	Differential Geometry	6	3	25	75	100	4
			Total	30					20

Note: One Elective subject be selected from Sl. No. 5, 6



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

425

PART - III	Title : ALGEBRA - I	Subject Code : 17 PMS C11
CORE		
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

To enable the students to acquire the knowledge of groups and rings. To understand the concepts of finite abelian groups, Euclidean rings and polynomial over rings.

Unit – 1

Another Counting Principle, Sylow's Theorem (Sections 2.11, 2.12)

Unit – 2

Direct Products, Finite Abelian Groups (Sections 2.13, 2.14)

Unit – 3

Ideals and Quotient Rings, More Ideals and Quotient Rings, The Field of Quotients of an Integral Domain (Sections 3.4, 3.5, 3.6)

Unit – 4

Euclidean Rings, A particular Euclidean Rings, (Sections 3.7, 3.8)

Unit – 5

Polynomials over Commutative Rings (sec 3.11)

Text Book:

Topics in Algebra by I.N.Herstein, Second Edition, John Wiley and Sons, 1999

From Textbook 1

Chapter 2 (Sections 2.11, 2.12, 2.13, 2.4)

Chapter 3 (Sections 3.4, 3.5, 3.6, 3.7, 3.8 and 3.11)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

426

PART - III CORE	Title : ANALYSIS – I	Subject Code : 17 PMS C12
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

To make the students gain knowledge in analysis -1. To make the students to understand various concepts and its applications in real analysis.

REVIEW:

Finite, Countable and Uncountable Sets, Metric Spaces (NOT FOR EXAMINATION)

Unit – 1

Compact Sets, Perfect Sets, Connected Sets (Sections 2.31 to 2.47)

Unit – 2

Convergent sequences, subsequence, Cauchy sequences, upper and lower limits, some special sequences, series, series of Non negative terms, the number e (Section 3.1 to 3.32).

Unit – 3

The Root and Ratio Tests, Power Series, Summation By Parts, Absolute Convergence, Addition and Multiplication of Series, Rearrangements (Sections 3.33 to 3.55).

Unit – 4

Limits of Functions, Continuous Functions, Continuity and Connectedness, Discontinuities, monotonic Functions, Infinite Limits and Limits at Infinity (Sections 4.1 to 4.34).

Unit – 5

The Derivative of a Real Function, Mean Value Theorems, The Continuity Derivatives, 'Hospital's Rule, Derivatives of Higher Order, Taylor's theorem Differentiation of Vector-Valued Functions (Sections 5.1 to 5.19)

TEXT BOOK:

Principles of Mathematical Analysis by Walter Rudin, Third Edition McGraw Hill, International Student Edition, 1976.

Chapter 2, Chapter 3, Chapter 4, Chapter 5



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

427

PART - III CORE	Title : DISCRETE MATHEMATICS	Subject Code : 17 PMS C13
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

To enable the students to acquire the knowledge of discrete mathematics. To understand the concepts of automata theory and lattices theory.

Unit 1 :

Statement and notations – connectives- negation, conjunction, disjunction – statement formulae – truth tables – conditional and biconditional – well formed formulae – tautologies – equivalence of formulae. (page no. 1 to 26)

Unit II :

Duality law – tautological implications – normal forms – conjunctive normal form – principal disjunctive normal forms - rules of inference (page no. 32 to 72)

Unit III :

Grammar and languages – polish expressions and complications (page no. 294 to 317)

Unit IV :

Lattices – definition and properties of lattices – lattices algebraic system – sublattices – direct product and homomorphisms (Page no. 378 to 392)

Unit V :

Some special lattices – Boolean algebra – definition and examples - Boolean functions – values of Boolean expressions and Boolean functions (Page No. 392 to 417)

TEXT BOOK :

Discrete Mathematical Structures with applications to Computer Science by J.P. Tremblay and R. Manohar McGraw Hill International editions .



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

428

PART - III CORE	Title : TOPOLOGY	Subject Code : 17 PMS C14
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

To enable the students to acquire the knowledge of topology. To understand the concepts of metric topology, product topology and its applications .

Unit 1: Topological spaces – basis for a topology – the order topology – the product topology on $X \times Y$ – the subspace topology – closed sets and limit points. Chap2 (12-17).

Unit 2: continuous functions – the product topology – the metric topology.
Chap 2 (18, 19, and 20)

Unit 3: connected spaces – connected subspaces of the real line -
Compact spaces – compact subspaces of the real line.
Chap 3 (23, 24, 26, and 27)

Unit 4: The countability axioms – the separation axioms.
Chap 4 (30, 31)

Unit 5: Normal spaces, the Urysohn lemma, the Urysohn metrization
Theorem. Chap 4 (32, 33, and 34)

TEXT BOOK:

Topology (Second Edition), James R.Munkress, Prentice – Hall pf India Private Ltd. New Delhi.

Chapter 2 : Sections 12 to 20

Chapter 3 : Sections 23, 24, 26, 27

Chapter 4 : Sections 30, 31, 32, 33, 34



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

429

PART - III ELECTIVE	Title : GRAPH THEORY	Subject Code : 17 PMS E11
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

(All units are from the text-book)

Objectives:

To enable the students to acquire the knowledge of graph theory. To understand the concepts of directed graph, Eulerian graph, matching, and coloring

Unit – 1

Graphs and simple graphs, Graph isomorphism, The incidence and adjacency matrices, Sub graphs, Vertex degrees, Paths and connection, cycles, The shortest path problem, Sperner's lemma (Chapter 1)

Unit – 2

Trees, Cut edges and Bonds, Cut vertices, Cayley's formulam The connector problem, Connectivity, Blocks, Construction of Reliable communications Network. (Chapter 2 and 3)

Unit – 3

Euler tours, Hamiltonian cycles, The Chinese postman problem, The traveling salesman problem (Chapter 4)

Unit – 4

Matchings, Matchings and coverings in Bipartite graphs, Perfect matching, The personnel assignment problem (Chapter 5)

Unit – 5

Edge Chromatic number, Vizing's theorem (Chapter 6).

TEXT BOOK:

Graph Theory with Applications, J.A. Bondy and U.S.R. Murty

Chapters: 1, 2, 3, 4, 5 and 6



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

430

PART - III ELECTIVE	Title : DIFFERENTIAL GEOMETRY	Subject Code : 17 PMS E12
Semester : I	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

To enable the students to acquire the knowledge of differential geometry. To understand the concepts of radius, curvature, geodesics curvature and its properties .

Unit 1:

Introductory remarks about space curves-definitions-arc length-tangent, normal and binormal-curvature and torsion of a curve given as the intersection of two surfaces-contact between curves and surfaces – tangent surfaces, involutes and evolutes.

Chap:1(section:1to 7)

Unit 2:

Intrinsic equations, fundamental existence theorem for space curves-helices (chap:1:sec:8-9) definition of a surface ,surfaces of revolution, helicoids(chap:2 sec:1to 4).

Unit 3:

Metric direction coefficients, families of curves isometric correspondence, intrinsic properties, geodesics, canonical geodesics equations,normal properties of geodesics (chap2:sec:5to12).

Unit4:

Existence theorems, geodesic curvature, Gauss –Bonnet theorem, Gaussian curvature(chap:2:sec :13,15,16,17).

Unit 5:

The second fundamental form, principal curvatures –lines of curvature, developables , developables associated with a space curves- developables associated with curves on surfaces-minimal surfaces-ruled surfaces(chap3:sec:1to 8)

TEXT BOOK:

An introduction to differential geometry by T.J.Willmore ,oxford university press.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

431

II SEMESTER

Sl. No.	Subject Code	Nature of Subject	Subject Title	Hours / Week	Durati on of exams	CA	SE	Tot	Cred its
1	17PMSC21	Core5	Algebra - II	6	3	25	75	100	4
2	17PMSC22	Core6	Analysis – II	6	3	25	75	100	4
3	17PMSC23	Core7	Differential Equations	6	3	25	75	100	4
4	17PMSC24	Core8	Numerical Analysis	6	3	25	75	100	4
5	17PMSE21	Elective3*	Mechanics	6	3	25	75	100	4
6	17PMSE22	Elective4*	Fuzzy Sets and Logics	6	3	25	75	100	4
7	17PMSE23	Elective5T*	Visual Basic	4	3	25	75	100	3
8	17PMSEP1	Elective5P*	Visual Basic	2	3	25	75	100	1
			Total	30					20

Note: One Elective subject be selected from Sl. No. 5, 6, (or) 7 and 8



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

432

PART - III CORE	Title : ALGEBRA - II	Subject Code : 17 PMS C21
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

All Units are from the text book)

Objectives:

To enable the students to acquire the knowledge of linear algebra. To understand the concepts of inner product space, linear transformation, matrices and determinants.

Unit – I

Dual spaces, Inner product spaces (Chapter 4: Sections 4.3,4.4)

Unit – II

The algebra of linear transformations, characteristic roots, (Chapter 6: Sections 6.1, 6.2)

Unit – III

Canonical forms, Triangular form, Nilpotent transformations, (Chapter 6: Sections 6.4, 6.5)

Unit – IV

Canonical forms : Rational canonical form, Trace and Transpose
(Chapter 6: Sections 6.7, 6.8)

Unit – V

Hermitian, Unitary and Normal Transformations (Chapter 6 ; Sections 6.10)

TEXT BOOK:

Topics in Algebra by I.N. Herstein, Second Edition, John Wiley and Sons, 1999

Chapter 4: Sections 4.3, 4.4 Chapter 6: Sections 6.1 to 6.10 (except 6.3, 6.6, 6.9)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

433

PART - III CORE	Title : ANALYSIS - II	Subject Code : 17 PMS C22
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

(All Units are from the text book)

Objectives:

To enable the students to acquire the knowledge of analysis-II. To understand the concepts of rectifiable curves, Riemann stieltje's integrable functions.

Unit – I

Definitions and existence of the integral, Properties of the integral(Statement only), Integration and Differentiation, Integration (Chapter 6: Sections 6.1 to 6.17)

Unit-II

Change of variables Intergration and Differentiation,- Integration of vector valued functions – Rectifiable carves (Chapter 6,Sections 6.19 - 6.27)

Unit – III

Uniform convergence, Uniform convergence and continuity uniform convergence and integration, uniform convergence and Differentiation, (Chapter 7:Sections 7.7 to 7.18)

Unit – IV

Equicontinuous families of functions – The stone Weierstars theorem (chapter 7, Sections 7.19 – 7.33)

Unit -V

Power series, The exponential and Logarithmic functions, The trigonometric Functions – The algebra completeness of the Complex field, Fourier series, The Gamma Functions (Chapter7: Sections 8.1 to 8.20)

TEXT BOOK

Principles of mathematical Analysis by Walter Rudin Third Edition, International Student edition 1976, Chapter 6,7, and 8.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

434

PART - III CORE	Title : DIFFERENTIAL EQUATIONS	Subject Code : 17 PMS C23
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

(Units 1,2,3 are from text-book 1 and Unit 4 and 5 from the text-book 2)

Objectives:

To enable the students to acquire the knowledge of differential equations . To understand the concepts of IVP, Legendre equation , Euler equations and Charpit's equations.

Unit 1: Introduction – IVP for homogeneous equation – solutions of the homogeneous equation – Wronskian and Linear independence – Reduction of the order of a homogeneous equation – the non – Homogeneous equation – Homogenous equations with analytical coefficient – Legendre equation Chapter 3 (Section 1 to 8) Textbook 1

Unit 2: Introduction – The Euler equation – 2nd order equation with regular singular points – an example - 2nd order equations with regular singular points – the general case (results only) – Exceptional cases (Results only, theorem statements only) –Bessel equation –Bessel equation (continued) Chapter 4 (1, 2, 3, 7, 8) Textbook 1

Unit 3: Introduction – equations with variables separated - exact equations – the method of successive approximation – The Lipschitz condition Chapter 5 (Section 1 to 5) Text book1.

Unit 4: Partial Differential equation – origins of 1st order Partial Differential equations – Linear equations of the 1st order– Integral surfaces passing through a given curve.
Chapter 2(2.4, 2.5) Textbook 2

Unit:5 : Nonlinear partial differential equations of the 1st order- Compatible systems of first order charpit's method – Special types of 1st order equations. Chapter 2 (2.7, 2.9, 2.10)

TEXT BOOKS

1. An introduction to ordinary differential equations by E.A. Coddington, Prentice Hall of India, 1987.
2. Elements of Partial Differential equations by I.N. Sneddon, Tata McGraw Hill Book Company, 1986

From Textbook 1

Chapter 3:Sections 1 to 8, Chapter 4: Sections 1 to 8, Chapter 5: Sections 1 to 8

From Textbook 2

Chapter 2: Sections 2.1 to 2.11

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

435

PART - III CORE	Title : NUMERICAL ANALYSIS	Subject Code : 17 PMS C24
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

Objectives:

To enable the students to acquire the knowledge of numerical analysis . To understand the concepts of various iteration methods, interpolation and difference equation.

Unit – I

Iteration methods based on first degree equation, Iteration methods based on second degree equation except multi-point iteration method- Rate of convergence- general iteration methods before acceleration of convergence (Chapter 2: Sections 2.3to 2.5 and 2.6)

Unit – II

Introduction-Iteration methods, Eigen values and eigen vectors, Bounds on Eigen values (Chapter 3:Sections 3.1, 3.4 to 3.6)

Unit – III

Introduction, Lagrange interpolations-Hermite interpolation, Piecewise and spline interpolation (Chapter 4:Sections 4.1,4.2 (Lagrange method) 4.5, 4.6 (only linear and quadratic interpolation)

Unit – IV

Introduction, Numerical Differentiation-Partial Differentiation, Numerical integration, Methods based on interpolation, Composite integration methods, Romberg method (Chapter 5:Section 5.1, 5.2, 5.5 to 5.7 and 5.9, 5.10)

Unit – V

Introduction, Difference equation, Numerical methods, (Euler's method only) (Chapter 6; Sections 6.1 to 6.3) (Euler's method only).

TEXT BOOK:

Numerical Methods for Scientific and Engineering Computation by M.K. Jain, S.R.K. Iyengar and R.K.Jain, Fifth Edition, New Age International Publishers, 2008

(Note: Section B of the Question paper for the end semester examination will contain only numerical problems, Scientific Calculator is allowed)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

436

PART - III ELECTIVE	Title : MECHANICS	Subject Code : 17 PMS E21
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

(All units are from the text-book)

Objectives:

To enable the students to acquire the knowledge of mechanics . To understand the concepts of Hamilton's principles, classification of orbits and kepler's problems.

Unit 1:

Mechanics of a particle, Mechanics of a system of particles, Constraints (Chapter 1: Sections 1.1 to 1.3)

Unit 2:

D'Alembert's principle and Lagrange's equations, Velocity-dependent potentials and the dissipation function, Hamilton's principle, Some techniques of the calculus of variations (Chapter 1: Sections 1.4,1.5 and Chapter 2: Sections 2.1,2.2)

Unit 3:

Deviation of Lagrange's equations from Hamilton's principle, Extension of Hamilton's principle to nonholonomic systems (Chapter 2: Sections 2.3, 2.4)

Unit 4:

Reduction to the equivalent one-body problem, The equations of motion and first integrals, The equivalent one-dimensional problem and classification of orbits, The Virial theorem (Chapter 3: Sections 3.1 to 3.4)

Unit 5:

The differential equation for the orbit and integrable power-law potentials, The Kepler problem, Inverse square law of force, The motion in time in the Kepler problem, The Laplace-Runge-Lenz vector (Chapter 3: Sections 3.5, 3.7 to 3.9)

TEXT BOOK:

Classical Mechanics by H. Goldstein, Second edition, Addison Wesley, New York, 1980



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

437

PART - III ELECTIVE	Title : FUZZY SETS AND LOGICS	Subject Code : 17 PMS E22
Semester : II	HOURS : 6 hours / Week	CREDITS : 4

(All units are from the text books)

Objectives:

To enable the students to acquire the knowledge of fuzzy logic . To understand the concepts of fuzzy numbers , fuzzy relations and fuzzy applications in science and engineering.

Unit 1: Fuzzy sets – Basic types – Fuzzy sets – Basic concepts – Additional properties of α – cuts – Representation of fuzzy sets – Extension principle for fuzzy sets – Types of operations – fuzzy complements (Chapter 1 Section 1.2 to 1.4; Chapter Sections 2.1 to 2.3; Chapter 3 Sections 3.1 to 3.2)

Unit 2: Fuzzy numbers – Linguistic variables – arithmetic operations on intervals – arithmetic operation on fuzzy number (Chapter 4 : Sections 4.1 to 4.4)

Unit 3: Crisp versus fuzzy relations – projections and cylindric extensions – Binary fuzzy relations on a single set – Fuzzy equivalence relations – Fuzzy compatibility relations – Fuzzy ordering relations (Chapter 5 Sections 5.1 to 5.7)

Unit 4: Classical logic – An over view - multivalued logic – Fuzzy propositions – Fuzzy quantifiers – Linguistic Hedges – Inference from conditional fuzzy propositions – inference from conditional and quantified propositions – Inference from quantified propositions (Chapter 8 full)

Unit 5: Introduction – Civil Engineering – Computer Engineering- Reliability theory – Robotics – Medicine – Economics – Fuzzy Regressions – Interpersonal Communications. (Chapter 16; Sections 16.1, 16.2, 16.5 to 16.7; Chapter 17 Sections 17.1 to 17.3 and Sections 17.5 , 17.6)

TEXT BOOK

Fuzzy sets and Fuzzy logic – Theory and applications – Second edition, by George J. Klir and B.Yuan . Publisher – Prentic Hall; US ed edition – 1995

Unit 1: Chapter 1 Section 1.2 to 1.4; Chapter Sections 2.1 to 2.3; Chapter 3 Sections 3.1 to 3.2

Unit 2: Chapter 4 : Sections 4.1 to 4.4

Unit 3: Chapter 5 Sections 5.1 to 5.7

Unit 4: Chapter 8 full

Unit 5: Chapter 16 ; Sections 16.1, 16.2, 16.5 to 16.7; Chapter 17 Sections 17.1 to 17.3 and Sections 17.5 , 17.6

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ELECTIVE	Title : VISUAL BASIC	Subject Code : 17 PMS E23
Semester : II	HOURS : 4 hours / Week	CREDITS : 3

Objectives:

To enable the students to acquire the knowledge of Visual Basic. To understand the concepts of various visual basic tools and graphics.

Unit 1: Customizing a form and writing simple programs: Starting a new project – the properties window-common form properties-scale properties-color properties-making a form responsive. First steps in building the user interface: The tool box-creating controls-the name property- properties of command buttons-simple event procedures for command buttons-access keys-image controls-textboxes-labels-navigating between controls-message boxes. First steps in programming: Variables-setting properties with code-data types-constants-input boxes.

Unit 2: Displaying information: Displaying information on a form-the format function –picture boxes-rich text boxes –the printer object.Controlling program flow: Determine loops-indeterminate loops-making decision-select case -nested if-then’s –the goto.Built-in functions:String functions-numeric functions-date and time functions.Writing your own functions and procedures: Function procedures-sub procedures.

Unit 3: Organizing information via code: Lists: one dimensional arrays-fixed versus dynamic arrays-static arrays –the erase statement –organizing information via controls: control arrays – list and combo boxes – the flex grid control (general properties, properties of selected cells, sorting a grid, events and methods for grid control)-finishing the interface: the toolbox revisited: frames –timers-option buttons-check boxes-scroll bars-common dialog boxes-the Microsoft windows common controls-menus –MDI forms.

Unit 4: An introduction to graphics:fundamentals of graphics-screen scales-the line and shape controls-graphics via code-line and boxes-circles-ellipse and pie chart monitoring mouse activity:the mouse event procedures-dragging and dropping operations for controls.basic file handling:file commands-sequential file –random access files- binary files- sharing files.file system controls and file system objects-: file system controls.

Unit 5: Communicating with other windows applications: overview of COM/OLE using the OLE client control at design time-OLE automation-OLE drag and drop.Survey of database development using visual basic:using the data control-SQL base-database objects-useful method and events for the data control.

Text book:

- Gary cornell(2010),visual basic 6 from ground up, Tata Mc Graw-hill .
 Unit 1: 3(pg:63-84),4(pg:97-128),5(pg:151-164,187-191)
 Unit 2: 6(pg:194-218),7(pg:220-254),8(pg:255-270,285-291),9(pg:301-326).
 Unit 3: 10(pg:338-346),11(pg:384-419),14(pg:497-551)
 Unit 4: 16(pg:589-635),17(pg:647-659),18(pg:675-700,702-716),19(pg:725-731)
 Unit 5: 20(pg:757-766,769-770),22(pg:811-837)

Reference book:

1. Evangelos petroutoas(2011),mastering visual basic6,wiley India publications.
2. NET 3.5 programming black book (2011),kogent learning solutions Inc.,dreamtech press.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

439

PART - III ELECTIVE	Title : VISUAL BASIC LAB	Subject Code : 17 PMS EP1
Semester : II	HOURS : 2 hours / Week	CREDITS : 1

LIST OF PROGRAMS

Areas of program:

1. Simple programs using text box, label and command button.
2. Implementation of string and data function
3. Programs using input box, message box
4. Design of a calculator
5. Design of font style
6. Creation of paint brush.
7. Interactive games, number puzzle and picture puzzle.
8. Design of text editor
9. Animation using timer control
10. Screen saver program
11. Pop up menu creation
12. Dynamic loading of controls
13. Program using OLE
14. Programs using data control.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

440

III SEMESTER

Sl. No	Sub. Code	Nature	Subject Title	Hrs / Week	Duration of exams (hrs)	CA	SE	Total	Credits
1	17PMSC31	Core 9	Algebra III	6	3	25	75	100	5
2	17PMSC32	Core10	Analysis III	6	3	25	75	100	5
3	17PMS C33	Core11	Functional Analysis I	6	3	25	75	100	5
4	17PMSC34	Core12	Statistics I	6	3	25	75	100	5
5	17PMSN31	NME	Business Statistics	6	3	25	75	100	5
6	17PMSN32	NME	Mathematics for Competitive Examinations	6	3	25	75	100	5
			TOTAL	30					25

Note: One of the subjects from S.No 5 and 6 to be selected as Non Major Elective Paper.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

441

PART - III CORE	Title : ALGEBRA - III	Subject Code : 17 PMS C31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the advance concepts in fields and polynomials.

Unit – I:

Extension fields, the transcendence of e

Unit – II:

Root of polynomials, more about roots

Unit – III:

The elements of Galois Theory

Unit – IV:

Solvability by radicals, Galois groups over the rationals

Unit – V:

Finite fields

Text Book:-

Topics in Algebra by I.N.HERSTEIN, Second edition John Wiley and sons, 2009

Chapter 5 – Sections 5.1 to 5.8(except 5.4)

Chapter 7 – Sections 7.1



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

442

PART - III CORE	Title : ANALYSIS - III	Subject Code : 17 PMS C32
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts in linear transformations and measurable functions.

UNIT I:

Linear Transformations – The Contraction Principle – The inverse function theorem.

UNIT II:

The implicit function theorem – The rank theorem – Determinants – Derivations of higher orders – Differentiation of integrals.

UNIT III:

Lebesgue outer measure – Measurable set.

UNIT IV:

Regularity – Measurable function.

UNIT V:

Integration of non-negative function – The general integral (Theorems only) – Integration of series.

Text book -1: Principles of mathematical analysis by Walter Rudin. (3rd edition)

Text book -2: Measure theory and integration by G.de Barra. (2nd edition)

UNIT 1: Chap 9 9.1 to 9.25 from Text book -1

UNIT 2: Chap 9, 9.26 to 9.37 from Text book -1

UNIT 3: Chap 2 -2.1, 2.2 from Text book -2

UNIT 4: Chap 2 – 2.3, 2.4 from Text book -2

UNIT 5: Chap 3 – 3.1, 3.2,(Theorems only) 3.3 from Text book -2



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

443

PART - III CORE	Title : FUNCTIONAL ANALYSIS – I	Subject Code : 17 PMS C33
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To provide the students a comprehensive idea about the principle of analysis.

Unit I:

The definition and some examples – Continuous Linear Transformations – The Hahn – Banach Theorem.

Unit II:

The Open mapping Theorem – The conjugate of an operator.

Unit III:

The definition and some simple properties – orthogonal complements.

Unit IV:

Orthogonal sets – The adjoint of an operator.

Unit V:

Self-adjoint operators – Normal and Unitary operators – Projections.

Text Book:

Introduction to Topology and Modern Analysis by G.F. Simmons – Tata Mc Graw Hill – 2004.

Unit – 1: Chapter 9 – Sections 46, 47, 48

Unit – 2: Chapter 9 – Sections 50, 51

Unit – 3: Chapter 10 – Sections 52, 53

Unit – 4: Chapter 10 – Sections 54, 56

Unit – 5: Chapter 10 – Sections 57, 58, 59



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

444

PART - III CORE	Title : STATISTICS - I	Subject Code : 17 PMS C34
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in probability and distributions.

UNIT I:

Introduction, Set theory, The probability set function, Conditional probability and Independence, Random variables of the discrete type, Random variables of the continuous type, properties of the distribution function, Expectation of a random variable, Some special expectations. Chebyshev's inequality.

UNIT II:

Distributions of two random variables, conditional distributions and expectations, the correlation coefficient, Independent random variables, Extension to several random variables.

UNIT III:

The binomial and related distributions, The Poisson distribution, The Gamma and Chi-square distributions. The normal distributions, The Bivariate normal distributions.

UNIT IV:

Sampling theory, Transformations of variables of the discrete type, Transformations of variables of the continuous type. The Beta, t, F distributions.

UNIT V:

Extensions of the change-of-variable technique, The moment generating function technique, The distributions of X -, and nS^2 / σ^2 , Expectations of functions of random variables-Central limit theorem.

Text Book:

Introduction to Mathematical Statistics, V Edition by R.V.Hogg and A.T.Craig, Pearson Education, Asia, 2002.

Unit 1: Chapter 1: Sections 1.1 to 1.10

Unit 2: Chapter 2: Sections 2.1 to 2.5

Unit 3: Chapter 3: Sections 3.1 to 3.5

Unit 4: Chapter 4: Sections 4.1 to 4.4

Unit 5: Chapter 4, 5: Sections 4.5 to 4.9 and 5.3.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

445

PART - IV NME	Title : BUSINESS STATISTICS	Subject Code : 17 PMS N31
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To acquire the knowledge in statistics for non-mathematics students.

UNIT – I:

Measure of central tendency – Definition – Mean – Median – Mode – Their merits and demerits – Weighted Arithmetic mean.

UNIT – II:

Measures of dispersion and skewness – Range – Quartile deviation – Standard Deviation.

UNIT – III:

Coefficient of variation – Pearson and Bowley coefficient of skewness.

UNIT – IV:

Scatter diagram – Pearson's coefficient of correlation – Rank correlation.

UNIT – V:

Index numbers – Meaning and uses – Methods of construction – Laspeyer's Method, Paasche method, Fisher's ideal index.

TEXT BOOK:

ELEMENTS OF STATISTICAL METHODS by S.P.GUPTA, Publishers: Sultan chand & sons, 16th edition (2005)

UNIT – I: Chapter 7, pages 158 - 198

UNIT – II & UNIT III: Chapter 8 and 9, pages 249 – 277, 315 - 326

UNIT – IV: Chapter 10: pages 371 - 425

UNIT – V: Chapter 12: pages 460 - 475



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

446

PART - IV NME	Title : MATHEMATICS FOR COMPETITIVE EXAMINATIONS	Subject Code : 17 PMS N32
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge of mathematics of competitive exams. To make the students to understand the basic concepts in arithmetic for real world problems.

UNIT I:

H.C.F and L.C.M of numbers – Decimal – Fractions – simplifications – Average .

UNIT II:

Percentage on Numbers – Problems and ages. Percentage –Profit and loss –Ratio and Proportion.

UNIT III:

Simple Interest – Compound Interest – Allegation of mixture.

UNIT IV:

. Time and Work – Time and distance – Problems on trains.

UNIT V:

Calendar – Odd man out and series.

Text Books:

1. Quantitative Aptitude by R.S.Agarwal, Publishers: S.Chand & Co., Reprint 2011.

Unit 1:: pages 30-33,46- 49, 67 – 73 & 139 -141

Unit 2:: pages 161 -163, 182-183, 208 -214, & 294 – 296.

Unit 3:: pages 445-447, 466-470 & 435-437.

Unit 4:: pages 341-344, 384-386,&405-407.

Unit 5:: pages : 593-596,& 649-657.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

447

IV SEMESTER

Sl. No.	Sub. Code	Nature	Subject Title	Hours / Week	Durati on (hrs)	CA	SE	Total	Cred its
1	17PMSC41	Core13	Complex Analysis	6	3	25	75	100	5
2	17PMSC42	Core14	Number Theory	6	3	25	75	100	5
3	17PMSC43	Core15	Operations Research	6	3	25	75	100	5
4	17PMSC44	Core16	Statistics II	6	3	25	75	100	5
5	17PMSE41	Elective	Advanced Topology	6	3	25	75	100	5
6	17PMSE42	Elective	Functional analysis II	6	3	25	75	100	5
			Total	30					25

NOTE: One of the subjects from S.No. 5 and 6 to be selected as elective subject.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

448

PART - III CORE	Title : COMPLEX ANALYSIS	Subject Code : 17 PMS C41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concept in analytic function and cauchy's theorems

UNIT I:

The algebra of complex numbers, the geometrical representation of complex numbers.

UNIT II:

Introduction to the concept of analytic functions – elementary theory of power series, the exponential and trigonometric series.

UNIT III:

Conformality, linear transformations, elementary conformal mappings.

UNIT IV:

Fundamental theorems, Cauchy's integral formula, local properties of analytic functions.

UNIT V:

The general form of Cauchy's theorem. The calculus of residues.

Text Book:

COMPLEX ANALYSIS by L.V.Ahlfors III edition Mcgraw Hill, ISE, 1981

Unit – 1: Chapter 1 (sections: 1 and 2)

Unit – 2: Chapter 2 (sections: 1, 2, and 3)

Unit – 3: Chapter 3 (section: 2 (2.3), sec: 3 (3.1 and 3.2) sec: 4(4.1 and 4.2))

Unit – 4: Chapter 4 (sections: 1, 2, 3 (3.1 and 3.2))

Unit – 5: Chapter 4 (section 4 (4.3 and 4.4) sec: 5 (5.1 and 5.3)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

449

PART - III CORE	Title : NUMBER THEORY	Subject Code : 17 PMS C42
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To study some important techniques in number theory and its applications.

UNIT I:

Introduction – Divisibility – G.C.D , Prime number – The fundamental theorem of arithmetic – The series of reciprocals of the prime – The Euclidean algorithm – G.C.D of more than 2 numbers – The Mobius function – Euler Totient, connecting relation Product formula – The Dirichlet product of arithmetic function, Dirichlet inverse and the Mobius inversion formula.

UNIT II:

The Mangold function, the multiplicative function and Dirichlet multiplication, the inverse of a completely multiplicative functions. Liouville's function – The divisor function, Generalized convolutions, formula power series, The bell series of an arithmetic function, bell series and Dirichlet multiplication, derivatives of arithmetic functions, the selberg identity Big on notation – Euler's summation formula.

UNIT III:

Definition and basic properties of congruences – residue classes and complete residue system – linear congruences reduced residues system and Euler Fermat's theorem – polynomial congruence modulo p – Lagrange's theorem – application of Lagrange's theorem.

UNIT IV:

Simultaneous linear congruence – Chinese remainder theorem, Application of Chinese remainder theorem – polynomial congruence with, prime power moduli – The principal of cross classification – decomposition property of reduced residue system, quadratic residue, Legendre's symbols and its properties – Evaluation of $(-1/p)$ and $(2/p)$ – Gauss lemma.

UNIT V:

The quadratic reciprocity law, application of reciprocity laws – Jacobi symbol, gauss sums and quadratic reciprocity law.

TEXT BOOK

Introduction to Analytic number Theory – T.M. Apostol (III Edition) Chapters 1,2,3,5 and 9. (Narosa publications 1991).



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III CORE	Title : OPERATIONS RESEARCH	Subject Code : 17 PMS C43
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts of PERT , CPM and Non LPP problems.

UNIT I:

Scope of Network applications – Definitions – minimal spanning tree algorithms – Shortest route problems using cyclic and acyclic algorithms – Maximal flow model (Algorithm only).

UNIT II:

CPM and PERT Network representation – critical path computations – Determination of floats – Total float and free float – PERT Networks.

UNIT III:

Why study queues?- Elements of a queueing model – Role of exponential distribution – Pure birth and death models – Generalized Poisson queueing model – steady state measures of performance – specialized Poisson Queue - $(M / M / 1) : (GD / \infty / \infty)$ - $(M / M / 1) : (GD / N / \infty)$

UNIT IV:

Classical optimization theory – Unconstrained problems – Necessary and Sufficient condition – Newton Raphson Method – Constrained problems – Equality constraints by Jacobian method – Lagrangean method and Kharush Kuhn Tucker (KKT) conditions. (Simple problem only)

UNIT V:

Non-linear programming – Unconstrained algorithms – Direct search method – Gradient method – Constrained algorithms – Geometric programming – Quadratic Programming model.

TEXT BOOK:

OPERATIONS RESEARCH, AN INTRODUCTION-6th edition by H.A.TAHA.

UNIT: 1 Chap 6- Section 6.1 to 6.3, 6.3.2 &6.4

UNIT: 2 Chap 6-Section 6.6, 6, 6.1,6.6.2&6.6.5

UNIT: 3 Chap 17-Sections 17.1 to 17.5

UNIT: 4 Chap 20-Section 20.1,20.2

UNIT: 5 Chap-21- Section-21.1, 21.1.1, 21.1.2, 21.2, 21.2.1 &21.2.2



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

451

PART - III CORE	Title : STATISTICS- II	Subject Code : 17 PMS C44
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to acquire the knowledge in sampling theory and analysis of variance.

UNIT I:

Point estimation, confidence intervals for means, confidence intervals for Differences of means, Tests of Statistical Hypotheses, Chi-squared tests.

UNIT II:

Measures of quality of estimators, A sufficient statistic for a parameter, Properties of a sufficient statistic, completeness and uniqueness. The exponential class of Probability density functions.

UNIT III:

Fisher information and the Rao-Cramer inequality, Limiting Distribution of maximum likelihood estimators.

UNIT IV:

Certain best tests, uniformly most powerful tests, Likelihood ratio tests, the sequential probability ratio test.

UNIT V:

Distributions of certain quadratic Forms, A test of the equality of several means, Noncentral chi-square and noncentral F.

TEXT BOOK

Introduction to Mathematical Statistics, V Edition, by R.V.Hogg and A.T.Craig, Pearson Education, Asia, 2002.

UNIT I	: (Relevant sections in chapter 6).
UNIT II	: (Relevant sections in chapter 7)
UNIT III	: (Relevant sections in chapter 8)
UNIT IV	: (Relevant sections in chapter 9)
UNIT V	: (Relevant sections in chapter 10)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

452

PART - III ELECTIVE	Title : ADVANCED TOPOLOGY	Subject Code : 17 PMS E41
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To enable the students to understand the advance concepts in topology.

UNIT – I

The Tychonoff Theorem – The Stone – Cech Compactification – Local finiteness.

UNIT – II

The Nagata – Smirnov theorem – Para compactness – The Smirnov metrization theorem.

UNIT – III

Complete metric spaces – A space filling curve.

UNIT – IV

Compactness in metric spaces – point wise and compact convergences – Ascoli's theorem

UNIT – V

Baire spaces – A nowhere differentiable function

Text book:

Topology by J.R.Munkres (second edition) – June 2002.

Unit – 1: chapter 5 – section 37, 38 & 6 – section 39

Unit – 2: chapter 6, section 40, 41, 42

Unit – 3: chapter – 7, section 43, 44

Unit – 4: chapter – 7, section 45, 46 & 47

Unit – 5: chapter – 8, section 48, 49



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
M.Sc., MATHEMATICS- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

453

PART - III ELECTIVE	Title : FUNCTIONAL ANALYSIS - II	Subject Code : 17 PMS E42
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the advance concepts in functional analysis.

Unit I:

Matrices – Determinants and spectrum of an operator – The spectral Theorem.

Unit II:

The definition and some examples – Regular and singular elements – Topological divisors of zero.

Unit III:

The spectrum – The formula for the spectral radius.

Unit IV:

The Gelfand mapping – applications of the formula $r(x) = \lim ||x^n||^{1/n}$.

Unit V:

Involution in Banach Algebras – The Gelfand Neuman theorem.

Text Book:

Introduction to Topology and Modern Analysis by G.F. Simmons – Tata Mc Graw Hill – 2004.

- Unit – 1: Chapter 11 – Sections 60,61,62
- Unit – 2: Chapter 12 – Sections 64,65,66
- Unit – 3: Chapter 12 – Sections 67,68
- Unit – 4: Chapter 13 – Sections 70,71
- Unit – 5: Chapter 10 – Sections 72,73



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
ECONOMICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

454

Degree : BBA	Branch : Business Administration	Subject Code : 17 UBN A11
PART - III ALLIED	Title : BUSINESS ECONOMICS	
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts and principles to be applied in Business and Management.

To enrich the knowledge of the students in the field of business and develop employment skills to become entrepreneur.

UNIT-1: Definition of Business Economics – Nature-Scope- Importance- Limitations –Role of Business Economics- Economics Vs Business Economics .

UNIT-2: Utility Analysis - Law of Diminishing Utility – Demand – Types – Measurement of Elasticity of Demand -Uses and factors affecting Elasticity of Demand- Demand Forecasting - Meaning – Demand Forecasting for New Products and Established Products.

UNIT-3 : Costs – Concepts – Types –Cost Curves - Revenue Concepts - Equilibrium –meaning – conditions – Break Even Analysis .

UNIT-4: Market Structures – Perfect competition – Imperfect – Monopoly, discriminating monopoly – Monopolistic Market – Excess capacity – Oligopoly (Features only).

UNIT- 5: Pricing – Meaning – Objectives of pricing policy – Types of pricing methods – Pricing policies – Profit – Meaning – Profit Forecasting – Methods.

TEXT BOOKS: S.Sankaran - Managerial Economics, Margham Publishers, Chennai

REFERENCE BOOKS

1. M.L.Jhingan, Managerial Economics, Vrinda publications, New Delhi, 2013. (Unit-1,2 and 3 : Chapter – 1,4,5,6,20,21,22,23,24,25,and 26)
2. Lokanathan.V. 1989, Principles of Economics, Sultan Chand & Sons , New Delhi. (Unit-3 and 4 : Chapter – 10, 11,13,15, 16 and 17)
3. H.L.Ahuja, Business Economics , S.Chand & Co Ltd.. New Delhi.2000 . (Unit-3 : Chapter – 14 and 15)
4. Sundaram KPM & Sundaram, E.N.2000, Business Economics, Sultan Chand & Sons, New Delhi.(Unit-2 : Chapter – 5 and 27)
5. R.L.Varshney & K.L.Maheswari, Managerial Economics , Sultan Chand & sons, New Delhi. (Unit-1,5 and 6 : Chapter – 1,3, 14, 15,17,18,20 and 28)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

Degree : BBA	Branch : Business Administration	Subject Code : 17UBNC11
PART - III CORE	Title : BUSINESS ENVIRONMENT	
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to aware about various aspect of Business Environment.

To help the students to understand the functioning of economic system and its impact on Business.

UNIT-1 ; Business Environment – Introduction - Meaning – Definition – Nature – Significance - Factors affecting Business environment – Social, Economic and Political factors.

UNIT-2 : Business and Society – Social Responsibilities of Business towards Shareholders, Employees, Customers, Dealers and Vendors, Community and Government – Arguments for and Against of Social Responsibilities.

UNIT-3 : Business Ethics – meaning – Definition – Characteristics of Business ethics – Factors influencing to make ethical decision and Unethical decision – Business ethics in India – Unethical practices – Consumer oriented, Employee oriented, Government and Community oriented.

UNIT-4 ; Privatization – Meaning –Definition - Ways of privatization – merits and limitations of Privatization – Arguments against privatization- Public Sector enterprises – Objectives- Advantages and Disadvantages.

UNIT-5 ; Business and Economic System – meaning - Socialism, Capitalism and Mixed Economy –Features – Impact of economic system on Business.

TEXT BOOK:

Francis Cherunilam - Business Environment Text and Cases, Himalaya Publishing House, Mumbai. 2002.

REFERENCE BOOKS :

1. Aswathappa K., Essentials of Business Environment, Himalaya Publishing House, Mumbai. 2001. (Unit-1,2 and 5 : Chapter – 3,5,17,18)
2. C.B.Gupta , Business Environment, Sultan Chand & Sons New Delhi. 2007. (Unit-2 : Chapter – 8,9,10,11,12and 29)
3. P.K.Dhar, Indian Business Environment, Kalyani Publishers, New Delhi.2007. (Unit-1,2 and 5 : Chapter – 1)
4. Indian Economy – I.C Dhingra (Unit-2 and 3 : Chapter – 12,16, 19,20 and 21)

Passed in the BOS Meeting held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
ECONOMICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

456

Degree : BBA	Branch : Business Administration	Subject Code : 17 UBN A21
PART - III ALLIED	Title : MONEY AND BANKING	
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts and theories applied in banking operations.

To give an exposure to the students about the operation of money market and financial institutions.

UNIT-1; Definition of money- difficulties of barter system -functions of money –primary, secondary and contingent functions-money in a developing economy.

UNIT-2 : Quantity theory : the transaction approach –assumptions-criticism- the cash balance approach –Marshall, Pigou, Robertson

UNIT-3: Inflation; meaning –kinds of inflation- consequences of inflation – Deflation- Trade cycle-meaning phases of a trade cycle – control of trade cycle.

UNIT-4: Functions and role of commercial banks -Banking facilities to business agriculture, small entrepreneurs and social welfare activities.

UNIT-5: Money market –definition–importance of money market-central banking –nature and functions-methods of credit control- Quantitative and qualitative -Reserve Bank of India and its functions. Non-banking Institutions like UTI, LIC and Mutual Funds.

TEXT BOOK :

Paul, R.R.1999 Money and Banking, Kalyani Publishers, New Delhi

REFERENCE BOOKS :

1. Sundaram,K.P.M and Sundaram,E.N Money, banking and international trade, Sultan chand &sons New Delhi. (Unit-1,2 and 5 : Chapter – 10)
2. Sethi, T.T. 1987 Money, Banking and International Trade, S.Chand & Co, New Delhi. (Unit-1,2,3,4 and 5 : Chapter – 1,2,5,16,21,24,25 and 28)
3. K.K.Dewett, Modern Economic theory, S.Chands & Co Publications,New Delhi. (Unit-3,4 and 5 : Chapter – 52,53 and 56)



ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

Degree : BBA	Branch : Business Administration	Subject Code :
PART - III	Title : INDIAN ECONOMIC SYSTEM	17 UBN C21
CORE		
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To develop knowledge of the students about various economic system and its important elements.

To enable the students to know the sector wise operations in the economy and its role in the country's economic development.

UNIT-1: Introduction - Features of Indian economy – characteristics of developing economy – Economic System — features of Mixed Economy – Economic Growth Vs Economic Development – Factors determining Economic Development.

UNIT-2: Population in India – causes, consequences and measures to control – Population policy - Capital formation in India – Sources of Capital formation - Causes for Low rate of Capital formation –Sources of Foreign capital - Importance of Foreign capital-Trends in growth of National Income.

UNIT-3: Primary sector – Role of agriculture in Indian economy – Causes for low agricultural productivity - Green revolution – Nature and effects – Agricultural price policy.

UNIT-4: Secondary sector – Industrial policy 1991 – Role of small scale and cottage industries in Indian economy – Problems – Government measures – Industrial Finance – IFCI, IDBI, ICICI and SFC - Merits and limitations of Globalization.

UNIT- 5: Tertiary sector – Commercial banks and economic development – Foreign direct investment – Merits and limitations – Objectives of Economic Planning - Achievements and failures-Employment generation schemes(IRDP,TRYSEM,JRY).

TEXT BOOK : Indian Economy – Sankaran, Margham publishers, Chennai.

REFERENCE BOOKS:

1. Indian Economy – Dutt & Sundharam, S.Chand & company Ltd, New Delhi 2009. (Unit-4 and 5 : Chapter – 10,43 and 44)
2. Indian Economy – I.C Dhingra, Sultan Chand & Sons, New Delhi, 2010. (Unit-2 and 3 : Chapter – 12,16, 19,20 and 21)
3. Indian Economy - Misra, Puri & Sharma, Himalaya Publishing House, New Delhi 2001. (Unit-1,2,3,4 and 5 : Chapter – 1,2,3,4,8,10,13,14, 15,18, 19, 21,27,28,33,34,35,36,37,39,41,and 42)
4. Modern Economic theory – K.K.Dewett, S.Chands & Co Publications, New Delhi (Unit-1 : Chapter – 71,72 and 74)



ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

Degree : BBA	Branch : Business Administration	Subject Code : 17UBNC32
PART - III	Title : MODERN BANKING	
CORE		
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts and theories applied in Banking Operations.

To give an Exposure to the students about the operation of e-Banking and its system.

UNIT –I: Introduction: Origin of banks – Types of bank – Unit banking – Branch banking – merits and demerits- Modern banking – Meaning – Importance.

UNIT-II: Banking instruments: Cheques – Meaning – Types - Crossing- Types of crossing- Draft – Meaning – Comparison between Cheque and Draft - Endorsement- Meaning – Types.

UNIT-III: Collecting Banker: Meaning – Duties - Paying Banker –Meaning- Responsibilities.- Bank Lending – Principles of Sound Lending policy.

UNIT –IV: Electronic Banking: Traditional Banking Vs Modern Banking. E-Banking – Meaning – Activities – Advantages and Limitations - E-Banking in India.

UNIT –V: Trends in E- Banking: Online Banking – Concept and Meaning- Credit Card and Debit Card – Meaning, Uses and Difference between Credit Card and Debit Card. Mobile banking - Virtual Banking - E-payments – Electronic Fund Transfer(EFT)- Automatic Teller Machine(ATM)- Uses – Electronic Money Transfer - Uses of EMT.

TEXT BOOKS:

1. E.Gorden and K.Natarajan - Banking Theory, Law and Practice, Himalaya Publishing House Pvt Ltd, Mumbai.(2010) .

Reference Books:

1. Banking Theory, Law and Practice – P.N. Varshney, Sultan Chand & Co. (Unit-2and3 : Chapter – 8 to 10 and 15)
2. Banking Theory and Practice – P.K.Srivastava, Himalaya Publishing House Pvt Ltd. (Unit-1,2and 3 : Chapter – 4 to 6 and 15)
3. Banking Theory, Law and Practice – S.Gurusamy, Vijay Nicole Imprints (P)LtD,Chennai. (Unit-2,3 and 5 : Chapter – 11,13,15, 19, 22 to 24)



ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

Degree : BBA	Branch : Business Administration	Subject Code : 17UBNC43
PART - III CORE	Title : INDUSTRIAL RELATIONS	
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the conditions of industrial relations in India.

To enhance the knowledge of the students about various concepts and role of institutions in industrial relations.

To develop the skills of the students about situation handling in industries.

Unit- 1: Industrial relations: - Definition of Industrial Relations-Factors affecting Industrial Relations- Importance – Need for good Industrial Relations – Role of Industrial Relations in Economic development.

Unit -2: Industrial conflict: - Industrial disputes – Meaning –Causes of Industrial Disputes-Types- Machinery for settlement of Industrial disputes -Works committee, Conciliation, Adjudication, Voluntary Arbitration.

Unit-3: Collective Bargaining: - Meaning–Nature-Types-Importance of collective bargaining – Process of collective bargaining –suggestions to improve collective bargaining

Unit- 4: Discipline & Grievance handling: -Discipline – Meaning – Causes of indiscipline-Codes of discipline- Principles of hot stove rule –Principles of natural Justice- Grievance – Meaning –Sources, Level of Grievance – Benefits of Grievance system.

Unit-5: Workers participation in management and Trade union: - Meaning of workers participation – Forms of workers participations in management – Works committee, Joint Management councils, Quality circle- Trade union- Meaning- Definition – Functions of Trade union – Rights of trade union- Problems- Measures to improve the strength of Trade union.

TEXT BOOK: Matoria and Gankar, Dynamics of industrial Relations, Himalaya Publishing House Pvt Ltd, Mumbai.

REFERENCE BOOKS:

1. Industrial Relations and labour Legislations – Dr. M.R. Srinivasan, Margham Publications, Chennai. (Unit-1,2,3 and 5 : Chapter – 1,2 and 4)
2. Personnel and Human Resource Management (Text & Cases) – Subbarao. B.P, Himalaya Publishing House Pvt Ltd. (Unit-1,2,3,4and 5 : Chapter – 24 to 29)
3. Personnel Management – J.Jeyasankar, Margham Publications, Chennai. (Unit-2 to 5 : Chapter – 15,16, 23 and 24)



ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

Degree : B.Com	Branch : Commerce	Subject Code : 17 UCE A11
PART - III ALLIED	Title : MANAGERIAL ECONOMICS	
Semester : I	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts and principles to be applied in Business and Management.

To enrich the knowledge of the students in the field of business and develop employment skills to become Entrepreneur.

UNIT-1: Introduction - Definition – Nature and scope of managerial Economics - Economics Vs Managerial Economics – Role and responsibilities of a managerial Economist -Objectives of a Modern Business Firm.

UNIT-2: Demand Analysis - Law of Demand –demand determinants – demand distinction - Elasticity of demand – Measurement of Elasticity of demand - Factors determining Elasticity of demand – Uses of Elasticity of demand.

UNIT-3: Demand or Sales forecasting - Meaning – Factors involved in forecasting – Importance – Methods of Forecasting an Established product and a New product.

UNIT-4: Price analysis – price determination under various market forms - Perfect competition, Monopoly, Monopolistic competition – Oligopoly (Features only) - Pricing policies - Pricing methods – Skimming pricing, penetration pricing, differential pricing and product line pricing.

UNIT- 5: Nature of profit – profit planning – Break Even analysis – concept, uses and limitations – Profit Forecasting – Methods.

TEXT BOOKS: S.Sankaran - Managerial Economics, Margham Publishers, Chennai

REFERENCE BOOKS

- 1 M.L.Jhingan, Managerial Economics, Vrinda publications, New Delhi, 2013. (Unit-1,2 and 3 : Chapter – 1,4,5,6,20,21,22,23,24,25,and 26)
2. Lokanathan.V. 1989, Principles of Economics, Sultan Chand & Sons , New Delhi. (Unit-3 and 4 : Chapter – 10, 11,13,15, 16 and 17)
3. H.L.Ahuja, Business Economics , S.Chand & Co Ltd.. New Delhi.2000 . (Unit-3 : Chapter – 14 and 15)
4. K.K.Dewett, Modern Economic theory, S.Chands & Co Publications,New Delhi. (Unit-3,4 and 5 : Chapter – 52,53 and 56)
5. R.L.Varshey & K.L.Maheswari, Managerial Economics , Sultan Chand & sons, New Delhi. .(Unit-4 and 5 : Chapter – 1,3, 14, 15,17,18,20 and 28)



SOURASHTRA COLLEGE, MADURAI- 625004

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

461

Degree : B.Com	Branch : Commerce	Subject Code :
PART - III ALLIED	Title : ECONOMIC DEVELOPMENT OF INDIA	17 UCE A21
Semester : II	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To develop knowledge of the students about various economic system and its important elements.

To enable the students to know the sector wise operations in the economy and its role in the country's economic development.

UNIT-1: Features of Indian economy – characteristics – under developed or developing economy – India as a mixed economy – population in India – causes, consequences and control. Capital formation in India – causes for low rate of capital formation – importance foreign capital.

UNIT-2: Primary sector – Role of agriculture in Indian economy – Causes for low agricultural productivity- Green revolution – nature and effects – food security – Agricultural price policy.

UNIT-3: Secondary sector – Industrial policy 1991 – Role of small scale and cottage industries in Indian economy – Problems – Government measures – Industrial Finance – IFCI, IDBI, ICICI and SFC. Public sector undertakings – objectives – Performance of public sector undertaking – Privatisation in India.

UNIT-4: Tertiary sector – Commercial banks and economic development –India's foreign trade – composition – pattern and direction of India's exports and imports – Export promotion measures – EXIM bank and role in India's foreign trade.

UNIT- 5: Planning – Last two five year plans – Objectives, achievements and failures – Anti poverty measures – Employment generation schemes(IRDP,TRYSEM,JRY) – Trends in the growth of national income.

TEXT BOOK : Indian Economy – Sankaran, Margham publishers, Chennai.

REFERENCE BOOKS:

1. Indian Economy – Dutt & Sundharam, S.Chand & company Ltd, New Delhi 2009. (Unit-4 and 5 : Chapter – 10,43 and 44)
2. Indian Economy – I.C Dhingra, Sultan Chand & Sons, New Delhi, 2010. (Unit-2 and 3 : Chapter – 12,16, 19,20 and 21)
3. Indian Economy - Misra, Puri & Sharma, Himalaya Publishing House, New Delhi 2001. (Unit-1,2,3,4and5:Chapter–1,2,3,4,8,10,13,14,15,18,19, 21,27,28,33,34,35,36,37,39,41,and 42)
4. Modern Economic theory – K.K.Dewett, S.Chands & Co Publications, New Delhi (Unit-1 : Chapter – 71,72 and 74)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
ECONOMICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

Degree : B.Com (CS)	Branch : Corporate Secretaryship	Subject Code : 17 UCP A31
PART - III ALLIED	Title : MANAGERIAL ECONOMICS	
Semester : III	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To make the students to understand the concepts and principles to be applied in Business and Management.

To enrich the knowledge of the students in the field of business and develop employment skills to become Entrepreneur.

UNIT-1: Introduction - Definition – Nature and scope of Managerial Economics - Economics Vs Managerial Economics – Role and responsibilities of a managerial Economist -Objectives of a Modern Business Firm.

UNIT-2: Demand Analysis - Law of Demand –demand determinants – demand distinction - Elasticity of demand – Measurement of Elasticity of demand - Factors determining Elasticity of demand – Uses of Elasticity of demand.

UNIT-3: Demand or Sales forecasting - Meaning – Factors involved in forecasting – Importance – Methods of Forecasting an Established product and a New product.

UNIT-4: Price analysis – price determination under various market forms - Perfect competition, Monopoly, Monopolistic competition – Oligopoly (Features only) - Pricing policies - Pricing methods – Skimming pricing, penetration pricing, differential pricing and product line pricing.

UNIT- 5: Nature of profit – profit planning – Break Even analysis – concept, uses and limitations – Profit Forecasting – Methods.

TEXT BOOKS

S.Sankaran - Managerial Economics, Margham Publishers, Chennai

REFERENCE BOOKS

1. M.L.Jhingan, Managerial Economics, Vrinda publications, New Delhi, 2013. (Unit-1,2 and 3 : Chapter – 1,4,5,6,20,21,22,23,24,25,and 26)
2. Lokanathan.V. 1989, Principles of Economics, Sultan Chand & Sons , New Delhi. (Unit-3 and 4 : Chapter – 10, 11,13,15, 16 and 17)
3. H.L.Ahuja, Business Economics , S.Chand & Co Ltd.. New Delhi.2000 . (Unit-3 : Chapter – 14 and 15)
4. K.K.Dewett, Modern Economic theory, S.Chands & Co Publications,New Delhi. (Unit-3,4 and 5 : Chapter – 52,53 and 56)
5. R.L.Varshey & K.L.Maheswari, Managerial Economics , Sultan Chand & sons, New Delhi. .(Unit-4 and 5 : Chapter – 1,3, 14, 15,17,18,20 and 28)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
ECONOMICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

463

Degree : B.Com (CS)	Branch : Corporate Secretaryship	Subject Code : 17 UCP A41
PART - III ALLIED	Title : BUSINESS STATISTICS	
Semester : IV	HOURS : 6 hours / Week	CREDITS : 5

Objectives:

To understand the basic concepts of Business Statistics.

To enrich the knowledge of the students to use tabulation, Classification and Frequency distribution in business decision.

To make the students to understand the calculation of averages, correlation, regression and time series analysis.

Unit – I: Introduction: Statistics – Meaning – Functions – Importance – Limitations – Data: Primary and Secondary data- Census and Sampling – Classification Tabulation – Presentation – Diagrammatic and Graphic Representation.

Unit – II: Measures of Central Tendency: Arithmetic Mean-Median- Mode- Harmonic Mean and Geometric Mean-Merits and Demerits- Mathematical Properties.

Unit – III: Measures of Dispersion: Range-Standard Deviation and Co-efficient of Variation.

Unit – IV: Correlation and Regression: Meaning –Types - Methods of Correlation- Scatter, Graphic, Karl Pearson's and Rank Correlation- Regression Analysis – Line – Equations – Least Square Method (Deviation Taken from Actual and Assumed Mean)

Unit – V: Time Series: Meaning-Components – Methods of determining Trend- Graphic Method- Semi Average method- Moving Average method- Least Square Method.

TEXT BOOK:

Statistical Methods – S.P.Gupta

REFERENCE BOOKS:

1. Statistical Methods – S.C.Gupta & Indra Gupta, Himalaya Publishing House Pvt Ltd. (Unit- 1,2,3,4 and 5 :Chapter – 2 to 6, 8 ,9 and 11)
2. Statistical Methods – M.Manoharan, Palani paramount Publications, Palani. (Unit-1,2,3,4 and 5 : Chapter – 1 to 7, 9, 10 and 13)
3. Statistics – R.S.N Pillai and V. Bagavathi, S.Chand & Co Ltd, New Delhi. (Unit-1,2,3,4 and 5 : Chapter – 1 to 10, 12,13 and 15)

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



ECONOMICS - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME	Title : DISASTER MANAGEMENT	Subject Code : 17 UES N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

To enhance the knowledge of students about disasters and their consequences and disaster management in India.

To expose the role of government personnel, representatives of private voluntary agencies, and other individuals interested in disaster management.

To know the ways of disaster management for both natural disasters (i.e., earthquakes, floods, hurricanes) and man-made disasters (i.e., famine, drought)

Unit -I: Introduction

Disaster: Definition- Factors and Significance-Difference between Hazard and Disaster-Natural and Manmade Disasters:-Difference-Nature-Types and Magnitude.

Unit -II: Consequences of Disasters

Repercussions of Disasters and Hazards: Economic Damage-Loss of Human and Animal Life- Destruction of Ecosystem.

Unit -III: Global Perspective (Natural Disasters)

Study of Environmental Impacts Induced By Human Activity- Types of Hazards- Earthquakes- Volcano- Cyclones- Tsunami- Flood- Droughts and Famines- Landslides and Avalanches.

Unit -IV: Global Perspective (Man-Made Disasters)

Nuclear Reactor Meltdown- Industrial Accidents- Oil Slicks and Spills- Outbreaks of Disease and Epidemics- War and Conflicts.

Unit -V: Disaster Management

Disaster management-Definition-Relief and Rehabilitation- Role of National and International Agencies in Disaster Management- National Disaster Policy of India (Salient Features).

BOOKS RECOMMENDED:

1. Bryant Edwards (2005): Natural Hazards, Cambridge University Press, U.K.
2. Carter, W. Nick, 1991: Disaster Management, Asian Development Bank, Manila.
3. Central Water Commission, 1987, Flood Atlas Of India, Cwc, New Delhi.
4. Central Water Commission, 1989, Manual Of Flood Forecasting, New Delhi.
5. Government Of India, 1997, Vulnerability Atlas Of India, New Delhi.
6. Sahni, Pardeep Et.Al. (Eds.) 2002, Disaster Mitigation Experiences And Reflections. Prentice Hall Of India, New Delhi.
7. .R. Nishith, Singh AK 2012 Disaster Management in India:Perspectives, issues and strategies New Royal book Company, Lucknow
8. Goel S. L. 2007 Disaster Adminastration And Management Text And Case Studies Deep &Deep Publication Pvt. Ltd., New Delhi



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
ECONOMICS - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

465

PART - IV NME	Title : EMOTIONAL INTELLIGENCE	Subject Code : 17 UES N41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

Objectives:

The students will be able to

- become aware of the sources of emotions.
- learn how to deal with human emotions. Making use of EI models, the course will focus on the managerial competencies and their emotional impacts. Developing managerial competencies by the use of Emotional Intelligence models.

Unit-I: Introduction:

Introduction -Meaning-Definition-EI elements – Importance.

Unit-II: Competencies:

EI and IQ-development of EI- Personal Competencies and Social Competencies.

Unit-III: EI and Relations Management:

Advantages and limitations of Emotional Intelligence - EI and relation Management Competencies

Unit-IV: Methods:

Measuring Emotional Intelligence-Ways to measure EI.

Unit-V:EI and Management:

Emotional Intelligence in Management of Team Building, Conflicts and Leadership.

TEXT BOOKS:

Emotional Intelligence-Why It Can Matter More Than IQ by Daniel Goleman Get Better or Get Beaten: 31 Leadership Secrets from GE's Jack Welch by Robert Slater, Jack Welch, McGraw-Hill School Education Group .

REFERENCE BOOKS

1. Working with Emotional Intelligence - Daniel Goleman Jack Welch on Leadership: Executive Lessons from the Master CEO by John A. Byrne, Jack Welch Crown Publishing Group
2. Supplementary Reading Material Leadership: The Power of Emotional Intelligence by Daniel Goleman
3. The Brain and Emotional Intelligence: New Insights by Daniel Goleman
4. The Emotionally Intelligent Workplace by Daniel Goleman, 2001
5. Primal Leadership: Realizing the Power of Emotional Intelligence by Daniel Goleman, 2002
6. Destructive Emotions: A Scientific Dialogue with the Dalai Lama – 2003
7. Emotional Intelligence: Key Readings on the Mayer and Salovey Model by John D. Mayer (Editor), Marc A. Brackett (Editor), Peter Salovey (Editor)
8. The Emotionally Intelligent Manager: How to Develop and Use the Four Key Emotional Skills of Leadership by David R. Caruso and Peter Salovey Bhagwad Gita As it is by Shree Prabhupada.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : Plant Diversity and Applied Botany	Subject Code : 17 UBYA11
Semester : I	HOURS : 4 hours / Week	CREDITS :3

ANCILLARY BOTANY PAPER FOR I YEAR B.Sc. (CHEMISTRY)

Objectives:

- To provide the basic knowledge the about structure and life cycle pattern of Algae, Fungi, Lichens, Bryophytes, Pteridophytes & Gymnosperms.
- This paper will enable the student get a glimpse of the economic importance and applications of plants.

Unit I - Algae & Fungi

General characteristics of **Algae**. Structure and life cycle of the *Sargassum**. Economic importance of Algae.

General characteristics of **Fungi**. Structure and life cycle of the *Puccinia**. Economic importance of Fungi.

Note: *Development of gametophyte, sporophyte and sex organs need not be discussed.

Unit II- Lichens & Bryophytes

General Features of **Lichens**, Structure and reproduction of *Usnea*. Economic importance of Lichens.

General characteristics of **Bryophytes**. Structure and life cycle of *Funaria**. Economic importance of Bryophytes.

Note: *Development of gametophyte, sporophyte and sex organs need not be discussed.

Unit III-Pteriophytes & Gymnosperms

General characteristics of **Pteriophytes**. Structure and Life history of *Lycopodium**.

General characteristics of **Gymnosperms**. Structure and Life history of *Pinus**.

Note: *Development of gametophyte, sporophyte and sex organs need not be discussed.

Unit IV-Plant Tissue culture

Definition, Basic Tissue culture techniques, Callus induction, Anther Culture, Applications of tissue culture.

Passed in the BOS Meeting
Held on 15-3-2017

Signature of chairman/ HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

Unit V- Mushroom cultivation and Biofertilizers

Structure of Mushroom, Cultivation of Oyster mushroom. Nutritive value of mushrooms.

Biofertilizers- Definition, Types. Mass cultivation of Blue Green Algae (BGA), *Rhizobium* and its significance.

Text Books

1. Pandey B.P. 2014. A Text book of Botany- Algae, Fungi & Bryophyta, Vol. I & II. S. Chand & Company Ltd. Ramnagar, New Delhi.
2. Pandey B.P. 2014. A text book of Botany-Bryophyta, Pteridophyta & Gymnosperms. S. Chand & Company Ltd. Ramnagar, New Delhi.
3. Ignacimuthu, S. 1996. Basic Biotechnology – Tata McGraw Publishing Co. Ltd.
4. Dubey, R .C. 2002. A textbook of Biotechnology. S.Chand and Co. Ltd., New Delhi.
5. Kapoor, J.N. 1989. Mushroom Cultivation, ICAR, New Delhi.

Reference Books

1. Smith, G.M. 1971. Cryptogamic Botany - Algae & Fungi, Vol. I. Tata McGraw Hill Pub. Co. NewDelhi.
2. Smith, G.M. 1971. Cryptogamic Botany - Bryophytes & Pteridophytes, Vol. II. Tata McGraw Hill Pub. Co. New Delhi.
3. Vasishta, P.C. 2005. Botany for Degree students- Gymnosperms, Vol. V. S. Chand & Company Ltd. Ramnagar, New Delhi- 110055.
4. Satyanarayana, U. 2013. Biotechnology. Books and Allied (P) Limited, Kolkata, India.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : Taxonomy, Embryology of Angiosperms & Plant Physiology	Subject Code : 17 UBYA21
Semester : II	HOURS : 4 hours / Week	CREDITS :3

ANCILLARY BOTANY PAPER FOR I YEAR B.Sc. (CHEMISTRY)

Objectives:

- To provide the basic knowledge about Taxonomy, Embryology of Angiosperms & Plant Physiology
- To understand the importance of Plant Resources.
- To understand the basic physiological process and metabolic functions in plants.

Taxonomy of Angiosperms

Unit I

Principles and types of classifications. Herbarium techniques. Outline of Bentham and Hooker's system of classification-Merits and Demerits.

Unit II

Study of salient features of following families and their economic importance

Caesalpiniaceae, Rubiaceae, Apocynaceae, Euphorbiaceae, Poaceae.

Unit III Embryology of Angiosperms

Structure and development of anther. Structure and development of male gametophyte. Types of ovule. Structure of embryo sac- eg. *Polygonum* type.

Plant Physiology

Unit IV

Absorption of water – Active and Passive absorption. Transpiration- Types, stomatal mechanism (Steward theory), Guttation.

Unit V

Photosynthesis – Light - cyclic and non-cyclic, Dark reactions-C₄ cycle. Respiration-Aerobic respiration- Glycolysis, Krebs's cycle, ETP pathway.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

Text books

1. Sharma, O.P. 2009. Plant Taxonomy, Tata McGraw-Hill publishers, New Delhi
2. Vashishta, P.C.1992. Taxonomy of Angiosperms, R.Chand and Co. Ltd., New Delhi.
3. Mukherji. S. and Ghosh, A. K. 2005. Plant Physiology, New Central Book Agency Ltd., New Delhi
4. Bhojwani, S.S. and Bhatnagar S.P. 1999. The Embryology of Angiosperms. Vikas Publishing House P.Ltd., New Delhi.

REFERENCE BOOKS

1. Lawrence, G.H.M. 1951. Taxonomy of Vascular plants. The Mac-Millan Co., New York.
2. Maheshwari, P. 1980, An Introduction to the Embryology of Angiosperms. Tata McGraw Hill Publishing Company Ltd., Bombay – New Delhi
3. Salisbury, F. B. and Ross, C. W. 2010. Plant Physiology, Asia Ltd., Singapore.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - III ALLIED	Title : ANCILLARY BOTANY PRACTICAL – Plant Diversity, Applied Botany, Taxonomy, Embryology of Angiosperms & Plant Physiology	Subject Code : 17 UBYAP1
Semester : II	HOURS : 2 hours / Week	CREDITS : 2

ANCILLARY BOTANY PRACTICAL PAPER FOR I YEAR B.Sc. (CHEMISTRY)

Objectives:

To impart the basic and applied knowledge about Plant Diversity, Applied Botany, Taxonomy, Embryology of Angiosperms & Plant Physiology.

1. Sectioning and Mounting of T.S. of *Sargassum* (stem, leaf), *Lycopodium* (stem), and *Pinus* (needle).
2. Spotters- Identification of specimens or slide from Algae, Fungi, Lichens, Bryophytes, Pteridophytes and Gymnosperms (mentioned in the syllabus).
3. Identification of pictures or Photographs related to Plant tissue culture, mushroom cultivation and biofertilizers.
4. To assign the given plant specimens to the respective families giving reasons.
5. To describe the given plant in technical terms
6. Identification of sections of Anther and Ovule (Permanent slides)
7. To describe any three physiological setups (Effect of light intensity on the rate of photosynthesis, Ganong's Potometer, Kuhn's fermentation tube)
8. To conduct field visit to the botanically important areas (minimum two days)
9. Submission of 5 herbarium sheets.

REFERENCE BOOKS

Pandey, B.P.2010. Modern Practical Botany, Vol. I- III. S.Chand, New Delhi India.



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV	Title : ECOFRIENDLY	Subject Code : 17 UBYN31
NME	BIOMATERIALS	
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

NON-MAJOR ELECTIVE (NME) PAPER FOR II YEAR B.Sc. (CHEMISTRY)

Objectives:

To provide the basic knowledge about importance of environment and biomaterials.

To enlighten the students on the ecofriendly biomaterials.

Unit 1: Ecosystem and Health

History of environmentalism, Green Environmentalism, Ecological Balance, Ecological Indicators, Sustainability of Ecosystem.

Unit II: Single cell protein

Definition, sources (Yeast, Algae and Bacteria) - Merits and Demerits.

Unit III: Biological Pesticides:

Definition, Plant Pesticide (eg. Neem), Microbial pesticide (eg. BT). Role of biopesticides on sustainable agriculture - Transgenic plants and crops- Bt cotton-Golden rice- Merits and demerits of Genetically modified food.

Unit IV: Bioplastics

Types –Starch, Cellulose and Bioderived polyethylene. Role of microorganisms in production of bioplastics.

Unit V: Biofuels

Definition, Types (Bioethanol, Biodiesel and Biogas) - sources, Advantages and disadvantages.

TEXT BOOKS

1. Sharma, P.D. 2004. Ecology and Environment, Rastogi Publications, New Delhi.
2. Patel, A.H. 1985. Industrial Microbiology. Macmillan India Ltd. New Delhi

REFERENCE BOOKS

1. Altman, A. 1997. Agricultural biotechnology. CRC Press.
2. Chouhan, N., Kumar, A., Sharma, A., Ameta, R. 2013. Eco-Friendly Products. Green Chemistry: Past, Present, and Future. CRC Press.
3. www.wikipedia.org



SOURASHTRA COLLEGE, MADURAI- 625004
 (An Autonomous Institution Re-accredited with 'B' grade by NAAC)
BOTANY- SYLLABUS
 (Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME	Title : HORTICULTURE AND ECONOMIC BOTANY	Subject Code : 17 UBYN41
Semester : IV	HOURS : 2 hours / Week	CREDITS : 2

NON-MAJOR ELECTIVE (NME) PAPER FOR II YEAR B.Sc. (CHEMISTRY)

Objectives:

- To provide the basic knowledge of horticulture.
- To learn the methods of propagation and gardening techniques.
- To know the economically important plants in day to day life.

Horticulture

Unit-I Horticulture- Definitions and importance, a brief account of olericulture, floriculture, pomology Vegetative propagations-cuttage (stem) and graftage (approach), Budding (T), advantages and disadvantages.

Unit-II Garden implements, Garden and Gardening- Basic techniques of pruning and training, Designing of formal and informal garden, Parts of a garden (Hedge, Edge, Arches and Rockery), Maintenance of Lawn.

Unit- III Layout of kitchen garden and mention the vegetable crops. Indoor gardening- Hanging baskets, terrarium, bottle garden and bonsai.

Economic Botany

Unit- IV Botanical and family name, Morphology of useful parts and economic importance of the following plants: **Cereals**-Rice, Wheat, Maize, Ragi; **Pulses**-Green gram, Soyabean; **Wood**-Teak wood, BAMBOO.

Unit-V Beverages- Coffee, Coco; **Fibre**- Cotton, Jute; **Latex**- Rubber

TEXT BOOKS

1. Rao, K.M.1991. Text book of Horticulture, Mac Millan India Ltd., New Delhi.
2. Bendre and Kumar, A. 1998. Economic Botany. Rastogi Publications, Meerut.

REFERENCE BOOKS

1. Kumar, N. 1999. Introduction to Horticulture. Rajalakshmi Publications. Nagerkoil.
2. Pandey, B.P. 2012. Economic Botany, S.Chand & Company Ltd, New Delhi.
3. Kochhar, S.L. 1995. Economic Botany in the Tropics, Macmillan India Ltd., Delhi.
4. Sambamurthy, A.V.S.S. and N.S. Subramanyam. 1989. A Text Book of Economic Botany, Wiley-Eastern Ltd, New Delhi.

Passed in the BOS Meeting
Held on 15-3-2017

Signature of chairman/ HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
NCC - NME - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

473

**III SEMESTER
COURSE STRUCTURE**

Sl. No	Sub. Code	Nature	Subject Title	Hours / Week	Duration of exams	CA	SE	Total	Credits
1	17NCCN31	NME	NATIONAL CADET CORP-I	2	3	25	75	100	2

**IV SEMESTER
COURSE STRUCTURE**

Sl. No	Sub. Code	Nature	Subject Title	Hours / Week	Duration of exams	CA	SE	Total	Credits
1	17NCCN41	NME	NATIONAL CADET CORP-II	2	3	25	75	100	2

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
NCC - NME - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

474

PART - IV NME	Title : NATIONAL CADET CORP-I	Subject Code : 17 NCC N31
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Unit-I

Motto-Aims of NCC-NCC song-Equivalent ranks-Honors and Awards-Organisation-History of NCC.

Unit- 2

National Integration and its importance-Duties of a good citizen-Leadership Traits- types of leadership-Civil Defence organization and its duties- Personality-Definition and factor influencing Personality(Physical,social,psychological & philisopical).

Unit-3

Natural disaster-types-role of NCC in natural disaster-NGO's contribution to the society.

Unit-4

Social service-social problems in India-role of NCC in social service- kinds of communicable diseases -prevention of AIDS and cancer-elements of good health.

Unit-5

Aim of adventure training- adventure activities in NCC-environment and eco system- pollution (types only).

BOOKS FOR REFERENCE:-

1. Cadet's Diary—Army Wing by Major.R.Ramasamy, Priya publications, Harur.
2. Precis—Published at OTA, Kamptee.
3. Cadet's Diary – By Cadets Centre, Chennai.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



475

SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
NCC - NME - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - IV NME	Title : NATIONAL CADET CORP-II	Subject Code : 17 NCC N41
Semester : III	HOURS : 2 hours / Week	CREDITS : 2

Unit – I: Map – Reading

Map – Outline layout of map – uses – identification – limitation – Conventional Signs – cardinal points kinds of North – Grid System – setting of map.

Unit – II: Prismatic Compass and own position

Parts of compass – Bearing FB and BB – Grid variation – Service protractor – Finding own position – Map to ground – Ground to Map –Night March.

Unit – III: Field Craft and Battle Craft

Judging Distance – various methods – estimation of distance – types of ground – camouflage and concealment – principles – types of movement – indication of targets.

Unit – IV: Fire Control orders and ambush

Fire control orders – explanation – section and platoon formation – sketch and explanation – ambush – patrol and scouts.

Unit – V: Environment and Ecology

Ecology – environment – components of ecology – hazards of environment – pollution – various types of pollution – agents of various pollution – protection of ecology.

BOOKS FOR REFERENCE:

Cadets Diary – Army Wing by Major. R. Ramasamy, Priya Publications – Karur.Precis – Published at OTA, Kamptee.

Cadet's Diary - By Cadets Centre, Chennai.

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

476

PART-V – EXTENSION ACTIVITIES (IV SEMESTER)

1. A candidate shall be awarded a maximum of one Credit for Compulsory Extension Service. These should be carried outside the class hours.
2. All the students shall have to enroll for NSS /NCC/ Sports & Games or any other service organizations in the college and shall have to earn minimum hours of attendance to be prescribed by the college.
3. There is no internal examination and only external examination for a maximum of 100 marks.

COURSE STRUCTURE

Sl. No	Sub. Code	Subject Title	Duration of exams	CA	FW	Viva voce	Total	Credit
1	17NSSEA4	National Service Scheme	3	25	25	50	100	1
2	17YRCEA4	Youth Red Cross	3	25	25	50	100	1
3	17RRCEA4	Red Ribbon Club	3	25	25	50	100	1
4	17CCCEA4	Citizen Consumer Club	3	25	25	50	100	1
5	17WUSEA4	World University Service	3	25	25	50	100	1
6	17LIBEA4	Library Information and Science	3	25	25	50	100	1
7	17NCCEA4	NCC	3	25	25	50	100	1
8	17PEDEA4	Physical Education	3	25	25	50	100	1

Note: Students shall opt for any one of the activities offered

FW- Field work

Passed in the BOS Meeting
held on 15-3-2017

Signature of Chairman/HOD



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

477

PART - V EXTENSION ACTIVITY	Title : NATIONAL SERVICE SCHEME (NSS) Ideals and Approaches	Subject Code : 17 NSS EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Objectives:

- To make the students aware of basic concepts of NSS.
- To orient the students about the regular and special camp activities.

Unit: I Introduction to NSS

1. Introduction to NSS
2. Philosophy of NSS
3. NSS concepts

Unit: II NSS Activities

1. NSS Programmes and activities
2. The Role of NSS Volunteers
3. NSS Regular activities in adopted villages, slums and voluntary organizations

Unit: III Regular and special camps

1. Regular and special camping programmes.
2. Social service programmes.
3. Guidelines for a successful camp.

Unit: IV Self Help groups

1. Women empowerment.
2. Role of Self Help Group in empowerment of women.
3. The social Role of Self Help Groups.

Unit: V Students; Participation in NSS

1. Environment.
2. Social issue – students' participation.
3. Community work



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

478

PART - V EXTENSION ACTIVITY	Title : YOUTH RED CROSS SOCIETY	Subject Code : 17 YRC EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Objectives: To develop awareness about YRC and its activities.

Unit I:

YRC – Meaning – Origin – Organisation Structure – Principles – functions relating to conserve the environmental quality.

Unit II:

Indian Red Cross Society – meaning – origin – organization structure – fundamental principles.

Unit III:

Hendry Dunant – RCS – meaning – origin – Red Cross emblem – Mahatma in Red Cross movement.

Unit IV:

Disasters – Meaning – Types – disaster response tools of Indian Red Cross.

Unit V:

First Aid – important rules of first aid – needy equipment for first aid.

BOOK FOR STUDY:

Youth Red Cross by Dr.N.Muthu, Pandia Nadu Panpaattu Maiyam, Madurai



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

479

PART - V EXTENSION ACTIVITY	Title : RED RIBBON CLUB	Subject Code : 17 RRC EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Objectives

1. To prevent HIV infection among youth through life skill education.
2. To help and support the people living with HIV / AIDS.
3. To promote voluntary non-remunerated blood donation.

Unit: I

RRC- Introduction – objectives – Programmes.

Unit: II

Preparing students to prevent HIV / AIDS. Helping people living with HIV / AIDS.

Unit: III

Celebrating the life – Lecture by ICTC, PLHIV & Transgender.

Unit: IV

Blood Donation: Importance – organising for free blood donation camps – storing and functions.

Unit: V

Cycle rally: Exposure visit to ICTC, Blood bank, PLHIV Centre

BOOKS FOR REFERENCE:-

1. Cadet's Diary—Army Wing by Major.R.Ramasamy, Priya publications,Harur.
2. Precis—Published at OTA,Kamptee.
3. Cadet's Diary – By Cadets Centre, Chennai.



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

480

PART - V EXTENSION ACTIVITY	Title : CITIZEN CONSUMER CLUB	Subject Code : 17CCC EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Objectives

1. To create an awareness about consumers rights and responsibilities.
2. To instil concern for environment around us citizens and consumers and sustainable consumption habits.
3. To educate students about remedial measures available to affected consumers.

Unit: I

Introduction – Responsible citizen – Consumer movement – Consumer responsibilities.

Unit: II

Consumer rights – Consumers right Violations – Remedies – step to be followed while purchasing a product in the market.

Unit: III

Consumer Laws – consumer commissions and other consumer protection agencies.

Unit: IV

Food safety and standards – medical services and drugs – food adulteration.

Unit: V

Unfair trade practices and advertisements – consumer complaints and redressal.

TEXT BOOK:

1. Handbook for citizen consumer clubs – Government of Tamil Nadu Civil supplies & consumer protection department.

ONLINE REFERENCES:

1. www.consumer.tn.gov.in
2. www.cag.org.in
3. www.consumercourt.in
4. www.consumerights.org.in



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

481

PART - V EXTENSION ACTIVITY	Title : WORLD UNIVERSITY SERVICE	Subject Code : 17 WUS EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Objectives:

- Preparing for competitive Exam.
- How to face the interview.
- Personality Development.
- Social Responsibility

Unit: I

Introduction – Functions of WUS, registration, rules and regulations governing Colleges and Universities. Institutions offering courses other than Colleges and Universities (Professional bodies).

Unit: II

Types of Universities – Arts and Science, Agriculture, Technical, Medical, Para Medical, Law, Professional, Languages.

Central, State Universities, Deemed, open Universities, concurrent - distribution of legislative power between Central and State with education.

Unit: III

Ministry of Human Resource Development (internal affairs) functions of Human Resource Ministry, Chancellor Chancellors (vice-president), Chancellors of Universities and their appointments, Pro-Chancellor, Vice-Chancellor.

Unit: IV

The role of Educational Institutions, Student in Independence Movement (Important Historical Events in India)

Unit: V

Service commission and their contribution to the employment of students (UPSC, SSC, TNPSC, & Various Recruitment Boards).



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

482

PART - V EXTENSION ACTIVITY	Title : LIBRARY AND INFORMATION SCIENCE	Subject Code : 17 LIB EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Objectives:

1. To enable the students to acquire knowledge regarding importance of Libraries in the context of social, economic, political, scientific and technological environment.
2. To enable the students to understand different levels of information systems in the society and their functions.
3. To enable the students apply their knowledge in various library practices.
4. To enable the students acquire knowledge regarding basis idea about World Wide Web (www)
5. To enable the students understanding of internet and Information Technology and its applications in Library & Information Science.

Unit: I

Evolution, growth and development of libraries in India.

Unit: II

Types of Libraries: Academic, Public and Special Libraries.

Unit: III

Library concepts – Five Laws of Library Science – Professional ethics of librarian .

Unit: IV

Library Automation.

Unit: V

Concepts of information marketing and knowledge Management.

BOOKS FOR REFERENCE

1. Dr. Renganathan, S.R., Five laws of Library Science, London: Vikas
2. Atherton, Paline: Handbook of Information Systems and Services, Paris: UNESCO.
3. Khanna, J.K. Library and society, Kurushetra: Research Publication.
4. Rendell, B. The Origins of Digital Computers – selected papers, Springer- Verlag.
5. Sanders, Donald H, Computers Today, McGraw Hill.
6. Stallings, William, Computer Organization and Architecture, 2nd Edition, Prentice Hall.
7. Bartee, Thomas C, Digital Computer Fundamentals, 6th Edition, Tata McGraw Hill.



SOURASHTRA COLLEGE, MADURAI- 6250

(An Autonomous Institution Re-accredited with 'B' grade by NAAC)

PART-V – EXTENSION ACTIVITIES - SYLLABUS

(Under CBCS w.e.f. 2017 – 2018 onwards)

483

PART - V EXTENSION ACTIVITY	Title : NCC - ARMY	Subject Code : 17NCC EA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Unit – I : General Services

Motto – cardinal points – Aims of NCC – NCC Song – Equivalent Ranks – Honors and Awards – Organisation – History of NCC.

Unit – II: Drill and Weapon Training

Word of Command – Foot – Drill – Arms Drill – Rifle – Characteristics – LMG – SLR – SMC.

Unit – III: Human Resource Management.

National Integration – Duties of good citizen – Leadership Training – Civil Defence – Hygiene and Sanitation – First Aid.

Unit – IV: Map Reading

Map – outline – uses – limitations – conventional signs – various types of North – Compass – Service Protractor – Map to Ground – Ground to Map.

Unit – V : Field Craft and Battle Craft.

Judging Distance – Indication of Targets – Fire Control Orders – Ambush – Social Service.

Books For Reference:

1. Cadets Diary – Army Wing by Major R.Ramasamy, Priya Publications, karur.
2. Precis – Published at OTA, karnapet.
3. Cadets Diary – by Cadets Centre Chennai.



SOURASHTRA COLLEGE, MADURAI- 6250
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
PART-V – EXTENSION ACTIVITIES - SYLLABUS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART - V EXTENSION ACTIVITY	Title : PHYSICAL EDUCATION	Subject Code : 17PEDEA4
Semester : IV	HOURS : 0 hours / Week	CREDITS : 1

Unit: I 20 Marks
Attendance

Unit: II **Battery of Test**
100mts,200mts, shotput
Discus, Longjump, Situps, Pullups
(Any 5 Test) 50 Marks

Unit: III Skill Test

Basket Ball

- (i) Shooting
 - (ii) Dribbling
 - (iii) Passing
- 30 Marks

Total -----
100 Marks



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
QUESTION PATTERN – EXTERNAL EXAMINATIONS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-I : TAMIL/HINDI/SANSKRIT

QUESTION PATTERN

Time: 3 Hours

Max: 75 Marks

SECTION – A (4 X 5 = 20 MARKS)

I. Answer all the questions:

- a. Fill up the blanks
- b. Question Answer
- c. Match the following
- d. Choose the best answer

SECTION – B (5 X 5 = 25 MARKS)

II. Answer all the questions:

Either /Or Pattern

SECTION – C (3 X 10 = 30 MARKS)

III. Answer any THREE questions:

Open Choice



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
QUESTION PATTERN – EXTERNAL EXAMINATIONS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PART-II : ENGLISH QUESTION PATTERN

Time: 3 Hours

Max: 75 Marks

PART-I – 20 Marks (From UNIT- I)

- IV. Answer any **TWO** of the following in about 100 words each
(2 out of 3) 2X5 = 10
- V. Answer any **ONE** of the following in about 250 words
(1 out of 2) 1X10 = 10

PART-II – 20 Marks (From UNIT- II)

- I. Answer any **TWO** of the following in about 100 words each
(2 out of 3) 2X5 = 10
- II. Answer any **ONE** of the following in about 250 words
(1 out of 2) 1X10 = 10

PART-III – 15 Marks (From UNIT- III)

- I. Fill in the blanks and/or identify the grammatical items /
Rewrite as directed (5 questions) 5X1 = 5
- II. Change as directed (5 questions) 5X2 = 10

PART-IV – 10 Marks (From UNIT- IV)

- I. Answer the following (Either or type) (2 questions) 2X5 = 10

PART-V – 10 Marks (From UNIT- V)

- I. Answer **TWO** of the following (Open choice – 2 out of 3) 2X5 = 10



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
QUESTION PATTERN – EXTERNAL EXAMINATIONS
(Under CBCS w.e.f. 2017 – 2018 onwards)

UG COURSES

PART III : (CORE, ALLIED, ELECTIVE) - QUESTION PATTERN

SECTION – A (COMPULSORY)

Ten Questions (Answer all questions)(Two questions from each unit) **10 X 2 = 20 Marks**

SECTION – B (INTERNAL CHOICE)

Five Questions (Either...Or type) **5 X 5 = 25 Marks**

Answer all questions choosing either (a) or (b) (One question from each unit)

SECTION – C(OPEN CHOICE)

Answer any **THREE** questions out of **FIVE** **3 X 10 = 30 Marks**

One question from each unit.

PART- IV : (SBS, NME, VE, EVS) - QUESTION PATTERN

SECTION – A (OPEN CHOICE)

Answer any **FIVE** questions out of **EIGHT** **5 X 5 = 25 Marks**

Not exceeding Two questions from each Unit

SECTION – B (INTERNAL CHOICE)

Five Questions (Either...Or type) **5 X 10 = 50 Marks**

Answer all questions choosing either (a) or (b)(One question from each unit)



SOURASHTRA COLLEGE, MADURAI- 625004
(An Autonomous Institution Re-accredited with 'B' grade by NAAC)
QUESTION PATTERN – EXTERNAL EXAMINATIONS
(Under CBCS w.e.f. 2017 – 2018 onwards)

PG COURSES

PART III : (CORE, ELECTIVE) - QUESTION PATTERN

SECTION – A (COMPULSORY)

Five Questions (Answer all questions)(One question from each unit) **5 X 3 = 15 Marks**

SECTION – B (INTERNAL CHOICE)

Five Questions (Either...Or type) **5 X 6 = 30 Marks**

Answer all questions choosing either (a) or (b) (One question from each unit)

SECTION – C(OPEN CHOICE)

Answer any **THREE** questions out of **FIVE** **3 X 10 = 30 Marks**

One question from each unit.

PART- IV : NME - QUESTION PATTERN

SECTION – A (OPEN CHOICE)

Answer any **FIVE** questions out of **EIGHT** **5 X 5 = 25 Marks**

Not exceeding Two questions from each Unit

SECTION – B (INTERNAL CHOICE)

Five Questions (Either...Or type) **5 X 10 = 50 Marks**

Answer all questions choosing either (a) or (b)(One question from each unit)