



DM-0796

Third Year B. C. A. (Sem. V) Examination
September / October – 2006
Operating System - II : Paper-504

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

● विवेकपूर्वक निम्नलिखित विवरण उत्तरपत्र पर अवश्य भरनी। Fillup strictly the details of signs on your answer book.	Seat No.
Name of the Examination : T. Y. B. C. A. (Sem. 5)	
Name of the Subject : Operating System - 2 - 504	
Subject Code No. : 0 7 9 6 Section No. (1, 2, ...) : Nil	Student's Signature

(2) Figures shown to **right** indicate marks.

- 1 (a) Describe demand paging 5
(b) Discuss page replacement algorithm. 5

OR

- (b) What is page fault ? Discuss steps to handle page faults. 5
(c) Describe general model of file management system. 5

OR

- (c) Describe external and internal fragmentation. 5
How can this problem be solved using paging ?

- 2 (a) Discuss various methods for allocation of disk space to files. 6

OR

- (a) What are various functions of operating system as process manager ? 6

DM-0796]

1

[Contd...

- (b) Explain LRU page replacement algorithm. 5
(c) Discuss various methods for implementing mutual exclusion. 5

OR

- (c) Explain various file protection mechanisms used by the O.S. 5

- 3 (a) Describe Peperson's solution for achieving mutual exclusion. 5
(b) Explain critical section problem. How the mutual exclusion is preserved in critical section problem ? 5

OR

- (b) Explain the concept of dead-lock. Describe the methods to solve the dead-lock situation. 5
(c) Explain FIFO page replacement and Optimal page replacement. 5

OR

- (c) Explain inverted page table and multilevel paging technique. 5

- 4 (a) Consider following page replacement string : 9
2, 3, 1, 2, 4, 6, 0, 2, 6, 3, 2, 9, 8, 3, 6, 2, 3, 2
How many page faults will occur for following replacement ? Consider the memory is empty initially. Memory having 6 frames.

- (i) FIFO page replacement
(ii) Optimal page replacement
(iii) LRU page replacement.

- (b) What is RA graph ? Explain RA graph in terms of dead-lock. 6

OR

- (b) Explain various types of information stored in Master file directory. 6

5 Write notes on following : (any three)

- (i) Spooling
- (ii) Boot strap
- (iii) Critical section
- (iv) Dead-lock
- (v) Virtual memory.

9

DM-0796]

3

[800]