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C16–IT–**403**

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BOARD DIPLOMA EXAMINATION, (C–16)

MARCH/APRIL—2018

DIT—FOURTH 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 buffering. Explain.   1+2=3

2. List the components of operating system.

3. Write a short note on relation between processes.

4. What is a semaphore? Explain.   1+2=3

5. Define a deadlock. Give examples.   1+2=3

6. Write a short note on overlays.

7. Describe the concept of thrashing.

8. Explain SCAN disk scheduling algorithm.

9. Briefly explain the free space management.

10. List the file attributes.

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. *(a)* What is a system call? Explain with examples. 2+3=5

(b) List and explain different types of system calls. 2+3=5

12. Describe threads and multi-threading. 3+7=10

13. Explain FCFS CPU scheduling algorithm with example.

14. Explain interprocess communication.

15. State the page replacement algorithm. Describe LRU page replacement algorithm. 2+8=10

16. Describe briefly on demand paging.

17. Describe contiguous allocation method with neat sketch.

18. What is file protection? Explain.

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