

B 2275

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Fourth Semester

Information Technology

IF 253 — OPERATING SYSTEMS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is an Assembler ?
2. State the two main functions of operating system.
3. Differentiate Next fit and Best fit memory allocations.
4. Define Page and Page frame.
5. Define the function of file append and seek operations.
6. Distinguish between Block and Character I/O devices.
7. List any four disk errors.
8. State the principle of Two level scheduling.
9. What is Mutual exclusion?
10. What is deadlock recovery through rollback?

PART B — (5 × 16 = 80 marks)

11. (a) Explain in detail the program execution using system software tools in microprocessor. (16)

Or

- (b) (i) Explain the OS concepts of process and system calls. (8)
- (ii) Describe the Client server and Layered OS structures. (8)

12. (a) (i) Explain Mono and multiprogramming with respect to memory management. (8)
(ii) Discuss multiprogramming with fixed partitions. State the problems in multiprogramming. (8)

Or

- (b) (i) Explain the Multilevel and Zero level paging techniques. (8)
(ii) Explain the pure memory segmentation technique. (8)
13. (a) Explain the File allocation and freeing methods. (16)

Or

- (b) (i) Explain the use of file descriptor and access control matrix. (10)
(ii) Write a short on Interrupt Handler. (6)
14. (a) Discuss about the various security flaws and protection mechanisms used in file systems. (16)

Or

- (b) (i) Explain the function of Device driver. (6)
(ii) Describe the various Disk scheduling methods. (10)
15. (a) (i) Explain the resource allocation with monitors. (8)
(ii) Explain SJF, Priority and Round robin process scheduling algorithms. (8)

Or

- (b) Explain the Deadlock Avoidance and Recovery schemes. (16)

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