CODE NO: RR221201

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-2008

II B.TECH II SEMESTER SUPPLIMENTARY EXAMINATIONS
OPERATING SYSTEM
(CSE, IT, CSS)

AUG/SEP 2008

TIME:3HOUR
MARK:80

ANSWER ANY FIVE QUESTIONS ALL QUESTIONS CARRY EQUAL MARKS.

MARK [16*5=80]

1. (a) Describe the basic instruction cycle with an example.

(b) What is an Interrupt? Describe the different types of interrupts.

2. (a) Explain the reasons for process terminations.

(b) Describe the single blocked queue and multiple blocked queues with an example.

3. What is message passing? Explain the design characteristics of message systems for inter process communication and synchronization.

4. (a) What are the conditions that must satisfy for deadlock occurrence and explain them.

(b) Is the deadlocks problem preventable? Justify your answer with example and diagram.

5. Consider a memory management system with demand paging. There are three processes P1, P2, P3 which have one page of private memory each. Moreover P1 and P2 are sharing an array A which fits entirely into one memory page. Similarly, P2 and P3 are sharing an array B, which fits into a memory page.

(a) Let all the data for the processes be located into physical memory. Draw a possible memory allocation diagram, give the page tables for the three processes.

(b) Assume that process P1 gets swapped out of memory entirely. How are the page tables changing.

(c) Assume that process P1 gets swapped back into memory. Give the page tables in this situation.

6. Write short notes of the following:

(a) Random disk scheduling

(b) Priority disk scheduling

(c) Disk Cache.

7. (a) What do you understand by a file directory?

(b) Explain briefly the information elements of a file directory.

(c) Explain what is tree-structured directory?

8. Write notes on:

(a) Intrusion detection

(b) password protection.

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