BCA

					INS.		MARKS		τοτα
SEM	COURSE CODE	PART	COURSE	COURSE TITLE	/WEE K	CREDIT	CIA	ESE	L
	20U1LT1/LA1/LF1/LH 1/LU1	I	Language – I		6	3	25	75	100
	20UCN1LE1	П	English - I		6	3	25	75	100
	20UCA1CC1		Core – I	Programming in C	5	5	25	75	100
	20UCA1CC2P		Core – II	C Programming Lab - Practical	3	2	20	80	100
I.	20UCA1AC1		Allied –I	Numerical and Statistical Methods	5	4	25	75	100
	20UCA1AC2		Allied –II	Digital Electronics	3	2	25	75	100
	20UCN1AE1	IV	AEC-I	Value Education	2	2	100	-	100
				TOTAL	30	21			700
	20U2LT2/LA2/LF2/LH 2/LU2	1	Language – II		6	3	25	75	100
	20UCN2LE2	Ш	English – II		6	3	25	75	100
	20UCA2CC3		Core – III	Programming in C++	6	5	25	75	100
	20UCA2CC4P	_	Core – IV	C++ Programming Lab - Practical	3	2	20	80	100
	20UCA2AC3	Ш	Allied – III	Operations Research	4	3	25	75	100
П	2011CA2AC4			Entropropourchin Dovelonment	3	2	25	75	100
	2000022004	IV	Skill Enhancement Course	Soft Skills Development	2	2	100	-	100
			-1@		-	-	100		700
	20112172/142/152/111			IOIAL	30	20		r	700
	3/LU3	I	Language– III		6	3	25	75	100
	20UCN3LE3	П	English – III		6	3	25	75	100
	20UCA3CC5		Core– V	Java Programming	4	4	25	75	100
	20UCA3CC6P	III	Core– VI	Java Programming Lab - Practical	3	2	20	80	100
ш	20UCA3AC5		Allied– V	Principles of Accountancy	4	3	25	75	100
	20UCA3AC6P		Allied–VI	Accounting Package Lab - Practical	3	2	20	80	100
	20UCA3GE1	IV	Generic Elective – I #		2	2	-	100	100
	20UCN3AE2		AEC-II	Environmental Studies	2	2	100	-	100
			-	TOTAL	30	21			800
	20U4LT4/LA4/LF4/LH 4/LU4	I	Language–IV		6	3	25	75	100
	20UCN4LE4	Ш	English– IV		6	3	25	75	100
	20UCA4CC7		Core– VII	Data Structures	5	5	25	75	100
	20UCA4CC8	l	Core - VIII	Multimedia and its Applications	3	2	25	75	100
IV	20UCA4AC7	- 111	Allied– VII	Scripting Languages	5	3	25	75	100
	20UCA4AC8P		Allied–VIII	Scripting Languages Lab - Practical	3	2	20	80	100
	20UCA4GE2	IV	Generic Elective – II #		2	2	-	100	100
	20UCN4EA	V	Extension Activities	NCC. NSS. etc.	-	1	-	-	-
		-		TOTAL	30	21			700
	20UCA5CC9		Core – IX	Operating Systems	6	5	25	75	100
	20UCA5CC10		Core – X	Database Management Systems	5	5	25	75	100
	20UCA5CC11		Core – XI	Python Programming	5	5	25	75	100
	2011CA5CC12P1	Ш	Core - XII (a)	RDBMS Lab - Practical	2	2	10	40	50
	2000/15001211	-	Core - XII (b)	Puthon Programming Lab - Practical	2	2	10	10	50
	200CA5CE12F2	-	DSF = 1 **		5	3	25	40 75	100
v	ZUUCASDEIA/B		Skill Enhancement Course		5	4	25	75	100
	20UCA5SE2AP/BP	IV	- II @		2	2	-	100	100
	20UCA5SE3AP/BP		– III @		2	2	-	100	100
	20UCA5EC1		Extra Credit Course - I	General Intelligence for competitive examinations	-	4*		100*	100*
				TOTAL	30	28			700
	20UCA6CC13		Core– XIII	Data Communications and Networking	5	5	25	75	100
	20UCA6CC14]	Core– XIV	Internet of Things	5	5	25	75	100
	20UCA6CC15	1	Core - XV	Software Engineering	5	5	25	75	100
	20UCA6CC16P	1 "	Core - XVI	Software Development Lab- Practical	5	5	20	80	100
	20UCA6DE2A/B	1	DSE – II **		5	4	25	75	100
VI	20UCA6DE3AP/BP	1	DSE – III **		4	4	20	80	100
	20UCN6AE3	IV	AEC-III	Gender Studies	1	1	100	-	100
	20UCA6EC2		Extra Credit Course - II	Computer Applications for competitive	-	4*		100*	100*
		<u> </u>	Extra Credit Course for all		_	1*			
		I			30	29		I	700
				CPAND TOTAL	180	140			4300

GENERIC ELECTIVE FOR OTHER MAJOR DEPARTMENT

SEMESTER	COURSE CODE	COURSE TITLE		
	20UCA3GE1	Office Automation		
IV	20UCA4GE2	Image Editing Tools		

@ SKILL ENHANCEMENT COURSE

•	SEMESTER	COURSE CODE	COURSE TITLE
•		20UCA5SE2AP	VB .Net Lab - Practical
•	· ·	20UCA5SE2BP	C# .Net Programming Lab – Practical
-		20UCA5SE3AP	Data Analytics Tool – Practical
	•	20UCA5SE3BP	Software Testing Tools - Practical

* DISCIPLINE SPECIFIC ELECTIVES

SEMESTER		COURSE CODE	COURSE TITLE	
	•	20UCA5DE1A	VB [.] .Net	
·	•	20UCA5DE1B	•	
	•	20UCA6DE2A	PHP Programming	•
	•	20UCA6DE2B	R Programming	•
	•	20UCA6DE3AP	PHP Programming Lab - Practical	(20 + 80 = 100 Marks)
	•	20UCA6DE3BP	R Tools Lab - Practical	(20 + 80 = 100 Marks)

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
I	20UCA1CC1	CORE – I	PROGRAMMING IN C	5	5	100	25	75

After completion of the course, students will be able to

- 1. Use C language as the base for higher level course in programming
- 2. Acquire the basic constructs of programming languages.
- 3. Applystructured approach in program design
- 4. Apply suitable logic in solving problems
- 5. Develop applications to solve real world problems

UNIT I

Getting Started with C - C Instructions– Decision Control Structure: The *if*Statement – The *if-else* Statement - Use of Logical Operators - **# The Conditional Operators #**.

15 hours

15 hours

15 hours

15 hours

15 hours

UNIT II

The Loop Control Structure: The *while* Loop – The *for* Loop – The *break* Statement – The *continue* Statement – The *do-while* Loop – The odd loop.

Case Control Structure: Decisions usingswitch - switchVersus if-else Ladder -#The goto keyword#.

UNIT III

Functions and Pointers: Passing values between Functions – Scope Rule of Functions – Calling Convention – Using Library Functions – Advanced Features of Functions – **#Adding Functions to the Library #**.

The C Preprocessor: Features of C Preprocessor – Macro Expansion – File Inclusion – Conditional Compilation – #*if* and #*elif* Directives – **# Miscellaneous Directives #** – The Build Process.

UNIT IV

Arrays – More on Arrays – Pointers and Arrays – Two dimensional Arrays – Array of Pointers –# Three-Dimensional Array #

Strings: More about Strings – Pointers and Strings – Standard Library String Functions – Two-Dimensional Array of Characters – Array of Pointers to Strings – Limitation of Array of Pointers to Strings.

UNITV

Structures: Array of Structures – Additional Features of Structures – Uses of Structures. Console Input / Output – Types of I/O – Console I/O Functions. File Input / Output: Data Organization – File Operations – Counting Characters, Tabs, Spaces – A File-Copy Program – File Opening Modes. – **# String (Line) I/O in Files #** - Record I/O in Files.

...... # Self-study portion

Text Book:

YashavantKanetkar, Let Us C, BPB Publications, New Delhi, 13thEdition, 2013.

UNITI	: Chapters 1, 2& 3	UNITII	: Chapters 4 & 5
UNITIII	: Chapters 6&8	UNITIV	: Chapters 9 & 10
UNITV	: Chapters 11, 12 & 13		

Books for References:

- 1. E. Balagurusamy, *Programming in ANSI C*, Tata McGraw Hill Education Private Ltd., Fifth Edition, 2011.
- 2. D. Ravichandran, *Programming in C*, New Age International (P) Ltd., First Edition, 1996.

Web Reference:

https://www.programiz.com/c-programming

Semester Code I 20UCA1CC1				Title of t	ne Course	2	Hours			Credits	
			PROGRAMMING IN C				5		5		
Course		Program	me Outcomes (POs) Progr			ramme Specific Outcomes (PSOs)					
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	\checkmark	~	~	~		~		~			
CO2	\checkmark	~				✓	~	~	~		
CO3	✓	~	~	~		✓	~	~	~		
CO4	\checkmark	~	~	~	~	✓	~	~	~	✓	
CO5	\checkmark	~	~	~	~	✓	~	~	~	~	
		N	umber of	matches (✓) = 40,	Relations	hip: High				

Prepared by:

1. O.S. Abdul Qadir

Note:

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very poor	Poor	Moderate	High	Very high

Checked by:

1. M. Kamal

Semester	Code	Course	Title of the Course	Hours	Credits	Max.	Internal	External
			The of the course			Marks	Marks	Marks
I	20UCA1CC2P	CORE – II	C PROGRAMMING LAB	3	2	100	20	80

Develop a program in C

- 1. Using assignment statements.
- 2. Using different forms of Ifstatement.
- 3. To demonstrate Logical operators
- 4. Using While, Do-While & For Loop
- 5. Using Switch
- 6. To illustrate the use of Functions& Pointers
- 7. Using Macro definitions to test whether a character is uppercase or lowercase
- 8. Tomake use of arrays.
- 9. To manipulate Strings.
- 10. To demonstrate structure.
- 11. Using console I/O Functions.
- 12. To copy the contents of one file into another

Prepared by:

1. O.S. Abdul Qadir

Checked by:

1. M. Kamal

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
I	20UCA1AC1	ALLIED – I	NUMERICAL AND STATISTICAL METHODS	5	4	100	25	75

After completion of the course, students will be able to

1. Examine methods for algebraic and transcendental equations with examples

- 2. Demonstrate and discuss System of Linear Equations with examples
- 3. Apply domain knowledge for Measures of Central Tendency and skewness.
- 4. Remember and illustrate the examples of Conditional Probability.
- 5. Classification and study of Bivariate distributions with examples.

UNIT I

Solution of algebraic and transcendental equations- Bisection method- Method of Successive Approximation or the Iteration method – Newton Raphson Method (This unit contains Problems only).

UNITII

Solution of System of Linear Equations - Gauss Elimination Method, Gauss Jordan Method, Gauss Jacobi Method-Gauss Seidel Method(This unit contains Problems only).

UNIT III

Measures of Central Tendency – Measures of Dispersion-Measures of skewness. (This unit contains Problems only).

UNITIV

Theory of Probability – Definitions of Probability – Sample Space –# Probability of an Event #– Independence of Events – Theorems on Probability – Conditional Probability – Baye's Theorem.

UNITV

Correlation (two variables only) - Karl Pearson's Correlation Coefficient and its properties. Spearman's rank correlation coefficient (repeated and non-repeated). Lines of regression – Definition – # Properties of regression coefficients # - Simple problems.

...... # Self-study portion

Text Book:

1. Dr.P.Kandasamy, Dr.K.Thilagavathy, Dr.K.Gunavathi, Numerical Methods, S. Chand, First Edition, 2008.

2. S.C. Gupta, V.K. Kapoor, Fundamentals of Mathematical Statistics, Sulthan Chand & Sons, Eleventh Edition, 2002.

UNIT I : Chapter 3 – Section 3.1, 3.2, 3.4 (T.B.1) **UNITII** : Chapter 4 - Section: 4.2,4.8, 4.9 (T.B.1) UNITIII : Chapter 2 - Section: 2.5 to 2.9 Chapter 3 – Section 3.3 to 3.7, 3.13 (**T.B.2**) UNITIV : Chapter 4 - Section-4.5 to 4.8 (T.B.2) **UNITV** : Chapter 10 - Section: 10.3, 10.6, 10.7.1, 10.7.3, 10.7.4(T.B.2)

Books for References:

1. S.S. Sastry, Introductory Methods of numerical analysis, Prentice Hall of India Pvt. Ltd., 2004.

2. S.C. Gupta, V.K. Kapoor, Elements of Mathematical Statistics, Sultan Chand & Sons, 2009.

Web Reference:

1. https://nptel.ac.in/courses/111/107/111107105/

2. https://nptel.ac.in/courses/111/106/111106112/

15 hours

15 hours

15 hours

15 hours

Semester	emester Code			Title of the Course			Hours		Credits	
I	20UC	A1AC1	NUMERICAL AND STATISTICAL METHODS				5		4	
Course	Programme Outcomes (POs) Progr							pecific Ou	tcomes (F	PSOs)
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	✓	~		~	~		~	✓	✓	
CO2	\checkmark		~		~	~		✓	✓	
CO3	\checkmark	~		✓	✓	✓	✓	✓	\checkmark	✓
CO4			~		~	~	~		✓	✓
CO5	✓	~	~	~		~		✓		✓
		N	umber of	matches (✓) = 35,	Relations	hip: High			

Prepared by:

1. Dr. V. Krishnan

Note:

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very poor	Poor	Moderate	High	Very high

Checked by:

1. O.S. Abdul Qadir

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
I	20UCA1AC2	ALLIED – II	DIGITAL ELECTRONICS	3	2	100	25	75

After completion of the course, students will be able to

1. Perform number conversions from one number system to another and understand the usage of various binary codes

- 2. Apply Boolean laws and theorems to simplify Boolean expressions
- 3. Implement Boolean expressions using gate networks
- 4. Understand the working of combinational circuits
- 5. Understand the working of sequential circuits

UNIT I

Binary Systems – Digital Computers and Digital Systems-Binary Numbers-Number Base Conversion- Octal and Hexadecimal Number Systems – Number Base Conversion –Complements-Subtraction with r's and (r-1)'s Complements.

UNIT II

Binary Codes – 8421, 2421, Excess-3, Reflected Code – Error Detection Codes – Alphanumeric Code - Basic Logic Gates.

UNIT III

Boolean Algebra: Basic Definitions-Axiomatic Definition of Boolean Algebra-Basic Theorems and Properties of Boolean Algebra– **#Boolean Functions#** –Canonical and Standard Forms- Simplification of Boolean Functions: Map Method –Two and Three Variable Maps - Four Variable Map.

UNIT IV

Combinational Logic –Adders, Subtractors- Binary Parallel Adders – Decimal Adder –Decoders – Encoders - Multiplexers – **#Demultiplexers#**.

UNIT V

Sequential Logic – Flip Flops: Clocked RS, JK and D Flip Flops – **#Shift Register#** – 4-bit Binary Ripple Counter – BCD Ripple Counter.

...... # self-study portion

Text Book:

Morris Mano M, Digital Logic and Computer Design, Pearson Education, Inc., 1979

UNITI : Chapter 1 (Section 1.1 – 1.5)
 UNITII : Chapter 1 (Section 1.6,&1.8)
 UNITIII : Chapter 2 (Section 2.1 – 2.5) & Chapter 3(Section 3.1-3.3)
 UNITIV : Chapter 4 (Section 4.1- 4.4) & Chapter 5 (Section 5.2,5.3,5.5-5.6)
 UNITV : Chapter 6 (Section 6.2, 6.3) & Chapter 7 (Section 7.3-7.4)

Books for References:

1. Donald P. Leach and Albert Paul Malvino, GoutamSaha, *Digital PrinciplesandApplications*, TMH, Sixth Edition, 2006.

2. Thomas C. Bartee, Digital Computer Fundamentals, Tata McGraw Hill, 6th Edition, 25th Reprint, 2006.

Web Reference:

https://www.geeksforgeeks.org/digital-electronics-logic-design-tutorials/

9 hours

9 hours

9 hours

9 hours

Semester	Co	de		Title of th	ne Course		Но	urs	Cre	dits
I	20UC	A1AC2	DIGITAL ELECTRONICS 3				3	2		
Course		Programr	ne Outcoi	mes (POs)		Programme Specific Outcomes (PSOs)				
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	✓	~		✓		~	~	√	✓	
CO2	\checkmark	~	~	✓	~	~	~	✓	✓	
CO3	\checkmark	~	~	✓		~	~	✓	✓	✓
CO4	\checkmark	~	✓	✓		~	~	✓	✓	✓
CO5	\checkmark	~	✓	✓		~	~	✓	✓	✓
Number of matches (✓) = 43, Relationship: High										

Prepared by:

1. Dr. S. Abdul Saleem

Note:

Checked by:

1. O.S. Abdul Qadir

Mapping 1-29% 30-59% 60-69% 70-89% 90-100% Matches 1-14 15-29 30-34 35-44 45-50 Relationship Very poor Poor Moderate High Very high

Semester	Codo	Course	Title of the Course	Hours	Crodite	Max.	Internal	External
	Code	Course	The of the course	nours	Creuits	Marks	Marks	Marks
II	20UCA2CC3	CORE – III	PROGRAMMING IN C++	6	5	100	25	75

After completion of the course, students will be able to

1. Acquire skills in object oriented programming concepts

2.Use object oriented concepts as the base for higher level course in programming

3.Differentiate structured and object-oriented programming.

4.Identify classes, objects, members of a class and the relationships among them needed for finding the solution to specific problem

5. Develop object oriented programs to solve real life problems

UNIT I

Object Oriented Programming concepts: Basic concepts of OOPS-Structure of C++ Program- Tokens-Keywords-Identifiers-constants-Basic data types-User defined data types-Derived data types-Declaration of variables-Reference Variables - Manipulators - Operator in C++ - Scope Resolution Operator - Type cast Operator - Expression and its types - **#control structures#**

UNIT II

Functions: Main Function - Call by reference - Inline function - Function overloading - Default arguments - Math Library functions - Classes and Objects:Specifying the class – Defining Member Function – A C++ Program with class - Nesting of Member Function - Arrays within a class - Static data members and Static member functions - **#Friend Function#**- Returning Object

UNIT III

Constructor and Destructor: Constructors - Parameterized constructor - Multiple constructor in a class -Dynamic initialization of the objects - Copy constructor - Dynamic constructor - Destructor. Operator Overloading and Type conversion: Defining operator overloading - Overloading unary operator - **#Type conversion#**

UNIT IV

Inheritance: Introduction - Single Inheritance - Multilevel inheritance - Multiple inheritance - Virtual base classes. Polymorphism: Pointers - Pointer to objects - this pointer - Pointer to derived classes - **#Virtual Functions#**

UNIT V

Working with Files: Introduction - Classes for File stream - Opening and closing the file - Detecting end of file - File modes. Templates: Introduction - Class templates - Class templates with multiple parameters - Function templates

...... # self-study portion

Text Book:

E.Balagurusamy, Object Oriented Programming with C++, [Fourth Edition], Tata McGraw Hill Publications, 2008

UNIT I : 1.5, 2.6, 3.2 – 3.7, 3.10, 3.17, 3.13, 3.14, 3.18, 3.24 UNIT II : 4.2, 4.4, 4.6, 4.7, 4.9, 4.11, 5.3 - 5.7, 5.9, 5.11, 5.12, 5.15 – 5.16 UNIT III : 6.2, 6.3 – 6.8, 7.1 – 7.3 UNIT IV : 8.1, 8.3, 8.5 – 8.7, 9.1 – 9.6 UNIT V : 11.1 – 11.5, 12.1 – 12.4, 12.7

Books for Reference:

1. Herbert Schildt, *Teach yourself C++*, Third Edition, TataMcGraw Hill Publications, 2008 **Web Reference:** https://www.programiz.com/cpp-programming https://www.tutorialspoint.com/cplusplus/index.htm

18 hours

18 hours

18 hours

18 hours

Semester	Co	de		Title of th	ne Course	2	Но	urs	Cre	dits	
н	20UC	A2CC3	PR	PROGRAMMING IN C++				6	5		
Course		Programr	ne Outco	mes (POs)		Prog	ramme S	pecific Ou	tcomes (F	PSOs)	
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	✓	~		✓		~		~			
CO2	✓	~		~		✓		~			
CO3	\checkmark	~		~		✓		~	~	✓	
CO4	\checkmark	~	~	~	~	✓	~	~	~	✓	
CO5	\checkmark	~	~	~	~	✓	~	~	~	✓	
	Number of matches (✓) = 37, Relationship: High										

Prepared by:

1. S. Peerbasha

Checked by:

1. O.S. Abdul Qadir

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very poor	Poor	Moderate	High	Very high

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
II	20UCA2CC4P	CORE – IV	C++ PROGRAMMING LAB	3	2	100	20	80

Develop a program in C++

- 1. To calculate the area and perimeter of any two basic shapes
- 2. Using different forms of If-Else statement
- 3. Using While, Do-While & For Loop
- 4. To illustrate Function Overloading
- 5. To print your personal details such as name, Roll no, Gender (M/F), Marks for five subjects, Total, Result (Pass/Reappear) by taking input from the user and displaythe same using two member functions
- 6. To illustrate Friend function
- 7. To illustrate class with constructors
- 8. To illustrate Operator Overloading
- 9. To implement the concept of Single level inheritance
- 10. To implement the concept of Multi level inheritance
- 11. To merge the contents of two files
- 12. To illustrate Function Templates

Prepared by:

1. S. Peerbasha

Checked by:

1. O.S. Abdul Qadir

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
П	20UCA2AC3	ALLIED – III	OPERATIONS RESEARCH	4	3	100	25	75

After completion of the course, students will be able to

1. Demonstrate and study of operations research and illustrate the examples of mathematical formulation

2. Classification and study of Transportation problem and Assignment problems with examples

- 3. Analyze machine elapsed times with examples
- 4. Illustrate the Replacement Problems suitable examples.
- 5. Construct the networks and plan execution with examples.

UNIT I

Introduction to Operations Research – Mathematical Formulation of the problem –Graphical Solution Method – Simplex method.

UNIT II

Transportation problem – North West corner rule – Least cost method – Vogel's approximation Method – Assignment problems.

UNIT III

Sequencing Problems: Introduction – Problem of sequencing – Basic term used in sequencing – Processing n Jobs through 2 machines – Processing n Jobs through k machines – **# Processing 2 Jobs through k machines #**.

UNIT IV

Replacement Problems – Introduction – Replacement of Equipment / asset that Deteriorates Gradually– **# Replacement of Equipment that fails suddenly #**.

UNIT V

Network scheduling by PERT/CPM – Introduction – Network and basic components – Rules of network construction – Critical path analysis – Probability consideration in PERT – **# Distinction between PERT and CPM #**.

...... # Self-study portion

Text Book:

KantiSwarup, P.K. Gupta and Man Mohan, Operations Research, Sultan Chand and Sons Publishers, New Delhi, Thirteenth Edition, Reprint 2008.

UNIT I : Chapter 2 (sections 2.1, 2.2) Chapter 3 (sections 3.1, 3.2) Chapter 4 (sections 4.1, 4.4)

UNITII : Chapter 10 (sections 10.1, 10.2, 10.5, 10.8, 10.9) Chapter 11 (sections 11.1, 11.2, 11.3, 11.4)

UNITIII : Chapter 12 (sections 12.1 to 12.6)

UNITIV : Chapter 18 (sections 18.1 to 18.3)

UNITV : Chapter 25 (sections 25.1, 25.2, and 25.4 to 25.7)

Books for References:

Sharma, S.D., "Operations Research", KedarNath Ram Nath& Co. (15th Edition), 2010.
 Richard Bronson, Theory and Problems of Operations Research, Tata McGraw Hill Publishing Company Ltd., New Delhi, 1982.

Web Reference:

https://nptel.ac.in/courses/111/107/111107128/

12 hours

12 hours

12 hours

12 hours

Semester	Co	de		Title of th	ne Course	2	Но	urs	Cre	dits	
н	20UC/	A2AC3	OP	OPERATIONS RESEARCH 4			3				
Course		Program	ne Outco	mes (POs)	Prog	ramme S	pecific Ou	tcomes (F	PSOs)		
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	✓	~		✓	~	✓		~		✓	
CO2	\checkmark	✓		✓	~	✓		~		✓	
CO3	✓		~	~	~		~		~	~	
CO4	✓	~	~			✓	~	~	~		
CO5		~	~	~	~		~		~	~	
	Number of matches (✓) = 35, Relationship: High										

Prepared by:

1. Dr. V. Krishnan

Checked by:

Note:

1. O.S. Abdul Qadir

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very poor	Poor	Moderate	High	Very high

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
II	20UCA2AC4	ALLIED – IV	ENTREPRENEURSHIP DEVELOPMENT	3	2	100	25	75

After completion of the course, students will be able to

1. Communicate the major concepts of entrepreneurship.

- 2. Understand Entrepreneurial Motivation and Mobility.
- 3. Innovate, prototypes or ideas by applying theory into practice.
- 4. Explain process of setting up of service unit/industry.
- 5. Describe about support institutions and schemes.

UNIT I

Entrepreneurship

Meaning and Importance - Evolution of term Entrepreneurship - Factors influencing entrepreneurship (Psychological factors, Social factors, Economic factor, Environmental factors) - Characteristics of an entrepreneur - Types of entrepreneurs- # Rural entrepreneurship, Women entrepreneurship# - Intrapreneur.

UNIT II

Entrepreneurial Motivation and Mobility

Entrepreneurial Motivation - Meaning – Motivation Theories – Motivating factors – #Achievement Motivation# – Entrepreneurial Mobility - Factors influencing Entrepreneurial Mobility - Occupational Mobility - Locational Mobility.

UNIT III

Creativity, Innovation and Idea Generation

Creativity Innovation and entrepreneurship - Creativity Process - #Components of Creative Performance# -Selecting Business Ideas – Methods of Generating New Ideas – Dynamics of Project Identification.

UNITIV

Setting Small Enterprises

Introduction – Project Identification and Selection – Project Formulation – Project Appraisal – Financing of Enterprise - #Ownership Structures#.

UNITV

Support to Entrepreneurs

A brief overview of financial institutions in India – NSIC, SIDO, SSIB, SSICS, SISI, DICs, Industrial Estates- Sickness in small Business – causes and consequences, Corrective Measures – # Government Policy for Small Scale Enterprises# - Growth Strategies in small industry - Expansion, Diversification, Joint Venture, Merger and Sub Contracting.

...... # Self-study portion

Text Book:

1. Khanka, S S. 'Entrepreneurial Development', S Chand & Company Ltd. New Delhi UNIT I, UNIT II, UNIT IV and UNIT V

2. SatishTaneja, S.L. Gupta, 'ENTREPRENEUR DEVELOPMENT – New Venture Creation', Galgotia Publishing Company, New Delhi.

UNIT III

9 hours

9 hours

9 hours

9 hours

Books for References:

1. Rabindra N. Kanungo "Entrepreneurship and innovation", Sage Publications, New Delhi.

2. Tendon ,C: Environment and Entrepreneur; Cliugh Publications, Allahabad.

3. SinerA David: EntrepreneuralMegabuks; John Wiley and Sons, New York.

4. Srivastava S. B: A Practical Guide to Industrial Entrepreneurs; Sultan Chand and Sons, New Delhi.

5. Prasanna Chandra: Protect Preparation, Appraisal, Implementation; Tata McGraw Hill. New Delhi.

Web References:

http://ediindia.ac.in/e-policy/ [Entepreneurial Policy India]

http://en.wikipedia.org/wiki/List_of_venture_capital_companies_in_India [Venture Capital]

indiavca.org/venture-capital-in-india.html [Venture Capital]

www.bplans.com/ [BUSINESS PLAN]

www.entrepreneur.com/businessplan [BUSINESS PLAN]

http://www.preservearticles.com/201101143322/functions-of-an-entrepreneur.html

https://ecestudy.files.wordpress.com/2015/02/entrepreneur-types-and-functions.pdf

https://www.entrepreneur.com/article/293463

http://www.yourarticlelibrary.com/entrepreneur/entrepreneurship-characteristicsimportance-types-and-functions-of-entrepreneurship/5228

http://www.simplynotes.in/mbabba/entrepreneurial-motivation-meaning-definitionnature-and-factors/

http://www.simplynotes.in/mbabba/role-of-government-in-promoting-entrepreneurship/

http://www.yourarticlelibrary.com/entrepreneurship/entrepreneurship-development-programmes-meaning-need-and-objectives-of-edp/40707

Semester	Co	ode		Title of the Course			Но	urs	Credits		
II	20UC	A2AC4	E	ENTREPRENEURSHIP DEVELOPMENT				3	2		
Course		Programn	ne Outcoi	mes (POs)		Programme Specific Outcomes (PS					
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	\checkmark			~	~	\checkmark	✓				
CO2	\checkmark			~	\checkmark	\checkmark					
CO3	\checkmark	✓		~	\checkmark	✓	✓	~		✓	
CO4	\checkmark	✓	\checkmark	✓	\checkmark	\checkmark	✓			✓	
CO5	\checkmark	✓	\checkmark	~	\checkmark	\checkmark	✓			\checkmark	
	Number of matches (\checkmark) = 33, Relationship: Moderate										

Relationship Matrix for Course Outcomes, Programme Outcomes and Programme Specific Outcomes:

Prepared by:

Checked by:

Dr. A. Selvarani

O.S. Abdul Qadir

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very poor	Poor	Moderate	High	Very high

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
III	20UCA3CC5	CORE – V	JAVA PROGRAMMING	4	4	100	25	75

After completion of the course, students will be able to

- 1. Understand the basic building blocks, control statements, arrays and strings in Java Programming
- 2. Implement the concepts of classes, objects, inheritance, polymorphism, packages and interfaces
- 3. Apply the exception handling mechanism in single and multithreaded programming
- 4. Develop the window based programs from basic level to file operations using Applet
- 5. Develop the simple applications using AWT components

UNIT I

Introduction to Java Programming: Introduction – Features of Java –Java Developer Kit. Java Language Fundamentals: The Building Blocks of Java – Data Types – Variable Declarations: Declaring, Initializing and Variables – Variable Types in Java. Wrapper Classes –Operators and Assignment – Control Structures – Arrays – # Strings #

UNIT II

Java as an OOP Language – Defining Classes – Defining Methods – Knowing This – Passing Arguments to Methods – Overloading Methods – Constructor Methods – Inheritance– Overriding Methods – Modifiers: The Four Ps of Protection – Finalizing Classes, Methods and Variables – Abstract Classes and Methods – Packages – Interfaces

UNIT III

Exception Handling: Introduction – Basics of Exception Handling in Java – Exception Hierarchy – Constructors and Methods in Throwable Class – Handling Exceptions in Java – Throwing User Defined Exceptions. Multithreading – Overview of Threads – Creating Threads – Thread Life-cycle – # Thread Priorities and Thread Scheduling #

UNIT IV

Files and I/O Streams: Java I/O – File Streams – FileInputStream and FileOutputStream – FilterStreams– RandomAccessFile – Serialization. Applets: Introduction – Java Applications Versus Java Applets – Applet Life Cycle – Working with applets – The HTML APPLET Tag

UNIT V

The Abstract Window Toolkit: Basic Classes in AWT – Drawing with Graphics class - Class Hierarchyin AWT – Event Handling – AWT Controls – # Layout Managers #

...... # Self-study portion

Text Book:

P. Radha Krishna, Object Oriented Programming through JAVA, Universities Press, 2008

UNIT I :Chapter 1 & 2	UNIT II : Chapter 3
UNIT IV :Chapter 7 & 8	UNIT V : Chapter 10

Book for Reference: Herbert Schildt, *The Complete* Reference Java, Fifth Edition, Tata McGraw-Hill, 2015

Web Reference:

https://www.programiz.com/java-programming

12hours

12hours

12 hours

12hours

12hours

UNIT III : Chapter 5 & 6

Semester	Co	de	Title of the Course Hours							dits
- 111	20UC	A3CC5	JÆ	AVA PROG	RAMMIN	IG		4	4	
Course		Program	me Outcomes (POs) Progr			ramme Specific Outcomes (PSOs)				
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	✓	~	~	~		~		~		
CO2	\checkmark	~				✓	~	~	✓	
CO3	✓	~	~	~		~	~	~	✓	
CO4	\checkmark	~	~	~	~	~	~	~	✓	\checkmark
CO5	\checkmark	~	~	~	~	~	~	~	✓	\checkmark
		N	umber of	matches (✓) = 40,	Relations	hip: High	•		

Prepared by:

Checked by:

Mr. M. Kamal

Mr. O.S. Abdul Qadir

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
=	20UCA3CC6P	CORE – VI	JAVA PROGRAMMING LAB	3	2	100	20	80

Develop the programs using Java

- 1. Using Control Statements
 - a) Find the prime numbers between 1 to 100
 - b) Count the number of digits for given integer using while loop
 - c) Find the smallest and biggest digit in 6 digits number using for loop
 - d) Self exercise
- 2. Using String handling functions
 - a) Find the ASCII character value of your name
 - b) Count the total number of vowels and consonants in a given string
 - c) Self exercise
- 3. To find the perimeter of circle and rectangle using class and objects
- 4. To demonstrate the following inheritance
 - a) Single Inheritance
 - b) Multilevel inheritance
- 5. To demonstrate the concepts
 - a) Area of the shapes (interface)
 - b) Abstract Class
- 6. Using package to prepare an EB bill / Telephone bill / Student mark sheet with suitable fields
- 7. Demonstrate multiple catch clauses
- 8. Using Thread concept to solve the following
 - a) Display the System date and time with specific time interval using extends Thread class
 - b) Display a set of numbers. If 25 even numbers have been displayed stop the thread and initiate a new thread class for displaying 25 odd numbers
- 9. Find the properties of a given directory name
- 10. Draw a human face using Graphics class
- 11. Demonstrate the layout managers
 - a) BorderLayout
 - b) GridLayout
- 12. Using AWT controls to create a login page

Prepared by:

Mr. M. Kamal

Checked by: Mr. O.S. Abdul Qadir

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
	20UCA3AC5	Allied– V	Principles of Accountancy	4	3	100	25	75

After completion of the course, students will be able to

1. State/outline the nature of financial accounting

- 2. Recognize the basics of financial accounting
- 3. Analyze assigned questions, exercises and problems
- 4. Participate in class, to complete written homework assignments and to interact with other classmates
- 5. Participate in collaborative learning, problems and cases in financial accounting selected to faster cooperative learning

UNITI

Meaning of Accounting – Meaning and Objects of Book Keeping – Accounting Concepts and Conventions – #Principles of Double Entry# – Kinds of Account – Journal and Ledger accounts

UNITII

Subsidiary Books – Purchase Book, Sales Book, Purchase Returns Book, Bills Receivable Book, Bills Payable Book, Cash Book, Analytical Petty Cash Book and Journal Proper –Bank Reconciliation Statement

UNITIII

Trail Balance –# Preparation# – Errors Disclosed and Errors Not Disclosed by its Suspense account – Rectification of Errors

UNITIV

Preparation of Final Accounts – Trading Account, Profit and Loss Account, Balance Sheet – Adjustingand Closing Entries. Methods of Depreciation Fixed Percentage on Original Cost Method and Diminishing Balance Method Only

UNITV

Bills of Exchange – #Bill Transaction, Discounting Endorsement# – Sending Bill for Collection, Notingof a Bill, Renewal of a Bill - Insolvency of Acceptor

80% - Problems 20% - Theory

...... # Self-study portion

Text Book:

N. Vinayakam, P.L. Mani, K.L. Nagarajan, Principles of Accountancy, EURASIA Publishing HousePVT Ltd., Ne w Delhi, **Revised Edition**, 2002

UNITI : Chapter 1 & 2	UNIT II : Chapters 3 & 7	UNIT III : Chapter 4
UNIT IV : Chapter 6	UNIT V : Chapter 8	

Book for Reference:

M.C. Shukla, T.S. Grewal, Advanced Accounts, Eleventh Edition, S. Chand& Company Pvt. Ltd, Reprinted, 1988

Web Reference:

https://www.accountingcoach.com/accounting-principles/explanation

12hours

12hours

12hours

12 hours

Semester	Co	ode		Title of th	he Course		Hours		Credits	
ш	20UC	A3AC5	Pri	nciples of	Accounta	incy		4	3	
Course		Program	ne Outcomes (POs) Progr			ramme Sp	pecific Ou	tcomes (F	PSOs)	
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	\checkmark	✓		~		✓	✓		~	
CO2		✓	✓	✓	\checkmark			~	✓	~
CO3	✓	✓	✓	✓		✓	✓	~	✓	~
CO4	✓	✓	✓			✓	✓	~	✓	~
CO5	✓	✓	· · · · ·						✓	
		N	umber of	matches (√) = 35,	Relations	nip: High			

Prepared by:

Dr. Y. Rasheed Khan

Checked by:

Mr. M. Kamal

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
III	20UCA3AC6P	ALLIED- VI	ACCOUNTING PACKAGE LAB	3	2	100	20	80

Solve the following problems using Tally ERP software

- 1. Architecture and customization of Tally
- 2. Configuration of Tally
- 3. Tally Screens and Menus
- 4. Creation of new company and groups
- 5. Preparation of voucher entries
 - a.Payment voucher
 - b.Receipt voucher
 - c.Sales voucher
 - d.Purchase voucher
 - e.Contra voucher
 - f.Journal voucher
- 6. Ledger Creation
- 7. Preparation of Trail balance
- 8. Preparation of Profit and Loss statement.
- 9. Preparation of Balance Sheet
- 10. Preparation of Bank Reconciliation Statement
- 11. Creation of Inventory reports
 - a. Stock groups
 - b. Stock items
 - c. Unit measurement
 - d. Single and multiple Godown

Prepared by:

Dr. Y. Rasheed Khan

Checked by:

Mr. M. Kamal

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
ш	20UCA3GE1	GENERIC ELECTIVE – I	OFFICE AUTOMATION	2	2	100		100

After completion of the course, students will be able to

- 1. Understand the basic knowledge of computer and components of computer in education.
- 2. Perform common functional operations in Windows and apply the menus in MS-Word.
- 3. Understand the menus and Toolbars in MS-Excel.
- 4. Understand the components of MS-PowerPoint.
- 5. Understand the Database Create and usage of MS-Access.

UNIT I

Introduction- Introduction to computers: What is Computer-What's so special about computer- History of Computers: Evolution – The first Computer-Next Generations- Basic Anatomy of Computers: The Basic Components - # Functioning of the Components#

UNIT II

MS-WORD – Word Basics: Starting Word - Creating document - Parts of Word window- # Mouse and Keyboard Operations # - The Most important Keys - Formatting Features - Menus - Toolbars and their Icons

UNIT III

MS-EXCEL - Excel Basics: Introduction: Navigating - Selecting cells - Selecting cells with mouse -# Entering and editing text # -Entering numbers Entering Formulas -Entering dates - Alignment -Menus -Toolbars - Icons

UNIT IV

MS-POWERPOINT – Navigating in PowerPoint: Creating a new Presentation - Opening a Presentation – Creating a New Slide - Saving and Closing a Presentation - Working with PowerPoint: Inserting Picture – Inserting Text – # Design Template # – Saving the Presentation-Closing a Presentation

UNIT V

MS-Access: Introduction: What is Database – Parts of an Access Window – Starting MS - Access – Creating a New Database - Creating a database through table Wizard - Creating a new table - # Rename Columns # -Saving the Database - Relationships

...... # Self-study portion

Text Book: Sanjay Saxena, MS Office 2000 for Everyone, Vikas Publishing, 2001

Book for Reference:

Archana Kumar, Computer Basics with Office Automation, First Edition, 2010

Web References:

http://www.bcpls.org/Docs/Computer Handouts/Word101.pdf http://www.itdesk.info/Microsoft%20Excel%202010%20notes.pdf

6hours

6 hours

6 hours

6 hours

Semester	Co	de	Title of the Course				Hours		Credits		
	20UCA3	GE1	0	FFICE AU	ΤΟΜΑΤΙΟ	DN	:	2		2	
Course	Programme Outcomes (POs)						ramme Sj	pecific Ou	tcomes (I	PSOs)	
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	✓	✓		✓		✓	~			✓	
CO2	✓		✓	✓	~	✓		~	✓	✓	
CO3		✓	✓	~		✓	~		✓	✓	
CO4	✓		✓	✓		✓	~		✓	✓	
CO5		✓		~	~	✓		~	✓		
		Num	ber of ma	itches (√)	= 34, Re	lationship	: Modera	te		<u>.</u>	

Prepared by:

Checked by:

Ms. S. Prabavathy

Ms. Tamil Fathima

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
IV	20UCA4CC7	CORE – VII	DATA STRUCTURES	5	4	100	25	75

After completion of the course, students will be able to

- 1. Acquire knowledge in the representation of arrays and linked lists
- 2. Implement the application of arrays and linked lists in various structures
- 3. Evaluate the use of stack, queue, trees and graphs
- 4. Describe the concept of graphs and their application
- 5. Apply the appropriate structures in problem solving

UNITI

INTRODUCTION TO DATA STRUCTURES: Overview – The Need for Data Structures - Definitions – Data Structures. ARRAYS: Overview – Introduction – Range of an Array – Primitive operations – Element Access in an Array – Onedimensional Array - Two-dimensional Array Multidimensional Arrays. LINKED LISTS - Overview – Introduction – Memory Allocation – Benefits – Limitations – Types – Basic Operations – Singly Linked Lists – Simple Algorithms on Linked Lists - Circular Linked Lists - Doubly Linked Lists

UNITII

STACKS, QUEUES AND RECURSION: Introduction – Stacks – Array and Linked Representations of Stacks – Arithmetic Expressions; Polish Notation – Recursion: Towers of Hanoi – Queues: Array representation of Queue - # Linked representation of Queues – Deques #

UNITIII

TREES: Introduction – Binary Trees– Representing Binary Tress in Memory – Traversing Binary Trees - Traversal Algorithms using Stacks – # Header Nodes # - Binary Search Trees – Searching and Inserting in Binary Search Trees – Deleting in a Binary Search Tree - Heap Sort

UNITIV

GRAPHS AND THEIR APPLICATIONS: Sequential Representation of Graphs – Warshall's Algorithm – Linked Representation of a Graph – Operations on Graphs – Traversing a Graph – Topological Sorting

UNITV

SORTING AND SEARCHING: Introduction – Insertion Sort – Selection Sort – # Merging – Merge Sort – Radix Sort # – Quick Sort - Searching and Data Modification – Hashing

...... # Self-study portion

Text Books:

- A. Chitra and P.T. Rajan, *Data Structures*, Tata McGraw Hill Publishing Company Limited, New Delhi UNIT I :Chapters 1, 3 and 4
- Seymour Lipschutz, *Data Structures*, Tata McGraw Hill Publishing Company Limited, New Delhi, 2006
 UNIT II : Chapter 6
 UNIT III : Chapter 7 (7.1 7.9)
 UNIT IV: Chapter 8
 UNIT V : Chapter 9

Book for Reference:

Jean Paul Tremblay and Paul G. Sorenson, An Introduction To Data Structures with Applications, Tata McGraw-Hill, Second Edition

Web Reference:

https://www.geeksforgeeks.org/data-structures/

15hours

15hours

15 hours

15hours

Semester	Co	de	Title of the Course Hours						Cre	Credits	
IV	20UC	A4CC7		DATA STR	UCTURES	5	!	5	4		
Course		Program	ne Outco	mes (POs)		Prog	ramme Sj	pecific Ou	tcomes (P	SOs)	
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	✓	~	~	✓		~		~	✓		
CO2	✓	~	~	✓		~	~	~			
CO3	✓	~	~	✓		~	~	~	✓		
CO4	✓	~	~	✓		~	~	~	✓		
CO5	✓	~	~	~	~	~	~	~	✓	✓	
	Number of matches (✓) = 40, Relationship: High										

Prepared by:

Mr. O.S. Abdul Qadir

Checked by:

Mr. M. Kamal

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
IV	20UCA4CC8	CORE – VIII	MULTIMEDIA AND ITS APPLICATIONS	3	2	100	25	75

After completion of the course, students will be able to

- 1. Illustrate about Multimedia and its usage and about uses of Text in Multimedia.
- 2. Understanding about various operations on Images and Sound.
- 3. Examine the Animation and Videos techniques in Multimedia.
- 4. Utilizing the Multimedia Project, Hardware, Software, and Skills.
- 5. Applying Multimedia in Internet and Deliver the Content.

UNIT I

Introduction: What is Multimedia? – Definition – Where to Use Multimedia – Delivering Multimedia – TEXT: About Font and faces – Using Text in Multimedia: Designing with Text – Fields for Reading – HTML Documents.

UNIT II

Images: Making Still Images - Image File Format-Sound: Power of Sound – Digital Audio – MIDI Audio – MIDI vs Digital Audio – #Audio file format# -Adding sound to your project.

UNIT III

Animation: Principles – Animating by computer - Making Animations That Work -Video: Using video –Digital Video Containers – Obtaining Video Clips.

UNIT IV

Making Multimedia: The stages of a multimedia project – What you need – Intangibles, Hardware, Software. Multimedia Skills: The Team.

UNIT V

The Internet and Multimedia: Internet History – Internetworking: Internet Addresses, Connections, The bandwidth Bottleneck, Internet Services, MIME Types, The World Wide Web and HTML. Multimedia on the Web: Tools for the World Wide Web, Web Servers, Web Browsers, Search Engines, Plug-ins and Delivery Vehicles. Delivering: # Testing: Alpha Testing, Beta Testing, Polishing to Gold#.

...... #Self-study Portion

Text Book:

Tay Vaughan, Multimedia Making it Work, Tata McGraw – Hill Edition, Eighth Edition, 2011 **UNIT III**: Chapters 5&6 **UNIT I** : Chapter 1 & 2 **UNIT II**: Chapter 3 & 4 **UNIT IV:** Chapters 7&8 **UNIT V**: Chapters 12&14

Books for References:

1. V.K. Jain, Introduction to Multimedia and its applications, Khanna Publishing, 2012 2. David Hillman, Multimedia Technology and Applications, Galgotia Publications

Web Reference:

https://www.omicsonline.org/conferences-list/multimedia-tools-and-applications

9 hours

9 hours

9 hours

9 hours

Semester	Co	de	Title of the Course Hours					urs	Cre	dits		
IV	20UC	A4CC8	N	MULTIMEDIA AND ITS APPLICATIONS				3	2			
Course		Programr	ne Outcoi	mes (POs)		Prog	ramme Sp	pecific Ou	tcomes (P	'SOs)		
COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5		
CO1	✓	~	✓	~		✓		✓	✓			
CO2	✓		✓	✓			✓			✓		
CO3	✓	~	✓				~		✓			
CO4	✓		✓ ✓ ✓ ✓ ✓									
CO5	✓	~	✓	✓ ✓ ✓ ✓ ✓ ✓						✓		
	Number of matches (\checkmark) = 31, Relationship: Mederate											

Prepared by:

Checked by:

Mr. P. Shaik Abdulla

Mr. O.S. Abdul Qadir

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
IV	20UCA4AC7	Allied - VII	SCRIPTING LANGUAGES	5	4	100	25	75

After completion of the course, students will be able to

- 1. Understand the basic concepts of HTML, CSS, JavaScript, VBScript and XML
- 2. Analyze a web page and identify its elements and attributes
- 3. Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style Sheet
- 4. Implement interactive web pages using html and JavaScript
- 5. Develop web application software tools and identify the environments currently available on the market to design web sites.

UNITI

HTML: Introduction - SGML - Outline of HTML Document - Head Section - Body Section - HTML Forms

UNITII

JavaScript: Introduction – Language Elements – Objects of JavaScript – # Other Objects #

UNITIII

DHTML: Introduction – Cascading Style Sheets – DHTML Document Object Model and Collections – Event Handling – Filters and Transitions – Data Binding

UNITIV

VBScript: Introduction – Embedding VBScript Code in an HTML Document – Comments – Variables – Operators – Procedures – Conditional Statements – # Looping Constructs # – Objects and VBScript – Cookies

UNITV

XML: Introduction – HTML vs XML – Syntax of the XML Document – XML Attributes – XML validation – XML DTD – The building blocks of XML Documents – # DTD elements # – DTD Attributes – DTD Entities – DTD validation

...... # Self-study portion

Text Book:

N.P. Gopalan, J. Akilandeswari, Web Technology, PHI Learning Private Limited, New Delhi, Fifth Printing, 2011

UNIT I : Chapter 4	UNIT II : Chapter 5	UNIT III : Chapter 7
UNIT IV: Chapter 6	UNIT V : Chapter 8	

Book for Reference:

Douglas Crockford, Java Script: The Good parts, O'Reilly Media, 2008

Web References:

- 1. https://www.tutorialspoint.com/html/index.htm
- 2. https://www.tutorialspoint.com/javascript/index.htm
- 3. https://epdf.pub/vbscript-unleashed.html

15 hours

15 hours

15 hours

15 hours

Semester	Co	de	Title of the Course Hours					urs	Cre	dits	
IV	20UC/	44AC7	SC	RIPTING I	LANGUAG	iES	!	5	4		
Course		Program	ne Outcoi	mes (POs)		Prog	ramme Sj	pecific Ou	tcomes (F	PSOs)	
Cos	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	✓		✓	✓	~	~		~		✓	
CO2	\checkmark	~		✓	~	✓	✓	~	✓	✓	
CO3	\checkmark	~	✓	✓	~	✓	✓		✓	✓	
CO4	\checkmark	~	✓	✓		~	~	~	~	✓	
CO5						~		~	~	✓	
	Number of matches (✓) = 43 Relationship: High										

Prepared by:

Ms. R. Senthamilselvi

Note:

Mr. M. Kamal

Checked by:

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
IV	20UCA4AC8P	ALLIED - VII	SCRIPTING LANGUAGES LAB	3	2	100	20	80

- 1. Develop a HTML document to basic alignments on headers and format the document using suitable tags.
- 2. Develop a HTML document which displays the arts and science department of your college and the courses offered by the department using list.
- 3. Develop a HTML document to create table with rows and columns and split them using rows span and column span.
- 4. Develop a Complete Web Page using Frames and Framesets which gives the Information about a Hospital using HTML.
- 5. Using CSS and HTML, make a webpage that has two columns. Each column should use half of the width of the page. The left half should have a light gray background and the right half should have a light green background. The left half should have a list of the 5 best-selling books in Amazon's kindle store, and the right should have a list of your five favourite celebrities or athletes.
- 6. Write a program to illustrate CSS border style properties
- 7. Develop a JavaScript program to compute the sum of an array of integers.
- 8. Develop a JavaScript program to generate ten random numbers within 1 to 100 and display the numbers in a table.
- 9. Write a JavaScript to create an Arithmetic Calculator using user defined Function
- 10. Develop a JavaScript for loop that will iterate from 0 to 15. For each iteration, it will check if the current number is odd or even, and display a message to the screen.
- 11. Develop a JavaScript program to check the given String is Palindrome or not.
- 12. Create a Registration Form using JavaScript. Apply appropriate data validations.
- 13. Develop a VBScript Program to generate Date and Time in different format.
- 14. Develop a VBScript program to display the week days.
- 15. Write a XML program content displaying using XSL & CSS
- 16. Write a XML program to create XSL for displaying various country names and their currency name.

Prepared by:

Ms.R. Senthamilselvi

Checked by: Mr. M. Kamal

Semester	Code	Course	Title of the Course	Hours	Credits	Max. Marks	Internal Marks	External Marks
IV	20UCA4GE2	Generic Elective – II	Image Editing Tools	2	2	100		100

After completion of the course, students will be able to

- 1. Acquire the knowledge on photo editing.
- 2. Learn basic idea in Editing Tools
- 3. Learn the practical experience in editing video and animation
- 4. Understand image cropping Operations
- 5. Get idea on applying Filter and light effect

UNIT I

Workspace and workflow: Panels and menus – Tools. Image and color basics: Image size and resolution- Creating, opening, and importing images-#Viewing images#.

UNIT II

About color- color modes. Layer: Layer basics- Selecting, grouping, and linking layers- layer effects and styles

UNIT III

Selecting: Selecting with the lasso tools -Selecting with the marquee tools. Reshaping and transforming: Crop and straighten photos-Transforming object s- Liquify filter

UNIT IV

Video and animation: - Creating frame animations- Creating timeline animations- Creating images for video- Saving and exporting video and animations- # Editing video and animation layers#

UNIT V

Filter and effects: Filter basics- Filter effects reference- Add Lighting Effects. Saving and exporting: Saving images- # File formats #

...... # Self-study portion

Text Book:

ADOBE® PHOTOSHOP Help and tutorials by Adobe - February 2013

UNIT I : Chapters 3& 4	UNIT II :Chapters 4 & 5	UNIT III : Chapters 6 & 10
UNIT IV : Chapter 13	UNIT V : Chapters 14 & 15	

Book for Reference:

Barbara Obermeier, Ted Padova, Photoshop Elements 2020 for Dummies, Published by John Wiley & Sons, Inc., New Jersey, 2020

Web Reference:

https://help.adobe.com/archive/en/photoshop/cs6/photoshop reference.pdf

6 hours

6 hours

6 hours

6 hours

Semester	Co	Code Title of the C		ne Course	9	Hours		Credits		
IV	20UC/	A4GE2	IMAGE EDITING TOOLS			2		2		
Course Outcomes COs	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	✓		~	✓	~		~	~		✓
CO2	✓	✓		✓	✓	✓	✓		~	✓
CO3	✓	✓		✓	~	~	~		~	✓
CO4	~	~	~	✓	~	~		~	~	~
CO5		~	~	~		~	~	~		~
Number of matches (✓) = 39, Relationship: High										

Prepared by:

Ms. A.M.S. ZunaithaSulthana

Checked by:

Ms. S. Benazir Butto

Mapping	1-29%	30-59%	60-69%	70-89%	90-100%
Matches	1-14	15-29	30-34	35-44	45-50
Relationship	Very Poor	Poor	Moderate	High	Very High