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: i) Finalize() ii) static iii) super iv) final	**07**

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. Crete 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: Aggregation, Abstract Class, Generalization, Reification, Constraints, Package, Metadata.	**07**

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