ARUL ANANDAR COLLEGE (AUTONOMOUS), KARUMATHUR – 625 514 (Reaccredited by NAAC with "A" Grade with a CGPA of 3.66) DEPARTMENT OF IT & M Programme Specific Outcome (PSO)

- 1. Learn current techniques and modern tools necessary to develop the software applications and business.
- 2. Identify, analyze, formulate and solve technical problems by applying principles of Information Technology and Management to the problem.
- 3. Take up multidisciplinary projects and to carry out it as per industry standards.
- 4. Comprehend and apply the technical solutions in a global and social context.
- 5. Understand and practice professional, ethical, legal, and social responsibilities as a matured citizen.

ARUL ANANDAR COLLEGE (AUTONOMOUS), KARUMATHUR DEPARTMENT OF IT & M OBE SYLLABUS (From 2022-2023 onwards)

	I SEMESTER								
Part	Subject Code	Subject Title	Hours	Credits					
	22UTAL11/	Tamil/							
I	22UHNL11/	Hindi/	6	4					
	22USNL11	French							
- 11	22UENB11	English through Prose & Short Story – Stream B	5	4					
	22UITC11	Core – 1 Principles of Management	4	4					
	22UITC21	Core – 2 Programming in C	3	3					
	22UITP11	Programming in C - Lab-1	5	3					
	22UITA11	Allied -1 Digital Principles	5	4					
	22UFCE11	FC – Personality Development	1	1					
IV	22UCSH12	Communication Skill	1	-					
	22UBRC11	Bridge Course		1					
	22UNCC/NSS/	Extension Activities NSS / NCC / Phy.Edn./							
V	PHY.EDU./YRC/	YRC /ROTARACT / AICUF /	-	-					
	ROT/ACF/NCB12	Nature Club							
		Total	30	24					
		II SEMESTER							
	22UTAL22/	Tamil/							
I	22UHNL22/	Hindi/	6	4					
	22USNL22	French							
П	22UENB22	English through Prose & Short Story – Stream B	5	4					
	22UITC32	Core – 3 Programming in C++	3	3					
	22UITC42	Core – 4 Data Structures & Algorithms	4	3					
111	22UITP22	Programming in C++ - Lab - 2	5	3					
	22UITA22	Allied – 2 Environment of Business	5	4					
11/	22UFCH22	FC- Social Responsibility and Global Citizenship	1	1					
IV	22UCSH12	Communication Skill	1	1					
	22UNCC/NSS/	Extension Activities NSS / NCC / Phy. Edn. / YRC							
V	PHY.EDU./YRC/	/ROTARACT / AICUF / Nature Club	-	1					
	ROT/ACF/NCB12								
		Total	30	24					
	1		-	1					
- 111	22UITC53	Core – 5 Operating Systems	5	4					
	22UITC63	Core – 6 DBMS	4	3					
	22UITC73	Core – 7 Web Technology	4	3					
	22UITP33	Programming in Web Technology Lab -3	5	3					
	22UITA33	Allied – 3 Business Accounting	5	4					

IV	22UITN13	Basic Tamil / Advanced Tamil / NME-1 Image	3	2
		Editing Tools		
	22UITS13	Skill based Elective- 1 Business Law	3	2
	22UFCE33	FC-Environmental Studies	1	1
V	22UNCC/NSS/	Extension Activities NSS / NCC / Phy.Edn./		
	PHY.EDU./YRC/	YRC /ROTARACT / AICUF /Nature Club	-	-
	ROT/ACF/NCB24			
	22UARE14	ARISE	-	-
		Total	30	22
		IV SEMESTER		
	22UITC84	Core – 8 Organizational Behaviour	4	4
	22UITC94	Core – 9 Computer Network	5	4
Ш	22UITD04	Core – 10 Dot Net Programming	4	2
	22UITP44	Dot Net Programming Lab - 4	5	3
	22UITA44	Allied–4 Web Marketing	5	4
	22UITN24	Basic Tamil / Advanced Tamil / NME- 2	3	2
		Ethical Hacker		
IV	22UITS24	Skill based Elective - 2	3	2
		Business Statistics		
	22UFCH44	FC - Religious Literacy and Peace Ethics	1	1
	22UNCC/NSS/	Extension Activities NSS / NCC / Phy.Edn. /		
V	PHY.EDU./YRC/	YRC /ROTARACT / AICUF /Nature Club		1
v	ROT/ACF/NCB24			
	22UARE14	ARISE	-	1
		Total	30	24
		V SEMESTER		
	22UITD15	Core - 11 Software Engineering	5	4
	22UITD25	Core – 12 Research Methodology	5	4
	22UITD35	Core – 13 Marketing Management	5	4
III	22UITD45	Core – 14 Java Programming	5	4
	22UITP55	Programming in Java Lab - 5	5	4
	22UITE15	Core Elective - 1	3	3
		Human Resource Management		
11/	22UINT15	Internship (Holidays)		1
IV	22USSI16	Soft Skills	2	
		Total	30	24
		VI SEMESTER		
	22UITD56	Core – 14 Mobile Application Development	5	4
	22UITP66	Mobile Programming Lab - 6	5	4

22UITD66	Core – 15 Advertising and Salesmanship	5	4
22UITD76	Core – 16 Entrepreneurship	5	4
	Development		
22UITD86	Core – 17 Project	5	4
22UITE26	Core Elective- 2 Internet of Things	3	3
22USSI16	Soft Skills	2	2
	Total	30	25

Semester	I	II	III	IV	V	VI	TOTAL
Credits	24	24	22	24	24	26	144*

Non-Major Electives

For Non-Science Students : Image Editing Tools

For Science Students : Ethical Hacker

Self-Learning Course

Semester	Subject Code	Title of the Paper	Credits
Semester-III	22UITSL3	Scripting Languages	3
Semester-IV	22UITSL4	Stress Management	3
Semester-V	22UITSL5	Cyber Security	3
Semester-VI	22UITSL6	Export and Import Management	3

Class : I IT & M

Semester : I

Subject Code : 22UITC11

Part : III Core-1

Hours : 60

Credits : 04

PRINCIPLES OF MANAGEMENT

1. Title of the Paper : Principles of Management

2. Course Educational Objectives (CEO)

- Understanding the basic concepts and functions of Principles of Management
- Knowing the importance and guidelines for effective planning
- Learning the process of decision making and factors affecting organizational structure
- Comprehending the concept of Direction and different types of leadership style
- Applying the skills and knowledge given by Management experts.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction on Management Management – Definition –Features- Importance – Nature – Levels – functions – Management VS Administration.	12
II	Planning Planning – Characteristics – Importance. Types of Planning – Steps in Planning Process- Advantages and Limitations of Planning – Guidelines for Effective Planning.	12
	Decision Making and Organization Decision Making – Process – Types of decisions – Organizational structure – types – Staffing – functions.	12
IV	Direction and Controlling Direction – Techniques of direction – Leadership – Types of leadership styles – Controlling – Definition – Process.	12
V	Contribution of Management Thinkers F.W.Taylor- Scientific Management - Henry Fayol – 14 Principles of Management - Elton Mayo – Hawthorne Experiment - Peter Drucker – MBO Concept.	12

4. Book for Study:

1. T. Ramasamy, "Principles of Management", Himalaya publishing House , Mumbai, 2010.

5. Book for Reference:

- 1. Prasad L. M, "Principles of Management", Sultan Chand & Sons Publications, New Delhi, 2006.
- 2. Dr.S.Arunprasad, "Principles of Management", Notion Press Publication, Chennai 2021.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- CO1. Discover the students to become professional Managers
- CO2. Generalized the knowledge of principles of management in the working environment
- CO3. Manipulate their managerial skills through principles of management
- CO4. Describe the basic techniques of directing and controlling
- CO5. Extend the contribution of Management thinkers

8. Course Outcome Level (Preferable one for each objective)

- CO1 K₃
- CO2 K₃
- CO3 K₃
- CO4 K₃
- CO5 K₃

9. Mapping Course outcome with

- (i) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	РО 5	PO 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3	2	1	3		3	3	3	1					19
CO2	2	2	3	2	1	2	2	2	3					19
CO3	2	2	3	2		3	1	2	2	2				19
CO4	2	3	2	2	1	2	3	2	2	1				20
CO5	3	3	2	3		3	2	2	2	1				21
						Gran	d Tot	al of	COs v	with 1	PSOs	and	POs	98
						Mea	an Va	lue o	f Cos	with	PSO	and	POs	2.18

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.18
Observation	COs of Advar Strongly	nced Principles of related with PSOs	Management and POs

Class : I IT & M

Semester : I

Subject Code : 22UITC21

Part : III Core - 2 Hours : 45

Hours : 45 Credits : 03

PROGRAMMING IN C

1. Title of the Paper : Programming in C

2. Course Educational Objectives (CEO)

- Understand the concepts of Procedural-Oriented Programming (POP).
- Impart the knowledge of decision making and control statements in C programming.
- Develop Generic programming skills by using array concept.
- Develop the efficient programs using functions.
- Able to understand and apply the concept of pointers in real time applications.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Overview of C	9
	Introduction -Importance of C - Basic structure of C program -	
	Character set - C token - keywords and identifiers – constants -	
	variables and data types - Declaration of variables, operators	
	and expression. Managing input and output operators:	
	formatted input and formatted output.	
П	Decision making and Branching	9
	If statement, if else statement, nesting if else statement, switch	
	statement, go to statement. Decision and looping : the	
	while statement, Do statement, for statement.	
	Arrays	9
	One dimensional array, two dimensional array,	
	multidimensional array. Handling of character String	
	:Declaring and initializing string variables, Reading string,	
	writing string, string handling functions.	
IV	Functions	9
	Library functions, user defined functions, parameters, function	
	calling, call by value, call by reference, Recursion. Structure :	
	Declaring structure, array of structure.	
	Unions :case studies.	

V	Pointers	9
	Pointer declaration, Pointers and arrays. File : opening a file,	
	Closing a file, Input/Outputoperations on files, getw() – putw()	
	functions, fprintf(), fscanf().	

4. Book for Study:

E. Balagurusamy, "Programming in ANSI C", Tata McGraw Hill, New Delhi, 2017.

5. Book for References:

I. Brain W.Kernighan, Dennis M.Ritchie, "Programming in C Language", Pearson Education India, New Delhi, 2015.

II. D. Ravichandran, "Programming in C", New Age Publishers, New Delhi ,2006.

III. Yashavant Kanetkar, Let us C", 8th Edition, BPB Publications, New Delhi, 2014.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Identify the concepts of C programming.

- CO2: Classify the Strong knowledge about the Decision Making and Control Statements in C programming.
- CO3: Convert Write, Compile and Execute the real time programs using C concepts.
- CO4: Classify write the array, functions, pointers and structure programs in C language.

CO5: Discover the knowledge and write the file operations programs in C language.

8. **Course Outcome Level** (preferable one for each objective)

- CO1 K3
- CO₂ K₃
- CO₃ K₃
- CO₄ K₃
- CO₅ K₃

9. Mapping Course outcome with

(iii) Programme Specific Objectives - **PSO (put tick mark in the correlating box)**

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	Sum							
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														POs
CO1	3	2	1	3		3	2	3	1					18
CO2	2	2	3	2	1	2	2	1	3					18
CO3	2	2	3	2		3	1	1	2	2				18
CO4	2	3	2	2	1	2	3	2	2	1				20
CO5	3	3	2	3		3	2	2	2	1				21
Grand Total of COs with PSOs and POs													95	
	Mean Value of Cos with PSO and POs													2.11

(iv) Programme Objectives - PO (put tick mark in the correlating box)

Mapping Scale	1	2	3							
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0							
Quality	Low	Medium	Strong							
Mean value of Cos			2 11							
with PSOs and POs			2.11							
Observation	COs of Programming in C Strongly related with PSOs and POs									

Class	: I IT&M	Part	: III Core Lab - 2
Semester	: I	Hours	: 75
Sub code	: 22UITP11	Credits	: 03

PROGRAMMING IN C LAB

1. Title of the Paper : Programming in C LAB

2. Course Educational Objectives (CEO)

- Understand the concepts of Procedural-Oriented Programming (POP).
- Impart the knowledge of decision making and control statements in C programming.
- Develop Generic programming skills by using array concept.
- Develop the efficient programs using functions.
- Able to understand and apply the concept of pointers in real time applications.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Tokens, Data-types, Variables and Operators	15
II	Using Decision making and Branching Statements	15
111	Using Arrays and Strings	15
IV	Using Functions. Write a C Program using Call by Value – Call by Reference	15
V	Program Using Pointers and File	15

4. Book for Study:

E. Balagurusamy, "Programming in ANSI C", Tata McGraw Hill, New Delhi, 2017.

5. Book for References:

I. Brain W.Kernighan, Dennis M.Ritchie, "Programming in C Language", Pearson Education India, New Delhi, 2015.

II. D. Ravichandran, "Programming in C", New Age Publishers, New Delhi ,2006. III. Yashavant Kanetkar, Let us C", 8th Edition, BPB Publications, New Delhi, 2014.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Identify the concepts of C programming.

CO2: Classify the Strong knowledge about the Decision Making and Control Statements in C programming.

CO3: Convert Write, Compile and Execute the real time programs using C concepts.

CO4: Classify write the array, functions, pointers and structure programs in C language. CO5: Discover the knowledge and write the file operations programs in C language.

- 8. Course Outcome Level (preferable one for each objective)
 - CO₁ K₃
 - CO₂ K₃
 - CO₃ K₃
 - CO₄ K₃
 - CO₅ K₃

9. Mapping Course outcome with

- (v) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (vi) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	PO 5	РО 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3	2	3	3		3	3	3						20
CO2	2	3	3	3	1	2	2	2	3					21
CO3	3	2		2	3	3	2	2	3					20
CO4	2	3	2	3	3	2	3	2						20
CO5	3	2	2	3	2	3	2	2	3					22
							Gran	d Tota	l of C	Os wit	h PSC)s and	POs	103
							Mea	n Val	ue of (Cos wi	ith PS	O and	POs	2.51

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.51
Observation	COs of Programming	in C Lab-1 Strongly relat	ted with PSOs and POs

Class : I IT & M

Semester : I

Subject Code : 22UITA11

Part : Allied - 1

Hours : 75

Credits : 04

DIGITAL PRINCIPLES

1. Title of the Paper : Digital Principles

2. Course Educational Objectives (CEO)

- Understand the basic concepts of Analog & Digital Computers, Evolution of Computer Systems.
- Impart the knowledge about the Digital Logic Circuits.
- ✤ Analyze and Design the Digital Circuits.
- Understand the Binary number system and its Conversions.
- Analyze the Arithmetic circuits and Filp-Flops, Instruction sets, Addressing Mode.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction on Digital Principles	15
	Digital and Analog Computers – Evolution of Digital Computers	
	 Computer Generations – First, second, third, fourth and fifth – 	
	Major components of a Digital computer.	
II	Logic Circuits	15
	Binary number system – Inverters – OR gates – AND gates –	
	Boolean Algebra – NOR gates – NAND gate.	
Ш	Circuit Analysis and Design	15
	Boolean Laws and theorem – Sum –of-products method- Truth	
	Table to Karnaugh Map- Pairs, Quads, and Octets – Karnaugh	
	simplifications product of sum method.	
IV	Number System and Codes	15
	Binary to decimal conversion – Decimal to Binary Conversion –	
	Octal numbers – Hexadecimal numbers – The ASCII code – The Excess	
	-3 code –Gray code.	
V	Arithmetic circuits	15
	Binary Addition – Binary subtraction – 2's complement	
	representation – Arithmetic building blocks – Adder-Subtractor. Flip-	
	Flops: RS Flip Flop – D FlipFlop – JK Flip Flop. Basic structure of	
	Computers: Instruction set – Addressing modes.	

4. Book for Study:

Donald P leach, Albert Paul Malvino, Goutam Saha, "Digital Principles and Applications", McGraw-Hill Education, New Delhi, 1993.

5. Book for References:

- I. Digital Logic and Computer Design, M.Morris Mano, Pearson Publication, New Delhi, 2017.
- II. B.Ram, "Computer Fundamentals Architecture and Organization", New Age International Publishers, New Delhi, 2018.

6. Teaching Learning Methods: (PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- CO 1: Describe the concepts of Analog & Digital Computers, Evolution of Computer Systems.
- CO 2: Classify comprehend the Digital Logic Circuits.
- CO 3: Describe and Analyze the Design of the Digital Circuits.
- CO 4: Discover the knowledge of the Binary number systems and able to convert the binary numbers as per the requirement.
- CO 5: Describe about the Arithmetic circuits and Filp-Flops, Instruction sets, Addressing Mode.
- 8. Course Outcome Level (preferable one for each objective)
 - CO₁ K₃ CO₂ - K₃
 - CO₃ K₃
 - $CO_4 K_3$
 - $CO_5 K_3$

9. Mapping Course outcome with

(i) Programme Specific Objectives - PSO (put tick mark in the correlating box)
 (ii) Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	, РО 7	PO 8	Sum of
														COs with PSOs & POs
CO1	3	2	1	3		3	2	3	1					18
CO2	2	2	3	2	1	2	2	1	3					18
CO3	2	2	3	2		3	1	1	2	2				18
CO4	2	3	2	2	1	2	3	2	2	1				20
CO5	3	3	2	3		3	2	2	2	1				21
					Gra	nd T	'otal	of CO)s wi	ith P	SOs a	and	POs	95
					Μ	ean	Valu	e of (Cos w	vith l	PSO a	and	POs	2.11

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.11
Observation	COs of Digital Prin	nciples Strongly related v	vith PSOs and POs

Class : I IT & M

Semester : II

Subject Code : 22UITC32

Part : Core - 3

Hours : 45

Credits : 03

PROGRAMMING IN C++

1. Title of the Paper : Programming in C++

2. Course Educational Objectives (CEO)

- 1. Understand difference between Procedural-Oriented Programming (POP) and Object-Oriented Programming (OOP) concepts.
- 2. Able to apply the object oriented features.
- 3. Develop Generic programming skills using OOPS concepts.
- 4. Develop the efficient programs using Class and Inheritance.
- 5. Able to understand and apply the concept of Polymorphism in real time applications.

3. Five Units of the Syllabus

UNIT	Content	No. of
I	Introduction on OOP Principles of Object Oriented Programming (OOP) – Software Evaluation – OOPParadigm – Basic Concepts of OOP – Benefits of OOP – Applications of OOP.	9
II	Introduction to C++ Tokens – Keywords – Variables – Operators – Manipulators - Expressions and Control Structures – pointers – Functions – Function prototyping - Parameters Passing in Functions – Values Return by Functions – Inline Functions - Friend and Virtual Functions.	9
	Classes, Objects & Constructors and Destructors Classes and Objects – Constructors and Destructors – Operator overloading - Type Conversions – Type conversions – Type of Constructors – Function Overloading.	9
IV	Inheritance Inheritance – Single Inheritance – Multiple Inheritance – Multilevel Inheritance – Hybrid Inheritance – Hierarchical Inheritance.	9
V	Virtual Functions and Polymorphism Virtual Functions and Polymorphism – Constructors in inheritance – Mapping Console I/O operations.	9

4. Book for Study:

E. Balagurusamy, "Object Oriented Programming with C++", Tata McGraw Hill, New Delhi, 2014.

5. Books for Reference:

I. D. Ravichandran, "Programming with C++", Tata McGraw Hill, New Delhi, 2017. II. Herbert Schildt, "C++: The Complete Reference", Tata McGraw Hill, New Delhi, 2017.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1: Distinguish the POP and OOPs concepts.
- 2: Discover knowledge about the C++ Features.
- 3: Classify Write, Compile and Execute and programs using C++ OOPs concepts.
- 4: Defend write the reusability codes by using Inheritance.
- 5: Convert apply the OOPS concepts in real time applications.
- 8. Course Outcome Level (preferable one for each objective)
 - CO₁ K₄
 - CO₂ K₃
 - CO₃ K₃
 - CO₄ K₃
 - CO₅ K₃

9. Mapping Course outcome with

- (i) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	Sum of COs with PSOs & POs
CO1	3	2	1	3		3	2	3	1					18
CO2	2	2	3	2	1	2	3	1	2					18
CO3	1	2	2	3	2	3	1	2	3	2				21
CO4	2	3	2	2	1	3	3	2	3	1				22
CO5	3	2	3	3	3	2	1	2	2					21
							Gran	d Tot	al of C	Os wi	th PSC)s and	POs	100
							Me	an Va	lue of	Cos w	ith PS	0 and	POs	2.17

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.17
Observation	Cos of PROGRAMMING	IN C++ Strongly related	with PSOs and POs

Class	: I IT&M	Part	: III Core Lab -2
Semester	: 11	Hours	: 75
Sub code	: 22UITP22	Credits	: 03

PROGRAMMING IN C++ LAB

1. Title of the Paper : Programming in C++ LAB

2. Course Educational Objectives (CEO)

- Understand difference between Procedural-Oriented Programming (POP) and Object-Oriented Programming (OOP) concepts.
- Able to apply the object oriented features.
- Develop Generic programming skills using OOPS concepts.
- Develop the efficient programs using Class and Inheritance.
- Able to understand and apply the concept of Polymorphism in real time applications.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Program Using OOPs Concept	15
II	Program Using Variables, Program Control Structures, using Pointers – Functions – Function & Operator Overloading	15
	using Class & Objects, – Constructors and Destructors, Array of Objects	15
IV	Using Inheritance - Types	15
V	Virtual Functions – Polymorphism	15

4. Book for Study:

E. Balagurusamy, "Object Oriented Programming with C++", Tata McGraw Hill, New Delhi, 2014.

5. Books for Reference:

I. D. Ravichandran, "Programming with C++", Tata McGraw Hill, New Delhi, 2017.
II. Herbert Schildt, "C++: The Complete Reference", Tata McGraw Hill, New Delhi, 2017.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO 1: Distinguish the POP and OOPs concepts.

CO 2: Discover knowledge about the C++ Features.

- CO 3: Classify Write, Compile and Execute and programs using C++ OOPs concepts.
- CO 4: Defend write the reusability codes by using Inheritance.
- CO 5: Convert apply the OOPS concepts in real time applications.

8. Course Outcome Level (preferable one for each objective)

CO_1	-	K4
CO ₂	-	K_3
CO ₃	-	K_3
CO_4	-	K_3
CO ₅	-	K_3

8. Mapping Course outcome with

- i. Programme Specific Objectives PSO (put tick mark in the correlating box)
- ii. Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	PO	РО	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														C0s
														with
														PSOs
														&
														POs
CO1	3	3	2	3		3	2	3	2	1				22
CO2	2	3	3	2	2	2	3	2	3					22
CO3	3	2	2	3	2	3	2	2	3	2				24
CO4	2	3	3	2	3	3	3	3	2	2				26
CO5	3	2	3	3	3	2	2	3	3	2				26
							Gran	d Tota	l of C	Os wit	h PSC)s and	POs	120
Mean Value of Cos with PSO and POs											2.5			

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos			25
with PSOs and POs			2.5
Observation	Cos of PROGRAMMING POs	IN C++ Lab Strongly rel	ated with PSOs and

Class: I IT & MPart: Core - 4Semester: IIHours: 60Subject Code: 22UITC42Credits: 03

DATA STRUCTURES AND ALGORITHMS

1. Title of the Paper : Data Structures and Algorithms

2. Course Educational Objectives (CEO)

- Understand the basic concepts about Stack and Queue.
- Impart the knowledge of the Lists and its types.
- Know the important concepts of Trees.
- Able to develop an Algorithm for real time applications.
- Able to understand and apply the various types of Computer Algorithms in real time problems.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction on Data Structures & Algorithms	12
	Introduction– Algorithms – Specification – Performance	
	Analysis. Arrays: Ordered Lists - Representation of arrays.	
	Stacks and Queues fundamentals-evaluation of expressions-	
	multiple stacks and queues.	
П	Linked Lists	12
	Singly Linked Lists- Linked stacks and queues- The Storage	
	Pool - Polynomial Addition- More on Linked Lists. Doubly	
	Linked Lists: Node Insertion and Node Deletion.	
III	Trees	12
	Basic terminology-Binary trees-Binary tree Representations -	
	Binary tree traversal. Threaded Binary Trees- Binary Tree	
	Representation of Trees.	
IV	The Complete Development of an Algorithm	12
	Algorithms – Basic Steps. Algorithm Design Methods: Sub goals	
	– Hill Climbing – Working Backward – Heuristics – Backtrack	
	Programming – Recursion.	

V	Computer Algorithms	12
	Sorting – Searching – Parallelism. Mathematical Algorithms	
	Magic Squares.	

4. Book for Study:

- I. Ellis Horowitz and Sartaj Sahni, "Fundamentals of Data structures", Galgotia Publications, New Delhi, 1985.
- II. S.E. Goodman and S.T. Hedetniemi, "Introduction to the Design and Analysis of Algorithms", McGraw Hill, International, New Delhi, 1988.

5. Book for References:

- I. Tanenbaum A.M. and Augustein M.J, "Data Structures with Pascal", Prentice Hall of India Limited, New Delhi, 1985.
- II. Yashavant Kanetkar, "Data Structures Through C", BPB Publications, New Delhi, 2010.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- CO 1: Identify the Data Structure Fundamentals and Stack, Queues concepts.
- CO 2: Generalized the functionalities of different Linked Lists.
- CO 3: Convert and compare the Operations of Tree Structure.
- CO 4: Classify data structures concepts to designing an algorithms.
- CO 5: Locate and compare the various types computer algorithms.

8. Course Outcome Level (preferable one for each objective)

- CO₁ K₃
- CO₂ K₃
- CO₃ K₄
- CO₄ K₃
- CO₅ K₃

9. Mapping Course outcome with

- (i) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	РО 5	РО 6	РО 7	PO 8	Sum of COs with PSOs &
														POs
CO1	3	3	1	2	1	2	3	2	1					18
CO2	2	2	2	3	1	3	1	2	2					18
CO3	1	3	2	3		2	1	2	1	3				18
CO4	2	3	2	3	1	3	2	2	1	1				20
CO5	3	3	3	2		3	2	2	1	1				20
Grand Total of COs with PSOs and POs											94			
Mean Value of Cos with PSO and POs											2.04			

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.04
Observation	Cos of DATA STRUCTUR PSOs and POs	RES AND ALGORITHMS S	trongly related with

Class : I IT & M

Semester : II

Subject Code : 22UITA22

Part : III Allied -2

Hours : 75

Credits : 04

ENVIRONMENT OF BUSINESS

1. Title of the Paper: Environment of Business

2. Course Educational Objectives (CEO)

- Understanding the basic concept of different business environment
- Knowing the role of culture and social changes in business
- Analyzing the different kinds of social responsibilities in business
- Comprehending the Business ethics and rights of consumers
- Studying the basic Economic system and LPG

3. Five Units of the Syllabus

	Contont	No. of
UNIT	content	Hours
I	Business Environment	15
	Meaning – Factors affecting Environment of Business –Social	
	– Economic - Political - Legal – Cultural – Technology.	
II	Social and Culture	15
	Business and Culture – Meaning – Definition – Concept and	
	Nature of Culture- Elements of culture – Types of Social	
	Change – Impact of Social Change in Business Environment –	
	Social Structure.	
- 111	Corporate Social Responsibility	15
	Social Responsibilities of Business – Responsibilities to	
	shareholders – Responsibilities to Employees –	
	Responsibilities to Customers – Responsibilities to the	
	community – Responsibilities to the Government.	
IV	Business Ethics and Consumerism	15
	Business Ethics – Characteristics - Principles– Consumerism –	
	Meaning – Rights of Consumers – Consumerism in India –	
	Salient Features of Consumer Protection Act- Guidelines for	
	Consumer Protection.	

V	Indian Economy system and Globalization	15
	Mixed Economy – Meaning and features - Liberalization -	
	Meaning – Merits and Demerits - Privatization – Meaning –	
	Merits and Demerits – Globalization – Meaning – Merits and	
	Demerits.	

4. Book for Study:

I. Cherunilam Francis, "Business Environment", Himalaya Publishers, New Delhi, 2009.

5. Book for Reference:

I. Namita Gopal, "Business Environment", Himalaya Publishing House, New Delhi, 2010.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Discover the various environments in business

CO 2: Identify the basic needs of culture and social changes in business

CO 3: Extend comprehend the social responsibilities of the business

CO 4: Identify the Business ethics and Principles of Consumerism

CO 5: Discover the Indian economy system and LPG concept.

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K_3
CO2	-	K_3
CO3	-	K_3
CO4	-	K_4
CO5	-	K_3

9. Mapping Course outcome with

- (i) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	PO	PO	PO	PO	PO	PO	PO	PO	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														C0s
														with
														PSOs
														&
														POs
CO1	3	3	2	1		3	3	3	1					19
CO2	2	2	3	3	1	3	2	1	2					19
CO3	1	2	2	3		3	1	2	3	3				20
CO4	2	3	3	2	1	2	2	2	2	1				20
CO5	3	3	3	2	2	2	1	2	1	1				20
					Gra	nd 7	fotal	of CO	Ds w	ith P	SOs	and	POs	98
Mean Value of Cos with PSO and POs											2.13			

Strong-3, Medium-2 & Low-1

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.13
Observation	Cos of ENVIRONMENT PSOs and POs	OF BUSINESS S	trongly related with

ARUL ANANDAR COLLEGE (AUTONOMOUS), KARUMATHUR DEPARTMENT OF IT & M OBE SYLLABUS (From 2019-2020 onwards)

Part	Subject Code	Subject Title	Hours	Credits							
	III SEMESTER										
	19UITC53	Core – 5 Operating Systems	6	5							
111	19UITC63	Core – 6 JAVA Programming	6	5							
	19UITP33	Programming in JAVA Lab -3	5	3							
	19UITA33	Allied – 3 Business Accounting	5	4							
	19UITN13	Basic Tamil / Advanced Tamil / NME-1	3	2							
N7	191117513	Skill based Elective- 1 Business Law	3	2							
IV	19UFCE33	FC-Environmental Studies	1	1							
	19USSI16	Soft Skills	1								
v	19UNCC/ NSS/ YRC/PHY.EDU./ ROT/ACF/NCB24	Extension Activities NCC / NSS / Phy.Edn./ YRC /ROTARACT / AICUF / Nature Club	-	_							
	19UARE14	Arise	-	-							
		Total	30	22							
		IV SEMESTER									
	19UITC74	Core – 7 Organizational Behaviour	4	4							
	19UITC84	Core – 8 Software Engineering	5	4							
	19UITC94	Core – 9 PHP and Oracle	3	2							
	19UITP44	PHP and Oracle Lab - 4	5	3							
	19UITA44	Allied–4 Mobile Computing	5	4							
	19UITN24	Basic Tamil / Advanced Tamil / NME- 2 Animation	3	2							
IV	19UITS24	Skill based Elective - 2 Quantitative Methods	3	2							
	19UFCH44	FC – Religious Literacy and Peace Ethics	1	1							
	19USSI16	Soft Skills	1								
v	19UNCC/ NSS/ YRC/PHY.EDU./ ROT/ACF/NCB24	Extension Activities NCC / NSS / Phy.Edn./ YRC /ROTARACT / AICUF / Nature Club		1							
	19UARE14	Arise		1							
		Total	30	24							

V SEMESTER								
	19UITD05	Core - 10 Data Communication & Computer Networks	5	5				
	19UITD15	Core – 11 Research Methodology	5	4				
	19UITD25	Core – 12 Marketing Management	5	4				
Ш	19UITD35	Core – 13 Dot Net Programming	5	4				
	19UITP55	Programming in Dot Net Lab - 5	5	4				
	19UITE15	Core Elective - 1	4	3				
		Human Resource Management						
IV	19USSI16	Soft Skills	1					
		Total	30	24				
		VI SEMESTER						
	19UITD46	Core – 14 Mobile Application Development	6	5				
	19UITP66	Android Programming Lab - 6	6	5				
	19UITD56	Core – 15 Advertising and Salesmanship	6	5				
111	19UITD66	Core – 16 Entrepreneurship	6	5				
		Development						
	19UITE26	Core Elective – 2 Cloud Computing	4	3				
11/	19UITD76	Project / Internship	1	1				
IV	19USSI16	Soft Skills	1	2				
		Total	30	26				

Semester	I	Π	III	IV	V	VI	TOTAL
Credits	24	24	22	24	24	26	144*

Non-Major Electives

For Non-Science Students: Image Editing ToolsFor Science Students: Animation

Self-Learning Course

Semester	Subject Code	Title of the Paper	Credits
Semester-III	19UITSL3	Scripting Languages	3
Semester-IV	19UITSL4	Stress Management	3
Semester-V	19UITSL5	Cyber Security	3
Semester-VI	19UITSL6	Export and Import Management	3

ARUL ANANDAR COLLEGE (AUTONOMOUS), KARUMATHUR – 625 514 (Reaccredited by NAAC with "A" Grade with a CGPA of 3.66) DEPARTMENT OF IT & M Programme Specific Outcome (PSO)

- 1. An ability to learn current techniques and modern tools necessary to develop the software applications, business.
- 2. An ability to identify, analyze, formulate and solve technical problems by applying principles of Information Technology and Management to the problem.
- 3. An ability to take up multidisciplinary projects and to carry out it as per industry standards.
- 4. An ability to understand and apply the technical solutions in a global and social context.
- 5. An ability to understand and practice professional, ethical, legal, and social responsibilities as a matured citizen.

Class : II IT & M

Semester

Part : Core - 5

Credits : 5

: 90

Hours

Subject Code : 19UITC53

: 111

OPERATING SYSTEMS

1. Title of the Paper : OPERATING SYSTEMS

2. Course Educational Objectives (CEO)

- 1: Understand the structure and functions of Operating System.
- 2: Impart the knowledge of Processes and CPU Scheduling algorithms.
- 3: Know how the operating systems handle the Deadlocks.
- 4: Understand how operating systems manage the Memory and Page Replacement.
- 5: Case Study of Linux Operating System.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction	18
	Operating System – Mainframe Systems – Desktop Systems –	
	Multiprocessor Systems – Distributed Systems – Clustered	
	Systems – Real Time Systems – Handheld Systems. Operating	
	System Structures: - System Components – Operating System	
	Services – System Structure: Simple Structure, Layered	
	Approach, Microkernels and Virtual Machines.	
II	Process Management	18
	Processes: - Process Concept – Process Scheduling –	
	Operation on Processes – Cooperating Processes. CPU	
	Scheduling: - Basic Concepts – Scheduling Criteria –	
	Scheduling Algorithms. Process Synchronization:- Background	
	 The Critical Section Problem – Semaphores. 	
111	Deadlocks	18
	System Model – Deadlock Characterization – Methods for	
	handling Deadlocks – Deadlock Prevention – Deadlock	
	Avoidance – Deadlock Detection – Recovery from Deadlock.	
IV	Memory Management	18
	Swapping – Paging – Segmentation .Virtual Memory: Demand	
	Paging – Page Replacement Techniques – Thrashing.	
V	Case Study : Linux Operating System	18
	History – Design Principles – Kernel-Process Management – File	
	System – Network Structure – Security.	

4. Book for Study:

Silberschatz, Galvin, Gagne, "Operating System Concepts", 8th Edition John Wiley & Sons Inc, 8th Edition, New Delhi, 2009.

5. Books for References:

- I. Andrew S. Tanenbaum, Albert S Wood Hull, "Operating Systems Design and Implementation", Prentice Hall, New Delhi, 1997.
- II. Milan Milenkovic, "Operating Systems Concepts and Design", Tata Mcgraw Hill, New Delhi, 1992.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- CO1: Describe with basic concepts of Operating Systems.
- CO2: Discover the knowledge about the Process Management & CPU Scheduling concepts.
- CO3: Identify Deadlock problems and its Prevention mechanism.
- CO4: Describe the Memory Management concepts.

CO5: Discover Knowledge about the Linux Operating System.

8. Course Outcome Level (preferable one for each objective)

- $CO_4 K_4$
- $CO_5 K_3$

9. Mapping Course outcome with

- (i) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	РО 5	РО 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3	3	2	1		3	3	3	1					19
CO2	2	2	3	2	1	3	1	2	3					19
CO3	1	3	2	3		2	1	2	3	3				20
CO4	2	3	3	3	1	2	2	2	1	1				20
CO5	3	2	3	2	2	2	2	2	2	1				21
Grand Total of COs with PSOs and POs											99			
Mean Value of Cos with PSO and POs											2.15			

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.15
Observation	Cos of OPERATING SYS	TEMS Strongly related v	vith PSOs and POs

Class : II IT & M

Part : Core - 6

Semester : III

Subject Code : 19UITC63

Hours : 90 Credits : 5

JAVA PROGRAMMING

1. Title of the Paper : JAVA PROGRAMMING

2. Course Educational Objectives (CEO)

- 1. Understand Java Features, Environment and tokens
- 2. Understand learn class, Methods
- 3. Able to Develop Inheritance
- 4. Able to Develop Multi-Tier Programs.
- 5. Able to learn Applet Graphics & JDBC Concepts.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Java Java History - Java Feature – Comparison of Java and other Languages - Java and Internet, Java Environment - Java Development Kit - API - Byte codes - Java Virtual Machine - Hardware & Software Requirements. Simple Java Program – Comments- Java Tokens - Character Set - Keyword - Identifier - Literals - Operators - Separator - Command Line Arguments.	18
11	UNIT – II: Classes, Object and Methods Defining Class - Adding Variables, Methods - Creating Objects - Accessing Methods - Constructors - Method Overloading, Overriding - Nesting of Methods - Static Members - Final Variables, Methods and Classes - Abstract method - Visibility Controls - Arrays - Strings - Vectors.	18
111	UNIT – III: Inheritance and Interface Inheritance: Inheritance – Introduction - Exception. Interface - Defining Interfaces - Extending Interfaces - Implementing interfaces - Accessing Interface variables.	18
IV	 AWT, Threading and Packages AWT: Layout Managers – Basic Controls, Text Box, List Box, Combo Box, Radio Button, Check Box, Button Events, Action Listener. Multithreading: Creating Thread - Stopping and blocking a Thread - Life cycle of Thread - Thread priority - Synchronization. Packages: Java API Packages - Using System Packages - Creating and Accessing Packages- Using a package - Adding class to package. 	18

	Applet & JDBC						
	Applets and Graphics: Fundamentals of Applets - Local & Remote						
.,	Applets - Applet and Application Difference - Building Applet code -						
v	Applet Life Cycle - Applet tag - Adding Applet to HTML - Running the	18					
	Applet - Drawing methods of Graphics Class. JDBC: Introduction to						
	JDBC – Creation of Database – Accessing Database through JDBC.						

4. Book for Study:

a. E. Balagurusamy, 2nd, 3rd, 4th Edition, "Programming with Java", Tata McGraw Hill Pub. Ltd., New Delhi.
Unit – I: 2.1 - 2.9, 3.1 - 3.12, Unit – II: 8.1 - 8.18, 9.1 - 9.6
Unit – III: 10.1- 10.6, 11.1 - 11.8, Unit – IV: 12.1 - 12.10, 13.1 - 13.9
Unit – V: 14.1 - 14.5, 14.8 - 14.9.

b. Muthu, Second Edition, "Programming with Java" Vijay Nicole Imprints, Chennai. Unit – IV: Chapters 18.

5. Book for References:

Patrick Naughton, Herbert Schildt, 3rd Edition, "The Complete Reference Java2", Tata McGraw Hill Pub. Ltd., New Delhi.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1: Discover the Strong knowledge about Java Features, Tokens.
- 2: Identify to create Class & Object Programs.
- 3: Discover to create Interface Concepts.
- 4: Convert Multi-Tier Programs using AWT, Packages & Multi-Thread.
- 5: Estimate to Connect Database & Design Using APPLET Graphics.

8. Course Outcome Level (preferable one for each objective)

- CO₁ K₃
- CO₂ K₃
- CO₃ K₄
- CO₄ K₃
- CO₅ K₃

9. Mapping Course outcome with

i. Programme Specific Objectives - **PSO (put tick mark in the correlating box)**

ii.	Programme Objectives - PO	(put tick mark in the correlating box)
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Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	PO	РО	PO	РО	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														POs
CO1	3	3	1	2		3	3	3	1					19
CO2	2	2	3	2	1	3	2	2	1					18
CO3	2	2	2	3	2	2	1	1	3	2				20
CO4	2	3	3	2		2	2	2	2	1				19
CO5	3	3	2	2	1	3	2	1	2	1				20
Grand Total of COs with PSOs and POs											96			
Mean Value of Cos with PSO and POs												2.09		

Mapping Scale	1	2	3					
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0					
Quality	Low	Low Medium Stron						
Mean value of Cos with PSOs and POs			2.09					
Observation	Cos of Java Programming Strongly related with PSOs and POs							

Class : II IT&M Semester : III Sub code : 19UITP33 Part: III Core Lab - 3Hours: 75Credits: 03

Programming in JAVA Lab -3

1. Title of the Paper : JAVA PROGRAMMING

2. Course Educational Objectives (CEO)

- 1. Understand Java Features, Environment and tokens
- 2. Understand learn class, Methods
- 3. Able to Develop Inheritance
- 4. Able to Develop Multi-Tier Programs.
- 5. Able to learn Applet Graphics & JDBC Concepts.

UNIT	Contont				
	Content				
I	Tokens, Operators, Control Structures, Data Types, Command Line				
	Arguments	15			
Ш	Class & Objects, Methods – Method Overloading, Final Keywords,				
	Strings, Arrays	12			
	Inheritance - Interface and types - Exceptions	15			
IV	AWT, Packages. Threads – Set Priority, Thread methods,	15			
V	Applets and Graphics – JDBC.	15			

3. Book for Study:

 E. Balagurusamy, 2nd, 3rd, 4th Edition, "Programming with Java", Tata McGraw Hill Pub. Ltd., New Delhi. Unit – I: 2.1 - 2.9, 3.1 - 3.12, Unit – II: 8.1 - 8.18, 9.1 - 9.6

Unit – III: 10.1- 10.6, 11.1 - 11.8, Unit – V: 14.1 - 14.5, 14.8 - 14.9. Unit – II: 8.1 - 8.18, 9.1 - 9.6 Unit – IV: 12.1 - 12.10, 13.1 - 13.9

ii. Muthu, Second Edition, "Programming with Java" Vijay Nicole Imprints, Chennai. Unit – IV: Chapters 18.

4. Book for References:

Patrick Naughton, Herbert Schildt, 3rd Edition, "The Complete Reference Java2", Tata McGraw Hill Pub. Ltd., New Delhi.

5. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

6. Course Outcome (CO)

On completion of the course, students should be able to

- 1: Discover the Strong knowledge about Java Features, Tokens.
- 2: Identify to create Class & Object Programs.
- 3: Discover to create Interface Concepts.
- 4: Convert Multi-Tier Programs using AWT, Packages & Multi-Thread.
- 5: Estimate to Connect Database & Design Using APPLET Graphics.

7. Course Outcome Level (preferable one for each objective)

- CO₁ K₃ CO₂ - K₃
- CO₃ K₄
- $CO_4 K_3$
- $CO_5 K_3$

8. Mapping Course outcome with

- i. Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- ii. Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	РО	РО	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														POs
CO1	3	3	3	2		3	3	3	1					21
CO2	2	2	3	3	2	3	2	2	2					21
CO3	3	2	2	3	3	2	2	3	3	2				25
CO4	2	3	3	2	3	3	2	2	3	2				25
CO5	3	3	2	3	2	3	3	3	3	1				26
Grand Total of COs with PSOs and POs 11								118						
Mean Value of Cos with PSO and POs									2.51					

Mapping Scale	1	2	3				
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0				
Quality	Low	Medium	Strong				
Mean value of Cos with PSOs and POs			2.51				
Observation	Cos of JAVA PROGRAMMING Lab - 3 Strongly related with PSOs and POs						
Class : II IT & M

Part : Allied - 3

Hours

Credits : 4

: 75

Semester : III

Subject Code : 19UITA33

BUSINESS ACCOUNTING

1. Title of the Paper : BUSINESS ACCOUNTING

2. Course Educational Objectives (CEO)

- 1: Knowing the basic concepts and Introduction of Accounts.
- 2: Understanding the importance, rules and Preparation of journal.
- 3: Learning the Ledger and concepts of single entry system.
- 4: Comprehending the concept of main subsidiary books.
- 5: To prepare the final accounts.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction of Accounts Financial Accounting: Definition, objectives, functions, limitations – concepts and conventions – Double entry system of book keeping: Rules.	15
11	Journal Journal: Definition-Objectives – importance – advantages and limitations – rules of Journalizing- Preparation of journal.	15
111	Ledger and Single Entry System Ledger: Definition- Rules – Advantages- Preparation of Ledger- Single Entry System: Features - Merits & Demerits- difference between single entry system and double entry system.	15
IV	Subsidiary book Main subsidiary books: purchase book, sales book, purchase return book, sales return book, its advantages – Importance, Cash Book – definition - Kinds of cash book, single column, double column.	15
v	Final Accounts Final Accounts (without adjustments): Trading a/c –definition - need- preparation- profit & loss a/c and Balance Sheet.	15

4. Book for Study:

1. Dr. Peer Mohamed and Dr. Shazuli Ibrahim, Advanced Accountancy-I, Pass Publications, 2016.

5. Book for Reference:

- 1. Jain S.P. and Narang K.L, Financial Accounting, Kalyani Publishers, New Delhi, 2010.
- 2. Maheswari S.N. and Maheswari S.K., Fundamentals of Accounting, Vikas Publishing House, New Delhi, 2005.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Describe the students to know the basic concepts of accounting.
- 2. Identify the skills to preparing journal entries.
- 3. Discover the preparation of Ledger and concepts of single entry system.
- 4. Discover the knowledge in Preparing subsidiary books and cash books.
- 5. Identify the concepts of final accounts and prepare it.

8. Course Outcome Level (Preferable one for each objective)

- CO1 K₃
- CO2 K₃
- CO3 K₃
- CO4 K₃
- CO5 K₃

9. Mapping Course outcome with

- (i) Programme Specific Objectives PSO (put tick mark in the correlating box)
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	РО 4	РО 5	PO 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3	2	1		3	3	3	2	1					18
CO2	2	2	3	3	1	2	1	2	2					18
CO3	1	2	2	2		2	1	2	3	3				18
CO4	2	3	2	2	1	2	3	1	2	1				19
CO5	3	1	3	2		3	3	2	1	1				19
							Gra	and To	tal of	COs w	ith PS	Os and	l POs	92

Mean Value of Cos with PSO and POs 2.04

Mapping Scale	1	2	3			
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0			
Quality	Low	Medium	Strong			
Mean value of Cos			2 04			
with PSOs and POs			2.07			
Observation	Cos of BUSINESS ACCOUNTING Strongly related with PSOs and POs					

Class : II IT & M

: 111

Semester

Part : NME - 1

Hours : 45

Credits : 2

Subject Code : 19UITN13

IMAGE EDITING TOOLS

1. Title of the Paper : IMAGE EDITING TOOLS

2. Course Educational Objectives (CEO)

- 1: Knowing the basic concepts and Introduction of Photoshop
- 2: Empathetic the importance, File Formats and Cropping
- 3: Education the features of Retouching photographs
- 4: Realizing the concept of main adding Clouds and spot lights
- 5: Case Study of applying transformation

3. Five Units of the Syllabus

	Contont	No. of
UNIT	content	Hours
I	Introduction to Photoshop CS: What is Photoshop?- Image Editing Theory – Photoshop desktop – File Handling – Units & Rulers – Memory and Image Cache – File Browser.	9
11	Image Management: How Images Work – Resolution of Screen Images – How to Open – Duplicate and Save Images. File Formats Roundup – Resampling and Cropping.	9
111	Painting and Retouching: Selecting and Editing Colors – Working in different Color Modes – Brush Size and Shape – Filling selection with Color or Pattern – Retouching photographs.	9
IV	Selections and Paths: Selection Fundamentals – Moving and duplicating Selection- How to draw and edit path – Filter basics – Noise factors – adding Clouds and spot lights.	9
V	Working with Layers: Layer basics – Moving, Linking, Aligning layers- Applying transformations- Modifying and saving effects - Correcting camera raw images – Organizing images for output.	9

4. Book for Study:

1. Deke McClelland, 2005, Photoshop 8 CS Bible- Wiley Dreamtech India Pvt Ltd.

5. Book for Reference:

1. Barbara Obermeier, 2010, Photoshop CS5 by Wiley Publishing Inc., Indianapolis, Indiana.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- CO1: Distinguish with basic concepts of Photoshop
- CO2: Extend knowledge about the How Images Works
- CO3: Locate Retouching photographs
- CO4: Describe the Filter basics concepts.
- CO5: Discover the Knowledge about the Working with Layers in Flash

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K ₃
CO2	-	K ₃
CO3	-	K ₃
CO4	-	K ₃
CO5	-	K ₃

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)

ii. Programme Objectives - **PO (put tick mark in the correlating box)**

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	PO	РО	РО	РО	PO	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														POs
CO1	2	3		1	3	3	3	1	1					17
CO2	3	2	2	3	1		2	3	2					18
CO3	1	3	2	3		2	1	1	2	2				17
CO4	2	2	2	З	1	З	2	2	1					18
CO5	3	3	2	2		1	2	1	2	1				17
							Grand	l Tota	l of CC	Ds wit	h PSO	s and	POs	87
Mean Value of Cos with PSO and POs										2.02				

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.02
Observation	Cos of IMAGE EDITING	TOOLS Strongly related v	vith PSOs and POs

Class : II IT & M

Subject Code : 19UITS13

Semester

Part : SBE - 1

Hours : 45

Credits : 2

BUSINESS LAW

1. Title of the Paper : BUSINESS LAW

: 111

2. Course Educational Objectives (CEO)

- 1: Understanding the basic concepts of Business Law
- 2: Comprehend the essentials of a Valid Acceptance and Need for consideration
- 3: Learning the Void Agreements and Law of Sale of Goods
- 4: Study the concept of Law of Partnerships
- 5: Knowing the kinds of Negotiable and Non Negotiable Instruments

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Law of Contract Meaning – Definition – Nature of Contracts – Classification of Contracts –Essential Elements of a Contracts — Contingent Contract – Discharge of Contract – Remedies for Breach of Contract – Quasi – Contract – Contract of Indemnity – Contracts of Guarantee.	9
II	Offer and Acceptance and Consideration Offer and Acceptance – Rules governing Offers – Rules governing Acceptance - Essentials of a Valid offer - Essentials of a Valid Acceptance –When does an Offer or Acceptance come to an End Consideration – Need for Consideration- Essential elements of a valid Consideration—Consideration VS Condition-Types of Consideration.	9
111	Void Agreements and Law of Sale of Goods Void Agreements- Expressly declared Void – Agreements in restraint of legal proceedings- Contract of Sale of Goods – Essentials of a contract of sale – Distinction between Sale and Agreement to sell – Duties of Buyer and Seller –Rules regarding Auction Sales.	9

IV	Law of Partnerships Introduction- Meaning- Characteristics of Partnership – kinds of partnership – Registration of Partnership firms – Partnership Deed - Duties and Liabilities of Partners – Dissolution of Partnership.	9
V	Law of Negotiable Instruments Introduction- Meaning - Kinds of Negotiable instruments – Features – Non Negotiable Instruments – Bill of Exchange – Promissory Note – Cheque - Distinction between Promissory note and Bill of Exchange.	9

4. Book for Study:

1. N.D.Kapoor, Elements of Mercantile Law –Sultan Chand & Sons, New Delhi- 37th Revised Edition, 2015.

5. Book for Reference:

- 1. L.M. Porwal, Sanjeev Kumar, Business Laws , Vrinda Publication(P) Ltd., Delhi, First Edition, 2006
- 2. R.S.N. Pillai and Bagavathi " Business Law, Sultan Chand & Company Ltd, New Delhi, Revised Edition, 2009.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7.Course Outcome (CO)

- On completion of the course, students should be able to
- 1. Identify the Basic Concepts different Laws in Business
- 2. Distinguish the Valid offer and Valid Acceptance
- 3. Convert the Void Agreements and Sales Agreements
- 4. Discover the Registration of Partnership firms
- 5. Distinguish the Negotiable Instruments with Non Negotiable Instruments

8. Course Outcome Level (Preferable one for each objective)

- CO1 K₃
- CO2 K₃
- CO3 K₃
- CO4 K₄
- CO5 K₃

9. Mapping Course outcome with

i. Programme Specific Objectives – **PSO (put tick mark in the correlating box)**

ii. Programme Objectives - PO(put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3			2	3	3	3	2	1					17
CO2	2	2	3	2	1		3	2	3					18
CO3	1	2	2	3		3	1	2	1	3				18
CO4	2	3	3	2	1	3		2	2	1				19
CO5	3	3	2	3		2	3	3						19
							Grand	d Tota	l of CO	Ds wit	h PSO	s and	POs	91
Mean Value of Cos with PSO and POs									2.28					

Mapping Scale	1	2	3				
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0				
Quality	Low	Medium	Strong				
Mean value of Cos with PSOs and POs			2.28				
Observation	Cos of BUSINESSS LAW Strongly related with PSOs and POs						

Class : II IT & M Part : Self Learning

Hours : -

Credits : 3

Semester : 111

Subject Code : 19UITSL3

SCRIPTING LANGUAGES

1. Title of the Paper: SCRIPTING LANGUAGE

2. Course Educational Objectives (CEO)

- 1: Knowing the basic concepts of HTML
- 2: Getting to Know the Forms & Frame concepts.
- 3: Able to learn DHTML & XML
- 4: Able to learn Basic Java Script.
- 5: Able to learn the Basic PHP concepts.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to HTML: Introduction – Outline of HTML Document – Head Section : Link – Base – Meta – Script – Style. HTML Body Section: Headers – Paragraphs – Text Formatting – Linking.	-
II	HTML Other Tags: Embedding Images – HTML Lists – Tables – Frames – Forms – other special Tags and Characteristics.	-
111	DHTML & XML: DHTML Introduction – CSS – coding CSS – Property of Tags – Property values – Backgrounds – DHTML DOM and Collections. XML: Introduction – HTML vs XML – Syntax of XML Document – XML Attributes – Validations.	_
IV	Java Script: Need for a Scripting Language – Language Elements: Identifiers, Expressions, Java Script Keywords, Operators, Functions. Objects of Java Script: The Window Object, Document Object, Forms Object.	-
V	PHP: Introduction – PHP tags – Comments – Print and echo Statements – Variables – Data Types – Arrays – User defined Functions.	-

4. Book for Study:

1. N.P. Gopalan 2014, Web Technology – A Developer's Perspective, PHI Learning Private Limited, Delhi – 110092.

5. Book for Reference:

1. Thomas A Powell, 2006, "HTML: The Complete Reference", Osborne/McGraw-Hill.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7.Course Outcome (CO)

On completion of the course, students should be able to

1: Distinguish Strong knowledge about the HTML Features.

- 2: Demonstrate the Forms & Frame concepts.
- 3: Illustrate the CSS using DHTML & XML.
- 4: Discover the Knowledge about the Working with Java Script.
- 5: Relate Work with PHP concepts.

8. Course Outcome Level (Preferable one for each objective)

- CO1 K₃
- CO2 K₃
- CO3 K₃
- CO4 K₃
- CO5 K₃

9. Mapping Course outcome with

- i. Programme Specific Objectives PSO(put tick mark in the correlating box)
- ii. Programme Objectives **PO(put tick mark in the correlating box)**

Outcomes	PS O 1	PS O 2	PS O 3	PS O 4	PS O 5	PO 1	PO 2	PO 3	РО 4	PO 5	PO 6	PO 7	PO 8	Sum of COs with PSOs & Pos
CO1	2	3	3		2	3	2	1	2					18
CO2	3	2	3	2	3	2	1	1	1					18
CO3	2	3	2	3		1	2	1	2	2				18
CO4	3	2	2	2	1	1	2	1	2	2				18
CO5	2	3	3	2		3	1	2	2	1				19
Grand Total of COs with PSOs and Pos									91					
							Mea	n Valı	ue of (Cos w	ith PS	O and	Pos	2.02

Strong-3, Medium-2 & Low-1

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and Pos			2.02
Observation	Cos MARKETING MAN	AGEMENT Stro	ngly related with

Class : II IT & M

Part : Core - 7

Semester : IV Subject Code : 19UITC74 Hours : 60

Credits : 4

ORGANIZATIONAL BEHAVIOUR

1. Title of the Paper : ORGANIZATIONAL BEHAVIOUR

2. Course Educational Objectives (CEO)

- 1: Understanding the basic concepts of Organizational Behaviour and Perception
- 2: Knowing the Principals of Learning and Functions of Attitude
- 3: Studying the types of Group and sources of Stress
- 4: Impart the Knowledge of theories of Motivation and Resolving Conflict
- 5: Comprehending the importance of organizational change and Pre-requisites for OD

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction of Organizational Behaviour Organizational Behaviour – Definition- Nature and Scope – Need – Perception- Process, determinants, factors affecting perception	12
II	Individual Behaviour Individual Behaviour – Personality – Concept – Determinants – Types, Learning – Definition–Classical conditioning – Principles of learning –Attitudes-– Formation of attitudes-Functions of attitudes.	12
111	Group Behaviour and Motivation Group behavior – Definition – Characteristics – Types – Why do people join in Groups? Stages of group formation – Group norms – Group cohesion –Group decision making - Motivation- Definition and meaning – Maslow's Theory –Herzberg Theory.	12
IV	Organizational conflict and Stress Management Conflict- Definition-Sources, types, Resolving Conflicts. Stress- Meaning and definition– Symptoms, causes, Sources of stress – Overcoming the stress.	12
V	Organizational change and Development Organizational change – Why organizational changes, types of changes – Resistance to change - managing resistance to change – Organizational Development – definition- objectives-OD Interventions.	12

4. Book for Study:

1. K. Aswathappa "Organizational Behaviour", Himalaya publishing House Pvt. Ltd., Mumbai, Ninth Revised Edition, 2010

5. Book for Reference:

- 1. L. M. Prasad "Organizational Behaviour", Sultan Chand & Sons, NewDelhi-4th Revised Edition, 2006
- 2. S. S. Khanka, "Organizational Behaviour", Sultan Chand & Sons, NewDelhi-3rd Edition, 2005

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Describe the Basic Concepts of Organizational Behaviour
- 2. Discover learning skills and attitudes
- 3. Distinguish the different Groups and Norms
- 4. Compare the theories of Motivation and Resolving Conflict
- 5. Infer the Organizational Development and Organizational Resistance

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K ₃
CO2	-	K_4
CO3	-	K ₃
CO4	-	K ₃

CO5 - K₃

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO(put tick mark in the correlating box)

ii. Programme Objectives - **PO(put tick mark in the correlating box)**

Outcomes	PSO	PSO	PSO	PSO	PSO	PO	PO	PO	PO	PO	PO	PO	PO	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														& POs
CO1	3	3		1	2	3	3	3	1					19
CO2	2	2	2	3	1	2	3		3	1				19
CO3	2	2	2	3		3	1	2	1	3				19
CO4	2	3	3	2	3		2	1	3	1				20
CO5	3	2	3	3		3		2	3	1				20
Grand Total of COs with PSOs and POs								97						
Mean Value of Cos with PSO and POs							2.26							

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and POs			2.26
Observation	Cos of Advanced Princi PSOs and POs	ples of Management Str	ongly related with

Class : II IT & M

Semester

Part : Core - 8

Subject Code : 19UITC84

: IV

Hours : 75

Credits : 4

SOFTWARE ENGINEERING

1. Title of the Paper : SOFTWARE ENGINEERING

2. Course Educational Objectives (CEO)

- 1: To be familiar with basic concepts of Software Engineering.
- 2: Impart the knowledge about Software Cost Estimation Factors & Techniques.
- 3: Knowledge about Software Requirement specification and analysis.
- 4: To gain comprehensive knowledge about Software Design Process.
- 5: Understand Software Quality Assurance & Maintenance concepts.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Software Engineering Software Features – size factors – Quality and Productivity Factors – Management issues - Planning a software project: Defining the problem – Developing a solution strategy – Planning the development process – Planning an Organizational Structure.	15
II	Overview of Software Cost Estimation Software Cost Factors – Software Cost Estimation Techniques – Staffing Level Estimation Estimating Software Maintenance Costs.	12
111	Software Requirements The Software Requirement Specification–Formal Specification Techniques: Relational Notations – Languages and Processors for Requirements Specification: PSL/PSA-Structured System Analysis- GIST.	15
IV	Software Design Fundamental Design Concepts – Modules and Modularization Criteria – Design Notations – Design Techniques.	15
V	Verification and Validation Techniques Quality Assurance – Walkthroughs and Inspections – Static Analysis – Unit Testing and Debugging – System Testing - Software Maintenance: Enhancing Maintainability during Development – Managing aspects of Software Maintenance . Configuration Management, Source Code Metrics.	18

4. Book for Study:

 Richard E. Fairly, "Software Engineering Concepts", Tata McGraw-Hill, New Delhi, 1997. Unit I: 1.1-1.4, 2.1-2.4 Unit II: 3.1-3.4 Unit III: 4.1- 4.3 (4.3.1,4.3.3,4.3.5) Unit IV: 5.1-5.4 Unit V: 81-8.3, 8.5,8.6,9.1,9.2

5. Book for References:

1. Roger S Pressman, "Software Engineering", Tata McGraw-Hill, New Delhi, 2005.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Interpret with basic concepts of Software Engineering.

CO2: Discover the Strong knowledge about the Software Cost Estimation Techniques.

CO3: Discover the Software Requirement specification methods.

CO4: Describe the Software Designing Techniques.

CO5: Discover the Knowledge about the Software Testing and Software Maintenance Process.

8. Course Outcome Level (preferable one for each objective)

-	K ₃
-	K ₃
-	K_4
-	K ₃
-	K ₃
	- - - -

9. Mapping Course outcome with

(i) Programme Specific Objectives - PSO (put tick mark in the correlating box)

(ii) Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	PO	РО	РО	РО	PO	РО	PO	РО	Sum of
	1	2	3	4	5	1	2	3	4	5	6	7	8	COs with
														PSOs &
														POs
CO1	3	3	2			3	3	3	1					18
CO2	2	2	3	2	1	2	1	2	3					18
CO3	1	3	2	2		1	2	2	2	3				18
CO4	2	2	3	3	1	3	2	1	2	1				20
CO5	3	3	3	3		2	3		2	1				20
Grand Total of COs with PSOs and POs								94						
Mean Value of Cos with PSO and POs							2.19							

Mapping Scale	1	2	3				
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0				
Quality	Low	Medium	Strong				
Mean value of Cos with PSOs and POs			2.19				
Observation	Cos of Advanced Princi PSOs and POs	ples of Management Stro	ongly related with				

PHP & ORACLE

Class : II IT & M

Subject Code : 19UITC94

Semester

Part : Core - 9

: IV

: 45 Hours

Credits : 2

1. Title of the Paper : PHP & ORACLE

2. Course Educational Objectives (CEO)

- 1. Understand PHP Tags and able to create simple programs.
- 2. Able to learn Control structures and Arrays
- 3. Develop PHP Front end designs using Form elements.
- 4. Able to Learn Database Concepts through Oracle.
- 5. Able to apply the concept of Front End PHP & Back End Oracle in real time applications to create the Website.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to PHP Introduction to PHP - Installing PHP - PHP Tags - Comments - Print & Echo Statements - Variables - Data Types - Constants - Operators.	9
II	Control Structures & Arrays Control Statements: Simple if - if else - if else if - Switch case - Complex Conditional statements. Looping Constructs: While loop - Do while Loop - for Loop - break & Continue Statement. Arrays - Nested Arrays.	9
111	Functions & Working with Forms String Functions - Numeric Functions - User Defined Functions. Working with Forms: Introduction to HTML From Tags & Elements - The Main <form> tag - Form Elements: Text Box - Text Area - Password - Radio Button - Check Box - Combo Box - Drop Down List Box - Hidden Field - Image - Submit & Reset Buttons.</form>	9
IV	Designing a Database Defining Your Database - Sample Database. Naming a Table - Assigning Storage Data Types, Describe Table Columns - Insert, Rename, Alter, Drop, Delete, Using Commit, Rollback and Creating Table from Other Tables.	9
V	Querying DB & Accessing the DB with PHP Querying the Database: Using ORDER BY – Grouping the results: GROUP BY, HAVING. Accessing the Database with PHP: Updating Data – Accessing Database through HTML Forms.	9

4. Book for Study:

- 1. N. P. Gopalan, 2014, "Web Technology-A Developer's Perspective", PHI Learning Private Limited, Delhi- 110092
- 2. James T. Perry & Joseph G. Lateer, "Understanding Oracle" BPB PUBLICATIONS, B-14, Connaught Place, New Delhi-110001.

5. Book for References:

1. Ivan Bayross, 4th Revised Edition, "Web Enabled Commercial Applications Development Using HTML, JavaScript, DHTML & PHP" BPB PUBLICATIONS, B-14, Connaught Place, New Delhi-1.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1: Describe PHP Tags & Concepts.
- 2: Discover the knowledge about the Arrays & Control Structures.
- 3: Demonstrate Front end design using PHP Form Elements.
- 4: Describe database using Oracle concepts.
- 5: Discover Website using PHP & Oracle concepts in real time applications.

8. **Course Outcome Level** (preferable one for each objective)

CO_1	-	K ₃
CO ₂	-	K ₃
CO ₃	-	K ₃
CO_4	-	K ₃
CO ₅	-	K ₃

9. Mapping Course outcome with

- (i) Programme Specific Objectives PSO (put tick mark in the correlating box)
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	РО 4	РО 5	PO 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3	3	2			3	3	3	1					18
CO2	2	2	1	3	2	3	2	2	1					18
CO3	1	3	2	2		2	1	2	3	3				19
CO4	2	2	3	3	1	1	3	2	2	1				20
CO5	3	3	3	2		2	3		3	1				20
Grand Total of COs with PSOs and POs											95			
	Mean Value of Cos with PSO and POs											2 21		

Mapping Scale	1	2	3					
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0					
Quality	Low	Medium	Strong					
Mean value of Cos with PSOs and POs	2.21							
Observation	Cos of PHP & ORACLE Strongly related with PSOs and POs							

PHP & ORACLE LAB

Class : II IT & M

Subject Code : 19UITP44

: IV

Semester

Part : LAB - 4 Hours : 75

Credits : 3

1. Title of the Paper : PHP & ORACLE

2. Course Educational Objectives (CEO)

- 1. Understand PHP Tags and able to create simple programs.
- 2. Able to learn Control structures and Arrays
- 3. Develop PHP Front end designs using Form elements.
- 4. Able to Learn Database Concepts through Oracle.
- 5. Able to apply the concept of Front End PHP & Back End Oracle in real time applications to create the Website.

3. Five Units of the Syllabus

UNIT	Content	No. of					
		Hours					
	Using Comments – using Print & Echo Statements – PHP Tags –	15					
I	HTML Tags	15					
П	Using Functions – Arrays – Nested Arrays	15					
Ш	Working with Forms and Designing in PHP	15					
IV/	Design a Database – Design a Database with Insert – Rename –	1 Г					
IV	Alter – Drop – Delete – Commit – Rollback Operations						
V	Selecting the Database using Querying to find out the Different	15					
	Data						

4. Book for Study:

- 1. N. P. Gopalan, 2014, "Web Technology-A Developer's Perspective", PHI Learning Private Limited, Delhi- 110092
- 2. James T. Perry & Joseph G. Lateer, "Understanding Oracle" BPB PUBLICATIONS, B-14, Connaught Place, New Delhi-110001.

5. Book for References:

1. Ivan Bayross, 4th Revised Edition, "Web Enabled Commercial Applications Development Using HTML, JavaScript, DHTML & PHP" BPB PUBLICATIONS, B-14, Connaught Place, New Delhi-1.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

1: Describe PHP Tags & Concepts.

- 2: Discover the knowledge about the Arrays & Control Structures.
- 3: Demonstrate Front end design using PHP Form Elements.
- 4: Describe database using Oracle concepts.
- 5: Discover Website using PHP & Oracle concepts in real time applications.
- 8. Course Outcome Level (preferable one for each objective)

CO1	-	K3
CO ₂	-	K ₃
CO₃	-	K ₃
CO ₄	-	K ₃
CO ₅	-	K ₃

9. Mapping Course outcome with

- i. Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- ii. Programme Objectives **PO (put tick mark in the correlating box)**

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	РО	РО	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														POs
CO1	3	3	2		3	3	3	3	2					22
CO2	2	2	3	3	3	3	2	2	2					22
CO3	2	3	2	2	2	2		2	3	3				21
CO4	3	2	3	3	3	1	3	2	3	2				25
CO5	3	3	3	2	3	2	3	3	3	1				26
Grand Total of COs with PSOs and POs											116			
Mean Value of Cos with PSO and POs											2.52			

Mapping Scale	1	2	3						
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0						
Quality	Low	Medium	Strong						
Mean value of Cos			2.52						
with PSOs and POs									
Observation	Cos of PHP & ORACLE Lab - 4 Strongly related with PSOs and POs								

Class : II IT & M

Semester

Part : Allied - 4

: IV

Subject Code : 19UITA44

Hours : 75

Credits : 4

MOBILE COMPUTING

1. Title of the Paper : MOBILE COMPUTING

2. Course Educational Objectives (CEO)

- 1: To be familiar with basic concepts of Computer Networks and Reference Models.
- 2: Impart the knowledge about Wireless Transmission System and Cellular Concepts.
- 3: Know about the Medium Access Control techniques.
- 4: To gain comprehensive knowledge about GSM and UMTS systems.
- 5: To be aware of advanced concepts of Satellite System.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction Computer Network: Types of Network, Network Topology, Wireless Networks: Wireless LANs, Wireless WANs, OSI Reference Model, TCP/IP Reference Model, Simplified Reference Model, User of Computer Networks	15
II	Wireless Transmission Wireless Transmission: Types of Frequencies for radio transmission – Signals – Antennas, Signal propagation: (Path loss of radio signals ,Additional signal propagation effects, Multi-path propagation), Multiplexing, Cellular System, Mobile Applications.	15
111	Medium Access Control Motivation for a specialized MAC: (Hidden and exPOsed terminals, Near and far terminals) – Multiple Access Techniques: (Reserve Based: FDMA, TDMA, SDMA & Random Based: CDMA, Classical Aloha, Slotted ALOHA, Spread Aloha), Multiple Access with Collision Avoidance, Polling.	15
IV	Telecommunication Systems Telecommunication Systems Introduction: GSM: Mobile Services – System Architecture – Localization and Calling – Handover – Security. UMTS System Architecture - UMTS Handover.	15
V	Satellite System Satellite System: History – Applications – Basics - Routing– Localization – Handover. Mobile Network Layer: Mobile IP: Goals, Assumption, and Requirements – Entities and Terminology – IP Packet delivery – Agent discovery – Registration.	15

4. Book for Study:

- 1. Andrew S Tanenbaum, "Computer Networks", 5th Edition, Prentice Hall, 2012. (Unit 1).
- 2. Jochen Schiller, "Mobile Communications", 2nd Edition, Pearson Education, 2011. (Unit 1: Simplified Reference Model, Unit 2 to 5).

5. Book for References:

- 1. William Stallings, "Wireless Communication and Networks", 2nd Edition, Pearson Education, 2005.
- 2. Theodore Rappaport, "Wireless Communications: Principles and Practice", Prentice Hall Communications, 1996.
- 6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1:Describe basic concepts of Computer Networks and Reference Models.

CO2: Discover knowledge about the Wireless Transmission System and Cellular Concepts.

CO3:Illustrate the Medium Access Control issues and its solutions.

CO4: Describe the GSM and UMTS systems.

CO5: Discover the Knowledge about the Satellite System.

- 8. Course Outcome Level (preferable one for each objective)
 - CO1 K3
 - CO₂ K₃
 - CO₃ K₃
 - CO₄ K₃
 - CO₅ K₃

9. Mapping Course outcome with

(i) Programme Specific Objectives - **PSO (put tick mark in the correlating box)**

(ii) Programme Objectives - **PO (put tick mark in the correlating box)**

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	РО 5	PO 6	РО 7	PO 8	Sum of COs with PSOs & POs
CO1	3	З		2	2	2		З	2					17
CO2	2	2	3	2	1	2	2	1	2					17
CO3	1	3	2	2		3	1	1	2	3				18
CO4	2	3	2	3	1	2	2		2	1				18
CO5	3	2	3	2			2	3	2	2				19
Grand Total of COs with PSOs and POs											89			
Mean Value of Cos with PSO and POs											2.12			

Mapping Scale	1	2	3							
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0							
Quality	Low	Medium	Strong							
Mean value of Cos with PSOs and POs		2.12								
Observation	Cos of MOBILE COMPUTING Strongly related with PSOs and POs									

Class : II IT & M

Part : NME - 2

Semester : IV

Subject Code : 19UITN24

Hours : 3

Credits : 2

ANIMATION

1. Title of the Paper : ANIMATION

2. Course Educational Objectives (CEO)

- 1: Knowing the basic concepts of Animation
- 2: Getting to Know the Production Pipeline of 3D.
- 3: Education the features of working with Object
- 4: Realizing the concept of main Assigning Sound to the Layer.
- 5: Case Study of playing flash movie in Flash

Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Animation: Introduction to Animation - Animation Basics & Laws - Types of Animation - The History of 3D Animation - Defining 3D Animation - Exploring the 3D Animation Industry.	8
П	Getting to Know the Production Pipeline of 3D: Components - Understanding the Production Pipeline's: Preproduction - Production – POstproduction.	10
=	Introducing Flash 8: What is Flash? – Flash Window – Various Menus – Various tools of Flash 8. Working with Objects: Drawing Objects, Editing Objects – Selecting Objects – Moving Object – Resizing Objects – Rotating Objects – Grouping Objects.	9
IV	Adding Animation and Sound to the Objects: Speed and Dimensions – Adding Frames – Creating Animation Frame by Frame – Selecting Frames – Using Sound – Adding Sound Layers – Assigning Sound to the Layer.	8
V	Working with Graphics and Layers: Including Graphics – Importing Objects – Use of Layers – Working with Layers in the Timeline – Hide a Layer – Lock a Layer – Playing flash movie in Flash. Creating a motion Tween – Rotation – Multiple Key Frame.	10

3. Book for Study:

- 1. Andy Beane, 3D Animation Essentials, John Wiley & Sons, Inc.
- 2. Dinesh Maidasani, 2006, "Flash 8", Firewall Media An Imprint of Laxmi Publication Pvt.Ltd, New Delhi.

4. Book for References:

- 1. A.K. Lodha, 2006, "Guide to Flash 8", Law Point, First Edition
- 2. Reinhardt Down. "Macromedia Flash 8 Bible", Wiley India (P) Ltd., 2008.

5. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

6. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Describe the basic concepts of Animation.

CO2: Discover the knowledge about 3D concepts.

CO3: Identify the Flash concepts.

CO4: Describe the Graphics in Flash.

CO5: Demonstrate the Animation & Movies in Flash.

7. Course Outcome Level (preferable one for each objective)

- CO₁ K₃
- CO₂ K₃
- CO₃ K₃
- CO₄ K₃
- CO₅ K₃

8. Mapping Course outcome with

- (i) Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- (ii) Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	РО 2	РО 3	РО 4	РО 5	РО 6	РО 7	РО 8	Sum of COs with PSOs & POs
CO1	1	3	2	3		З	3	2	2	3	2			24
CO2	3	2	3	2	3	2	2	2	2		3			24
CO3	2	3	2	3	2	3	3	3	2	3				26
CO4	3	2	3	2	3	2	2	3	2	3	2			27
CO5	3	3	3	2		3	3	2	3	2	3			27
Grand Total of COs with PSOs and POs											128			
Mean Value of Cos with PSO and POs											2.51			

Mapping Scale	1	1 2						
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0					
Quality	Low	Strong						
Mean value of Cos with PSOs and POs	2.51							
Observation	Cos of ANIMATION Strongly related with PSOs and POs							

Class : II IT & M

Part : SBE - 2

Hours : 45

Credits : 2

Semester : IV Subject Code : 19UITS24

QUANTITATIVE METHODS

1. Title of the Paper : QUANTITATIVE METHODS

2. Course Educational Objectives (CEO)

- 1. Understanding the basic concepts and Introduction of Statistics.
- 2: Knowing the importance of collection of data.
- 3: To understand and to calculate various Measures of central tendency.
- 4: To study the concepts of set theory.
- 5: To learn the methods of Time Series Analysis.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Statistics: Introduction; Statistics and Statistical Methods; Definition; Functions of Statistics; Scope; Limitations of Statistics; Statistics in Business and Management.	9
II	Collection of Data: Primary and secondary data; methods of collecting primary data, Questionnaire – Meaning, Specimen of questionnaire, qualities of good questionnaire, sources of secondary data.	9
111	Measure of Central Tendency: Introduction; Measures of Central Tendency. Definition, objectives, types of average, Mean, Median and Mode, simple arithmetic mean: Individual observation, discrete series, and continuous series, Median: Individual observation, discrete series, continuous series, Mode; individual observation.	9
IV	Set Theory: Introduction; Meaning of Set theory; Representation of sets, types of sets, set operations, union of sets, intersection of sets, difference of two sets, complement of set.	9
V	Time Series Analysis: Introduction; Meaning and definition of Time Series; Importance, Components- Measurement of secular trend; Graphic method, semi average method, moving average method (not even periods).	9

4. Book for Study:

- 1. M. Wilson, Business Statistics, Himalaya Publishing House, New Delhi.
- 2. Veerachamy R. Quantitative Methods, New age International Publishers, New Delhi.

5. Book for Reference:

- 1. Pillai R.S.N. and Bagavathi, Statistics- Theory and Practice, S.Chand and Company Pvt. Ltd New Delhi.
- 2. V. Sunderesan, Business Mathematics, S.Chand and Company Pvt. Ltd New Delhi.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Illustrate the students to know the basic concepts of Statistics.
- 2. Describe the concept about data classification and Data Collection Methods.
- 3. Discover to Knowing the techniques of measures of central tendency.
- 4. Identify the knowledge in set theory.
- 5. Discover concepts of Variations in Time Series.

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K_3
CO2	-	K_3
CO3	-	K_3
CO4	-	K_3
CO5	-	K_3

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)
ii. Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	РО	РО	РО	РО	Sum of
	1	2	3	4	5	1	2	3	4	5	6	7	8	COs with
														PSOs &
														POs
CO1	3	2	1		2	2	3	2	1	2				18
CO2	3	3	3	3	2	2	1	2		1				20
CO3	2	3	3	3		3	1	3	2					20
CO4	3	2	2	2	3	3	2	2	1	1				21
CO5	3	3	3	3		1	3	2	2	1				21
Grand Total of COs with PSOs and POs											100			
Mean Value of Cos with PSO and POs												2.22		

Mapping Scale	1	2	3						
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0						
Quality	Low	Medium	Strong						
Mean value of Cos with PSOs and POs			2.22						
Observation	Cos of QUANTITATIVE	Cos of QUANTITATIVE METHODS Strongly related with PSOs and POs							

Class : U.G. (SFC)

Part : Self Learning

Hours : --Credits : 03

Semester : IV Subject Code : 19UITSL4

STRESS MANAGEMENT

1. Title of the Paper: STRESS MANAGEMENT

2. Course Educational Objectives (CEO)

- 1. Understanding the basic concepts and Introduction of Stress.
- 2: Knowing the importance of stress influence.
- 3: To understand the stress effects.
- 4: To study the various stress influence concepts.
- 5: To learn the methods of Employer.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
Ι	Introduction- causes of Stress – Symptoms - Potential Sources of Stress - Stress Level – Stress Types.	-
Ш	Stress and its influences on Employee Behavior – Key time Working - Flexibility – Multi Skilling – Sources of work Stress.	-
111	Stress and its effects on employee changes – Effects on Management – Stress Management Strategies – Managing Stress & Reducing the Stress.	-
IV	Influence of stress on occupation – Physiological influences – Coping with Stress –Coping Mode - Burn Out – Causes – Symptoms - Reducing Burn Out.	-
V	Violence at work - Employer Welfare – Stress Interview – Administering the Interview	_

4. Book for Study:

1) Dr. Andrew Goliszek, "Stress Management", Magna Publishing Company Limited, Chennai.

5. Book for Reference:

- 1) Barry L. Reece & Rhonda Brandt, "Effective Human relations in Organisations", 1997, VI Edition, All India Publishers & Distributors, Chennai.
- 2) Prasad L.M, "Organisation Behaviour", Sultan Chand & Sons, New Delhi.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Illustrate the causes of stress.
- 2. Describe the concept about Employee Behaviour.
- 3. Discover to reduce the stress Management.
- 4. Discover the techniques to rectify the stress.
- 5. Identify the knowledge of employer welfare.

8. Course Outcome Level (Preferable one for each objective)

-	K3
-	K_3
	- - -

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)
ii. Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	РО	РО	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														POs
CO1	3	2	1		2	2	3	2	1	2				18
CO2	3	3	3	3	2	2	1	2		1				20
CO3	2	3	3	3		3	1	3	2					20
CO4	3	2	2	2	3	3	2	2	1	1				21
CO5	3	3	3	3		1	3	2	2	1				21
Grand Total of COs with PSOs and POs													100	
							Mea	n Valu	ue of (Cos wi	ith PS	O and	POs	2.22

Mapping Scale	1	2	3							
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0							
Quality	Low	Medium	Strong							
Mean value of Cos with PSOs and POs			2.22							
Observation	Cos of STRESS MANAG	Cos of STRESS MANAGEMENT Strongly related with PSOs and POs								

Class : III IT & M

Part : III Core-10

: W

Hours : 75

Subject Code : 19UITD05

Semester

Credits : 05

DATA COMMUNICATION & COMPUTER NETWORKS

1. Title of the Paper: DATA COMMUNICATION & COMPUTER NETWORKS

2. Course Educational Objectives (CEO)

1: To be familiar with basic concepts of Communication and Networking.

2: Impart the knowledge Transmission Media and its types.

3: Know about the Error Correction and Detection.

4: To gain comprehensive knowledge about Connecting Devices.

5: To be aware of Security and Cryptography.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction Introduction to data communication and networking: Data Communication, Classification of Network, Protocols and Standards, Standards Organizations, Internet Standards, TCP/IP Protocol Suites, ISO-OSI Reference Model, Transmission modes, Applications of data communication.	15
II	Transmission Media Guided Media (Twisted-Pair, Coaxial, Fiber-Optic Cable), Unguided Media and its Applications (Radio Waves, Microwaves, Infrared), Define Switching, Taxonomy of Switched Networks.	15
II	Error Detection and Correction Introduction about Errors, Types of Errors, Detection, Parity Check, Vertical Redundancy Check, Longitudinal Redundancy Check, Cyclic Redundancy Check, Checksum, Error Correction.	15
IV	CONNECTING DEVICES Passive Hubs, Repeaters, Active Hubs, Bridges, Routers, Distance Vector Routing Algorithm, Link State Routing, Gateway.	15
V	Security Cryptography: Cryptography, Two Categories, SYMMETRIC-KEY CRYPTOGRAPHY: Traditional Ciphers, Simple Modem Ciphers, Modern Round Ciphers, Mode of Operation. FIREWALLS: Packet- Filter Firewall, Proxy Firewall.	15

4. Book for Study:

1. Behrouz A Foruzan," Data Communications and Networking" 4th Edition, Tata McGraw-Hill, 2009.

5. Book for References:

1. Andrew S. Tanenbaun,"Computers Networks", 4th Edition, Pearson Prentice Hall, 2009.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Describe the basic concepts of Communication and Networking.

CO2: Discover the knowledge about the Transmission Media.

CO3: Solve the Error Detection and Correction.

CO4: Manipulate the Connecting Devices.

CO5: Discriminate about the Security.

8. Course Outcome Level (preferable one for each objective)

- CO₁ K₃
- CO₂ K₃
- CO₃ K₃
- CO₄ K₄

CO₅ - K₃

9. Mapping Course outcome with

- 1. Programme Specific Objectives PSO (put tick mark in the correlating box)
- 2. Programme Objectives PO (put tick mark in the correlating box)

Outcomes	DSO	DSO	DSO							Þ٨	DO	PO	ΡΩ	Sum of
Guttomes	130	130	130	130	- 30	10	.0	2					.0	
	1	Z	3	4	5	1	2	3	4	5	6	/	ð	COs
														with
														PSOs &
														Pos
CO1	2	3	2	1		3	2	2	1	2				18
CO2	3	2	З	2	2	2	2	2	1					19
CO3	1	2	2	2	2	2	1	3	2	2				19
CO4	3	3	3	3	1	3	2	2	1					21
CO5	3	3	3	3		3	2	2	2					21
Grand Total of COs with PSOs and PO											98			
Mean Value of COs with PSO and PO											2.18			

Mapping of COs with PSOs and POs

Strong-3, Medium-2 & Low-1

Mapping Scale	1	2	3			
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0			
Quality	Low	Medium	Strong			
Mean value of Cos with PSOs and Pos			2.18			
Observation	COs of DATA COMMUNICATION & COMPUTER NETWORKS Strongly related with PSOs and PO					

Class : III IT & M

Semester

Part : III Core- 11

: 75 Hours

Credits : 4

: V Subject Code : 19UITD15

RESEARCH METHODOLOGY

1. Title of the Paper : RESEARCH METHODOLOGY

2. Course Educational Objectives (CEO)

- 1: Knowing the basic concepts of research methodology.
- 2: Understanding the concept of sampling and data collection.
- 3: Learning the concepts of Scaling and Tools of Analysis.
- 4: Knowing the Data Classification and Report Writing.
- 5: Develop the knowledge in Technology of Research.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Research Methodology Objectives –Characteristics - Types – Significance - Research Process - Criteria of Good Research – Scope of Business Research.	15
II	Sampling Definition – Need for sampling – Characteristics – Advantages and disadvantages - Steps - Types – Probability and Non Probability sampling Methods- Factors consider in sampling design.	15
111	Data Collection Primary Data – Secondary Data - Advantages and Disadvantages - Methods of Data Collection- Experiment Method – Survey Method - Questionnaire – Merits & Demerits – requisites of good Questionnaire – Kinds of Questions – Steps to Construct Questionnaire.	15
IV	Scaling and Analysis of Data Scale Classification – Important Scaling techniques – Rating – Ranking – Likert Scale – Semantic Differential Scale – Data Processing – Hypothesis -Characteristics – Procedure of Testing – Analysis of Data – Tools for Analysis	15
V	Report Writing Purpose- Essentials of Good Report – Types – Layout Contents of research report – Problems encountered by researchers in India – Uses of Library – Role of internet in Research	15

4. Book for Study:

1. C.R. Kothari, 2014 - II Edition, "Research Methodology", Sultan Chand and Sons, New Delhi.

5. Book for Reference:

- 1. Saravanavel, 1987 I Edition, "Research Methodology", Prentice Hall Publications.
- 2. Sharma Ram Nath, VI Edition, "Research Methods in Social Sciences", Media Promoters and Publishers Pvt Ltd.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Brain Storming, Case Study, Assignments etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Recognize the students to know the basic concepts of Research Methodology.
- 2. Compose the knowledge about methods of data collection and sampling.
- 3. Manipulate the skills to Scaling and Measurement Techniques.
- 4. Practice the students to know the research report writing.
- 5. Outline the concepts of Use of Library and internet in Research.

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K ₃
CO2	-	K ₃
CO3	-	K ₃
CO4	-	K_3
CO5	-	K ₃

9. Mapping Course outcome with

- 1. Programme Specific Objectives **PSO (put tick mark in the correlating box)**
- 2. Programme Objectives PO (put tick mark in the correlating box)

Mapping of COs with PSOs and POs

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	PO	РО	РО	РО	РО	РО	PO	Sum of
	1	2	3	4	5	1	2	3	4	5	6	7	8	COs with
														PSOs &
														Pos
CO1	2	3	3	3		2	3	1		1				18
CO2	2	3	2	2	3	3	1	2	2	1				21
CO3	3	3	2	3		3	1	3	3					21
CO4	3	2	3	2	1	2	3	2	2	1				21
CO5	2	2	3	3		3	3	3	2	2				23
Grand Total of COs with PSOs and PO									104					
Mean Value of COs with PSO and PO										2.31				

Strong-3, Medium-2 & Low-1

Mapping Scale	1	2	3				
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0				
Quality	Low	Medium	Strong				
Mean value of Cos with PSOs and Pos			2.31				
Observation	COs of RESEARCH METHODOLOGY Strongly related with PSOs and PO						

Class : III IT & M

Subject Code : 19UITD25

: V

Semester

Part : III Core- 12

Hours : 75

Hours : 75 Credits : 4

MARKETING MANAGEMENT
1. Title of the Paper : MARKETING MANAGEMENT

2. Course Educational Objectives (CEO)

1: Knowing the basic concepts of Marketing Management.

- 2: Understanding the concept of product and its classification.
- 3: Learning the pricing concepts and its types.
- 4: Comprehending the concept of channel of distribution.
- 5: Develop the knowledge about advertising and Medias.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction on Marketing Marketing-nature and scope - Classification of Markets - Evolution of marketing concept - Functions of marketing - Consumer Behavior - Buying motives – Consumer Decision making.	15
=	Product Concept of Product – Features - Product Classification - New product development -Product life cycle – Branding and packaging- Features – Types - Functions of packaging.	15
111	Pricing Objectives -Factors affecting Pricing – Pricing Policies - Cost oriented pricing, Demand oriented pricing, Cost-demand based, competitive pricing - Price Discrimination - Kinds of pricing.	15
IV	Channel of Distribution Functions - importance of channel – types of channel of distribution- Factors to be considered in channel selection- Middlemen- Functions- Kinds of Agent Middlemen.	15
V	Advertising & Online Marketing Objectives– Types of Advertising- online Marketing – Web based Marketing – E- Business, E- Commerce, E- Banking and E- Trading – Emerging New trends – Challenges to Marketers – Differ Traditional and Online Marketing.	15

4. Book for Study:

1. Marketing Management by R.S.N.Pillai and Bagavathi, 2005 – Sultan Chand and Sons, New Delhi.

5. Book for Reference:

- 1. Marketing Management by Philip Kotler, 2007 Prentice Hall.
- 2. Marketing Management by V.S.Ramasamy and Nama Kumari, 2006 Macmillan Publications.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Label the basic concepts of marketing and its functions.
- 2. Develop the skills to new product development.
- 3. Match the objectives of pricing and kinds.
- 4. Illustrate the knowledge about distribution channels and types.
- 5. Utilize the concepts of advertising and Medias.

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K_3
CO2	-	K ₃
CO3	-	K_4
CO4	-	K_3
CO5	-	K ₃

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)

ii. Programme Objectives - PO (put tick mark in the correlating box)

Mapping of COs with PSOs and POs

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	РО	РО	РО	РО	Sum of
	1	2	3	4	5	1	2	3	4	5	6	7	8	COs with
														PSUS & Pos
CO1	1	3	3		2	3	2	1	2					17
CO2	3	2	3	3	3	2	2	2	1					21
CO3	2	3	2	3		1	3	2	3	2				21
CO4	3	2	3	3	1	3	2	1	2	2				22
CO5	2	3	З	2		3	З	З	2	1				22
Grand Total of COs with PSOs and PO										103				
Mean Value of COs with PSO and PO										2.29				

Strong-3, Medium-2 & Low-1

Mapping Scale	1	2	3			
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0			
Quality	Low	Medium	Strong			
Mean value of Cos with PSOs and Pos			2.29			
Observation	COs MARKETING MANAGEMENT Strongly related with PSOs and PO					

Class : III IT & M

Part : Core – 13 Hours : 75

Credits : 4

Semester : V

Subject Code : 19UITD35

DOT NET PROGRAMMING

1. Title of the Paper : DOT NET PROGRAMMING

2. Course Educational Objectives (CEO)

- i. Understand Visual C# Features, Environment and Controls.
- ii. Understand C# Essentials and Tokens.
- iii. Able to code in C# Environment
- iv. Able to learn working with C# and Database.
- v. Able to learn web forms.

3. Five Units of the Syllabus

Unit	Content	No. of Hours
I	C# Introduction and Controls Introduction: C# and other Languages – Installing Visual C# - IDE – Your First Application – Toolbox – property Editor - Visual C# forms – events – setting properties in code – A C# adding machine – Dealing with errors. Controls: Methods- Buttons, Labels, Text, picture boxes, Check & Radio Boxes - Group, List, Combo boxes - Timer, Open File Dialog and Tab Control- Splitter Control -Using Toolbar-Month Calendar Control.	15
II	 C# Essentials Language Essentials: Start the beginning – Parts of C# file – Data types- function and Parameters – variables & scope – IFElse, do and while, for loops, switch – Arrays, Structs, Using enum, Understanding reference types-working with parameters. Visual Studio Tools: Creating, Customizing a menu, Pop-up menu-outlining & Auto insertion- using Clip board ring – using Find – Debugger –break points – Customizing Tool box – Using Add-in Manager – Setting Visual C# Options – Project Properties- creating Stand Alone applications. 	15
	C# Techniques Catching errors with exceptions – user validation-Use tool tips-Printing with Visual C# - Managing multiple forms- Introducing MDI – Starting C# application – How to read and write a file- Drawing Graphics – Creating a shared Event Handler – Interrupt With DoEvents-Using a Setup Project.	15
IV	Creating Database Programs Introducing Databases- creating Databases with access- Designing a table- Data form Wizard – Improving Data Form- Disconnected data – Database objects – Showing data in Grid- Styling a Data grid- Dealing with large	15

	database- Copying record to clipboard- creating and showing a report.	
	Running C# on the Internet	
	What kind of web?- Introducing Web Forms- Creating a Web Form - How	
V	web Forms Work - Web Forms Toolbox-The page Class and code-behind-	15
	The Load event and isPostBack -The Session object - ASP.Net and	
	Database-Showing data in a Data Grid.	

4. Book for Study:

Tim Anderson, "C# Programming in easy steps", Dream Tech Press, New Delhi – 02. Unit – I: **Chapters 1, 2** pages 08 - 20 & 28 – 47, Unit – II: **Chapters 4, 5** pages 51 - 73 & 96 - 115 Unit – III: **Chapters 6** Pages 118 – 140, Unit – IV: **Chapters 7** Pages 146 - 169 Unit – IV: **Chapters 8**, Pages 172 – 187

5. Book for References:

- 1. Christian Nagel, Bill Evjen, Jay Glynn, KarliWats, Morgan Skinner, Allen Jones, 2005 PROFESSIONAL C# WITH .NET 3.0 By Copyright John Wiley.
- 2. RudrakashBatra, Charual Shukla ASP.NET 2.0 Black Book Dream Tech Press, New Delhi 110002.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1: Utilize the knowledge about ASP C# Dot Net Environments.
- 2: Apply the basics of C# Essentials (Tokens, control structures).

3: Compute the knowledge about C# Techniques (Error Handling, Multiple Forms, Graphics)

4: Ability to create & Connect Database using C#.

5: Design Web Forms and web Pages.

8. Course Outcome Level (preferable one for each objective)

CO1	-	K ₃
CO2	-	K ₃
CO3	-	K ₄
CO4	-	K ₃
CO5	-	Кз
9. Mapping Course outcome with

- i. Programme Specific Objectives PSO (put tick mark in the correlating box)
- ii. Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	PO	РО	PO	PO	PO	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														Pos
CO1	3	2	3	2		3	2	2	1					18
CO2	2	2	2	2	1	2	2	2	2	2				19
CO3	2	3	2	3	3	2	2	1	2	2				22
CO4	3	2	3	3	1	3	3	2		1				21
CO5	3	3	2	2		3		3	3	2				21
							Gran	d Tota	al of C	Os wi	th PS	Os an	d PO	101
							Mea	n Val	ue of	COs w	ith PS	SO an	d PO	2.24

Mapping of COs with PSOs and POs

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and Pos			2.24
Observation	COs of DOT NET PROGE and PO	RAMMING Stror	ngly related with PSOs

Class	: III IT & M	Part	: III Lab -5
Semester	: V	Hours	: 75
Code	: 19UITP55	Credit	: 04

PROGRAMMING IN DOT NET LAB - 5

1. Title of the Paper : PROGRAMMING IN DOT NET LAB - 5

2. Course Educational Objectives (CEO)

- i. Understand Visual C# Features, Environment and Controls.
- ii. Understand C# Essentials and Tokens.
- iii. Able to code in C# Environment
- iv. Able to learn working with C# and Database.
- v. Able to learn web forms.

3. Five Units of the Syllabus

OrintHoursIYour First Application –Visual C# forms –Using Tool Box controls:12IIUsing Function and Parameters –IFElse, do and while, for loops, switch – Arrays, Structs, Using enum.15IIIDesign Stylish attractive Menus - AD Rotator – Rotation Animation – Using CSS, Attractive Background Design.18IVCreating Databases with access- Designing a table- Using Grid View - Using Repeater & Data Pager.16	Unit	Content	No. of
IYour First Application –Visual C# forms –Using Tool Box controls:12IIUsing Function and Parameters –IFElse, do and while, for loops, switch – Arrays, Structs, Using enum.15IIIDesign Stylish attractive Menus - AD Rotator – Rotation Animation – Using CSS, Attractive Background Design.18IVCreating Databases with access- Designing a table- Using Grid View - Using Repeater & Data Pager.16	Onit	Content	Hours
IIUsing Function and Parameters –IFElse, do and while, for loops, switch – Arrays, Structs, Using enum.15IIIDesign Stylish attractive Menus - AD Rotator – Rotation Animation – Using CSS, Attractive Background Design.18IVCreating Databases with access- Designing a table- Using Grid View - Using Data List -Using Details View - Using Form View - Using List View - Using Repeater & Data Pager.16	I	Your First Application –Visual C# forms –Using Tool Box controls:	12
III - Arrays, Structs, Using enum. 13 III Design Stylish attractive Menus - AD Rotator - Rotation Animation - Using CSS, Attractive Background Design. 18 IV Creating Databases with access- Designing a table- Using Grid View - Using Data List -Using Details View - Using Form View - Using List View - 16 IV Using Repeater & Data Pager. 16		Using Function and Parameters –IFElse, do and while, for loops, switch	15
IIIDesign Stylish attractive Menus - AD Rotator - Rotation Animation - Using CSS, Attractive Background Design.18IVCreating Databases with access- Designing a table- Using Grid View - Using Data List -Using Details View - Using Form View - Using List View - Using Repeater & Data Pager.16		– Arrays, Structs, Using enum.	15
III Using CSS, Attractive Background Design. 10 Creating Databases with access- Designing a table- Using Grid View - 10 IV Using Data List -Using Details View - Using Form View - Using List View - 16 Using Repeater & Data Pager. 16		Design Stylish attractive Menus - AD Rotator – Rotation Animation –	10
Creating Databases with access- Designing a table- Using Grid View -IVUsing Data List -Using Details View - Using Form View - Using List View -16Using Repeater & Data Pager.		Using CSS, Attractive Background Design.	10
IVUsing Data List -Using Details View - Using Form View - Using List View -16Using Repeater & Data Pager.		Creating Databases with access- Designing a table- Using Grid View -	
Using Repeater & Data Pager.	IV	Using Data List -Using Details View - Using Form View - Using List View -	16
		Using Repeater & Data Pager.	
V Creating a Web Form - Web Forms Toolbox-Using Session objects 14	V	Creating a Web Form - Web Forms Toolbox-Using Session objects	14

4. Book for Study:

Tim Anderson, "C# Programming in easy steps", Dream Tech Press, New Delhi – 02.

5. Book for References:

- 1. Christian Nagel, Bill Evjen, Jay Glynn, KarliWats, Morgan Skinner, Allen Jones, 2005 PROFESSIONAL C# WITH .NET 3.0 By Copyright John Wiley.
- 2. RudrakashBatra, Charual Shukla ASP.NET 2.0 Black Book Dream Tech Press, New Delhi 110002.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

1: Compose the knowledge about ASP C# Dot Net Environments.

2: Apply the basics of C# Essentials (Tokens, control structures).

3: Utilize knowledge about C# Techniques (Error Handling, Multiple Forms, Graphics)

- 4: Create & Connect Database using C#.
- 5: Construct Web Forms and web Pages.

8. Course Outcome Level (preferable one for each objective)

 $\begin{array}{ccccccc} CO_1 & - & K_3 \\ CO_2 & - & K_4 \\ CO_3 & - & K_3 \\ CO_4 & - & K_3 \\ CO_5 & - & K_3 \end{array}$

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)ii. Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PS O 4	PSO 5	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	РО 7	PO 8	Sum of COs with PSOs & Pos
CO1	3	3	3	3		3	3	3	1					22
CO2	2	2	3	3	2	2	2	3	3	2				24
CO3	2	3	2	2	3	2	3	2	3	2				24
CO4	3	2	3	3	2	3	3	3	2	1				25
CO5	3	3	3	2	2	3	1	2	3	3				25
							Grand	l Tota	l of C	Os wit	h PSC	Ds and	d PO	120
							Mear	n Valu	e of C	Os w	ith PS	O and	d PO	2.5

Mapping of COs with PSOs and POs

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and			2.5
Pos			215
Observation	COs of PROGRAMMIN related with PSOs and	G IN DOT NET L PO	AB - 5 Strongly

Class : II IT & M

Semester : V Subject Code : 19UITE15 Part : Core Elective 1

Hours : 60

Credits : 03

HUMAN RESOURCE MANAGEMENT

1. Title of the Paper: HUMAN RESOURCE MANAGEMENT

2. Course Educational Objectives (CEO)

- 1. Understanding the basic knowledge of Human Resource Management
- 2. Comprehend the Manpower planning and Job Analysis
- 3. Learning the different wage systems and Training Methods
- 4. Studying the Industrial Relation and Trade Union
- 5. Knowing the Performance Appraisal System and Collective Bargaining

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Human Resource Management Human Resource Management – Definition – Concepts –Objectives–Functions-Personnel Management vs HRM.	12
II	Manpower Planning Manpower Planning – Job Analysis – Job description - Job Specification – Job evaluation - Sources of Recruitment – Steps in Selection process.	12
111	Wages and Salary Administration Wages and Salary Administration: Objectives – Methods of payment of wages – Training and Development : Methods of Training – Essential of a Good Training Programme.	12
IV	Industrial Relations Trade Union - Industrial Relations significance – Causes for poor relations – Remedies – Industrial Disciplinary system – Grievance Handling system – Machinery and procedure.	12
V	Performance Appraisal Performance Appraisal- Methods- Collective Bargaining- Workers participation in Management	12

4. Book for Study:

1. C.B Gupta, Human Resource Management, Sultan Chand & Sons Publication, New Delhi, Tenth Edition-2009

5. Book for Reference:

- 1. Gary Dessler, "Human Resource Management" Prentice-Hall of India P.Ltd., Pearson, Seventh Edition
- 2. Dr.S.S.Khanka, "Human Resource Management" S.Chand & Company Ltd., New Delhi-2003.
- 3. Dr. R.Venkatapathy & Assissi Menacheri, . Industrial Relations & Labour Welfare, Adithya Publications, CBE, 2001.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 2. Label the Basic functions of Human Resource Management
- 2. Interview the Recruitment and selection process
- 3. Adapt the different types of wages system and Training methods
- 4. Summarize the Industrial Relations and Grievance Handling system
- 5. Relate the best method of Performance appraisal system

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K ₃
CO ₂	-	K ₄
CO ₃	-	K ₃
CO ₄	-	K ₃
CO ₅	-	K ₃

9. Mapping Course outcome with

- i. Programme Specific Objectives –**PSO(put tick mark in the correlating box)**
- ii. Programme Objectives **PO(put tick mark in the correlating box)**

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	РО 2	РО 3	РО 4	РО 5	РО 6	РО 7	PO 8	Sum of COs with PSOs & Pos
CO1	3	3	3			2	3	2	1					17
CO2	3	2	2	2	3		1	2	2					17
CO3	3	2	3	2		2	1	2		3				18
CO4	2	3	2	2	3	3	2	2	1					20
CO5	2	2	3	3		1	3	3	1	2				20
							Gran	d Tot	al of C	Os wi	th PS	Os an	d PO	92
							Me	an Va	lue of	Cos w	ith PS	SO an	d PO	2.24

Mapping of COs with PSOs and POs

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs			2.24
and Pos			2.24
Observation	COs of HUMAN RESO	URCE MANAGE	EMENT Strongly
Observation	related with PSOs and	d PO	

Class : III IT & M

Subject Code : 19UITSL5

Semester

Part : Self Learning Hours : Credits : 03

Cyber Security

1. Title of the Paper : Cyber Security

: V

2. Course Educational Objectives (CEO)

- 1: Discuss the basic concepts Cyber Security and Threats.
- 2: Imagine the importance of Cyber Security Vulnerabilities and Safe Guards.
- 3: Compute the process of Security in SOAP Services and Identity Management.
- 4: Discriminate the knowledge of Network based Intrusion detection Systems, Network based Intrusion Prevention Systems.
- 5: Practice the Concept of Cryptography and Network Security.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
	Introduction to Cyber Security	
	Overview of Cyber Security, Internet Governance –	_
•	Challenges and Constraints, Cyber Threats:- Cyber Warfare-	_
	Cyber Crime-Cyber terrorism.	
	Cyber Security Vulnerabilities and Cyber Security	
	Safeguards	
	Cyber Security Vulnerabilities-Overview, vulnerabilities in	
II	software, System administration, Complex Network	-
	Architectures, Open Access to Organizational Data, Weak	
	Authentication, Unprotected Broadband communications,	
	Security policy, Threat Management.	
	Securing Web Application, Services and Servers	
	Introduction, Basic security for HTTP Applications and	
III	Services, Basic Security for SOAP Services, Identity	-
	Management and Web Services, Authorization Patterns,	
	Security Considerations, Challenges.	
	Intrusion Detection and Prevention	
	Intrusion, Physical Theft, Abuse of Privileges, Unauthorized	
	Access by Outsider, Malware infection, Intrusion detection	
	and Prevention Techniques, Anti-Malware software,	
N/	Network based Intrusion detection Systems, Network based	-
IV	Intrusion Prevention Systems, Host based Intrusion	
	prevention Systems, Security Information Management,	
	Network Session Analysis, System Integrity Validation.	

	Cryptography and Network Security	
	Introduction to Cryptography, Symmetric key Cryptography,	
	Asymmetric key Cryptography, Message Authentication,	
V	Digital Signatures, Applications of Cryptography. Overview	
V	of Firewalls- Types of Firewalls, User Management, VPN	
	Security Security Protocols: - security at the Application	
	Layer- PGP and S/MIME, Security at Transport Layer- SSL	
	and TLS, Security at Network Layer-IPsec.	

4. Book for Study:

1. Nihad Hassan, Rami Hijazi, 2017 - "Digital Privacy and Security Using Windows: A Practical Guide A Press.

5. Book for Reference:

1. Lester Evans, 2018-"Cyber Security" An Essential Guide to Computer and Cyber Security for Beginners.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

- 1. Understood the Concept of Cyber Security.
- 2. Applying the knowledge of Cyber Security Vulnerabilities and Cyber Security Safeguards
- 3. Developing their managerial skills SOAP Services and Identity Management
- 4. Knowing the basic techniques Network based Intrusion detection Systems, Network based Intrusion Prevention Systems
- 5. Understanding the Techniques of Cryptography and Network Security.

8. Course Outcome Level (Preferable one for each objective)

CO1	-	K_3
CO2	-	K ₃
CO3	-	K ₃
CO4	-	K ₃
CO5	-	K ₃

9. Mapping Course outcome with

i. Programme Specific Objectives - **PSO (put tick mark in the correlating box)**

ii. Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	PO	РО	PO	PO	PO	PO	PO	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														Pos
CO1	3	3	1	3		2	2	2	1					17
CO2	2	2	2	2	1	2	2	2	2					17
CO3	3	3	2	2		2	1		2	2				17
CO4	3	2	3	2	1	2	2	2	2	1				20
CO5	2	3	3	2		2	2	2	3	1				20
							Gran	nd Tot	al of C	COs w	ith PS	Os an	d PO	91
Mean Value of COs with PSO and PO									2.07					

Mapping Scale	1	2	3					
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0					
Quality	Low	Medium	Strong					
Mean value of Cos with PSOs			2.07					
and Pos			2.07					
Observation	COs of CYBER SECURITY Strongly related with PSOs and PO							

Class : III IT & M

Semester

Part : III Core - 14 Hours : 90 Credits : 05

Subject Code : 19UITD46

: VI

Mobile Application Development

1. Title of the Paper : Mobile Application Development

2. Course Educational Objectives (CEO)

- 1: Understand the concepts of Mobile Applications development and its Framework.
- 2: Impart the knowledge of Mobile Application Development Tools.
- 3: Develop the knowledge of Creating Mobile Applications and Activities.
- 4: Develop the efficient User Interface of Mobile Applications.
- 5: Able to understand the Resources of Mobile Application Development Tools.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	A Little Background Mobile Applications The Future An open platform for mobile development and Native android applications - Android SDK features - Introducing the Development Framework - Developing for Android - Developing for Mobile Devices.	18
II	Mobile development tools Hardware - Imposed Design Considerations - Environment, Developing for Android and To-Do List Example - The Android Emulator ,Dalvik Debug Monitor Service (DDMS) - The Android Debug Bridge (ADB)	18
111	Creating applications and activities The Android Application Life Cycle - Understanding Application Priority and Process States - Extending and Using the Application Class - Creating an Activity - Creating an Activity - Android Activity Classes.	18
IV	Creating user interfaces Fundamental android UI design - Introducing Views - Creating Activity User Interfaces with Views - The Android Widget Toolbox - Introducing layouts - Using Layouts, Optimizing Layouts – Creating new views - Modifying Existing Views - Creating Compound Controls - Creating Custom Views.	18
V	Resources Drawable resources - Shapes, Colors, and Gradients, Color Drawable, Shape Drawable, Gradient Drawable, Composite Drawable - Creating and using menus - Introducing the Android Menu System - Defining an Activity Menu - Menu Item Options - Menu Item Options.	18

4. Book for Study:

"Reto Meier " Professional Android 2 Application Development John Wiley & Sons, 01-Mar-2010

5. Book for References:

Mark Murphy "Android "A press 2009.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Summarize the concepts of Mobile Applications Development.

CO2: Experiment the knowledge about Mobile Application Development Tools.

CO3: Create New Innovative Android Applications and Activities.

CO4: invent Android User Interfaces and Views.

CO5: Formulate how to use the various resources to creating the Mobile Applications.

8. Course Outcome Level (preferable one for each objective)

CO1	-	K ₃
CO ₂	-	K ₄
CO3	-	K ₃
CO ₄	-	K ₃
CO ₅	-	K_3

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)
ii. Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	РО 3	РО 4	PO 5	PO 6	PO 7	PO 8	Sum of COs with PSOs & Pos
CO1	2	3	3	3		2	2	2	1					18
CO2	3	2	3	2	2	3		2	1					18
CO3	1	3	2	2	1	3		1	2	3				18
CO4	2	2	2	3	1	2	2	3		1				18
CO5	3	2	3	2		2	2	1		3				18
							Grand	l Tota	l of C	Os wit	th PSC	Ds and	d PO	90
Mean Value of COs with PSO and POs										2.14				

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and Pos			2.14
Observation	COs of Mobile Application with PSOs and PO	on Development	t Strongly related

Class : III IT & M

Semester : VI

Subject Code : 19UITP66

Part : Lab – 6 Hours : 90 Credits : 05

1. Title of the Paper : Android Programming Lab - 6

2. Course Educational Objectives (CEO)

- 1: Understand the concepts of Mobile Applications development and its Framework.
- 2: Impart the knowledge of Mobile Application Development Tools.
- 3: Develop the knowledge of Creating Mobile Applications and Activities.
- 4: Develop the efficient User Interface of Mobile Applications.
- 5: Able to understand the Resources of Mobile Application Development Tools.

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Simple Android Application using Basic SDK - Frameworks and - Services	18
II	Designing Android Applications – Creating Android Applications using Emulators	18
III	Creating Android Applications Using Priority and Process States – Creating Activities in Android Applications	18
IV	Creating Android Applications Using Layouts – Custom Views – Compound Controls.	18
V	Creating Android Applications with Drawable Resources – Shapes – Colors. Creating Menus in Android Applications.	18

4. Book for Study:

"Reto Meier " Professional Android 2 Application Development John Wiley & Sons, 01-Mar-2010

5. Book for References:

Mark Murphy "Android "A press 2009.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

CO1: Infer the concepts of Mobile Applications Development.

CO2: Criticize knowledge about the Mobile Application Development Tools.

CO3: Examine New Innovative Android Applications and Activities.

CO4: Create Android User Interfaces and Views.

CO5: Test the various resources to creating the Mobile Applications.

8. Course Outcome Level (preferable one for each objective)

CO1 - K₃

CO₂ - K₄

CO ₃	-	K ₃
CO_4	-	K ₃
CO_5	-	K ₃

9. Mapping Course outcome with

- i. Programme Specific Objectives PSO (put tick mark in the correlating box)
- ii. Programme Objectives PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	РО 2	РО 3	РО 4	РО 5	РО 6	РО 7	PO 8	Sum of COs with PSOs & Pos
CO1	2	3	3	3		3	3	2	2					21
CO2	3	2	3	2	2	3	2	3	3	1				24
CO3	2	3	2	2	2	3	2	3	3	3				25
CO4	3	2	3	3	2	2	2	3	3	2				25
CO5	3	2	3	2	3	2	3	2	2	3				25
							Gra	nd To	tal of	COs w	ith PS	Os an	d PO	120
Mean Value of COs with PSO and PO										2.5				

Mapping Scale	1	2	3			
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0			
Quality	Low	Medium	Strong			
Mean value of Cos with PSOs			2 5			
and Pos			2.5			
Observation	COs of Android Programming Lab - 6 Strongly related with					
Observation	PSOs and PO					

Class : III IT & M

Part : Core 15 Hours : 90

Credits : 5

Semester : VI Subject Code : 19UITD56

1. Title of the Paper: ADVERTISNG AND SALESMANSHIP

2. Course Educational Objectives (CEO)

- 1. Understanding the basic knowledge of Advertising
- 2. Comprehend the social and Ethical aspects of Advertising
- 3. Learning the Advertising Agency and Advertising Media
- 4. Studying the concept of Salesmanship
- 5. Knowing the kinds of Negotiable and Non Negotiable Instruments

3. Five Units of the Syllabus

UNIT	Content	No. of Hours
I	Introduction to Advertising Meaning-Definition-Characteristic-Objectives-Nature Scope –Types-Importance-Functions of Advertising	18
Ш	Social and Ethical Aspects of Advertising Social issues in Advertising-The responsibility of the advertiser-Positive social effects of Advertisements- Advertising and cultural value-Ethical issues in Advertising-improving advertising Ethics	18
111	Advertising Agencies and Advertising Media Meaning-Role -Importance and Types of Advertising Agency-functions of Advertising Agencies-Classification of Advertising Media-Media Planning-types of Indoor Media and Out door Media-	18
IV	Salesmanship Definition-features-Objectives-Nature-Types- Advantages of Salesmanship—Functions of Salesman- -Quality of a Sales Manager-Advertising vs Salesmanship	18
V	Sales Organization Need for a Sales Organization –Functions of Sales Organization-Techniques of Sales Forecasting-Training of Salesman-Remuneration of salesmen- Advantages of Control of Salesmen	18

4. Book for Study:

1. P.Saravanavel and S. Sumathi, Advertising and Salesmanship– Margham Publications, Chennai- Second Edition- 2009.

5. Book for Reference:

- 1. M.N. Mishra and P.N.Harikumar, Advertising and Sales Promotion , Himalaya Publishing House, Mumbai First Edition,2015
- 2. Frank Jefkins and Daniel Yadin " Advertising", Pearson Education, New Delhi, Revised Edition, 2000

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Infer the Basic knowledge about Advertising and it's functions
- 2. Identify the knowledge about the social and ethical aspect of Advertising
- 3. Choose the right Advertising Agencies and best Advertising Media
- 4. Propose the basic functions of Salesmanship
- 5. Plan the sales Techniques, Remuneration and Control of salesmen

8.Course Outcome Level (Preferable one for each objective)

CO1	-	K ₃
CO_2	-	K ₃
CO ₃	-	K ₃
CO_4	-	K ₄
CO_5	-	K ₃

9.Mapping Course outcome with

1. Programme Specific Objectives –PSO(put tick mark in the correlating box)

2. Programme Objectives - PO(put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	Sum of COs with PSOs
														& Pos
CO1	3	3	1		3	2	2	2	1		2			19
CO2	2	2	2	2	1	2	2	2	2	2				19
CO3	1	3	3	3	3	2	2	2	2	2	1			24
CO4	3	2	2	2	1	2	2	3	3	2	2			24
CO5	3	3	2	3		3	3	2	3		2			24
Grand Total of COs with PSOs and PO												110		
						Ν	Aean	Value	e of C	Os wi	th PS	O and	d PO	2.2

Mapping Scale	1	2	3					
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0					
Quality	Low	Medium	Strong					
Mean value of Cos with			2.2					
PSOs and Pos								
Observation	COs of ADVERTISNG AND SALESMANSHIP Strongly related with PSOs and PO							

Class : III IT & M

Part : III Core- 16

Semester : VI

Subject Code : 19UITD66

Hours : 90

Credits : 5

1. Title of the Paper : ENTREPRENEURSHIP DEVELOPMENT

2. Course Educational Objectives (CEO)

- 1: Knowing the basic concepts of Entrepreneur.
- 2: Understanding the concept of Women Entrepreneurship and NGO's.
- 3: Learning the concepts of ownership structure.
- 4: Knowing the concept of project report formulation.
- 5: Develop the knowledge in Small Scale Industries.

3. Five Units of the Syllabus

Unit	Content	No. of Hours
I	Introduction to Entrepreneur Concept – Characteristics of entrepreneur - Functions - Types - Entrepreneurship: Concept - Role of Entrepreneurship in Economic Development - Distinction between Entrepreneur and manager – Intrapreneur- concept.	18
II	Women Entrepreneurship Concept - Functions - Growth – Recent trends - Problems of women Entrepreneurs - Entrepreneurial competencies - Rural Entrepreneurship: Need – Problems - Role of NGO's in development of Rural Entrepreneurship.	15
111	Form of Business Enterprises and EDP Ownership Structure - Proprietorship - Partnership - Company - Co- operatives- Advantages and Disadvantages- Selection on appropriate Ownership Structure - Entrepreneurship Development Programme – Objectives- Course Contents – phases - Evaluation.	15
IV	Project Formulation Project Report - Significance - Contents - Formulation of a project report - Planning commission Guidelines –Specimen of a project report- Project appraisal – Concept - Methods of project appraisal.	15
v	Institutional support to Entrepreneurs and SSI Need for institutional support - NSIC, SIDO, SISI and DIC - SSI: Definition – Steps for stating Small Scale Industries - Sickness in Small Business: Signals - Symptoms - Consequences and Remedial measures.	15

4. Book for Study:

1. S.S.Khanka, 2010 - II Edition, "Entrepreneurial Development", S. Chand & Co., New Delhi, India,

5. Book for Reference:

- 1. CB. Gupta, 2009 VII Edition, "Entrepreneurial Development", Sultan Chand & Sons
- 2. Vasanth Desai, 1980 "Entrepreneurial Development", Himalaya Publishing House, Second revised.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Prepare the students to know the basic concepts of Entrepreneurship.
- 2. Survey the knowledge about women Entrepreneurs and Rural Entrepreneurship.
- 3. Test for the skills to Form of Business Enterprises.
- 4. Plan the students to Formulation of a project report.
- 5. Recommend the students to know the Steps for stating Small Scale Industries.

8. Course Outcome Level (Preferable one for each objective)

- CO5 K₃

9. Mapping Course outcome with

i. Programme Specific Objectives - PSO (put tick mark in the correlating box)

ii. Programme Objectives - PO (put tick mark in the correlating box)

Outcomes	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PO 1	РО 2	РО 3	РО 4	РО 5	РО 6	РО 7	PO 8	Sum of COs with PSOs & Pos
CO1	2	2	1	3		3	3	2	1		2			19
CO2	3	2	2	2	1	3	2	2	2	3				22
CO3	2	3	2	3	1	2	1	2	2	2	2			22
CO4	3	2	3	2	3	2	3	1	3	2				24
CO5	3	2	2	3	3	2	3	2	2	2				24
Grand Total of COs with PSOs and PO												111		
							Mean	Valu	e of C	COs w	ith PS	io and	d PO	2.22

Strong-3, Medium-2 & Low-1

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and Pos			2.22
Observation	COs of ENTRE with PSOs and	PRENEURSHIP D I PO	EVELOPMENT Strongly related

Syllabus 2022-23

PROJECT

Class : III IT&M Semester : VI Subject Code : 19UITD76 Part : III Core-17 Hours : 15 Credits : 01

Objective:

- Project work aims at exposing the students to various developments taking place in the field of information technology and management.
- Students will select individually Commercial or Technical Project based on Application Development Technologies.
- Students will get exposed to various management practices and their implications in the companies where they are undergoing the project.
- > With the known technologies they can develop the software.

Description:

- ✤ In the last semester students avail 30 days for project.
- The Project involves practical work for understanding and solving problems in the field of information technology and management.
- The report has to be submitted within one month, after consulting the faculty guide.
- Students submit the attendance certificate from the company in which they have undergone the project work at the time of submission of the report.

Depending upon the interest of students they are sent for exposure to:

- 1. For developing open source software's and development of software package for the organizations.
- 2. Software package development for organizations.
- 3. Carrying out project work in various functional areas of management.
- 4. Field study to prepare a report on scope of Entrepreneurship in particular area.

The students who are taking the project work in the field of Management have to submit the report as follows:

- Title of the study
- Identification of research problem
- Collection of review of literature
- Selection of the title of the research
- > Identification of the statement of the problem
- List out the objectives of research
- Preparation of tools of research
- Data collection
- > Data processing
- Preparation of report
- Submission of report

Project evaluation:

Particulars	Mark Criteria
Report Evaluation	50
VIVA – VOCE Examination	50
Total	100

Note *

The viva – voce will be conducted by the Head of the Department, the Faculty Guide and External Expert together.

Class : III IT & M Part : Core – Elective 2

: 60

Hours

Credits : 3

Semester : VI

Subject Code : 19UITE26

CLOUD COMPUTING

1. Title of the Paper : CLOUD COMPUTING

2. Course Educational Objectives (CEO)

- Understand the basics of Cloud Computing. i.
- ii. Understand Cloud Architecture.
- Gain Knowledge about Cloud Platforms. iii.
- iv. Ability to understand Cloud applications.
- Learn about cloud storage. ٧.

3. Five Units of the Syllabus

Unit	Content	No. of Hours
I	UNDERSTANDING CLOUD COMPUTING Cloud computing – cloud types – the cloud cube model – deployment models – service models – characteristics of cloud computing – benefits of cloud computing – disadvantages of cloud computing.	12
11	CLOUD ARCHITECTURE AND VIRTUALIZATION The cloud computing stack – virtual appliances – communication protocols – Google Chromium OS – load balancing and virtualization	12
111	DEVELOPING CLOUD SERVICES Infrastructure as a Service (IaaS) – IaaS workloads – Platform as a Service (PaaS) – Software as a Service (SaaS) – Identity as a Service (IDaaS) – Compliance as a Service (CaaS).	12
IV	CLOUD APPLICATIONS The cloud providers – Cloud Analytics. Healthcare: ECG analysis in the cloud - Geoscience: satellite image processing.	12
v	CLOUD STORAGE Cloud storage – unmanaged cloud storage – managed cloud storage – creating cloud storage systems. Public clouds - Private clouds - Community clouds - Hybrid cloud s - Advantages of Cloud computing.	12

4. Book for Study:

Barrie Sosinsky, (2012). Cloud Computing Bible, New Delhi: Wiley India Pvt. Ltd. Print. UNIT I: Chapter 1: pages 3-19.

UNIT II: Chapter 3: pages 45-48, 51-60, 61-63, Chapter 5: pages 93-9

UNIT III: Chapter 4: pages 65-89.

UNIT IV: Chapter 5: pages 97-100, Chapter 8: pages 162-163, Chapter 10: pages 205-216. UNIT V: Chapter 15: pages 316-321, Chapter 9: pages 185-199

5. Book for References:

Michael Miller, "Cloud Computing", 1st Edition, Pearson Education Inc., New Delhi, 2008

6. Teaching Learning Methods: (PPT, GD, Seminar, Quiz Programme, Brain Storming, Case Study, Assignment etc.)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1: Describe knowledge about cloud concepts.
- 2: Create the cloud architecture.
- 3: Prepare knowledge about IT infrastructure cost cutting techniques.
- 4: Solution to various cloud applications (Google).
- 5: Maximize knowledge about cloud storage (Amazon).
- 8. Course Outcome Level (preferable one for each objective)
 - CO1 K₃
 - CO2 K₃
 - CO3 K₃
 - CO4 K₄
 - CO5 K₃

9. Mapping Course outcome with

- i. Programme Specific Objectives PSO (put tick mark in the correlating box)
- ii. Programme Objectives **PO (put tick mark in the correlating box)**

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	РО	РО	РО	РО	РО	РО	РО	Sum
	1	2	3	4	5	1	2	3	4	5	6	7	8	of
														COs
														with
														PSOs
														&
														Pos
CO1	3	2	1		3	2	2	3	1					17
CO2	2	2	2	2	1	2	2	2	2	2				19
CO3	1	3	2	3	3	3	1	2	3	3				24
CO4	3	3	3	3		3	3	2	3	1				24
CO5	3	2	2	2	3	3	2	2	3	2				24
							Gra	and To	tal of	COs w	vith PS	Os an	d PO	108
							Μ	ean Va	alue o	f COs v	with P	SO an	d PO	2.3

Mapping Scale	1	2	3						
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0						
Quality	Low	Medium	Strong						
Mean value of Cos with			2.2						
PSOs and Pos			2.5						
Observation	COs of CLOUD COMPUTING Strongly related with PSOs and POs								

Class : III IT & M

Semester : VI Subject Code : 19UITSL6 Part : Self Learning

Hours :

Credits : 3

EXPORT AND IMPORT MANAGEMENT

1. Title of the Paper EXPORT AND IMPORT MANAGEMENT

2. Course Educational Objectives (CEO)

- 1. Understanding the basic knowledge about Import and Export Policy
- 2. Comprehend the Role of Foreign Exchange
- 3. Learning the Foreign Exchange Market and procedures
- 4. Studying the Export documentation and procedure
- 5. Knowing the Recent trends in India's Foreign Trade

3. Five Units of the Syllabus

UNIT	Content
I	Import Export Policy Introduction – Objectives – India's recent Trade Policy – New Foreign Trade Policy – Important features of policy changes.
11	Foreign Exchange Definition – Rate of exchange - Fluctuations in the rate of exchange – Stable vs. Fluctuating rate of exchange.
ш	Foreign Exchange Market Meaning – Advantages and limitations of foreign exchange facilities – Payment procedure followed in Foreign exchange.
IV	Export documentation and procedure Meaning and Definition – Letter of Credit – Bill of Lading – Certificate of Origin – Export Procedure
v	Recent trends in India's Foreign Trade Future of export and import in India – Planning for exports – Role and functions of World Bank.

4. Book for Study:

1. Balagopal, "Export Management", Himalaya Publishing House, Mumbai, IX Edition-2007

5. Book for Reference:

- 1. Chunnawala Patel, , "Export and Import Management", Anmol Publications Pvt Ltd, Chennai. II Edition 2003.
- 2. Nand Kishore Sharma, "Import and Export Management", RBSA Publishers, Jaipur, II Edition-2008.

6. Teaching Learning Methods:

(PPT, GD, Seminar, Quiz programme, Brain Storming, Case Study, Assignments etc.,)

7. Course Outcome (CO)

On completion of the course, students should be able to

- 1. Analyze the Basic knowledge about India's recent Trade Policy
- 2. Compare the knowledge about Rate of Exchange and stable vs Fluctuating rate of exchange
- 3. Discuss the payment procedure system followed in foreign exchange market
- 4. Predict the basic documentation and procedures in Export
- 5. Judge the future export in India and role and functions of World Bank

8. Course Outcome Level (Preferable one for each objective)

- CO1 K₃
- CO2 K₃
- CO3 K₃
- CO4 K₃
- CO5 K₃

9. Mapping Course outcome with

- 1. Programme Specific Objectives –PSO(put tick mark in the correlating box)
- 2. Programme Objectives PO(put tick mark in the correlating box)

Outcomes	PSO	PSO	PSO	PSO	PSO	РО	PO	РО	PO	РО	РО	РО	РО	Sum of	
	1	2	3	4	5	1	2	3	4	5	6	7	8	COs with	
														PSOs &	
														Pos	
CO1	3	2	1	3		3	3	2	1	2				20	
CO2	1	3	3	1	3	2	3	1	3	1	1			22	
CO3	2	2	2	2	2	2	2	2	2	2	2			22	
CO4	2	2	2	2	1	2	2	2	2	1				18	
CO5	2	2	2	2		2	2	2	2	3				19	
Grand Total of COs with PSOs and POs												101			
				Mean Value of COs with PSO and POs											

Mapping Scale	1	2	3
Relation	0.01 to 1.0	1.01 to 2.0	2.01 to 3.0
Quality	Low	Medium	Strong
Mean value of Cos with PSOs and Pos			2.02
Observation	Cos of EXPORT AND IMPORT MANAGEMENT Strongly related with PSOs and POs		