OCAME/D-20   **24033**

PROGRAMMING IN C

Paper–MCA-14-11

Time allowed : 3 Hours   *Maximum Marks : 80*

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

Compulsory Question

1. (a) Is 'main' a keyword? Explain.

   (b) What will be the output of the following program?

   ```
   void main()
   {
           char str="C Programming";
           clrscr();
           puts(str);
           getche();
   }
   ```

(iii) Why goto statement is avoided?

(iv) Which are the possible arithmetic operations with pointers?

(v) Differentiate between Structure and Union.

(vi) Comment on the need of Header files.

(vii) Differentiate between Break and Continue.

(viii) Is it possible to create Dynamic arrays in C? If yes, how?   8×2=16

UNIT-I

2. (i) Write and explain structure and memory layout of a 'C' program with the help of an example.   10

   (ii) How, constants and variables are declared in 'C'? Explain. Write the rules for naming variables.   6

3. Draw a table of various operators alongwith their hierarchy and associativity. Explain each operator in brief with suitable examples.   16

UNIT-II

4. (i) Write a program in 'C' to generate first n prime numbers. 8

   (ii) Discuss various ways to pass arguments to functions. 8

5. (i) Are there any built-in functions available in C language? If yes, explain any five built-in functions along with their argument type and return type. Give suitable example for each. 8

   (ii) Differentiate between : 8

   (a) while and do-while

   (b) switch and else-if ladder.

UNIT-III

6. Write a program in C to multiply three matrices using function subprograms. 16

7. (i) Write a program in C to check whether an input pattern exists in a given text or not. 10

   (ii) Explain, how pointers can be used in place of arrays using suitable examples. 6

UNIT-IV

8. (i) Explain following macro definitions in 'C' using suitable examples: 10

   (a) define

   (b) ifdef

   (c) pragma directive

   (d) undef

   (e) error.

   (ii) Discuss the purpose of union in C. How can we declare and use union? Explain. 6

9. Write a program in C to read the content of a file. Convert the file contents in capital and display the same on the screen. Also calculate total number of characters and lines. 16