

GUJARAT TECHNOLOGICAL UNIVERSITY**SEMESTER– 3 EXAMINATION – WINTER 2012****Subject code: 630002****Date: 01/01/2013****Subject Name: Fundamentals of Java Programming****Time: 10:30 – 13:00****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) State whether the following statements are true or false. Justify yours **07**
answer

1. 'new' operator is used to create both primitive types and objects.
2. static methods can be called with its 'this' reference
3. 'final' can be used to prevent a method from being overloaded.
4. A class can inherit exactly one interface.
5. More than one file can include the same package statement.
6. Java's exception handling mechanism is meant to handle only runtime errors.
7. A component can have multiple listeners for events of different types.

(b) Fill in the blanks with appropriate words: **07**

1. The _____ block if present, is always executed irrespective of the occurrence of exception.
2. Applets do not need a _____ method.
3. The streams available in Java are _____ and _____
4. _____ is a collection interface used to maintain unique elements.
5. The syntax to assign octal 12 to an integer variable 'x' is _____.
6. In java the method binding is done at _____ time.
7. Create a/an _____ when you have a fixed number of instances.

Q.2 (a) What are the access specifiers available in Java? Explain each of them **07**
and state which of these can be applied to members of a class and which can be applied to members of a package.

(b) Explain the component hierarchy for various AWT components. **07**

OR

(b) Explain the concept of creating anonymous class with appropriate example **07**

Q.3 (a) What role does an interface play in multiple inheritance. Also **07**
differentiate between abstract class and an interface.

(b) Compare Iterator and Enumeration interface. Also explain the Map **07**
interface of Collection Framework.

OR

Q.3 (a) Write a note on daemon thread. Also explain the priorities of thread? **07**
Discuss the default priority and priority setting and retrieving.

(b) What is the difference between runtime errors and compile time errors? **07**
Explain using suitable example. Give the hierarchy of Exception. Also

explain checked and unchecked exceptions.

- Q.4 (a)** 1. Explain event delegation model for event handling in Java **04**
2. Compare the adapter classes with listener interfaces **03**
(b) Explain the life cycle of an Applet? Explain various methods of the life cycle of applet **07**

OR

- Q.4 (a)** 1. What are annotations and how are they useful? **04**
2. Explain the use of finalize method **03**
(b) Explain the difference between Comparable and the Comparator interfaces. Explain them with appropriate example. **07**

- Q.5 (a)** 1. Discuss the significance of wrapper classes. List the names of all the wrapper classes in Java **04**
2. Give the output for the following code: **03**

```
class Ex12{  
    public static void main(String [] args)    {  
        try {  
            badMethod();  
            System.out.print("A");    }  
        catch (Exception ex)  
        {    System.out.print("B");    }  
        finally  
        {    System.out.print("C");    }  
        System.out.print("D");  
    }  
    public static void badMethod()  
    {    throw new Error();    }  
}
```

- (b)** Design a registration form for new user. On clicking submit button, entered data should be display in on dialog box. **07**

OR

- Q.5 (a)** 1. Differentiate between AWT and Swing. **04**
2. Explain the use of keyword “transient”. **03**
(b) Write a program of threads to show inter-communication of two threads: t1 and t2 synchronizing on a shared object. Let t1 print message “ping --->” and t2 print message “<--- pong”. Make the threads execute in a way that the output displays a consistent patterns of “ping ---> <--- pong” **07**
