15598

MCA 1st Semester Examination

Fundamentals of IT and Digital Electronics (CBS)

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 section A, B, C and D. Section E is compulsory and carries 12 marks in all.

SECTION - A

1. (a) What are the various parts of a computer? Draw a block diagram of such a Computer.   (6)

   (b) What is the main use of an operating system? Name two operating system for computer.   (6)

2. (a) What is Disk Operating System? Write any five DOS commands with syntax.   (6)

   (b) What are the most commonly used application software in computer?   (6)

SECTION - B

3. (a) Construct a logic circuit diagram and truth table for the full adder.   (6)

   (b) Describe how a JK flip flop can be converted to a D flip flop with an inverter between the J and K inputs.   (6)

4. (a) Draw the block diagram of a 4 to 1 multiplexer and explain its operation by means of a function table.   (6)

[P.T.O.]

   (b) Simplify the Boolean function F in sum-of products and product-of-sum form

   $F(A, B, C, D) = \Sigma$ (0, 2, 4, 5, 6, 7, 8, 10, 13, 15)   (6)

SECTION - C

5. (a) What is word processing? What are the facilities provided by a word processor?   (6)

   (b) What is the difference between Animation and Transition? Which view can be used to insert and test the Animation effects and Transition effects?   (6)

6. (a) What are headers and footers? Explain the steps to add headers and footers in a doc file.   (6)

   (b) What are the steps to create a presentation using MS Power Point 2007?   (6)

SECTION - D

7. (a) How do we sort data in Spreadsheet/ Excel? Explain with steps.   (6)

   (b) Write formulas for the operations (i) - (iv) based on the spreadsheet given below along with the relevant cell address: (6)

	A	B	C	D	E	F	G
1	S.No.	Name	Science	Maths	Computers	Total	Average
2	1	Sonika	70	80	87	—	—
3	2	Shruti	90	98	89	—	—
4	3	Neelu	90	90	98	—	—
5	4	Riya	60	76	79	—	—
6	5	Asha	65	74	84	—	—
7	Max				—		
8	Total		—				

(i) To calculate the Total Marks as sum of Science, Maths & Computers for each student and display them in column F.

(ii) To calculate the average marks for each student and display them in column G.

(iii) To calculate the highest marks in Computers and display it in cell E7.

(iv) To calculate the total number of students appearing for the Science test and display it in cell C8.

8. (a) What is a chart and explain different steps for inserting a chart in Excel. (6)

(b) Write short note on various issues of Intellectual property rights. (6)

SECTION - E

9. Write short note on:

(a) Firewall.

(b) TTL and ECL.

(c) Encoder.

(d) Mail Merge.

(e) Charts in worksheets.

(f) Indian IT Act (2×6=12)