Paper Id: | **206101** | **Roll No:** | | | | | | | | | | | | | |

MCA (INT)
(SEM I) THEORY EXAMINATION 2019-20
PROGRAMMING IN C

Time: 3 Hours   *Total Marks: 70*

N o t e 1. A t t e m p t **a l l** S e c t i o n s. I f r e q u i r e a n y m i s s i n g d a t a; t h e n c h o o s e s u i t a b l y.

SECTION A

1. **Attempt *all* questions in brief.**   **2 x 7 = 14**
   a. What will be the output of the following code
      for(i=1; i<10;i++);
      printf("%d", i);
   b. What is the use of flow chart?
   c. What do you mean by system software and application software?
   d. What is the task of a loader?
   e. What do you mean by formal parameters?
   f. If a = 14 and b= 3, what is the result of a/b in C language?
   g. Declare and initialize a 2 dimensional array during compile time.

SECTION B

2. **Attempt any *three* of the following:**   **7 x 3 = 21**
   a. How do-while loop is different from while loop? Give the syntax and working of both the loops.
   b. What are the disadvantages of 1st generation computers?
   c. Draw a flow chart to find the sum of 1 to N.
   d. Write a function to find factorial of a number.
   e. Write a program in C to search a number in a given array of numbers.

SECTION C

3. **Attempt any *one* part of the following:**   **7 x 1 = 7**
   (a) Write a program in c to count the number of characters in a string.
   (b) What do you mean by type casting? Illustrate implicit type casting and explicit type casting with suitable example.

4. **Attempt any *one* part of the following:**   **7 x 1 = 7**
   (a) Define algorithm. What are the attributes of a good algorithm?
   (b) Write a program in C to print the pattern
       A
       A B
       A B C
       A B C D
       A B C D E

5. **Attempt any *one* part of the following:**   **7 x 1 = 7**
   (a) **"A variable is declared as static".** Illustrate with example the behavior of the variable.
   (b) Write a program in C to print the transpose of a matrix.

6. **Attempt any *one* part of the following:**   **7 x 1 = 7**
   (a) Differentiate between compiler and interpreter.
   (b) What do you mean by precedence and associativity of operators? Explain with a suitable example.

7. **Attempt any *one* part of the following:**   **7 x 1 = 7**
   (a) Write a function to check an input number is prime or not. The function should return a value of 1 if the number is prime otherwise it should return 0.
   (b) Write the syntax of switch statement and explain its working. Illustrate with a suitable example.