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C23-CM-AI-AIM-CIOT-CCN–303

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BOARD DIPLOMA EXAMINATION, (C-23)

OCTOBER/NOVEMBER—2024

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 Operating System.

2. Define system call with an example.

3. What is Process Control Block? Draw the structure of PCB.

4. Distinguish between preemptive scheduling and non-preemtive scheduling algorithms?

5. Define semaphore.

6. State the necessary conditions for arising deadlocks.

7. Define virtual memory.

8. What is dynamic address binding?

9. List the 3 file allocation methods.

10. List the 6 disk scheduling algorithms.

PART—B

10×5=50

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

(2) Each question carries **ten** marks.

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

11. Explain the components of an operating system in detail.

12. Explain First Come First Serve (FCFS) and SJF scheduling algorithms with an example.

13. Explain about dead lock prevention in detail.

14. Explain about shared memory and message passing in detail.

15. What is fragmentation? Explain the types of fragmentation in detail.

16. Explain the concept of paging in detail.

17. List and explain various file access methods.

18. Explain disk structure in detail.

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