

Lesson Plan

Name of faculty : **Madhu Bala**
Discipline : **Computer Engineering**
Semester : **5th**
Subject : **Computer network**
Lesson Plan Duration : **16 Weeks (from 30 July 2026 to 23Nov 2026)**
Work Load (Lecture/ Practical) per week (in hours): Lectures-03 Practical -04

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical day	Topic
1st	1st	Concept of network Models of network computing Networking models	1st	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network
	2nd	Peer-to –peer Network Client-Server Network LAN, MAN and WAN		
	3rd	Network Services Topologies Switching Techniques		
2nd	4 th	OSI model: Definition, Layered Architecture	2 nd	Recognition and use of various types of connectors RJ-45, RJ-11, BNC and SCST
	5 th	Functions of various layers		
	6 th	TCP/IP Model: Definition, Functions of various layers		
3rd	7 th	Comparison between OSI and TCP/IP model	3rd	Making of cross cable and straight cable
	8 th	Concept of physical and logical addressing		
	9 th	IPV4 addresses – Address space, Notations		
4 th	10 th	Classful Addressing- Different IP address classes, Classes & Blocks, Net-id & Host-Id, Masks, Address depletion	4 th	Install and configure a network interface card in a workstation.
	11 th	Classless Addressing – Address blocks, Masks		
	12 th	Special IP Addresses Subnetting and Supernetting		
5 th	13 th	Loop back concept Network Address Translation IPV4 Header	5 th	Seminar/Viva
	14 th	IPV6 Header Comparison between IPV4 and IPV6		
	15 th	Sessional test		
6 th	16 th	Ethernet specification and standardization: 10 Mbps (Traditional Ethernet),	6 th	Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
	17 th	10 Mbps (Fast Ethernet) and 1000 Mbps (Gigabit Ethernet)		

	18 th	Network connectivity Devices		
7 th	19 th	NICs Hubs, Switches, Routers, Repeaters, Modem, Gateway	7 th	Managing user accounts in windows.
	20 th	Configuration of Routers & Switches		
	21 st	Network Security Principles		
8 th	22 nd	Cryptography, using secure protocols	8 th	Sharing of Hardware resources in the network.
	23 rd	Cryptography, using secure protocols		
	24 th	Trouble Shooting Tools: PING, IPCONFIG, IFCONFIG,		
9 th	25 th	NETSTAT, TRACEROUT	9 th	Use of Netstat and its options.
	26 th	Wireshark, Nmap		
	27 th	TCPDUMP, ROUTEPRINT		
10 th	28 th	DHCP Server	10 th	Seminar/Viva
	29 th	Workgroup/Domain Networking		
	30 th	Sessional II		
11 th	31 st	Introduction to wireless LAN IEEE 802.11, WiMax ad Li-Fi	11 th	Connectivity troubleshooting using PING,
	32 nd	Wireless Security		
	33 rd	Introduction to bluetooth - architecture, application		
12 th	34 th	Comparison between blue tooth and Wi -fi	12 th	IPCONFIG, IFCONFIG
	35 th	Definition of Cloud Computing and advantages of Cloud Computing		
	36 th	Cloud Computing service model-		
13 th	37 th	model- SaaS	13 th	Installation of Network Operating System (NOS)
	38 th	PaaS		
	39 th	IaaS		
14 th	40 th	Deployment model-	14 th	Demonstration of Cloud Computing in Labs or using Online Videos.
	41 st	Private Cloud		
	42 nd	Public Cloud		
15 th	43 rd	Hybrid	15 th	Seminar/Viva
	44 th	Community cloud.		
	45 th	Sessional test III		

Lesson Plan

Name of faculty	:	Ms Payal Arora
Discipline	:	Comp. Engg
Year	:	1st Sem
Subject	:	Computer workshop
Lesson Plan Duration	:	15 weeks

week	Practical Topic
1	Anatomy of a Computer, Foundations of Modern Information Technology, The Central Processing Unit, How Microprocessors and Memory Chips are Made, Memory, Buses for Input and Output, communication With Peripherals.
2	Desktop: Identification of desktop and its parts, Hardware, Software and Firmware Introduction to Mother board, IO and memory expansion slots, Drives, front panel and rear panel.Processors& Bus: Introduction and types of Processor, Introduction to BUS
3	Laptop: Introduction to Laptop, advantages over Desktops Laptop components: Adapter – types, Battery – types, Laptop Keyboard and Touchpad Power Supply: Introduction to online and offline UPS, Difference between online and offline UPS
4	SMPS: Introduction to SMPS, Study of SMPS Connectors
5	Primary Memory: Introduction and types of primary memory (SDRAM, DDR RAM) Secondary Storage: Hard Disk –Working Principle of IDE, HDD Partition – Formatting, Introduction to SATA and Solid-State Drives (SSD)
6	1st Internal Sessional exam
7	Removable Storage: Introduction to CD, DVD, reading & writing operations; Introduction to Blue-ray devices Flash memory: Flash drives (pen drives), Memory cards and its types
8	Inputting Text and Graphics, State of the Art, Input and Output, Pointing Devices, Foundations of Modern Output, Display Screens, Printers, Foundations of Modern Storage, Storage Media, Increasing Data Storage Capacity, Backing up your Data, The Smart Card Keyboard: Types of keyboards (wired and wireless Keyboard), keyboards connectors, troubleshooting
9	Mouse: types, connectors, operation of Optical mouse and Troubleshooting. Printers: Introduction – Types of printers- Dot Matrix, Inkjet, LaserJet, MFP (Multi-Function Printer), advantages, disadvantages, cables and connectors, Troubleshooting. I/O Ports: Introduction and identification of Serial, Parallel, USB, HDMI.
10	Displays: Introduction to LED, LCD and TFT Displays, cables and connectors Graphic Cards: Introduction to different types of Graphics cards
11	2nd Sessional exam

12	Bios-setup: Standard CMOS setup, Advanced BIOS setup, advanced chipset features, PC Bios communication, upgrading BIOS, Flash BIOS -setup. POST and BOOTING: Definition, POST Test sequence – beep codes. Diagnostic Software and Viruses: Computer Viruses, Precautions, Anti-virus Software, Working of Antivirus software's
13	General troubleshooting of various peripheral devices (printer, pc, laptop, keyboard, mouse, monitor, hard disk)
14	Assembling and Disassembling of PC DIPLOMA IN COMPUTER ENGINEERING NSQF LEVEL - 3 HARYANA STATE BOARD OF TECHNICAL EDUCATION 29 Installation and Troubleshooting: Formatting, Partitioning and Installation of OS: Windows and Linux Installation of peripheral devices: Printers, scanner Installation of software's: application software, systems software
15	3rd Sessional Exam

Govt. Polytechnic, Ambala City

Lesson Plan (DBMS)

Name of the Faculty: Visiting faculty
Discipline: Computer Engg.
Semester: 4th
Subject : DBMS
Lesson Plan Duration: 16 Weeks (from 30 July

2026 to 23Nov 2026) Work Load (Lecture/Practical) per week (In hour):

Lecture-02, Practical-04

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/Test)	Practical Day	Topic
1st	1	Database system: Introduction to database and its purpose Characteristics of database, approach, advantage and disadvantage of database system	1 st (G1)	Exercise on creation and modification of structure of tables
	2	Classification of DBMS users: Actors on the scene- Database Administrators, Database designers, End users – System Analyst and Application Programmers	2nd(G2)	Exercise on creation and modification of structure of tables
2nd	3	Workers behind the scene (DBMS system designers and implementers, tools developers, operator and maintenance personnel	3rd (G1)	Revision of Exercise on creation and modification of structure of tables
	4	Data Models, Schemas, instances, Database state, DBMS Architecture: External level, Conceptual level, Internal level, Mappings Data Independence: Logical data independence and physical data independence	4th (G2)	Revision of Exercise on creation and modification of structure of tables
3rd	5	Database Languages, DBMS interfaces, Classification of DBMS- Centralized, Distributed, Parallel and Object Based	5th (G1)	Exercise on inserting and deleting values from tables
	6	Data modeling using E-R Model Data Model Classification: File Based or primitive models, traditional data Models, Semantic Data Models	6th(G2)	Exercise on inserting and deleting values from tables

4th	7	Entities and Attributes, Entity Types and Entity Sets, Key Attribute and domain of attributes	7th (G1)	Revision of exercise on inserting and deleting values from tables
	8	Relationship among entities , database design with ER model Revision of 1 st , 2 nd and 3 rd unit	8th (G2)	Revision of exercise on inserting and deleting values from tables
5th	9	Relational model Concepts: Domain, Tuple, Attribute, Cardinality, Relation	9th (G1)	Exercise on Querying the table using Select Command
	10	Keys- Primary, Secondary, Foreign, Alternate. Relational Constraints and Relational Database schemes Domain Constraints, key Constraints and Constraints on Null	10th (G2)	Exercise on Querying the table using Select Command
6th	11	Relational Databases and Relational Database Schemes	11th(G1)	Revision of Exercise on Querying the table using Select Command
	12	Entity Integrity, Referential Integrity and Foreign Key Comparison between ER Model and Relational Model	12 th (G2)	Revision of Exercise on Querying the table using Select Command
7th	13	Trivial and Non Trivial Dependencies	13th(G1)	Exercise on using various types of joins
	14	Non Loss Decomposition and Functional Dependencies First and 2 nd normal forms	14th(G2)	Exercise on using various types of joins
8th	15	Third normal form, BCNF, Denormalization	15th(G1)	Revision of Exercise on using various types of joins
	16	Revision of unit 4, 5	16th(G2)	Revision of Exercise on using various types of joins
9th	17	Creating and using indexes, Creating and using views	17th(G1)	Exercise on using functions provided by database package
	18	Database security, Process controls Database protection, grant and Revoke	18th(G2)	Exercise on using functions provided by database package
10th	19	DDL: Creating tables, Creating a table with data from another table	19th(G1)	Revision of Exercise on using functions provided by database package
	20	Inserting values into a table, Updating columns of a table Deleting Rows, Dropping a table	20th(G2)	Revision of Exercise on using functions provided by database package

11th	21	DML, Database Security and privileges, Grant and Revoke command	21st(G1)	Exercise on Grant, Revoke, Commit and Rollback
	22	Maintaining Database objects, commit and Rollback Various types of select commands	22nd(G2)	Exercise on Grant, Revoke, Commit and Rollback
12th	23	Various types of joins, subquery	23rd(G1)	Revision of Exercise on Grant, Revoke, Commit and Rollback
	24	Aggregate functions , Challenges of My Sql Introduction to Big Data	24th(G2)	Revision of Exercise on Grant, Revoke, Commit and Rollback
13th	25	Understanding Big data with samples	25th(G1)	Design of Database for any application
	26	Revision of Unit 1, 2	26th(G2)	Design of Database for any application
14th	27	Revision of Unit 3	27th(G1)	Viva of practical no. 1 to 3
	28	Revision of Unit 4, 5	28 th (G2)	Viva of practical no. 1 to 3
15th	29	Revision of Unit 6	29th(G1)	Viva of practical no. 4 to 7
	30	Revision of Unit 7 Pre Exam Conduct	30 th (G2)	Viva of practical no. 4 to 7

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Lesson Planning

Name of Faculty

: Sh. Virender Gupta

Dicipline

: CSE

Subject

: Cloud computing

Lesson Plan duration

:16 Weeks (from 30July 2026 to 23Nov

2026)

Work load (Lecture/Practical) per week (in hours):

Lectures-02,Practicals-04

Week	Theory		Practical	
	Lecture day	Topic(Including assignment/test)	Practical Day	Topic
1	1	Evaluation of cloud computing	1	Introduction to cloud vendors: Amazon, microsoft, IBM
	2	Cloud computing overview, Characteristics, Application		
2	3	Benefits of cloud computing	2	practical repeated same as above
	4	challenges of cloud computing, Revision, class test		
3	5	Cloud computing service models: Iaas, Paas, Saas	3	Setting up virtualization using virtual boc/vmware hypervisor
	6			
4	7,8	cloud computing deployment models: Public, Private, Hybrid, community	4	practical repeated same as above
5	9	Comparison of cloud deployment models	5	Introduction to own cloud
	10	Assignment Revision, class test		
6	11	Overview of SLA	6	practical repeated same as above
	12	Types of SLA, Life cycle		
7	13	SLA management process	7	installation and configuration of own cloud
	14	Revision, class test		
8	15	Overview of virtualization	8	practical repeated same as above
	16	types of virtualization, Benefits		
9	17	Hypervisors		installation and configuration of own cloud for Saas
	18	Revision, class test		
10	19	Infrastructure security	10	practical repeated same as above
	20	Data security, privacy issues in cloud computing		
11	21	Legal issues in cloud computing	11	Accessing Microsoft AZURE services
	22	Revision, class test		
12	23	Storage as a service	12	practical repeated same as above
	24	benefits and challenges, Storage as a network		
13	25	Assignment	13	cloud simulation software introduction: cloud sim
	26	Revision, class test		
14	27	Different types of scheduling in cloud	14	practical repeated same as above

	28	overview of the problems of scheduling, scheduling for independent and dependent tasks		
15	29	Static vs Dynamic scheduling	15	practical repeated same as above
	30	Assignment, Revision		

NAME OF THE FACULTY : Visiting Faculty
DISCIPLINE : Computer Engineering
SEMESTER : 3rd
SUBJECT : DIGITAL ELECTRONICS
LESSON PLAN DURATION : 16 Weeks (from 30 July 2026 to 23 Nov 2026)
WORKLOAD PER WEEK (IN HOURS) : LECTURE-03, PRACTICE-03 PER GROUP

WEEKS. N.	THEORY		PRACTICAL		
	Lecture Hours	TOPIC (Including Assignment/Test)	Practical Hours		Experiment
1 st	1	Introduction to Digital Electronics: Distinction between analog and digital signal.	Group-1	1	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR (EXNOR) gates
				2	
				3	
	2	Applications and advantages of digital signals.	Group-2	1	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR (EXNOR) gates
				2	
				3	
2 nd	4	Conversion from decimal and hexadecimal to binary and vice-versa.	Group-1	1	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR (EXNOR) gates
				2	
				3	
	5	Binary addition and subtraction including binary points. 1's and 2's complement method of addition/ subtraction	Group-2	1	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR (EXNOR) gates
				2	
				3	
3 rd	7	Examples of 8421, BCD, excess-3 and Gray code	Group-1	1	Realization of logic functions with the help of NAND or NOR gates
				2	
				3	
	8	Concept of parity, single and double parity and error detection	Group-2	1	Realization of logic functions with the help of NAND or NOR gates
				2	
				3	
4 th	10	Definition, symbols and truth tables of NOT, AND, OR Gates	Group-1	1	To design a half adder using XOR and NAND gates and verification of its operation
				2	
				3	
	11	Definition, symbols and truth tables of NAND, NOR, EXOR Gates	Group-2	1	To design a half adder using XOR and NAND gates and verification of its operation
				2	
				3	
5 th	13	Introduction to TTL and CMOS logic families	Group-1	1	Construction of a full adder circuit using XOR and NAND gates and verify its operation
				2	
	14	Assignment-1		3	

5 th			Group-2	1	Construction of a full adder circuit using XOR and NAND gates and verify its operation
	15	Sessional Test-1		2	
				3	
6 th	16	Logic Simplification: Postulates of Boolean algebra, De Morgan's Theorems	Group-1	1	Revision Experiment Performed
				2	
	17	Implementation of Boolean (logic) equation with gates		3	
	18	K-Map (upto 4 variables)	Group-2	1	Revision Experiment Performed
				2	
				3	
7 th	19	Simple application in developing combinational logic circuits	Group-1	1	Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch, D flip-flop, JK flip-flops)
				2	
	20	Arithmetic circuits: Half adder and Full adder circuit		3	
	21	Half adder and Full adder circuit, design and implementation	Group-2	1	Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch, D flip-flop, JK flip-flops)
				2	
				3	
8 th	22	Decoders, Multiplexers, Multiplexers and Encoder: Introduction	Group-1	1	Verification of truth table for encoder and decoder ICs, Mux and DeMux
				2	
	23	Four bit decoder circuits for 7 segment display and decoder/driver ICs		3	
	24	Basic functions and block diagram of MUX and DEMUX with different ICs	Group-2	1	Verification of truth table for encoder and decoder ICs, Mux and DeMux
				2	
				3	
9 th	25	Basic functions and block diagram of Encoder	Group-1	1	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and verification of their operation
				2	
	26	Latches and flip flops: Concept and types of latch with their working and applications		3	
	27	Operation using waveforms and truth tables of RS, T, D, Master/Slave JK flip flops.	Group-2	1	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and verification of their operation
				2	
				3	
10 th	28	Difference between a latch and a flip flop.	Group-1	1	Revision Experiment Performed
				2	
	29	Assignment-2		3	
	30	Sessional Test-2	Group-2	1	Revision Experiment Performed
				2	
				3	
11 th	31	Counters: Introduction	Group-1	1	To design a 4 bit ring counter and verify its operation
				2	
	32	Introduction to Asynchronous counters		3	
	33	Introduction to Synchronous counters	Group-2	1	To design a 4 bit ring counter and verify its operation
				2	
				3	

12 th	34	Binary counters	Group-1	1	Use of Asynchronous Counter ICs (7490 or 7493)
				2	
				3	
	35	Divide by N ripple counters	Group-2	1	Use of Asynchronous Counter ICs (7490 or 7493)
				2	
	36	Decade counter, Ring counter		3	
13 th	37	Shift Register: Introduction and basic concepts including shift left and shift right. Serial in parallel out, serial in serial out	Group-1	1	Revision Experiment Performed
				2	
				3	
	38	Parallel in serial out, parallel in parallel out. Universal shift register.	Group-2	1	Revision Experiment Performed
				2	
	39	A/D and D/A Converters: Working principle of A/D and D/A converters, Stair step Ramp A/D converter, Dual Slope A/D converter.		3	
14 th	40	Successive Approximation A/D Converter, detail study of : Binary Weighted D/A converter, R/2R ladder D/A converter. Applications of A/D and D/A converter	Group-1	1	Revision Experiment Performed
				2	
				3	
	41	Semiconductor Memories: Memory organization, classification of Semiconductor memories	Group-2	1	Revision Experiment Performed
				2	
	42	(RAM, ROM, PROM, EPROM, EEPROM), static and dynamic RAM		3	
15 th	43	Introduction to 74181 ALU IC	Group-1	1	Revision Experiment Performed
				2	
				3	
	44	Assignment-3	Group-2	1	Revision Experiment Performed
				2	
	45	Sessional Test-3		3	

Week	Day	Theory Topic (Including assignment / test)	Group	Practical Topic (Programming exercises-P.E.)
1st	1st	Algorithm and Programming Development: Introduction, Steps in development of a program	G-I	P.E.on executing and editing a C program
	2nd	Flow charts, Algorithm development		
	3rd	Algorithm and Flowchart writing for practical	G-II	P.E. on executing and editing a C program
2nd	4th	Programme Debugging, Practice of error detection and corrections in examples.	G-I	P.E. on defining variables and assigning values to variables
	5th	Program Structure: Introduction to structure of C program		
	6th	Keywords, assign statements	G-II	P.E. on defining variables and assigning values to variables
3rd	7th	I/O statements: Printf and Scanf,	G-I	P.E. on arithmetic and relational operators
	8th	Constants, variables and data types		
	9th	Operators and Expressions	G-II	P.E. on arithmetic and relational operators
4th	10th	Unformatted and Formatted IOS	G-I	P.E. on arithmetic Expressions and their evaluation
	11th	Data Type Casting		
	12th	Class Test	G-II	P.E. on arithmetic expressions and their evaluation
5th	13th	Control Structures: Introduction and use	G-I	P.E. onformatting input/output using printf and scanf and their return type values
	14th	Decision making with IF – statement		
	15th	IF – Else and Nested IF	G-II	P.E. onformatting input/output using printf and scanf and their return type values
6th	16th	While and do-while, for loop	G-I	P.E. using if, if-else statement
	17th	Break. Continue statements		
	18th	Go to and switch statements	G-II	P.E. using if, if-else statement
7th	19th	Revision of unit III	G-I	P.E. on switch statement
	20th	Sessional Test I		
	21st	Pointers: Introduction to pointers	G-II	P.E. on switch statement
8th	22nd	Signed and unsigned short and long integer variable concepts	G-I	P.E. on do – while statement
	23rd	Address operator and pointers, Declaring and initializing pointers		
	24th	Single pointer	G-II	P.E. on do – while statement
9th	25th	Revision of unit IV	G-I	P.E. on for loop statement
	26th	Introduction to functions		
	27th	Global and local variables	G-II	P.E. on for loop statement
10th	28th	Function Declaration	G-I	Simple programs using pointers
	29th	Standard functions		
	30th	Parameters and Parameter Passing	G-II	Simple programs using pointers
11th	31st	Call - by value/reference	G-I	Programs on one-dimensional array
	32nd	Sessional II		
	33rd	Arrays and Strings: Introduction to Arrays, Array Declaration, Length of array	G-II	Programs on one-dimensional array.
12th	34th	Single and Multidimensional Array, Arrays of characters	G-I	Programs on two-dimensional array.
	35th	Introduction of Strings: String declaration and definition, String Related function i.e. strlen, strcpy, strcmp		
	36th	Passing an array to function	G-II	Programs on two-dimensional array.
13th	37th	Pointers to an array and strings	G-I	Programs for putting two strings together and comparing two strings
	38th	Structures and Unions: Introduction		
	39th	Declaration of structures	G-II	Programs for putting two strings together and comparing two strings
14th	40th	Accessing structure members	G-I	Simple programs using functions
	41st	Structure Initialization		
	42nd	Pointer to structures	G-II	Simple programs using functions
15th	43rd	Introduction, Difference between Structures and unions	G-I	programs using structures and union
	44th	Concept of File Handling		
	45th	Opening and Closing of File	G-II	programs using structures and union
16th	46th	Modes of Accessing Files	G-I	Program on Reading and Writing data to a file.
	47th	Reading and Writing in the File	G-II	Program on Reading and Writing data to a file.
	48th	Sessional III		

LESSONPLAN

NAME OF FACULTY: MRS.SWATI NAUTIYAL
 DISCIPLINE: COMPUTER ENGINEERING
 SEMESTER: 5th
 SUBJECT: PROGRAMMING IN PYTHON
 LESSONPLANDURATION:16WEEKS

WORKLOAD(LECTURE/ PRACTICAL):LECTURES-3,PRACTICALS-4

WEEK	THEORY		PRACTICAL	
1st	DAY	TOPIC	PRACTICAL DAY/PERIOD	TOPIC
	1	UNIT1The way of the program The Python programming language, What is a program? What is debugging?	1 - 4	Introduction and python installation
	2	Syntax errors, Runtime errors, Semantic errors, experimental debugging.		
	3	Variables, Expressions and Statements: Values and data types, Variables, Variable names and keywords, Statements, Evaluating expressions		
2nd	1	Operators and operands, Type converter functions, Order of operations	1-4	Let list1 and list2 be two lists of integers. Implement function sublist() that takes as input lists list1 and list2 and returns True if list1 is a sublist of list2, and False otherwise
	2	Operations on strings, Input, Composition, The modulus operator.		
	3	Conditionals: Boolean values and expressions, Logical operators Simplifying Boolean Expressions		
3rd	1	Conditional execution, Chained conditionals, Nested conditionals, The return statement, Logical opposites.	1-4	Write function vowelCount() that takes a string as input and counts and prints the number of occurrences of vowels in the string.
	2	UNIT III Iteration: Assignment, Updating variables, The for loop, The while statement,		
	3	The Collatz 3n + 1 sequence, Tables, Two-dimensional tables		
4th	1	Paired Data, Nested Loops for Nested Data.	1-4	- The cryptography function crypto() takes as input a string (i.e., the name of a file in the current directory). The function should print the file on the screen with this modification: Every occurrence of string 'secret' in the file should be replaced with string 'xxxxxx'. - Write a function stats() that takes one input argument: the name of a text file. The function should print, on the screen, the number of lines, words, and characters in the file; your function should open the file only once.
	2	Strings: Working with strings as single things, Working with the parts of a string,		
	3	Length, Traversal and the for loop, Slices, String comparison		
5th	1	Strings are immutable, The in and not in operators, A find function, Looping and counting, Optional parameters,.	1-4	Implement function distribution () that takes as input the name of a file (as a string). This online file will contain letter grades separated by blanks. Your function should print
	2	The built-in find method, The split method, Cleaning up your strings, The string format method		
	3	Test 1		

				thedistribution of grades • The function censor () takes the name of a file (a string) as input. The function should open the file, read it, and then write it into file censored.txt with this modification: Every occurrence of a four-letter word in the file should be replaced with string 'xxxx' • Create a dictionary for phones and their prices. Write functions to add a new entry (phone:price) ,search for a particular phone and retrieve it's price, given price findphones with same price , remove an entry, display all phones sorted according to price
6 th	1	Tuples: Tuples are used for grouping data, Tuple assignment	1-4	• Write a Python program that prompts the user to enter a list of first names and stores them in a list. The program should display how many times the letter 'a' appears within the list • Write a Python program that prompts the user to enter integer values for each of two lists.It then should displays whether the lists are of the same length, whether the elements in each list sum to the same value, and whether there are any values that occur in both lists • Implement and test a Python program that determines if all parentheses in an entered line of code form matching pairs. Note: Pairs of parentheses may be nested.
	2	Tuples as return values, Composability of Data Structures.		
	3	Lists: List values, Accessing elements, List length, List membership, List operations, List slices,		
7 th	1	Lists are mutable, List deletion, Objects and references, Aliasing, Cloning lists	1-4	• Suppose variable s has been assigned in this way: s = ""It was the best of times, it was the worst of times; it was the age of wisdom, it was the age of foolishness; it was the epoch of belief, it was the epoch of incredulity; it was ..."" Then do the following, in order, each time: (a) Write a sequence of statements that produce a copy of s, named newS, in which characters ., ,, ;, and \n have been replaced by blank spaceslistS
	2	Lists and for loops, List parameters, List methods, Pure functions and modifiers,		
	3	Functions that produce lists, Strings and lists, list and range, Nested lists, Matrices.		

8th	1	Functions: Functions with arguments and return values.	1-4	- The function avgavg() takes as input a list whose items are lists of three numbers. Each three-number list represents the three grades a particular student received for a course. - Implement function names () that takes no input and repeatedly asks the user to enter the first name of a student in a class. - Implement six classes to tree hierarchy model taxonomy with Python inheritance.
	2	UNIT III Modules: Random numbers, The time module, The math module		
	3	Creating your own modules,		
9th	1	Namespaces, Scope and lookup rules, Attributes and the dot operator.	1-4	- Write a program that calculates the numeric value of a single name provided as input - Expand your solution to the previous problem to allow the calculation of a complete name
	2	Files: About files, Writing our first file, Reading a file line-at-a-time		
	3	Turning a file into a list of lines Reading the whole file at once,		
10th	1	Working with binary files, Directories, fetching something from the web	1-4	Write a python program with function inner_product(x,y) that computes the inner product of two (same length) lists.
	2	List Algorithms: Linear search, Binary search, Merging two sorted lists.		
	3	Test 2		
11th	1	UNIT IV Object oriented programming: Classes and Objects- The Basics, Attributes, Adding methods to our class	1-4	The Sieve of Eratosthenes is an elegant algorithm for finding all of the prime numbers up to some limit n.
	2	Instances as arguments and parameters, Converting an instance to a string		
	3	Instances as return values Objects are mutable, Sameness, Copying.		
12th	1	Exceptions: Catching exceptions, raising our own exceptions, the finally clause of the try statement	1-4	Write a function that returns the index of the smallest element in a list of integers. If the number of such elements is greater than 1, return the smallest index. Use the following header: def index Of Smallest Element (lst): Write a program that prompts the user to enter a list of numbers, invokes this function to return the index of the smallest element, and displays the index
	2	Inheritance: Polymorphism, Generalization, Pure functions		
	3	UNIT V GUI: Creating Graphical User Interfaces, Using Module Tkinter		

13th	1	Building a Basic GUI, Models, Views, and Controllers	1-4	Write a program that reads an unspecified number of integers and finds the ones that have the most occurrences.
	2	Customizing the Visual Style, Few More Widgets		
	3	Revision		
14th	1	Databases: Overview, Creating and Populating, Retrieving Data, updating and Deleting	1-4	Develop and test a Python program that allows a user to type in a message and have it converted into Morse code, and also enter Morse code and have it converted back to the original message.
	2	Using NULL for Missing Data, Using Joins to Combine Tables		
	3	Keys and Constraints, Advanced Features.		
15th	1	Test 3	1-4	Revision
	2	Revision		
	3	Revision		

Lesson Plan

Name of faculty : Rakesh Gupta
Discipline : Computer Engineering
Semester : 5th
Subject : WEB TECHNOLOGIES
Lesson Plan Duration : 16 Weeks (from 30 July 2026 to 23Nov 2026)
Work Load (Lecture/ Practical) per week (in hours): Lectures-03 Practical -04

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical day	Topic
1st	1st	Introduction to HTML 5 and CSS 3. Basic structure of HTML	1st	Design PHP based web pages using correct PHP, CSS, and XHTML syntax, structure.
	2nd	designing a web page, inserting links images, horizontal rules, comments.		
	3rd	Formatting text, title, headings, colors, fonts, sizes		
2nd	4 th	simple tables and forms.	2nd	Design PHP based web pages using correct PHP, CSS, and XHTML syntax, structure.
	5 th	HTML tags, hyperlinks. Adding graphics and images		
	6 th	image maps, image files. Using tables, forms, style sheets and frames. Floating of web site/pages.		
3rd	7 th	Introduction to PHP: How PHP Works	3rd	Design SQL language within MySQL and PHP to access and manipulate databases.
	8 th	The php.ini File, Basic PHP Syntax, PHP variables		
	9 th	statements, operators, decision making, loops		
4 th	10 th	arrays, strings, forms, get and post methods, functions.	4 th	Install and configure both PHP and MySQL.
	11 th	Introduction to cookies, storage of cookies at client side, Using information of cookies.		
	12 th	Creating single or multiple server side sessions.		
5 th	13 th	Timeout in sessions, Event management in PHP.	5 th	Seminar/Viva
	14 th	Introduction to content management systems based on PHP.		
	15 th	Sessional test I		
6 th	16 th	Introduction to MySQL,	6 th	Create PHP code that utilizes the

	17 th	connecting to MySQL, database,		commonly used API library functions built in to PHP.
	18 th	creation, insertion, deletion		
7 th	19 th	retrieval of MySQL data using PHP.	7 th	Design and create a complete web site that demonstrates good PHP/MySQL client/server design.
	20 th	Installing Wamp Server -		
	21 st	Installing Joomla on Web Server,		
8 th	22 nd	- Joomla global configuration -Article manager	8 th	To store a cookie using PHP on client side.
	23 rd	- -Archive manager-FrontPage manager		
	24 th	Section manager - Category manager- Media Manager-Menu manager - Component manager		
9 th	25 th	Content Manager- Extensions manager- Module manager-	9 th	To save the user session on server side.
	26 th	Plugin manager-Template manager-How to install a new module-		
	27 th	How to install a new template-How to install a new plugin-		
10 th	28 th	How to install a new component-Understanding the concept of Joomla positions	10 th	Seminar/Viva
	29 th	-Changing the layout structure by changing the module position.		
	30 th	Sessional Test II		
11 th	31 st	Understanding Basic Joomla Template-	11 th	Design website using Joomla.
	32 nd	Customizing Joomla template -		
	33 rd	BuildingCustom Joomla Template-Understanding Templatedetails.xml		
12 th	34 th	File-Creating Templatedetails.xml	12 th	Design website using Joomla.
	35 th	File using tmpl_builder Linking CSS-		
	36 th	Linking JavaScript- Understanding		
13 th	37 th	Include-Displaying Content in Xhtml-	13 th	Design website using Joomla.
	38 th	Creating Template installation Package-		

	39 th	Creating Custom Forms-		
14 th	40 th	Changing the Form Appearance using CSS.	14 th	Design website using Joomla.
	41 st	Overview/Revision of unit I		
	42 nd	Overview/Revision of unit II		
15 th	43 rd	Overview/Revision of unit III	15 th	Seminar/Viva
	44 th	Overview/Revision of unit IV		
	45 th	Sessional test III		

LESSON PLAN

Name of Faculty : Payal Arora
Discipline : Computer Engineering.
Semester : 1st
Subject : Fundamentals of IT
Lesson Plan Duration : 16Weeks

Work Load (Lecture / Practical) per week (In hours): Lecture-2, Practical-4)

Week	Theory	
	Lecture Day	Topic (Including Assignment / Test)
1	1	Brief history of development of computers,
	2	Definition of Computer, Block diagram of a Computer, Hardware, Software,
2	1	Bootling: Cold and Hot Bootling,
	2	Interaction between the CPU and Memory with Input/output devices, Function of CPU and major functional parts of CPU.
3	1	Memory: Bit, Nibble, Byte, KB, MB, GB, TB, PB, Functions of memory,
	2	Use of storage devices in a Computer, List types of memory used in a Computer, Importance of cache memory,
4	1	CPU speed and CPU word length.
	2	Understanding browser, Introduction to WWW, efficient use of search engines,
5	1	Awareness about Digital India portals (state and national portals) and college portals
	2	Various email service providers Creation of email id, sending and receiving emails,
6	1	Attaching documents with email and drive.
	2	Effective use of Gmail, G-Drive, Google Calendar, Google Sites, Google Sheets,
7	1	Online mode of communication using Google Meet & WebEx.
	2	Revision and Test 1
8	1	Introduction to Programming,
	2	Steps involved in problem solving, Definition of Algorithm, Definition of Flowchart
9	1	Steps involved in algorithm development,
	2	Differentiate algorithm and flowchart, symbols used in flowcharts,
10	1	Algorithms for simple problems,
	2	Flowcharts for simple problems, Practice logic building using flowchart/algorithm
11	1	Test 2
	2	Introducing LibreOffice/Open Office Calc, Working with Cells, Sheets, data, tables using formulae and functions, using charts and graphics.
12	1	Office Tools like LibreOffice/Open Office/MSOffice.
	2	Open Office Writer – Typesetting Text and Basic Formatting Inserting Images, Hyperlinks, Bookmarks,
13	1	Tables and Table Properties in Writer
	2	Open Office Impress – Creating and Viewing Presentations Inserting Pictures and Tables, Slide Master and Slide Design,
14	1	Custom Animation.
	2	Introduction to Digital Marketing Why Digital Marketing, Characteristics of Digital Marketing,
15	1	Tools for Digital Marketing, Effective use of Social Media like LinkedIn, Google+, Facebook, Twitter, etc
	2	Features of Social media, Advantages and Disadvantages of Social Media, Assignment And Revision Test 3