

Roll No. ....

Total No. of Questions : 09]

[Total No. of Pages : 02

*www.allsubjects4you.com*  
**MCA (Sem. - 1<sup>st</sup>)**

**PROGRAMMING IN C**

**SUBJECT CODE : MCA - 102(N2)**

**Paper ID : [B0102]**

[Note : Please fill subject code and paper ID on OMR]

**Time : 03 Hours**

**Maximum Marks : 60**

**Instruction to Candidates:**

- 1) Attempt any one question from each Sections A, B, C, and D.
- 2) Section - E is **Compulsory**.
- 3) Use of Non-programmable **Scientific Calculator** is allowed.

**Section - A**

**(1 × 10 = 10)**

- Q1)** Discuss the generalized methodology involved in the problem solving.
- Q2)** What is the range of various data types? Discuss the primary data types in detail.

**Section - B**

**(1 × 10 = 10)**

- Q3)** (a) Write a program in C to sort integer elements of one dimensional array in ascending order.
- (b) List few conditional compilation directives and their functionality.
- Q4)** (a) Write a function that interchange and prints the value of two integers A and B without using any extra variable.
- (b) Define recursion.

**Section - C**

**(1 × 10 = 10)**

- Q5)** (a) What are the two common ways of selecting array elements for processing.
- (b) Differentiate between dynamic and non dynamic data structures.
- Q6)** (a) Explain with example the relationship of one dimensional array with pointers.
- (b) Define enumeration.

**J-719/8129]**

**P.T.O.**

**Section - D**

**(1 × 10 = 10)**

- Q7)** What is meant by random file access? How C implements the concept of random file access.
- Q8)** (a) Write the algorithmic steps for searching a binary search tree.  
(b) Differentiate between exchange selection sorting and selection sorting.

**Section - E**

**(10 × 2 = 20)**

- Q9)**
- a) Compiler.
  - b) Recursive algorithm.
  - c) Bitwise operators.
  - d) Difference between a string and a character.
  - e) Function prototype.
  - f) The functions related to the header file time.h.
  - g) Pointer arithmetic.
  - h) Example of function returning pointer.
  - i) Need of structure initialization.
  - j) Difference between fseek() and ftell().

