TED (10) – 4071

(REVISION — 2010)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 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. List any two operating systems.
2. Define a process.
3. What is logical address of a process ?
4. List directory operations.
5. What is cpu bound process ? (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe the general functions of operating system.
2. Explain the structure of PCB with a neat diagram.
3. Distinguish between internal and external fragmentation.
4. List the various file operations.
5. Give a brief comparison between compilers and interpreters.
6. Differentiate between pre-emptive and non-preemptive scheduling.
7. Briefly explain the file attributes. (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 Briefly explain various types of operating systems. 15

Or

IV Explain the components of operating systems. 15

Unit — II

V Explain various process scheduling algorithms with Gantt chart. 15

Or

VI (a) What are the scheduling criteria of a process ? 8

(b) What is deadlock and explain its causes ? 7

Unit — III

VII (a) Explain paging with paging hardware diagram. 8

(b) Describe segmentation and list the advantage of it over paging. 7

Or

VIII (a) Explain page fault with diagram and the steps to handle page fault. 12

(b) Write a short note on virtual memory. 3

Unit — IV

IX (a) List and explain different directory structures. 12

(b) Briefly explain swap space management. 3

Or

X (a) Explain any three disk scheduling algorithms. 9

(b) List and explain different file allocation methods. 6