

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1720109

Date: 25-06-2014

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)** Explain the scope visibility of class members in java- with in the same package and outside the package. **07**
- (b)** 1. What is the use of scope resolution operator? **07**
2. Differentiate between an Abstract class and Interface?
3. Explain what garbage collection is.
What is the alternative to garbage collection?
4. How are data and functions organized in an object-oriented program?
- Q.2 (a)** Explain the following features of Java Language: distributed, interpreted, architecture-neutral, portable, high-performance, multithreaded, and dynamic language. **07**
- (b)** Write a program to demonstrate the multilevel inheritance? **07**
- OR**
- (b)** Write a program to demonstrate the multipath inheritance? **07**
- Q.3 (a)** Explain the thread life cycle. Also write a program to create threads and demonstrate the life cycle. **07**
- (b)** Using a program demonstrate and explain the method overriding and method overloading. **07**
- OR**
- Q.3 (a)** Explain the difference between Application and Applet. Write an applet to display a smiley face with fill colors and boundary. **07**
- (b)** What are two ways of creating threads in java? Demonstrate both using small programs. **07**
- Q.4 (a)** Demonstrate the use of static variables and static methods using a program. **07**
- (b)** What is the benefit of of Exception handling in java? Write a java program to handle NoSuchElementException, ArrayIndexOutOfBoundsException using try-catch-finally and throw. **07**
- OR**
- Q.4 (a)** What is the benefit of of Exception handling in java? Write one program to to show the functionality of all the keywords: try, catch, finally and throw. **07**
- (b)** A class student has rollno, name and marks. Write a java program to write the student records in a .txt file. After writing close the file and then read the records and then display them using ObjectOutputStream and ObjectInputStream class. **07**
- Q.5 (a)** What is AWT? Explain its main classes' hierarchy including component class. **07**
- (b)** Explain the two types of streams defined in java along with their class hierarchy. **07**
- OR**
- Q.5 (a)** What are interfaces? How is an interface defined and implemented? **07**
- (b)** Explain AWT. Write a program to create a frame window in an applet having button Add. On clicking Add button the value of a text field would get stored in an array and a message id displayed that the value has been stored. **07**
