

BCA-13

December - Examination 2016

BCA Pt. III Examination**Operating System II****Paper - BCA-13****Time : 3 Hours]****[Max. Marks :- 100**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A**10 × 2 = 20**

(Very Short Answer Questions)

Note: Answer **all** questions. As per the nature of the question you delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) If a process is executing in its critical section, then no other processes can be executing in their critical section. This is known as.
 - (ii) What is Firmware?
 - (iii) What is Dispatcher?
 - (iv) Name five scheduling criteria's.
 - (v) Name different modes of Distributed Computing.
 - (vi) What is Context Switch?

- (vii) When two or more processes attempt to access the same resource simultaneously. Name the problem which occurs.
- (viii) Name features of Concurrency Control in Distributed Computing Environment.
- (ix) What “sudo” command do in Linux?
- (x) Why the “root” is called root?

Section - B**4 × 10 = 40**

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

- 2) Differentiate between a process and a programme.
- 3) What are the types of files system in the Linux?
- 4) What is the difference between listing the contents of directory play with ls -l and ls -L?
- 5) How do you do number comparison in shell scripts? Give an example.
- 6) Differentiate between su, sudo and gksu.
- 7) Explain chmod command with syntax and example. A file has got protection 744 (octal). What protections does it really have?
- 8) Discuss NIS server and client in brief. Write steps of implementing NIS server.
- 9) Explain the features of Concurrency Control in Distributed Computing Environment.

Section - C**2 × 20 = 40**

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each carries 20 marks.

- 10) What are the desirable issues in IPC by Message Passing and Synchronization?
- 11) What are the main issues involve in the design of a distributed system?
- 12) Write script of determine whether given file exist or not, file name is supplied as command line argument, also check for sufficient number of command line argument.
- 13) Suppose that a disk drive has 500 cylinders, numbered 0 to 499. The drive is currently serving a request at cylinder 123, and the previous request was at cylinder 105. The queue of pending requests, in FIFO order, is

86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130

Starting from a current head position, what is the total distance (in cylinders) that the disk arm moves to satisfy all the pending requests, for each of the following disk-scheduling algorithms?

- (i) FIFO (ii) SSTF (iii) SCAN (iv) C-SCAN
