Discipline Computer Engineering

Semester

Subject : Mobile Application Development
Lesson Plan Duration : 15 Weeks
Work Load (Lecture/ Practical) per week (in hours): Lectures-03, Practical - 06

Week	Theory		Practical		
	Lecture day	Topic (including assignment / test)	Practical day	Topic	
	1st	Introduction : Evolution of Mobile Computing, Important terminologies			
1st	2nd	Mobile computing functions, Mobile computing security issues	1st	Write a program to demonstrate activity	
	3rd	Mobile computing Devices, Networks: Wired, Wireless, Ad-hoc, Comparisonof wired and wireless mechanism, Various types of wirelesscommunication technologies	& <sub>2</sub> nd	(Application Life Cycle)	
	4th	Antennas, Basics of Base Station and Medium access control and Mobilestation			
2 <sup>nd</sup>	5 <sup>th</sup>	Architecture of Mobile Computing, , 3-Tier Architecture	3rd	Write a program to demonstrate different types of	
	6 <sup>th</sup>	Mobile computing through Telephony: Evolution through telephony, Wireless LAN: Introduction - Applications of WLAN	& <sub>4</sub> th	layouts.	
	7th	Infrared versus Radio Transmission, Features of WI-FI	5 <sup>th</sup>	Write a program to implement simple	
3 <sup>rd</sup>	8th	Features of WI-FI and WI-MAX.,Bluetooth: Introduction and application	& <sub>6</sub> th	calculator using text view, edit view, option button and	
	9th	ANDROID : Android Versions, Features of Android		button	
	10 <sup>th</sup>	Architecture of Android	7th	Write a program to	
4 <sup>th</sup>	11 <sup>th</sup>	Android Market, Android Runtime (Dalvik Virtual Machine)	& <sub>8</sub> th	demonstrate list view	
	12 <sup>th</sup>	ANDROID SDK & ADT : Android SDK, Android Development Tool (ADT)			
	13 <sup>th</sup>	Installing and configuring Android	9th	Write a program to	
5 <sup>th</sup>	14 <sup>th</sup>	Android Virtual Device (AVD), Understanding Activities, Linking activities and indents	& <sub>10</sub> th	demonstrate photogallery	
	15 <sup>th</sup>	Sessional test			
	16 <sup>th</sup>	Calling built-in applications using intents, Fragments			
6 <sup>th</sup>	17 <sup>th</sup>	Displaying Notifications, UserInterface : Views and View groups, Layouts	11 <sup>th</sup> &	Write a program to demonstrate Date picker and time picker	
	18 <sup>th</sup>	Display Orientation, Action Bar,Listening for UI			

		Notifications		
7 <sup>th</sup>	19 <sup>th</sup>	Basic Views : Textview, Button, Image Button	13 <sup>th</sup> &	
	20 <sup>th</sup>	EditText, CheckBox, ToggleButton,	14 <sup>th</sup>	Develop an simple application
-	21 <sup>st</sup>	RadioButton , RadioGroup Views		with context menu and option menu
	22 <sup>nd</sup>	ProgressBar View, Auto Complete Text View	15 <sup>th</sup> &	Develop an applicationto
8 <sup>th</sup>	23 <sup>rd</sup>	Advanced Views : Time Picker View	16 <sup>th</sup>	send SMS
-	24 <sup>th</sup>	Date Picker View, List Views		
	25 <sup>th</sup>	Image View, Menus	th fr	
9th	26 <sup>th</sup>	Menus	17 <sup>th</sup> &	Write a program to view,edit
-	27 <sup>th</sup>	Analog and Digital View, Dialog Boxes, Displaying Pictures & Menus with Views		contact
	28 <sup>th</sup>	Gallery View, ImageSwitcher, GridView	19th&	Write a program to sende-
10 <sup>th</sup>	29 <sup>th</sup>	Creating the Helper Methods	20 <sup>th</sup>	mail
Ī	30 <sup>th</sup>	Sessional test		
	31 <sup>st</sup>	Options Menu, Context Menu		
th	32nd	Sending SMS	21st &	Write a program to demonstrate a service
11 <sup>th</sup>	33rd	Receiving SMS	22 <sup>nd</sup>	demonstrate a service
	34 <sup>th</sup>	Making phone call		
ı əth	35 <sup>th</sup>	Location Based Services	23rd&	Write a program to demonstrate web view to
12 <sup>th</sup>	36 <sup>th</sup>	Obtaining the Maps API Key,Displaying the Map	24 <sup>th</sup>	display web site
	37 <sup>th</sup>	Zoom Control, Navigating to a specific location	25th&	Write a program to display
13 <sup>th</sup>	38 <sup>th</sup>	Adding Marker, Geo Coding andreverse Geo coding	26 <sup>th</sup>	map of given location/position using map
Ī	39th	Content Provider		view
14 <sup>th</sup>	40 <sup>th</sup>	Sharing data, view contacts, Addcontacts, Modify contacts, Delete Contacts	27 <sup>th</sup> &	Write a program to demonstrate the
-	41 <sup>st</sup>	Storage: Store and Retire data's inInternal and External Storage	20	application of intent class
-	42 <sup>nd</sup>	SQLite, Creating and using databases		
_	43rd	Android Service : Consuming Webservice using HTTP	29th&	Write a program to create a text file in external memory.
15 <sup>th</sup>	44 <sup>th</sup>	Downloading binary Data, Downloading Text Content	30 <sup>th</sup>	Write a program to storeand fetch data from SQL life
	45 <sup>th</sup>	Accessing Web Service		database.
		Revision	l	l

Discipline Computer Engineering

Semester

MOOC (Digital Marketing) 15 Weeks Subject

Lesson Plan Duration : 15 Weeks
(Work Load (Lecture/ Practical) per week (in hours): Lectures-2

Week	Theory				
	Lecture day	Topic (including assignment / test)			
	1st	Introduction to Digital Marketing and its Significance			
1st	2nd	Traditional Marketing Vs Digital Marketing, Digital Marketing Process			
		Website Planning and Development : Types of websites			
	3rd				
2 <sup>nd</sup>	4th	Website Planning and Development : Keywords			
	5th	Understanding Domain and Webhosting			
3 <sup>rd</sup>	6th	Building Website/Blog using CMS WordPress			
	7th	Introduction to Search Engine Optimization, Keyword P lanner Tools			
4 <sup>th</sup>	8th	On Page SEO Techniques-Indexing and Key Word Placement			
	9th	On Page SEO Techniques- Content Optimization, On Page SEO : YoastSEO Plug-in ,Off –Page SEO Techniques			
5 <sup>th</sup>	10th	Sessional Test I			
	11th	Email Marketing- Introduction and Significance, Designing e-mail marketing campaigns using Mail Chimp			
6 <sup>th</sup>		Building E-mail List and Signup Forms			
	12th				
7 <sup>th</sup>	13th	Email Marketing Strategy and Monitoring, Email –Automization			
	14th	Pay Per Click Advertising: Introduction, Pay Per Click Advertising: Google Adword			
	15th	Types of Bidding strategies			
8 <sup>th</sup>	16th	Designing and Monitoring search campaigns, Designin g and Monitoring Display campaigns			
	17th	Designing and Monitoring Video campaigns			
9th	18th	Designin g and Monitoring Universal App Campaigns			
	19th	Google Analytics : Introduction and Significance, Google Analytics Interfaceand Setup			
10 <sup>th</sup>	20th	Sessional Test II			
	21st	Understanding Goals and Conversions			
11 <sup>th</sup>	22nd	Monitoring Traffic Behavior and preparing Reports			
	23rd	Social Media Marketing: Introduction and Significance, Facebook Marketing			

		: Introduction Types of Various Ad Formats
12 <sup>th</sup>	24th	Setting up Facebook Advertising Account
	25th	Understanding Facebook Audience and its Types,
	26 <sup>th</sup>	Designing Facebook Advertising Campaigns
13 <sup>th</sup>	27th	Working with Facebook Pixel
	28th	Twitter Marketing: Basics, Designing Twitter Advertising Campaigns
14 <sup>th</sup>	29th	Introduction to LinkedIn Marketing, Developing digital marketing strategy in Integration form
15 <sup>th</sup>	30th	Sessional Test III
	31th	Revision
	32 <sup>nd</sup>	

**Discipline** : Computer Engineering

Semester : 6th

Subject : Application Development Using Web Frame Work

**Lesson Plan Duration**: 15 Weeks

Work Load(Lecture/ Practical) per week (in hours): Practicals - 06

Week	Practical			
	day	Topic		
1st	1	1. Practice on HTML, CSS, Java Script, Ajax.PHP & MySql		
2 <sup>nd</sup>	2	2. Install WordPress & Create Blogs		
3rd	3	3. Manage blogs features e.g. Images, Text Around Images, Comments, Post Formats, Linking, Pages, Categories, Smilies, Feeds, Gravatars, Password Protection		
4th	4	4. Practice various designing features: Colour Scheme, Headers, CSS Horizontal Menus, Dynamic Menu, Highlighting, Navigation Links, Print		
5 <sup>th</sup>	5	5. Read More, Formatting Date and Time, Finding CSS Styles, Creating Individual Pages, Uploading Files, Using WordPress Themes, Templates, Template Tags, Template Hierarchy, Validating a Website, Know Your Sources, WordPress Site Maintenance		
6 <sup>th</sup>	6	6. Integrate PHP & MySql with WordPress		
7 <sup>th</sup>	7	7. Install Moodle & various plugins,		
8 <sup>th</sup>	8	8. Create a Moodle site and Database Schema		
9th	9	9. Design Site appearance, Front page, Front page settings, My Moodle, User profiles, Navigation, Course list, Themes, Theme settings, Header and footer, Language settings, Using web services, Publishing a course, Blogs, RSS feeds		
10 <sup>th</sup>	10	10. Manage Moodle site, Managing authentication, Manual accounts, No login, Email-based self- registration, Account		
11 <sup>th</sup>	11	11. Create Roles and permissions, Assign roles,		
12 <sup>th</sup>	12	12. Implement Password salting.		
13 <sup>th</sup>	13	13. Perform Site backup, Course backup, Course restore, Automated course backup		
14 <sup>th</sup>	14	Revision		
15 <sup>th</sup>	15	Revision		

**Discipline** : Computer Engineering

Semester : 6th

Subject : Application Development Using Web Frame Work

**Lesson Plan Duration**: 15 Weeks

Work Load(Lecture/ Practical) per week (in hours): Practicals – 06

Week	Practical			
	day	Topic		
1st	1	1. Practice on HTML, CSS, Java Script, Ajax.PHP & MySql		
2 <sup>nd</sup>	2	2. Install WordPress & Create Blogs		
3rd	3	3. Manage blogs features e.g. Images, Text Around Images, Comments, Post Formats, Linking, Pages, Categories, Smilies, Feeds, Gravatars, Password Protection		
4 <sup>th</sup>	4	4. Practice various designing features: Colour Scheme, Headers, CSS Horizontal Menus, Dynamic Menu, Highlighting, Navigation Links, Print		
5 <sup>th</sup>	5	5. Read More, Formatting Date and Time, Finding CSS Styles, Creating Individual Pages, Uploading Files, Using WordPress Themes, Templates, Template Tags, Template Hierarchy, Validating a Website, Know Your Sources, WordPress Site Maintenance		
6 <sup>th</sup>	6	6. Integrate PHP & MySql with WordPress		
7 <sup>th</sup>	7	7. Install Moodle & various plugins,		
8 <sup>th</sup>	8	8. Create a Moodle site and Database Schema		
9th	9	9. Design Site appearance, Front page, Front page settings, My Moodle, User profiles, Navigation, Course list, Themes, Theme settings, Header and footer, Language settings, Using web services, Publishing a course, Blogs, RSS feeds		
10 <sup>th</sup>	10	10. Manage Moodle site, Managing authentication, Manual accounts, No login, Email-based self- registration, Account		
11 <sup>th</sup>	11	11. Create Roles and permissions, Assign roles,		
12 <sup>th</sup>	12	12. Implement Password salting.		
13 <sup>th</sup>	13	13. Perform Site backup, Course backup, Course restore, Automated course backup		
14 <sup>th</sup>	14	Revision		
15 <sup>th</sup>	15	Revision		

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Semester :
Subject :
Lesson plan duration : Computer Engg.  $6^{th}$ Project 15 weeks

Lesson plan duration : 15 weeks				
Week		Practical		
	Practical Day	Topic		
1st Week	1 <sup>st</sup>	Selection of Project		
	2 <sup>nd</sup>	Selection of Project		
Week 2	1 <sup>st</sup>	Finalization of Project		
	2 <sup>nd</sup>	Finalization of Project		
Week 3	1 st	Outline of Project		
	2 <sup>nd</sup>	Outline of Project		
Week 4	1 <sup>st</sup>	Planning of Project		
	2 <sup>nd</sup>	Planning of Project		
Week 5	1 <sup>st</sup>	Execution of Project		
	2 <sup>nd</sup>	Execution of Project		
Week 6	1 <sup>st</sup>	Execution of Project		
	2 <sup>nd</sup>	Execution of Project		
Week 7	1 <sup>st</sup>	Execution of Project		
	2 <sup>nd</sup>	Execution of Project		
Week 8	1 <sup>st</sup>	Execution of Project		
	2 <sup>nd</sup>	Execution of Project		
Week 9	1 <sup>st</sup> -G	Execution of Project		
	2 <sup>nd</sup>	Execution of Project		
Week 10	1st	Providing Solution of Problems		
	2 <sup>nd</sup>	Providing Solution of Problems		
Week 11	1 <sup>st</sup>	Production of Final Executed project		
	2 <sup>nd</sup>	Production of Final Executed project		
Week 12	1 <sup>st</sup>	Checking of Final Project		
	2 <sup>nd</sup>	Checking of Final Project		
Week 13				

	1 <sup>st</sup>	Report writing	
	2 <sup>nd</sup>	Report writing	
Week 14	1 <sup>st</sup>	Seminar	
	2 <sup>nd</sup>	Seminar	
Week 15	1 <sup>st</sup>	Viva-Voce	
	2 <sup>nd</sup>	Viva-Voce	

Discipline: ComputerEngg.

Semester: 4th

Subject: OOPS Using JAVA

Lesson Plan Duration: 15 weeks

Work Load (Lecture/Practical) per week (In hour): Lecture-03,Practical - 03

WEEK		THEORY	PRACTICAL		
1st	LECTURE DAY	TOPIC	PRACTICALDAY/P ERIOD	TOPIC	
	1	UNIT1 INTRODUCTION AND FEATURES Fundamentals of object oriented programming	1-3	<ol> <li>Write a program in JAVA to print "Hello" using classes.</li> </ol>	
	2	Procedure oriented programming Vs.objectorientedprogramming(OOP)		using classes.	
	3	Object oriented programming concepts— Classes, object, object reference			
2nd	1	Abstraction, encapsulation	1-3	2. Write a program to	
	2	Inheritance,polymorphism		input using Scanner	
	3	Introduction of eclipse(IDE) for developing programs in Java		Class.	
3rd	1	UNIT2 LANGUAGE CONSTRUCTS Review of constructs of C used in JAVA: variables	1-3	3. Write a program to print factorial of a	
	2	Types and type declarations		Number.	
	3	Datatypes			
4th	1	Increment operators	1-3	4. Write a program	
	2	Decrement operators		to create a Class and	
	3	Relational and logical operators		make objects of that class.	
5 <sup>th</sup>	1	If then else clause; conditional expressions	1-3	5. Create a class with	
	2	Input using scanner class and output statement		data members Feet, Inches and add them.	
	3	Loops,switchcase,arrays,methods			
6 <sup>th</sup>	1	UNIT3 CLASSES AND OBJECTS Creation	1-3	6. Create a class using constructors.	
	2	Accessing class members		constructors.	
	3	Private Vs Public Vs Protected Vs Default			
7th	1	Constructors	1-3	7. Create a class and	
	2	Object		show the use of Single	
	3	Object Reference		inheritance.	

8th	1	UNIT4 INHERITANCE	1-3	8. Create a class and
		Definition of inheritance		show the use of
	2	Protected data		
	3	Public data, Constructor chaining		multiple inheritance.
9th	1	Order of invocation	1-3	9. Create a class and
	2	Types of inheritance		show the use of Multi-
	3	Single inheritance		level inheritance.
10th	1	Multilevel inheritance,	1-3	10 Create a dese
200	2	Hierarchical inheritance	-	10. Create a class
	3	Hybrid inheritance		showing the use of
		,		Constructor
				Overloading.
11 <sup>th</sup>	1	UNIT5 POLYMORPHISM	1-3	11. Create a program
		Method overloading		showing the use of
	2	Constructor overloading		Interfaces.
	3	Method overriding		interraces.
12th	1	Up-casting	1-3	12 Croato a program
	2	Down-casting		12. Create a program
	3	UNIT6 ABSTRACT CLASS & INTERFACE		using Try and Catch Block.
		Key points of Abstract class		DIOCK.
13th	1	Interface	1-3	Revision
	2	Difference between an abstract class &		
		interface		
	3	Implementation of multiple inheritance		
	1	Through interface		
14th	1	UNIT7 EXCEPTION HANDLING Definition of exception handling	1-3	Revision
	2	Implementation of keywords like try		
	3	Catch,finally		
15th	1	Throw & Throws	1-3	Revision
	2	Importance of exception handling in	<b> </b>	
	-	practical implementation of live projects		
	3	REVISION		
16th	1	TEST	1-3	Revision
	2	REVISION		
	3	REVISION		

		<u>Lesson Plan</u>					
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Discipl Semest		Computer Engg.					
Subjec		6th Entrepreneurship Development and Management					
	e per Week	3					
	olan Duration	15 weeks					
Week	Lecture Day	Topic (including assignment / test)	Delivery Date of Lecture	Remarks			
	SECTION - A	Unit-1-Introduction:					
1st	1st	Introduction					
	2nd	Introduction/ Syllabus					
	1st	Concept/Meaning and its need					
2nd	2nd	Sole proprietorship and partnership forms and other forms of business organisations					
	3rd	Schemes of assistance by entrepreneurial support agencies at National, State, District – level, organisation: NSIC, NRDC,					
	1st	DC, MSME, SIDBI, NABARD, NIESBUD, HARDICON Ltd.					
3rd	2nd	Commercial Banks, SFC's TCO, KVIB, DIC,					
	3rd	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks					
		Unit-2 - Market Survey and Opportunity Identification/Ideation					
	1st	Scanning of the business environment					
4th	2nd	Salient features of National and Haryana State industrial policies and resultant business opportunities					
	3rd	Types and conduct of market survey					
	1st	Assessment of demand and supply in potential areas of growth					
5th	2nd	Identifying business opportunity, Considerations in product selection					
	3rd	Converting an idea into a business opportunity					
		1st Sessional Test					
	ı	Unit-3- Project Report Prepration					
6th	1st	Detailed project report including technical, economic and market feasibility, Common errors in project report preparations					
	2nd	Exercises on preparation of project report, Sample project report					
	SECTION -B	Unit-4 Construction Labour					
	1st	Introduction to Management, Definitions and importance of management	t				
7th	2nd	Functions of management: Importance and process of planning, organising, staffing, directing and controlling					
	3rd	Principles of management (Henri Fayol, F.W. Taylor), Concept and structure of an organisation					
	1st	Types of industrial organisations and their advantages,Line organisation					
8th	2nd	Staff organisation,Line and staff organisation.					

	3rd	Functional Organisation		
		Unit-5 -Leadership and Motivation		
9th	1st	a) Leadership: Definition and Need, Qualities and functions of a leader, Manager Vs leader		
H	2nd	Types of leadership, Case studies of great leaders		
	3rd	<b>b) Motivation :</b> Definition and characteristics, Importance of self motivation, Factors affecting motivation		
	1st	Theories of motivation (Maslow, Herzberg, Douglas, McGregor)		
		Unit-6 - Management Scope in Different Area		
10th	2nd	a) Human Resource Management: Introduction and objective, Introduction to Man power planning, recruitment and selection, Introduction to performance appraisal methods		
	3rd	b) Material and Store Management: Introduction functions, and objectives, ABC Analysis and EOQ		
	1st	c) Marketing and sales: Introduction, importance, and its functions, Physical distribution, Introduction to promotion mix, Sales promotion		
11 th	2nd	d) Financial Management: Introductions, importance and its functions, knowledge of income tax, sales tax, excise duty, custom duty, VAT, GST		
	2nd Sessional Test			
	Unit-7 - Work Culture			
	1st	Introduction and importance of Healthy Work Culture in organization		
12th	2nd	Components of Culture, Importance of attitude, values and behaviour Behavioural		
	3rd	Science – Individual and group behavior.		
	1st	Professional ethics – Concept and need of Professional Ethics and human values.		
13th		Unit-8 - Basic of Accounting and Finance		
	2nd	a) Basic of Accounting: - Meaning and definition of accounting,		
	3rd	Double entry system of book keeping		
	1st	Trading account		
	2nd	PLA account and balance sheet of a company <b>b) Objectives of Financial Management -</b> Profit Maximization v/s		
14th	3rd	Wealth Maximization		
		Unit- 9 Miscellaneous Topics		
	1st	a) Total Quality Management (TQM) Statistical process control, Total employees Involvement		
15th	2nd	b) Intellectual Property Right (IPR) Introduction, definition and its importance		
	3rd	Infringement related to patents, Just in time (JIT)		
	1st	Copy right,		
16th	2nd	Trade mark		
·		3rd Sessional Test		

**Discipline:** Computer Engineering Semester: IV **Subject:** DATA STRUCTURES USING 'C'

**Lesson Plan Duration:** 15 weeks

Work Load (Lecture/ Practical) per week (in hours): L- 03, P - 04 + 04

L-1 Introduction to data Structure (Linear, Non-Linear, Primitive, Non-Primitive, Contiguous, Non-contiguous datastructures) L-2 Problem solving concept, top down and bottom- up design L-3 Structured programming concepts L-4 Concept of data types, variables, constants. concept ofdata- information L-5 Concept of pointer variables and constants. Arrays and pointers, pointers to structures. L-6 Concept of Arrays: Single dimensional array Two-dimensional array L-7 Representation of Two-dimensional Array (Base Address, LB, UB) L-8 Storage representation of multi-dimensional arrays(Row major, column major order) L-9 Operations on Arrays (Traversing, Insertion, Deletion) L-10 Operations on Arrays (Searching – Linear Search) L-11 Operations on Arrays (Searching – Binary Search)	[P-1] Operations on Arrays (Traversing, insertion, deletion)  [P-17] Operations on Arrays (Searching-Linear Search)  [P-16] Operations on Arrays (Searching-Binary Search)  [P-2] The addition of two matrices using functions  [P-3] The multiplication of two matrices using function  [P-*] Creation of arrays using dynamic memoryallocation  [P-*] Creation of structures using dynamic memoryallocation
L-2 Problem solving concept, top down and bottom-up design L-3 Structured programming concepts L-4 Concept of data types, variables, constants. concept ofdata- information L-5 Concept of pointer variables and constants. Arrays and pointers, pointers to structures. L-6 Concept of Arrays: Single dimensional array Two-dimensional array L-7 Representation of Two-dimensional Array (Base Address, LB, UB) L-8 Storage representation of multi-dimensional arrays(Row major, column major order) L-9 Operations on Arrays (Traversing, Insertion, Deletion) L-10 Operations on Arrays (Searching – Linear Search) L-11 Operations on Arrays (Searching – Binary	[P-16] Operations on Arrays (Searching- Binary Search)  [P-2] The addition of two matrices using functions  [P-3] The multiplication of two matrices using function  [P-*] Creation of arrays using dynamic memoryallocation  [P-*] Creation of structures using dynamic
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L-7 Representation of Two-dimensional Array (Base Address, LB, UB) L-8 Storage representation of multi-dimensional arrays(Row major, column major order) L-9 Operations on Arrays (Traversing, Insertion, Deletion) L-10 Operations on Arrays (Searching – Linear Search) L-11 Operations on Arrays (Searching – Binary	function  [P-*] Creation of arrays using dynamic memoryallocation  [P-*] Creation of structures using dynamic
L-10 Operations on Arrays (Searching – Linear Search) L-11 Operations on Arrays (Searching – Binary	
	[P-7] Creation of linked lists using static and
L-12 Introduction to linked list. Representation of linked lists in Memory, Comparison between Linked List and Array	dynamic memory allocation
L-13,14 Ist sessional	Ist sessional
L-15 Traversing a linked list Searching an item in a linkedlist	[P-7] Insertion of elements in linked list at the beginning, at the last and at the desired location
L-16 Insertion and deletion into linked list (At first Node, Specified Position, Last node Application of linked lists	[P-7] Deletion of an item from a linked list
L-17 Doubly linked lists Traversing a doubly linked lists Insertion and deletion into doubly linked lists	ID 91 Incoming of alamants in Double lighted list
L-18 Applications of linked lists. Stacks, queues	[P-8] Insertion of elements in Doubly linked list at the desired location
L-19 Introduction to stacks. Representation of stacks witharray and Linked Lists L-20 Application of stacks-Postfix expression	[P-8] Deletion of an item from Doubly linked list
L-21 Transforming infix expression into postfix expression	[P-4] Push and Pop operations in stacks using linked lists.
L-22 Quick Sort L-23 Concept and Comparison between recursion and Iteration factorial of a no with and	[P-4] Push and Pop operations in stacks using Arrays  [P-5] Inserting and deleting elements in queue
	usingarrays.
withoutrecursion	[P-5] Inserting and deleting elements in queue using linked lists
L E L L	vitharray and Linked Lists -20 Application of stacks-Postfix expression valuation -21 Transforming infix expression into postfix expression -22 Quick Sort -23 Concept and Comparison between ecursion and Iteration factorial of a no with and vithout recursion -24 Fobonacii series problem using recursion and

	L-27 Implementation of Queues using linked lists	[P-6] Inserting and deleting elements in circular
		queueusing arrays.
10th	L-28 Circular Queues, De-queues, Application of	[P-6] Inserting and deleting elements in circular
	Queues	queueusing linked lists.
	L-29,30 Hnd sessional	IInd
		sessional
11th	L-31 Concept of Trees	[P-9] The Factorial of a given number with
11th	L-31 Concept of Trees	[P-9] The Factorial of a given number with recursion and without recursion
11th	L-31 Concept of Trees  L-32 Representation of Binary tree in memory	
11th		recursion and without recursion

Week	Theor	Practical
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12 <sup>th</sup>	L-34 In order Traversal (Non-recursive)	[P-11] Program for binary search tree
		operation-inserting/deleting a node into a
		binary search tree
	L-35 Post order Traversal (Non-recursive)	[P-11] Program for binary search tree operation-
	L-36 Concept of Binary Search Trees (BST)	preorder, inorder, post order traversal
13 <sup>th</sup>	L-37 Searching and Inserting nodes into BSTs	[P-12] The selection sort technique
	L-38 Deleting a node from a BST	[P-13] The bubble sort technique
	L-39 Introduction to Heap	
14 <sup>th</sup>	L-40 How to insert Item into a Heap	[P-14] The quick sort technique
	L-41 How to delete an Item from a Heap & Heapsort	[P-14] The quick sort technique
	L-42 Selection sort	
15 <sup>th</sup>	L-43 Insertion Sort	[P-15] The merge sort technique
	L-44 Merging	[P-15] The merge sort technique
	L-45 Merge Sort	
16th	L-46 Revision	IIIrd Sessional
	L-47-48 IIIrd Sessional	· · ·
		Revision
11th	L-33 Preorder Traversal (Non-recursive)	[P-10] Fibonacii series with recursion and

withoutrecursion

Discipline : Computer Engineering

Semester : 2nd

Subject : Multimedia Applications

Lesson Plan Duration : 15 weeks

Work Load (Lecture) per week (in hours): Lectures-02 and Lab-02

		Theory		
Week	Lecture day	Topic (including assignment / test)	Practical's	
1st	1 <sup>st</sup>	Introduction to Multimedia System; Components and tools of multimedia	Study of Adobe Flash Tool	
_	2 <sup>nd</sup>	Applications of Multimedia		
2nd	3 <sup>rd</sup>	Multimedia file audio/video format; Media, File Format and types of media files	Frame by Frame Animation	
Znu	4 <sup>th</sup>	Basic Multimedia hardware and software requirements.  Quality, criteria and specification of hardware component		
	5 <sup>th</sup>	Difference between Analog and Digital Signal	Motion Tweening	
3rd	6 <sup>th</sup>	Modulation and Digital Recording; Search of Digital Recording by converting sound into numbers		
4 <sup>th</sup>	7 <sup>th</sup>	Sound Card Connection, History of Sound Card. Types of Sound Card; Area of computer to use sound card, advantages of external sound card	Shape Tweening	
	8 <sup>th</sup>	Function of Playback and recording, MIDI, Components of MIDI, MIDI Connectors, Features and working of MIDI		
5 <sup>th</sup>	9 <sup>th</sup>	Revision	Practice	
3	10 <sup>th</sup>	Sessional 1		
C th	11 <sup>th</sup>	Hardware Requirement for text	Single Layer Masking	
6 <sup>th</sup>	12 <sup>th</sup>	Software Requirement for text		
<b>7</b> th	13 <sup>th</sup>	Coloring of Text	Double Layer Masking	
7.11	14 <sup>th</sup>	Fundamental Image Processing Steps		
Oth	15 <sup>th</sup>	Types of Image Processing	Adding Video Clips	
8 <sup>th</sup>	16 <sup>th</sup>	Digital Image Editing		
9th	17 <sup>th</sup>	Class Test	Movie Clip, Buttons	
	18 <sup>th</sup>	Animation Techniques		

10 <sup>th</sup>	19 <sup>th</sup>	Revision	Practice
	20 <sup>th</sup>	Sessional 2	Tructice
11 <sup>th</sup>	21st	Digital Video fundamentals	Publishing of Flash Movie
11	22 <sup>nd</sup>	Relationship between pixel and video bitrate	
12 <sup>th</sup>	23rd	Steps to create high quality video	Study of Adobe
	24 <sup>th</sup>	Digital Video Production Techniques	Photoshop Tools
13 <sup>th</sup>	25 <sup>th</sup>	Revision	Image Editing in Photoshop
13	26 <sup>th</sup>	Authoring Tools and their features	
1 /1th	27 <sup>th</sup> Classification of Authorizing Tools	Classification of Authorizing Tools	Applying
14 <sup>th</sup>	28 <sup>th</sup>	Multimedia Project Planning and Costing	Special Effects
15 <sup>th</sup>	29 <sup>th</sup>	Multimedia team	Practice
	30 <sup>th</sup>	Sessional 3	