Roll No. .....

DD–2875

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.

Unit—I

1. (a) Define Operating Systems and discuss its role from different perspectives.

   (b) Classify multi-processor operating system based on how machine related its instructions to the data processing.

   (c) Discuss process management in operating systems.

Unit—II

2. (a) What is scheduler ? Explain First Come First Served Scheduling algorithm.

   (b) Discuss the uses of job queues, ready queues and device queues with suitable example.

   (c) Explain process control block in operating system with suitable diagram.

Unit—III

3. (a) Differentiate between internal and external fragmentation.

   (b) Explain about page replacement technique.

   (c) Describe page-based virtual memory and how virtual memory is differ from main memory.

Unit—IV

4. (a) What file access pattern is particularly suited to chained file allocation on disk ?

   (b) Mention the different file attributes and file types and explain.

   (c) What are the structures used in file system implementation ?

Unit—V

5. (a) List *two* examples of deadlocks that are not related to a computer system environment.

   (b) Discuss resource pre-emption combined approach to deadlock handling.

   (c) Explain the Banker's algorithm for deadlock avoidance.