



MF-3770

Third Year B.C.A. (Sem. - V) (CBCS) Examination
October / November – 2013
Operating System - II

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशिक निशानीवाणी विगतो उत्तरवही पर अवश्य कपची. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
Third Year B.C.A. (Sem. - 5) (CBCS)	<input type="text"/>
Name of the Subject :	<input type="text"/>
Operating System - 2	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="7"/> <input type="text" value="7"/> <input type="text" value="0"/>	Section No. (1, 2,.....) : <input type="text" value="NII"/>
	Student's Signature

- (2) Figures on right indicates marks.
(3) Do not interchange options.

- 1 Answer in short : 14
- (i) List the major criteria that will give you the good process scheduling policy.
 - (ii) What do you mean by race condition ?
 - (iii) Define Hold and Wait and Circular Wait conditions. Also find out any relation between them.
 - (iv) What are the major functions of File Management ?
 - (v) What do you mean by cooperating processes ?
 - (vi) Define principle of Locality.
 - (vii) What is absolute and relative path name ?

- 2 Do as directed : 14
- (a) Explain paging with segmentation in detail.
 - (b) Explain the linked allocation of disk space of file.

OR

- (b) Write a note on critical region problem. Discuss Peterson's algorithm.
- 3 Write short note : (any two) 14
- (a) Safe State
 - (b) Message passing system
 - (c) Hierarchical page table

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[Contd...

- 4 Do as directed : 7
(a) Consider the following table :

Process	Arrival Time	CPU Burst
P1	0	8
P2	1	4
P3	2	1

What is the average turnaround time with FCFS and SJN ?

- (b) Consider the reference string given below : 7
1 2 3 4 5 8 3 6 0 1 2 3 4 8 3 6 2 5 3
How many page faults will occur for the following replacement ? Consider the memory is empty initially and having 3 frames.
(i) Optimum page replacement algorithm
(ii) Least recently used page replacement algorithm

- 5 Do as directed : (any two) 14
(a) Explain any two methods for file access control verification.
(b) What is semaphore ? Explain how does it solve the critical section problem.
(c) Discuss RR policy with its merits and demerits. What is the impact of the quantum of time slice on the system performance ? What criteria you should consider to decide the proper time slice ?