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Roll No.

PAPER ID—14531

B.C.A. EXAMINATION, 2023

(Third Semester)

INTRODUCTION TO OPERATING SYSTEM

Code : BCA-201

Time : 3 Hours

Maximum Marks : 80

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory.

1. (a) What is multi user operating systems ?
- (b) Write a short note on process state.

- (c) What is dead lock ?
- (d) What is Starvation ? How can it be solved ?
- (e) Why need disk scheduling in operating system ?
- (f) Explain concurrent processing.
- (g) Compare multiprogramming and multiprocessing.
- (h) What is virtual memory ? 8×2=16

Unit I

2. (a) What is operating system ? Explain its need and function. 12
- (b) Explain operations on process. 4
3. (a) Explain Process state diagram and importance of PBC in a program execution. 12

(b) What is Real time or Distributed operating system ? 4.

Unit II

4. (a) What is the main advantage of using deadlock detection instead of prevention or avoidance ? 10
(b) What is FCFS scheduling algorithm ? 6
5. (a) What is round robin algorithm ? 8
(b) Explain banker algorithm. 8

Unit III

6. What is the importance of paging and segmentation in memory management ? Explain with diagram. 16
7. Explain different page replacement algorithms. 16

Unit IV

8. (a) List file access methods used in OS.
(b) Explain Importance of Disk Scheduling in Operating System. 16
9. Give a note on Disk scheduling : FCFS, SSTF, SCAN, C-SCAN. 16