

DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: CSIT

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 CSIT	I	Basic Terminologies: Concept of Operating Systems, Generations of Operating systems	Q1) Question related to Operating Systems Q2) Question related to Generations	
	2	IV CSIT	I	Types of Operating Systems, OS Services	Q1) Question related to Types of Operating System Q2) Question related to OS Services	
	3	IV CSIT	I	Processes: Definition, Process Relationship, Different states of a Process, Process State transitions	Q1) Process States Q2) Numerical	
	4	IV CSIT	I	Process State transitions, Process Control Block (PCB), Context switching	Q1) Process Control Block Q2) Numerical	
	5	IV CSIT	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 CSIT	I	Process Scheduling: Foundation and Scheduling objectives, Types of Schedulers	Q1) Numerical Q2) Numerical	
	7	IV CSIT	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 CSIT	I	FCFS, SJF, SRTF, RR Scheduling.	Q1) Numerical Q2) Numerical	
	9	IV CSIT	II	Inter-process Communication: Critical Section, Race Conditions	Q1) Question related to synchronization. Q2) Numerical.	
	10	IV CSIT	II	Mutual Exclusion, The Producer\Consumer Problem	Q1) Numerical Q2) Numerical	
	11	IV CSIT	II	Semaphores	Q1) Numerical Q2) Numerical	
	12	IV CSIT	II	Event Counters, Monitors, Message Passing	Q1) Numerical Q2) Numerical	
	13	IV CSIT	II	Classical IPC Problems: Reader's & Writer Problem, Dining Philosopher Problem etc.	Q1) Question related to reader writers problem. Q2) Numerical	
	14	IV CSIT	II	Synchronization : Questions	Q1) Numerical Q2) Numerical	
	15	IV CSIT	II	Definition, Necessary and sufficient conditions for Deadlock	Q1) Numerical Q2) Numerical	
	16	IV CSIT	II	Deadlock Prevention, and Deadlock Avoidance	Q1) Numerical Q2) Numerical	

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