

Total No. of Questions : 12]

SEAT No. :

P1451**[4759] - 207****[Total No. of Pages : 3**

B.E. (Computer Engineering)
OBJECT ORIENTED MODELING AND DESIGN
(2008 Pattern) (Semester -I)

*Time : 3 Hours]**[Max. Marks : 100**Instructions to the candidates:*

- 1) Answer three questions from section I and three questions from section II.*
- 2) Answers to the two sections should be written in separate answer-books.*
- 3) Neat diagrams must be drawn wherever necessary.*

SECTION - I

Q1) a) Explain the Basic Building Blocks of the UML 2.0. **[8]**

b) What are basic built-in types used in OCL expressions? **[8]**

OR

Q2) a) Explain 4+1 Architecture of UML 2.0. **[8]**

b) Explain OMG standards MDA and XMI. **[8]**

Q3) a) Draw and Explain looping and streaming in activity diagram. **[8]**

b) Draw the Use Case Diagram for the Credit card processing. The merchant submits a credit card transaction request to the credit card payment gateway on behalf of a customer. Bank which issued customer's credit card would approve or reject the transaction. If transaction is approved, funds will be transferred to merchant's bank account. Identify the actors, use cases and use full advance notation to draw the diagram. **[8]**

OR

Q4) a) What are different Activity nodes used in activity diagram. Draw and explain with example? **[8]**

b) Enlist different relationships used in use case diagram. Explain with example. **[8]**

P.T.O.

- Q5)** a) How do we represent private, public and protected visibility in class diagrams? [6]
- b) What does associations, aggregation and composition in a class diagram mean? [6]
- c) Draw a class diagram with full notations for enrollment of student for seminar. Assume the scope. [6]

OR

- Q6)** a) Explain connectors, ports and pins with reference to composite structure diagrams. [6]
- b) Explain Import, Access and Merge in the Package Diagram for ATM System. [6]
- c) What is the need of object diagram in UML? Draw object diagram for the question 5(c)? [6]

SECTION - II

- Q7)** a) Explain composite states with example in State Chart Diagram. [6]
- b) What are different interaction operators used in sequence diagram? Explain briefly with example. [6]
- c) What is the significance of communication diagram. Draw communication diagram for question 8(a). [6]

OR

- Q8)** a) Explain and Draw sequence diagram for Online Examination of FPL subject of F.E Students in your college? [6]
- b) Explain the significance of Interaction Overview Diagram with example? [6]
- c) How do you show the time constraints on messages in interaction diagrams? Explain with example. [6]

- Q9)** a) Component diagram models implementation view. Justify the answer with example. [8]
b) Draw the deployment Diagram for online shopping web application? [8]

OR

- Q10)** a) Explain Artifact instances and execution environments in Deployment diagram. [8]
b) Draw the component Diagram for event registration system? [8]
- Q11)** a) Explain in brief: Singleton design pattern and Abstract factory pattern. [8]
b) Give the solution for observer design pattern. [8]

OR

- Q12)** a) Explain the design pattern template with an example? [8]
b) How do you reverse engineer a class diagram? [8]

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