Lesson Plan

BA 4th Sem

B.A.(COMPUTER SCIENCE)

Operating System

Week	Topic
1	Introduction: operating system, architecture, functions, characteristics, historical evolution
2	types: Serial batch, multiprogramming, time sharing, real time, distributed and parallel, OS as resource Manager.
3	Computer system structures: I/O structure, storage structure, storage hierarchy. Operating system structure: system

	components, services, system calls, system programs, system structures
4	Process management: process concepts, process state, process control block, operations, process scheduling, inter process communication.
5	CPU Scheduling: scheduling criteria, levels of scheduling, scheduling algorithms, multiple processor scheduling
6	Deadlocks: Characterization, methods of handling, deadlock detection, prevention, avoidance, recovery.
7	Storage Management: memory management of single-user and multiuser operating system
8	partitioning, swapping, paging and segmentation, virtual memory, Page replacement Algorithms, Thrashing.
9	Process synchronization: critical section problems, semaphores. Mutual

	exclusion
10	Device and file management: Disk scheduling, Disk structure, Disk management,
11	File Systems: Functions of the system, File access and allocation methods,
12	Directory Systems: Structured Organizations, directory and file protection mechanisms.

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                                        Object

Oriented Programming with C++

Week	Topic
1	Object oriented Programming: Object-Oriented programming features and benefits. Object-Oriented features of C++, Class and Objects, Data Hiding & Encapsulation, Structures
2	Data members and Member functions, Scope resolution operator and its significance, Static Data Members
3	Static member functions, Nested and Local Class, Accessing Members of Class and Structure.
4	Constructor, Initialization using constructor, types of constructor– Default, Parameterized & Copy Constructors
5	Constructor overloading, Default Values to Parameters, Destructors
6	Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations.
7	Manipulators, Friend Function, Friend Class,

	Arrays, Array of Objects, Passing and Returning Objects to Functions
s8	String Handling in C++, Dynamic Memory Management: Pointers, new and delete Operator
9	Array of Pointers to Objects, this Pointer, Passing Parameters to Functions by Reference & pointers
10	Static Polymorphism: Operators in C++, Precedence and Associativity Rules
11	Operator Overloading, Unary & Binary Operators Overloading, Function Overloading
12	Inline Functions, Merits/Demerits of Static Polymorphism.