CS/B.Tech/Even/ECE/6th Sem/EC-605A/2014

2014

Object Oriented Programming

Time Alloted : 3 Hours   **Full Marks : 70**

The figure in the margin indicate full marks.
Candidates are required to give their answers in their
own words as far as practicable

GROUP - A

(Multiple Choice Type Questions)

1. **Choose the correct alternatives** for the following:

                                10x1=10

i) **A process that involves recognizing and focusing on the important characteristics of a situation or object is known as:**

    (a) Encapsulation   (b) Polymorphism
    (c) Inheritance   (d) Abstraction

ii) **Which statement is true regarding an object?**

    (a) An object is a variable
    (b) An object is a reference to an attribute
    (c) An object is an instance of a class
    (d) An object is not an instance of a class

iii) **The wrapping up of data and functions into a single unit is called?**

    (a) Encapsulation   (b) Polymorphism
    (c) Inheritance   (d) Abstraction

iv) _____ is a name given to a variable, class or method.

    (a) Constant   (b) Reference   (c) Identifier   (d) Modifier

v) **JVM is platform independent?**

    (a) True   (b) False

vi) **Which of the following can not be used as the first letter to form a valid java identifier?**

    (a) $ (b) &
    (c) Any Alphabet (A-Z or a-z)   (d) _ (underscore)

vii) **Java source codes are compiled and converted to**

    (a) Object codes   (b) Assembly codes
    (c) Binary codes   (d) Byte codes

viii) **What will happen when following Java code block is compiled and run?**

```
Public class A {
        Public static void main (string argv [ ]) {
                int ary [ ]=new int [ ] {1, 2, 3} ;
                system.out.println (ary [1] ) ;
                }
        }
```

    (a) 1
    (b) Compilation Error: Incorrect Syntax
    (c) 2
    (d) Compilation Error: size of array must be defined

ix) **What is the output of the following program?**

```
class MyClass{
        int i;
        float j;
        public static void main (String [ ] args) {
                MyClass myObj= MyClass () ;
                System.Out.println("myObj.i="+myObj.
                i+ ",myObj.j="+myObj.j;
                }
        }
```

    (a) myObj.i=0, myObj.j=0
    (b) myObj.i=0, myObj.j=0.0
    (c) Compilation Error
    (d) Run Time Error

x)   What is the output of the following program?

```
class My class {
    int i;
    float j ;
    MyClass (int x, float y) {
        i=x:
        j=y ;
    }
    public static void main (Sring [ ] args) {
        MyClass myObj= new MyClass (10.20) ;
        System.out.println("myObj.i="+myObj.i+",
        myObj.j="+myObj.j);
    }
}
```

(a) myObj.i=10, myObj.j=20.0
(b) Compile Time Error: Default Constructor is missing
(c) None of the above
(d) Run Time Error

GROUP - B

(Short Answer Type Questions)
Answer any three of the following.   3x5=15

2.   Explain different access specifiers in Java.   [5]

3.   Explain the following.
         public static void main (String [ ] args)   [5]

4.   Contrast Object oriented programming and Procedure oriented programming.   [5]

5.   State four similarities between interfaces and Classes. How to add class or interface to a package?   [3+2]

6.   What is a thread? Describe the complete life cycle of thread.

[1+4]

GROUP - C

(Long Answer Type Questions)
Answer any three of the following.   3x15=45

7.   a)   Explain Class & Object with proper example.

     b)   Write a Java program to find the greatest of 3 numbers.

     c)   What is aggregation?   [(3+3)+6+3]

8.   a)   What is wrapper class? Why do we need wrapper classes?

     b)   What is bytecode? Why java is called Compiled-Interpreted language? What does JVM do?

     c)   Explain the concept of multiple inheritances with an example   [5+5+5]

9.   a)   How do applets differ from application programs explain with example?

     b)   Write a Java program to implement the Fibonacci series using for loop control structure.

     c)   Define the term static method with example. What is instance variable?   [5+5+(2.5+2.5)]

10. a)   What are exceptions? Explain user defined exceptions and system defined exceptions with suitable examples.

     b)   How do we explain try and catch block. Is it essential to catch all type of exceptions? Explain.

     c)   Briefly explain the use of 'this' and 'super' keywords.   [(2+5)+4+4]

11. Write short notes on (any three)   [5x3]

              a) Constructor

              b) Abstraction

              c) Object oriented programming

              d) Call by Value & Call by Reference

              e) Method Overloading & Method Overriding

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