

MCA-10/M.Sc.IT-10/MIT(CS)-303
Object- Oriented Programming Through C++
(MCA/M. Sc. IT-11/12/16/17)
3rd Semester, Examination 2019

Time : 3 Hours

Max. Marks : 80

Note : This Paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section- A

(Long-Answer-type questions)

Note : Section 'A' Contains Five (05) Long-Answer type questions of Fifteen (15) marks each. Learners are required to answer any three (03) questions only.

(3 x 15 =45)

1. How Structure programming is differing from object oriented programming?

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(2)

2. Why we use static data member? What are the various properties of static data member? Explain with example.
3. What is diamond problem (ambiguity problem) in inheritance? How can we resolve it?
4. What is operator overloading? What are the rules for operator overloading? Write a program to overload binary + operator.
5. What is Polymorphism? Explain function overloading with example.

Section - B

(Short-Answer-Type questions)

Note : Section 'B' contains eight (08) Short-answer type questions of Seven (07) marks each. Learners are required to answer any Five (05) questions only. **(5x7=35)**

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1. Explain Virtual function and pure virtual function with examples.
2. What is the role of friend functions in Object Oriented Programming? Write a program which shows the use of friend function.
3. Write a program to find average of two numbers with the help of friend function.
4. What is inheritance? Explain different types of inheritance in C++.
5. What is manipulator? Explain with example.
6. Write a program to demonstrate the concepts of array of object.
7. What is virtual base class? Explain with an example.
8. Write a program to illustrate the working of constructor overloading.