MCA/IIIS/303/13

MCA 3rd Semester Examination, 2013

OBJECT ORIENTED PROGRAMMING

PAPER – MCA-303

Full Marks : 100

Time : 3 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Answer **Q.No. 1** and any **five** from the rest

1. Answer any *five* questions : 2 × 5

(*a*) What is encapsulation ? Explain with the help of an example in Java.

(*b*) What is the difference between method overloading and method overriding ?

(*c*) What do you mean by constructor overloading in Java ?

(*d*) What is the difference between final, finally and finalize Keywords in Java ?

(*e*) What will be the output of the following code ?

```
Class  XYZ {
            int X ;
    public : Void func ( )
             {
              delete this ; }
             } ;
main ( ) {
    XYZ   X ;
      X. func ( ) ;
     }
```

(*f*) What do you mean by pure virtual function in C ++ ?

(*g*) What is the difference between free ( ) and delete ?

(*h*) What is 'this' pointer ? Explain with the help of an example.

2. (*a*) What is constructor ?

   (*b*) Define parameterized constructor and constructor overloading with examples.

   (*c*) What is function templet and data abstruction. 2 + (3 + 3) + (2 + 2)

3. (*a*) What is wrapper class ? What are the applications of it ?

   (*b*) Give an example where interface can be used to support multiple inheritance.

   (*c*) When do we declare a class static ?
   (2 + 3) + 4 + 3

4. (*a*) Describe different features of Java program.

   (*b*) How Java differ from C++ ?

   (*c*) What is Java token ? Explain any two types of Java tokens. 4 + 4 + (2 + 2)

5. (*a*) What is package ?

   (*b*) How can we define and implement user define package using Java ?

   (*c*) What is inheritance ? List the different types of inheritance. $2 + (2 + 4) + (2 + 2)$

6. (*a*) What is Applet ? How does it differ from application program ?

   (*b*) What is local and remote applet ?

   (*c*) Describe applet life cycle ? $(2 + 3) + (1\frac{1}{2} \times 2) + 4$

7. (*a*) Differentiate between 'has a' and 'is a' relationship with example.

   (*b*) Write a program in C++ to overload [ ] operator.

   (*c*) What is a const member function ? Why is it used ? $4 + 4 + 4$

8. Write short notes on any *three* from the following : 4×3

(*i*) Interface

(*ii*) Exception Handling

(*iii*) Run-time Polymorphism

(*iv*) Container Classes.

[*Internal Assessment* – 30 Marks]