TKN/KS/16–5846

Third Semester B. Sc. Examination

COMPUTER SCIENCE

Paper – II

(Operating Systems)

Time : Three Hours] [Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.
(2) Draw neat and labeled diagram wherever necessary.

EITHER

1. (a) Discuss characteristics of modern operating system. 5

(b) Explain SJF CPU scheduling algorithm with example. 5

OR

(c) Explain long term, short term and medium term scheduler with example. 5

(d) Explain different states of process. 5

EITHER

2. (a) Write short note on : Resource Allocation Graph. 5

(b) Explain :-

(i) Multilevel Feedback Queues

(ii) Multilevel queue scheduling. 5

OR

(c) Discuss conditions which may lead to deadlock the system. 5

(d) Write Banker's algorithm. Consider suitable example to explain how deadlock can be avoided by using Banker's Algorithm. 5

EITHER

3. (a) Explain fixed equal multiple partition memory management scheme with two advantages and disadvantages. 5

(b) Explain paging with example. 5

OR

(c) Explain :

(i) Swapping.

(ii) Relocation. 5

(d) Explain segmentation with example. 5

EITHER

4. (a) Write short note on :-

(i) Digital signature.

(ii) Cryptography. 5

(b) Explain Grouped Indexed File allocation method with example. 5

OR

(c) How many levels does a RAID support ? Explain them. 5

(d) Explain following disk scheduling algorithm. 5

(i) FCFS

(ii) SSTF

5. (a) Explain role of dispatcher. 2½

(b) Write short note on Simulator. 2½

(c) Explain compaction. 2½

(d) Explain following user authentication technique. Physical Identification. 2½