

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – OCTOBER/NOVEMBER -2019.

FOUNDATIONS OF COMPUTER SOFTWARE

(Maximum Marks : 100)

[Time : 3 hours]

PART-A
(Maximum marks: 10)

Marks

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

1. Define Data Structures.
2. Define Tree Data Structure.
3. Define Operating System.
4. What do you mean by virtual memory.
5. Name any two Page replacement algorithms.

(5x2=10)

PART - B
(Maximum Marks : 30)

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

1. Compare and contrast Array and Link list.
2. Explain about de-queue.
3. Describe about linear search with algorithm.
4. Explain about steps in bubble sort.
5. Differentiate between Application software and System Software.
6. Define Process and Explain Process States.
7. Explain Dynamic Loading.

[5x6 =30]

PART - C
(Maximum marks : 60)

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

UNIT I

- III (a) Explain about Stack data structure and its operations. (8)
- (b) Explain about Queue data structure and its operations. (7)

OR

- IV (a) Describe the steps to insert and delete an element in circular queue. (8)
(b) Explain the steps to search a node in a link list. (7)

UNIT- II

- V (a) Explain about the algorithm for binary search. (8)
(b) Explain the technique of selection sort and its any two advantages. (7)

OR

- VI (a) Explain about the pre-order tree traversal with algorithm. (8)
(b) Define graph and explain about directed and undirected graph. (7)

UNIT- III

- VII (a) Explain about language translator. (8)
(b) Explain about the uses of operating system. (7)

OR

- VIII (a) Explain First Come First Serve Process scheduling. (8)
(b) Explain about process control block. (7)

UNIT – IV

- IX (a) Describe Swapping with diagram. (8)
(b) Describe Segmentation with diagram. (7)

OR

- X (a) Explain about sequential and direct file access methods. (8)
(b) Explain different File Attributes. (7)
