C.U.SHAH UNIVERSITY
Winter Examination-2015

Subject Name : Object Oriented Programming with Java

Subject Code : 4TE04OPJ1   **Branch : B.Tech (CE)**

Semester : 4   **Date :24/11/2015**   **Time :2.30 To 5:30**   **Marks : 70**

Instructions:
    (1) Use of Programmable calculator & any other electronic instrument is prohibited.
    (2) Instructions written on main answer book are strictly to be obeyed.
    (3) Draw neat diagrams and figures (if necessary) at right places.
    (4) Assume suitable data if needed.

Q-1   Attempt the following questions: (14)

a) Which class cannot be a subclass in java?
    (a) Abstract class (b) Parent class (c) Final class (d) None of the above

b) Which of these is not a bitwise operator?
    (a) & (b) &= (c) = (d) <=

c) How can you stop the finally() block from executing, after try-catch block execution?
    (a) by calling return statement from try or catch block
    (b) by calling System.exit from try or catch block
    (c) by Both return and System.exit
    (d) None of the above

d) Can you override private or static method in Java?
    (a) Yes (b) No

e) Can you access non static variable in static context?
    (a) Yes (b) No

f) Which of the following is not an exception in Java?
    (a) NullPointer Exception (b) Arithmetic Exception (c) Logical Exception
    (d) ArrayIndexOutOfBounds Exception

g) Can abstract class have constructor in Java?
    (a) Yes (b) No

h) Which keyword is used by method to refer to the object that invoked it?
    (a) import (b) catch (c) abstract (d) this

i) Which of the following is a method having same name as that of its class?
(a) finalize (b) delete (c) class (d) constructor

j) Which of these cannot be declared static?
(a) class (b) object (c) variable (d) method

k) What is the output of this program?
```
class increment {
    public static void main(String args[])
    {
        int g = 3;
        System.out.println(++g * 8);
    }
}
```
(a) 25 (b) 24 (c) 32 (d) 33

l) What is the output of this program?
```
class selection_statements {
    public static void main(String args[])
    {
        int var1 = 5;
        int var2 = 6;
        if ((var2 = 1) == var1)
            System.out.println(var2);
        else
            System.out.println(++var2);
    }
}
```
(a) 1 (b) 2 (c) 3 (d) 4

m) What is the Output of this program?
```
class Output {
    public static void main(String args[])
    {
        int x, y = 1;
        x = 10;
        if (x != 10 && x / 0 == 0)
            System.out.println(y);
        else
            System.out.println(++y);
    }
}
```
(a) 1
(b) 2
(c) Runtime error owing to division by zero
(d) Unpredictable behaviour

n) What is the output of this program?
```
class main_class {
    public static void main(String args[])
    {
        int x = 9;
        if (x == 9) {
            int x = 8;
            System.out.println(x);
        }
    }
}
```
(a) 9 (b) 8 (c) Compilation Error (d) Runtime Error

Attempt any four questions from Q-2 to Q-8.

Q-2   Attempt all questions
   a) Explain buzzwords of JAVA. (05)
   b) Explain constructor overloading with example. (05)
   c) Write a program to compute x^y. Consider x and y are type integers and input as command (04)
line arguments. Don't use Math class method.

Q-3   Attempt all questions
   a) Explain method overriding with suitable example. (05)
   b) Explain constructor calling sequence in multilevel inheritance with suitable example. (05)
   c) Write a JAVA application to count total number of objects created for a class. (04)

Q-4   Attempt all questions
   a) What is interface? Explain multiple inheritance with example. (06)
   b) What is super keyword? Write a program that shows use of super keyword (variable, (06)
constructor, method).
   c) Differentiate: Constructor and Method of class. (02)

Q-5   Attempt all questions
   a) Explain StringBuffer class with example. (06)
   b) Write a program that adds 100 days into current date and time and display new date and (06)
time.
   c) Differentiate: Checked and Unchecked Exceptions. (02)

Q-6   Attempt all questions
   a) Explain thread life cycle. (06)
   b) Create three packages A, B and C. Where B and C are inside A. Write a program which (06)
shows how to access classes of packages A, B and C.
   c) Differentiate: abstract class and interface. (02)

Q-7   Attempt all questions
    a)   Explain applet life cycle example.   (06)
    b)   Write a program that displays each alphabets of one String with the delay of 1000   (06)
        Milliseconds and each alphabets of another String with the delay of 500 Milliseconds.
        Create two threads to implement this work.
    c)   Differentiate: C++ and JAVA.   (02)

Q-8   Attempt all questions
    a)   Write a program (using AWT) that will display three buttons. When user clicks on any   (07)
        button a String will be displayed on that button.
    b)   Explain delegation event model.   (07)