

B.Sc. (Pass) 5th Semester Examination,

November-2023

INFORMATION TECHNOLOGY

Paper-P-5.1

Operating System

Time allowed : 3 hours ] [ Maximum marks : 40

*Note : Attempt five questions in all, Question No. 1 is compulsory. In addition to compulsory question, attempt four questions selecting one from each unit.*

**1. Compulsory Question :**

- (a) What is the need of operating system?
- (b) What is fragmentation?
- (c) What is logical address?
- (d) Discuss the purpose of Grouping.

**Unit-I**

2. What is Operating System ? Explain various types of operating system in detail.

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3. Describe the following :

- (a) Process and process states with diagram
- (b) System Calls

**Unit-II**

4. What is Deadlock ? Explain various methods for handling deadlock.
5. Define the following :

- (a) FCFS algorithm
- (b) Round Robin algorithm

**Unit-III**

6. Explain the following :

- (a) Demand Paging
- (b) Thrashing

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7. What is Page replacement ? Explain page replacement algorithm briefly ?

#### **Unit-IV**

8. Define file system structure. Explain various types of file access methods.
9. Explain the structure of disk. Also discuss SCAN and C-SCAN disk Scheduling Algorithms.

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