6229

BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

DCME - THIRD SEMESTER EXAMINATION

OPERATING SYSTEMS

Time : 3 hours]   [*Total Marks* : 80

PART—A   3×10=30

Instructions :   (1) Answer all questions.

(2) Each question carries three marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define spooling.

2. What is process management in operating system?

3. What three issues must be considered in the case of pre-emption?

4. What is deadlock detection?

5. What is meant by shared memory in inter-process communication?

6. Define swapping.

7. List any six differences between paging and segmentation.

8. What is disk structure?

9. What is storage hierarchy?

10. What is acyclic directory structure?

Instructions :   (1) Answer *any* five questions.

              (2) Each question carries ten marks.

              (3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11.   Explain operating system services in detail.

12.   Explain about round-robin CPU scheduling algorithm with an example.

13.   *(a)* Write about sequential process.

      (b) Write about process control block.

14.   Explain the banker's algorithm for deadlock avoidance in detail.

15.   Explain about address binding, dynamic linking, dynamic loading and overlays.

16.   Explain the following page replacement algorithms with an example :

      (a) Optimal page replacement algorithm

      (b) FIFO page replacement algorithm

17.   Explain the following disk scheduling algorithms with examples :

      (a) SCAN

      (b) C-SCAN

18.   What are the file operations? Explain them.

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