Sadakathullah Appa College

(Autonomous)

(Reaccredited by NAAC at an 'A' Grade and ISO 9001:2015 Certified Institution)

Rahmath Nagar, Tirunelveli – 627 011, Tamil Nadu.

DEPARTMENT OF COMPUTER APPLICATION

CBCS SYLLABUS

For

B.C.A.

(Applicable for students admitted in June 2019 and onwards)
(As per the Resolutions of the Academic Council Meetings held on 03-03-2018, 17-10-2018 and 02-03-2019).

CONTENTS

B.C.A (2018– 2021)
(Applicable for students admitted in June 2019 onwards)

DISTRIBUTION OF CREDITS, NO. OF PAPERS & MARKS

Part	Course	Semester	Hours	Credits	Papers	Marks
I	Tamil / Arabic	I to IV	12	8	2	200
II	English	I to IV	12	8	3	200
III	Discipline Specific Core (DSC) + Project + Practicals	I to VI	90	76	22	2100
	Discipline Specific Elective (DSE + Practical)	III to VI	28	22	8	700
	Allied Theory + Practicals	I to IV	24	16	8	600
IV	Non-major Elective (NME)	III & IV	4	4	2	200
	Skill Enhancement Course (SEC)	V & VI	4	4	2	200
	Skill Based Common (SBC)	VI	2	2	1	100
	Ability Enhancement Compulsory Course (AECC) Environmental Studies (EVS)	I	2	2	1	100
	Value Education (VE)	II	2	2	1	100
V	Extension Activities	I to IV+	--	1+1*	1	100
	MOOC[$]	I – V	-	2#		
		TOTAL	**180**	**145+1*+2#**	**51**	**4600**

SEMESTER WISE DISTRIBUTION OF HOURS

Part	I	II	III				IV				Total
SEM	**T/A**	**ENG**	**DSC**	**PRO/ FW**	**DSE**	**AL**	**NME**	**SEC**	**SBC**	**EVS/VE**	
I	6	6	10	-	-	6	-	-	-	2	**30**
II	6	6	10	-	-	6	-	-	-	2	**30**
III			16	-	6	6	2	-	-	-	**30**
IV			16	-	6	6	2	-	-	-	**30**
V	-	-	20	-	8	-	-	2	-	-	**30**
VI	-	-	12	6	8	-	-	2	2	-	**30**
Total	**12**	**12**	**84**	**6**	**28**	**24**	**4**	**4**	**2**	**4**	**180**

+ Activities and evaluation are to be performed during Semesters I to IV and results to be declared at the end of the Semester IV along with those for other courses in the Mark Statement.

* Extra credit for Sadakath Outreach Programme (SOP)

[$] As per the guidelines of the UGC all the UG and the PG students shall enroll for one Massive Open Online Course offered through SWAYAM, NPTEL, etc.

Two extra credits will be given on completion of the course.

B.C.A (2018-2021) CBCS Syllabus
(Applicable for students admitted in June 2019 onwards)
TITLE OF THE PAPERS, CREDITS & MARKS

P	SUB	Title of the paper	S. CODE	H/W	C	MARKS		
						I	E	T
I SEMESTER								
I	TA 1	இக்காலத் தமிழ்	18ULTA11	6	4	25	75	100
	AR 1	Applied Grammar and Translation – I	18ULAR11					
II	EN 1	Prose, Poetry and Grammar – I	18ULEN11	4	2	25	75	100/2
		English for Communication	18ULEC11	2	2	25	75	100/2
III	DSC1	Principles of Programming in C	18UCCA11	4	4	25	75	100
	DSC2	Fundamentals of Computer	18UCCA12	4	4	25	75	100
	AI-1	Office Automation	18UACA11	4	3	25	75	100
	DSCP-1	Principles of Programming in C Practicals	18UCCA1P1	2	1	40	60	100/2
	AI-P-1	Office Automation Practicals	18UACA1P1	2	1	40	60	100/2
IV	EVS	Environmental Studies	18UENS11	2	2	25	75	100
			TOTAL	**30**	**23**			**700**
II SEMESTER								
I	TA 2	சமயத் தமிழ்	18ULTA21	6	4	25	75	100
	AR 2	Applied Grammar and Translation – II	18ULAR21					
II	EN 2	Prose, Poetry and Grammar – II	18ULEN21	6	4	25	75	100
III	DSC3	C++ Programming	18UCCA21	4	4	25	75	100
	DSC4	Digital Electronics & Principles	18UCCA22	4	4	25	75	100
	AI-2	Multimedia Tools	18UACA21	4	3	25	75	100
	DSCP-2	C++ Programming -Practicals	18UCCA2P1	2	1	40	60	100/2
	AI-P-2	Multimedia Tools -Practicals	18UACA2P1	2	1	40	60	100/2
IV	VE	Value Education – I	18USVE2A	2	2	25	75	100
		Value Education – II	18USVE2B					
			TOTAL	**30**	**23**			**700**
III SEMESTER								
III	DSC5	JAVA Programming	18UCCA31	4	4	25	75	100
	DSC6	Data Structures	18UCCA32	4	4	25	75	100
	DSC7	Software Engineering	18UCCA33	4	4	25	75	100
	DSE-1	A) XML Programming	18UECA3A	4	4	25	75	100
		B) Desktop Publishing	18UECA3B					
	AII-1	GUI Programming	18UACA31	4	3	25	75	100
	DSCP-3	Java Programming Practicals	18UCCA3P1	4	2	40	60	100
	DSEP-II	XML Programming Practicals	18UECA3PA	2	1	40	60	100/2
		Desktop Publishing Practicals	18UECA3PB					
	AII-P-1	GUI Programming Practicals	18UACA3P1	2	1	40	60	100/2
IV	NME-I	Introduction to Photo Editing	18UNCA31	2	2	25	75	100
			TOTAL	**30**	**25**			**800**

B.C.A (2018-2021) CBCS Syllabus
(Applicable for students admitted in June 2019 onwards)
TITLE OF THE PAPERS, CREDITS & MARKS

P	SUB	Title of the paper	S. CODE	H/W	C	MARKS		
						I	E	T
IV SEMESTER								
III	DSC8	ASP. NET	18UCCA41	4	4	25	75	100
	DSC9	Operating Systems	18UCCA42	4	4	25	75	100
	DSC10	Computer Networks	18UCCA43	4	4	25	75	100
	DSCP-5	ASP.NET Practicals	18UCCA4P1	4	2	40	60	100
	DSE-2	A) Unix & Shell Programming	18UECA4A	4	4	25	75	100
		B) Web Designing	18UECA4B					
	DSEP-2	A) Unix & Shell Programming Practicals	18UECA4PA	2	1	40	60	100/2
		Web Designing Practicals	18UECA4PB					
	AII-2	RDBMS With Oracle	18UACA41	4	3	25	75	100
	AII-P-2	RDBMS With Oracle Practicals	18UACA4P1	2	1	40	60	100/2
IV	NME-II	Introduction to internet and HTML	18UNCA41	2	2	25	75	100
V	EX	Extension Activities (Choose from the list)	---		1		100	100
		SOP	18UEXSOP	-	1*			
			TOTAL	**30**	**26+ 1***			**900**
V SEMESTER								
III	DSC11	Computer Graphics & Multimedia	18UCCA51	6	4	25	75	100
	DSC12	Python Programming	18UCCA52	6	4	25	75	100
	DSC13	Mobile Computing	18UCCA53	4	4	25	75	100
	DSCP-6	Computer Graphics & Multimedia Practicals	18UCCA5P1	4	2	40	60	100
	DSE-3	A) MONGODB Programming	18UECA5A	4	4	25	75	100
		B) C# Programming	18UECA5B					
	DSEP-3	MONGODB Programming Practicals	18UECA5PA	4	2	40	60	100
		C# Programming Practicals	18UECA5PB					
IV	SEC-I	Basic Mathematics	18USCA51	2	2	25	75	100
			TOTAL	**30**	**22**			**700**
VI SEMESTER								
III	DSC14	Advanced Java Programming	18UCCA61	4	4	25	75	100
	DSC-15	Software Project Management	18UCCA62	4	4	25	75	100
	DSC-16	Project	18UCCA63	6	6	-	-	100
	DSCP-7	Advanced Java Programming Practicals	18UCCA6P1	4	2	40	60	100
	DSE-4	PHP With MYSQL	18UECA6A	4	4	25	75	100
		Core Android Application	18UECA6B					
	DSEP-4	PHP With MYSQL Practicals	18UECA6PA	4	2	40	60	100
		Core Android Application Practicals	18UECA6PB					
IV	SEC-II	Digital Marketing	18USCA61	2	2	25	75	100
	SBC	Personality Development	18USPD62	2	2	27	75	100
			TOTAL	**30**	**26**			**800**
I-V Sem		Massive Open Online Course $		-	2#			

BCA (2018-2021) CBCS Syllabus

PART I AND II SUBJECTS

(Applicable for students admitted in June 2019 and onwards)

TITLE OF THE PAPERS, CREDITS & MARKS

GROUP I COURSES (ONE YEAR LANGUAGE COURSES) (B.Com., B.Com. (Finance), B.B.A., B.Sc. Computer Science, B.Sc. Information Technology and B.C.A.)							
SEM	**Title of the paper**	**S. CODE**	**H/W**	**C**	**I**	**E**	**T**
PART I – TAMIL							
I	இக்காலத் தமிழ்	**18ULTA11**	6	4	25	75	100
II	சமயத் தமிழ்	**18ULTA21**	6	4	25	75	100
		TOTAL	**12**	**8**			**200**
PART I – ARABIC							
I	Applied Grammar and Translation – I	**18ULAR11**	6	4	25	75	100
II	Applied Grammar and Translation – II	**18ULAR21**	6	4	25	75	100
		TOTAL	**12**	**8**			**200**
PART II – ENGLISH							
I	Prose, Poetry and Grammar-I	**18ULEN11**	4	2	25	75	100/2
	English for Communication	**18ULEC11**	2	2	25	75	100/2
II	Prose, Poetry and Grammar-II	**18ULEN21**	6	4	25	75	100
			12	**8**			**200**

PART III

Part III DSC, DSE, Project and SEC								
SEM	**SUB**	**Title of the paper**	**S. CODE**	**H/W**	**C**	**MARKS**		
						I	**E**	**T**
I	DSC1	Principles of Programming in C	18UCCA11	4	4	25	75	100
	DSC2	Fundamentals of Computer	18UCCA12	4	4	25	75	100
	DSCP-1	Principles of Programming in C Practicals	18UCCA1P1	2	1	20	30	50
II	DSC3	C++ Programming	18UCCA21	4	4	25	75	100
	DSC4	Digital Electronics & Principles	18UCCA22	4	4	25	75	100
	DSCP-2	C++ Programming -Practicals	18UCCA2P1	2	1	20	30	50
III	DSC5	JAVA Programming	18UCCA31	4	4	25	75	100
	DSC6	Data Structures	18UCCA32	4	4	25	75	100
	DSC7	Software Engineering	18UCCA33	4	4	25	75	100
	DSE-1	A) XML Programming	18UECA3A	4	4	25	75	100
		B) Desktop Publishing	18UECA3B					
	DSCP-3	Java Programming Practicals	18UCCA3P1	4	2	40	60	100
	DSEP-II	XML Programming Practicals	18UECA3PA	2	1	20	30	50
		Desktop Publishing Practicals	18UECA3PB					
IV	DSC8	ASP. NET	18UCCA41	4	4	25	75	100
	DSC9	Operating Systems	18UCCA42	4	4	25	75	100
	DSC10	Computer Networks	18UCCA43	4	4	25	75	100
	DSE-2	A) Unix & Shell Programming	18UECA4A	4	4	25	75	100
		B) Web Designing	18UECA4B					
	DSCP-5	ASP.NET Practicals	18UCCA4P1	4	2	40	60	100
	DSEP-2	Unix &Shell Programming Practicals	18UECA4PA	2	1	20	30	50
		Web Designing Practicals	18UECA4PB					
V	DSC11	Computer Graphics & Multimedia	18UCCA51	6	4	25	75	100
	DSC12	Python Programming	18UCCA52	6	4	25	75	100
	DSC13	Mobile Computing	18UCCA53	4	4	25	75	100
	DSE-3	A) MONGODB Programming	18UECA5A	4	4	25	75	100
		B) C# Programming	18UECA5B					
	DSCP-6	Computer Graphics & Multimedia Practicals	18UCCA5P1	4	2	40	60	100
	DSEP-3	MONGODB Programming Practical	18UECA5PA	4	2	40	60	100
		C# Programming Practicals	18UECA5PB					
VI	DSC14	Advanced Java Programming	18UCCA61	4	4	25	75	100
	DSC-15	Software Project Management	18UCCA62	4	4	25	75	100
	DSC-16	Project	18UCCA63	6	6	--	--	100
	DSE-4	PHP With MYSQL	18UECA6A	4	4	25	75	100
		Core Android Application	18UECA6B					
	DSCP-7	Advanced Java Programming Practicals	18UCCA6P1	4	2	40	60	100
	DSEP-4	PHP With MYSQL Practicals	18UECA6PA	4	2	40	60	100
		Core Android Application Practical	18UECA6PB					
				118	**98**			**2800**

DEPARTMENT OF COMPUTER APPLICATIONS
CBCS SYLLABUS

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	Office Automation	18UACA11	4	3	25	75	100
	AI-P	Office Automation Practicals	18UACA1P1	2	1	20	30	50
II	AI-2	Multimedia Tools	18UACA21	4	3	25	75	100
	AI-P	Multimedia Tools -Practicals	18UACA2P1	2	1	20	30	50
III	AII-3	GUI Programming	18UACA31	4	3	25	75	100
	AII-P	GUI Programming Practicals	18UCA3P1	2	1	20	30	50
IV	AII-4	RDMBS With Oracle	18UACA41	4	3	25	75	100
	AII-P	RDMBS With Oracle Practicals	18UACA4P1	2	1	20	30	50
		TOTAL		**24**	**16**			**600**

PART IV – NON-MAJOR COURSE (FOR OTHER MAJOR STUDENTS

SEM	**P**	**TITLE OF THE PAPER**	**S. CODE**	**H/W**	**C**	**MARKS**		
						I	**E**	**T**
III	NME-1	Introduction to Photo Editing	18UNCA31	2	2	25	75	100
IV	NME-II	Introduction to internet and HTML	18UNCA41	2	2	25	75	100
		TOTAL		**4**	***4***			***200***
Part IV – SEC/SBC								
V	SEC-I	Basic Mathematics	18USCA51	2	2	25	75	100
VI	SEC-II	Digital Marketing	18USCA61	2	2	25	75	100
VI	SBC	Personality Development	18USPD62	2	2	25	75	100
		TOTAL		**6**	**6**			**300**
PART IV – EVS & VALUE EDUCATION (FOR ALL MAJOR STUDENTS)								
I	EVS	Environmental Studies	18UENS11	2	2	25	75	100
II	VE	Value Education – I	18USVE2A	2	2	25	75	100
		Value Education - II	18USVE2B					
		TOTAL		**4**	**4**			**200**

PART – V – Extension Activities

SEM	**Extension Activities (Choose anyone)**	**S. CODE**	**H/W**	**C**	**MARKS**		
					I	**E**	**T**
I to IV	NCC	18UEXNCC		**1**			**100**
	NSS	18UEXNSS					
	Physical Education	18UEXPHE					
	Red Ribbon Club	18UEXRRC					
	Youth Red Cross	18UEXYRC					
	Youth Welfare	18UEXYWL					
	Yoga	18UEXYOG					
III-IV	Sadakath Outreach Programme (SOP)	18UEXSOP		**1***			
	Total		**-**	**1+1***			**100**

முதல் பருவம்			
PART - 1 TAMIL			
TA – 1	**இக்காலத்தமிழ்**		**18ULTA11**
Hrs/Week: 6	**Hrs/Sem: 90**	**Hrs/Unit: 18**	**Credits:4**

நோக்கம்

1. தமிழ்ப்படைப்பிலக்கியங்களான புதுக்கவிதைகள், சிறுகதைகள் ஆகியவற்றை எழுத வைத்தல்
2. சமூகம் பற்றிய சிந்தனைகளைப் படைப்பிலக்கியங்கள் மூலம் ஏற்படுத்துதல்.

அலகு - 1 தமிழ்க்கவிதைகள்

1. பரம்பொருள் வாழ்த்து - மகாகவிபாரதியார்
2. தமிழின் இனிமை - பாவேந்தர் பாரதிதாசன்
3. கொக்கு - ந.பிச்சமூர்த்தி
4. நான் - தருமு சிவராம் (பிரமிள்)
5. முக்காலம் - சி.மணி
6. தோழர் மோசிகீரனார் - ஞானக்கூத்தன்
7. நகுலன் கவிதைகள் - நகுலன்
8. எதிர்வரும் யாவரும் - கல்யாண்ஜி
9. ஆயிரம் திருநாமம் பாடி - கவிக்கோ அப்துல் ரகுமான்
10. மரங்களைப் பாடுவேன் - வைரமுத்து
11. இளைய தோழனுக்கு - மு.மேத்தா
12. செய்யுள் - கலாப்ரியா
13. பெயர் தெரியாப்பறவை - தேன்மொழிதாஸ்
14. நிசப்தத்தில் குளிரும் வார்த்தை - அனார்
15. முதல்துளி - பாலைவன லாந்தர்
16. இந்தக்காலம் - மனுஷ்யபுத்திரன்
17. பூவின் பதில் - நாகூர் ரூமி
18. அறிவுமதி கவிதைகள் - அறிவுமதி
19. வேர் பிடித்த மரம் - க.அம்சப்ரியா
20. நட்சத்திரக் கிழவி - ப.சுடலைமணி
21. கீதாஞ்சலி - மகாகவி இரவீந்தரநாத் தாகூர்
22. ஜென் கவிதைகள் - பாஷோ

அலகு - 2 சிறுகதை இன்பம்

1. விடியுமா? - கு.பா.ராஜகோபாலன்
2. காலனும் கிழவியும் - புதுமைப்பித்தன்
3. கதவு - கி.ராஜநாராயணன்
4. காலத்தின் ஆவர்த்தனம் - தோப்பில் முஹம்மது மீரான்
5. சொர்க்கக் கன்னிகை - கருணா மணாளன்
6. செடிகளுக்கு - வண்ணதாசன்
7. கனவில் உதிர்ந்த பூ - நாறும்பூநாதன்
8. சங்காத்தி - தீன்
9. ராஜமீன் - கீரனூர் ஜாகீர்ராஜா

அலகு - 3 கட்டுரைக் கனிகள்

1. தமிழில் ஹைக்கூ கவிதைகள்
2. கவிக்கோ அப்துல் ரகுமானின் கவிதைகள்
3. நாட்டுப்புற இலக்கியங்கள்
5. இணையத்தில் தமிழ்
6. தமிழ்ச் சிறுகதை இலக்கியம்
7. இயற்கையைக் கொண்டாடும் ஜென் கவிதைகள்

அலகு - 4 இலக்கியவரலாறு

1. தமிழ்ப் புதுக்கவிதை தோற்றமும் வளர்ச்சியும்
2. தமிழ்ச் சிறுகதை தோற்றமும் வளர்ச்சியும்
3. தற்காலச் சிறுகதையாசிரியர்கள் ஓர் அறிமுகம்
4. புதுக்கவிதைகள் எழுதப்பயிற்சி தந்து மாணவர் கவிதைத் தொகுப்பை வெளியிடல்.

அலகு - 5 எழுத்து இலக்கணம் & எழுத்து வகைகள்அறிமுகம்

1. முதலெழுத்துகள், சார்பெழுத்துகள், சுட்டெழுத்துக்கள், வினாவெழுத்துகள்
2. மொழி முதல் எழுத்துகள், மொழி இறுதி எழுத்துகள், வல்லினம் மிகுமிடங்கள், வல்லினம் மிகாவிடங்கள்.
3. நாளிதழ்களில் இடம்பெறும் செய்திகளில் பிழைகளைக் கண்டறிந்து எழுதப்பயிற்சி

பாடநூல்

"இன்பத்தமிழ்"
சதக்கத்துல்லாஹ்அப்பா கல்லூரித் தமிழ்த்துறை வெளியீடு
ரஹ்மத்நகர், திருநெல்வேலி& 627 011.

பார்வை நூல்கள்மற்றும் வழிகாட்டு இணையதளங்கள்

1. வல்லிக்கண்ணன்
   புதுக்கவிதை தோற்றமும் வளர்ச்சியும்
2. ந.சுப்புரெட்டியார்
   புதுக்கவிதை போக்கும் நோக்கம்
3. பேராசிரியர் சு.பாலசந்திரன்
   புதுக்கவிதை & ஒரு புதுப்பார்வை
4. எஸ். ராமகிருஷ்ணன்
   கதாவிலாசம்
   விகடன் பிரசுரம்
   757, அண்ணாசாலை
   சென்னை & 600 002.

இணையதளங்கள்

1. www.tamilvu.org
2. www.azhiyasudargal.blogspot.in
3. www.neelamegam.blogspot.in
4. www.jeyamohan.in
5. www.sramakrishnan.com

SEMESTER – I			
AR-1	**APPLIED GRAMMAR AND TRANSLATION-I**		**18ULAR11**
Hrs/ Week: 6	**Hrs/ Sem: 90**	**Hrs/ Unit: 18**	**Credits: 4**

Objectives: To enable the students to learn Alphabets, Pronunciation, Basic Grammar, Reading, Writing of Arabic Language

UNIT I: Lessons 1 to 4 (Textbook – 1)

من الدرس الأول إلى الدرس الرابع

UNIT II: Lessons 5 to 8 (Textbook – 1)

من الدرس الخامس إلى الدرس الثامن

UNIT III: Grammar Portions (Textbook – 2)

1) Words and the types of words (**أجزاء الكلام**)
2) Nominal Sentence (**الجملة الاسمية**)
3) Adjective and Noun-qualified **(الصفة والموصوف)**
4) Subject and Predicate
5) Masculine and Feminine **(المذكر والمؤنث**)
6) Interrogatives **(أدوات الاستفهام)**
7) Singular, Dual and Feminine **(المفرد والتثنية والجمع**)
8) Possessiveness (**المضاف والمضاف إليه**)
9) Detached Pronouns (**الضمائر المنفصلة**)
10) Prepositions (**حروف الجر**)
11) Demonstrative pronouns (**أسماء الاشارة**)
12) Relative pronouns (**الأسماء الموصولة)**

UNIT IV: Lessons 9to12 (Textbook – 1)

من الدرس التاسع إلى الدرس الثاني عشر

UNIT V: Lessons 13 to 16 (Textbook – 1)

من الدرس الثالث عشر إلى الدرس السادس عشر

TEXTBOOKS

1. Duroosul Lughatil Arabiya Part – I Lessons 1 to 16 only by Dr. V. Abdur Rahim. Available at: Islamic foundation Trust, 78 Perambur High Road, Perambur, Chennai- 600 012.
2. Arabic for Beginners (selected topics only), Dr. Syed Ali (Former HOD of Arabic, The New College, Royappettach, (Chennai) (International Edition 2001) (UBS Publishers & Distributors Ltd) 5, Ansari Road New Delhi -110 002.

I SEMESTER Part – II English			
EN I A	**Prose, Poetry and Grammar - I**		**18ULEN11**
Hrs/ Week: 4	**Hrs/ Sem: 60**	**Hrs/ Unit: 12**	**Credits:2**

Objectives:

- To answer comprehensive questions on passages of moderate level of difficulty.
- To write a critical appreciation of the prescribed poems.
- To write grammatically.

UNIT I: PROSE

1. Education Provides a Solid Foundation - A.P. J. Abdul Kalam
2. Love Story - Maneka Gandhi

UNIT II: PROSE

3.Speech on Indian Independence - Jawaharlal Nehru
4.Film-Making - Satyajit Ray

UNIT III: POETRY

1. In the Bazaars of Hyderabad - Sarojini Naidu
2. Middle Age - Kamala Das

UNIT IV: GRAMMAR

1. Parts of Speech: Verb
2. Tenses

UNIT V: COMMUNICATION SKILLS

1. Unseen Passages
2. Letter Writing: Personal and Business Letters
3. Curriculum Vitae (CV)

TEXTBOOK:

Kulat L. Ambadas, Dr. Joshi, Sandeep. et. al. (ed). *Blooming Buds.* Hyderabad: Orient Black Swan, 2017.

I SEMESTER			
EN I B	**ENGLISH FOR COMMUNICATION**		**18ULEC11**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Hrs/ Unit: 6**	**Credits:2**

Objectives:

- To teach students basic Grammatical categories.
- To teach students the four skills viz. Listening, Speaking, Reading and Writing and to impart language skills through tasks.
- To inculcate in students the skills necessary for social and academic circumstances.

UNIT I

Parts of Speech (Pages 5 to 17)

UNIT II

Listening and Speaking (Pages 22 to 34) and (56 to 59)

UNIT III

Reading (Pages 35 to 45)

UNIT IV:

Writing - I

Punctuation and Kinds of Sentences (Pages46 to 55)

UNIT V:

Writing - II

Filling in Forms & Wrap-up (Pages 60 to78)

TEXTBOOK:

Board of Editors. *Content and Language Integrated Learning to Enhance Communication Skills. Semester I Module 1.* Chennai: Tamil Nadu State Council for Higher Education, 2017.

DEPARTMENT OF COMPUTER APPLICATION
BCA SYLLABUS
(Applicable for students admitted in June 2018 onwards)

PART III – CORE, CORE ELECTIVE & PROJECT

I SEMESTER			
DSC1	**PRINCIPLES OF PROGRAMMING IN C**		**18UCCA11**
Hrs/ Week: 4	**Hrs/ Sem: 4 x 15 = 60**	**Hrs/ Unit: 12**	**Credits: 4**

Objectives:

To provide the student the basic concepts of the C-programming language and exposure to problem-solving through programming.

UNIT I:

Identifiers & Keyword – Data types – Constants– Variables –Input statement – Output Statement –Operators – Expressions – Assignment statement – Conditional Statement – Looping Statements - Break Statement – Go to Statement.

UNIT II

Array Notation – Array Declaration – Initialization – Processing with Array – Array and Functions – Multidimensional array character array – Pointer declaration – Pointer Arithmetic – Array of Pointers – Pointers & Functions.

UNIT III

Function & Program Structure – Defining Function – Return Statement – Types of Function – Argument – Local & Global Variable – Scope of the Variable – Recursion-string functions

UNIT IV:

Preprocessors – Macros – Header Files – Standard Functions – Structures– Union– Bit fields – Type def – Enumeration.

UNIT V:

Structures – Declaration of structure – Members – Accessing the members of a structure – Arrays of structures – Pointer to structure-File Handling - File operations - Creating and accessing a data file

TEXTBOOK:

Programming with C by E. Balagurusamy.

REFERENCE BOOKS:

1.Programming with C by Thamarai Selvi.
2.Ashok Kamthane, “Programming with ANSI & Turbo C”, Pearson, 2011.

I SEMESTER			
DSC2	**FUNDAMENTALS OF COMPUTERS**		**18UCCA12**
Hrs/ Week: 4	**Hrs/ Sem: 4 x 15 = 60**	**Hrs/ Unit: 12**	**Credits: 4**

Objectives:

To provide developing knowledge and understanding the fundamentals of computer systems, including hardware, software, network, operating system etc.

UNIT I:

An overview of the computer system- the shapes of computers today – Transforming Data into information –CPUs used in personal computers.

UNIT II:

Standard method of input – Alternative methods of input- monitor sound system- Devices that output Hardcopy – Types of storage devices.

UNIT III:

Operating system Basics- Pc operating Systems – Database management systems- Networking Basics.

UNIT IV:

Internet Basics – Getting Online – working online – Understanding multimedia – creating multimedia.

UNIT V:

The basic of information systems- Building information systems – Creating computer programs- programming languages and the programming process.

TEXTBOOK:

Introduction to computers fourth Edition by peter Norton, Tata McGraw-Hill. (Chapters: 1 – 12, 16 – 20, 23 – 28).

REFERENCE BOOKS:

1. P.K. Sinha, “Computer Fundamentals”, New Age International Publishers, 2014. https://www.edutechlearners.com/computer-fundamentals-p-k-sinha-free-pdf
2. S.K. Basandra, “Computers Today”, Galgotia Publications.

I SEMESTER			
AI-1	**OFFICE AUTOMATION**		**18UACA11**
Hrs/ Week: 4	**Hrs/ Sem: 4 x 15 = 60**	**Hrs/ Unit: 12**	**Credits: 3**

Objectives:

To provide the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools

UNIT I:

Introduction of Office 2007: Exploring common features in Office. Working with files. Editing in Office 2007, Selecting, moving and Copying – Fonts and font styles. Mastering the basics of Word Creating Word documents – Editing document Texts – applying Text enhancements. Aligning and Formatting, adding Lists, Numbers, Symbols, Date and time, Replacing and checking text, getting into print.

UNIT II:

Word: Applying advanced formatting techniques: Formatting pages. Working with Columns, constructing high quality tables, Creating outlines in Word. Working with complex documents.

UNIT III

Managing data with Word, creating customized Merge Documents, publishing online forms, adding reference to documents, working together on documents.

UNIT IV:

Excel: Creating Excel Worksheet: Entering and editing Cell entries, Working with numbers, changing worksheet layout, other formatting options, Printing in Excel, using functions and references, naming ranges, creating easy to understand charts, using custom and special effects, using financial and statistical functions. Tracking and analyzing data with Excel, auditing Worksheet.

UNIT V:

Power Point: Creating Power Point presentation: Creating a Basic Presentation, building presentations, modifying visual elements, formatting and checking text, adding objects, applying transitions, animations effects and linking, preparing handouts, taking the show on the road.

TEXTBOOK:

Microsoft Office 2007 Bible Paperback – 28 Jun 2007by John Walkenbach, Herb Tyson, Faithe Wempen

REFERENCE BOOKS:

1. Stephen L. Nelson – Office 2007 The Complete Reference, Tata McGraw-Hill publishing Company Limited.
2. Microsoft Office Word 2007 Step by Step Paper back – Import, 3 Jan 2007by Joan Preppernau (Author), Joyce Cox (Author), Online Training, Solutions Inc. (Author)

I SEMESTER		
DSCP-1	**PRINCIPLES OF PROGRAMMING IN C PRACTICALS**	**18UCCA1P1**
Hrs/ Week: 2	**Hrs/ Sem: 2 x 15 = 30**	**Credits: 1**

1. Program using branching statement.
2. Program using looping statement.
3. Program using two dimensional arrays.
4. Program using functions.
5. Program using Recursions.
6. Program using strings.
7. Program using pointer.
8. Programs using Structure pointer.
9. Program using typedef.
10. Program using Files.

I SEMESTER		
AI- P1	**OFFICE AUTOMATION PRACTICALS**	**18UACA1P1**
Hrs/ Week: 2	**Hrs/ Sem: 2 x 15 = 30**	**Credits: 1**

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.

I SEMESTER			
EVS	**ENVIRONMENTAL STUDIES**		**18UENS11**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Hrs/ UNIT: 6**	**Credits:2**

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, Fukushima. Stone leprosy in Taj Mahal

UNIT II: Natural Resources

Renewable and Non-Renewable resources - classification.

- Forest resources: Use and over - exploitation, Afforestation 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 & windmills.
- Land resources: Land degradation

UNIT III: Ecosystem

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

UNIT IV: Biodiversity & Its Conservation

Introduction - Definition: ecosystem diversity, species diversity and Genetic diversity. Hot spots of biodiversity - Western Ghats, Eastern Himalayas and Gulf of Mannar. Threats to biodiversity - Habitat Loss, Poaching of wildlife and Man - wildlife conflicts.

Conservation of biodiversity: *In-situ* and *Ex-situ*.

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 water and Marine water.
c) Noise Pollution
d) Soil pollution

Biodegradable and Non-Biodegradable wastes; Environmental Acts

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

REFERENCE BOOKS:

1. Basic of Environmental Science. Vijayalakhmi, 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, 2008.
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.

இரண்டாம் பருவம்			
PART - 1 TAMIL			
TA- 2	**சமயத்தமிழ்**		**18ULTA21**
Hrs/Week: 6	**Hrs/Sem: 90**	**Hrs/UNIT: 18**	**Credits:4**

நோக்கம்

1. பலசமயக் கருத்துக்களை ஒப்பிட்டுச் சமயநல்லிணக்கத்தோடு வாழவழிகாட்டுதல்
2. தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத் தேர்வுக்கு மாணவர்களை ஆயத்தப்படுத்துதல்.

அலகு - 1 தமிழ்ச் செய்யுள் (துறை வெளியீடு)

சைவம்

1. அ. திருநாவுக்கரசர் - மாசில் வீணையும்..
   - நாமார்க்கும் குடியல்லோம்..
   - அப்பன் நீ அம்மை நீ

   ஆ. திருஞானசம்பந்தர் - தோடுடைய செவியன்..
   - வேயுறு தோளிபங்கன்
   - மருந்தவை மந்திரம்..

   இ. சுந்தரமூர்த்தி நாயனார் - பித்தா பிறைசூடி..
2. திருவாசகம் &மாணிக்கவாசகர் - பால் நினைந்தூட்டும்..
3. திருவெம்பாவை - ஆதியும் அந்தமும் இல்லா..
4. திருமந்திரம் & திருமூலர் - ஒன்றே குலமும் ஒருவனே தேவனும்

வைணவம்

5. அ. பொய்கையாழ்வார் - வையம் தகளியா..

   ஆ. பூதத்தாழ்வார் - அன்பேதகளியா..

   இ. பேயாழ்வார் - திருக்கண்டேன்.
6. திருப்பாவை &ஆண்டாள் - மார்கழித் திங்கள்..

சமணம்

7. வளையாபதி - மக்கட் செல்வம்

பௌத்தம்

8. புத்தபிரான் - மு.ரா.பெருமாள்

கிறித்தவம்

9. இயேசு காவியம் (மலைப் பொழிவு) முதல் நான்கு பாடல்கள் - கண்ணதாசன்

இஸ்லாம்

10. அல்லாஹ் - உமறுப்புலவர்
11. நபிகள்நாயக மான்மிய மஞ்சரி - சதாவதானி செய்குத்தம்பிபாவலர் (குறிப்பிட்டபாடல்கள்)
12. குணங்குடி மஸ்தான் பாடல்கள் - பாசக்கயிற்றுவலை
13. ஞானப்புகழ்ச்சி - தக்கலை பீர்முகம்மது அப்பா
14. அலகிலா அருளும் - இறையருட் கவிமணி கா. அப்துல்கபூர்

நீதிஇலக்கியம்

15. திருக்குறள் - ஒழுக்கமுடைமை
13. நாலடியார் - கல்விகரையில்

அலகு - 2 புதினம்

வாடிவாசல் - சி.சு.செல்லப்பா, காலச்சுவடு பதிப்பகம், நாகர்கோவில்

அலகு - 3 உரைநடை (தமிழ்த்துறை வெளியீடு)

போட்டித் தேர்வுகளுக்குக் கட்டுரை எழுதும் பயிற்சி

1. தமிழ் இலக்கியத்தில் சமயநல்லிணக்கச் சிந்தனைகள்

2. நபிகள் நாயகம் (ஸல்) அன்பின் தாயகம்
3. சதக்கத்துல்லாஹ் அப்பா அவர்களின் வாழ்வும் பணியும்
4. தமிழ் இலக்கியங்களில் மனிதநேயச் சிந்தனைகள்
5. தமிழ் இலக்கியத்தில் மதுஒழிப்புச் சிந்தனைகள்
6. சூஃபியச் சித்தாந்தமும் சித்தர்களும்

அலகு - 4

(போட்டித் தேர்வுத் தயாரிப்பு)

இலக்கியவரலாறு

1. சைவம், வைணவம், கிறித்தவம், இசுலாம் வளர்த்த தமிழ்
2. புகழ் பெற்றதமிழ் நூல்கள், நூலாசிரியர்கள்

அலகு - 5

தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம் நடத்தும் போட்டித் தேர்வுக்குரிய பொதுத் தமிழ் இலக்கணப்பகுதி& ஓர் அறிமுகம்

1. வேர்ச் சொல்லைக் கண்டறிதல்
2. பெயரெச்சம், வினையெச்சம், முற்றெச்சம் பற்றிஅறிதல்
3. வினைத்தொகை, பண்புத்தொகை பற்றிஅறிதல்
4. வினைமுற்று, வினையாலணையும் பெயர் கண்டறிதல்
5. இரட்டைக்கிளவி, அடுக்குத் தொடர் அறிதல்
6. வேற்றுமைத் தொகையைக் கண்டறிதல்

பாடநூல்

நற்றமிழ், சதக்கத்துல்லாஹ் அப்பா கல்லூரித் தமிழ்த்துறை வெளியீடு

வழிகாட்டு இணையதளங்கள்

1. www.noolulagam.com
2. www.tamilauthors.com
3. www.tnpsc.gov.in
4. www.tnpscexams.in
5. www.tamilvu.org

SEMESTER – II			
AR-2	**APPLIED GRAMMAR AND TRANSLATION-II**		**18ULAR21**
Hrs/ Week: 6	**Hrs/ Sem: 90**	**Hrs/ Unit: 18**	**Credits: 4**

Objectives: To make the students to develop the skill of basic Arabic Grammar and Translation skills from Arabic to English vice-versa.

UNIT I: Lessons 1 to 3 (Textbook – 1)

من الدرس الأول إلى الدرس الثالث

UNIT II: Lessons 4 to 6 (Textbook – 1)

من الدرس الرابع إلى الدرس السادس

UNIT III: Grammar Portions (Textbook – 2)

1) Inna and its sisters (إن وأخواتها)
2) Elative (اسم التفضيل))
3) Perfect Tense (الفعل الماضي)
4) Imperfect Tense (الفعل المضارع)
5) Doer and Object (الفاعل والمفعول)
6) Kaana and Its sisters (كان وأخواتها)
7) Classification of Verb into Sound and weak verb (تقسيم الفعل إلى صحيح ومعتل)
8) Transitive and Intransitive verb (الفعل اللازم والمتعدي)
9) Verbal Noun (المصدر)

UNIT IV: Lessons 7 to 9 (Textbook – 1)

من الدرس السابع إلى الدرس التاسع

UNIT V: Lessons 10 to 12 (Textbook – 1)

من الدرس العاشر إلى الدرس الثاني عشر

TEXTBOOKS

1. Duroosul Lughatil Arabiya Part – II Lessons 1 to 12 only by Dr. V. Abdur Rahim. Available at: Islamic foundation Trust, 78 Perambur High Road, Perambur, Chennai- 600 012.
2. Arabic Tutor Part-I, II & III, by Moulana Ebrahim Muhammad Karachi- Darul Ishaat.

II SEMESTER			
EN2	**PART II ENGLISH Prose, Poetry and Grammar - II**		**18ULEN21**
Hrs/ Week: 6	**Hrs/ Sem: 90**	**Hrs/ Unit: 18**	**Credits: 4**

Objectives:

- To answer comprehensive questions on a passage of moderate level of difficulty.
- To write a critical appreciation of the prescribed poems and write sentences in English grammatically.

UNIT I: PROSE

1. Appro JRD - Sudha Murthy
2. Packing - Jerome K. Jerome

UNIT II: PROSE

3. How I Became a Public Speaker - G. B. Shaw
4. Values in Life - Rudyard Kipling

UNIT III: POETRY

1. Money-Madness - D. H. Lawrence
2. No Men are Foreign - James Kirkup
3. On Another's Sorrow - William Blake

UNIT IV: GRAMMAR

1. Subject-Verb Agreement
2. Verbs: Forms of 'to be', 'have', 'do'; modal auxiliaries

UNIT V: COMMUNICATION SKILLS

1. Story Building
2. e-Communication: Fax; e-mail
3. Notices, Agendas and Minutes

TEXTBOOK:

Kulat L Ambadas, Dr. Joshi, Sandeep. et. al. (ed). *Blooming Buds.* Hyderabad: Orient Black Swan, 2017.

II SEMESTER			
DSC 3	**C++ PROGRAMMING**		**18UCCA21**
Hrs/ Week: 4	**Hrs/ Sem: 60**	**Hrs/ Unit: 12**	**Credits: 4**

Objectives:

To Understand object-oriented programming and advanced C++ concepts and Improve student's problem solving skills

UNIT I: Classes and objects

Introduction – structures in C – structures in C++ – declaring objects – The public Keyword – defining member functions – characteristics of member function – outside member function inline – Rules for inline functions – data hiding or encapsulation – classes, objects and memory – static variable and functions – static object – Array of objects.

UNIT II: Constructors and Destructors

Introduction – Constructors and destructors – Characteristics of constructors and destructors – Types of constructors – calling constructors and destructors – qualifier and nested classes.

UNIT III: Operator overloading and Inheritance

Introduction – the keyword operator – overloading unary operator – overloading binary operators – overloading with friend function – type conversion – Rules for overloading operators - Inheritance – access specifiers and simple inheritance – Protected data with private inheritance – types of inheritance – single inheritance – Multilevel inheritance – multiple inheritance – hierarchical inheritance – hybrid inheritance.

UNIT IV: Pointers and Arrays

Introduction – pointers declaration – pointer to class – pointer to object – the this pointer – pointer to derived classes and base classes – arrays – characteristics of arrays – initialization of arrays using functions – arrays of classes – binding in C++ – pointers to derived classes objects.

UNIT V: Virtual functions and files

Virtual function – rules for virtual function – pure virtual functions – virtual functions in derived classes – file stream classes – steps of file operations – Checking for errors – finding end of a file – file opening modes – file pointers and manipulators – manipulators with arguments – sequential read and write operators – binary and ASCII files – random access operation.

TEXTBOOK:

Object Oriented Programming with C++ by E. Balagurusamy.

REFERENCE BOOKS:

1. C++ Programming by Ravichandran.
2.C++: The Complete Reference, 4th Editionby Herbert Schildt

II SEMESTER			
DSC 4	**DIGITAL ELECTRONICS & PRINCIPLES**		**18UCCA22**
Hrs/ Week: 4	**Hrs/ Sem: 60**	**Hrs/ Unit: 12**	**Credits: 4**

Objectives:

To provide the basic knowledge of digital logic levels and application of knowledge to understand digital electronics circuits and to perform the analysis and design of various digital electronic circuits.

UNIT I:

Number system: Binary Addition and Subtraction – Binary Multiplication and Division Converting Decimal numbers to Binary- Negative numbers – Use of Complements to Negative numbers – Binary number complements – BCD – Octal and Hexadecimal number systems.

UNIT II

Boolean algebra and Gate networks: Fundamental concepts of Boolean algebra – Logical multiplication – AND, OR gates – Basic laws of Boolean Algebra – De Morgan's theorem - Boolean Algebra – Sum of Products(SOP) and Product of Sums(POS) – Map Simplification using Karnaugh Maps – Don't care conditions

UNIT III

Logic Design: Flip–Flop – Gated flip flops – Master- Slave flip flops – SR flip-flop – D flip-flop

UNIT IV:

Adder – Half Adder – Full Adder – Parallel Binary Adder – BCD Adder – Shift Operation

UNIT V:

Counters: Binary counter – Ripple counter – BCD counter- Synchronous and Asynchronous counters – shift counter

TEXTBOOKS:

Digital computer Fundamentals – Thomas C.Bartee, sixth Edition, McGraw – Hill Publications

UNIT I: Chapters 2.4 to,2.12
UNIT II: Chapters 3.1 to 3.23
UNIT III: Chapters 4.1 to 4.9
UNIT IV: Chapters 5.1 to 5.5, 5.10, 5.11,5.14
UNIT V: Chapters 4.8, 4.9

REFERENCE BOOKS:

1. Digital principles and Applications – Malvino and leach, TMH publications, fifth Editions.
2. Digital Electronics – V.K.puri, TMH Publication, 1997.

II SEMESTER			
AI-2	**MULTIMEDIA TOOLS**		**18UACA21**
Hrs/ Week: 4	**Hrs/ Sem: 60**	**Hrs/ Unit: 12**	**Credits: 3**

Objectives:

To provide student uses a combination of different content forms such as text, audio, images, animations, video and interactive content using macromedia flash.

UNIT I:

How flash works – Uses of flash – Timeline – Stage –Property Inspector – Panels-Creating a New Flash Document-Scenes-Layers-concept of Frames-Saving & Testing a Document

UNIT II

Vector& Bitmap graphics-drawing model-selecting objects-creating graphics-Fill and Outline fills-color palette-color swatches-color Mixer panel

UNIT III

Transformation and Aligning graphics-grouping-breakup part-grouping object-working with text-text attributes-spell checker-transforming text

UNIT IV:

Creating symbols-buttons-editing and modifying symbols-Timeline Effect - Frame by Frame Animation-Tweening-Motion Tweening-Shape Tweening

UNIT V:

Onion Skin-Masking Effects – Behaviours - Action script - Movie Clip-Color Transform- Get URL Action.

TEXTBOOKS:

1. Macromedia Flash MX: Training from the source by Chrissy Rey.
2. Flash 8 – Shalini Gupta and Adity Gupta.

REFERENCE BOOKS:

1. Kogent Learning Solutions Inc., “Flash CS6 in Simple Steps”, First Edition, Dreamtech Press, 2013.
2. Prof. Satish Jain, Kratika Bhagia, “Flash Professional CS6 Training Guide”, First Edition, BPB Publications, 2016.

II SEMESTER		
DSCP-2	**C++ PROGRAMMING PRACTICALS**	**18UCCA2P1**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Credits: 1**

1. Write a c++ program using class.
2. Write a c++ program using pointers.
3. Write a c++ program using Inline.
4. Write a c++ program using method overloading.
5. Write a c++ program using constructor and destructor.
6. Write a c++ program using multiple inheritance
7. Write a c++ program using operator overloading.
8. Write a c++ program using multi-level inheritance.
9. Write a c++ program using virtual function.
10. Write a c++ program using file concept.

II SEMESTER		
AI-P-2	**MULTIMEDIA TOOLS PRACTICALS**	**18UACA2P1**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Credits: 1**

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 to 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. Adding sound in a video file.
9. Create animation using dynamic and input text
10. Create animation using timeline control action

II SEMESTER			
VE1	**VALUE EDUCATION – I**		**18USVE2A**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Hrs/ Unit: 6**	**Credit: 2**

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 – Perseverance – 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**		**18USVE2B**
Hrs/ Week: 2	**Hrs/ Sem: 30**	**Hrs/ Unit: 6**	**Credit: 2**

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.

III SEMESTER			
DSC5	**JAVA PROGRAMMING**		**18UCCA31**
Hrs/ Week: 4	**Hrs/ Sem: 60**	**Hrs/ Unit: 12**	**Credit: 4**

Objectives:

To provides an introduction to object-oriented programming (OOP) using the Java programming language concepts object classes and interfaces, exceptions and Applets.

UNIT I

Features of Java: History – Characteristics of Java - Developing and Running a Java Program – Structure of a java program – Variables – Features of java – Data types – Type Conversion and casting – arrays – operators. Branching and Looping Statements - continue and return statement.

UNIT II:

Classes methods and objects examples-declaring objects – methods in classes – constructors –this keyword- class structure- Extension to classes and methods: Methods overloading – passing objects to methods- passing arguments – returning objects – recursion – nested classes – string handling – command line execution.

UNIT III

Inheritance: basic concepts – multilevel hierarchy – method overriding – abstract classes – Packages and Interfaces.

UNIT IV:

Errors and Exception Handling: Compile time, runtime errors – exceptions – try and catch multiple catch- throw – java's built-in-exceptions. Multiple thread programming: java threads creating several threads – controls on threads.

UNIT V:

Input Output Operations: reading characters, sentences, writing to console, file processing, copying files. Applets: Introduction - Graphics and Text: lines, rectangles, ellipse, arcs, polygons, paint mode, fonts, text.

TEXTBOOKS:

1. Programming in java2 – R. Rajaram, SCITECH Publications (India) Pvt. Ltd, Chennai 2001
2. Java2 – Complete Reference, Tata McGraw-Hill Publications

REFERENCE BOOKS:

1. Herbert Schildt, "JAVA A Beginner's Guide", Seventh Edition, McGraw-Hill Education, 2017.
3. E. Balaguruswamy, "Programming with JAVA-A Primer", Fifth Edition, McGraw-Hill Education, 2014.

III SEMESTER			
DSC6	**DATA STRUCTURES**		**18UCCA32**
Hrs/ Week: 4	**Hrs/ Sem: 60**	**Hrs/ Unit: 12**	**Credit: 4**

Objectives:

- To import the basic concepts of data structures and algorithms,
- To understand basic concepts about stack, queue, linked lists, Trees and Graphs

UNIT-I ARRAYS AND STRUCTURES

Arrays-Dynamically Allocated Arrays-Structures and Unions-Polynomials-Sparse Matrices: The Abstract Data Type, Sparse matrix representation, transpose a sparse matrix-Representation of Multidimensional Arrays-Strings

UNIT-II STACKS AND QUEUES

Stacks-Abstract data type Stack-add, delete elements from stack-Queues-Abstract data type queue-add, delete elements from queue-Circular Queues-Evaluation of Expressions-Evaluating postfix expressions-infix to postfix-Multiple stacks and Queues.

UNIT-III LINKED LISTS

Singly linked lists and Chains-Representing chains in C - create a two node list-insert an element in a list-delete an element from a list-display the elements in a list-add and delete an element using linked stack and queue-polynomial representation using linked list-adding polynomials-doubly linked list-add and delete an element using doubly linked list

UNIT-IV TREES

Terminology-Representation of trees-binary tree: abstract data type-properties of binary trees-Binary tree representations-binary tree traversals-in order, preorder and post order traversal-additional binary tree operations: copying and testing equality.

UNIT-V GRAPHS

Abstract data type –Definitions – Graph Representations –Adjacency Matrix, Adjacency Lists, Adjacency Multilists-Elementary Graph operations - Depth First Search, Breadth First Search, Connected Components, Spanning Trees-Minimum Cost spanning trees-Kruskal's Algorithm, Prim's Algorithm.

TEXTBOOK:

"Fundamentals of Data Structures in C"-Horowitz, Sahni and Anderson-Freed, Second Edition, University Press (India) private limited

REFERENCE BOOKS:

1. "Fundamental of Data Structures" Ellis Horowitz and Sartaj Sahni, Galgotia Publications
2. Data Structures Using Cby Aaron M. Tenenbaum, Yedidyah Langsam, et al.

III SEMESTER			
DSC7	**SOFTWARE ENGINEERING**		**18UCCA33**
Hrs/Week: 4	**Hrs/Sem:60**	**Hrs./ Unit:12**	**Credit: 4**

Objectives:
To provide discipline that is concerned with all aspects of software production includes software requirement, design, coding and testing

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 iteration - Software Specification – design and implementation – Software validation – Software Evolution – automated process support.

UNIT II:

Project Management: Software requirement: Functional and non-functional requirements – user Requirements – system requirements – Software requirements document. System Models – Context models – Behavioral models – data models – Object models

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.

UNIT V:

Verification and Validation: Verification and Validation planning – Software inspections - Automated static analysis – clean – room software development. Software testing: Defect testing – Integration testing – Object oriented testing – Testing workbenches.

TEXTBOOKS:

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 BOOKS:

1 Roger Pressman S., “Software Engineering: A Practitioner's Approach”, 7th Edition, McGraw-Hill, 2010.
2. Rod Stephens, “Beginning Software Engineering”, First Edition, Wrox, 2015.

III SEMESTER			
DSE1A	**XML PROGRAMMING**		**18UECA3A**
Hrs/Week: 4	**Hrs/Sem:60**	**Hrs./ Unit:12**	**Credit: 4**

Objectives:

To provide the students to develop web site using HTML and to define his own tags that describes the useful data and the relationship between elements.

UNIT I:

XML Basics: Introduction-XML Tree-XML Syntax-Elements-Attributes-Name spaces-XML Display-Reviewing XML Validating and Non-validating Parsers-Saying "Hello World" in XML-

UNIT II:

Organizing XML: Data-Creating Well-Formed XML - Working with DTD-Validating Your XML Documents- Defining DTD Entities-Working with Attributes- Adding Other Data.

UNIT III:

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 IV:

Using XML Query: Introducing XML Query – X links - Using X pointer - Resource Description Framework - XML in Action-XHTML-Manipulating XML with JavaScript - Collecting and Writing Data with CGI.

UNIT V:

XML SERVER: XML on Server- Storing XML Files on the Server-Generating XML with PHP-Generating XML with ASP –Generating XML From a Database-Transforming XML with XSLT on the Server

TEXTBOOK:

Heather Williamson, —The Complete Reference in XML, First edition, Tata McGraw-Hill publication

REFERENCE BOOKS:

1. Anders Moller Michael Schwartz bach, “An Introduction to XML and Web Technologies”, Pearson Education, 2015.
2. Joe Fawcett, Liam R.E. Quin, Danny Ayers, “Beginning XML”, Fifth Edition, Wiley Publications, 2015.

III SEMESTER			
DSE1B	**DESKTOP PUBLISHING**		**18UECA3B**
Hrs/Week: 4	**Hrs/Sem:60**	**Hrs./ Unit:12**	**Credit: 4**

Objectives:
To provide DTP Operators Include Publishing, Graphic Design, Advertising, Printing and Reprographics Companies on a Personal Computer**.**

UNIT I: Introduction

Introduction to PageMaker - Layout window – Document setup –Basic page Maker function: Open, new, close, print, save and save as – Working with text: text tool, Text block – Editing Text – Formatting a Text: Character formatting, paragraph formatting

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

UNIT III: Corel Draw 8.0

Introduction to CorelDraw – features and advantages – Layout window – Basic CorelDraw 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 and paragraph text – Fit text to path.

UNIT IV: Object manipulation

Fill, outline, Group, ungroup weld, combine, breaking apart, Separate, Intersection. Trim, Align and ordering – transforming object, Shaping object – Graphic based roll – ups: Pen, Blend, Contour, Preset, Layer and Power clip option –Template creation

UNIT V: Photoshop 5.5

Introduction to photo Shop - Layout -basic functions: New, Open, close, save, save as and setup –painting tools: Air brush, paint brush, line pen, eraser, eye dropper, and gradient and paint bucket tools. Text Tools – Zoom tool, Hand tool, selection tools: Move and sponge tools- vignettes and edge effects.

TEXTBOOKS:

1. Mastering Page Maker6 for windows 95 – by Rebecca Bridges Altman & Rick Altman Chapters: 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 Chapters 1 - 6,10,12,13.

REFERENCE BOOKS:

1. Rapidex DTP Course – 2003 by Shirish Chavan
2. DTP Training Guide – 2015 by Satish Jain

III SEMESTER			
AII-1	**GUI PROGRAMMING**		**18UACA31**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 3**

Objectives:
Learn to design and develop Windows-based business applications in Visual Basic programming language using graphical user interface (GUI) environment

UNIT I:

Integrated Development Environment (IDE) and Forms: Introducing Visual BASIC- Learning the IDE Features- Working with Forms: The Anatomyof 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:

Selecting and Using Controls: Introducing Controls- Command Buttons-Text Boxes-Labels- Option Buttons- Check Boxes- Frame controls- List Boxes- Combo Boxes- Image objects- Picture objects Timers- Scroll Bars- Drive Lists- Directory List Boxes- File List Boxes.

UNIT III

Logic and Program Flow, Data Types: Understanding Logical operators- Making Comparisons- Evaluating Conditions in code- Performing repetitive tasks. Introducing variables- variable types- Arrays- Constants.

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- Creating a Query- Modifying a table- DAO-RDO-ADO-Data reports.

TEXTBOOK:
Visual BASIC 6 In Record Time – Steve Brown – BPB Publications.

REFERENCE BOOKS:
1. Visual BASIC 6 – Paul Sheriff – PHI
2. The Complete Reference Visual Basic 6 – Noel Jerke - Tata McGraw-Hill Edition

III SEMESTER		
DSCP-3	**JAVA PROGRAMMING PRACTICALS**	**18UCCA3P1**
Hrs/Week: 4	**Hrs/Sem:60**	**Credit: 1**

1. Write a Java Program to make a simple calculator using switch case
2. Write a java program using class
3. Write a Java Program using method overloading
4. Write a java program using inheritance
5. Write a java program using interfaces
6. Write a java program using packages
7. Write a java program to create a user defined exception
8. Write a program using threads
9. Create an applet program to draw multiple shapes
10. Create a java programming using Files

III SEMESTER		
DSCP-1A	**XML PROGRAMMING PRACTICALS**	**18UECA3PA**
Hrs/Week: 2	**Hrs/Sem: 30**	**Credit: 1**

1. XML document creation.
2. XML Schema creation
3. Designing web page using attributes and entities
4. Design a web page in XML using CSS.
5. Design a web page in XML using XSLT.
6. Design a web page in XML using XPath.
7. Design a web page in XML using XLink.
8. Design a web page in XML using Internal DTD.
9. Design a web page in XML using External DTD.
10. Importing and Exporting XML document in database.

III SEMESTER		
DSCP-1B	**DTP PRACTICALS**	**18UECA3PB**
Hrs/Week: 2	**Hrs/Sem: 30**	**Credit: 1**

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 picture.
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.

III SEMESTER		
AII-P-1	**GUI PROGRAMMING PRACTICALS**	**18UACA3P1**
Hrs/Week: 2	**Hrs/Sem: 30**	**Credit: 1**

1 Designing an Arithmetic Calculator.
2 Menu Creation with simple files and edit options.
3 Designing a color mixer using basic colors.
4 Create a file open dialogue box to load a picture.
5 Create an application to format the text inside the text box.
6 Viewing records using data base controls.
7 Adding records to database using data Control
8 Display the information in the report form.
9 Create an application to move the elements from list to list and add new items.
10 Picture Animation using Timer Control.

III SEMESTER			
NME-1	**INTRODUCTION TO PHOTO EDITING**		**18UNCA31**
Hrs/Week: 2	**Hrs/Sem: 30**	**Hrs/Unit: 6**	**Credit: 2**

Objectives:

To explore students about the basic photo editing skills for photojournalists and other types of photography, including public relations, advertising and art photography.

UNIT I:

Basic Image Manipulation - Bitmap Images - Vector Images - Image Size and Resolution Settings - Creating New Images - Color Basics - Color Modes - Foreground and Background Colors - Selecting Colors with the Eyedropper Tool - Selecting Colors with the Swatches Palette

UNIT II

Making Selections: Selection Basics - Making Pixel Selections - The Marquee Tools - The Lasso Tools - The Magic Wand Tool - Selecting by Color Range adjusting Pixel Selections

UNIT III:

Painting Tools: Painting Tools - The Brush Tool - Blending Modes - The Pencil Tool - The Eraser Tool - The Magic Eraser Tool - The Background Eraser Tool - Using the Art History Brush - Using the History Brush – Brush Settings.

UNIT IV:

The Extract Command - Copying and Pasting Pixel Selections - Saving and Loading Selections -Filling and Stroking - Applying Fills - Using the Paint Bucket Tool - Using the Gradient Tool

UNIT V:

Layers: Using Layers and Layer Sets - Creating Layers and Layer Sets - Stacking and Linking Layers - Moving Layer Content with the Move Tool - Locking Layers - Merging and Flattening Layers

TEXTBOOK:

Adobe Photoshop. CS2 Class Room In book New Full-color Edition Adobe Press

REFERENCE BOOKS:

1. Adobe Photoshop CC Classroom in a Book by Faulkner Andrew (Author), Chavez Conrad
2. Adobe Photoshop: The World'S Best Imaging and Photo Editing Software by Bittu Kumar (Author)

IV SEMESTER			
DSC8	**ASP.NET**		**18UCCA41**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:
To provide students how to create a simple Active Server Page ASP.NET application that delivers dynamic content to the Web.

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-Validation and Rich Controls-validation-A simple validation controls-Understanding Regular Expressions

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 – page tracing

UNIT V:

ADO.NET-Data Access-Accessing Data the Easy Way-Creating a Connection-Defining a Select command- Updating Data Accessing-Modifying-Updating Disconnected Data-Component based programming – why use components – creating a simple component – entity framework in ASP.NET

TEXTBOOK:
The complete reference ASP.NET, Mathew Macdonald, TMH 2002

REFERENCE BOOKS:

1. Microsoft ASP. NET Step by step, G. Andrew Duthie, PHI
2. John Sharp, “Microsoft Visual C# Step by Step”, Eighth Edition, PHI Publications, 2016.

IV SEMESTER			
DSC9	**OPERATING SYSTEMS**		**18UCCA42**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

To provide the basic components of a computer operating system and the interactions among the various components.

UNIT I

Operating Systems Objectives and Functions - Operating System and User - Computer Interface, Operating System as a Resource Manager: Evolution of Operating Systems – Serial Processing, Sample Batch Systems, Multi Programmed Batch Systems, Time Sharing Systems.

UNIT II:

Process Description, Process Control – Processes and Threads, Concurrency – Principles of Concurrency, Mutual Exclusion – Deadlock Prevention, Deadlock Detection, Deadlock Avoidance. Memory Management - Memory Management Requirements – Fixed Partitioning, Placement Algorithm, Relocation in a Paging System - Sample Segmentation.

UNIT III:

Virtual Memory – Paging – Address Translation in a Paging System, Segmentation – Organization, Address Translation in a Segmentation System – Combined Paging and Segmentation – Virtual Memory – Operating System Software.

UNIT IV:

Scheduling – Types of Scheduling, Scheduling Algorithms, Scheduling Criteria, FIFO, Round Robin, Shortest Process Next, Shortest Remaining Time, and Feedback Scheduling – Fair share Scheduling.

UNIT V:

I/O Management and disk scheduling – Organization of the I/O function – The Evaluation of the I/O function, Logical Structure of the I/O function, I/O Buffering, Disk I/O – Disk Scheduling Algorithms, Disk Cache. File Management – Files, File Management Systems, Secondary Storage Management – File Allocation.

TEXTBOOK:

1. William Stallings, Operating Systems, Second Edition, Maxwell McMillan, International Editions, 1997. (unit I)
2. Silberschatz A.Peterson J.L., Galvan, Operating System Concepts. Third Edition. (unit II, III, IV, V)

REFERENCE BOOKS:

1. Dental H.M., An Introduction to Operating Systems, Addison Wesley Publishing Co., 1998.
2. Charles Crowley, Operating Systems – A Design Oriented Approach, IRWIN Publication.

IV SEMESTER			
DSC 10	**COMPUTER NETWORKS**		**18UCCA43**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:
To provide students fundamentals of data communication and computer networks in layered network models (OSI reference model, TCP/IP networking architecture) and their protocols.

UNIT I

Introduction: Data Communication – Networks – Protocols and Standards – Standards Organizations. Basic Concepts: Line Configuration – Topology – Transmission Mode – Categories of Networks – Internetworks.

The OSI Model: The Model – Functions of the layers (Physical, Data Link, Network, Transport, Session, Presentation and Application Layers)

UNIT II

Transmission Media Guided Media (Twisted – Pair Cable, Coaxial Cable, Optical Fiber) – Unguided media (Radio Frequency Allocation, Propagation of Radio Waves, Terrestrial Microwave, Satellite Communication, Cellular Telephony)

UNIT III:

Data Link Control: Line Discipline – Flow Control – Error Control. Network Layer Function: Circuit Switching – Packet Switching – Message Switching

UNIT IV:

Transport Layer**:** Duties of the transport Layer. Session Layer: Session and Transport Interaction – Synchronization Points – Session Protocol Data UNIT

UNIT V:

Presentation Layer: Translation – Encryption / Decryption – Authentication Data Compression Application Layer: Message Handling System – File Transfer, Access and Management, Virtual Terminal, Directory Services, Common Management Information Protocol.

TEXTBOOK:
"Introduction to Data Communication and Networking" – Behrouz Forouzan – Tata McGraw-Hill, 3rd Edition, 2006.

UNIT I:– Chapters 1,2,3
UNIT II:– Chapters 7.1,7.2
UNIT III:– Chapters 10.1, 10.2, 10.3, 14.1, 14.2, 14.3
UNIT IV:– Chapters 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 13.1
UNIT V:– Chapters 22.1,23

REFERENCE BOOKS:

1. "COMPUTER NETWORKS" – Andrew S. Tanenbaum, 4thEdition, PHI
2. Achyut and Godbole, "Data Communications and Computer Networks", Tata McGraw-Hill Edition,2006.

IV SEMESTER			
DSE2A	**UNIX AND SHELL PROGRAMMING**		**18UECA4A**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

To provide introduction to UNIX operating system and their various basic commands and shell scripting/programming.

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.

UNIT III:

Vi editor – Creating Text – Editing text – 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.

TEXTBOOK:

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

REFERENCE BOOKS:

1. Graham Glass, King Ables, “Unix for programmers and users”, Third Edition, Pearson Education.
2. Sumitabha Das, “Unix Concepts and Applications”, Tata McGraw-Hill Publications, Fourth Edition, 2017.

IV SEMESTER			
DSE2B	**WEB DESIGNING**		**18UECA4B**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:
To provide student an ability to design website using HTML and CSS

UNIT I

Introduction to HTML – History Of HTML –HTML Documents - HTML Editors – HTML Basics – HTML Elements and Attributes – Anchor Tag – Hyper Links. Head and Body Sections – Header Section – Title, prologue, Links, Colorful Web Page, Comment Lines.

UNIT II

Designing Body Sections – Heading printing, Aligning the Headings, Horizontal rule, Paragraph, Tab Settings.

UNIT III:

Lists, Unordered Lists, Ordered Lists, Table Handling, Layouts, Frames: Frameset Definition – Frame Definition – Nested Framesets.

UNIT IV:

Forms – Action Attribute – Drop Down List – Check Boxes – Radio Buttons – Text Field – Text Area – Password – Hidden – Submit and Reset Buttons.

UNIT V:

CSS Introduction – CSS Selectors - Text & fonts – CSS Box Model – CSS Border – Margin & Padding – Pseudo Classes - Javascript Overview – Syntax – Javascript Events – Javascript Functions – Cookies.

TEXTBOOK:

1. Thomas A. Powell, “The Complete Reference – HTML& CSS”, Fifth Edition, McGraw-Hill Education, 2017.

REFERENCE BOOKS:

1. World Wide Web design by C. Xavier
2. Mike McGrath, “HTML5 in Easy Steps”, Second Edition, BPB Publications, 2017

IV SEMESTER			
AII-2	**RDBMS WITH ORACLE**		**18UACA41**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 3**

Objective:

To provide student the architecture (logical and physical) structure of the Oracle Database Management System. and working knowledge of the Relational Database Model as well as SQL and PL/SQL programming skills.

UNIT I

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

UNIT II

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.

UNIT III:

Multiple tables: joins-set operations. Index – sequence – view

UNIT IV:

Users – privileges and roles – synonyms-Distributed processing: distributed processing – replication.

UNIT V:

PL/SQL: PL / SQL – triggers – stored procedures and functions – packages – cursors – transactions - Distributed processing: distributed processing – replication.

TEXTBOOK:

1. Jose. A. Ramalho – Learn Oracle 8i, B.P.B Publications. (UNIT 1 to 4)
2. http://docs.oracle.com/cd/B19306_01/server.102/b14220/security.htm (UNIT 5)

REFERENCE BOOKS:

1. Nilesh Shah, “Database Systems using Oracle A simplified guide to SQL and PL/SQL”, Prentice Hall of India, 2009.
2. Abraham Silberschatz, Henry F. Korth and S. Sudarsan, “Database system concepts”, Sixth edition, McGraw-Hill, 2011.

IV SEMESTER		
DSCP5	**ASP.NET PRACTICALS**	**18UCCA4P1**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

1. Create a web form to add controls and display a message.
2. Create a web form to change the color of the page using drop down list.
3. Create a page using code behind file.
4. Create a web form to handle list box's selection change event.
5. Create a page that takes name and message from the user and choose a color by radio button, select a style from the checkbox and display the formatted text.
6. Create a web form and demonstrate the use of hyperlink control.
7. Create a web form and demonstrate the use of validation control.
8. Create a page that takes number of rows and columns from the user and make a table.
9. Create a page which generates a greeting card.
10. Demonstrate use of login controls with web forms for login, create user, password recovery.

IV SEMESTER		
DSEP-2A	**UNIX & SHELL PROGRAMMING PRACTICALS**	**18UECA4PA**
Hrs/Week: 2	**Hrs/Sem: 30**	**Credit: 1**

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.
9. Counting number of lines before and after updating the file.
10. File Comparison.
11. Listing contents of directory and removing directory.
12. Implementing copy, move command.
13. Implementing sort command
14. Implementing grep command
15. Students mark List

IV SEMESTER		
DSEP-2B	**WEB DESIGNING PRACTICALS**	**18UECA4PB**
Hrs/Week: 2	**Hrs/Sem: 30**	**Credit: 1**

1. Write a HTML code to display information about your college. Use 1) Bold Tag 2) Centre Tag 3) Heading tags and font tags, Add background color and picture.
2. Design a web page with attractive background color and text color the academic and personal facets of an international leader. Give suitable headings and horizontal rules.
3. Write a HTML program using all formatting elements
4. Write a HTML program to prepare a biodata in a form.
5. Write an HTML program to print a nested list.
6. Create a table to display your I semester marks obtained in the exam.
7. Write an HTML program to display your current semester timetable.
8. Write an HTML code to display a list of cars in a frame Line, each one to a brief description in second frame. Both the frames should be side by side.
9. Write an HTML program to display any three Flower details in separate frames. Each frame should be side by side.
10. Write a HTML program to develop a web page using css.

IV SEMESTER		
AII-P-2	**RDBMS WITH ORACLE PRACTICALS**	**18UACA4P1**
Hrs/Week: 2	**Hrs/Sem: 30**	**Credit: 1**

1. Creating, modifying and dropping tables using constraints
2. Inserting, modifying, deleting rows.
3. Retrieving rows with operators in where clause.
4. Retrieving rows with Character, Number and Date functions.
5. Retrieving row with Group functions and HAVING.
6. Joining Tables (Inner and Outer)
7. Program using control structures
8. Program using Exception Handling
9. Program Using Triggers
10. Program using Cursors
11. Program using Packages
12. Program using Functions

IV SEMESTER			
NME 2	**INTRODUCTION TO INTERNET & HTML**		**18UNCA41**
Hrs/Week: 2	**Hrs/Sem: 30**	**Hrs/Unit: 6**	**Credit: 2**

UNIT I

Introduction to internet-computers in business networks-internet-electronic mail-resource sharing-gopher-www-usenet-telnet-bulletin services-wide area information service.

UNIT II

Designing a home page-history of html-html generations-html document-anchor tag-hyperlinks-sample html documents-header and body section-designing the body-tab setting-image and picture-embedding PNG format images.

UNIT III:

List unordered list-ordered list-nested list-table creation-Cell spacing and spanning-coloring cells - rows and columns specification.

UNIT IV:

Frameset-definition-frame definition-nested frame sets.

UNIT V:

Forms action attributes-method attributes-enctype attributes-dropdown list.

TEXTBOOK:

World Wide Web Design with html-C. Xavier

REFERENCE BOOKS:

1. Mike McGrath, “HTML5 in Easy Steps”, Second Edition, BPB Publications, 2017.
2. Thomas A. Powell, “The Complete Reference – HTML& CSS”, Fifth Edition, McGraw-Hill Education, 2017.

V SEMESTER			
DSC 11	**COMPUTER GRAPHICS & MULTIMEDIA**		**18UCCA51**
Hrs/Week: 6	**Hrs/Sem: 90**	**Hrs/Unit: 18**	**Credit: 4**

Objectives:

To introduce multimedia processing, and editing of various types of media, including text, hypertext, images, audio, video, and animation and how pictures and movies created using computers.

UNIT I

Introduction to graphics: Application of computer graphics –Raster and vector Graphics – Display devices – Graphical Input devices. Graphics in c++ – Coordinate system – Line, Circle drawing – Other shapes – Setting drawing colors – Setting background colors – Line styles – Fill styles – Displaying texts – Animations.

UNIT II

Raster Graphics Algorithms: Line drawing – Polynomial – DDA – Bresenham's algorithm – Circle drawing – polynomial – trigonometric – Bresenham's algorithm – Midpoint algorithm.

UNIT III:

Geometrical transformations: 2D and 3D graphics – matrix representation – Homogeneous coordinates – window to view port transformations

UNIT IV:

Clipping operation: Point Clipping – Line Clipping - Polygon Clipping - Curve Clipping.

UNIT V:

Multimedia: Overview – Multimedia operating systems – system requirements and configurations for multimedia – compression technology for multimedia – Multimedia tools – Developing and delivering a multimedia project – Applications of multimedia.

TEXTBOOKS:

1. Computer Graphics and Multimedia – Donald Hearn & Paurlin Baker – Computer Graphics, Prentice Hall of India Pvt Ltd.
2. Interactive computer Graphics –Neumann and Sproull McGraw-Hill Publications.

REFERENCE BOOKS:

1. Foley Van Dam, Feigner Hughes, "Computer Graphics Principles and Practices", 2nd edition.
2. "Computer Graphics", ISRD Group, Tata McGraw-Hill, 2012.

V SEMESTER			
DSC 12	**PHYTHON PROGRAMMING**		**18UCCA52**
Hrs/Week: 6	**Hrs/Sem: 90**	**Hrs/Unit: 18**	**Credit: 4**

Objectives:

To provide students with an introduction to programming, I/O, and visualization using the Python programming language.

UNIT I

Introduction to Python - Installation and Working with Python - Understanding Python – variables - Python basic Operators - Understanding python blocks Python Objects -Namespaces - Comments - Operators - Variables and Assignment - Numbers - Integers Floating Point Real Numbers - Complex Numbers - Strings - Lists and Tuples -Dictionaries.

UNIT II

Built-in Function - Statements and Syntax Variable Assignment Identifiers - Conditionals and Loops - If Statement - else Statement - elif (a.k.a. else-if) Statement - while Loop - break Statement - continue Statement - pass Statement

UNIT III:

Functions - Default Arguments - Formal Arguments - Positional Arguments -Variable-length Arguments - Creating Functions - Calling Functions -Passing Functions

UNIT IV:

Classes - Modules - Persistent Storage Modules Related Modules Errors And Exceptions -Detecting and Handling Exceptions- Exceptions as Strings - Exceptions as Classes -Module Built-in Functions

UNIT V:

Regular Expressions - Files and Input/Output - Files and the open() Built-in Function - File Execution - Errors and Exceptions - Packages

TEXTBOOK:

Core Python Programming, Wesley J. Chun, Publisher: Prentice Hall PTR

REFERENCE BOOKS:

1. Chun, J.Wesley, “Core Python Programming”, Second Edition, Person, 2010.
2. Barry, Paul, “Headfirst Python”, Second Edition, O Rielly, 2010.

V SEMESTER			
DSC 13	**MOBILE COMPUTING**		**18UCCA53**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

To understand the challenges of wireless communication and the solutions that is in use, study about various types of wireless data networks, wireless protocols, design and implement mobile applications and learn development of applications in mobile computing platform.

UNIT I: INTRODUCTION TO MOBILE COMPUTING

Mobile Computing – Mobile Computing Vs wireless Networking – Mobile Computing Applications – Characteristics of Mobile computing – Structure of Mobile Computing Application. MAC Protocols – Wireless MAC Issues – Fixed Assignment Schemes – Random Assignment Schemes – Reservation Based Schemes.

UNIT II: MOBILE INTERNET PROTOCOL AND TRANSPORT LAYER

Overview of Mobile IP – Features of Mobile IP – Key Mechanism in Mobile IP – route Optimization. Overview of TCP/IP – Architecture of TCP/IP-Adaptation of TCP Window – Improvement in TCP Performance.

UNIT III: MOBILE TELECOMMUNICATION SYSTEM

Global System for Mobile Communication (GSM) – General Packet Radio Service (GPRS) – Universal Mobile Telecommunication System (UMTS).

UNIT IV: MOBILE AD-HOC NETWORKS

Ad-Hoc Basic Concepts – Characteristics – Applications – Design Issues – Routing – Essential of Traditional Routing Protocols –Popular Routing Protocols – Vehicular Ad Hoc networks (VANET) – MANET Vs VANET – Security.

UNIT V: MOBILE PLATFORMS AND APPLICATIONS

Mobile Device Operating Systems – Special Constrains & Requirements – Commercial Mobile Operating Systems – Software Development Kit: iOS, Android, BlackBerry, Windows Phone – M-Commerce – Structure – Pros & Cons – Mobile Payment System – Security Issues.

TEXTBOOK

Prasant Kumar Pattnaik, Rajib Mall, "Fundamentals of Mobile Computing", PHI Learning Pvt. Ltd, New Delhi – 2012.

REFERENCES

1. Jochen H. Schller, "Mobile Communications", Second Edition, Pearson Education, New Delhi, 2007.
2. Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems", Thomson Asia Pvt Ltd, 2005.
3. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, "Principles of Mobile Computing", Springer, 2003.

V SEMESTER			
DSE-3A	**MONGODB PROGRAMMING**		**18UECA5A**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:
To introduce MongoDB open-source NoSQL document database to create and deploy a highly scalable and performance-oriented database.

UNIT I:
MongoDB Overview-Advantages-MongoDB Environment-Common Terms in MongoDB- Data Modelling-Create and Drop Database

UNIT II:
Collections-Create and Drop Collections- MongDB Data Types-Insert Command- MongoDB Query Document-Update Command-Delete Command-Projection-Limit Record-Sort Record-Aggregation.

UNIT III:
Indexing- Compound Indexes -Indexing Objects and Arrays Index Cardinality -Using explain() and hint() -The Query Optimizer-Types of Indexes-Unique Indexes -Sparse Indexes -Index Administration -Identifying Indexes-Changing Indexes

UNIT IV:
Replication: Overview – Replica sets – Master-slave replication – Drivers and replication. Sharding: Overview – A sample shard cluster – Querying and indexing a shard cluster – Choosing a shard key – Sharding in production.

UNIT V:
Deployment and administration: Deployment – Monitoring and diagnostics – Maintenance – Performance troubleshooting.

TEXTBOOK
Kristina Chodorow “MongoDB the definitive guide”, Second Edition, O’Reilly Media Inc

REFERENCE BOOKS
1. Rick Copeland, 2013, “MongoDB Applied Design Patterns”, First Edition, O’Reilly Media Inc.
2. NoSQL with MongoDB in 24 Hours, Sams Teach Yourself by Brad Dayley

WEBSITES
https://www.tutorialspoint.com/mongodb

V SEMESTER			
DSE-3B	**C# PROGRAMMING**		**18UECA5B**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

To provide the knowledge of Dot Net Frameworks along with C#

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, for each statements – Jump Statements – Selection Statements

UNIT IV:

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

UNIT V:

Delegate Declaration and Instantiation- Events – Exceptions – Preprocessor Directives – C# Documentation Comments – Generating c# Documentation

TEXTBOOK:

Programming in c# - Balagurusamy E 2007 McGraw-Hill Education

REFERENCE BOOKS:

1.John Sharp, “Microsoft Visual C# Step by Step”, Eighth Edition, PHI Publications, 2016.
2. Harsh Bhasin, “Programming in C#”, First Edition, Oxford University Press, 2014.

V SEMESTER		
DSCP7	**COMPUTER GRAPHICS & MULTIMEDIA PRACTICALS**	**18UCCA5P1**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

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

V SEMESTER		
DSEP-3A	**MONGODB PROGRAMMING PRACTICALS**	**18UCCA5PA**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

1. Write a MongoDB query to create the collection "Students" and insert the data.
2. Write a MongoDB query to create, insert data into the Database
3. Write a MongoDB query to create an employee Database
4. Write a MongoDB query to update and delete data into the Database
5. Write a MongoDB query to find a record in the table.
6. Write a MongoDB query to sort a Database
7. Write a MongoDB query to create and drop Index.
8. Write a MongoDB query using match() and group() method
9. Write a MongoDB query using count() and remove() function
10. Write a MongoDB query to create a user and assign roles.

V SEMESTER		
DSEP-3B	**C# PROGRAMMING PRACTICALS**	**18UCCA5PB**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

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

   $f(x) = x^2 + \sin 2x$ if $x < 3$

   $= 10.3$ if $x = 3$

   $= x^3 \cos 3x$ if $x > 3$

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 illustrating types of delegates.

V SEMESTER			
SEC-I	**BASIC MATHEMATICS**		**18USCA51**
Hrs/Week: 2	**Hrs/Sem: 30**	**Hrs/Unit: 6**	**Credit: 2**

Objectives:
To provide the student the knowledge, skills and attitudes necessary to pursue further studies in mathematics and develop abstract, logical and critical thinking

UNIT I

Number Systems and Equations: Numbers – Natural - Whole – Rational – Irrational Real – Algebraic expression – factorization – linear equations with two or three unknowns – solutions of quadratic equations.

UNIT II

Set theory: Sets and elements, Universal Set and Empty Set, Subsets, Venn Diagrams, Set Operations, Algebra of Sets and Duality, Finite, Infinite Sets and Counting Principle, The Inclusion-Exclusion Principle, Classes of Sets, Power Sets.

UNIT III:

Logic and Proportional Calculus: Propositions and Compound Propositions, Basic Logical Operations, Propositions and Truth Tables, Tautologies and Contradictions, Algebra of propositions, Conditional and Bi-conditional statements, Logical Implication

UNIT IV:

Matrices: Basic concepts – matrix addition – scalar multiplication – Multiplication of Matrix – inverses of a matrix – solution through linear equations.

UNIT V:

Commercial Arithmetic: Percentages – ratio and proportion – simple interest – compound interest – discount – banker's discount.

TEXTBOOKS:

1. Business Mathematics – D.C. Sancheti and V.K. Kapoor Publisher: Sultan Chand & Sons, New Delhi.
2. Discrete Mathematics – Seymour Lipschutz and Marc Lars Lipson -Schaum's Series – Third Edition – Tata McGraw-Hill Publications.
3. A Textbook of Business Mathematics by G.K. Ranganath – Himalaya Publishing House, Delhi.

REFERENCE BOOKS:

1. A Textbook of Business Mathematics by G.K. Ranganath – Himalaya Publishing House, Delhi.
2. K.D. Joshi, "Foundation of Discrete Mathematics", Wiley Eastern Ltd.

VI SEMESTER			
DSC 14	**ADVANCED JAVA PROGRAMMING**		**18UCCA61**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

To provide the ability to design console based, GUI based and web-based application and to understand integrated development environment to create, debug and run multi-tier and enterprise level applications

UNIT I

APPLET AND SWING: Fundamentals of Applets –Creating Applet in java-Applet Life Cycle-Graphics methods in java- AWT components-Swing-Introduction.

UNIT II:

Event Handling- Two Event handling mechanisms-The Delegation Event Model-Sources of Events-Event Listener Interface-Using delegation Event model

UNIT III:

Java Database Connectivity (JDBC): Setting up first JDBC query-Connecting to databases with JDBC- Building JDBC Statements-working with Result sets-Understanding JDBC Data Types

UNIT IV:

Servlet: Servlet Overview and Architecture, Interface Servlet and the Servlet Life Cycle, Handling HTTP get Requests, Handling HTTP post Requests, Redirecting Requests to Other Resources, Session Tracking, Cookies, Session Tracking with Http Session

UNIT V:

Java Beans: Introduction to Bean-Advantages of Java bean-Application Builder Tools- BDK -JAR files-Introspection-Developing a Simple Bean

TEXTBOOK:

Java2 Complete Reference-Herbert Schildt, Tata McGraw-Hill

REFERENCE BOOKS:

1. Java Programming for Core & Advanced Learners by S. Sagayaraj (Author), R. Denis (Author), P Karthik (Author), D. Gajalakshmi (Author)
2. BIG JAVA, 4th edition, Gay Horstmann.

VI SEMESTER			
DSC 15	**SOFTWARE PROJECT MANAGEMENT**		**18UCCA62**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

To understand the fundamental principles of software project management and to have good knowledge of responsibilities of project manager to handle this.

UNIT I:

Introduction to software project management: Introduction-Selecting a project-Identifying Project Scope and Objectives-Identifying Project Infrastructure

UNIT II:

Project Evaluation and Estimation: Cost benefit analysis-Cash Flow forecasting-Cost benefit evaluation techniques

UNIT-III

Risk Management: Introduction-Nature of the risk-managing risk-Risk Identification-Risk Analysis-Reducing the Risk

UNIT IV:

Monitoring the Control: Introduction-Creating the Framework-Collecting the data-Visualizing Progress-Cost Monitoring

UNIT-V

Software Quality: Introduction-Importance of software Quality-Defining software Quality-Product and Process Metrics-Techniques to enhance Software Quality, Testing

TEXTBOOK:

Software Project Management (Second Edition), by Bob Hughes and Mike Cotterell,1999, TMH

REFERENCE BOOKS:

1. Software Project Management, Walker Royce,1998, Addison Wesley
2. Software Project Management: A Unified Framework, 2002by ROYCE

VI SEMESTER		
DSC 16	**PROJECT**	**18UCCA63**
Hrs/Week: 6	**Hrs/Sem: 90**	**Credit: 6**

Objectives:

1. Identify the potential areas of research in his/her field.
2. Collect data from various sources including the internet, analyze 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.**
7. **Evaluation scheme:**
8. 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

VI SEMESTER			
DSE-4A	**PHP WITH MYSQL**		**18UECA6A**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:

The PHP Programming & MySQL for Web Development to give delegates the knowledge to develop/maintain PHP scripts utilizing the MYSQL database system and HTML.

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.

TEXTBOOK:

PHP A Beginner's Guide – Vikram Vaswani – Tata McGraw-Hill.

REFERENCE BOOKS:

1.W. Jason Gilmore, "Beginning PHP and MySQL 5": From Novice to Professional", Second Edition, Apress publication.

2.Paul Hudson, "PHP in a Nutshell", O'Reilly Media, 2005.

VI SEMESTER			
DSE-4B	**CORE ANDROID APPLICATION**		**18UECA6B**
Hrs/Week: 4	**Hrs/Sem: 60**	**Hrs/Unit: 12**	**Credit: 4**

Objectives:
To provide student knowledge for developing apps for Android devices and to understand the application lifecycle

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 andthe 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, and 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 On-click events

UNIT-V

Understanding content providers: An overview of Android Content Providers – Defining a Content Providers – Working with a Database – Understanding Intents and Intent Filters – Graphics API-2D Graphics – android-graphics-Canvas- android-graphics-Paint class

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

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. BlakeMeike, Laird Dornin, Zane Pan

VI SEMESTER		
DSCP- 9	**ADVANCED JAVA PROGRAMMINGPRACTICALS**	**18UCCA6P1**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

1. Program using Applet
2. Program using Swing
3. Program using Event Handling
4. Developing applications using JDBC
5. Program using Servlet
6. Program using Java Beans
7. Registering a New User and Displaying the Number of Visits Made by the Existing User using Cookies
8. Write a AWT program to create check boxes for different courses belongs to a university such that the course selected would be displayed.
9. Write a program to perform state management using Http Session using servlet.
10. Write a program to create GUI components of online shopping site using swing

VI SEMESTER		
DSCP- 10A	**PHP WITH MYSQL PRACTICALS**	**18UECA6PA**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

1. Write a PHP code using if else statement.
2. Write a PHP code using while loop.
3. Write a PHP script to get the current file name.
4. Write a PHP code to print the multiplication table.
5. Write a PHP code using string and numeric functions.
6. Write a PHP code using array functions.
7. Write a PHP script to calculate and display average temperature, five lowest and highest temperatures.
8. Design a HTML form using HTML Control and write a PHP code for displaying the employee's information.
9. Write a PHP code for Adding, Deleting, and Modifying records.
10. Write a PHP code using function.

VI SEMESTER		
DSCP- 10B	**CORE ANDROID APPLICATION PRACTICALS**	**18UECA6PB**
Hrs/Week: 4	**Hrs/Sem: 60**	**Credit: 2**

1. Create a sample application about Android Application Resources.
2. Create an Android program to implement Alert Dialog.
3. Create Sample Application about user interfaces.
4. Create an application using menus.
5. Create a Sample Application about Layouts.
6. Create a basic List View Demo in Android.
7. Create a sample application using intents.
8. Create Calculator App in Android.
9. Create a Database Connective in Android.
10. Create a Sample Application about Animations.

V SEMESTER
SEC-II DIGITAL MARKETING 18USCA61
Hrs / Week: 2 Hrs / Sem: 30 Hrs/Unit:6 Credits:2

Objectives:
To develop students' knowledge and understanding of Digital Marketing strategies and develop practical skills around implementing these new plans.

UNIT I:

Introduction to E-Commerce-Traditional Commerce and Electronic Commerce-Types of E-Commerce-Benefits of E-Commerce to Organization, Consumers.

UNIT II:

M-Commerce-Growth of M-Commerce-Wireless Applications-Technologies for M-Commerce-GPRS-Wireless Technologies (CDMA & GSM) - Generations in Wireless Communication-Security Issues in Cellular Technology

UNIT III:

Electronic Data Interchange-Definition-Benefits of EDI-EDI Application in Business- Un/EDIFACTS Standard.

UNIT IV:

Electronic Payment System: Special features required in payment systems for ecommerce, Types of e-payment systems; E-cash and currency servers, e-cheques Digital token-based credit cards, smart cards, electronic purses and debit cards.

UNIT V:

Security on Internet-Network and Website Security Risks-Security incidents-Security and E-Mail-Firewall Concepts and Constituents-Benefits-Secure Physical Infrastructure

TEXTBOOK:
Kamalesh K. Bajaj and Debajaninag E-Commerce, Tata McGraw-Hill Publications Co Ltd, New Delhi

REFERENCE BOOKS:
1. S.Jaiswal: Doing Business on the Business on the Internet Commerce, Galgotia Publication
2. David Whitely: E-Commerce, Tata McGraw-Hill Publications Co. Ltd., New Delhi

VI SEMESTER			
SBC	**PERSONALITY DEVELOPMENT**		**18USPD62**
Hrs / Week: 2	**Hrs / Sem: 30**	**Hrs/Unit: 6**	**Credits:2**

UNIT -I

PERSONALITY - Definition – Determinants – Personality Traits –Theories of Personality – Importance of Personality Development. **SELF AWARENESS** – Meaning – Benefits of Self – Awareness – Developing Self – Awareness. **SWOT** – Meaning – Importance- Application – Components.

UNIT – II

SELF MONITORING – Meaning –Advantages and Disadvantages self-monitor - Self – monitoring and job performance. **PERCEPTION**- Definition- Factor influencing perception- Perception process. **ATTITUDE** – Meaning- Formation of attitude – Types of attitude - Measurement of Attitudes. **ASSERTIVENESS** - Meaning – Assertiveness in Communication – Assertiveness Techniques.

UNIT – III

TEAM BUILDING – Meaning – Types of teams – Importance of Team building- Creating Effective Team. **LEADERSHIP** – Definition – Leadership style – Qualities of an Effective leader. **NEGOTIATION SKILLS** – Meaning – Principles of Negotiation – Types of Negotiation – The Negotiation Process. **CONFLICT MANAGEMENT** – Definition- Types of Conflict- Levels of Conflict.

UNIT –IV

COMMUNICATION – Definition – Importance of communication – Process of communication –Barriers in communication – Overcoming Communication Barriers. **EMOTIONAL INTELLIGENCE**: Meaning – Components of Emotional Intelligence- Significance of managing Emotional intelligence. **STRESS MANAGEMENT** – Meaning – Sources of Stress – Symptoms of Stress – Consequences of Stress – Managing Stress.

UNIT – V

SOCIAL GRACES – Meaning – Social Grace at Work – Acquiring Social Graces. **TABLE MANNERS** – Meaning – Table Etiquettes in Multicultural Environment- Do's and Don'ts of Table Etiquettes. **DRESS CODE** – Meaning- Dress Code for selected Occasions – Dress Code for an Interview. **GROUP DISCUSSION** – Meaning – Personality traits required for Group Discussion- Process of Group Discussion**. INTERVIEW** – Definition- Types of skills – Employer Expectations – Planning for the Interview – Interview Questions- Critical Interview Questions.

References:

1. Dr.S. Narayana Rajan, Dr. B. Rajasekaran, G. Venkadasalapthi, V. Vijuresh Nayaham and Herald M.Dhas, **Personality Development**, Publication Division, Manonmaniam Sundaranar University, Tirunelveli
2. Stephan P.Robbins, **Organisational Behaviour**, Tenth Edition, Prentice Hall of India Private Limited, New Delhi,2008
3. Jit S. Chandan, **Oragnisational Behaviour**, Third Edition, Vikas Publishing House Private Limited, 2008
4. Dr. K.K. Ramachandran and Dr. K.K. Karthick, **From Campus to Corporate**, Macmillan Publishers India Limited, New Delhi, 2010.

SCHEME OF EXAMINATIONS UNDER CBCS (2018 - 2021)

The medium of instruction in all UG and PG courses is English, and students must write the CIA Tests and Semester Examinations in English.

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.	OVERALL
Theory	100	25	75	Nil	30	40
Practical (4 hrs)	100	40	60	Nil	24	40
Practical (2 hrs)	50	20	30	Nil	12	20
Project	100	Nil	Report - 60 marks Viva Voce - 40 marks	Nil	Nil	40

DIVISION OF MARKS FOR CIA TEST

SUBJECT	MARKS	ASSIGNMENT FOR UG / ASSIGNMENT OR SEMINAR FOR PG	RECORD NOTE	TOTAL MARKS
Theory	20	5	--	**25**
Practical (4 hrs)	30	--	10	**40**
Practical (2 hrs)	15	--	5	**20**

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 has to be submitted.
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. Two internal practical tests of 30/15 marks each will be conducted for science students in the respective semester and the average will be taken. The record marks allotted for the above practical are 10 and 5 respectively.

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 ANYONE 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 carry 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**