Roll No. ..... Total Pages : 03

BCA/M-17 1914

OPERATING SYSTEM-II

BCA-362

Time : Three Hours] [Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) Describe Critical Section. 4
   (b) What are the advantages of distributed systems ? 3
   (c) Explain the concept of pipe using exampie. 4
   (d) Describe file attributes in linux. 2
   (e) Explain various modes of Vi. 3

Unit I

2. (a) Write a note on Semaphore Implementation. 7
   (b) Explain the following classical problems of synchronization :
      (i) Bounded buffer problem 3
      (ii) The readers and writers problem 3
      (iii) The Dining philosophers problem. 3

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3. (a) What do you mean by Critical Regions and Conditional Critical Regions ? What are its limitations. 8
   (b) Explain various methods for Recovery of lost data stored on the harddisk. 8

Unit II

4. (a) Explain the following disk scheduling algorithms by using example :
      (i) SSTF Scheduling 3
      (ii) C-Scan Scheduling 3
      (iii) Look Scheduling. 3
   (b) Write short notes on the following :
      (i) Remote login 3
      (ii) Remote file Transfer. 4

5. (a) Explain Swap-space management in detail. 8
   (b) Write short notes on the following :
      (i) Data Migration 4
      (ii) Computation Migration. 4

Unit III

6. (a) Explain various features of Linux. 4
   (b) What do you mean by Linux distribution ? Explain any *six* linux distribution. 6

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(c) Explain the following commands in Linux : 6

(i) date

(ii) who

(iii) bc.

7. (a) Explain with example at least six communication-oriented commands. 8

(b) Explain the following commands in Linux : 8

(i) Ps

(ii) Cd

(iii) Vdir

(iv) Cat.

Unit IV

8. (a) Describe the structure of file system in Linux. Also explain file system types in Linux. 6

(b) Explain different disk related commands in Linux. 10

9. (a) Explain the syntax of while, until and for loops. 8

(b) Write a program to check whether a given number is prime number or not. 8