| N22 – 01283 |
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## DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2022

## OPERATING SYSTEM

[Maximum Marks: **100**]                                              [Time: **3** Hours]

### PART-A
[Maximum Marks: **10**]
I.      (Answer **all** questions in one or two sentences.  Each question carries **2** marks)

1. Define system software.

2. Define Deadlock.

3. List two address binding schemes.

4. List any two Process States.

5. Describe tree directory structure.                                        (5 x 2 = 10)

### PART-B
[Maximum Marks: **30**]
II.      (Answer **any five** of the following questions.   Each question carries **6** marks)

1. Define Multiprogramming with advantage and disadvantage.

2. Explain the methods to prevent Deadlock.

3. Compare logical and physical address.

4. Compare single level and two-level directory structure.

5. Explain pre-emptive and non pre-emptive scheduling.

6. Compare fixed partition and variable partition memory allocation.

7. Define Operating System with its functions.                        (5 x 6 = 30)

### PART-C
[Maximum Marks: **60**]
(Answer **one** full question from each Unit.  Each full question carries **15** marks)

### UNIT – I

III.  (a) Explain Batch processing, time sharing and real time systems.                (9)

   (b) Explain multiprocessor system with its types.                                (6)

**OR**

IV. (a) Explain Assembler, Compiler and Interpreter. (9)

(b) Compare Linux, Unix and Windows. (6)

## UNIT – II

V. (a) Explain with example the Priority and Round Robin Scheduling Algorithms. (8)

(b) Describe Process Control Block. (7)

**OR**

VI. (a) Explain the main causes of Deadlock. (7)

(b) Explain Threads with its types. (8)

## UNIT- III

VII. (a) Explain in detail the FIFO, LRU and Optimal Page Replacement Algorithms with example.(9)

(b) Explain with suitable diagram Translation Look-aside Buffer (TLB). (6)

**OR**

VIII. (a) Explain Pages, Frames and Page Fault. (6)

(b) Explain trashing with its causes and solutions. (9)

## UNIT - IV

IX. (a) Explain Linked and Indexed File Allocation Methods. (10)

(b) Explain Thin Client. (5)

**OR**

X. (a) Explain the File Operations. (10)

(b) Explain the attributes of a file. (5)

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