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C16–CM–303

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BOARD DIPLOMA EXAMINATION, (C–16)

OCT/NOV—2017

DCM—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 what is buffering.

2. List any six components of Operating System.

3. What is a thread?

4. What is a semaphore?

5. What is a circular wait in deadlocks?

6. Define virtual memory.

7. List the functions of memory management.

8. Give the need for page replacement.

9. What is storage hierarchy?

10. What problems might arise on deletion if a file is shared?

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 about the terms *(a)* Multiprogramming and *(b)* timesharing.

12. Explain about process state diagram.

13. *(a)* Explain the FCFS cpu scheduling algorithm with an example.

(b) Write about the scheduling criteria.

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

15. Explain the concept of paging in detail.

16. Explain the page replacement algorithms with an example *(a)* optimal page replacement algorithm and *(b)* least recently used page replacement algorithm.

17. *(a)* List the three file allocation methods.

(b) Explain indexed allocation in detail.

18. Explain two-level and three-level directory structures.

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