LESSON PLAN

Semester: First   Subject: Engineering

GraphicsLesson Plan Duration: 16 Weeks

Teaching Load: Practical - 2Turns/week (3Hrs./ Turn)

WEEK	TURN	TOPIC	COURSE OUT COME
1	1	**UNIT I** **1. Introduction to Engineering Drawing and Graphics** 1.1 Introduction to use and care of drawing instruments, drawing materials, layout and sizes of drawing sheets and drawing boards.	CO1
	2	1.2 Symbols and conventions a) Conventions of Engineering Materials, Sectional Breaks and Conventional lines.	CO1
2	3	b) Civil Engineering Sanitary fitting symbols c) Electrical fitting symbols for domestic interior installations.	CO4
	4	1.3 Geometrical construction-geometrical figures such as triangles, rectangles, circles, ellipses and curves, hexagons, pentagons bisecting a line and arc, division of line and circle with the help of drawing instruments.	CO2
3	5		CO2
	6	**2. Technical Lettering of Alphabet and Numerals** Definition and classification of lettering, Free hand (of height of 5,8,12 mm) and instrumental lettering (of height 20 to 35 mm) :	CO2
4	7	upper case and lower case, single and double stroke, vertical and inclined (Gothic lettering) at 75 degree to horizontal and with suitable height to width ratio 7:4	CO2
	8	**3. Dimensioning** 3.1 Necessity of dimensioning, method and principles of dimensioning (mainly theoretical instructions).	CO2
5	9	3.2 Dimensioning of overall sizes, circles, threaded holes, chamfered surfaces, angles, tapered surfaces, holes, equally spaced on P.C.D., countersunk holes, counter bored holes, cylindrical parts, narrow spaces and gaps, radii, curves and arches.	CO2
	10	**4. Scales** 4.1 Scales –Needs and importance (theoretical instructions), Type of scales, Definition of Representative Fraction (R.F.) and Length	CO2
		of Scale.	CO2
6	11	4.2 To draw/construct plain and diagonal scales.	

	12	**UNIT II** **1. Orthographic Projections** 1.1 Theory of orthographic projections	CO3
7	**13**	1.2 Three views of orthographic projections of different objects of given pictorial view of a block in 1st and 3rd angle.	CO4
	14	1.3 Projection of Points in different quadrant	CO4
8	**15**	1.4 Projection of Straight Line (1st angle) i. Line parallel to both the planes. ii. Line perpendicular to any one of the reference plane and parallel to others iii. Line inclined to any one of the references and parallel to another plane.	CO4
	16	1.5 Projection of Plane – Different lamina like square rectangular, triangular, circle and Hexagonal pentagon. Trace of planes (HT and VT).	CO4
9	**17**	1.6 Identification of surfaces.	CO3
	18	**2. Sectioning** 2.1 Importance and salient features 2.2 Drawing of full section, half section, partial or broken out sections, Offset sections, revolved sections and removed sections (theoretical only).	CO3
10	**19**		CO3
	20	2.3 Orthographic sectional views of different objects.	CO3
11	**21**	**UNIT III** **1. Introduction of projection of right solids** such as prism & pyramid (square, Pentagon, Hexagonal) cube, cone & cylinder (Axes perpendicular to H.P and parallel to V.P.)	CO3
	22	**2. Introduction of sections of right solids**- Section planes, Sections of Hexagonal prism, pentagon pyramid, cylinder and cone (Section plane parallel to anyone reference planes and perpendicular to V.P. and inclined to H.P.)	CO5
12	**23**	**3. Development of Surfaces**– Development of lateral surfaces of right solids like cone, cylinder, pentagonal prism, pyramid and hexagonal pyramid (Simple problems)	CO5
	24	**UNIT IV** **1. Fundamentals of isometric projections and isometric scale.**	CO4
13	**25**	**2. Isometric views of different laminas** like circle, pentagon and hexagon.	CO4
	26	**3. Isometric views of different regular solids** like cylinder, cone, cube, cuboid, pyramid and prism.	CO4
14	**27**	**4. Isometric views from given different orthographic projections** (front, side and top view)	CO4
	28	**UNIT V** **Introduction to AutoCAD** Basic introduction and operational instructions of various commands in AutoCAD.	CO1
15	**29**		CO1
	30		CO1

16	**31**	**Drawing of different objects on AutoCAD**(given pictorial/isometric view of a block).	
	32	**Viva**	

Lesson Plan

Discipline : Computer Engineering
Semester : 6th Semester
Subject : Major Project
Lesson Plan Duration : 16 weeks Practical-15

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment /Test)	Practical Day	Topic
1st			1st	Selection of the Project Work
	N/A	N/A		
	N/A	N/A	2nd	Analyze & Study
	N/A	N/A	3rd	Analyzing the aptitudes and Interest of students
	N/A	N/A	4th	Detailed study of different project areas
	N/A	N/A	5th	Study of Previous Work Assigned
2nd				
	N/A	N/A	1st	Analyzing the usefulness and scope of the project
	N/A	N/A	2nd	Reconsidering the alternate areas of project
	N/A	N/A	3rd	Discussion on Possibilities, Pros and Cons of the different projects
	N/A		4th	Discussions on nature and scope of the selected project assignment
	N/A	N/A	5th	Study of Previous Work Assigned
3rd				
	N/A	N/A	1st	Assessing the boundaries of the project assignment
	N/A	N/A	2nd	Discussion on the Hardware and Software requirements of the different
	N/A	N/A	3rd	Selection of the Project assignment
	N/A	N/A	4th	Revisions and Rework
	N/A	N/A	5th	Revisions and Rework
4th			1st	**Feasibility Study of the selected Project:** Discussion about different possibilities and limitations of the selected projects
	N/A	N/A		
	N/A	N/A	2nd	Studying the Project assignment and assessing the technical feasibility of the Project
	N/A	N/A	3rd	Study of Previous Work Assigned
	N/A	N/A	4th	Study of Previous Work Assigned
	N/A	N/A	5th	Study of Previous Work Assigned
5th				
	N/A	N/A	1st	Studying the Project assignment and assessing the Behavioral and economic feasibility of the

N/A	N/A	2nd	Study of Previous Work Assigned
N/A	N/A	3rd	Study of Previous Work Assigned
N/A	N/A	4th	Finalize the Project feasibility report
N/A	N/A	5th	Study of Previous Work Assigned
6th			
N/A	N/A	1st	**Planning of the Project**- selecting the tools and software's and Front/Backend, H/w to be used
N/A	N/A	2nd	Assessing the availability of the tools and technical support for the project
N/A	N/A	3rd	Selection of the software and Hardware for development of the project
N/A	N/A	4th	Revisions and Rework
N/A	N/A	5th	Study of Previous Work Assigned
7th			
N/A	N/A	1st	**Designing and developing & prototyping of the work**
N/A	N/A	2nd	Generation of the SRS Document which include the expected outcome and working of the project
N/A	N/A	3rd	Review Works According to the Project Work
N/A	N/A	4th	Review Works According to the Project Work
N/A	N/A	5th	Review Works According to the Project Work
8th			
N/A	N/A	1st	Designing the algorithm and flowchart as per the requirement of the project
N/A	N/A	2nd	Review Works According to the Project Work
N/A	N/A	3rd	Review Works According to the Project Work
N/A	N/A	4th	Review Works According to the Project Work
N/A	N/A	5th	Review Works According to the Project Work
9th			
N/A	N/A	1st	Development and Coding of the algorithms in the language or software selected by the students
N/A	N/A	2nd	Review Works According to the Project Work
N/A	N/A	3rd	Review Works According to the Project Work
N/A	N/A	4th	Review Works According to the Project Work
N/A	N/A	5th	Review Works According to the Project Work
10th	N/A	N/A	1st	Review Works According to the Project Work
	N/A	N/A	2nd	Review Works According to the Project Work
	N/A	N/A	3rd	Review Works According to the Project Work
	N/A	N/A	4th	Review Works According to the Project Work
	N/A	N/A	5th	Review Works According to the Project Work
11th	N/A	N/A	1st	Review Works According to the Project Work
	N/A	N/A	2nd	Review Works According to the Project Work
	N/A	N/A	3rd	Review Works According to the Project Work
	N/A	N/A	4th	Review Works According to the Project Work
	N/A	N/A	5th	Review Works According to the Project Work
12th			
N/A	N/A	1st	**Execution of the project:** execution of the project to assess its working
N/A	N/A	2nd	Preparing real time and manual data for execution of the project
N/A	N/A	3rd	Execution of the project and checking documentation
N/A	N/A	4th	execution of the Project and correction of any errors

	N/A	N/A	5th	Review Works According to the Project Work
13th	N/A	N/A	1st	**Testing the developed Project**
	N/A	N/A	2nd	Testing the Project on manually created data and detecting and correcting syntax and logical errors
	N/A	N/A	3rd	Testing the Project on real time data and compare the results with the requirements specified at the start of the project assingment
	N/A	N/A	4th	Review Works According to the Project Work and do necessary rework
	N/A	N/A	5th	Review Works According to the Project Work and do necessary rework
14th	N/A	N/A	1st	**Report Writing:** Deciding the format and Report layout
	N/A	N/A	2nd	Deciding the Chapterization scheme and topics to be covered
	N/A	N/A	3rd	Writing thr report as per the decided scheme
	N/A	N/A	4th	Writing thr report as per the decided scheme
	N/A	N/A	5th	Review Works According to the Project Work and do necessary rework
15th	N/A	N/A	1st	Writing thr report as per the decided scheme
	N/A	N/A	2nd	Evaluation of the report and Rework if needed
	N/A	N/A	3rd	Evaluation of the report and Rework if needed
	N/A	N/A	4th	Evaluation of the report and Rework if needed
	N/A	N/A	5th	Evaluation of the report and Rework if needed
16	N/A	N/A	6TH	Viva

Signature of the Teacher

LESSON PLAN

DISCIPLINE: COMPUTER ENGINEERING

SEMESTER: 2nd

SUBJECT: MULTIMEDIA APPLICATIONS

LESSON PLAN DURATION: 14 WEEKS

WORK LOAD (LECTURE/ PRACTICAL): LECTURES-2, PRACTICALS -4

WEEK	THEORY		PRACTICAL	
1st	LECTURE DAY	TOPIC	PRACTICAL DAY/PERIOD	TOPIC

	1	**UNIT 1 Introduction to Multimedia Systems**		

		Concept of Multimedia, History of		

		Multimedia,		

		Specifications of different capturing devices,		

		Communication devices		

				Installing and use of various multimedia devices: - Scanner - Digital camera

3rd	1	**UNIT 2 Content and Project**		

		Planning, Designing and		

		development		

	1	Text encoding		
4th	1	Audio encoding techniques		

5th	1	Coding techniques for Moving Images, Editing	1-4	- Touch screen
	2	Editing of images audio		
		Editing of Text		
6th	1	Video Navigation		
	2	Graphics Navigation		

		User interface designing	1-4	Plotter and printers
7th	1	Use of various codes like bar code,		
	2	QR code in multimedia applications.		
		REVISION	1-4	- DVD - Audio CD and Video CD
8th	1	**UNIT 3 Using Image Processing Tools** Photo-shop workshop,		
	2	Image editing tools		
		Specifying and adjusting colors	1-4	Reading and writing of different format on CD/DVD
9th	1	Using gradient tools		
	2	Selection and move tools	1-4	Transporting audio and video files
		Transforming path drawing and editing tools		
10th	1	Using channels, layers, filters and actions		
	2	**REVISION**	1-4	Using various features of Flash
		UNIT 4 Multimedia Authoring Tools Types of Authoring programmes – Icon based		
11th	1	Time based, Story boarding/scripting		
	2	Object oriented working in macromedia flash	1-4	Using various features of Photo-shop/GIMP
		Exploring interface using selection of PEN tools		
12th	1	Working with drawing and painting tools	1-4	Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project
	2	Applying colour viewing		
		Manipulating time line		
13th	1	Animating, Processing		
	2	Guiding layers, importing	1-4	Generation and recognition of bar code & QR code using pre built application/mobile
		Editing sound and video clips in flash		
14th	1	**REVISION**		
	2	**REVISION**	1-4	Revision of Practicals

Lesson Plan (DBMS)

Discipline: Computer Engg.

Semester: 4th

Subject :   DBMS

Lesson Plan Duration: Work Load (Lecture/Practical) per week

(In hour):   Lecture-03

Week	Theory	
	Lecture Day	**Topic(including assignment/Test)**
1st	1ST	Database system: Introduction todatabase and its purpose
	2nd	Characteristics of database, approach, advantage and disadvantage of database system
	3rd	Classification of DBMS users: Actorson the scene- Database Administrators, Database designers,End users – System Analyst and Application Programmers
2nd	4th	Workers behind the scene (DBMS system designers and implementers,tools developers, operator and maintenance personnel
	5th	Data Models, Schemas, instances, Database state, DBMS Architecture:External level, Conceptual level, Internal level, Mappings
	6th	Data Independence: Logical dataindependence and physical dataindependence
3rd	7th	Database Languages, DBMS interfaces, Classification of DBMS- Centralized, Distributed, Parallel andObject Based
	8th	Data modeling using E-R Model
	9th	Data Model Classification: File Based or primitive models, traditional data Models, Semantic Data Models
4th	10th	Entities and Attributes, Entity Typesand Entity Sets, Key Attribute and domain of attributes
	11th	Relationship among entities , database design with ER model
	12th	Revision of 1st , 2nd and 3rd unit
5th	13th	Relational model Concepts: Domain, Tuple, Attribute, Cardinality, Relation
	14th	Keys- Primary, Secondary, Foreign, Alternate. Relational Constraints andRelational Database schemes

	15TH	Domain Constraints, key Constraintsand Constraints on Null
6th	16th	Relational Databases and RelationalDatabase Schemes
	17th	Entity Integrity, Referential Integrityand Foreign Key
	18th	Comparison between ER Model andRelational Model
7th	19th	Trivial and Non Trivial Dependencies
	20th	Non Loss Decomposition andFunctional Dependencies
	21Th	First and 2nd normal forms
8th	22th	Third normal form, BCNF,Denormalization
	23th	Revision of unit 4
	24TH	Revision of unit 5
9th	25th	Creating and using indexes, Creatingand using views
	26th	Database security, Process controls
	27TH	Database protection, grant andRevoke
10th	28th	DDL: Creating tables, Creating a tablewith data from another table
	29th	Inserting values into a table,Updating columns of a table
	30TH	Deleting Rows, Dropping a table
11th	31st	DML, Database Security andprivileges, Grant and Revokecommand
	32th	Maintaining Database objects,commit and Rollback
	33RD	Various types of select commands
12th	34th	Various types of joins, sub query
	35th	Aggregate functions , Challenges ofMy Sql
	36th	Introduction to Big Data
13th	37th	Understanding Big data with samples
	38th	Revision of Unit 1
	39TH	Revision of Unit 2
14th	40th	Revision of Unit 3

	41th	Revision of Unit 4
	42nd	Revision of Unit 5
15th	43rd	Revision of Unit 6
	44th	Revision of Unit 7
	45th	Pre Exam Conduct

Lesson Plan (OOPS Using JAVA)

Discipline: Computer Engg.

Semester: 4th

Subject :   OOPS Using JAVA

Lesson Plan Duration: Work Load (Lecture/Practical) per week

(In hour):   Lecture-03, Practical-03

WEEK	THEORY		PRACTICAL	
1st	**LECTURE DAY**	**TOPIC**	**PRACTICAL DAY/PERIOD**	**TOPIC**
	1	**UNIT 1 INTRODUCTION AND FEATURES** Fundamentals of object oriented programming	1-3	Consider we have a Class of Cars under which Santro Xing, Alto and Wagon R represents individual Objects. In this context each Car Object will have its own, Model, Year of Manufacture, Colour, Top Speed, etc. which form Properties of the Car class and the associated actions i.e., object functions like Create(), Sold(), display() form the Methods of Car Class. Use this class to create another class Company that tracks the models it creates.
	2	Procedure oriented programming Vs. object oriented programming (OOP)		
	3	Object oriented programming concepts – Classes, object, object reference		
2nd	1	Abstraction, encapsulation	1-3	In a software company Software Engineers, Sr. Software Engineers, Module Lead, Technical Lead, Project Lead, Project Manager, Program Manager, Directors all are the employees of the company but their work, perks, roles, responsibilities differs. Create the Employee base class would provide the common behaviors of all types of employee and also some behaviors properties that all employee must have for that company. Also include search method to search an employee by name
	2	Inheritance, polymorphism		
	3	Introduction of eclipse (IDE) for developing programs in Java		
3rd	1	**UNIT 2 LANGUAGE CONSTRUCTS** Review of constructs of C used in JAVA : variables	1-3	Suppose the Airport personals want to maintain records for the arrival and departure of the planes. Create a class Airport that has data like name, id, and
	2	Types and type declarations		
	3	Data types		

				address. Create two more classes for Arrival and Departure implementing Airport that will have track of planes (their name, id, arrival time or departure time and a counter to count the number of arrivals) also include the necessary methods to access the information. Also try to keep record of passengers by creating a new class Passenger. Also include a method search() in Airport class to search any passenger by name
4th	1	Increment operators	1-3	Create a whole menu driven hospital management system using concept of OOP like classes, inheritance. Include information about the following: a. Patient -name, registration id, age, disease, etc.
	2	Decrement operators		
	3	Relational and logical operators		
5th	1	If then else clause; conditional expressions	1-3	Create a whole menu driven hospital management system using concept of OOP like classes, inheritance. Include information about the following: b. Staff – id, name, designation, salary, etc.
	2	Input using scanner class and output statement		
	3	Loops, switch case, arrays, methods		
6th	1	**UNIT 3 CLASSES AND OBJECTS** Creation	1-3	Create a class called Musicians to contain three methods string ( ), wind ( ) and perc ( ). Each of these methods should initialize a string array to contain the following instruments: - veena, guitar, sitar, sarod and mandolin under string ( ) - flute, clarinet saxophone, nadhaswaram and piccolo under wind ( ) - tabla, mridangam, bangos, drums and tambour under perc ( ) It should also display the contents of the arrays that are initialized. Create a derived class called TypeInsto contain a method called get ( ) and show ( ). The get ( ) method must display a means as follows.
	2	Accessing class members		
	3	Private Vs Public Vs Protected Vs Default		

				Type of instruments to be displayed: a. String instruments b. wind instruments c. Percussion instruments The show ( ) method should display the relevant detail according to our choice. The base class variables must be accessible only to its derived classes
7th	1	Constructors	1-3	Write three derived classes inheriting functionality of base class person (should have a member function that ask to enter name and age) and with added unique features of student, and employee, and functionality to assign, change and delete records of student and employee
	2	Object		
	3	Object Reference		
8th	1	**UNIT 4 INHERITANCE** Definition of inheritance	1-3	Using the concept of multiple inheritance create classes: Shape, Circle, Square, Cube, Sphere, Cylinder. Your classes may only have the class variable specified in the table below and the methods Area and/or Volume to output their area and/or volume.
	2	Protected data		
	3	Public data, Constructor chaining		
9th	1	Order of invocation	1-3	Write a program to create class Person. a. Make two classes, Student and Instructor, inherit from Person. A person has a name and year of birth.
	2	Types of inheritance		
	3	Single inheritance		
10th	1	Multilevel inheritance,	1-3	Write a program to create class Person b. A student has a major, student id.
	2	Hierarchical inheritance		
	3	Hybrid inheritance		
11th	1	**UNIT 5 POLYMORPHISM** Method overloading	1-3	Write a program to create class Person c. An instructor has salary, subject.
	2	Constructor overloading		
	3	Method overriding		
12th	1	Up-casting	1-3	Write the class definitions, the constructors, set methods, get methods and for all classes.
	2	Down-casting		
	3	**UNIT 6 ABSTRACT CLASS & INTERFACE** Key points of Abstract class		
13th	1	Interface	1-3	Old MacDonald had a farm and several types of animals. Every animal shared certain characteristics: they had a type (such as cow, chick or
	2	Difference between an abstract class & interface		
	3	Implementation of multiple inheritance through interface		

				pig) and each made a sound (moo, cluck or oink). An Interface defines those things required to be an animal on the farm. Define new classes for the Old MacDonald that implement the Animal and Farm class. Create array of object of animal to define the different types of animal in the farm. Also create appropriate methods to get and set the properties.
14th	1	**UNIT 7 EXCEPTION HANDLING** Definition of exception handling	1-3	Write a program with Student as abstract class and create derive classes Engineering, Medicine and Science from base class Student. Create the objects of the derived classes and process them and access them using array of pointer of type base class Student.
	2	Implementation of keywords like try		
	3	Catch, finally		
15th	1	Throw & Throws	1-3	Revision
	2	Importance of exception handling in practical implementation of live projects		
	3	**REVISION**		
16th	1	**TEST**	1-3	Revision
	2	**REVISION**		
	3	**REVISION**		

LESSON PLAN

DISCIPLINE: COMPUTER ENGINEERING

SEMESTER: 4TH

SUBJECT: MICROPROCESSORS AND PERIPHERAL DEVICES

LESSON PLAN DURATION: 16 WEEKS

WORK LOAD (LECTURE/ PRACTICAL): LECTURES-3, PRACTICALS -3

WEEK		THEORY		PRACTICAL	
1st	LECTURE DAY	TOPIC	PRACTICAL DAY/PERIOD	TOPIC	
	1	**UNIT 1 EVOLUTION OF MICROPROCESSOR** Typical organization of a microcomputer system and functions of its various blocks			
	2	Microprocessor, its evolution	1-3	Familiarization of different keys of 8085 microprocessor kit and its memory map	
	3	Function and impact on modern society			
2nd	1	**UNIT 2 ARCHITECTURE OF A MICROPROCESSOR (WITH REFERENCE TO 8085 MICROPROCESSOR)** Concept of Bus, bus organization of 8085	1-3		
	2	Functional block diagram of 8085 and function of each block			
	3	Pin details of 8085 and related signals			
3rd	1	Demultiplexing of address/data bus			
	2	Generation of read/write control signals	1-3	Steps to enter, modify data/program and to execute a programme on 8085 kit	
	3	Steps to execute a stored programme			
4th	3	**UNIT 3 INSTRUCTION TIMING AND CYCLES** Instruction cycle			
	1	Machine cycle	1-3	Writing and execution of ALP for addition and subtraction of two 8 bit numbers	
	2	T-states			
5th	1	Fetch cycle	1-3	Writing and execution of ALP for arranging 10 numbers in ascending/descending order	
	2	Execute cycle			
	3	**TEST**			
6th	1	**UNIT 4 PROGRAMMING (WITH RESPECT TO 8085 MICROPROCESSOR)** Brief idea of machine and assembly languages			

	2	Machines and Mnemonic codes		
	3	Instruction format and Addressing mode	1-3	Writing and execution of ALP for multiplication and division of two 8 bit numbers)
7th	1	Identification of instructions as to which addressing mode they belong		
	2	Concept of Instruction set.		
	3	Explanation of the instructions of the following groups of instruction set - Data transfer group	1-3	Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory
8th	1	Arithmetic Group		
	2	Logic Group		
	3	Stack	1-3	Interfacing exercise on 8255 like LED display control
9th	1	I/O and Machine Control Group		
	2	Programming exercises in assembly language	1-3	Interfacing exercise on 8253 programmable interval timer
	3	**UNIT 5 MEMORIES AND I/O INTERFACING** Concept of memory mapping		
10th	1	partitioning of total memory space		
	2	Address decoding	1-3	Practicing Programs on kit
	3	concept of peripheral mapped I/O		
11th	1	memory mapped		
	2	I/O Interfacing of memory mapped I/O devices	1-3	Practicing Programs on kit
	3	I/O Interfacing of memory mapped I/O devices		
12th	1	**UNIT 6 INTERRUPTS** Concept of interrupt, Maskable and non-maskable	1-3	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	2	Edge triggered and level triggered interrupts, Software interrupt, Restart interrupts and its use		
	3	Various hardware interrupts of 8085, Servicing interrupts, extending interrupt system		
13th	1	**TEST**		
	2	**UNIT 7 DATA TRANSFER TECHNIQUES** Concept of programmed I/O operations, sync data transfer	1-3	Use of 8085 emulator for hardware testing
	3	Async data transfer (hand shaking),		
14th	1	Interrupt driven data transfer, DMA		
	2	Serial output data, Serial input data	1-3	Revision of Practicals
	3	**UNIT 8 PERIPHERAL DEVICES** 8255 PPI, 8253 PIT		

15th	1	8257 DMA controller		
	2	**UNIT 9 ARCHITECTURE OF 8086 MICROPROCESSOR** Block diagram - Minimum and Maximum mode	1-3	Revision of Practicals
	3	Pin and Signals		
16th	1	**TEST**		
	2	**REVISION**	1-3	Revision of Practicals
	3	**REVISION**		

Lesson Plan for Even semester Govt. Polytechnic, Ambala City

Faculty: Munish Gupta (Theory (3P) + Practical(6P))

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

Lesson Plan Duration: 16 weeks

Work Load (Lecture/ Practical) per week (in hours): L- 03, P - 06 + 06

Week	Theory	Practical
1st	L-1 Introduction to d a t a Structure (Linear, Non-Linear, Primitive, Non-Primitive, Contiguous, Non-contiguous data structures)	[P-1] Operations on Arrays (Traversing, insertion, deletion)
	L-2 Problem solving concept, top down and bottom- up design	[P-17] Operations on Arrays (Searching- Linear Search)
	L-3 Structured programming concepts	
2nd	L-4 Concept of data types, variables, constants. concept of data- information	[P-16] Operations on Arrays (Searching- Binary Search)
	L-5 Concept of pointer variables and constants. Arrays and pointers, pointers to structures.	[P-2] The addition of two matrices using functions
	L-6 Concept of Arrays: Single dimensional array Two-dimensional array	
3rd	L-7 Representation of Two-dimensional Array (Base Address, LB, UB)	[P-3] The multiplication of two matrices using function
	L-8 Storage representation of multi-dimensional arrays (Row major, column major order)	[P-*] Creation of arrays using dynamic memory allocation
	L-9 Operations on Arrays (Traversing, Insertion, Deletion)	
4th	L-10 Operations on Arrays (Searching – Linear Search)	[P-*] Creation of structures using dynamic memory allocation
	L-11 Operations on Arrays (Searching – Binary Search)	[P-7] Creation of linked lists using static and dynamic memory allocation
	L-12 Introduction to linked list. Representation of linked lists in Memory, Comparison between Linked List and Array	
5th	**L-13,14 Ist sessional**	**Ist sessional**
	L-15 Traversing a linked list Searching an item in a linked list	[P-7] Insertion of elements in linked list at the beginning, at the last and at the desired location
6th	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	
	L-18 Applications of linked lists. Stacks, queues	[P-8] Insertion of elements in Doubly linked list at the desired location
7th	L-19 Introduction to stacks. Representation of stacks with array and Linked Lists	[P-8] Deletion of an item from Doubly linked list
	L-20 Application of stacks-Postfix expression evaluation	
	L-21 Transforming infix expression into postfix expression	[P-4] Push and Pop operations in stacks using linked lists.
8th	L-22 Quick Sort	[P-4] Push and Pop operations in stacks using Arrays
	L-23 Concept and Comparison between recursion and Iteration factorial of a no with and without recursion	[P-5] Inserting and deleting elements in queue using arrays.
	L-24 Fobonacii series problem using recursion and without recursion	
9th	L-25 Solving Tower of Hanoi problem using recursion and without recursion	[P-5] Inserting and deleting elements in queue using linked lists
	L-26 Introduction to Queues Implementation of Queues using arrays	
	L-27 Implementation of Queues using linked lists	[P-6] Inserting and deleting elements in circular queue using arrays.
10th	L-28 Circular Queues, De-queues, Application of Queues	[P-6] Inserting and deleting elements in circular queue using linked lists.
	L-29,30 IInd sessional	**IInd sessional**
11th	L-31 Concept of Trees	[P-9] The Factorial of a given number with recursion and without recursion
	L-32 Representation of Binary tree in memory	[P-10] Fibonacii series with recursion and without recursion
	L-33 Preorder Traversal (Non-recursive)	

Week	Theory	Practical
12th	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- preorder, in order, post order traversal
	L-36 Concept of Binary Search Trees (BST)	
13th	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	
14th	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	
15th	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

Lesson Plan

Analog Electronics-II

| Week | Lecture Day | Theory |
		Topic(Including Assignments)
Ist	1	**Unit I** **Semiconductors and Diodes**: Electrons- free and valence. Conductors, Insulators, and Semiconductors- definition & energy band diagrams.
	2	Properties of semiconductors. Meaning of Hole current, electron-hole pairs, recombination, doping, acceptor and donor impurities.
2nd	1	Intrinsic and Extrinsic, N and P type semiconductors. Diode- formation, depletion region, VI Characteristics, ratings, types and applications. Zener diode- reverse bias characteristics,
	2	voltage regulation, shunt voltage regulator, and applications. Varistor and Thermistor working and applications.
3rd	1	UNIT II **Transistors and MOSFETs**: Transistors- definition, terminals, types, symbols, formation of NPN and PNP, ratings.
	2	Transistor biasing- definition, importance, list types, stabilisation, thermal runaway, heat sink, and voltage divider method
4th	1	. List configurations and applications. Alpha and Beta- definitions, relation. CE input and output characteristics- cut off, saturation, and active Regions.
	2	Transistor as a switch,List applications. FET- definition, types. MOSFET- definition, types, symbols.
5th	1	N type enhancement mode- construction, working, characteristics, switch. List applications and ratings. Differentiate BJT and MOSFET.
	2	REVIEW OF SYLLABUS DONE
6th	1	First Sessional Test(Tentative)
	2	First Sessional Test(Tentative
7th	1	UNIT III Rectifiers, filters and regulators: Regulated power supply- block diagram and applications.
	2	Rectifiers- definition, half wave, centre tapped and bridge full wave rectifier, efficiency, ripple factor, PIV, ratings.
8th	1	Filters- definition, necessity, C and PI filters, Regulator-definition, working of 7805, operating voltages- 7809, 7812, 7905, 7912.
	2	**UNIT IV** **Amplifiers and Oscillators**: Amplifier- definition, faithful amplification, classification based on configuration, power, and frequency.
9th	1	Transistor CE amplifier with biasing. Working of class A, B, C, and Push pull amplifier.
	2	Two stage RC coupled amplifier working, gain in dB, frequency response. Feed back- definition, types, advantages and disadvantages, applications
10th	1	Oscillators- definition, classification, LC tank circuit, criteria. RC phase shift and crystal oscillator- working, applications
	2	CRT- construction, working and applications.
11th	1	Second Sessional Tests(Tentative)
	2	Second Sessional Tests(Tentative)

12th	1	**UNIT V** **OP-AMP and Timers**: OPAMP– definition, block diagram, operation, characteristics,
	2	applications, µA 741 pin diagram
13th	1	. Definitions of virtual ground, CMRR and Slew rate.
	2	OPAMP applications– inverting, integrator, differentiator, summer, voltage follower, and comparator.
14th	1	Filters- definition, Working- low pass, high pass passive and active filters, applications. Timers–
	2	block diagram, pin diagram of 555, duty cycle, time constant, applications. Multi-vibrators-Astable and monostable using 555.
15th	1	Third Sessional Test(Tentative)
	2	Third Sessional Test(Tentative)
16th	1	Revision of syllabus
	2	Revision of syllabus

Lesson Plan

Discipline   : Computer Engg.

Semester   : VIth

Subject   :- APPLICATION DEVELOPMENTUSINGWEB FRAMEWORK

Lesson Plan Duration :- 15weeks

Work load (Practical) per week (in hours) :- Practical-6

Note:- GI and GII are the respective Groups of students

Week	Practical	
	Practical Group	**Topic**
Week 1	G-I	Practice on HTML, CSS, Java Script
	G-II	Practice on HTML, CSS, Java Script
	G-I	Practice on Ajax.PHP & MySql
	G-II	Practice on Ajax.PHP & MySql
Week 2	G-I	Install WordPress & Create Blogs
	G-II	Install WordPress & Create Blogs
	G-I	Practice
	G-II	Practice
Week 3	G-I	Manage blogs features e.g. Images, Text Around Images, Comments, Post Formats, Linking, Pages, Categories, Smilies, Feeds, Gravatars, Password Protection
	G-II	Manage blogs features e.g. Images, Text Around Images, Comments, Post Formats, Linking, Pages, Categories, Smilies, Feeds, Gravatars, Password Protection
	G-I	Manage blogs features e.g. Images, Text Around Images, Comments, Post Formats, Linking, Pages, Categories, Smilies, Feeds, Gravatars, Password Protection
	G-II	Manage blogs features e.g. Images, Text Around Images, Comments, Post Formats, Linking, Pages, Categories, Smilies, Feeds, Gravatars, Password Protection
Week 4	G-I	Practice / viva
	G-II	Practice / viva
	G-I	Practice various designing features: Colour Scheme, Headers, CSS Horizontal Menus, Dynamic Menu, Highlighting, Navigation Links, Print
	G-II	Practice various designing features: Colour Scheme, Headers, CSS Horizontal Menus, Dynamic Menu, Highlighting, Navigation Links, Print
Week 5	G-I	Practice various designing features: Colour Scheme, Headers,

		CSS Horizontal Menus, Dynamic Menu, Highlighting, Navigation Links, Print
	G-II	Practice various designing features: Colour Scheme, Headers, CSS Horizontal Menus, Dynamic Menu, Highlighting, Navigation Links, Print
	G-I	Read More, Formatting Date and Time, Finding CSS Styles, Creating Individual Pages
	G-II	Read More, Formatting Date and Time, Finding CSS Styles, Creating Individual Pages
Week 6	G-I	Uploading Files, Using WordPress Themes, Templates, Template Tags, Template Hierarchy,
	G-II	Uploading Files, Using WordPress Themes, Templates, Template Tags, Template Hierarchy
	G-I	Practice
	G-II	Practice
Week 7	G-I	Validating a Website, Know Your Sources, WordPress Site Maintenance
	G-II	Validating a Website, Know Your Sources, WordPress Site Maintenance
	G-I	Validating a Website, Know Your Sources, WordPress Site Maintenance
	G-II	Validating a Website, Know Your Sources, WordPress Site Maintenance
Week 8	G-I	Integrate PHP & MySql with WordPress
	G-II	Integrate PHP & MySql with WordPress
	G-I	Practice
	G-II	Practice
Week 9	G-I	Install Moodle & various plugins
	G-II	Install Moodle & various plugins
	G-I	Create a Moodle site and Database Schema
	G-II	Create a Moodle site and Database Schema
Week 10	G-I	Create a Moodle site and Database Schema
	G-II	Create a Moodle site and Database Schema
	G-I	Design Site appearance, Front page, Front page settings
	G-II	Design Site appearance, Front page, Front page settings
Week 11	G-I	My Moodle, User profiles, Navigation, Course list, Themes, Theme settings, Header and footer, Language settings
	G-II	My Moodle, User profiles, Navigation, Course list, Themes, Theme settings, Header and footer, Language settings
	G-I	Using web services, Publishing a course, Blogs, RSS feeds
	G-II	Using web services, Publishing a course, Blogs, RSS feeds
Week 12	G-I	Practice / viva
	G-II	Practice / viva
	G-I	Manage Moodle site, Managing authentication, Manual accounts, No login
	G-II	Manage Moodle site, Managing authentication, Manual accounts, No login
Week 13	G-I	Email-based self-registration,Account
	G-II	Manual accounts, No login, Email-based self-registration,Account

	G-I	Create Roles and permissions, Assign roles,
	G-II	Create Roles and permissions, Assign roles,
Week 14	G-I	Implement Password salting.
	G-II	Implement Password salting.
	G-I	Perform Site backup, Course backup
	G-II	Perform Site backup, Course backup
Week 15	G-I	Course restore, Automated course backup
	G-II	Course restore, Automated course backup
	G-I	Practice / viva
	G-II	Practice / viva