



ACE
Engineering College
 (An Autonomous Institution)

Question Paper Code:

CS403PC

ACE-R20

Semester End Examination
II B. Tech- II Semester- AUGUST -2022
OPERATING SYSTEMS
Common to CSE,IT,CSM, CSD,CSO

Time: 3 Hours

Max. Marks: 70

H. T. No

Answer any 5 Questions out of 8 Questions from the following

Q.No	Question	Marks
1. a)	Explain about various types of operating systems.	7
b)	Explain operating systems services and functions	7
2. a)	Define Multiple -Processor Scheduling and Scheduling Algorithm.	7
b)	Explain Process concepts & scheduling and Operations on processes?	7
3. a)	Explain about different CPU Scheduling methods.	7
b)	Explain Process Synchronization & Demonstrate Classic Problems of Process Synchronization	7
4. a)	Define Semaphores and the Critical Section Problem	7
b)	Explain Bankers algorithm for deadlock avoidance with suitable example,	7
5. a)	Explain Deadlocks Characterization, Methods for Handling Deadlocks	7
b)	Write the resource allocation algorithm for Deadlock detection.	7
6. a)	What is paging and Describe the concept of Segmentation?	7
b)	Explain Demand Paging and Page Replacement Algorithms.	7
7. a)	What are File Access methods and explain Directory Structure?	7
b)	Define File System Structure and explain Allocation methods with neat diagram?	7
8. a)	Explain with neat diagram how Free-space Management is implemented? Describe following system calls , (i) read (ii) write (iii) open	7
b)	Describe indexed file and indexed sequential file organization	7