TED (15) – 4134 Reg. No.....

(REVISION — 2015) Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2019

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. List two examples for system software.
2. Define race condition.
3. Name four CPU scheduling algorithms.
4. Define thrashing.
5. List two directory structures. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Compare hard real time and soft real time systems.
2. Explain process states with the help of a diagram. .
3. Summarize RR scheduling with an example.
4. Explain three memory allocation strategies.
5. Compare FIFO and LRU page replacement algorithms.
6. Explain six file operations.
7. Summarize different types of hardware virtualization. (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) Explain memory and file management functions of OS. 9

(b) Explain batch processing and time sharing systems. 6

OR

IV (a) Explain assembler, compiler and interpreter. 9

(b) Compare multiprogramming and multiprocessing. 6

UNIT — II

V (a) Explain FCFS, SJF and priority scheduling with gantt chart. 9

(b) Compare long term and short term scheduling. 6

OR

VI (a) Calculate the waiting time for the following process using FCFS and SJF scheduling.

Process	*Burst time*
P1	10
P2	6
P3	2
P4	4

9

(b) Explain Deadlock prevention. 6

UNIT — III

VII (a) Explain paging and its hardware. 9

(b) Explain fragmentation. 6

OR

VIII (a) Explain virtual memory concepts with diagram. 9

(b) Compare different address binding schemes. 6

UNIT — IV

IX (a) Compare contiguous, linked and indexed file allocation methods. 9

(b) Explain two level and three level directory structure. 6

OR

X (a) Explain Vmvare features and infra structure. 9

(b) Explain Virtual Box. 6
