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

(An Autonomous Institution affiliated to VTU, Belgaum)

Sixth Semester, B.E. - Information Science and Engineering

Semester End Examination; June - 2016

Object Oriented System Development

Time: 3 hrs

Max. Marks: 100

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

### UNIT - I

- 1 a. What is generalization and inheritance? Give an example of inheritance for graphic objects. 6
- b. What is object orientation? Explain object oriented themes. 7
- c. Explain aggregations with UML Notation. Distinguish between associations and Aggregations. 7
- 2 a. Design a class diagram of a work station window management system. 10
- b. Explain the terms meta data, Reification, constraints, Derived data and package with respect to object oriented development. 10

### UNIT - II

- 3 a. Consider an example of an online stock broker. Write scenario and sequence diagram for a session with online stock broker. 10
- b. What are the problems with flat state diagrams? For a vending machine problem explain how nested state diagrams overcome the problems. 8
- c. What is Do-activity? 2
- 4 a. Explain the different types of procedural sequence models. 8
- b. What is concurrency? Explain any two types of concurrency among objects. 8
- c. Describe the terms signal event and change events. 4

### UNIT - III

- 5 a. Explain how right chesses are identified and data dictionary is built in domain class modeling. 10
- b. For an ATM case study, explain how system is conceptualized and problem statement is prepared. 10
- 6 a. Explain the steps to construct application class model. 10
- b. In domain class model, explain how right attributes are identified. Give an example. 10

### UNIT-IV

- 7 a. Discuss the steps in formulating the algorithm. Give an example. 10
- b. Explain the different ways, how a system is broken into sub systems. 7
- c. Describe the management of data storage. 3

- 8 a. In a class design explain the steps in adjustment of inheritance. Give example. 10
- b. Explain how each concurrent subsystem is allocated to a processor. Give example. 10

**UNIT - V**

- 9 a. What is a pattern? Explain the different types of patterns. Explain the relationship between patterns. 10
- b. Write and explain the steps to implement command processor. 10
- 10 a. Explain the steps to implement view handler design pattern. 10
- b. Explain the In-process quality metrics with an example. 10

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