

**GUJARAT TECHNOLOGICAL UNIVERSITY****M.C.A -III<sup>rd</sup> SEMESTER-EXAMINATION – MAY- 2012****Subject code: 630002****Date: 24/05/2012****Subject Name: Fundamentals of Java Programming (Java)****Time: 02:30 pm – 05:00 pm****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) (1) Why Java is so popular? **03**  
 (2) What is an interface? How it is important in Java? Explain with example. **04**
- (b) Specify whether the following statements are True or False. If False then **07**  
 correct it.
- (1) Each object has its own copy of the static variables defined in the class.  
 (2) Always a super class constructor must execute before a subclass constructor.  
 (3) A class can extend from more than one super class.  
 (4) To call the parent class constructor explicitly, super() and this() both are use together.  
 (5) A local variable may be declared with the same name as a static or instance variable.  
 (6) Static variable are initialized to default value when the object is created.  
 (7) Class X is a super class of X1, Class X1 is a super class of class X11. The variable of class X1 can reference any object of class X, X1, X11.
- Q.2** (a) What is an Exception? How many different types of exception available in Java? **07**  
 Explain in detail.
- (b) What is Thread? How thread is created in Java? Explain with example. **07**
- OR**
- (b) Explain the life cycle of Thread. Specify some important methods of Thread class. **07**
- Q.3** (a) (1) What is Package? How it is useful in Java with example? **04**  
 (2) Difference between static and instance variable with example. **03**
- (b) (1) Explain about the synchronization of thread with suitable example. **04**  
 (2) Difference between String and StringBuffer class. **03**
- OR**
- Q.3** (a) (1) What is stream? Explain different types of stream. **04**  
 (2) Explain abstract, final and public class modifier. **03**
- (b) (1) Explain the importance of Graphics, Color and Font class of java.awt package with its method. **04**  
 (2) What is an Exception? How it can handle? Explain with example. **03**
- Q.4** (a) What is difference between Vector and Hashtable class? How the Enumeration interface is useful in Java explain with code? **07**
- (b) (1) What is container and component class in Java? Specify different types of components with its events? **04**  
 (2) Explain final, native and synchronized method modifier. **03**
- OR**
- Q.4** (a) Explain the life cycle of an Applet with example. **07**
- (b) (1) What is Checkbox and Radio Button? How it is created in Java? **04**  
 (2) How many different types of programs create in Java? Explain in detail. **03**

- Q.5** (a) What is an event listener? List down all event listener and use it for which component. **07**
- (b) (1) What is CLASSPATH? How it is important? **03**  
(2) Write a program to create an applet which shows current date and time continuously using Thread. **04**

**OR**

- Q.5** (a) What is Layout Manager? Explain the different types of layout in details. **07**
- (b) (1) Explain the importance of super and this keyword with example. **03**  
(2) Write a program which write 10 numbers in the file. Read this file and identify odd and even numbers among them. **04**

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