

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 0 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

[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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