



Time Allotted : 3 Hours

Full Marks : 70

The Figures in the margin indicate full marks.

Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

1. Answer any ten of the following :

[1 x 10 = 10]

- (I) From the submission time of a process to its completion time is.....
- (II) When was the first operating system developed?
- (III) Generally we have user level threads and
- (IV) In OS, Memory management refers to management of?
- (V) A thread is a
- (VI) The address generated by the CPU is referred to as
- (VII) Which of the following is system software?
- (VIII) Which of the conditions are required for a deadlock to be possible?
- (IX) _____ is the concept in which a process is copied into the main memory from the secondary memory according to the requirement.
- (X) What is the use of directory structure in the operating system?
- (XI) A problem encountered in multitasking when a process is perpetually denied necessary resources is called _____.
- (XII) Illustrate which OS should be chosen which is applicable to systems that require time-bound response?

Group-B (Short Answer Type Question)

Answer any three of the following :

[5 x 3 = 15]

2. Describe the directory implementation techniques. [5]
3. Write down the difference between security and protection. [5]
4. Write down the operating system services. [5]
5. Define Process Scheduling and Process Scheduling objective. [5]
6. Illustrate the reasons of "there is no preemptive version of FCFS". [5]

Group-C (Long Answer Type Question)

Answer any three of the following :

[15 x 3 = 45]

7. What is Process? Describe every state of the process life cycle briefly. Write down the criteria of the process scheduling approach. [3+7+5]
8. Discuss the concept of page, frame, and page table. Write down the steps of paging. [9+6]
9. If the contents of the reference string is: 7,0,1,2,0,3,0,4,2,3,0,3 and there are 3 frames available in the memory then calculate the no of page fault and page fault rate for the algorithm FIFO. What is Belady's anomaly? [10+5]
10. Differentiate between: Viruses and Worms. Differentiate between: Symmetric and Asymmetric Encryption. Describe the Denial of Service attack. [5+5+5]
11. Compare equal size fixed partitioning with variable size fixed partitioning. Discuss different types of fragmentation that may occur in partitioning system. What is compaction technique. [5+5+5]

*** END OF PAPER ***