

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Information Technology

LESSON PLAN

Subject Name: - Electronics Fundamental

Subject Code: - ES- 201A

Year: - 2024-25

Semester: - 3rd

Lecture No	Unit No	Topic	COs Covered	Planned on	Delivered on	Mode of delivery
L 1	UNIT-I	Classification of semiconductor	CO1	27/08/2024	02/09/2024	White Board/PPT
L 2		PN junction diodes, VI characteristics of PN junction diode		28/08/2024	03/09/2024	White Board/PPT
L 3		Half wave, full wave and bridge type rectifier circuits		02/09/2024	04/09/2024	White Board/PPT
L 4		Zener and Avalanche breakdown		03/09/2024	09/09/2024	White Board/PPT
L 5		Zener diode, VI characteristics		04/09/2024	10/09/2024	White Board/PPT
L 6		Zener diode as a voltage regulator		09/09/2024	11/09/2024	White Board/PPT
L 7		Light emitting Diode (LED)		10/09/2024	16/09/2024	White Board/PPT
L 8		Introduction about CRO		11/09/2024	17/09/2024	White Board/PPT
L 9		Doubt Session		16/09/2024	18/09/2024	White Board/PPT
L 10		Introduction about transistor and types of transistor	CO2	17/09/2024	23/09/2024	White Board/PPT

L 11	UNIT-II	Characteristic of transistor in Common Base Configuration		18/09/2024	24/09/2024	White Board/PPT
L 12		Characteristic of transistor in Common Emitter Configuration.		23/09/2024	01/10/2024	White Board/PPT
L 13		Transistor load line, operating point		24/09/2024	03/10/2024	White Board/PPT
L14		Faithful amplification and Stabilization		01/10/2024	14/10/2024	White Board/PPT
L 15		Base resistor method and Voltage divider Method	CO2	03/10/2024	15/10/2024	White Board/PPT
L16		Single Stage NPN common emitter amplifier		14/10/2024	16/10/2024	White Board/PPT
L 17		NPN transistor as switch		15/10/2024	21/10/2024	White Board/PPT
L 18	UNIT-III	Introduction about oscillator		16/10/2024	23/10/2024	White Board/PPT
L 19		Tank circuit and Barkhausen Criteria		21/10/2024	04/11/2024	White Board/PPT
L 20		Tuned collector oscillator	CO3	23/10/2024	05/11/2024	White Board/PPT
L 21		Colpitt's oscillator		04/11/2024	06/11/2024	White Board/PPT
L 22		Hartley oscillator		05/11/2024	18/11/2024	White Board/PPT
L 23		Phase shift oscillator		06/11/2024	19/11/2024	White Board/PPT
L 24		Wien Bridge oscillator		18/11/2024	20/11/2024	White Board/PPT

L 25		Crystal oscillator		19/11/2024	25/11/2024	White Board/PPT
L 26		Introduction about Elements of measurement system		20/11/2024	26/11/2024	White Board/PPT
L 27		Characteristics of measuring devices		25/11/2024	27/11/2024	White Board/PPT
L 28		Characteristics of measuring devices		26/11/2024	02/12/2024	White Board/PPT
L 29		Transducer and classification of transducer		27/11/2024	03/12/2024	White Board/PPT
L 30	UNIT-IV	Selection criteria of transducer for measurement	CO4	02/12/2024	04/12/2024	White Board/PPT
L 31		Construction and working of LVDT		03/12/2024	09/12/2024	White Board/PPT
L 32		Construction and working of Thermocouple		04/12/2024	10/12/2024	White Board/PPT
L 33		Block diagram of Digital Data Acquisition System.		09/12/2024	16/12/2024	White Board/PPT
L 34		Doubt Session		10/12/2024	17/12/2024	White Board/PPT

LESSON PLAN

Subject: Data Structures
Session: 2024-25

Subject code: PC-IT-205A
Semester: III

SN o	Topic	No. of Lec	CO Cove red	Planned Date	Actual Date	Teaching Methodolo gy
1	Unit - 1 Data Structure - Definition, Classification and its application	1	CO1	28-Aug-24	27/8	PPT, Chalk And Talk
2	Data Structure - Application	1		29-Aug-24	28/8	PPT, Chalk And Talk
3	Array - its application,	1		30-Aug-24	29/8	PPT, Chalk And Talk
4	Array - implementation,	1		3-Sep-24	30/8	PPT, Chalk And Talk
5	addressing of element in 1D array	1		4-Sep-24	3/9	PPT, Chalk And Talk
6	Addressing of elements in 2D array, practice questions	1		5-Sep-24	4/9	PPT, Chalk And Talk
7	Sparse Matrix and implementation of transpose	1		6-Sep-24	10/9	PPT, Chalk And Talk
8	Introduction to algorithm and Linear search	1		10-Sep-24	11/9	PPT, Chalk And Talk
9	Binary search and its complexity	1		11-Sep-24	13/9	PPT, Chalk And Talk
10	Introduction to Sorting	1		12-Sep-24	17/9	PPT, Chalk And Talk

11	Insertion and Selection sort	1		13-Sep-24	18/9	PPT, Chalk And Talk
12	Bubble sort and Quicksort	1		17-Sep-24	19/9	PPT, Chalk And Talk
13	Merge sort, comparative study of sorting methods	1		18-Sep-24	20/9	PPT, Chalk And Talk
14	Unit - 2 Introduction to Stacks, its implementation memory representation and application	1	CO2	19-Sep-24	24/9 2 25/9	PPT, Chalk And Talk
15	Evaluation of postfix expression, Converting Infix to Prefix	2		20-Sep-24	1/10 2 3/10	PPT, Chalk And Talk
16	Introduction to linear Queue and its implementation and application	1		24-Sep-24	15/10	PPT, Chalk And Talk
17	Circular queue, push and pop algorithm and memory representation	2		25-Sep-24	16/10	PPT, Chalk And Talk
18	Priority queue: memory representation and push/pop operations	1		1-Oct-24	16/10	PPT, Chalk And Talk
19	UNIT - 3 Need of dynamic data structures, operation on lists	1	CO3	15-Oct-24	17/10	PPT, Chalk And Talk
20	Dynamic implementation of linked lists, Comparison between Array and Dynamic implementation of linked list	1		16-Oct-24	18/10	PPT, Chalk And Talk
21	Link list implementation of stack and queue	1		18-Oct-24	21/10	PPT, Chalk And Talk
22	Singly link list: insertion, deletion, traversal algorithm	2		22-Oct-24	22/10	PPT, Chalk And Talk

23	Doubly link list: insertion, deletion, traversal algorithm	1		23-Oct-24	23/10	PPT, Chalk And Talk
24	Circular link list: insertion, deletion, traversal algorithm	1		24-Oct-24	24/10	PPT, Chalk And Talk
25	Doubly link list: insertion, deletion, traversal algorithm	1		25-Oct-24	24/10	PPT, Chalk And Talk
26	UNIT - 4 Tree: Definition, Basic terminology, Classification	1	CO4	29-Oct-24	25/10	PPT, Chalk And Talk
27	Tree traversal methods, Construction of Tree from postorder/preorder and inorder	1		30-Oct-24	5/11 6/11	PPT, Chalk And Talk
28	Representation of infix, postfix and prefix expressions using tree	1		31-Oct-24	8/11 12/11 13/11	PPT, Chalk And Talk
29	Binary Tree: implementation, insertion and deletion operation/algorithm	1		5-Nov-24	19/11	PPT, Chalk And Talk
30	B+ trees, AVL Trees, threaded trees	1		6-Nov-24	19/11	PPT, Chalk And Talk
31	Graph: Basic terminology, Representation of graphs	1		7-Nov-24	28/11 30/11	PPT, Chalk And Talk
32	Graph Traversal: DFS and BFS	1		8-Nov-24	3/12 4/12	PPT, Chalk And Talk
33	Minimum spanning tree	1		9-Nov-24	5/12	PPT, Chalk And Talk

LESSON PLAN

Subject: OOP using C++

Subject code: PC-IT-207A

Session: 2024-25

Semester: III

SNo	Topic	No. of Lec	CO Covered	Panned Date	Actual Date	Teaching Methodology
1	Unit - I Introduction to C++ Introduction to C++, C++ Standard Library, Basics of a Typical C++ Environment, Pre-processors Directives	2	CO1	21-22 Aug	29-30 Aug	Conventional
2	Illustrative Simple C++ Programs, Header Files and Namespaces, library files.	1		26 Aug	2 Sep	Conventional
3	Concept of objects, basic of object modeling, object classes, associations, behaviors, description	2		27-28 Aug	2 Sep	Conventional
4	Object Oriented Analysis & Object Modeling techniques	1		29 Aug	4 Sep	PPT
5	Object Oriented Concepts: Introduction to Objects and Object-Oriented Programming, Encapsulation (Information Hiding)	1		2 Sep	4 & 9 Sep	PPT
6	Access Modifiers: Controlling access to a class, method, or variable (public, protected, private, package), Other Modifiers,	1		3 Sep	10 Sep	PPT
7	Polymorphism: Overloading, Inheritance, Overriding Methods, Abstract Classes, Reusability, Class's Behaviors.	1		4 Sep	12 Sep	PPT/ Chalk & Talk
8	Classes and Data Abstraction: Introduction, Structure Definitions, Accessing Members of Structures, Class Scope and Accessing Class Members	1		9 Sep	17 Sep	Conventional
9	Separating Interface from Implementation, Controlling Access Function and Utility Functions	1		10 Sep	18 Sep	Conventional
10	Initializing Class Objects: Constructors, Using Default Arguments with Constructors, Using Destructors	1		11 Sep	18 Sep	PPT
11	Classes: Constructor (Constant) Object and Constructor Member Functions, Object as Member of Classes	1		12 Sep	19 & 20 Sep	PPT

LESSON PLAN

Subject: OOP using C++

Subject code: PC-IT-207A

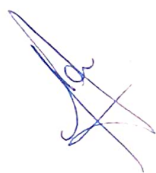
Session: 2024-25

Semester: III

SNo	Topic	No. of Lec	CO Covered	Panned Date	Actual Date	Teaching Methodology
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2	Illustrative Simple C++ Programs, Header Files and Namespaces, library files.	1		26 Aug	2 Sep	Conventional
3	Concept of objects, basic of object modeling, object classes, associations, behaviors, description	2		27-28 Aug	2 Sep	Conventional
4	Object Oriented Analysis & Object Modeling techniques	1		29 Aug	4 Sep	PPT
5	Object Oriented Concepts: Introduction to Objects and Object-Oriented Programming, Encapsulation (Information Hiding)	1		2 Sep	4 & 9 Sep	PPT
6	Access Modifiers: Controlling access to a class, method, or variable (public, protected, private, package), Other Modifiers.	1		3 Sep	10 Sep	PPT
7	Polymorphism: Overloading, Inheritance, Overriding Methods, Abstract Classes, Reusability, Class's Behaviors.	1		4 Sep	12 Sep	PPT/ Chalk & Talk
8	Classes and Data Abstraction: Introduction, Structure Definitions, Accessing Members of Structures, Class Scope and Accessing Class Members	1		9 Sep	17 Sep	Conventional
9	Separating Interface from Implementation, Controlling Access Function and Utility Functions	1		10 Sep	18 Sep	Conventional
10	Initializing Class Objects: Constructors, Using Default Arguments with Constructors, Using Destructors	1		11 Sep	18 Sep	PPT
11	Classes: Constructor (Constant) Object and Constructor Member Functions, Object as Member of Classes	1		12 Sep	19 & 20 Sep	PPT

12	Friend Function and Friend Classes, Using This Pointer, Dynamic Memory Allocation with New and Delete	2		16-17 Sep	24 & 25 Sep	Conventional
13	Static Class Members, Container Classes and Integrators, Proxy Classes, Function overloading	1		18 Sep	25 Sep	Conventional
14	Unit - II Operator Overloading: Introduction, Fundamentals of Operator Overloading, Restrictions on Operators Overloading	1	CO2	19 Sep	1 Oct	PPT
15	Operator Functions as Class Members vs. as Friend Functions Overloading, <<, >> Overloading Unary Operators, Overloading Binary Operators.	2		23-24 Sep	3 & 4 Oct	Board PPT/ Chalk & Talk
16	Inheritance: Introduction, Inheritance: Base Classes and Derived Classes, Protected Members	2		25-26 Sep	14 & 15 Oct	PPT/ Chalk & Talk
17	Casting Base- Class Pointers to Derived-Class Pointers, Using Member Functions	1		30 Sep	16 Oct	PPT/ Chalk & Talk
18	Overriding Base -Class Members in a Derived Class, Public, Protected and Private Inheritance	2		1 Oct and 3 Oct	17 & 22 Oct	PPT/ Chalk & Talk
19	Using Constructors and Destructors in derived Classes, Implicit Derived -Class	1		14 Oct	23 Oct	PPT/ Chalk & Talk
20	Object To Base- Class Object Conversion, Composition Vs. Inheritance	1		15 Oct	24 Oct	Conventional
21	Unit- III Virtual Functions and Polymorphism: Introduction to Virtual Functions, Abstract Base Classes and Concrete Classes	1	CO3	16 Oct	4 Nov	Conventional
22	Polymorphism, New Classes and Dynamic Binding, Virtual Destructors, Polymorphism, Dynamic Binding	2		17 Oct and 21 Oct	7 & 11 Nov	PPT/ Chalk & Talk
23	Files and I/O Streams: Files and Streams, creating a Sequential Access File, Reading Data from A Sequential Access File, Updating Sequential Access Files	2		22-23 Oct	12 Nov	PPT/ Chalk & Talk
24	Random Access Files, Creating A Random-Access File, Writing Data Randomly to a Random-Access File, Reading Data Sequentially from a Random-Access File	2		24 Oct and 28 Oct	14 Nov	PPT/ Chalk & Talk
25	Stream Input/ Output Classes and Objects, Stream Output, Stream Input, Unformatted I/O (with read and write)	2		29-30 Oct	18 & 19 Nov	PPT/ Chalk & Talk
26	Unit-IV Templates & Exception Handling: Function Templates, Overloading	2	CO4	31 Oct and 4 Nov	20 & 28 Nov	PPT/ Chalk & Talk

	Template Functions, Class Template and Non-Type Parameters					
27	Templates and Inheritance	2		5-6 Nov	30 Nov	PPT/ Chalk & Talk
28	Templates and Friends, Templates and Static Members	1		7 Nov	2 Dec	PPT/ Chalk & Talk
29	Basics of C++ Exception Handling: Try Throw, Catch, Throwing an Exception, Catching an Exception, Re-throwing an Exception	2		11-12 Nov	3 & 4 Dec	PPT/ Chalk & Talk
30	Exception specifications, Processing Unexpected Exceptions	1		13 Nov	4 Dec	PPT/ Chalk & Talk
31	Constructors, Destructors and Exception Handling, Exceptions and Inheritance	2		18-19 Nov	5 Dec	PPT/ Chalk & Talk
Revision Classes till semester ends						



LESSON PLAN

Subject: Digital Electronics and Logic Design

Subject code: ES-217A

Session: 2024-25

Semester: 3rd

SNo	Topic	No. of Lectures	CO	Planned Date	Actual Date	Teaching Methodology
1	Review of logic gates and number system	1	CO1	27-Aug-24	27-Aug-24	PPT, Chalk And Talk
2	1's and 2's compliment Arithmetic	2		2-Sep-24	2-Sep-24	PPT, Chalk And Talk
3	Introduction to Boolean algebra using basic postulates and theorems;	2		3-Sep-24	3-Sep-24	PPT, Chalk And Talk
4	Binary codes: BCD, Excess-3, Gray codes;	1		9-Sep-24	9-Sep-24	PPT, Chalk And Talk
5	Standard representation of logic functions: SOP and POS forms	2		10-Sep-24	10-Sep-24	PPT, Chalk And Talk
6	Simplification of switching functions using K map	3		16-Sep-24	16-Sep-24	PPT, Chalk And Talk
7	Quine-McCluskey methods.	2		17-Sep-24	17-Sep-24	PPT, Chalk And Talk
8	Half and Full Adders and Multiplexers and Demultiplexers	1	CO2	20-Sep-24	20-Sep-24	PPT, Chalk And Talk
9	Half and Full Subtractors	1		23-Sep-24	23-Sep-24	PPT, Chalk And Talk
10	Multiplexers and Demultiplexers	1		30-Sep-24	30-Sep-24	PPT, Chalk And Talk
11	Decoders	1		13-Sep-24	1-Oct-24	PPT, Chalk And Talk
12	Implementation of SOP logic functions using multiplexers and Demultiplexers / Decoders	2		17-Sep-24	1-Oct-24	PPT, Chalk And Talk
13	Encoders. Decoders / Drivers for display devices	2		18-Sep-24	14-Oct-24	PPT, Chalk And Talk
14	Code converters.	1		19-Sep-24	14-Oct-24	PPT, Chalk And Talk
15	Latches, Flip Flops: S-R	2		20-Sep-24	15-Oct-24	PPT, Chalk And Talk

16	Flip Flops: J-K. T D, master-slave,	2	CO3 &CO 4	24-Sep-24	15-Oct-24	PPT, Chalk And Talk
17	Race around condition; Excitation table	1		25-Sep-24	17-Oct-24	PPT, Chalk And Talk
18	Interconversion among flip flop	1		1-Oct-24	17-Oct-24	PPT, Chalk And Talk
19	Design of Synchronous and Asynchronous counters	1		15-Oct-24	24-Oct-24	PPT, Chalk And Talk
20	Modulo N counter design			16-Oct-24	24-Oct-24	PPT, Chalk And Talk
21	Shift registers	1		18-Oct-24	4-Nov-24	PPT, Chalk And Talk
22	Sample and hold circuit, Quantization	2		22-Oct-24	5-Nov-24	PPT, Chalk And Talk
23	Weighted resistor and R - 2 R ladder	2		23-Oct-24	5-Nov-24	PPT, Chalk And Talk
24	Digital to Analog Converters,	2		24-Oct-24	6-Nov-24	PPT, Chalk And Talk
25	Specifications for D/A converters., Flash type Analog to digital Converter	1		25-Oct-24	7-Nov-24	PPT, Chalk And Talk
26	Successive approximation type Analog to digital Converter,	2	CO4	29-Oct-24	11-Nov-24	PPT, Chalk And Talk
27	Specifications of ADCs.	1		30-Oct-24	12-Nov-24	PPT, Chalk And Talk
28	Introduction to PLA and PAL	1		31-Oct-24	18-Nov-24	PPT, Chalk And Talk
29	Implementation of simple functions using PLA	1		5-Nov-24	19-Nov-24	PPT, Chalk And Talk
30	Implementation of simple functions using PAL	1		6-Nov-24	28-Nov-24	PPT, Chalk And Talk
31	Discussion on old Question papers	2		7-Nov-24	2-Dec-24	PPT, Chalk And Talk