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P.E.S. College of Engineering, Mandya - 571401

(An Autonomous Institution affiliated to VTU, Belagavi)

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

Semester End Examination; June - 2017

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.	Describe different models of object oriented development design technique.	6
	b.	Explain the following with respect to multiple inheritance in brief : i) Multiple classification ii) Work around.	6
	c.	Prepare a class diagram for library checkout system that shows the late charges for an overdue book as a derived attribute.	8
2	a.	Define object orientation. Explain various stages involved in object oriented methodology.	8
	b.	Illustrate following terms with suitable example : i) Ordering ii) Sequence iii) Qualified Association.	6
	c.	Explain aggregation versus association with a suitable example.	6

UNIT - II

3	a.	Illustrate the signal event and change event with suitable example.	6
	b.	Describe the guidelines for usecase models.	6
	c.	Prepare a usecase diagram for the purchase of gasoline from an electronic gasoline pump. Normally customer pays cash for gas purchase. Add extend relationships to handle incremental behavior of paying by credit card outside or paying by credit card inside. Add an include relationship to represent the optional purchase of a car wash.	8
4	a.	Explain an activity diagram with swim lanes with a suitable example.	6
	b.	Prepare sequence diagrams for receiving an e-mail and setting options for an email in a computer email system.	8
	c.	Illustrate Do-Activities and entry and exit activities with suitable examples.	6

UNIT - III

5	a.	Describe various questions that are addressed by a good system concept. Use ATM as a case study.	12
	b.	Explain how right classes can be identified in a domain class model.	8

Contd…2

6	a.	Describe the steps to construct an application interaction model.	10
	b.	Explain various ways to refine inheritance in domain class model.	10

UNIT - IV

7	a.	Illustrate a batch transformation with a suitable example. Also describe the steps in designing a batch transformation.	10
	b.	Describe information hiding and coherence of entities with respect to organization of a class design.	10
8	a.	Describe qualities of ‘good” class libraries.	6
	b.	Explain handling of global resources for a system design with suitable examples.	8
	c.	Illustrate the concept of refactoring with a suitable example.	6

UNIT - V

9	a.	Describe various object oriented design metrics.	10
	b.	Explain forwarder-receiver pattern of communication with its structure.	10
10	a.	Describe various metrics for software maintenance.	10
	b.	Explain client-dispatcher-server pattern with an example.	10

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