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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; 10  
     i) Enumerations      ii) Multiplicity  
     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, 10  
     i) Fine-tuning classes  
     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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