

**20AA743**

**M.C.A. EXAMINATION, 2021**

(First Semester)

(C Scheme) (Main Only)

MASTER OF COMPUTER APPLICATIONS

MCA105C

Programming in 'C'

*Time : 2½ Hours]*

*[Maximum Marks : 75*

---

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

---

**Note :** Attempt *Four* questions in all. All questions carry equal marks.

1. (a) Name various data types used in C.  
(b) What is a bitwise operator ?  
(c) Write advantages of using a function in C.  
(d) Explain any *two* operations that can be performed on pointer.  
(e) Write uses of library functions.
2. Define a flow chart. Draw a flow chart to find the roots of a quadratic equation.
3. Write the use of the following in C :
  - (i) getchar
  - (ii) putchar
  - (iii) ifdef

- (iv) gets
  - (v) puts
4. Explain the control statements used in C. Differentiate between while and do-while statements.
  5. What is nested if-else statement ? Write an algorithm and a program in C to assign grade to the students as per following conditions :
    - If marks > 90 then grade A
    - If marks > 80 then grade B
    - If marks > 70 then grade C
    - If marks > 60 then grade D
    - If marks > 50 then grade E
    - else grade F.
  6. Define array. How an array is initialized ? Write a program in C to declare an array of 10 number. Enter the values of 10 numbers and sort the array in ascending order.
  7. What are storage classes ? Explain various types of storage classes used in C.
  8. What is a structure ? Explain it by taking a suitable example. How is it different from an array ?
  9. Write a program in C to create a file and write data into it and count numbers of characters entered.