

LECTURE PLAN (OPERATING SYSTEM MCA 2ND SEM)

S.NO	Topic To Be Covered	Lect. Reqd.
1.	Introduction to operating systems,Types of OS:-Distributed system,Parallel,Real time system etc	2
2.	Operating system structures, System calls(Process control,File,Device management,Info mgmt,Comm)	2
3.	Process concept: States, PCB	2
4.	Operations on processes(Creation,Termination), Cooperating processes, threads	2
5.	CPU Scheduling(CPU-IO Burst cycle,Scheduler), Scheduling criteria	1
6.	Scheduling algorithms(FCFS,SJF,RR,Priority) Multiple-processor scheduling and Real time scheduling	2
7.	Synchronization, The critical-section problem: two process, multiple process solution	2
8.	Synchronization hardware, Semaphores, Deadlock, Starvation	2
9.	Classic problems of synchronization	1
10.	Deadlock - System model and Deadlock characterization	2
11.	Methods for handling deadlocks and Deadlock prevention, avoidance, detection, recovery	2
12.	Memory Management – Background: Address binding, Logical Vs Physical address space	2
13.	Swapping and Contiguous memory allocation, Memory protection & allocation	2
14.	Paging: Basic methods, H/W support	1
15.	Segmentation and Segmentation with paging	1
16.	Virtual Memory - Background, Demand paging	2
17.	Page replacement algorithms	2
18.	Allocation of frames, Thrashing (Causes, Working set model)	2
19.	File-System Interface, File concept and Access methods	1
20.	Directory structure, Protection(Types of access,Access control)	1
21.	Allocation methods, Free-space management	2
22.	I/O Systems – I/O Hardware, Polling, Interrupts, DMA	2
23.	Kernel I/O subsystem(IO Scheduling,Buffering,Caching)	2
24.	Disk Scheduling, Disk management, Swap-space management	2