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## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Seventh Semester, B.E. - Computer Science and Engineering

Semester End Examination; Dec - 2016/Jan - 2017

Object Oriented Modeling Design

Time: 3 hrs

Max. Marks: 100

*Note: Answer FIVE full questions, selecting ONE full question from each unit.*

### UNIT - I

- |      |  |    |
|------|--|----|
| 1 a. | Explain the different stages of Object Oriented Methodology. | 10 |
| b.   | Briefly discuss the three models to describe a system.       | 6  |
| c.   | Differentiate between Link and Association with example.     | 4  |
| 2 a. | Draw and explain a state diagram for telephone line.         | 10 |
| b.   | Explain the following with example;                          |    |
|      | i) Enumerations      ii) Multiplicity                        | 10 |
|      | iii) Scope            iv) Visibility.                        |    |

### UNIT - II

- |      |   |    |
|------|---|----|
| 3 a. | Describe the steps performed in constructing domain state model.                            | 10 |
| b.   | Explain the questions that must be answered by a good system concept.                       | 10 |
| 4 a. | What is software development process? Mention the different stages of software development. | 4  |
| b.   | With example, explain UML diagram.  | 6  |
| c.   | Explain sequence diagram with any two examples.   | 10 |

### UNIT - III

- |      |   |    |
|------|---|----|
| 5 a. | Explain the steps involved in constructing application interaction model. | 10 |
| b.   | Draw an application class model diagram for ATM.                          | 5  |
| c.   | How operations can be added in object oriented analysis?                  | 5  |
| 6 a. | Explain the different concepts of Re-use plan for system design.          | 10 |
| b.   | Explain the different software control strategies.                        | 10 |

### UNIT - IV

- |      |   |    |
|------|---|----|
| 7 a. | Explain the steps involved in designing algorithm.              | 10 |
| b.   | Explain the tasks involved in design optimization.              | 10 |
| 8 a. | Discuss the inputs and outputs for reverse engineering.         | 10 |
| b.   | Explain the following concepts related to implementation model, |    |
|      | i) Fine-tuning classes  | 10 |
|      | ii) Fine-tuning Generalizations.                                |    |

**UNIT - V**

- 9 a. What is a pattern? Briefly explain its properties. Also mention three-port-schema of pattern. 10
- b. Explain the pattern discription template. 10
- 10 a. Explain the steps involved in client-dispatches-series implementation. 10
- b. Explain counted-pointer briefly. Also write the steps to implement counted pointer idiom. 10

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