

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

MCA (Sem. - 1st)

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.

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)
- Compiler.
 - Recursive algorithm.
 - Bitwise operators.
 - Difference between a string and a character.
 - Function prototype.
 - The functions related to the header file time.h.
 - Pointer arithmetic.
 - Example of function returning pointer.
 - Need of structure initialization.
 - Difference between fseek() and ftell().

