



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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

Semester End Examination; May/June - 2018

Object Oriented System Development

Time: 3 hrs

Max. Marks: 100

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

UNIT - I

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| 1 a. With respect to object oriented modeling and design, explain the concept of Object Oriented (OO) themes. | 7 |
| b. Explain the three models useful to model a system and the relationship among them. | 6 |
| c. How can we decompose N-ary associations into Binary associations? | 7 |
| 2 a. Explain the concept of generalization and Inheritance. Write a class model for geometric figures. | 10 |
| b. Write a short notes on : | |
| i) Enumerations ii) Multiplicity | 10 |
| iii) Scope iv) Visibility | |

UNIT - II

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| 3 a. What is an event? Explain different types of events along with UML notation for each. | 7 |
| b. What do you mean by concurrency? Explain the different types of concurrency among objects. | 7 |
| c. Draw a sequence diagram for a stock purchase using an online stock broker system. | 6 |
| 4 a. Define nested states. Draw a nested state for a phone line. | 8 |
| b. What are the usecase model? Give the guidelines for constructing a usecase model. | 6 |
| c. What is an Activity diagram? Explain with an example. | 6 |

UNIT - III

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| 5 a. Explain how to find classes and keep right classes in domain class model with ATM example? | 10 |
| b. Describe the questions that need to be answered for a system conception of an ATM. | 10 |
| 6 a. Explain the steps required to construct an application state model. | 10 |
| b. List the steps to construct an application intersection model. Explain any four. | 10 |

UNIT - IV

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| 7 a. List the various decisions to the made during system design. Explain any two. | 10 |
| b. Describe the steps to design algorithm with examples. | 10 |
| 8 a. Explain three steps used to improve the organization of class design. | 6 |

- b. In detail, explain the batch transformation and continuous transformation architectural styles suited for the system design. 10
- c. Write a short note on handling boundary conditions in system design. 4

UNIT - V

- 9 a. Explain the dynamics of client-dispatcher-server design pattern with a neat diagram. 10
- b. What is pattern? Explain briefly the template for pattern description. 10
- 10 a. Illustrate with a neat diagram the static relationship in forwarder and receiver. 10
- b. Explain in-process quality metrics with an example. 10

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