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MCA 1st Semester Examination

Fundamentals of IT and Digital Electronics (N.S.)

MCA-102

Time : 3 Hours   Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt one question each from the sections A, B, C and D. Each question is of 12 marks. Section E is compulsory and carries 12 marks in all.

SECTION - A

1. (a)   Discuss in brief the characteristics of Computers.

    (b)   Discuss briefly any two multimedia file formats.   (12)

2. What is the difference between internal and external DOS commands? Discuss any five internal and five external commands giving the purpose, syntax and options available.
                                                                       (12)

SECTION - B

3. Given the Boolean function: F = xy'z + x'y'z + xyz

    (a)   List the truth table of the function.

    (b)   Draw the logic diagram using the original Boolean expression.

    (c)   Simplify the algebraic expression using Boolean algebra.

    (d)   List the truth table of the simplified expression and draw the logic diagram for the same.   (12)

4. Discuss in detail the Edge-triggered D flip-flop.   (12)

SECTION - C

5. (a) What is the use of headers and footers in a word document? How different headers and footers can be set for different sections with in the same document?

   (b) What are Tables in word? Explain how a row and column can be added to and deleted from a table, considering that table already had some data values stored in it.

                                        (12)

6. What are the different views available in Power Point? Discuss the purpose of each type of view.   (12)

SECTION - D

7. What is a Function? How a function is used in MS Excel? Discuss various statistical functions used in MS Excel.   (12)

8. What do you mean by Intellectual property rights? What are the legal provisions for intellectual property rights? Discuss with special reference to Indian IT Act.   (12)

SECTION - E

9. (a) What is the difference between primary and secondary storage?

   (b) How disk partitions are created in Windows?

   (c) Why computers use Binary number system?

   (d) What is the difference between combinational and sequential circuits?

   (e) How many flip-flops are needed to construct a shift register capable of storing decimal number upto 64?

   (f) Construct the truth table and circuit of full adder.

   (g) What are the uses of Auto-correct?

   (h) What is the purpose of creating a presentation?

   (i) What do you mean by discrete and continuous ranges?

   (j) How discrete ranges can be selected? Explain.

   (k) How cells and worksheets can be protected?

   (l) What are the applications of IT in banking? (1×12=12)