

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.

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- (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.