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N20-01238

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – NOVEMBER -2020.

OPERATING SYSTEMS

(Maximum Marks :75) [Time : 2.15 hours]

PART–A

Marks

I. Answer **any three** questions in one or two sentences. Each question carries 2 marks.

1. List any two functions of Loader.
2. Define co-operating process.
3. State the term 'page fault'.
4. Define segmentation.
5. What do you mean by Virtual Box? (3x2=6)

PART - B

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

1. Compare multiprogramming and multiprocessing.
2. Explain the functions of Operating systems.
3. With diagram explain the structure of process control block(PCB).
4. What are the necessary conditions for a deadlock?
5. Differentiate logical address and physical address.
6. List out and explain any four file operations.
7. Explain Virtualization. [4x6 =24]

PART - C

(Answer **any of the three units** from the following. Each full question carries 15 marks)

UNIT I

III (a) Explain assembler, compiler and interpreter. (9)

(b) Describe real time systems. (6)

OR

IV (a) Compare Windows and Unix operating systems. (9)

(b) Write notes on batch systems. (6)

UNIT- II

V (a) Explain FCFS and Round robin Scheduling algorithms. (9)

(b) Explain SJF scheduling and find the average waiting time for the following processes.

Process	Burst time
P1	6
P2	8
P3	7

(6)

OR

VI (a) Draw and explain process state diagram. (9)

(b) How deadlock can be detected using resource allocation graph. (6)

UNIT- III

VII (a) Write short notes on FIFO, LRU and optimal page replacement algorithm. (9)

(b) Define fragmentation? Explain its types. (6)

OR

VIII (a) Discuss first fit, best fit, and worst fit memory allocation strategies. (9)

(b) Describe paging. (6)

UNIT – IV

IX (a) Explain contiguous and linked file allocation methods. (9)

(b) Write notes on thin client. (6)

OR

X (a) Explain memory, data and storage virtualization. (9)

(b) Write notes on file and directory. (6)

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