BT-I/D-21   **41013**

FUNDAMENTALS OF COMPUTERS AND PROGRAMMING IN C
CSE-101E

Time : Three Hours]   [Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Define digital computers. What is the difference between a computer and human being ?   **5**

    (b) Describe the following terms :   **5×3=15**

        (i)   RAM   (ii) ROM

        (iii) PROM   (iv) EPROM

        (v)   Dot matrix printers.

2. (a) Perform the following conversions :   **5×3=15**

        (i) $(45215)_5 = (?)_{10}$

        (ii) $(1101011101.101)_2 = (?)_8$

        (iii) $(A65D)_{16} = (?)_8$

        (iv) $(58721.124)_{10} = (?)_{16}$

        (v) $(7645.214)_8 = (?)_{10}$

(b) Why is a line printer preferred over a dot matrix printer ? If you have an image to be printed, which out of these two will you use and why ? **5**

Unit II

3. Differentiate machine language, assembly language and high-level languages. Also write the advantages and limitations of assembly language over high-level languages.

20

4. Explain the following : **20**

   (a) Emails   (b) FTP

   (c) Debuggers.

Unit III

5. (a) Define keywords. How many keywords are used in C-language ? Write the list of keywords used in C-language. **12**

   (b) Define switch statement. Write a program to design a calculator, which performs the basic arithmetic operators by using switch statement. **8**

6. (a) What are the differences between call by value and call by reference ? Explain the concept of call by value arguments and call by reference arguments by using suitable example. **12**

(b) Explain the operator precedence and associativity with a example. **8**

Unit IV

7. (a) How does structure differ from an array and union ? Write a program in C language which reads and display the name, age, designation, date of birth and salary of an employee by using structure. **12**

(b) Write a program in C language to copy a string in to another string. **8**

8. Explain the following file functions with examples : **5×4=20**

(a) fell()   (b) fread()

(c) fseek()   (d) rewind()

(e) feof().