

Subject : Operating Systems

Day : Wednesday
Date : 07/12/2016



Time : 02.00 P.M. TO 05.00 P.M.
Max Marks : 80 Total Pages : 1

N.B.:

- 1) Attempt any **FIVE** questions from section –I and any **TWO** questions from Section –II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.

SECTION-I

- Q.1** Define operating system. Discuss various views of operating systems. (10)
- Q.2** Differentiate between: (10)
i) Online operating system and Real time operating system.
ii) Multilevel queue scheduling and multilevel queue with feedback scheduling.
- Q.3** What is virtual memory? Explain the process of converting virtual address to physical address with help of page table. (10)
- Q.4** What is semaphore? Explain queuing implementation of semaphore. (10)
- Q.5** Explain file system implementation in brief. (10)
- Q.6** Why performance monitoring and evaluation is needed? Give the various evaluation techniques. (10)
- Q.7** Write short notes on Any **TWO**: (10)
a) Messages
b) Distributed operating system
c) Working set model

SECTION-II

- Q.8** Discuss in brief procedure-consumer problem with bounded buffer. (15)
- Q.9** Consider the memory with four page frames. Assume that all frames are initially empty. The pages are referenced in the order given below: (15)
1, 3, 0, 1, 3, 2, 1, 2, 0, 3, 1, 2, 1, 2, 3, 2, 0
Compute total number of page faults in case of:
i) FIFO ii) LRU with matrix
- Q.10** For a given system having 50 tracks. Following is the sequence of tracks. (15)
21, 29, 35, 28, 38, 16, 17, 39, 41, 28.
Currently head in one track number 30 and moving outside. Explain the concept and find total track moments in case of:
i) Shortest seek time first
ii) First come first served

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