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

(An Autonomous Institution affiliated to VTU, Belagavi)

Fourth Semester, Master of Computer Applications (MCA)

Semester End Examination; May / June - 2019

Object-Oriented Modeling and Design Patterns

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. | Discuss different object oriented themes. | 10 |
| | b. | Explain the following with example : | |
| | | i) Class ii) Object iii) Multiplicity | 10 |
| 2 | a. | Discuss advanced class concept with suitable examples. | 10 |
| | b. | Explain the following : | |
| | | i) Association end names ii) Associations classes | 10 |

UNIT - II

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|---|----|--|----|
| 3 | a. | Write a note on one shot state diagram. | 10 |
| | b. | Define Event. Explain the different kinds of Events with example. | 10 |
| 4 | a. | Describe aggregation concurrency and concurrency with in an object of state diagram. | 10 |
| | b. | Discuss Nested states and Expanding states. | 10 |

UNIT - III

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| 5 | a. | Explain Activity model with an example. | 10 |
| | b. | Discuss software development stages. | 10 |
| 6 | a. | Describe different use case relationships with examples. | 10 |
| | b. | Discuss any two steps involved in constructing a domain class model. | 10 |

UNIT - IV

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| 7 | a. | Discuss different ways of subsystem can be allocated to hardware units. | 10 |
| | b. | Describe the different ways of breaking a system into subsystems. | 10 |
| 8 | a. | Narrate the steps involved in designing algorithms. | 10 |
| | b. | Explain the steps to organize a class design model. | 10 |

UNIT - V

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| 9 | a. | Explain any five properties of patterns. | 10 |
| | b. | Discuss observer pattern. | 10 |
| 10 | a. | List and explain categories of patterns. | 10 |
| | b. | Discuss model view controller pattern. | 10 |

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