



C16-CM-303

6229

BOARD DIPLOMA EXAMINATION, (C-16)
JANUARY/FEBRUARY—2022
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. List the types of system calls. Give an example in each case.
2. Define the terms spooling and buffering?
3. What is process state diagram?
4. What is scheduler? List their types.
5. What are *P* and *V* operations with semaphore?
6. Define fragmentation. List types of fragmentation.
7. What is page fault?
8. Define seek time and latency time.
9. List different disk scheduling algorithms.
10. What are the file operations?

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PART—B

10×5=50

- 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. What are the services of Operating System? Explain.
- 12. Explain the process creation and termination.
- 13. Explain about SJF and priority scheduling algorithms with an example.
- 14. Explain the necessary condition that should exist in a system for a dead lock to occur.
- 15. Explain paging and segmentation with neat diagram.
- 16. For the reference page string 2, 9, 6, 5, 9, 1, 3, 5, 1, 9, 1, 5. Show how page frames get effected and count the page fault with a frame size 3 in FIFO, OPT and LRU page replacement algorithms.
- 17. List and explain various allocation methods.
- 18. (a) Write about the sequential file access method.
(b) Explain various file protection implementations.

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