



TED (15) – 4134

(REVISION — 2015)

Reg. No. ....

Signature .....

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017**

**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. Define system software.
2. Name two queues available during scheduling.
3. Define Deadlock.
4. List two address binding schemes.
5. Define file system.

(5 × 2 = 10)

**PART — B**

(Maximum marks : 30)

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

1. Compare multiprogramming and multiprocessing.
2. Explain various scheduling criteria.
3. Explain different causes for deadlock.
4. Compare logical and physical addresses with necessary details.
5. Explain demand paging with diagram.
6. Contrast 2 two level and tree directory structure.
7. List the limitations of virtualization.

(5 × 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 Assembler, Compiler and Interpreter. 9  
(b) Explain features of an operating system. 6

OR

- IV (a) Explain batch processing, time sharing and real time systems. 9  
(b) Explain loader and its functions. 6

UNIT — II

- V (a) Compare Multilevel queue and Multilevel Feedback Queue. 10  
(b) Explain different states of process with diagram. 5

OR

- VI (a) Explain critical-section problem. 8  
(b) Explain priority scheduling and find the average waiting time for the following processes.

Process	Burst time	Priority	
P1	10	3	
P2	1	1	
P3	2	4	
P4	1	5	
P5	5	2	7

UNIT — III

- VII (a) Explain fragmentation. 9  
(b) Explain first fit, best fit and worst fit memory allocation strategies. 6

OR

- VIII (a) Explain FIFO, optimal and LRU page replacement algorithms. 9  
(b) Explain segmentation with diagram. 6

UNIT — IV

- IX (a) Explain linked and indexed file allocation methods. 9  
(b) Explain thin client. 6

OR

- X (a) Explain memory, storage and data virtualizations. 9  
(b) Explain VMware with infrastructure. 6