# 3ʳᵈ Semester, Examination–2014

## MCA-11/ MSc. (IT) - 12

### (Master of Computer Application/Master of Science in Information Technology)

# MCA-10 / MSc. (IT)-10

## Object Oriented Programming Through C++

**Time :** 3 Hours                **Maximum Marks :** 60

**Note :** The question paper is divided into three sections A, B and C. Give the answer according to the directions given in each section.

### Section-A

### (Long Answer Type Questions)

**Note :** Answer any two questions. Each question carries 15 Marks.

(2×15=30)

1.  (a)  Explain the following characteristics of object oriented programming with example :

    (i)  Polymorphism

    (ii)  Inheritance

(iii)   Modularity

(b)   Differentiate between data encapsulation and data abstraction.

2.   (a)   What is an inline function? Mention its advantage. How are inline functions declared within a class? Give one example.

3.   (a)   What does inheritance mean in C++? When do we use the protected visibility specifier to a class member? Give one example.

(b)   What is a scope resolution opetator? Why it is required?

4.   (a)   Create a class FLOAT that contains two float data members. Write a C++ program to overload all the four arithmetic operators so that they operate on the objects of FOLAT.

$\neq$

(b)   What is function over loading ? Explain with suitable example.

# Section-B

## (Short Answer Type Questions)

**Note :** Answer any four questions. Each question carries 5 Marks.

$$(4 \times 5 = 20)$$

1.   When do we make a virtual function pure? What are the implications of making a function pure virtual function ?

2.   What is an abstract class? Give an example.

3. What is friend function? List out its advantages over a normal function.

4. Can a constructor be overloaded? Justify.

5. What is the difference between object and entity ?

6. Define constructor. List out the five characteristics of constructor.

7. Discuss the general form of a class declaration with example.

8. What do you understand by the term type conversion.

## Section-C

## Objective Type Questions (Compulsory)

**Note :** Answer all questions. Each question carries 1 Mark.

(10 × 1 = 10)

1. Which of the following is a correct comment?

   A. */Comment*/.          B. **Comment**

   C. /*Comment*/.          D. {Comment}.

2. The name of a variable is known as its :

   A. identifier.           B. constant.

   C. data type.            D. None of these

3. What will be the output if you will execute following c code?#include int main(){float a=0.5,b=9;if (a&&b>0.9) printf ("Sachin"); else printf ("Rahul");return0; }

   A. Sachin                B. Rahul.

   C. Run time error.       D. Compilation error.

4. >> is called as .................. operator.

   A. insertion          B. extraction.

   C. greater than.      D. None of the above

5. An ............. is a real world entity :

   A. procedure          B. object

   C. class              D. function

6. ............. are automatically created when constructors are used.

   A. Objects            B. Destructors

   C. Arrays             D. None of the obove

7. ............. is the process of using the same name for two or more functions.

   A. Function Overloading  B. Operator Overloading.

   C. Default Function      D. Constructors.

8. Which of the following is an escape sequence ?

   A. \c                 B. \m

   C. \f                 D. \g

9. Which of the following is not the member of class ?

   A. Const function     B. Friend function

   C. Virtual function   D. Static function

10. A constructor that accepts ............. parameters is called the default constructor.

    A. one               B. two

    C. no                D. three