SADAKATHULLAH APPA COLLEGE

(AUTONOMOUS)

(Reaccredited by NAAC at an 'A' Grade with a CGPA of 3.40 out of 4.00 in the III cycle An ISO 9001:2008 Certified Institution)

RAHMATH NAGAR, TIRUNELVELI- 11.

Tamilnadu

DEPARTMENT OF INFORMATION TECHNOLOGY

(Unaided)

MY LORD
VOUCHSAFE ME WISDOM

CBCS SYLLABUS

For

B.Sc. Information Technology

(Applicable for students admitted in June 2015 and onwards)

(As per the Resolutions of the Academic Council Meeting held on 23.02.2016)

CONTENTS

B.Sc. (Information Technology)
COURSE STRUCTURE (CBCS)
(Applicable for students admitted in June 2015 onwards)

ALLIED I – Computer Application				ALLIED II – Computer Application			
I SEMESTER				**II SEMESTER**			
P	**COURSE**	**H/W**	**C**	**P**	**COURSE**	**H/W**	**C**
I	Tamil / Arabic	6	3	**I**	Tamil / Arabic	6	3
II	English	6	3	**II**	English	6	3
III	Core – 1	4	4	**III**	Core – 3	4	4
	Core – 2	3	4		Core – 4	3	4
	Core Practical - I*	3	-		Core Practical - I*	3	3
	Allied I	3	4		Allied II	3	4
	Allied Practical - I*	3	-		Allied Practical - I*	3	2
IV	Environmental Studies	2	1	**IV**	Islamic Value Education	2	1
					Value Education		
	TOTAL	**30**	**19**		**TOTAL**	**30**	**24**
III SEMESTER				**IV SEMESTER**			
III	Core – 5	5	4	**III**	Core – 8	5	4
	Core – 6	5	4		Core – 9	5	4
	Core – 7	5	4		Core – 10	5	4
	Core Practical – II *	3	-		Core Practical – II *	3	3
	Allied III	3	4		Allied IV	3	4
	Allied Practical – II *	3	-		Allied Practical – II*	3	2
IV	Skill Based Elective - 1	3	2	**IV**	Skill Based Elective - 2	3	2
	Non Major Elective -1	3	2		Non Major Elective - 2	3	2
				V	Extension Activities	--	1
	TOTAL	**30**	**20**		**TOTAL**	**30**	**26**
V SEMESTER				**VI SEMESTER**			
III	Core – 11	6	5	**III**	Core – 14	6	5
	Core – 12	5	5		Core – 15	5	5
	Core – 13	5	5		Core – 16 – Project	5	5
	Core Practical – III*	3	-		Core Practical – III*	3	3
	Core Practical – IV*	3	-		Core Practical - IV*	3	3
	Core Elective – 1	5	6		Core Elective – 2	5	6
	Core Elective Practical *	3	-		Core Elective Practical *	3	3
	TOTAL	**30**	**21**		**TOTAL**	**30**	**30**

* Practical Examination – End of even semester   **G1-S**

1

B.Sc. (Information Technology)						
DISTRIBUTION OF CREDITS, NO. OF PAPERS & MARKS						
Part	Course	Semester	Hrs.	Credits	No. of Papers	Marks
I	Tamil / Arabic	I to II	12	6	2	200
II	English	I to II	12	6	2	200
III	Core + Core Practical	I to VI	95	77	15 + 4	1900
	Core Elective + CE Practical + Project	V & VI	21	20	2 + 1 + 1	400
	Allied + Practical	I to IV	24	20	4 + 2	600
IV	Environmental Studies	I	2	1	1	100
	Social Value Education	II	2	1	1	100
	Skill Based Elective	III & IV	6	4	2	200
	Non Major Elective	III & IV	6	4	2	200
V	Extension Activities	I to IV	--	1	1 (No Exam)	100
		TOTAL	**180**	**140**	**40**	**4000**

SEMESTER WISE DISTRIBUTION OF HOURS

Part	I	II	III				IV			
Sem	T/A	ENG	Core + Pract	CE	PRO	Allied+ Pract	SBE	NME	VE/ES	Total
I	6	6	7 + 3	-	-	3 + 3	-	-	2	**30**
II	6	6	7 + 3	-	-	3 + 3	-	-	2	**30**
III	-	-	15 + 3	-	-	3 + 3	3	3	-	**30**
IV	-	-	15 + 3	-	-	3 + 3	3	3	-	**30**
V	-	-	16 + 6	5 + 3	-	-	-	-	-	**30**
VI	-	-	11 + 6	5 + 3	5	-	-	-	-	**30**
TOT	**12**	**12**	**71+24=95**	**10+6=16**	**5**	**12+12=24**	**6**	**6**	**4**	**180**

B.Sc. (Information Technology) - CBCS Syllabus
(Applicable for students admitted in June 2015 onwards)
TITLE OF THE PAPERS, CREDITS & MARKS

P	SUB	Title of the paper	S.CODE	H/W	C	MARKS I	MARKS E	MARKS T
I SEMESTER								
I	TA 1	இக்காலத் தமிழ்	15UTAL11	6	3	25	75	100
	AR 1	Applied Grammar and Translation - I	15UARL11					
II	EN 1	Prose, Poetry and Remedial Grammar - I	15UENL11	6	3	25	75	100
III	C1	C Programming *	15UITC11	4	4	25	75	100
	C2	Introduction to Computers	15UITC12	3	4	25	75	100
	CP-1	Information Technology Core Practical – I	-	3	0	Examination II Semester		
	AI-1	MS Office	15UCSA11	3	4	25	75	100
	AI-P	Allied I - Practical	-	3	0	Examination II Semester		
IV	ES	Environmental Studies	15UEVS11	2	1	25	75	100
			TOTAL	**30**	**19**	**150**	**450**	**600**
II SEMESTER								
I	TA 2	சமயத் தமிழ்	15UTAL21	6	3	25	75	100
	AR 2	Applied Grammar and Translation - II	15UARL21					
II	EN 2	Prose, Poetry and Remedial Grammar - II	15UENL21	6	3	25	75	100
III	C3	Object Oriented Programming with C++	15UITC21	4	4	25	75	100
	C4	Digital Principles & Applications *	15UITC22	3	4	25	75	100
	CP-1	Information Technology Core Practical – I	15UITC2P	3	3	40	60	100
	AI-2	Graphics and Animation Tools	15UCSA21	3	4	25	75	100
	AI-P	Allied I – Practical	15UCSA2P	3	2	40	60	100
IV	VE	Value Education – I	15USVE2A	2	1	25	75	100
		Value Education - II	15USVE2B					
			TOTAL	**30**	**24**	**230**	**570**	**800**

III SEMESTER								
P	**SUB**	**Title of the paper**	**S.CODE**	**H/W**	**C**	**MARKS**		
						I	**E**	**T**
III	C5	Object Oriented Programming with Java	15UITC31	5	4	25	75	100
	C6	System Architecture	15UITC32	5	4	25	75	100
	C7	Data Structures	15UITC33	5	4	25	75	100
	CP-II	Information Technology Core Practical – II	-		3	-	Examination IV Semester	
	AII-1	Desktop Publishing	15UCSA31	3	4	25	75	100
	AII-P	Allied II - Practical	-		3	-	Examination IV Semester	
IV	SBE1	Management Information System	15UITS31	3	2	25	75	100
	NME1	Choose from the list	-	3	2	25	75	100
			TOTAL	**30**	**20**	**150**	**450**	**600**
IV SEMESTER								
III	C8	Web Designing Languages	15UITC41	5	4	25	75	100
	C9	Modern Operating Systems	15UITC42	5	4	25	75	100
	C10	Computer Networks	15UITC43	5	4	25	75	100
	CP-II	Information Technology Core Practical – II	15UITC4P	3	3	40	60	100
	AII-2	Unix and Shell Programming	15UCSA41	3	4	25	75	100
	AII-P	Allied II – Practical	15UCSA4P	3	2	40	60	100
IV	SBE2	Quantitative Aptitude	15UITS41	3	2	25	75	100
	NME2	Choose from the list	-	3	2	25	75	100
V	EX	Extension Activities (Choose from the list)	-	--	1	--	100	100
			TOTAL	**30**	**26**	**230**	**670**	**900**

			V SEMESTER						
P	**SUB**	**Title of the paper**	**S.CODE**	**H/W**	**C**	**MARKS**		
						I	**E**	**T**
III	C11	GUI Design with VB	15UITC51	6	5	25	75	100
	C12	Software Engineering	15UITC52	5	5	25	75	100
	C13	Mobile Computing	15UITC53	5	5	25	75	100
	CP-III	Information Technology Core Practical – III	-	3	-	Examination VI Semester		
	CP-IV	Information Technology Core Practical – IV	-	3	-	Examination VI Semester		
	CE1	A) ORACLE	15UITE5A	5	6	25	75	100
		B) C # Programming	15UITE5B					
	CE-P	Information Technology Core Elective Practical – A	-	3	-	Examination VI Semester		
		Information Technology Core Elective Practical – B	-					
			TOTAL	**30**	**21**	**100**	**300**	**400**
			VI SEMESTER					
III	C14	Computer Graphics using C	15UITC61	6	5	25	75	100
	C15	Mobile Application and Development	15UITC62	5	5	25	75	100
	C16	Project	15UITP61	5	5	-	100	100
	CP-III	Information Technology Core Practical – III	15UITC6P1	3	3	40	60	100
	CP-IV	Information Technology Core Practical – IV	15UITC6P2	3	3	40	60	100
	CE2	A) ASP .Net	15UITE6A	5	6	25	75	100
		B) PHP	15UITE6B					
	CE-P	Information Technology Core Elective Practical – A	15UITE6AP	3	3	40	60	100
		Information Technology Core Elective Practical – B	15UITE6BP					
			TOTAL	**30**	**30**	**195**	**505**	**700**

B.Sc. (Information Technology) CBCS Syllabus

PART I AND II SUBJECTS

(Applicable for students admitted in June 2015 and onwards)

TITLE OF THE PAPERS, CREDITS & MARKS

SEM	Title of the paper	S.CODE	H/W	C	I	E	T
GROUP I COURSES (ONE YEAR LANGUAGE COURSES) (B.Com., B.Com. (C.A.), B.Com. (Finance), B.B.A., B.Sc. Computer Science, B.Sc. Information Technology and B.C.A.)							
PART I – TAMIL							
I	இக்காலத் தமிழ்	15UTAL11	6	3	25	75	100
II	சமயத் தமிழ்	15UTAL21	6	3	25	75	100
		TOTAL	12	6	50	150	200
PART I – ARABIC							
I	Applied Grammar and Translation – I	15UARL11	6	3	25	75	100
II	Applied Grammar and Translation – II	15UARL21	6	3	25	75	100
		TOTAL	12	6	50	150	200
PART II – ENGLISH							
I	Prose, Poetry and Remedial Grammar – I	15UENL11	6	3	25	75	100
II	Prose, Poetry and Remedial Grammar – II	15UENL21	6	3	25	75	100
		TOTAL	12	6	50	150	200

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PART III – CORE, CORE ELECTIVE AND PROJECT
TITLE OF THE PAPERS, CREDITS & MARKS

SEM	SUB	Title of the paper	S.CODE	H/W	C	I	E	T
I	C1	C Programming *	15UITC11	4	4	25	75	100
	C2	Introduction to Computers	15UITC12	3	4	25	75	100
	CP-I	Information Technology Core Practical – I	-		3		Examination II Semester	
II	C3	Object Oriented Programming with C++	15UITC21	4	4	25	75	100
	C4	Digital Principles & Applications *	15UITC22	3	4	25	75	100
	CP-I	Information Technology Core Practical – I	15UITC2P	3	3	40	60	100
III	C5	Object Oriented Programming with Java	15UITC31	5	4	25	75	100
	C6	System Architecture	15UITC32	5	4	25	75	100
	C7	Data Structures	15UITC33	5	4	25	75	100
	CP-II	Information Technology Core Practical – II	-		3		Examination IV Semester	
IV	C8	Web Designing Languages	15UITC41	5	4	25	75	100
	C9	Modern Operating Systems	15UITC42	5	4	25	75	100
	C10	Computer Networks	15UITC43	5	4	25	75	100
	CP-II	Information Technology Core Practical – II	15UITC4P	3	3	40	60	100
V	C11	GUI Design with VB	15UITC51	6	5	25	75	100
	C12	Software Engineering	15UITC52	5	5	25	75	100
	C13	Mobile Computing	15UITC53	5	5	25	75	100
	CP-III	Information Technology Core Practical – III	-		3		Examination VI Semester	
	CP-IV	Information Technology Core Practical – IV	-		3		Examination VI Semester	
	CE1	A) ORACLE	15UITE5A	5	6	25	75	100
		B) C # Programming	15UITE5B					
	CE-P	Information Technology Core Elective Practical – A	-		3		Examination VI Semester	
		Information Technology Core Elective Practical – B	-					
VI	C14	Computer Graphics using C	15UITC61	6	5	25	75	100
	C15	Mobile Application and Development	15UITC62	5	5	25	75	100
	C16	Project	15UITP61	5	5	-	100	100
	CP-III	Information Technology Core Practical – III	15UITC6P1	3	3	40	60	100
	CP-IV	Information Technology Core Practical – IV	15UITC6P2	3	3	40	60	100
	CE2	A) ASP .Net	15UITE6A	5	6	25	75	100
		B) PHP	15UITE6B					
	CE-P	Information Technology Core Elective Practical – A	15UITE6AP	3	3	40	60	100
		Information Technology Core Elective Practical – B	15UITE6BP					
		TOTAL		**116**	**97**	**625**	**1675**	**2300**

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PART III – ALLIED I & II – COMPUTER APPLICATIONS

SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS I	E	T
I	AI-1	MS Office	15UCSA11	3	4	25	75	100
	AI-P	Allied I - Practical	-	3	-	Examination II Semester		
II	AI-2	Graphics and Animation Tools	15UCSA21	3	4	25	75	100
	AI-P	Allied I – Practical	15UCSA2P	3	2	40	60	100
III	AII-1	Desktop Publishing	15UCSA31	3	4	25	75	100
	AII-P	Allied II – Practical	-	3	-	Examination IV Semester		
IV	AII-2	Unix and Shell Programming	15UCSA41	3	4	25	75	100
	AII-P	Allied II – Practical	15UCSA4P	3	2	40	60	100
		TOTAL		24	20	180	420	600

PART IV – Skill-Based Elective (For B.Sc. (Information Technology))

SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS I	E	T
III	1	Management Information System	15UITS31	3	2	25	75	100
IV	2	Internet Security	15UITS41	3	2	25	75	100
		TOTAL		6	4	50	150	200

PART IV- NON-MAJOR ELECTIVE (FOR OTHER MAJOR STUDENTS)

SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	I	E	T
III	1	Introduction to Computers	15UITN31	3	2	25	75	100
IV	2	MS Office	15UITN41	3	2	25	75	100
		TOTAL		6	4	50	150	200

PART IV – EVS & VALUE EDUCATION (FOR ALL MAJOR STUDENTS)

SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	I	E	T
I	1	Environmental Studies	15UEVS11	2	1	25	75	100
II	2	Islamic Value Education	15USVE2A	2	1	25	75	100
		Value Education	15USVE2B					
		TOTAL		4	2	50	150	200

PART – V

SEM	Extension Activities (Choose any one)	S.CODE	H/W	C	I	E	T
I to IV	Enviro Club	15UEXEVC					
	NCC	15UEXNCC					
	NSS	15UEXNSS					
	Physical Education	15UEXPHY	-	1	-	100	100
	Red Ribbon Club	15UEXRRC					
	Sadakath Outreach Programme	15UEXSOP					
	Youth Red Cross	15UEXYRC					
	Youth Welfare	15UEXYWL					
			-	1	-	100	100

PART – 1 TAMIL			
முதல் பருவம்			
Part – 1	இக்காலத் தமிழ்		15 UTAL11
Hrs/Week : 6	Hrs/Sem : 90	Hrs/Unit : 18	Credits : 3

நோக்கம் :

❖ தமிழ்ப் படைப்பிலக்கியங்களான புதுக்கவிதைகள், சிறுகதைகள் ஆகியவற்றை எழுத வைத்தல்.

❖ சமூகம் பற்றிய சிந்தனைகளைப் படைப்பிலக்கியங்கள் மூலம் ஏற்படுத்துதல்.

அலகு - 1

தமிழ்ச் செய்யுள் - புதுக்கவிதைகள்

1. அல்லாஹ் - மகாகவி பாரதியார்
2. தமிழுக்கு அமுதென்று பெயர் - பாவேந்தர் பாரதிதாசன்
3. பாடல் - பட்டுக்கோட்டை கல்யாணசுந்தரம்
4. ஆயிரம் திருநாமம் பாடி - கவிக்கோ அப்துல் ரகுமான்
5. தேசப்பிதாவுக்கு ஒரு தெருப் பாடகனின் அஞ்சலி - மு. மேத்தா
6. ஐந்து பெரிது ஆறு சிறிது - வைரமுத்து
7. மழை கொடுக்கும் - கவியரசு கண்ணதாசன்
8. எத்திசையிலிருந்து எறியப்பட்டது - கல்யாண்ஜி
9. சினேகிதனின் தாழ்வான வீடு - கலாப்பிரியா
10. தூக்கம் விற்ற காசுகள் - ரசிகவ்ஞானியார்
11. தோழர் மோசிகீரனார் - ஞானக்கூத்தன்
12. வயலும் வாழ்வும் - நா.முத்துக்குமார்
13. கடவுள் போற்றி - கவிமணி
14. நண்பனே - கலீல் ஜீப்ரான்

அலகு -2 (சிறுகதைக் களஞ்சியம்)

1. காஞ்சனை - புதுமைப்பித்தன்
2. கூறல் - வண்ணதாசன்
3. சொர்க்க கன்னிகை - கருணாமணாளன்
4. காலத்தின் ஆவர்த்தனம் - தோப்பில் முகமதுமீரான்
5. கனவில் உதிர்ந்த பூ - நாறும்பூநாதன்
6. ராஜமீன் - கீரனூர் ஜாஹிர்ராஜா
7. சங்காத்தி - தீன்

அலகு- 3 உரைநடை

1. படிப்பது சுகமே – வெ. இறையன்பு இ.ஆ.ப.
   நியூ செஞ்சுரி புக் ஹவுஸ் (பி) லிட், சென்னை.

அலகு- 4 இலக்கிய வரலாறு

1. தமிழ்ப் புதுக்கவிதைகள் தோற்றமும் வளர்ச்சியும்
2. தமிழ்ச் சிறுகதைகள் தோற்றமும் வளர்ச்சியும்
3. தடம் பதித்த தமிழ்ச் சிறுகதையாசிரியர்கள்
4. தற்காலத் தமிழ்ப் புதுக்கவிதைகள், சிறுகதைகளின் போக்கு

அலகு- 5 இலக்கணம்

1. எழுத்து வகை பற்றிய விளக்கம்
   முதலெழுத்துகள், சார்பெழுத்துகள், சுட்டெழுத்துகள், வினாவெழுத்துகள்
2. மொழி முதல் எழுத்துக்கள், மொழி இறுதி எழுத்துகள்
3. வல்லினம் மிகுமிடங்கள், மிகா இடங்கள்

PART – 1 TAMIL			
இரண்டாம் பருவம்			
Part – 1	சமயத் தமிழ்		15 UTAL21
Hrs/Week : 6	Hrs/Sem : 90	Hrs/Unit : 18	Credits : 3

நோக்கம் :

❖ பலசமயக் கருத்துக்களை ஒப்பிட்டுச் சமய நல்லிணக்கத்தோடு மாணவர்கள் வாழ இப்பருவம் துணை புரிகிறது.

❖ தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத் தேர்வுக்கு மாணவர்களை ஆயத்தப்படுத்துதல்

அலகு- 1

தமிழ்ச் செய்யுள் (துறை வெளியீடு)

சைவம்

1. தேவாரம்

திருநாவுக்கரசர்	-	மாசில் வீணையும்...
	-	நாமார்க்கும் குடியல்லோம்...
	-	அப்பன் நீ அம்மை நீ...
திருஞானசம்பந்தர்	-	தோடுடைய செவியன்...
	-	வேயுறு தோளி பங்கன்...
	-	மருந்தவை மந்திரம்...
சுந்தரமூர்த்தி நாயனார்	-	பித்தா பிறைசூடி...

2. திருவாசகம்

மாணிக்கவாசகர்	-	பால் நினைந்தூட்டும்...
3. திருவெம்பாவை	-	ஆதியும் அந்தமும் இல்லா...
4. திருமந்திரம்		
திருமூலர்	-	ஒன்றே குலமும் ஒருவனே தேவனும்...

வைணவம்

5. பொய்கையாழ்வார்	-	வையம் தகளியா...
பூதத்தாழ்வார்	-	அன்பே தகளியா...
பேயாழ்வார்	-	திருக்கண்டேன்...
6. திருப்பாவை		
ஆண்டாள்	-	மார்கழித் திங்கள்...

7.	வளையாபதி	-	மக்கட் செல்வம்

<u>பௌத்தம்</u>

8. புத்தபிரான் - மு.ரா.பெருமாள்

<u>கிறித்தவம்</u>

9. இயேசு காவியம் (சில பகுதிகள்) - கண்ணதாசன்

<u>இஸ்லாம்</u>

10. நபிகள் நாயக மான்மிய மஞ்சரி - சதாவதானி செய்குத்தம்பிப்பாவலர் (குறிப்பிட்ட பாடல்கள்)

11. குணங்குடி மஸ்தான் பாடல்கள் - பாசக்கயிற்று வலை

12. ஞானப் புகழ்ச்சி - தக்கலை பீர்முகமது அப்பா

13. அலகிலா அருளும் - இறையருட் கவிமணி. கா.அப்துல்கபூர்

<u>நீதி இலக்கியங்கள்</u>

14. திருக்குறள் (வான் சிறப்பு)

15. நாலடியார் - கல்வி கரையில

16. இன்னாநாற்பது - ஆன்றவித்த...

அலகு- 2 புதினம்

"கல்மரம்" - திலகவதி

அலகு - 3 உரைநடை (தமிழ்த் துறை வெளியீடு)

1. நபிகள் நாயகம் (ஸல்) அன்பின் தாயகம்
2. சதக்கத்துல்லாஹ் அப்பா அவர்களின் வாழ்வும் பணியும்
3. <u>கவி.கா.மு.ஷெரிப்</u> - த.மு.சா காசாமைதீன்
4. கவிக்கோ அப்துல்ரகுமானின் கவிதைகள்
5. தமிழ் இலக்கியங்களில் மனிதநேயச் சிந்தனைகள்
6. இணையத்தில் தமிழ்

அலகு- 4 (போட்டித் தேர்வுத் தயாரிப்பு)

இலக்கிய வரலாறு

1. சைவம், வைணவம், கிறித்துவம், இசுலாம் வளர்த்த தமிழ்
2. புகழ் பெற்ற தமிழ் நூல்கள், நூலாசிரியர்கள்
3. தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம் நடத்தும் போட்டித் தேர்வுக்குரிய பொதுத்தமிழ் பாடத்திட்டம் - ஓர் அறிமுகம்

அலகு- 5 இலக்கணம்

வேர்ச்சொல் அறிதல், அகரவரிசைப்படி மாற்றியமைத்தல், செய்வினை, செய்யப்பாட்டுவினை, தன்வினை, பிறவினை, உடன்பாடு, எதிர்மறை, செய்தி வாக்கியம், கலவை வாக்கியம், பெயர்வினை, இடை, உரிச்சொற்களின் இலக்கணம் மற்றும் பெயர்ச்சொல், வினைச்சொல் வகைகள், லகர, எகர, ணகர, ரகர, �றகர வேறுபாடுகள்.

Part - I ARABIC
Applicable for Group I Courses (One Year Language Courses) such as B.Com, B.Com. (C.A) B.Com, (Finance) , B.B.A, B.Sc. Computer Science, B.Sc., Information Technology and B.C.A.

PAPER-I	APPLIED GRAMMAR AND TRANSLATION-I	15UARL11
Hrs/ Week: 6 Hrs/ Sem: 90 Hrs/ Unit: 18		**Credits: 3**

Unit I :-
         Lessons   1 to 5 (Reader)
Unit II :-
         Lessons   6 to 10

Unit III :-
         Grammar Portions
1) Al Mufrad wal- muthanna wal jam'
2) Huroof ul Jarr
3) Asmaa – ul Ishaarah.
4) Adawaatul Istifhaam
5) Ad Damaair – ul – Munfasilah Val Muthasilah
6) Al-Idaafah
7) Al Mubtada wal khabar
8) As-sifatu wal mausoof
9) Al mudhakkar wal muannath
10) Asmaa-ul-mausool

Unit IV :-
         Lessons   11 to 15

Unit V :-
         Lessons   16 to 20

TEXT BOOKS

1) Duroosul Lughatil Arabiya   Part – I (Reader) - Lessons 1 to 20 only by Dr.V. Abdur Rahim. Available at Islamic foundation Trust, 78 Perambur High Road , Perambur, Chennai- 600 012.

2) An-Nahwul Waadih Ibtidayee – Part I (Grammar, selected topics only) by Ali   Al-jaarim and Mustafa Ameen. Available at Hilal Book House , Tirurkad, Angadipuram, Kerala.

	Semester - II	
PAPER-II	APPLIED GRAMMAR AND TRANSLATION-II	15UARL 21
Hrs/ Week: 6	Hrs/ Sem: 90　　　　Hrs/ Unit: 18	Credits: 3

Unit I :-
      Lessons　　1 to　3 (Reader)

Unit II :-
      Lessons　　4　to　7

Unit III :-
      Grammar Portions
      1) Inna wa Akhavaatuha.
      2) Ismut Tafleel
      3) AlMali wal Mularee
      4) Al-Amr wan Nahi
      5) Al Fa-il
      6) Al Maf-ool
      7) Al-Asmaul Mausool
      8) Taqseemu Fihl ila As-saheeh wal Muhtal
      9)Ismul Maf'ool
      10) Ismul Faa'il.

Unit IV
      Lessons　　8　to　11

Unit V
      Lessons　　12 to 15

TEXT BOOKS

1. ***Duroosul Lughatil Arabiya*** *Part – II (Reader) Lessons 1 to 15 only　by　Dr.V. Abdur Rahim.　Available at: Islamic foundation Trust, 78 Perambur High Road , Perambur, Chennai-600 012.*

2. ***An-Nahwul Waadih Ibtidayee*** *–Part I &II (Selected Grammar Portions only)　by　Ali Al-jaarim and Mustafa Ameen. Available at: Hilal Book House , Tirurkad, Angadipuram, Kerala.*

ONE – YEAR LANGUAGE COURSE
B.Com., B.Sc. Computer Science, Information Technology, B.B.A., B.Com, (C.A), B.C.A., and B.Com (Finance)

I SEMESTER			
EN1	PROSE, POETRY AND REMEDIAL GRAMMAR - I		15UENL11
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 3

Objectives:
1. To answer comprehensive questions on passages of moderate level of difficulty.
2. To analyse the prescribed prose pieces and to attempt a critical appreciation of the poems.
3. To write grammatically.

UNIT I – PROSE
1. Letter to a Teacher - Nora Rossi and Tom Cole (Trans.)
2. Spoken English and Broken English - George Bernard Shaw
3. Voluntary Poverty - M.K. Gandhi

UNIT II – PROSE
4. A Snake in the Grass - R.K. Narayan
5. The Civilization of Today - C.E.M. Joad
6. Kamala Nehru - Jawaharlal Nehru

UNIT III – POETRY
1. On His Blindness - John Milton
2. Upon Westminster Bridge - William Wordsworth
3. When I have Fears - John Keats

UNIT IV – FUNCTIONAL GRAMMAR
1. Articles and Nouns (Units 68-80 of Intermediate English Grammar)
2. Pronouns and Determiners (Units 81–90 of Intermediate English Grammar)

UNIT V – FUNCTIONAL GRAMMAR
3. Reported Speech (Units 46-47 of Intermediate English Grammar)
4. Questions and auxiliary verbs (Units 48-51 of Intermediate English Grammar)
5. 'ing' and the infinitive (Units 52-67 of Intermediate English Grammar)

TEXTBOOKS:
1. T. Srirama, Colin Swatridge. ed. College Prose and Poetry. TRINITY, New Delhi: Trichy, 1989 (rpt. 2014).
2. Raymond Murphy. ed. Intermediate English Grammar. New Delhi : Cambridge University Press, 1994 (rpt. 2006).

	II SEMESTER	
EN2	**PROSE, POETRY AND REMEDIAL GRAMMAR - II**	**15UENL21**
Hrs/ Week: 6	**Hrs/ Sem: 90** **Hrs/ Unit: 18**	**Credits: 3**

Objectives:

1. To answer comprehensive questions on passages of moderate level of difficulty.
2. To analyse the prescribed prose pieces and to attempt a critical appreciation of the poems.
3. To write grammatically.

UNIT I – PROSE

1. With the Photographer   - Stephen Leacock
2. Professions for Women   - Virginia Woolf
3. On Letter Writing   - Alpha of the Plough

UNIT II – PROSE

4. The Night the Ghost Got In   - James Thurber
5. The Donkey   - Sir. J.Arthur Thomson
6. A Cup of Tea   - Katherine Mansfield

UNIT III – POETRY

1. The Flower   - Alfred Lord Tennyson
2. Homage to a Government   - Philip Larkin
3. Obituary   - A.K. Ramanujan

UNIT IV – FUNCTIONAL GRAMMAR

1. Present and Past (Units 1-6 of Intermediate English Grammar)
2. Present Perfect and Past (Units 7-18 of Intermediate English Grammar)
3. Future (Units 19-22 of Intermediate English Grammar)

UNIT V – FUNCTIONAL GRAMMAR

4. Future (Units 23-25 of Intermediate English Grammar)
5. Modals (Units 26-36 of Intermediate English Grammar)
6. Conditionals and 'Wish' (Units 37-40 of Intermediate English Grammar)
7. Passive (Units 41-45 of Intermediate English Grammar)

TEXTBOOKS:

1. T. Srirama, Colin Swatridge. ed. College Prose and Poetry. TRINITY, New Delhi: Trichy, 1989 (rpt. 2014).
2. Raymond Murphy. ed. Intermediate English Grammar. New Delhi: Cambridge University Press, 1994 (rpt. 2006).

B.SC (INFORMATION TECHNOLOGY) – CBCS SYLLABUS (2015 – 2016)			
PART III - CORE, CORE ELECTIVE & PROJECT			
I SEMESTER			
C 1	C PROGRAMMING		15UITC11
Hrs / Week : 4	Hrs / Sem :4X15 60	Hrs / Unit : 12	Credits : 4

UNIT I

Overview of C Language   History of C- C Fundamental : constants-variable- data types - character set – C tokens – identifiers- keywords - data types - Operators & Expressions- Managing Input & Output Operations.

UNIT II

Decision making & Branching : Introduction – IF statement - IF-ELSE- Nesting of IF ELSE – ELSE IF LADDER – Switch- Conditional Operator – GOTO Statement

Decision making & Looping : Introduction – WHILE Statement – DO – FOR – Jumps In Loops

UNIT III

Arrays: Introduction –One Dimensional Arrays- Declaration-Initialization-Two Dimensional Arrays -Initialization –Multi Dimensional Arrays.

Functions : Introduction – Need for User Defined Functions –A Multi Function Program – Elements of User Defined Functions – Defintions of Functions – Category of Functions.

UNIT IV

Structures & Unions : Introduction – Defining a structures – Declaring Structure variables – Accessing Structure Members – Structure Initilization – Unions

Pointers : Introduction – Understanding Pointers – Accessing address of the variable – Declaring Pointer Variable - Initialization of pointer Variables – Pointers & Arrays.

UNIT V

File Management in C : Introduction - Defining & Opening a File – Closing a File – Input / Output Operations & files– Random Access to File – Command Line arguments.

TEXT BOOK:

Programming IN ANSI C 4E by E. Balagurusamy
REFERENCE BOOK :
Programming With C – C. Ravichandran

B.SC (INFORMATION TECHNOLOGY) – CBCS SYLLABUS (2015 – 2016)			
PART III - CORE, CORE ELECTIVE & PROJECT			
I SEMESTER			
C 2	INTRODUCTION TO COMPUTERS		15UITC12
Hrs / Week : 3	Hrs / Sem :3X15=45	Hrs / Unit : 9	Credits : 4

UNIT I

Computers an Overview: Introduction to computers – Five Generations of modern computers- Classification of Digital computer Systems.- **Inside the computer:** Anatomy of digital computer – Computer Architecture.

UNIT II

Number system & Boolean Algebra: Number system – Boolean algebra and logic circuits. **Memory:** Memory units – Auxiliary Storage Devices Primary.

UNIT III

Input / Output: Input devices - Output Devices – **Computer Software & Software Development:** Introduction to computer software - Operating systems - Programming languages.

UNIT IV

Data processing and Networking: Data processing – Computer networks – Distributed data processing. **Telecommunications:** Introduction to Telecommunications. **Security:** Introduction to computer security – Cryptography - Computer Viruses, Bombs and worms.

UNIT V

Internet and Intranet: Internet and world wide web – Introduction to Intranets**. Multimedia and virtual reality:** Introduction to Multimedia - Multimedia tools - Introduction to virtual reality.

TEXT BOOK :

Alexis Leon and Mathews Leon. "Introduction to Computers" VIKAS publishing house Pvt Ltd, 1999.

REFERENCE BOOK:

Alexis Leon, Fundamentals of Introduction System. Vijay Niicholas, Imprints Pvt. Ltd. 2004.

B.SC (INFORMATION TECHNOLOGY) – CBCS SYLLABUS (2015 – 2016)			
PART III - CORE, CORE ELECTIVE & PROJECT			
II SEMESTER			
C 3 OBJECT ORIENTED PROGRAMMING WITH C++			15UITC21
Hrs / Week : 4	Hrs / Sem :4X15=60	Hrs / Unit : 12	Credit : 4

UNIT I - Classes and objects

Introduction- c structures revisited - specifying a class- defining member functions - a c++ program with class - Making an outside function inline - Nesting of member functions - Private member functions - Array within a class - Memory allocation for objects - Static data members - Static member functions - Array of objects - Object as function arguments - Friendly functions - returning objects.

UNIT II -   Constructors and Destructors

Introduction – constructors - parameterized constructors - multiple constructor in a class - constructor with default arguments - dynamic initialization of objects - copy constructor - dynamic constructors - constructing two - dimensional arrays - const objects - Destructors.

UNIT III - Operator overloading

Introduction - defining operator overloading - overloading unary operators - overloading binary operators - overloading binary operators using friends - manipulation of strings using operators - rules for overloading operators.

UNIT IV - Inheritance: Extending classes

Introduction - defining derived classes- single inheritance - making a private member inheritable - multilevel inheritance- multiple inheritance - hierarchical inheritance - hybrid inheritance - virtual base classes - abstract classes - constructors in derived classes- member classes: Nesting of classes.

UNIT V – Pointers & Working with files

Introduction - pointers to objects - this pointer - pointers to derived classes- Introduction- classes for file stream operations - opening and closing a file - detecting End-of-file - more about open(): file modes - file pointers and their manipulations- sequential input and output operations- updating a file: Random Access - error handling during file operations - command-line arguments.

TEXT BOOKS:

1. Object –Oriented Programming with C++ By E.Balagurusamy

REFERENCE BOOKS:

1. Object – Oriented programming in Turbo C++ By Robert Lafore

B.SC (INFORMATION TECHNOLOGY) – CBCS SYLLABUS (2015 – 2016)			
PART III - CORE, CORE ELECTIVE & PROJECT			
II SEMESTER			
C 4 DIGITAL PRINCIPLES AND ITS APPLICATIONS			15UITC22
Hrs / Week : 3	Hrs / Sem :3X15=45	Hrs / Unit : 9	Credit : 4

UNIT I

 Logic Circuits: Binary Number System neither OR Gates - AND Gates – Boolean algebra - NOR Gates NAND Gates. **Circuit Analysis and Design:** Boolean Laws and Theorem- Sum of Products method- Truth table to Karnaugh Map– Pairs, Quads, and Octets- Karnaugh simplification– Don't Care Conditions - Product-of sums method.

UNIT II

 Data Processing Circuits: Multiplexers – Demultiplexers-1-of-16 Decoder – BDC-to-decimal Decoders – Encoders – Exclusive-OR Gates.

UNIT III

 Number Systems and codes : Binary to Decimal conversion – Decimal to Binary conversion – Octal Numbers – Hexa Decimal Numbers- ASCII Code – The Excess 3 Code.

Unit IV

 Arithmetic Circuits : Binary Addition- Binary Subtraction–2'S Complement Representation - 2'SComplement Arithmetic – Arithmetic Building Blocks – The Adder – Subtracter. **Flip Flops:** RS Flip-Flops – D Flip-flops-JK Flip Flop- JK Master Slave Flip flop.

UNIT V

 Shift Registers : Types of Registers – Serial In-Serial Out – Serial In Parallel Out – Parallel In Serial Out – Parallel In Parallel Out. **Counters:** – Asynchronous Counter - Synchronous Counter - Shift Counters - Ring Counter- A Digital Clock.

TEXT BOOK

 1. Digital Principals and Applications –Albert Paul Malvino, Donald P Leach,
Sixth Edition, The McGraw-Hill Publishing Companies Lmt - 2001

 Reference Book
1.   Digital Computer Fundamentals , Thomas C. Bartee TMH 2007.
2.   Digital Circuits and Design, S. Salivahanan and S. Arivazhagan , Vikas Publishers. 2005

I & II SEMESTERS		
CP I	INFORMATION TECHNOLOGY CORE PRACTICAL I *	15UITC2P
Hrs / Week : 3	Hrs / Sem :3X5 = 45	Credits : 3

*Examination at the end of II Semester

C PROGRAMMING PRACTICAL

1. Program using   If statement.

2. Program using while & do – while statement.

3. Program using switch statement.

4. Program using for statement.

5. Program using one dimensional array.

6. Program using two dimensional arrays.

7. Program using Functions.

8. Programs using Recursions.

9. Program using strings.

10. Program using Structure.

11. Program using file concepts.

C + +   PROGRAMMING PRACTICAL

1. Program to demonstrate all manipulators in C++.

2. Swap 2 Values

3. Evaluate an expression using macros (Macrosinic & inline function C++)

4. Compare any 2 elementary data types in C++ using function overloading.

5. Find m power n values using default arguments.

6. Program to perform simple banking operation.

7. Write a program using operator overloading .

8. Programs using multiple inheritance, hybrid inheritance, hierarchical inheritance, multilevel inheritance.

9. Program using polymorphism and virtual functions.

10. Create and copy a text file to another.

III SEMESTER		
C 5	OBJECT ORIENTED PROGRAMMING WITH JAVA	15UITC31
Hrs / Week : 5	Hrs / Sem : 5x15=75	Hrs / Unit : 15	Credits :4

UNIT I

Introduction to Java – Features of Java – Java Development Environment –Simple programs – Java History and Feature – Java Development Kit (JDK) – Java Tokens – Java Statements – variables - Java Character set – Operators – Strings and StringBuffers.

UNIT II

Classes, Interfaces and Packages: Conditional and Looping Statements - Classes – Objects –- Static members- Abstract and Final classes - Method Overloading – Method Overridding. - Wrapper Classes

UNIT III

Constructor **-** Inheritance Extending classes– Interfaces and Inheritance - Final Variables and Methods—arrays – Packages and Interfaces.- Threads – Creating Threads – Life Cycle of Threads – Extending Thread Class – Accessing thread members.

UNIT IV

Exception Handling: Error Handling and Exception Handling – Exception Types and Hierarchy – Try Catch blocks – Use of Throw, Throws and Finally – Programmer Defined Exceptions.

UNIT V

Applets and Graphics: Fundamentals of Applets – Graphics. **AWT and Event Handling:** AWT components and Event Handlers – AWT Controls and Event Handling Types and Examples –Introduction. **Input and Output:** Files – Streams.

TEXT BOOK

1. Programming with Java a primer 4/E ,E . Balaguruswamy, Mc.Graw Hill
REFERENCE BOOKS

1. Programming with Java - C. Muthu

III SEMESTER		
C6	SYSTEM ARCHITECTURE	15UITC32
Hrs / Week : 5	Hrs / Sem : 5x15= 75	Hrs / Unit : 15	Credits : 4

UNIT I

Basic Computer Organization and Design : Instruction Codes – Computer Registers – Computer Instructions – Timing And Control – Instruction Cycle – Design of Basic computer – Design of Accumulator logic. **Programming the basic Computer:** Introduction – Machine Language - Assembly Language - The Assembler – Program Loops- Subroutines.

UNIT II

Central Processing Unit: Introduction - General Register Organization – Stack Organization – Instruction Formats –Addressing Modes - Program Control – CISC, RISC Characteristics.

UNIT III

Pipe Lines and Vector Processing: Parallel Processing – Pipelining – Instruction Pipeline - Vector processing- Array Processors. Computer Arithmetic: Addition and Subtraction – Multiplication Algorithms – Division Algorithms.

UNIT IV

Input output organization: Input Output Interface – Asynchronous Data Transfer- Modes of Transfer- Priority Interrupt- Direct Memory Access- Input output Processor- Serial Communication.

UNIT V

Memory Organization: Memory Hierarchy - Main Memory - Auxiliary Memory - Associative Memory - Cache Memory - Virtual Memory**. Multiprocessor :** Interprocessor Communication and Synchronization.

TEXT BOOK :

M. Morris Mano - Computer System Architecture - Third Edition

REFERENCE BOOK:

S.Salivahanan and S.Arivalagan Digital Circuits and Design, VIkas Publishing House Pvt. Ltd,2005

III SEMESTER		
C7	**DATA STRUCTURES**	**15UITC33**
Hrs / Week : 5 **Hrs / Sem : 75**	**Hrs / Unit : 15**	**Credits :4**

Unit 1:

Basics of Data Structures: Basic data types-linear,non linear-psedo code-alogrithm efficiency-List searches-Sequential,binary-Hashed list searches.

Unit 2:

Lists: Linear List Concepts – Linked list Concepts - Definition representation, operations, implementation and applications – Types of linked List - singly, doubly and circular linked lists. Implementation of stack and queue using linked lists.

Unit 3:

Stacks and Queues: Stacks- Definition, representation, operations, static implementation and applications of stack.

Queues:Definition, representation, operations, static implementation and applications of queue, circular queue, priority queue.

Unit 4:

Trees: Basic tree Concepts –Binary Trees- Binary Tree Traversals-DFS, BFS –Expression Trees - Binary search tree - AVL trees- B tree-B+ tree and their applications.

Unit 5:

 Sorting Concepts: General Sort Concepts- Insertion sort- Selection Sort – Exchange Sort –External Sort.

Graphs: Terminology –Operations – Graph Storage Structures – Graph Algorithms –Networks.

Text Books:

Data Structures- A Pseudocode Approach with C – Richard F. Gilberg and Behrouz A. Forouzon 2nd Edition

Reference books:

1. Data Structures Using C-A.M. Tanenbaum, Y.Langsam.
2. Seymous Lipshutz, Scharms Outlines Data Structures, Mc Graw Hill publishing.

IV SEMESTER			
C 8	**WEB DESIGNING LANGUAGES**		**15UITC41**
Hrs / Week : 5	**Hrs / Sem : 75**	**Hrs / Unit : 15**	**Credits : 4**

Unit I:

Introduction to HTML-History of HTML, HTML Document, Anchor Tag, Hyper Links. Head and body sections-Header section-Title, Prologue, Links, Colorful Web Page,Comment Lines. Designing body section-Heading printing, Aligning the headings,Horizontal rule, Paragraph, Tab Settings.

Unit II:

Lists, Unordered Lists, Ordered Lists, Table Handling. Frames: Frameset definition-Nested Framesets-Forms-Action Attribute-Drop Down list-Check Boxes-Radio Buttons-Text Field-Text Area-Password-Hidden-Submit and Reset Buttons.

Unit III:

XML Basics- Getting a Global Perspective- Reviewing XML Validating and Nonvalidating Parsers-Saying "Hello World" in XML-Chapter 4: Organizing XML Data-Creating Well-Formed XML- Adding Attributes- XML Namespaces- Working with DTD- Validating Your XML Documents- Defining DTD Entities-Working with Attributes- Adding Other Data.

Unit IV:

Adding Style:When to Use Style Sheets- CSS Basics- CSS: The Next Step-XSL Basics-XSL Transformations-XSL: Completing Your Application-Using Schemas-Introducing Schemas-Schema Elements, Types, and Groups-Defining Schema Attributes.

Unit V:

Using XML Query:Introducing XML Query-Xlinks-Using Xpointer-Resource Description Framework-XML in Action-XHTML-Manipulating XML with JavaScript-Collecting and Writing Data with CGI.

Text Books:

1. C.Xavier, World Wide Web Design with HTML, Tata McGraw-Hill Publishing.

2. Heather Williamson, "The Complete Reference in XML", First edition, Tata McGraw hill publication.

IV SEMESTER			
C 9	MODERN OPERATING SYSTEMS		15UITC42
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

Unit 1

   Introduction : Mainframe Systems- Desktop Systems- Multiprocessor System- Distributed Systems- Clustered Systems- Real Time Systems- Handheld Systems- Feature Migration- Computing Environments

Unit 2

   Process: Process Concept- Process Scheduling- Operations on Processes- Cooperating Process- Interprocess Communication- Communication in client Server Systems

Unit 3

   Process Synchronization: The Critical section problem- Synchronization Hardware- Semaphores- Classical problems of Synchronization- Critical Regions- Monitors- OS Synchronization- Atomic Transactions-Deadlocks

Unit 4

   Memory Management: Swapping- Contiguous Memory allocation- Paging- Segmentation- Segmentation with Paging

   Virtual Memory : Demand Paging- Process Creation- Page Replacement- Allocation of Frames- Thrashing

Unit 5

   File System Interface : File Concept- Access Methods- Directory Structure- File System Mounting- File Sharing- Protection.

   File System Implementation : File System Structure- File System Implementation- Directory Implementation- Allocation Methods- Free Space Management- Efficiency and performance- Recovery

 TEXT BOOK :

 1.   Operating System Concepts- Silberschatz and Peter B. Galvin Addison Wesle Publishers Sixth Edition.

REFERENCE BOOKS :

1. Operating Systems - Milan Milenkovic- Tata Mcgraw – Hill Publishing Edition – Second Edition.
2. Systems Programming And Operating Systems - Dhamdhere- Tata Mcgraw – Hill Edition.

Unit I

      Introduction - Uses of computer networks : business applications-home applications-mobile users- **Network Hardware:**LAN-MAN-WAN-wireless networks- **Network Software:** protocol hierarchies- Design Issues for the Layers - Connection oriented and connection less services- **Reference model :** OSI reference model – TCP/IP Reference Model

Unit II

      The Physical Layer - Guided Transmission media: Magnetic Media-Twisted Pair-Coaxial Cable-Fiber Optics. **Wireless Transmission:** The Electromagnetic Spectrum – Radio Transmission. **Communication Satellites:** Geostationary Satellites. **The Public Switched Telephone Network:** Switching. **The Mobile Telephone System:** First Generation Mobile Phones (Analog Voice) – Second Generation Mobile Phones (Digital Voice).

Unit III

      The Data Link Layer - Data Link Layer Design Issues : Services Provided to the Network Layer – Framing – Error Control – Flow Control. **Sliding Window Protocols :** A One-Bit Sliding Window Protocol – A Protocol Using Go Back N - **The Network Layer - Network layer design issues - Routing Algorithm:** Shortest path Routing- Flooding - Distance vector routing-Broad cast routing-Multi cast routing- **Quality of service:** Integrated services-Differentiated services-The **Network Layer in the Internet:** The IP Protocol- IP addresses-Mobile IP.

Unit IV

      The Transport Layer - The Transport services: Service provided to the upper layer-**Elements of Transport Protocols:** Addressing-Flow control and buffering -Multiplexing- **The Internet Transport protocols:** UDP:-Introduction-Remote procedure call- **TCP:**-Introduction-TCP Service model-TCP protocol- TCP Segment header-TCP Timer management-Wireless TCP & UDP-Transactional TCP.

Unit V:

      The Application Layer - Domain name system: DNS namespace- Name servers-**Electronic Mail:** Architecture and services-User Agent-Message format and transfer-Final delivery-**The World Wide Web:** Architectural overview-Static and Dynamic Web documents-HTTP- TheWireless Web-**MultiMedia:** Introduction to digital audio-Audio compression- streaming audio-Introduction to video-video compression. **Network Security :** Cryptography - Communication Security.

TEXTBOOK:

Computer Networks- Fourth Edition: Andrew S. Tanenbaum, Prentice Hall of India Pvt Ltd. 2005.

REFERENCE BOOK :

Computer Networks – Fundamentals and applications – R.S . Rajesh and R. Balasubramanian, K.S Easwarakumar, Vikas Publications, New Delhi

III & IV SEMESTER		
CPII	**CORE PRACTICAL**	**15UITC4P**
Hrs / Week :3	**Hrs / Sem : 45**	**Credits : 3**

OBJECT ORIENTED PROGRAMMING WITH JAVA

1. Program to find the sum of digits of a given number
2. Program to create String object and working with String function
3. Program to read N numbers in array and Find the largest and Smallest Numbers
4. Program using class and objects
5. Program to find area of rectangle, circle and squarer using method overloading
6. program using Multi_Level inheritance
7. Program to show how a class implements two interfaces.
8. Program to catch more than one exceptions.
9. Program to create user_defined exception.
10. Program using threads.
11. Program using Packages.
12. Program to copy a text file into another text file
13. Create an applet to draw different shapes.
14. Create an applet to move an object.
15. Create an applet to calculate simple interest

AND

WEB SERVICES PRACTICAL

1. Design a simple web page using HTML.
2. Design a web page in HTML using hidden fields.
3. Design a web page in HTML using frames.
4. Design a web page in HTML using list.
5. Design a web page in HTML using tables.
6. Design a web page in HTML using forms
7. Design a simple XML documents.
8. Design a web page in XML using CSS.
9. Design a web page in XML using XSLT.
10. Design a web page in XML using XPath.
11. Design a web page in XML using XLink.
12. Design a web page in XML using Internal DTD.
13. Design a web page in XML using External DTD.
14. Design XML page using Entities.
15. Design XML page using javascript.

V SEMESTER		
C 11	**GUI DESIGN WITH VB**	**15UITC51**
Hrs / Week : 6	**Hrs / Sem : 90** **Hrs / Unit : 18**	**Credits : 5**

UNIT I

Integrated Development Environment (IDE) And Forms: Introducing Visual BASIC – Learning the IDE Features – Working with Forms: The Anatomy of a Form – Working with Form Properties – Tweaking a Form's Properties – Introducing Form events – Introducing Form methods – Working with Multiple Document Interface (MDI) Forms.

UNIT II

Logic And Program Flow, Data Types: Understanding Logical operators – Making comparisons – Evaluating Conditions in code – Performing repetitive tasks. Introducing variables – Arrays – Constants.

UNIT III

Selecting And Using Controls: Introducing Controls – Command Buttons – Text Boxes – Labels – Option Button – Check Boxes – Frame Controls – List Boxes- Combo Boxes – Image objects – Picture objects Timers – Scroll Bars – Drive Lists – Directory List Boxes – file List Boxes.

UNIT IV

Modules, classes, Menus, And Tool Bars: Introducing Code Modules and Classes – Creating a code Library – Working with sub procedures – Working with Function procedures – Using Private and public sub procedures. Understanding the Menu Object – Creating a menu with the Menu.

UNIT V

Storing and Retrieving Data, Dialog Boxes: Working with ASCII Files – Data controls – Understanding the Anatomy of a database – Creating data bases with Visual Data Manager – Creating a Data base Table – Data Grid Control- Creating a Query – Modifying a table – DAO- RDO – ADO – Data reports.

TEXT BOOK:

   1. Visual BASIC 6 In Record Time – Steve Brown _ bpb Publication.

REFERENCE BOOK:

   1. Visual BASIC 6 – Paul Sheriff – PHI
   2. The Complete Reference Visual BASIC 6 – Nole Jerke – TATA McGRAW – HILL Edition

V SEMESTER		
C 12	SOFTWARE ENGINEERING	15UITC52
Hrs / Week : 5	Hrs / Sem : 75 Hrs / Unit : 15	Credits : 5

UNIT I

Introduction : What is Software Engineering – Software Process –software Process model – software engineering methods. CASE Computer Based System Engineering System properties – system environment – system modeling – system engineering process – system requirements – system design – system evolution – system decommissioning – system procurement. Software processes: Software Process models: Process iteratin - Software Specification – design and implementation – Software validation – Software Evolution – automated process support.

UNIT II

Project Management : Project Management :Management activities – Project Planning – Project Scheduling - Risk management. Software requirement : Functional and non-functional requirements – user Requirements – system requirements – Software requirements document. System Models – Context models – Behavioural models – data models – Object models – CASE workbenches.

UNIT III

Software Prototyping : Prototyping in the software process – Rapid prototyping techniques – user interface prototyping .Architectural Design **-** System structuring – Control models – Modular decomposition – domain specified architecture.

UNIT IV

Object oriented design: Object and object classes – An object oriented design process – design evolution. Real time software **-** System design – real-time executives – monitoring and control systems – data acquisition systems. User Interface design: User Interface design – User interaction – information presentation – user support – interface evaluation. Verification and Validation: Verification and Validation planning – Software inspections.

UNIT V

Automated static analysis – clean – room software development . Software testing: Defect testing – Integration testing – Object oriented testing – Testing workbenches. Software cost estimation: Productivity – Estimation techniques –   Algorithmic cost modeling – Project duration and staffing. Quality management: Quality assurance and standards – Quality planning – Quality control – Software measurement and metric.

TEXT BOOK : Software Engineering , IAN SOMMERVILLE , 6th Edition ,Pearson Education Asia   Chapters 1 to 5,7,8,10,11,12,13,14,15,19,20,23,24.

REFERENCE BOOK : Software Engineering Theory and Practices, Shari Lawrence Pfleeger, 2nd Edition, Pearson Education Asia.

V SEMESTER			
C 13	**MOBILE COMPUTING**		**15UITC53**
Hrs / Week : 5	**Hrs / Sem : 75**	**Hrs / Unit : 15**	**Credits : 5**

UNIT I   WIRELESS COMMUNICATION FUNDAMENTALS

Introduction – Wireless transmission – Frequencies for radio transmission – Signals – Antennas – Signal Propagation – Modes of propagation- line of sight transmission– Multiplexing – Modulations – Spread spectrum– TDMA – Cellular Wireless Networks.

UNIT II TELECOMMUNICATION NETWORKS

Telecommunication systems – GSM – GSM architecture-GPRS – DECT – Satellite Networks **-** Basics –Broadcast Systems – DAB - DVB.

UNIT III WIRLESS LAN

Wireless LAN – IEEE 802.11 - Architecture – services – MAC – Physical layer – IEEE 802.11a - HIPERLAN – Blue Tooth.

UNIT IV MOBILE NETWORK LAYER

Mobile IP – Tunneling and Encapsulation– Reverse Tunneling-Dynamic Host Configuration Protocol –Ad-hoc Networks- Routing – DSDV – DSR – Alternative Metrics.

UNIT V   TRANSPORT AND APPLICATION LAYERS

Traditional TCP – Congestion Control- Mobility- Indirect TCP-Snooping TCP-Mobile TCP-WAP-WAP Specification-Wireless Datagram, Transaction, Session Protocol .

TEXT BOOKS
1.   Jochen Schiller, "Mobile Communications", PHI/Pearson Education, Second Edition, 2003. (Unit I Chap 1,2 &3- Unit II chap 4,5 &6-Unit III Chap 7.Unit IV Chap 8- Unit V Chap 9&10.)

REFERENCES
1.   William Stallings, "Wireless Communications and Networks", PHI/Pearson Education, 2002. (Unit I Chapter – 7&10-Unit II Chap 9)
2.   Kaveh Pahlavan, Prasanth Krishnamoorthy, "Principles of Wireless Networks", PHI/Pearson Education, 2003.
3.   Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, "Principles of Mobile Computing", Springer, New York, 2003.

V SEMESTER			
CE 1 A		ORACLE	15UITE5A
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 6

UNIT I

Introduction to oracle server -data dictionary-table Space and data files -data blocks -extents and segments - Structure of Relational Databases – The Relational Algebra – The Extended Relational – Algebra operations – Modification of Database.

UNIT II

Data types –constraints-creating and maintaining tables –DDL –DML – arithmetic operators-logical operators-relational operators-other comparison operators.

UNIT III

Working with tables: function and grouping-built-in functions- character functions – numeric functions – data functions – other functions – conversion functions – nested function – group function-grouping data-having clause- Multiple tables: joins-set operations.

UNIT IV

Index – sequence – view – users – privileges and roles – synonyms.

UNIT V

PL/SQL: PL/SQL –control structures- triggers – stored procedures and functions – packages – cursors –Exception handling- transactions

TEXT BOOK :

1.   Database system using oracle – Nileshshah
     Chapter 4 to 7, 10 to 12 and 14.

REFERENCE BOOK :

1. Jose. A. Ramalho – Learn Oracle, B.P.B Publications.
2. Alex Leon, Database Management System

V SEMESTER		
CE 1B	C # PROGRAMMING	15UITE5B
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 6

UNIT I

Introduction to .NET Framework – Comparing C# to C++ - Comparing C# to Java – How to write a Program in C#

UNIT II

Variable Types: Value Types – Reference Types –Escape sequences and verbatim Strings – Boxing Pointers : Pointer Notation – unsafe code – Pointers, Methods and Arrays . Arrays : Single Dimension Arrays- Rectangular Arrays – Jagged Arrays

UNIT III

Enumerations – Operators – Overloading Operators – Loop Statements : while, do while, for, fore ach statements – Jump Statements – Selection Statements

UNIT IV

Classes and Types – Inheritance – abstract Classes and Interface – Nested Classes – Structs – Namespaces – Class Atributes – Class Modifiers – Method Attributes and Modifiers – Formal parameters – Passing parameters – Method Overloading –Polymorphism : Method overloading, Method overriding – Constants , fields, Indexes and properties

UNIT V

Delgate Declaration and Instantiation- Events – Exceptions – Preprocessor Directivies – C# Documentation Comments – Generating c# Documentation

TEXT BOOK :

1   Programming in c# - Balagurusamy E 2007 Mcgraw Hill Education Ltd.

VI SEMESTER		
C 14	COMPUTER GRAPHICS USING C	15UITC61
Hrs / Week : 6	Hrs / Sem : 90 Hrs / Unit : 18	Credits : 5

UNIT I:

Introduction to computer Graphics - Video display devices- Raster scan Systems - Random Scan Systems - Interactive input devices - Hard copy devices - Graphics software

UNIT-II

Output primitives - line drawing algorithms - initializing lines - line function - circle Generating algorithms-Ellispe-Generating algorithms.

UNIT- III

Two-dimensional Geometric Transformation: Basic transformation-Matrix Representations and Homogeneous coordinates-Composite Transformations-other Transformations.

UNIT-IV

Two - dimensional viewing - window- to view port co-ordinate transformation-Two dimensional Viewing functions-Clipping operations-point clipping-line clipping-polygen and curve clipping.

UNIT- V

Three - dimensional concepts - Three dimensional display methods - parallel Projection - Perspective Projection - Depth Cueing - Visible line and surface identification - Three dimensional transformations.

Text Book :

D.Hearn and M.P.Baker - Computer Graphics (C version) - Pearson Education.

Reference Book:

W.M. Newman and RF.Sproull - Principles of Interactive Computer Graphics - McGraw Hill International Edition - 1979.

VI SEMESTER		
C 15	MOBILE APPLICATION AND DEVELOPMENT	15UITC62
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT-I

Introduction to Android – What is Android – Advantages of Android – Preparing of Liftoff: Java – Eclipse – Android – SDK. – Android Development Environment: Installing Java, Eclipse and Android – updating the Android SDK: Setting up AVDs and Smart Phone Connections – Developing on 64 Bit Computing Platforms

UNIT-II

Introducing the Android Software Development Platform: Understanding Java SE and the Dalwik Virtual Machine – The directory Structure – Android XML and Android Application Resources – Launching Application: Android Manifest.XML – Creating your first Android Application – Android Frame work Overview – Foundation of OOPS – Overview of XML – The APK File – Android Application Components – Android Intent Objects – Android Manifest XML

UNIT-III

Screen Layouts Design: Views and Layouts – Android view Hierarchical – Defining Screen Layouts using XML – UI Design: Buttons, Menus, Dialogs – Using Common UI Elements – Using Menus in Android – Adding Dialogs

UNIT-IV

An Introduction to Graphic Resources in Android: Introducing the Drawables – Using Bitmap Images in Android – Creating Animation in Android – Using Transitions – Creating 9-Patch Customs Scalable Images – Playing Video in your Android Apps - Adding Interactivity: Handling UI events - An overview of UI events in Android – Handling Onclick events

UNIT-V

In understanding content providers: An overview of Android Content Providers – Defining a Content Providers – Working with a Database – Understanding Intents and Intent Filters – What is an Intent – Android Intent Messaging via Intent Objects – Intent Resolution: Implicit Intents and Explicit Intents – Using Intents with Activities – Android Services – The Future: Widgets – Location Basis Services in Android – Google Maps in Android – Google Search in Android – Data Storage in Android

TEXT BOOK :

Android Apps for Absolute Beginners 2nd Edition by Wallace Jackson, A press

REFERENCE BOOKS :

1. Professional Android Open Accessory Programming with Arduino by Andreas Goransson, David Cuartielles Ruiz
2. Enterprise Android Programming Android Database Application for the Enterprise by Zigurd Mednieks, G.Blake Meike, Laird Dornin, Zane Pan

VI SEMESTER		
C16	PROJECT	15UITP61
Hrs / Week : 5	Hrs / Sem : 90 Hrs./Unit:15	Credits : 5

OBJECTIVES :

At the end of the semester the students should be able to:

1. Identify the potential areas of interest in his/her field;

2. Collect data from various sources including the internet, analyse them, make new connections and link them to life;

3. Read and write originally and usefully.

GUIDELINES :

1. The project may be done individually or in groups **not exceeding five per group.**

2. The minimum length of the project should be 30 pages in A4 size.

3. The project may not be experimental oriented

4. Project should be cheap within the expense of students limit.

5. It can be of survey method.

6. Marks for the project report will be 100 divided as **60% for the presentation of project and 40% for viva-voce.**

Evaluation scheme:

The project will be evaluated by both Internal and External Examiners. Each Examiner will evaluate for 100 marks. The allocation of marks for project is as follows:

Project	Internal	External
Word of title	5	5
Objectives / Formulation including Hypothesis	5	5
Review of literature	10	10
Relevance of project to social needs	5	5
Methodology / Technique / Procedure adopted	20	20
Summary / Findings / Summation	5	5
Works cited / Annexure / Footnotes	10	10
Total	**60**	**60**

V & VI SEMESTERS		
CP III	CORE PRACTICAL III	15UITC6P1
Hrs / Week : 3	Hrs / Sem : 45	Credits : 3

VISUAL BASIC

1.Create a calculator that can add, subtract, multiply and divide two numbers given by the user.

2. Write a program to convert inches to centimetres OR centimetres to inches (using the conversion 1 inch = 2.54 centimetres).

3.Program to animate a Picture.

4.Program to create Menu.

5.Program to manipulate and formatting a text

6.Program to pick a color from color dialog box

7.Program to create a Stop watch using Timer Control

8.Program using String function

9.Program using Common Dialog Control

10.Program using Modules and Function.

11.Program to Save the content of list box in a file

12.Viewing Records using Database controls

13.Adding records to the database

14.Display the information in the report form.

15.View and edit data using Data Grid control.

V & VI SEMESTERS		
CP IV	CORE PRACTICAL IV	15UITC6P2
Hrs / Week : 3	Hrs / Sem : 45	Credits : 3

COMPUTER GRAPHICS USING C

1. Program to draw line using Bresenham's Algorithm
2. Program to draw circle using Bresenham's Algorithm
3. program to draw an object and fill it using various styles
4. program using any filling algorithm
5. program to use transformations
6. program to draw a natural scenery
7. program to animate an object
8. program to draw text in various styles
9. program to scroll a text
10. program to clip a line

VI SEMESTER		
CE 2 A	ASP .NET	15UITE6A
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 6

UNIT I

The .NET framework – The .NET programming framework – VB.NET , C#, and the NET language – the common language runtime – the .NET class library – ASP .NET – visual studio .NET

Learning the .NET language – Data types – declaring variables – scope and accessibility – variable operations – object based manipulation – conditional structures – loop structures – functions and subroutines

UNIT II

ASP .NET Applications – ASP .NET Applications – code behind the global ASP application file – understanding ASP .NET classes – ASP .NET configuration

Web form fundamentals – a simple page Applet – improving the currency converter – a deeper look at HTML control classes – the page class – assessing HTML server controls.

UNIT III

Web controls – stepping up to web controls – web control classes – auto post back and web control events – a simple web page applet – assessing web controls

Using visual studio .NET – the promise of Visual Studio .NET – starting a visual studio .NET project – the web form designer – writing code – visual studio .NET debugging – working without Visual Studio .NET

UNIT IV

State management – the problem of state – view state – transferring Information – custom cookies – session state – session state configuration – application state.

Tracing and logging – logging exceptions – error pages – page tracing

UNIT V

Component based programming – why use components – creating a simple component – properties and state – database components – a simple database component using COM components

TEXT BOOK :

1. The complete reference ASP .NET , Mathew Macdonald, TMH 2002

REFERENCE BOOK :

1.Microsoft ASP. NET Step by step , G. Andrew Duthie, PHI

VI SEMESTER		
CE 2B	PHP	15UITE6B
Hrs / Week : 5	Hrs / Sem : 75 Hrs / Unit : 15	Credits : 6

Unit – I

Introduction: PHP History – Unique Feature – Writing and running the script – Mixing PHP with HTML – Variables and operators: Assigning values to variable – Destroying and inspecting variable content – PHP Data Types - Manipulating variable with operators.

Unit – II

Controlling program flow: writing simple conditional statements – if – if else – if else if -Switch case Repeating action with loops: while – do while – for loops – String functions – Numeric function.

Unit – III

Working with Array: Storing data in Array – Assigning Array values – Nesting Arrays – for each loop – Array functions –Generating Date and Time – Format Date and Time – Date and Time functions.

Unit – IV

Functions: Creating and invoking function – using arguments and return values - Cookies: Basics – Attributes – Headers – setting , reading and removing cookies – Session: Basics – Creating and removing sessions – Handling scripting Errors.

Unit – V

Working with database and SQL: Database, records, primary and foreign key - SQL statements – Creating database – Adding Tables – Adding Records – Executing Queries – modifying and removing records – Retrieving Data – Returning data as array and object.

Text Book:

PHP A Beginner's Guide – Vikram Vaswani – Tata Mc Graw Hill .

V & VI SEMESTERS		
CEP A	CORE ELECTIVE PRACTICAL	15UITE6AP
Hrs / Week : 3	Hrs / Sem : 45	Credits :3

ORACLE PRACTICAL

1. Creating, modifying and dropping tables.
2. Creating tables with referential and check constraints.
3. Inserting, modifying, deleting rows.
4. Dropping, disabling / enabling constraints.
5. Retrieving rows with operators in where clause.
6. Retrieving rows with Character functions.
7. Retrieving rows with Number and Data functions.
8. Retrieving row with Group functions and HAVING.
9. Joining Tables (Inner and Outer)
10. Simple PL/SQL Programs.
11. PL/SQL programs with control structures.
12. PL/SQL programs with procedures
13. PL/SQL programs with Cursors.
14. PL/SQL programs with Exception Handling.
15. Working with Triggers
16. Creating a View

ASP.NET

1) A. Create a page in ASP.Net using VB.Net or C#, to choose a color from drop-down-list and display a message "you have chosen 'color name' " in same color that you choose. Also add a color toolbox on the form to add color to button.
B. Create a page in ASP.Net using VB.NET or C# that takes name and message from the user and choose a color by radio button, select a style for ex.-bold, italic, underline from the checkbox and display in label control, when you clicked on display button. And clear the information when you clicked on clear button
2) Create a page in ASP.Net using VB.NET or C# that take a student name from the user, add that name in list-box control. And delete the chosen name from the list-box.
3) Create a page in ASP.Net using VB.NET or C#, to calculate compound interest. Take a compound frequency from drop-down-list. For example-Annual value-1, quaterly value-4,monthly value-12, daily value-365.
Formula:Temp= (1+rate/period)
Result=Principal amount+ Pow (Temp,(year*period))
4) Create a page in ASP.Net using VB.NET or C#, for book sales. Enter the quantity, title and price of the book. Calculate the extended price, discount (15%) and after discount, the actual price of the book. Show the summery of book sales. (Like total no of books, total discount given, total discounted amount and average discount.) You will need command buttons- calculate, clear sale.
5) Create a page in ASP.Net using VB.Net or C#, using HTML Server controls that take user name, address, and city, state and country name from the user and display it.

6) Create a page in ASP.Net using VB.Net or C#, using HTML Server controls that convert given currency into another selected currency. For that you need a drop-down-list.

7) Create a page in ASP.Net using VB.NET or C#, which generate a greeting card and display a greeting message in selected font. For that you need a drop-down-list for font selection.

8) Create a page in ASP.Net using VB.NET or C# that take Name, Password, Email add. & age from the user. Put appropriate validation. Show the summary of invalid validation.

9) Create a page in ASP.Net using VB.NET or C# to create a custom validation control that check even number.

10) Create a page in ASP.Net using VB.NET or C# that displays registration form. Fields are First Name, Last Name, Email, Password, repass, Age (dd-mm-yyyy), Ph. No., address, city, with appropriate validation controls such as email validation, city to choose from combo box options.

11) Create a page in ASP.Net using VB.NET or C# that takes no. of rows and columns from the user and make a table using Grid Control.

12) Design a database component for Account maintenance. The component should handle the following functionality Adding and Updating Account.

13) Create a page in ASP.Net using VB.NET or C#, to add a list box control to a Web forms page through coding which prompts for adding or deleting Name of fruits through indexing. The listbox control properties should be user defined i.e. color, font etc. of the list box control.

C # PROGRAMMING PRACTICAL

1. Find Maximum of an Array.
2. Find Factorial of a number using recursion.
3. Write a program to generate Fibonacci series for a given number.
4. Create a class with your own attributes and with suitable constructor and method to display the details of a Television Set.
5. Write a C# Program to evaluate the following function values

$$f(x) = x^2 + \sin 2x \qquad \text{if} \quad x < 3$$

$$= 10.3 \qquad \text{if} \quad x = 3$$

$$= x^3 - \cos 3x \qquad \text{if} \quad x > 3$$

6. Write a program to check whether a given integer is a prime number.
7. Write a program to calculate the value of $Sin(x)$, $Cos(x)$ and e^x
8. Write a program to add, subtract and multiply two matrices.
9. Define a class with certain attributes. Write a C# program to throw user defined Exception.
10. Write a program to copy contents of a file to two different destinations using command line input.

PHP PRACTICAL

1. Write a PHP code using if else statement.
2. Write a PHP code using while loop.
3. Write a PHP code to print the multiplication table.
4. Write a PHP code using string and numeric functions.
5. Write a PHP code using numeric function.
6. Write a PHP code using array functions.
7. Design a HTML form using HTML Control and write a PHP code for displaying the employee's information.
8. Write a PHP code for Adding, Deleting, and Modifying records.
9. Write a PHP code using function.
10. Write a PHP code to add and retrieve an image into database through form.

I SEMESTER			
AI - 1	MS OFFICE		15UCSA11
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 4

UNIT I

Documentation Using MS-Word : Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark.

UNIT II

Advance MS-Word : Advance Features of MS-Word [Mail Merge, Macros], Tables, File Management, Printing, Styles, linking and embedding object, Template.

UNIT III

Electronic Spread Sheet using MS-Excel : Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts,

UNIT IV

Advance features of MS-Excel : Pivot table & Pivot Chart, Linking and Consolidation, Database Management using Excel- Sorting, Filtering, Table, Validation, Goal Seek, and Scenario, Macros

UNIT V

Presentation using MS-PowerPoint : Presentations, Creating, Manipulating & Enhancing Slides, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

TEXT BOOK :

Microsoft Office – Complete Reference – BPB Publication

REFERENCE BOOK :

Learn Microsoft Office – Russell A. Stultz – BPB Publication.

II SEMESTER			
A 2	**GRAPHICS AND ANIMATION TOOLS**		**15UCSA21**
Hrs / Week : 3	**Hrs / Sem : 45**	**Hrs / Unit : 9**	**Credits : 4**

UNIT I

How flash works – Uses of flash – What Flash can do – Animation – Interacting – Basic functions – Timeline – Stage – Toolbars – Menu bar – The inspectors – Viewing options – preferences.

UNIT II

Creating objects – Drawing toolbar – Various tools like line tool, oval tool etc – Editing objects – Grouping objects – Moving – Resizing Rotating – Skewing – Reshaping – Copy – Paste – Aligning colour and text – colour palette – Adding colours – Adding text – Formatting and Manipulating text.

UNIT III

Symbols and instances – Creating and Editing symbols – Bitmaps and sounds – Frames land layers – Animation – Elements of Animation – Scenes – Frame by Frame Animation

UNIT IV

Motion Tweening – Motion guides – Motion guide Orientation – Shape tweening – Animating text – Movie clips - Interacting – Types – Frame Actions – Adding stop and play actions.

UNIT V

Adding go to actions Button symbols – Adding actions to buttons – Adding movie clips and sounds

TEXT BOOK :

Flash 8 – Shalini Gupta and Adity Gupta

REFERENCE BOOK

Macromedia Flash MX: Training from the source by Chrissy Rey

	I & II SEMESTERS	
AI-P	**ALLIED I PRACTICAL**	**15UCSA2P**
Hrs / Week : 3	**Hrs / Sem : 45**	**Credit : 2**

MS OFFICE PRACTICAL

MS WORD 2007

1. Typing letters and editing and printing.
2. Using Spell Check and Thesaurus.
3. Designing a cover page with word art.
4. Using Header, Footer Bookmark, Foot notes.
5. Mail merge a letter to an address file.
6. Typing 5 pages of Mathematical equations and symbols.

POWER POINT 2007

1. Creation of presentation with different styles on a given topic of current interest.
2. Preparing Presentation for a topic in the study of all course.

EXCEL 2007

1. Entering spread sheets with formula
2. Entering spreadsheet and doing statistical calculations
3. Printing Of Graphs and charts for the given data.
4. Creating and using macros.

(AND)

GRAPHICS AND ANIMATION TOOLS PRACTICAL

1. Make an object move across the screen.
2. Draw a path an object should follow.
3. Change the color of an object.
4. Using Shape Tweening you can change one object into another.
5. Create your own button and add a URL to it so it becomes a link.
6. Create a draggable movie clip in Flash
7. Animate an object
8. Play sound Play a video file

III SEMESTER		
AII 1	**DESK TOP PUBLISHING**	**15UCSA31**
Hrs / Week : 3	**Hrs / Sem : 45** **Hrs / Unit : 9**	**Credits :4**

UNIT I – INTRODUCTION

Introduction to Page Maker - layout window – Document setup – Basic PageMaker function: Open, new, close, print, save and save us – Working with text text tool, TEXT Block – Editing text – Formatting a Text Character formatting, paragraph formatting and style creation and Color creation

UNIT II – Working With Graphics

Graphics Tool, Masking, Rotation, Flipping, Cropping, positioning and scaling, Fill option. Arrange the object, Grouping, locking, Frame concept polygon setting and Text wrap properties Master pages: Header and Footer and Template files – Story editor: Find & Replace. Spell Checker – Book Creation – TOC Creation   - Index Creation both page reference and cross reference – Table editor: Create Tables using Adobe Table, Import tables into Page maker

UNIT III - Corel Draw 8.0

Introduction to CorelDraw – features and advantages – Layout window – Basic Corel Draw functions: open, new, close, print , save and save as. Basic Tools: Rectangle, Ellipse, Text, Freehand drawing, Outline, fill and shape – Creating and manipulating text: Artistic Text, Artistic Tool and paragraph text - Text based Roll – ups: Enveloping., Extruding, Text and fit text to path.

UNIT IV – Object Manipulation

Fill, Outline, Group, ungroup weld, combine, breaking apart, Separate, Intersection. Trim, Align and ordering – Effects: transforming object, Shaping object - Graphic based Roll – ups: Pen, Blend, Contour, symbol, Preset, Layer and Power clip option - Template creation Creating New: Arrow, Pattern, symbol and style

UNIT V – Photoshop 5.5

Introduction to Photoshop - Layout- basic functions – painting tools- Text tools – Zoom tool, hand tool, selection tools: Move and Sponge tools – vignettes and edge effects-working with images-resizing & cropping images-working with basic selections-layers.

TEXT BOOK :

1. Mastering Page Maker6 for windows 95-by Rebecca Bridges Altman & Rick Altman Chapter: 1-7,8(Text Blocks)10-11,13-15.
2. Corel Draw 8: The Official Guide by foster Coburn & Peter McCormick 3-8, 11, 13, 15-16, 18-22, 33, 37.
3. Photoshop 4 Studio skills by steven Moniz.

IV SEMESTER		
AII 2	UNIX AND SHELL PROGRAMMING	15UCSA41
Hrs / Week : 3	Hrs / Sem : 45 Hrs / Unit : 9	Credits : 4

UNIT I

History of Unix – Architecture of Unix – File system – Simple commands – Creating files – Redirecting input – Indirection with input output and pipelines – Appending output to your files.

UNIT II

Personalized Unix – Changing Password – Login Profiles – Own login profile – Permissions – Changing owner, groups and permission – Multitasking – UNIX images & processes – background process – Killing process – Process status command – Multi line commands – Sleep – Scheduling Process.

UNIT III

Vi editor – Creating Text – Editing text – EX command mode – Shell within Vi – Printing and spooling – Simple formatting with pr.

UNIT IV

Sort – Head – Tail – Split – Cut – Paste – Find – tr – dd – grep family – fgrep – egrep – Sed – awk.

UNIT V

Shell Programming – Shell Scripting Steps Simple Shell Program – Shell and sub shell variables – Setting and unsetting variables – Positional parameters – meta characters – Loops – test – read – error handling – system administration.

TEXT BOOK :

1. UNIX Complete   by   Peter Dyson, Stan Kelly – Bootle and John Heilbern.

REFERENCE BOOK

1. UNIX CONCEPTS AND APPLICATIONS" Fourth Edition by Sumitabha Das, Tata MeGraw Hill Publications.

1.

III & IV SEMESTERS		
AII P	ALLIED II PRACTICAL	15UCSA4P
Hrs / Week : 3	Hrs / Sem : 45	Credit : 2

DTP PRACTICAL

PAGE MAKER

1. Preparing simple document with formatting.
2. Document preparation with types of Equations.
3. Creating and Using new colors and styles (user defined)
4. Prepare document with column layout.
5. Applying word wrap options.
6. Design an invitation model.
7. Applying utility menu plugins.
8. Creating TOC .
9. Creating index.
10. Prepare document with tables.

COREL DRAW

11. Document with print merging.
12. Draw a simple pictures.
13. Applying roll ups: Envelop, Extrude, Contour, Blend.
14. Creating and Adding new symbols, patterns arrows.
15. Designing a visiting card.
16. Combining text and graphic object.
17. Text manipulation with column layout.
18. Design a Scenery (Natural, Sunset)
19. Design a Fish Tank with fishes using Artistic Tool.

PHOTO SHOP

20. Drawing Pictures.
21. Using filter tools.
22. Design a cover page for a book.

UNIX AND SHELL PROGRAMMING PRACTICAL

1. Program for finding factorial
2. Program for generating Multiplication Table.
3. Finding Simple Interest.
4. Leap year checking .
5. Counting No, words, lines, characters.
6. Fibonacci Series.
7. Over time pay calculation.
8. Checking file access permission.
   a. File Comparison.
   b. Listing contents of directory
   c. Checking Validity of user.
   d. Implementing copy, move commend.
   e. Counting number of lines before and after updating the file.
   f. Removing directory.
   g. Granting and revoking permissions for user, and others.
9. Sorting using GREP
10. Students mark List

III SEMESTER

SBE 1	MANAGEMENT INFORMATION SYSTEM	15UITS31

Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Foundation concept : Information systems and technologies – Business Applications – Development and Management

UNIT II

Information technologies : Managing data sources – Technical foundations of Database Management .

UNIT III

Business applications : Functional Business Systems – Cross functional enterprise systems – Decision support in business

UNIT IV

Development process : Planning fundamentals – Implementation Challenges – Developing Business Systems – Implementing Business Systems

UNIT V

Management challenges : Managing Information Technology – Managing Global IT - Real world case studies

TEXTBOOK :

1.**"**Management Information System" Sixth edition, James A.O.Brien, TMH Chapters 1,2,3,4,5,8,9,10,12,Appendix A-1

REFERENCE BOOK :

1."Management Information System ", Laudon & Laudon, Nineth Edition, PHI

IV SEMESTER			
SBE 2	INTERNET SECURITY		15UITS41
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits :2

Unit I: Introduction

Security trends – The OSI Security Architecture – Security Attacks: Passive Attacks – Active Attacks- Security Services –security Mechanism.

Unit II : Malicious Software

Viruses and Related threats: Worms - Types of Worms – Backdoor – Logic bomb – Trojan Horses – Virus Structure – Types of Viruses – Virus Counter measures – Denial of Service Attack - Intruders

Unit III : Firewalls

Firewall Design Principles.-Types of Firewalls:Packet Filters-Application-Level Filtering., Circuit_Level Gateways - trusted System – Common Criteria for Information Technology Security Evaluation.

Unit IV : Web Security

Web Security Consideration: Web Security Threats – Web Traffic Security Approaches – SSL: SSL Architecture- TLS - SET:SET Overview – Features of SET – SET Participants –Basic Concepts of SNMP

Unit V: IP Security

IP Security Overview – Applications of IPSec – Benefits of IPSec – IP security Architecture – IPSec Services –Role of an Internet Protocol – Ipv4 – Ipv6.

TextBook:

Network Security Essentials Application and Standards : third edition Author : William Stallings, Pearson Education.

Unit I :Chapter 1; Unit II : Chapter 9,10 ; Unit III : Chapter 11 ; Unit IV: chapter 7,8 ; Unit V : 6

Reference Book:

Firewalls and Internet Security: Repelling the Wily Hacker , Second Edition Addison. Wessly

III SEMESTER			
NME 1	INTRODUCTION TO COMPUTERS		15UITN31
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Computers an Overview: Introduction to computers – Five Generations of modern computers- Classification of Digital computer Systems.- **Inside the computer:** Anatomy of digital computer – Computer Architecture.

UNIT II

Number system & Boolean Algebra: Number system – Boolean algebra and logic circuits. **Memory:** Memory units – Auxiliary Storage Devices Primary.

UNIT III

Input / Output: Input devices - Output Devices – **Computer Software & Software Development:** Introduction to computer software - Operating systems - Programming languages.

UNIT IV

Data processing and Networking: Data processing – Computer networks – Distributed data processing. **Telecommunications:** Introduction to Telecommunications. **Security:** Introduction to computer security – Cryptography - Computer Viruses, Bombs and worms.

UNIT V

Internet and Intranet: Internet and world wide web – Introduction to Intranets. **Multimedia and virtual reality:** Introduction to Multimedia - Multimedia tools - Introduction to virtual reality.

TEXT BOOK :

Alexis Leon and Mathews Leon. "Introduction to Computers" VIKAS publishing house Pvt Ltd, 1999.

IV SEMESTER		
NME 2	MS-OFFICE	15UITN41
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9 Credits : 2

UNIT I

Documentation Using MS-Word : Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark.

UNIT II

Advance MS-Word : Advance Features of MS-Word [Mail Merge, Macros], Tables, File Management, Printing, Styles, linking and embedding object, Template.

UNIT III

Electronic Spread Sheet using MS-Excel : Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts,

UNIT IV

Advance features of MS-Excel : Pivot table & Pivot Chart, Linking and Consolidation, Database Management using Excel- Sorting, Filtering, Table, Validation, Goal Seek, and Scenario.

UNIT V

Presentation using MS-PowerPoint : Presentations, Creating, Manipulating & Enhancing Slides, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

TEXT BOOK :

Microsoft Office – Complete Reference – BPB Publication

REFERENCE BOOK :

Learn Microsoft Office – Russell A. Stultz – BPB Publication.

	PART IV – NON-MAJOR ELECTIVE (UNAIDED COURSES) (2015 – 2018)						
SEM	**TITLE OF THE PAPER**	**S.CODE**	**H/W**	**C**	**MARKS**		
					I	**E**	**T**
	DEPT. OF ENGLISH						
III	*Computer Assisted Language Learning: Reading & Writing*	*15UENN31*	*3*	*2*	*25*	*75*	*100*
IV	*Computer Assisted Language Learning: Listening & Speaking*	*15UENN41*	*3*	*2*	*25*	*75*	*100*
	DEPT. OF ISLAMIC STUDIES						
III	*Arabic for Beginners*	*15UISN31*	*3*	*2*	*25*	*75*	*100*
IV	*Fundamentals of Arabic Grammar*	*15UISN41*	*3*	*2*	*25*	*75*	*100*
	DEPT. OF COMMERCE						
III	*Principles of Commerce*	*15UCON31*	*3*	*2*	*25*	*75*	*100*
IV	*Basics in Accounting**	*15UCON41*	*3*	*2*	*25*	*75*	*100*
	DEPT. OF COMMERCE (CA)						
III	*Development of Small Business*	*15UCCN31*	*3*	*2*	*25*	*75*	*100*
IV	*Basics in Accounting**	*15UCCN41*	*3*	*2*	*25*	*75*	*100*
	DEPT. OF COMMERCE (FINANCE)						
III	*Investment Management*	*15UCFN31*	*3*	*2*	*25*	*75*	*100*
IV	*Advertising*	*15UCFN41*	*3*	*2*	*25*	*75*	*100*
	DEPT. OF BUSINESS ADMINISTRATION						
III	*Basic in Management*	*15UBAN31*	*3*	*2*	*25*	*75*	*100*
IV	*Retail Management*	*15UBAN41*	*3*	*2*	*25*	*75*	*100*

	DEPT. OF COMPUTER SCIENCE						
III	Office Automation	15UCSN31	3	2	25	75	100
IV	Desktop Publishing	15UCSN41	3	2	25	75	100
	DEPT. OF COMPUTER APPLICATION						
III	Internet & HTML	15UCAN31	3	2	25	75	100
IV	Desktop Publishing	15UCAN41	3	2	25	75	100
	DEPT. OF INFORMATION TECHNOLOGY						
III	Introduction to Computers	15UITN31	3	2	25	75	100
IV	MS Office	15UITN41	3	2	25	75	100
	DEPT. OF MATHEMATICS						
III	Mathematics for Competitive Examinations – I	15UMAN31	3	2	25	75	100
IV	Mathematics for Competitive Examinations – II	15UMAN41	3	2	25	75	100
	DEPT. OF MICROBIOLOGY						
III	General Microbiology	15UMBN31	3	2	25	75	100
IV	Biotechnology	15UMBN41	3	2	25	75	100
	DEPT. OF NUTRITION AND DIETETICS						
III	Introduction to Bakery	15UNDN31	3	2	25	75	100
IV	Biotechnology	15UMDN41	3	2	25	75	100

* Common to Department of Commerce and Department of Commerce (CA)
** Common to Department of Computer Science and Department of Computer Application.

I SEMESTER		
EVS	**ENVIRONMENTAL STUDIES**	**15UEVS11**
Hrs/ Week: 2	**Hrs/ Sem: 30** **Hrs/ UNIT: 6**	**Credits: 1**

UNIT - I: Nature of Environmental Studies

Goals, Objectives and guiding principles of environmental studies. Towards sustainable development - Environmental segments– Atmosphere, Hydrosphere, Lithosphere, Biosphere – definition. Pollution episodes –– Hiroshima – Nagasaki, - Bhopal gas Tragedy, Fukishma – Stone leprosy in Taj Mahal

UNIT - II: Natural Resources

Renewable and Non Renewable resources - classification.

➢ Forest resources: Use and over - exploitation, Aforrestation and deforestation.

➢ Water resources: Use and over - utilization and conservation of surface and ground water - Rain harvesting.

➢ Marine Resources: Fisheries and Coral reefs.

➢ Mineral resources: Use and exploitation - environmental impacts of extracting and using mineral resources.

➢ Food resources: Effects of modern agriculture fertilizers - pesticide problem.

➢ Energy resources: Growing energy needs - use of alternate energy source - Solar cells & wind mills.

➢ Land resources: Land degradation

UNIT - III: Ecosystem

➢ Concept of Eco-systems - Tropic level, food chains, food web and Ecological pyramids. Types, structure & Functions of the following:
  a) Aquatic ecosystem
  b) Grassland ecosystem
  c) Forest ecosystem
  d) Desert ecosystem
  e) Living conditions on other planets (Briefly)

UNIT - IV: Biodiversity & Its Conservation

Introduction - Definition: eco system diversity, species and Genetic Hot spots of biodiversity - Western Ghats, Eastern Himalayas and Gulf of Mannar. Threats to biodiversity - Habitual Loss, Poaching of wild life and Man - wild life conflicts.

Conversation of biodiversity: Insitu and ex-insitu.

UNIT - V: Environmental Pollution

Sources, effects, prevention and control measures of the following.

a) Air pollution: Composition of clean air, Global warming, Ozone layer depletion.

b) Water Pollution: Fresh and Marine water pollution

c) Noise Pollution

d) Soil pollution

e) Bio degradable and Non Bio degradable wastes

> ➢ Air (prevention & Control of Pollution) Act.
> ➢ Environmental Protection Act
> ➢ Water (Prevention & Control of pollution) Act
> ➢ Environmental movements - Green peace and Chipco,
> ➢ Role of State & Central pollution Control Boards.

REFERENCE BOOKS:

1. Basic of Environmental Science. Viyajalakhmi, Murugesan and Sukumaran - Manonmaniam Sundaranar University publications.

2. Environmental Studies. John de Brito, Victor, Narayanan and Patric Raja - published by St. Xavier's College, Palayamkottai.

3. Environmental Science and Biotechnology. A.G. Murugesan and C. Raja Kumar - MJP Publishers.

4. Fundamental of Environmental pollution - Krishnan Kannan - Chand & Company Ltd., New Delhi 1997.

5. Environmental Studies. S. Muthiah, Ramalakshmi publications, Tirunelveli.

6. Environmental Studies. V.M. Selvaraj, Bavani Publications, Tirunelveli.

II SEMESTER			
VE1	**VALUE EDUCATION – I**		**15USVE2A**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Hrs/ Unit: 6**	**Credits: 1**

Objectives:
1. To inculcate moral values in the minds of students.
2. To teach ethical practices to be adopted by students in their life.
3. To make students honest and upright in their life.

UNIT I

Islam – Meaning – Importance – A complete Religion – The religion accepted by God – Five Pillars of Islam – Kalima – Prayers – Fasting – Zakat – Haj.

Iman – Monotheism – Angels – Books – Prophets – Dooms Day – Life after death – Heaven and Hell.

UNIT II

Quran – The Book of Allah – Wahi – Revelation to Prophet Muhammad(sal) – Compilation – Preservance – Structure – Content – Purpose – Source of Islamic Law– Sura Fathiha , Kafirun, Iqlas, Falakh and Nas.

UNIT III

Hadith – Siha Sitha – Buhari – Muslim – Tirmithi – Abu Dawood – Nasai – Ibn Maja – Collection of Hadith – Meaning of 40 Hadith.

UNIT IV

Life History of Prophet Muhammad (sal) – Aiamul Jahiliya – Prophet's Childhood and Marriage – Prophethood – Life at Mecca – Life at Medinah – Farewell Address – Seal of Prophethood.

UNIT V

Good character – Etiquettes – Halal and Haram – Duties towards Allah – Duties towards fellow beings – Masnoon Duas.

REFERENCE BOOKS:
1. V.A. Moahmed Ashrof – Islamic Dimensions – Reflection and Review on Quranic Themes.
2. The Presidency of Islamic Researchers – Revised & Edited – The Holy Quran.
3. M. Manzoor Nomani – Islamic Faith & Practice.
4. Abdul Hasan Ali Nadvi – Muhammad Rasulullah.
5. K. Ali – A Study of Islamic History.
6. Abdul Rahuman Abdullah – Islamic Dress code for Women.
7. Dr. Munir Ahamed Mughal – Code For Believers.
8. Abdul Malik Mujahid – Gems and Jewels.

II SEMESTER		
VE2	**VALUE EDUCATION – II**	**15USVE2B**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Hrs/ Unit: 6** **Credits: 1**

UNIT I

Individual Morality – Objective of Moral life – Living in accordance with the code of Morality – the goodness of Morality – Morality and *Thirukural*- The need for faith.

UNIT II

Adherence to higher code of Morality – Fear of God – Good Moral Values – Duty to Parents – Teacher, respecting elders – Moral Etiquettes – Right-minded Principle – High Principles for Proper conduct.

UNIT III

Inculcating good attitudes – Open mindedness – Morale – analysing the pros and cons of good and bad – Service to others – Mind Power, tolerance, respecting others, showing love to others, patience – tranquility – Modesty, kindness and forgiveness.

UNIT IV

Quotations and moral Stories expressing Good characters of Great personalities – Life History of Great people: Mahatma Gandhi, Abraham Lincoln, Dr. A.P.J. Abdul Kalam.

UNIT V

Truth, the importance of uprightness, integrity, friendship – Health awareness on Alcohol and drug abuse – inculcating reading habit – reading good books – Hygiene – Dowry – Corruption.

TEXTBOOK:

Publication of Sadakathullah Appa College.

The medium of instruction in all UG and PG courses is English and students shall write the CIA Tests and Semester Examinations in English. However, if the examinations were written in Tamil, the answer papers will be valued.

DISTRIBUTION OF MARKS FOR CIA AND SEMESTER EXAMINATIONS

UNDERGRADUATE, CERTIFICATE & DIPLOMA COURSES

SUBJECT	TOTAL MARKS	CIA TEST	SEMESTER EXAMINATION	PASSING MINIMUM		
				CIA TEST	SEM. EXAM.	OVER ALL
Theory	100	25	75	Nil	30	40
Practical	100	40	60	Nil	24	40
Project	100	Nil	Report - 60 marks Viva Voce - 40 marks	Nil	40	40

POSTGRADUATE COURSES

SUBJECT	TOTAL MARKS	CIA TEST	SEMESTER EXAMINATION	PASSING MINIMUM		
				CIA EXAM.	SEM. EXAM.	OVER ALL
Theory	100	25	75	nil	38	50
Practical	100	40	60	nil	30	50
Project	100	nil	Report - 60 marks Viva Voce - 40 marks	nil	50	50

DIVISION OF MARKS FOR CIA TEST

SUBJECT	MARKS	ASSIGNMENT FOR UG / ASSIGNMENT OR SEMINAR FOR PG	REGULARITY	RECORD NOTE	TOTAL MARKS
Theory	20	5	--	--	**25**
Practical	30	--	5	5	**40**

1. The duration of each CIA Test is ONE hour and the Semester Examination is THREE hours.

2. Three CIA tests of 20 marks each will be conducted and the average marks of the best two tests out of the three tests will be taken.

3. The I test will be based on the first 1.5 units of the syllabus, the II test will be based on the next 1.5 units of the syllabus and the III test will be based on the next 1.5 units of the syllabus.

4. Two assignments for Undergraduate, Certificate, Diploma and Advanced Diploma Courses and two assignments OR two seminars for Postgraduate Courses.

5. The duration and the pattern of question paper for practical examination may be decided by the respective Boards of Studies. However, out of 60 marks in the semester practical examination, 10 marks may be allotted for record and 50 marks for practical.

6. Three internal practical tests of 25 marks each will be conducted for science students in the even semester and the best two out of the three will be taken. The total 50 marks of the best two tests will be converted to 30 by using the following formula:

$$\left(\begin{array}{c} \text{Marks secured in the first best Practical Test (Out of 25)} \\ + \\ \text{Marks secured in the next best Practical Test (out of 25)} \end{array} \right) \times 0.6$$

7. The Heads of Science Departments are requested to keep a record of attendance of practicals for students to assign marks for regularity.

QUESTION PAPER PATTERN FOR CIA TEST (THEORY)

Duration: 1 Hr   **Maximum Marks: 20**

Section	Question Type	No. of Questions & Marks	Marks
A	No Choice Answer should not exceed 75 words	2 Questions 2 marks each	2 x 2 = 4
B	Internal choice (Either or type) Answer should not exceed 200 words	2 Questions 4 marks each	2 x 4 = 8
C	Open Choice (Answer ANY ONE out of Two) Answer should not exceed 400 words	1 Question 8 marks	1 x 8 = 8
		TOTAL	**20 MARKS**

QUESTION PAPER PATTERN FOR SEMESTER EXAMINATION (THEORY)

Duration: 3 Hrs   **Maximum Marks: 75**

Section	Question Type	No. of Questions & Marks	Marks
A	No Choice Answer should not exceed 75 words	10 Questions - 2 marks each (2 Questions from each unit)	10 x 2 = 20
B	Internal choice (Either or type) Answer should not exceed 200 words	5 Questions with internal choice. Each carries 5 marks (Two questions from each unit)	5 x 5 = 25
C	Open Choice (Answer ANY THREE out of FIVE) Answer should not exceed 400 words	3 Questions out of 5 - 10 marks each (1 Question from each unit)	3 x 10 = 30
		TOTAL	**75 MARKS**