

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014****Subject code: 1722310****Date: 08-12-2014****Subject Name: Object Oriented Programming****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) One object in Java can be assigned as reference to another object of the same type. To explain this concept write a complete Java program and explain how a reference object works. **07**
- (b) What is a constructor? Write a Java program to explain how super class constructors are called in their subclasses. **07**
- Q.2** (a) Discuss in detail the access specifiers available in Java. **07**
- (b) Compare and contrast overloading and overriding methods. **07**
- OR**
- (b) Explain the different methods in java.Util.Arrays class with example. **07**
- Q.3** (a) What is dynamic binding? Explain with example. **07**
- (b) Write a program for matrix multiplication (Test the validity of matrix sizes before performing multiplication). **07**
- OR**
- Q.3** (a) What is object cloning? Explain with program code. **07**
- (b) Create a 3-level inheritance hierarchy. Each class in the hierarchy should have a finalize () method, and it should properly call the base-class version of finalize (). Demonstrate that your hierarchy works properly. **07**
- Q.4** (a) Explain the life cycle of thread and synchronization in detail. **07**
- (b) Explain different Array related exceptions with example. **07**
- OR**
- Q.4** (a) What are the two methods to create threads? Compare them. Explain them with an example Java program. **07**
- (b) Explain the following exceptions with example. **07**
- (i) ArithmeticException
- (ii) NumberFormatException
- Q.5** (a) What is an Adapter class? Explain its purpose and functionality. **07**
- (b) Write an applet that accepts two numbers in two Textboxes and an arithmetic operator in other Textbox. When user press the calculate Button the result after arithmetic operation should be displayed in the other Textbox. **07**
- OR**
- Q.5** (a) Explain different event types in java. Also explain event handling in java. **07**
- (b) Explain various methods called during execution cycle of an applet. **07**
