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

(An Autonomous Institution affiliated to VTU, Belgaum)

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

Semester End Examination; Dec. - 2014

Object Oriented Analysis and Design

Time: 3 hrs

Max. Marks: 100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART - A

1. a. What is object orientation? Explain four aspects of OO with an example. 8
- b. Describe a system from different viewpoints using three kinds of OO models. How are they related? 8
- c. Define model. Explain how does it serves for several purpose. 4
2. a. Briefly explain the OCL constructs for traversing class model with example. 6
- b. Explain aggregation and composition with examples. 8
- c. Describe three kinds of events in state modeling. 6
3. a. Write nested state diagram with activities clearly indicated for a phone line. 8
- b. Explain activity model with UML notation in detail. Give an example. 8
- c. Differentiate between include relationship and extend relationship. 4
4. a. Explain the sequence of stages followed in software development process. 8
- b. With the help of ATM example, describe how to identify classes in constructing a domain class model. 4
- c. Explain the steps followed in constructing a domain state model. 8

PART - B

5. a. With suitable example, explain the steps followed to construct an application state model. 10
- b. Explain batch transformation and continuous transformation architectural styles suited for system design. 10
6. a. With example, explain how fine – tune classes and fine – tune generalizations issues are addressed in implementation modeling. 8
- b. Explain the steps followed to design algorithms in class design. 8
- c. What is testing? Explain unit and system testing. 4
7. a. List the various tasks performed to implement the structure specified by class model in OO language. Explain any two. 8
- b. Describe three major aspects in RDBMS with example. 6
- c. Explain the various additional tasks followed to implement advanced structure in RDBMS. 6

- 8 a. Compare the following:
 - i) Iterative development versus waterfall. 8
 - ii) Iterative development versus Rapid prototype.
- b. Write a note on scope of iteration. 4
- c. Describe the various kinds of risks considered for each iterations. 8

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