

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2150704

Date:06/05/2016

Subject Name:Object Oriented Programming using JAVA

Time:02:30 PM to 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 Thread life cycle and describe creation of thread with suitable example. **07**
- Q.2** (a) Differentiate between Method overloading and Method overriding. **07**
(b) Explain following with example: **07**
i) Finalize() ii) static iii) super iv) final
- OR**
- (b) The abstract vegetable class has three subclasses named Potato, Brinjal and Tomato. Write a java prog. That demonstrates how to establish this class hierarchy. Declare one instance variable of type String that indicates the color of a vegetable. Create and display instances of these objects. Override the toString() method of object to return a string with the name of vegetable and its color. **07**
- Q.3** (a) Describe Inheritance and its type with suitable example. **07**
(b) Explain use of Interface with suitable example. **07**
- OR**
- Q.3** (a) Write a method for computing x^y doing repetitive multiplication. X and y are of type integer and are to be given as command line arguments. Raise and handle exception(s) for invalid values of x and y. **07**
(b) Differentiate between interface and abstract class **07**
- Q.4** (a) List out the steps of preparing domain class model. What are the criteria for identifying right classes? **07**
(b) What do you mean by an event in state diagram? Discuss various types of events. **07**
- OR**
- Q.4** (a) What do you mean by object-orientation? Briefly discuss the characteristics of object oriented approach. **07**
(b) Explain various steps required for class design. **07**
- Q.5** (a) Prepare a sequence diagram for issuing book in the library management system. **07**
(b) Explain 'ordered', 'bags', 'sequences' in class diagram with suitable examples. **07**
- OR**
- Q.5** (a) Explain Nested States. Draw the Nested states diagram for the phone line. **07**
(b) Define the following terms: **07**
Aggregation, Abstract Class, Generalization, Reification, Constraints, Package, Metadata.
