

**Bachelor of Science (B.Sc.I.T.) Semester—II (C.B.S.) Examination**

**OPERATING SYSTEMS**

**Paper—III**

Time : Three Hours]

[Maximum Marks : 50

- Note :—** (1) **ALL** questions are compulsory.  
 (2) Draw neat and labelled diagram wherever necessary.

**EITHER**

1. (a) Explain the following terms :
  - (i) Multiprogramming
  - (ii) Time sharing. 5
- (b) Explain the process states in operating system with well labelled diagram. 5

**OR**

- (c) Explain the Round-Robin scheduling algorithm. 5
- (d) Differentiate between process and threads. 5

**EITHER**

2. (a) What is deadlock ? What are the conditions for occurring dead lock ? 5
- (b) Explain the deterministic modeling of performance comparison. 5

**OR**

- (c) What is deadlock ? Explain prevention of deadlock. 5
- (d) What is resource allocation graph ? Explain with example. 5

**EITHER**

3. (a) Write in brief multiple partition memory management with advantages and disadvantages. 5
- (b) Write short notes on :
  - (i) Compaction
  - (ii) Paging. 5

**OR**

- (c) Distinguish between logical organization and physical organization of memory. 5
- (d) What is protection ? Explain protection in memory management requirements. 5

**EITHER**

4. (a) Write short note on RAID. 5
- (b) Explain disk space management. 5

**OR**

- (c) Write in brief Disk I/O Structure. 5
- (d) Write a short note on digital signature. 5

5. Attempt **all** :

- (a) Define FCFS, CPU scheduling algorithm. 2½
- (b) Explain Hold and Wait conditions. 2½
- (c) Write advantages and disadvantages of Internal and External fragmentation. 2½
- (d) Define user authentication methods. 2½