NKT/KS/17/5304

Bachelor of Science (B.Sc. I.T.) Semester—II (C.B.S.) 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 well labelled diagrams wherever necessary.

EITHER

1. (A) Explain various functions of Operating System. 5

(B) What do you mean by CPU scheduling ? Explain FCFS scheduling. 5

OR

(C) What is thread ? Describe life cycle of a thread. 5

(D) Explain various characteristics of modern operating system. 5

EITHER

2. (A) What is a Dead Lock ? Explain its conditions. 5

(B) Write short notes on :

(i) Queuing analysis

(ii) Simulators. 5

OR

(C) Write short notes on :

(i) Multilevel Queue Scheduling

(ii) Multilevel feedback Queues. 5

(D) What is Dead Lock Detection and Recovery ? Explain. 5

EITHER

3. (A) What is logical and physical address space ? Explain. 5

(B) Explain various memory management policies. 5

OR

(C) Differentiate between paging and segmentation. 5

(D) What are the different methods that improve the main memory utilization ? Explain. 5

EITHER

4. (A) What is RAID ? Explain RAID Level ‘zero’ with advantages and disadvantages. 5

(B) Explain Disk Cache in detail. 5

OR

(C) Write short note on record blocking. 5

(D) What is Cryptography ? Explain secret-key cryptography. 5

5. Attempt **all** :

(a) Explain different types of schedulers 2½

(b) How a deadlock can be prevented ? 2½

(c) Write a short note on compaction. 2½

(d) Write a note on Digital Signature. 2½