

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

Paper ID [B0102]

(Please fill this Paper ID in OMR Sheet)

MCA (Sem. - 1st)

PROGRAMMING IN C (MCA - 102)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Attempt any one question from each Sections A, B, C & D.
- 2) Section - E is **Compulsory**.

Section - A

(1 × 10 = 10)

- Q1)** What do you mean by the terms algorithm and flowchart? Illustrate their use with the help of suitable examples?
- Q2)** List and explain different types of data types in C? Also differentiate between signed and unsigned data types with reference to range of memory they occupy?

Section - B

(1 × 10 = 10)

- Q3)** What are functions? Differentiate between call by value and call by reference with the help of suitable examples?
- Q4)** Write a C program to read the element of two 3×3 matrices and multiply two matrices.

Section - C

(1 × 10 = 10)

- Q5)** Write a function (using pointer parameters) that compares two integer arrays to see whether they are identical. The function returns 1 if they are identical, 0 otherwise?
- Q6)** Differentiate and compare the working of an array, structure and a union with the help of suitable examples?

Section - D

(1 × 10 = 10)

- Q7)** Write a program that compares two files and returns 0 if they are equal and 1 if they are not.
- Q8)** What do you mean by dynamic memory allocation? Explain the working of following functions with the help of suitable examples :
- Malloc ()
 - Calloc ()
 - Free ()
 - Realloc ()

Section - E

(10 × 2 = 20)

- Q9)**
- a) Differentiate between reserve words and identifiers?
 - b) What are enumerated data types?
 - c) What is sorting?
 - d) What is the role of header files?
 - e) Explain global variable and local variable.
 - f) What do you mean by conditional statements.
 - g) What do you mean by prototype?
 - h) List the various string operations?
 - i) What is the role of return statement?
 - j) What do you mean by recursion?

