PGDCA / MSCCS-01 / MCA-101

June - Examination 2016

MSCCS / PGDCA - MCA I Year Examination

Computer Fundamentals and System Software

Paper - PGDCA / MSCCS-01 / MCA-101

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) List the characteristics of computers.

   (ii) Name some system software.

   (iii) What do you mean by refresh rate of a monitor?

   (iv) Draw the truth table of XOR-gate.

   (v) What is the purpose of system call?

   (vi) What do you mean by critical section?

   (vii) Convert $(1011010)_2$ into $(?)_{16}$

   (viii) Define distributive law in Boolean Algebra.

(ix) What is unicode?

(x) What do you mean by hard copy?

Section - B $\qquad$ $4 \times 10 = 40$

(Short Answer Questions)

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

2) Compare primary and secondary memory. Also give example.

3) Explain the working of modem with neat diagram.

4) Write short note on Optical Character Recognition (OCR) Device.

5) What is EBCDIC code? How it is different than ASCII code?

6) What do you mean by process? Discuss various states of a process and state transition.

7) Write short note on Demand Paging.

8) What do you mean by deadlock? Also write necessary conditions of deadlock.

9) Discuss various types of printers.

(Contd.)

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) What do you mean by open source software? Explain the file system of Linux.

11) Consider the following set of process, with the arrival times and the CPU burst times given in milliseconds.

Process	Arrival time	Burst time
P1	0	5
P2	1	3
P3	2	3
P4	4	1

What is the average turnaround time for these processes with the preemptive shortest remaining processing time frist algorithm?

12) What is MS-DOS? Discuss various internal and external commands in MS-DOS.

13) What are the various methods to simplify the Boolean expression? If P, Q, R are Boolean variables, then simplify $(P + \overline{Q}) (P\overline{Q} + P{\cdot}R) (\overline{P} + \overline{R} + \overline{Q})$.

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