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B.E. (Information Technology)
OBJECT ORIENTED MODELING AND DESIGN
(2008 Course) (Semester-I)

Time : 3 Hours] *[Max. Marks : 100*
Instructions to the candidates:
  1) *Solve Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6 from Section-I and Q. 7 or Q. 8, Q. 9 or Q. 10, Q. 11 or Q. 12 from Section-II.*
  2) *Answers to the two sections should be written in separate books.*
  3) *Figures to the right indicate full marks.*
  4) *Neat diagrams must be drawn wherever necessary.*
  5) *Assume suitable data, if necessary.*

SECTION-I

Q1) a) What is CORBA? What are the basic elements of CORBA? Explain. **[6]**

  b) What is OCL? Give the example of PRE-condition, Post-condition in OCL. **[8]**

  c) Discuss by giving appropriate example when will you model an entity such as 'bank account' as: **[4]**

    i) Attribute.

    ii) Class.

OR

Q2) a) What are the salient features of RUP and? How is it different from waterfall model? **[6]**

  b) Explain 4+1 view architecture with corresponding UML diagram. **[8]**

  c) Model the association that an 'Employee' can work on at most one 'Project' at a time but a Manager can work more than one project at the same time. **[4]**

Q3) a) Explain in detail Class Responsibility Collaborator model. **[8]**

b) Write a note on relationships in UML. **[8]**

OR

Q4) a) Write a short note on UML versions. **[8]**

b) Explain common mechanisms in UML. **[8]**

Q5) a) What is use case diagram? Identify the various use case and draw the use case diagram for "Online Shopping System". **[8]**

b) Draw a class diagram for an "online CD/DVD library system". Make suitable additional assumptions about scope and working of the system. **[8]**

OR

Q6) a) Write a note on Communication Diagram. **[4]**

b) Draw a package diagram for "Online Shopping System" showing packages, and package relationships. **[4]**

c) Draw a class diagram for "Online Examination System" using advanced notations. Assume suitable data. **[8]**

SECTION-II

Q7) a) What is an interaction? Draw the sequence diagram for the 'Issue book' operation of a Library Management System. **[8]**

b) Explain the timing diagram with its importance in an embedded application. **[6]**

c) Differentiate between sequence and communication diagram. **[4]**

OR

Q8) a) Draw the state diagram with composite states for ATM card reading and authentication system. **[8]**

b) Draw the communication diagram for 'Scheduling a seminar' activity. **[6]**

c) What is the purpose and need of interaction overview diagram? **[4]**

Q9) a)   Explain the following concepts for Activity diagram: [8]

      i)   Pin.

      ii)   Expansion Region.

  b)   What are the elements of composite structure diagram? Explain.   [8]

<div align="center">OR</div>

Q10) a)   What do you mean by two tier and three tier architecture? Draw the deployment diagram for a two tier web application.   [8]

  b)   Explain the following in brief in the context of component diagram.   [8]

      i)   Provided and required interfaces.

      ii)   Ports and connectors.

Q11) a)   Draw the component diagram for Course Management system.   [8]

  b)   Give the different types of systems which can be modeled using deployment diagram? Draw the deployment diagram for an email system.   [8]

<div align="center">OR</div>

Q12) a)   Write short note on following: Pattern and framework.   [8]

  b)   What is signal? How signals are modeled in UML? Explain with suitable example.   [8]

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