A22-04050

TED (15/19) - 4134
(Revision-2015/19)

Reg.No.....
Signature.....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/ COMMERCIAL PRACTICE - APRIL - 2022

OPERATING SYSTEMS

[Maximum marks: 100] (Time: 3 Hours)

PART – A

(Maximum Marks: 10)

Marks

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

1. What is an assembler.
2. Define thread.
3. Define logical address
4. List various file organizations
5. Write any two examples of virtualization software. (5 x 2 = 10)

PART – B

(Maximum Marks: 30)

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

1. Compare compiler and interpreter.
2. Describe about real time systems.
3. Differentiate between pre-emptive and non-pre-emptive scheduling.
4. Describe CPU bound and I/O bound processes
5. Compare fixed sized partition and variable sized partition memory allocation.
6. Compare segmentation and paging.
7. List and explain any 3 file attributes. (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) Compare windows and Linux Operating systems. (9)

(b) Differentiate between multiprogramming and multi-processing systems. (6)

OR

IV. (a) Explain an Operating systems and its functions. (9)

(b) Describe a loader and its functions. (6)

UNIT-II

V. (a) Explain SJF and RR scheduling algorithms (9)

(b) Draw the process state diagram and explain its different states. (6)

OR

VI. (a) Explain the critical section problem and write any three solutions. (9)

(b) Describe the dead lock and the various causes for the deadlock. (6)

UNIT-III

VII. (a) Explain paging and paging hardware with the diagram. (9)

(b) Explain the different strategies used to select memory partitions. (6)

OR

VIII. (a) Explain page fault and how to handle page fault. (9)

(b) Explain Optimal and LRU page replacement algorithms. (6)

UNIT-IV

IX. (a) Describe the different directory structure. (9)

(b) Explain the contiguous, linked and indexed allocations. (6)

OR

X. (a) Explain three different types of Hardware virtualization. (9)

(b) Describe the architecture of VMware. (6)
