

Examination: End Semester
Course Title: Programming with C++
Course Code: MCA21101CR
Semester: First

Paper Type: Core
Max. Marks: 80
Time Allowed: 2 Hrs 30 Min
Min Marks: 32

Section A: Very short answer type (Attempt all questions)

Q No. 1: **2 x 8=16**

- a) What's the difference between variable, constant and a literal?
- b) What are storage classes?
- c) How do we declare a macro in C programming?
- d) What are void pointers?
- e) What is the difference between static and dynamic binding?
- f) What is the use of Protected Access specifier?
- g) What are pure virtual functions?
- h) List one example of a stream error?

Section B: Short answer type (Attempt all questions)

4 x 8=32

Q.No.2: Write a C++ program to add two matrices?

Q.No.3: Write a C++ program to loop from 1 to the number passed as a command line argument?

Q.No.4: Write a C++ program to demonstrate the concept of function overloading?

Q.No.5: With the help of an example show the use of virtual functions ?

Section C: Long Answer type (Attempt any two)

2 x 16=32

Q. No.6 a) Explain the different control structures in C++.

b) Write a recursive function to generate a Fibonacci series till 'n' term ?

Q. No.7 a) With the help of an example show how you can pass a structure as an argument and return type of a function ?

b) Discuss in detail the concept of abstraction and encapsulation ?

Q. No.8 What is operator overloading? Write a program to overload the + operator to add two complex numbers?

Q. No. 9 What are templates ? Show how can we create and use the different types of templates in C++ ?

*****END OF PAPER*****

