LESSON PLAN 2023-24

NAME:-Ms. Poonam Rani **DEPARTMENT: - Computer Science**

CLASS: - BCA- 2nd Sem **SUBJECT: - Concepts of Operating Systems**

WEEK	TOPIC
FEB-II	Introductory Concepts: Operating System, Functions and Characteristics, Historical Evolution of Operating Systems
FEB-III	Operating System Structure. Types of Operating System: Real-time, Multiprogramming, Multiprocessing, Batch processing.
MARCH-I	Operating System Services, Operating System Interface, Service System Calls, and System Programs. Process Management: Process Concepts, Operations on Processes, Process States, and Process Control Block. Inter-Process Communication.
MARCH-II	CPU Scheduling: Scheduling Criteria, Levels of Scheduling, Scheduling Algorithms, Multiple Processor Scheduling, Algorithm Evaluation. Synchronization: Critical Section Problem, Semaphores, Classical Problem of Synchronization, Monitors.
MARCH-III	Deadlocks: Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery.
APRIL-I	Memory Management Strategies: Memory Management of Single-user and Multiuser Operating Systems, Partitioning,
APRIL-II	Swapping, Contiguous Memory Allocation, Paging and Segmentation;
APRIL-III	Virtual Memory Management: Demand Paging, Page Replacement Algorithms, Thrashing.
APRIL-IV	Implementing File System: File System Structure, File System Implantation, File Operations,
MAY-I	Type of Files, Directory Implementation, Allocation Methods, and Free Space Management.
MAY-II	Disk Scheduling algorithm - SSTF, Scan, C- Scan, Look, C-Look. SSD Management.
MAY-III	Revision
MAY-IV	Revision

LESSON PLAN 2023-24

NAME:-Ms. Poonam Rani **DEPARTMENT: - Computer Science**

CLASS: - BCA- 6th Sem **SUBJECT: -Internet Technologies**

WEEK	TOPIC
JAN-I	Internet: Introduction; History; Internet Services
JAN-II	TCP/IP: Architecture, Layers, Protocols; TCP/IP model versus OSI Model;
JAN-III	World Wide Web (WWW) - The Client Side, The Server Side, Creating and Searching Information on the Web, Popular Search Engines
JAN-IV	URL, HTTP, Web Browsers, Chat &Bulletin Board, USENET & NNTP (Network News Transfer Protocol); Internet vs. Intranet;
FEB-I	TCP, UDP and IP Protocols, Port Numbers; Format of TCP, UDP and IP
FEB-II	IPv4 addressing; The need for IPv6; IPv6 addressing and packet format
FEB-III	TCP Services; TCP Connection Management; Remote Procedure Call; IP Address Resolution- DNS; Domain Name Space; DNS Mapping;
FEB-IV	Recursive and Iterative Resolution; Mapping Internet Addresses to Physical Addresses: ARP, RARP, DHCP; ICMP; IGMP
MARCH-I	Application Layer: Electronic Mail: Architecture; Protocols - SMTP, MIME, POP, IMAP; Web Based Mail
MARCH-II	File Access and Transfer: FTP, Anonymous FTP, TFTP, NFS; Remote Login using TELNET
MARCH-III	Voice and Video over IP: RTP, RTCP, IP Telephony and Signaling, RSVP, Routing in Internet: RIP, OSPF, BGP
APRIL-I	Internet Multicasting; Mobile IP; Private Network Interconnection: Network Address Translation (NAT), Virtual Private Network (VPN)
APRIL-II	Internet Management and SNMP; Internet Security: E-Mail Security; Web Security; Firewall; Introduction to IPSec and SSL
APRIL-III	Revision
APRIL-IV	Old Question Paper

LESSON PLAN 2023-24

NAME:-Ms. Poonam Rani **DEPARTMENT: - Computer Science**

CLASS: - B.SC (CS) - 4th Sem **SUBJECT: - Object Oriented Programming with C++**

WEEK	TOPIC
JAN-I	Object oriented Programming: Object-Oriented programming features and benefits
JAN-II	Object-Oriented features of C++, Class and Objects, Data Hiding & Encapsulation, Structures, Data members and Member functions
JAN-III	Scope resolution operator and its significance, Static Data Members, Static member functions, Nested and Local Class, Accessing Members of Class and Structure
JAN-IV	Constructor, Initialization using constructor, types of constructor– Default, Parameterized & Copy Constructors, Constructor overloading, Default Values to Parameters
FEB-I	Destructors, Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations
FEB-II	Manipulators, Friend Function, Friend Class, Arrays, Array of Objects
FEB-III	Passing and Returning Objects to Functions, String Handling in C++
FEB-IV	Dynamic Memory Management: Pointers, new and delete Operator, Array of Pointers to Objects
MARCH-I	this Pointer, Passing Parameters to Functions by Reference & pointers
MARCH-II	Static Polymorphism: Operators in C++, Precedence and Associativity Rules
MARCH-III	Operator Overloading, Unary & Binary Operators Overloading
APRIL-I	Function Overloading, Inline Functions
APRIL-II	Merits/Demerits of Static Polymorphism.
APRIL-III	Revision
APRIL-IV	Old Question Paper