

BCA-IT 50

Roll No.

Total Pages : 2

BCAM-15

19013

OPERATING SYSTEM

Paper-BCA-201

Time Allowed : 3 Hours]

[Maximum Marks : 80

Note : Attempt five questions in all, selecting at least one question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) What is PCB? Discuss. 4
- (b) What is Multiple processor scheduling? Discuss. 4
- (c) Explain Thrashing. 4
- (d) Discuss various File access methods. 4

UNIT-I

2. What is an Operating system? What are the services provided by Operating system? Discuss historical evolution of Operating system. 16
3. (a) What do you understand by System call and System program? Explain various system calls and system programs in different aspects of Operating system.
- (b) Explain various states of a process by drawing a diagram. 6

UNIT-II

4. Discuss various algorithms for CPU-Scheduling.
Explain with suitable examples. 16
5. Describe the various necessary conditions for a
deadlock to occur. Explain various ways to handle a
deadlock in brief. 16

UNIT-III

6. (a) What is a Semaphore? How semaphores can be
implemented? Discuss various types of
semaphores along with their usage. 8
- (b) What is Critical Section problem? Explain various
algorithms for solving critical section problem. 8
7. (a) What is Memory Partitioning? Explain various
types of partitioning. 8
- (b) Differentiate between Paging and Segmentation. 8

UNIT-IV

8. (a) Differentiate between Contiguous, Linked and
Indexed allocation methods. 8
- (b) Discuss various Directory and File protection
mechanisms. 8
9. Explain various Disk scheduling policies with suitable
examples. 16