

Roll No.

Total Pages : 2

753105

January 2023

**M.Sc. (Mathematics) - 1st SEMESTER
PROGRAMMING IN C (MATH21-705)**

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Name three types of instructions offered by C language. (1.5)
- (b) What is the Ranges of 2-byte and 4-byte integers? (1.5)
- (c) Write rules for arithmetic instructions in C. (1.5)
- (d) What are the four types of control instructions? (1.5)
- (e) Write down the types of functions in C. (1.5)
- (f) Write down the 3 ways to call a function in C programming. (1.5)
- (g) Storage class signifies four things explain them. (1.5)

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 [P.T.O.]

- (h) Write down the two ways to declare an Array. (1.5)
- (i) Write six uses of structures in C. (1.5)
- (j) What are the differences between a declaration and a definition? (1.5)

PART-B

2. (a) ANSI C supports 3 classes of Data types, Explain them. (10)
- (b) What is more efficient, a switch statement or an if-else chain and why? (5)
3. (a) What is the difference between searching and sorting? (5)
- (b) Describe multi-dimensional Arrays. (10)
4. Write a program to calculate the standard deviation with algorithm. (15)
5. (a) Explain Array of pointers. (5)
- (b) Explain pass by value versus pass by pointers. (10)
6. (a) Explain how to declare structure variables. (10)
- (b) Write down the rules for initializing structures. (5)
7. Explain Array of Structures with the help of example. (15)