Roll No…… Total Pages: 3

1929

BCA/M-18

OPERATING SYSTEM-II

Paper: BCA-362

Time: Three Hours Maximum Marks: 80

Note: Attempt five questions in all, selecting at least one question from each Unit.Q. No. 1 is compulsory.

Compulsory Question

1. (a) Discuss the Dining-Philosophers problem and its solution.
   (b) Explain remote file transfer.
   (c) How do you grant and revoke permissions to Linux files and directories? Explain with suitable examples.
   (d) Explain the three modes of vi and how can you switch from one mode to another?

UNIT-I

2. (a) What is a semaphore? How can semaphores be implemented? Discuss various types of semaphores along with their usages.
   (b) Explain Readers-Writers problem along with its solution in detail.

2. Discuss the following :
   (a) Single-Level Directory
   (b) Two-Level Directory
   (c) Tree-Structured Directory
   (d) Acyclic-Graph Directory
   (e) General Graph Directory.

UNIT-II

3. What is disk scheduling? Discuss FCFS, SSTF, SCAN and LOOK disk scheduling algorithms. What are the criteria for selection of disk scheduling algorithms?

5. (a) What are distributed operating systems? What are their advantages?
   (b) Discuss data migration and process migration in distributed operating systems.

UNIT-III

6. (a) Explain the architecture and features of Linux.
   (b) Discuss various process oriented commands in Linux.
7. (a) Explain any eight directory oriented commands in Linux using examples.

(b) What do you mean by online and offline communication in Linux? Discuss various communication oriented commands in Linux.

UNIT-IV

8. (a) Discuss various types of file systems in Unix. Also explain the procedure to create a new file system.
   (b) Explain various job control commands in Linux using command formats and examples.
9. (a) Write a menu driven shell script to convert all the capital letters in a file to small case letters and vice versa.
   (b) Discuss various control structures used in shell programming using suitable examples.