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| TED (15) – 4134 | | Reg. No. |
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 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 the functions of Loader.
 - 2. Define process.
 - 3. Distinguish between logical address and physical address.
 - 4. Define file control block.
 - 5. Define Thin client.

 $(5 \times 2 = 10)$

PART — B

(Maximum marks: 30)

- II Answer any five of the following questions. Each question carries 6 marks.
 - 1. Write notes on Time sharing systems.
 - 2. Describe the goals of operating system.
 - 3. Explain different types of schedulers.
 - 4. Describe the three address binding methods.
 - 5. Explain critical section problem and the requirements for its solution.
 - 6. Compare segmentation and paging.
 - 7. List and explain different file operations.

 $(5 \times 6 = 30)$





Marks

PART — C

(Maximum marks: 60)

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

| | | Unit — I | |
|------------------|------|---|-----|
| III | Expl | ain any five operating system components. | 15 |
| | | O_{R} | |
| IV | Com | apare the features of DOS, Unix, Windows and Linux operating systems. | 15 |
| | | Unit — II | * |
| \mathbf{V}^{-} | (a) | Explain any three process scheduling algorithms with example. | 9 |
| | (b) | Explain the methods for preventing deadlock. | 6 |
| | | O_{R} | |
| VÏ | (a) | Illustrate resource allocation graph with example. | 9 |
| | (b) | Describe the general structure of PCB. | 6 |
| | | Unit — III | |
| VII | (a) | Explain contiguous memory allocation scheme. | 9 |
| | (b) | Explain the steps to handle page fault. | 6 |
| | | O_{R} | |
| VIII | (a) | Describe any three page replacement algorithms with example. | 9 |
| | (b) | Explain paging with paging hardware diagram. | 6 |
| | | Unit — IV | |
| IX | (a) | Explain about different directory structures. | . 9 |
| | (b) | Explain about virtual box. OR | 6 |
| X | (a) | Discuss about different allocation methods in detail. | . 9 |
| | (b) | Explain different types of hardware virtualization. | 6 |