Roll No. .....
Printed Pages : 2

25/4/19

1951

BCA / M-19
OPERATING SYSTEM-II
Paper–BCA-362

Time allowed : 3 hours] *[Maximum marks : 80*

Note : *Attempt **five** questions in all, selecting **one** from each unit. **Question No. 1 is compulsory.***

Compulsory Question

1. (a) What are the issues in directory implementation ? Discuss. 4

   (b) Discuss Disk Structure. 4

   (c) Explain the Linux support for offline and online communication. 4

   (d) Discuss chmod command in Linux using examples. 4

Unit–I

2. (a) What is critical section ? Explain the two-process solution for critical section problem. 8

   (b) What do you understand by directory system ? Explain various directory structures in detail. 8

3. What is a semaphore ? How Bounded-Buffer, Reader-Writer and Dining-philosopher classical synchronization problems can be solved using semaphores ? 16

Unit–II

4. Discuss the disk scheduling algorithms with suitable examples. Explain the criteria and situation where these algorithms will perform better. 16

5. (a) What are the factors that decide swap-space size ? 6

(b) Discuss remote login, data migration and computation migration. 10

Unit–III

6. (a) Discuss the features of Linux and compare it with other operating systems. 8

(b) Explain the Linux commands that are used for arithmetic operations. 4

(c) How can input and output redirection be done in Linux ? 4

7. (a) Discuss various file and directory related commands in Linux. 10

(b) Explain the system booting and shutdown processes in Linux. 6

Unit–IV

8. (a) Explain the features of a Linux filename. What are various categories of files in Linux ? 7

(b) Discuss the following commands :

(i) at

(ii) batch

(iii) time 9

9. (a) What is a shell script ? Discuss build-in and user-defined variables. 8

(b) Write a shell script to generate first n prime numbers. 8