Roll No. .....

DD-2875 (SE)

B. C. A. (Part III) EXAMINATION, 2020

Paper Fifth

COMPUTER OPERATING SYSTEM

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 40

Note : Attempt any *two* parts from each Unit. All questions carry equal marks. Only simple calculator is allowed.

Unit—I

1. (a) Describe the basic concept of Operating System.

   (b) Describe the types of operating system.

   (c) Describe the views of operating system.

Unit—II

2. (a) Set of process assumed to have arrived at time O and length of the CPU burst given in milliseconds :

Process	Burst Time	Priority
P_1	10	3
P_2	1	1
P_3	2	4
P_4	1	5
P_5	5	2

Using priority scheduling algorithm solve the following questions :

(i) Draw the Gantt chart of the scheduling.

(ii) Calculate the average waiting time.

(b) Explain Round-Robin algorithm with giving suitable example.

(c) Write about multilevel queues and multilevel feedback queues algorithm.

Unit—III

3. (a) What are preliminaries of memory management ? Describe the multiple partitions.

(b) What is paging ? Describe job scheduling implementation of page table.

(c) Write about page replacement and page replacement algorithms.

Unit—IV

4. (a) Write the concept of a file. Describe the types of files.

(b) Explain the working of file directory maintenance.

(c) Write about the free space management.

Unit—V

5. (a) What is deadlock ? Describe the deadlock detection algorithm.

(b) Describe the performance of deadlock prevention.

(c) Explain the working of combined approach using for deadlock handling.

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