

MAY 2011

**P/ID 17467/RCT/
PCAO**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) What are the advantages of multiprocessor systems?

Or

- (b) Briefly discuss about various types of system calls.

2. (a) Explain shortest-job-first scheduling with an illustration.

Or

- (b) Define the reader-writer problem.

3. (a) Define the following :

- (i) Swapping
(ii) Fragmentation.

Or

- (b) Discuss about the contiguous allocation method.

4. (a) Draw the two-level directory structure and discuss.

Or

- (b) Write short notes on file protection.

5. (a) Draw MS-DOS disk layout and discuss.

Or

- (b) Draw the structure of UNIX system.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. (a) Draw process state transition diagram and discuss.
(b) Explain about PCB.
7. (a) Draw the abstract view of the components of a computer system.
(b) Briefly discuss the services provided by an operating system.
8. Briefly discuss about the history of an operating system.
9. Explain Deadlock avoidance algorithm with an illustration.

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10. Draw the structure of paging hardware with TLB and explain.
 11. Clearly explain various disk scheduling algorithms.
 12. Discuss about the access methods for files.
 13. Clearly explain the structure and functionality of MS-DOS.
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