

# DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: CSE

Academic Session: (MAY- AUG 2021)

## Lesson Plan with Assignment questions

Subject with code:Operating Systems (PCC-CSE-206G)

Name of Faculty with designation :Mr. Naveen (Assistant Professor)

Month	Date & Day	Sem-Class	Unit	Topic/Chapter covered	Write Lecture Wise Questions	Remarks
	1	IV CSE - 1	I	Basic Terminologies: Concept of Operating Systems, Generations of Operating systems	Q1) Question related to Operating Systems Q2) Question related to Generations	
	2	IV CSE - 1	I	Types of Operating Systems, OS Services	Q1) Question related to Types of Operating System Q2) Question related to OS Services	
	3	IV CSE - 1	I	Processes: Definition, Process Relationship, Different states of a Process, Process State transitions	Q1) Process States Q2) Numerical	
	4	IV CSE - 1	I	Process State transitions, Process Control Block (PCB), Context switching	Q1) Process Control Block Q2) Numerical	
	5	IV CSE - 1	I	Thread: Definition, Various states, Benefits of threads, Types of threads, Multithreading.	Q1) Question related to various states of threads. Q2) Comparison of threads..	
	6	IV CSE - 1	I	Process Scheduling: Foundation and Scheduling objectives, Types of Schedulers	Q1) Numerical Q2) Numerical	
	7	IV CSE - 1	I	Scheduling criteria: CPU utilization, Throughput, Turnaround Time, Waiting Time, Response Time; Scheduling algorithms: Pre-emptive and Non-pre-emptive	Q1) Numerical Q2) Numerical	
	8	IV CSE - 1	I	FCFS, SJF, SRTF, RR Scheduling.	Q1) Numerical Q2) Numerical	
	9	IV CSE - 1	II	Inter-process Communication: Critical Section, Race Conditions	Q1) Question related to synchronization. Q2) Numerical.	
	10	IV CSE - 1	II	Mutual Exclusion, The Producer\Consumer Problem	Q1) Numerical Q2) Numerical	
	11	IV CSE - 1	II	Semaphores	Q1) Numerical Q2) Numerical	
	12	IV CSE - 1	II	Event Counters, Monitors, Message Passing	Q1) Numerical Q2) Numerical	
	13	IV CSE - 1	II	Classical IPC Problems: Reader's & Writer Problem, Dining Philosopher Problem etc.	Q1) Question related to reader writers problem. Q2) Numerical	
	14	IV CSE - 1	II	Synchronization : Questions	Q1) Numerical Q2) Numerical	
	15	IV CSE - 1	II	Definition, Necessary and sufficient conditions for Deadlock	Q1) Numerical Q2) Numerical	
	16	IV CSE - 1	II	Deadlock Prevention, and Deadlock Avoidance	Q1) Numerical Q2) Numerical	

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	17	IV CSE - 1	II	Banker's algorithm, Deadlock detection and Recovery	Q1) Numerical Q2) Numerical	
	18	IV CSE - 1	II	Deadlock : Questions	Q1) Numerical Q2) Numerical	
	19	IV CSE - 1	III	Memory Management: Basic concept	Q1) Numerical Q2) Numerical	
	20	IV CSE - 1	III	Logical and Physical address map, Memory allocation	Q1) Numerical Q2) Numerical	
	21	IV CSE - 1	III	Contiguous Memory allocation – Fixed and variable partition–Internal and External fragmentation and Compaction	Q1) Numerical Q2) Numerical	
	22	IV CSE - 1	III	Paging: Principle of operation – Page allocation – Hardware support for paging	Q1) Numerical Q2) Numerical	
	23	IV CSE - 1	III	Protection and sharing, Disadvantages of paging	Q1) Numerical Q2) Numerical	
	24	IV CSE - 1	III	Virtual Memory: Basics of Virtual Memory –	Q1) Numerical Q2) Numerical	
	25	IV CSE - 1	III	Hardware and control structures – Locality of reference	Q1) Numerical Q2) Numerical	
	26	IV CSE - 1	III	Page fault, Working Set, Dirty page/Dirty bit	Q1) Numerical Q2) Numerical	
	27	IV CSE - 1	III	Demand paging	Q1) Numerical Q2) Numerical	
	28	IV CSE - 1	III	Page Replacement algorithms	Q1) Comparison of page replacement algorithms Q2) Numerical	
	29	IV CSE - 1	IV	File Management: Concept of File, Access methods, File types, File operation	Q1) Questions related to file access methods.	
	31	IV CSE - 1	IV	Directory structure, File System structure	Q1) Questions related to file structures.	
	31	IV CSE - 1	IV	Allocation methods (contiguous, linked, indexed), efficiency and performance.	Q1) Comparison of file allocation methods.	
	32	IV CSE - 1	IV	Disk Management: Disk structure	Q1) Question related to disk structures. Q2) Numerical.	
	33	IV CSE - 1	IV	Disk scheduling - FCFS, SSTF, SCAN, C-SCAN	Q1) Comparison of disk scheduling algorithms. Q2) Numerical	
	34	IV CSE - 1	IV	Disk reliability, Disk formatting, Boot-block, Bad blocks	Q1) Question related to disk formatting. Q2) Numerical.	
	35	IV CSE - 1	IV	Comparative Study of Latest Operating System	Q1) Comparison of different operating systems.	

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