NKT/KS/17/5131

Bachelor of Science (B.Sc.) Semester—III (C.B.S.) Examination

COMPUTER SCIENCE (Operating Systems)

Paper–II

Time : Three Hours] [Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.
(2) Draw neat labelled diagram wherever necessary.

EITHER

1. (a) Explain the structure of operating system. List the characteristics of modern operating system. 5
   (b) What is thread ? Explain multithreading in detail. 5

   OR

   (c) What is CPU scheduling ? Explain round robin scheduling in detail. 5
   (d) Define process. Explain the different states of process. 5

   EITHER

2. (a) Explain the resource allocation graph with example. 5
   (b) Discuss various methods for deadlock recovery. 5

   OR

   (c) Write notes on :
   (i) Queuing analysis (ii) Simulators. 5
   (d) Is deadlock prevention possible ? If yes then write prevention methods. 5

   EITHER

3. (a) List multiple partition memory management schemes and explain any one with example. 5
   (b) Explain segmentation with paging. 5

   OR

   (c) Write a note on dynamic loading and dynamic linking. 5
   (d) Explain :
   (i) Relocation (ii) Protection. 5

   EITHER

4. (a) Explain single, double and circular buffering. 5
   (b) Write short notes on :
   (i) Digital signature (ii) Cryptography. 5

   OR

   (c) What is RAID ? Explain its different levels. 5
   (d) List different file allocation methods and explain any two. 5
5. (a) Explain short term on medium term scheduler. 2½
   (b) Explain Hold and Wait condition with diagram. 2½
   (c) Write short note on shared pages. 2½
   (d) Write short note on physical identification. 2½