



G-3770

Third Year B. C. A. (Sem. V) (CBCS) Examination
November / December – 2014
Operating System - II

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांकित निशानीवाणी विगतो उत्तरवही पर अवश्य अपनी. 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. V) (CBCS)	<input type="text"/>
Name of the Subject :	<input type="text"/>
Operating System - II	<input type="text"/>
Subject Code No. : <input type="text"/> 3 <input type="text"/> 7 <input type="text"/> 7 <input type="text"/> 0	Section No. (1, 2, ...): <input type="text"/> Nil
	Student's Signature

(2) Figure on right indicates marks.

(3) Do not interchange option.

Q-1: Answer in Short.

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1. Define Deadlock.
2. What purpose does the modified bit serve in demand paging system?
3. What do you mean by cooperating processes?
4. What information needs to be saved when context switching takes place?
5. What do you mean by Hit ratio?
6. Define principle of Locality.
7. Difference between Job Scheduler & Process Scheduler.

Q-2: Do as Directed.

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- a. Given reference string is (Consider three Page Frames) **06**
1, 2, 3, 4, 1, 2, 5, 1, 2, 3, 4, 5.

Then discuss FIFO algorithm.

Also check is there Belady's Anomaly or not. (Considering Four Page Frames)

- b. If FIFO algorithm mistakenly replaces the page that is still **06**
in active use, then which technique is used to overcome this problem? Explain it.

- c. Discuss Round Robin policy with its merits & demerits. What is the impact of the quantum of time slice on the system performance? 06

OR

- c. Write a note on critical region problem. Discuss Primitives for mutual exclusion algorithm. 06

Q-3: Write short Note (Any Three)

- a. Demand paging.
 - b. Hash page table.
 - c. Tree level directory structure.
 - d. Message passing system.
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Q-4: Do as Directed.

- a. Consider the following table:

Process	Arrival Time	CPU burst(ms)
P1	0	8
P2	1	4
P3	2	1
P4	3	2
P5	4	5

What is the average turnaround time with SJN & SRT?

OR

- a. Consider the following table:

Process	CPU burst
P1	10
P2	1
P3	2
P4	1
P5	5

- a) Draw three time line charts illustrating the execution of these processes using SRT, RR (quantum=2) scheduling.
- b) What is the turnaround time of each process for each of the scheduling algorithms?

Q-5: Do as Directed.

a. Explain any two methods for file access control verification.

OR

a. Explain the hierarchy model of the file system.

b. What is producer-consumer problem? Explain with example.

OR

b. List four necessary conditions to occur deadlock. Explain

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