

Bachelor of Computer Application (B.C.A.) Semester-I (C.B.S.) Examination**OPERATING SYSTEMS****Paper—V**

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (a) What is a thread ? Explain the concept of multithreading with a suitable example. 5
- (b) Explain schedulers and type of schedulers in detail. 5

OR

- (c) Describe Round Robin CPU scheduling algorithm. 5
- (d) What is Micro Kernel ? Explain its architecture and benefits. 5

EITHER

2. (a) Explain mutual exclusion in detail. 5
- (b) What is deadlock ? Explain resource allocation graph. 5

OR

- (c) Explain the methods for recovery from deadlock. 5
- (d) Explain Hold and Wait condition in brief. 5

EITHER

3. (a) Write short notes on :
 - (i) Paging
 - (ii) Compaction. 5
- (b) Explain the concept of segmentation with paging. 5

OR

- (c) What is swapping ? Explain swapin and swapout process with well labelled diagram. 5
- (d) Explain single partition allocation mechanism with example. 5

EITHER

4. (a) Explain I/O buffering. Why is it necessary ? What are the different types of buffers ? 5
- (b) Explain the concept of file directories. 5

OR

- (c) Write notes on :
 - (i) RAID
 - (ii) Disk Cache. 5
- (d) Explain various file accessing methods. 5

5. Attempt all :

- (a) Explain process creation. 2½
- (b) Explain queuing analysis. 2½
- (c) Explain memory management requirement. 2½
- (d) Explain cryptography. 2½