

Roll No.

(05/25)

14382

B.A./B.Sc. EXAMINATION

(For Batch 2021 to 2023 Only)

(Second Semester)

OPERATING SYSTEM

CS-22

Time : Three Hours Maximum Marks : $\begin{cases} \text{B. A. : 20} \\ \text{B. Sc. : 40} \end{cases}$

Note : Attempt *one* question from each Unit.

Q. No. 1 is compulsory. All questions carry equal marks. (For B. Sc. Students, each question carries 8 marks and for B. A. students each question carries 4 marks.

1. B.Sc. Students attempts all the Eight parts in this question and B.A. Students attempt any *four* parts. Each part carries 1 mark.

- (i) What are components of Operating System ?
- (ii) Define Swapping.
- (iii) What is System call ?
- (iv) Define process States.
- (v) What is page replacement ?
- (vi) Define method of deadlock handling.
- (vii) What is file system ?

Unit I

- 2. What is Operating System and its characteristics ? Write different operating system services.
- 3. (a) What is Virtual Memory ? Explain.
(b) What is Paging ? What is Page Table ?

Unit II

- 4. What is Process ? Give the difference between a process and a program. Explain the Process State transition diagram.

5. (a) Define CPU scheduling and levels of scheduling.
- (b) Describe any *two* CPU Scheduling Algorithms.

Unit III

6. What is Deadlock ? List the conditions that lead to deadlock. How Deadlock can be prevented ?
7. (a) Define Techniques for Device Management.
- (b) Explain disk scheduling and various disk scheduling methods.

Unit IV

8. Define the various file access and allocation methods in brief.
9. (a) Define file concepts and access methods.
- (b) Differentiate between Logical file system and Physical file system.

