

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- Vth SEMESTER-EXAMINATION – MAY/JUNE - 2012****Subject code: 150704****Date: 05/06/2012****Subject Name: Object oriented programming with 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) Explain features of **JAVA**. **07**
(b) Explain interface in **JAVA**. How do interfaces support polymorphism? **07**

- Q.2** (a) Explain Exception handling in **JAVA**. Write an application that generates custom exception if any value from its command line arguments is negative. **07**
(b) Why synchronization is required in multithreaded programming and how can we implement it in program? **07**

OR

- (b) Explain Thread Life Cycle in detail. Write a code to create Thread in **JAVA**. **07**

- Q.3** (a) Write a program using **BufferedInputStream**, **FileInputStream**, **BufferedOutputStream**, **FileOutputStream** to copy Content of one file **File1.txt** into another file **File2.txt**. **07**
(b) Describe **abstract** class called **Shape** which has three subclasses say **Triangle**, **Rectangle**, **Circle**. Define one method **area()** in the abstract class and override this **area()** in these three subclasses to calculate for specific object i.e. **area()** of **Triangle** subclass should calculate area of triangle etc. Same for **Rectangle** and **Circle** **07**

OR

- Q.3** (a) Write a program to display the bytes of a file in reverse sequence. Provide the name of the file as a command line argument. (Use **RandomAccessFile**) **07**
(b) Write a program that illustrates interface inheritance. Interface **P** is extended by **P1** and **P2**. Interface **P12** inherits from both **P1** and **P2**. Each interface declares one constant and one method. class **Q** implements **P12**. Instantiate **Q** and invoke each of its methods. Each method displays one of the constants **07**

- Q.4** (a) Differentiate Applet and Application. **07**
(b) Differentiate **String** class and **StringBuffer** class with explanation of its methods. **07**

OR

- Q.4** (a) Write an applet that contains three buttons **OK**, **CANCEL** and **HELP** and one textfield. if **OK** is pressed shown on the status bar-“**OK** is pressed” and the text field should turn red. When **CANCEL** is pressed -shown on the status bar-“**CANCEL** is pressed” and text field should turn green. When **HELP** is pressed- shown on the status bar-“**HELP** is pressed” and the text field should turn yellow. **07**
(b) Explain Applet life cycle with demo program. **07**

- Q.5** (a) Explain package in java. List out all packages with short description. **07**
(b) Differentiate Method Overloading and Method Overriding with example. **07**

OR

- Q.5** (a) Explain Event Handling in java and describe methods of mouse event and key event. **07**
(b) Explain Generics in java with demo program. **07**
