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BCA-13

December - Examination 2019

BCA Pt. III Examination

Operating System II

Paper - BCA-13

Time : 3 Hours] **[Max. Marks :- 70**

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

Section - A $7 \times 2 = 14$

(Very Short Answer Questions)

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

1. i. What do you mean by Open Source Software? Give an example.
   ii. What do you mean by Fault Tolerance?
   iii. What is 3-tier architecture?
   iv. Give any two differences between Distributed Systems and Parallel Computing.
   v. A file has got protection 744 (octal). What protections does it really have?
   vi. List four system issues in the Distributed File System.
   vii. What is sudo?

Section - B $4 \times 7 = 28$

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 7 marks.

2. What is the difference between Password File & Shadow Password File? Explain with suitable example.

3. Write Script, using case statement to perform basic math operation as follows + addition, - subtraction, x multiplication, /division.

4. Differentiate between Centralised approach and Fully Distributed Approach.

5. Explain superblock, Inode, and Indirect block in detail with example.

6. What is Buffering? Enlist the different type of buffering with their brief functionality.

7. What are the desirable issues in IPC by Message Passing & Synchronization?

8. What are stub and skeleton and why are they needed in remote procedure calls?

9. Write a short note on FAT.

Section - C $2 \times 14 = 28$

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 14 marks.

10. Considering an ordered disk queue with respects evolving tracks 86,1470, 913,1774,948,1509,1022,1750, 130. If the read/write head is initially at track 123. What is the total distance that the disk arm moves to satisfy all the pending requests for FCFS, SSTF?

11. Explain the advantages and disadvantages of Linux in detail. Also, discuss some basic commands in Linux with a suitable example.

12. Explain different features of Real-Time Kernel. Also, Explain in brief the implementation components of RTOS.

13. Why we need compression? Explain various image and video compression in detail.