DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

OPERATING SYSTEMS

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Write any two functions of loaders.

2. What is meant by deadlock ?

3. Define fragmentation.

4. What is virtual box ?

5. List different file allocation methods.

(5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Write the functions of operating systems.

2. Explain multiprocessor systems with its advantages.

3. State scheduling criteria.

4. Describe deadlock detection.

5. Write the steps in handling page fault.

6. Discuss different address bindings.

7. List and explain any four file operations.

(5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

III (a) Define interpreter and mention its functions.   8

    (b) Write short note on batch systems.   7

OR

IV (a) Compare windows and linux operating systems.   10

    (b) Discuss multiprogramming systems.   5

UNIT — II

V (a) Draw the process state diagram and explain its different states.   8

    (b) List and explain various schedulers.   7

OR

VI (a) Explain FCFS and RR scheduling algorithms with their Gantt charts.   10

    (b) Describe critical section problem.   5

UNIT — III

VII (a) List and explain memory allocation strategies.   8

    (b) Write short note on virtual memory and its benefits.   7

OR

VIII (a) Explain segmentation hardware with diagram.   8

    (b) Present FIFO and LRU page replacement algorithms with example.   7

UNIT — IV

IX (a) Explain any two directory structures.   8

    (b) Discuss VMware architecture with diagram.   7

OR

X Explain different types of virtualization.   15

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