BCA-13

December - Examination 2017

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 $10 \times 2 = 20$

(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)   How the time is set and shown in Linux?

   (ii)   Give advantages of distributed memory management.

   (iii) Define rotational latency.

   (iv)   What is the use of the sticky bit?

   (v)   State the features of good distributed file system.

   (vi)   What is kernel in Linux Operating system?

   (vii) What do you understand by shell parameters?

   (viii) Give command listing the content of directory.

(ix) What is daemon?

(x) Name two different type of shell used in Linux OS.

Section - B $4 \times 10 = 40$
(Short Answer Questions)

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

2) What do you understand by NFS and NIS? Explain in brief about these services.

3) Explain NTFS (New Technology File System) used in Windows OS.

4) What is compression? Explain video compression.

5) Explain chmod command with syntax and example. A file has got protection 744 (octal). What protections does it really have?

6) Explain the RPC (Remote Procedure Call) model with suitable diagram.

7) What are the desirable characteristics of RTOS?

8) What are various fields in the / etc / passwd file?

9) Explain the good features of Message Passing System.

Section - C $2 \times 20 = 40$
(Long Answer Questions)

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

10) Define Real Time System. Explain the different class of Real Time System.

11) Write script, using case statement to perform basic math operation as follows:

+   Addition

−   Subtraction

×   Multiplication

/   Division

12) 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

86, 1470, 913, 1774, 948, 1509, 1022, 170, 130.

Starting from the 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 (Elevator))

13) Consider the set of process with the length of CPU burst time given in (ms)

Process	Burst Time	Priority
P1	23	5
P2	52	2
P3	35	3
P4	10	1
P5	04	2
P6	12	3

Process are assumed to have arrived in order P3, P1, P4, P2, P5 and P6 at time 0 ms.

i) Draw Gnatt chart illustrating the execution of the process using

   (a) FCFS

   (b) SJF (preemptive)

   (c) Priority scheduling

   (d) RR algorithm (time quantum = 6 ms)

ii) Calculate the turnaround time and average waiting time for each process.

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