

KNT/KW/16/5243

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 well labelled diagrams wherever necessary.

EITHER

1. (a) Explain the structure of Operating System. 5
- (b) What is Process ? Explain different process states. 5

OR

- (c) Explain :
 - (i) Concurrent Process
 - (ii) Multithreading. 5
- (d) Explain FCFS (First Come First Served) CPU Scheduling algorithm with example. 5

EITHER

2. (a) Explain :
 - (i) Deterministic modelling
 - (ii) Queuing analysis. 5
- (b) What is Resource allocation graph ? Explain. 5

OR

- (c) What is deadlock ? Explain the conditions for deadlock. 5
- (d) Explain the methods for recovery from deadlock. 5

EITHER

3. (a) Explain :
 - (i) Logical Vs Physical address space
 - (ii) Internal Vs External fragmentation. 5
- (b) Explain the different memory management requirements. 5

OR

- (c) Explain single partition allocation mechanism with example. 5
- (d) Explain the concept of paging. 5

EITHER

- 4. (a) Explain I/O buffering mechanism. 5
- (b) Explain Disk Cache. 5

OR

- (c) Explain cryptography in detail. 5
 - (d) Explain the concept of file directories. 5
5. Attempt **all** :
- (a) Explain different types of schedulers. 2½
 - (b) Explain Dead lock detection. 2½
 - (c) Explain dynamic linking. 2½
 - (d) Explain Record blocking. 2½