

Model Question Papers
Subject: OPERATING SYSTEM

Time: 3 Hours

Max.Marks:75

Section-A (Answer any FIVE Questions). 5x5=25 Marks

1. Explain the importance of Real-Time Embedded systems.
2. Define Cooperating process? What is the environment need in Cooperating processes?
3. What is Critical Section Problem?
4. Write the difference between internal and external fragmentation.
5. Define the Safe, unsafe, and deadlock state spaces
6. What are Operating-System Services?
7. Identify the situations for Preemption of a process.
8. Define Busy Waiting? How to overcome busy waiting using Semaphore operations.
9. What is Deadlock?
10. Write short note on demand paging.

SECTION-B

Answer ANY FIVE Questions. 5X10=50 MARKS

1. What is meant by interleaving and overlapping with respect to multi programming and multi processing? Explain. (Assume system have two user processes).
2. Explain the Time-shared operating system.
3. For given process how to evaluate Average Waiting Time and Average Turnaround Time for: i) FCFS ii) SJF iii) SRT iv) Non-Preemptive Priority v) Preemptive Priority vi) RR(Q=2).
4. What is paging? Explain its structure for 32 -byte memory with 4-byte pages.
5. What is effective access time? Compute it for 70% hit ratio, 20 ns to search TLB and 100 ns to access memory. Observe the difference when it is changed to 90% hit ratio.
6. Explain the usage and structure of monitors with an example.
7. Explain Banker's deadlock-avoidance algorithm with an illustration.
8. List out the various methods for free-space management and explain them.
9. Give a brief note on Disk scheduling algorithms
10. Differentiate SCAN, C-SCAN and LOOK, C-LOOK disk scheduling algorithms with an example

Note:- At least 2 question must be given from each unit in both section-A and Section-B

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