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BT-5 / D-17

OPERATING SYSTEMS

Paper–CSE-307

Time allowed : 3 hours]   *[Maximum marks : 75*

Note : Attempt five questions in all, selecting at least one question from each unit. All questions carry equal marks.

Unit–I

1. (i) What is an operating system? What are the functions of the operating system?   10

    (ii) Define throughput and turn around time with suitable examples.   5

2. (i) Describe the file system organization. Describe how file hierarchy is managed?   8

    (ii) Explain the differences in the degree to which the following scheduling algorithms discriminate in favor of short processes.   7

      (a) First Come First Served.

      (b) Round Robin

      (c) Multilevel feedback queues.

Unit–II

3. (i) Write note on LRU page replacement.   8

    (ii) What is meant by fragmentation. Explain.   7

4. (i) Explain demand paging.   8

    (ii) Explain the concept of segmentation with neat diagram.   7

(2)

Unit–III

5. (i) What is the motivation for establishing inter-process communication?   8

    (ii) Explain critical section problem in detail.   7

6. (i) Explain the Banker's algorithm for deadlock avoidance with an example.   10

    (ii) Explain thrashing.   5

Unit–IV

7. Write a short note on with reference to DOS: 15

    (i) device system

    (ii) interrupt mechanism

8. Write a short note on with reference to DOS: 15

    (i) Concurrency control

    (ii) File system

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