MCA/M-15 **10312**

PROBLEM SOLVING THROUGH C

Paper–CS-DE-12

Time Allowed : 3 Hours] [Maximum Marks : 80

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) What is the difference between Source program and Object program?

   (b) When is it advisable to use Unsigned integer over Signed integer?

   (c) What is the use of Register storage class?

   (d) Write a brief note on the library functions used in dynamic memory management.

UNIT–I

2. (a) What is the difference between Syntax error and Semantic error? Explain each using suitable examples.

   (b) What is a Decision table? What are its merits and demerits over flow chart? Draw a decision table to find the largest of three number.

10312/K/53/1,800 P. T. O.

3. (a) Define Structured programming? What are its rules? Discuss the advantages of structured programming.

(b) Differentiate between the following :

(i) Lexical analysis and Syntax analysis

(ii) Compiler and Interpreter.

UNIT-II

4. (a) What is the difference between hierarchy of operators and associativity of operators? Discuss the operators in C language having the associativity right to left.

(b) What do you understand by Bitwise operators? Differentiate between << and >> operators using suitable examples.

5. (a) What are the different data types available in C language? Discuss.

(b) Write a note on the use of ternary operator in C language.

UNIT-III

6. What is the difference between Break and continue statement? Write a program in C language to generate the prime numbers upto 100 except those which are greater than 40 and less than 60.

7. What is a Function? What is the difference between call by value and call by reference parameter passing techniques? Write a recursive function to compute factorial of given integer.

UNIT-IV

8. What is a String? Write a function in C to return the number of vowels present in a string.

9. (a) What is a Pointer? Write a function to swap the value of two integer variables.

(b) What is a Structure? How is a structure declared? How is it passed to a function? Discuss using suitable examples.