| Seat No.: | Enrolment No |
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GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II (Old course) • REMEDIAL EXAMINATION - SUMMER 2015 Subject Code: 1720105 Date:14/05/2015

| Subject Name: Object | Oriented | Methodology | and | design |
|----------------------|----------|-------------|-----|--------|
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| Time: | 02:30 pm to 5:00 pm | Total Marks: 70 |
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Instructions:

- 1. Attempt all questions.
- Make suitable assumptions wherever necessary.
 Figures to the right indicate full marks.

| Q.1 | (a) | What do you mean by modular design? Explain concepts of cohesion and coupling in detail. | 07 |
|-------------|------------|---|-----|
| | (b) | Write a note on singleton design pattern. Give suitable application of singleton. | 07 |
| Q.2 | (a) | Explain following characteristics of Association with proper symbols & examples. 1. Arity of association 2. Aggregation & Composition | 07 |
| | (b) | Explain following methods of java.lang.Object class. Give proper examples of each. 1. equals() 2. toString() | 07 |
| | | OR | |
| | (b) | Write a note on long term storage of objects. Also discuss various issues regarding object storage. | 07 |
| Q.3 | (a) | Draw the class diagram for library management system. | 07 |
| V. 0 | (b) | Create a Use case diagram for registering new member in library management system. OR | 07 |
| Q.3 | (a) | Draw state transition diagram for microwave oven system. | 07 |
| | (b) | Draw a Sequence diagram for issuing a book in library system. | 07 |
| 0.4 | (-) | Front in the consent of two inheritance with witch to consent. | 07 |
| Q.4 | (a) | Explain the concept of type inheritance with suitable example. Explain following concepts | 07 |
| | (b) | 1. RTTI (Run time type identification) | U/ |
| | | 2. Java Reflection | |
| | | OR | |
| Q.4 | (a) | What is the use of adapter design pattern? Give real life example. | 07 |
| ~ | (b) | Write and explain following rules of Refactoring. | 07 |
| | (~) | 1. Extract method rule | |
| | | 2. Move method rule | |
| 0.5 | () | XX7 ' ' ' ' ' ' ' ' ' '- | 0.5 |
| Q.5 | (a) | Write a java swing program to create form with one textbox and button. When | 07 |
| | <i>a</i> > | button is clicked, text in textbox should be cleared. | 0.5 |
| | (b) | Write a program to demonstrate usage of Factory design pattern. OR | 07 |
| Q.5 | (a) | Write a GUI based program to illustrate the concept of look and feel in swing. | 07 |
| Ų.S | (a) (b) | Write a program to demonstrate usage of Iterator design pattern. | 07 |
| | (0) | ************************************** | 07 |