Bachelor of Science (B.Sc. I.T.) Semester–II Examination

OPERATING SYSTEMS

Paper–III

Time : Three Hours] [Maximum Marks : 50

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

(2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (a) Define process. Explain process states using well labelled diagram. 5

(b) What is CPU scheduling ? Explain round robin scheduling with suitable example. 5

OR

(c) List and explain characteristics of modern operating system. 5

(d) Draw and explain life cycle of thread. 5

EITHER

2. (a) Write a note on "Deterministic modeling and queuing analysis". 5

(b) Explain resource allocation graph with example. 5

OR

(c) Explain banker's algorithm for deadlock avoidance. 5

(d) List and explain various methods for dead lock recovery. 5

EITHER

3. (a) Explain concept of segmentation with paging. 5

(b) What is swapping ? Explain swap in and swap out process with well labelled diagram. 5

OR

(c) Explain the method of multiple partition memory management. 5

(d) Write a short note on 'relocation and protection'. 5

EITHER

4. (a) Write short notes on :

(1) Digital Signature.

(2) Biometric authentication. 5

(b) List the various file allocation methods and explain any two of them. 5

OR

(c) What is buffering ? Explain various types of buffering. 5

(d) Explain the concept of cryptography in detail. 5

5. (a) Differentiate between process and thread. 2½

(b) Explain circular wait condition with example. 2½

(c) Write short note on 'Dynamic loading'. 2½

(d) Write short note on 'Record blocking'. 2½