Total No. of Questions : 12]

P1883

SEAT No. :

[Total No. of Pages : 3

[5059]-203

B.E. (Computer Engineering) (Semester - I)

OBJECT ORIENTED MODELING AND DESIGN

(2008 Pattern)

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) Draw and explain 4+1 view architecture of the system models all the view of the system? **[8]**

b) Explain and elaborate the building blocks of UML? **[8]**

OR

Q2) a) Define stereotype? What is the significance of stereotype in UML diagrams **[8]**

b) Explain different phases of RUP? **[8]**

Q3) a) Draw a activity diagram for the system online shopping. Online customer can browse or search items, view specific item, add it to shopping cart, view and update shopping cart, do checkout. User can view shopping cart at any time. **[8]**

b) What are different types of requirements? Explain with an example? **[8]**

OR

Q4) a) Explain different types of relationships used in use case diagram. Elaborate with an example? [8]

b) Define major use cases for a credit card processing system . 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 is actor which could approve or reject the transaction. If transaction is approved, funds will be transferred to merchant's bank account. **[8]**

P.T.O.

OR

Q5) a) Draw a class diagram for a banking system. Make and state suitable assumptions for the same. **[8]**

b) What is need and purpose of object diagram in UML **[6]**

c) Explain import and access stereotypes with reference to package diagram. **[4]**

OR

Q6) a) Draw a class diagram for Library Management System (LMS) — system manages Library, Catalog, Book, Account. Use advanced class diagram notation. Assume and make suitable assumptions. **[8]**

b) What is CRC .Compare it with class diagram **[6]**

c) What is the need and purpose of composite structure diagram. **[4]**

SECTION - II

Q7) a) Draw a state diagram for printer for printing a document. **[8]**

b) Explain interaction operators: Alternative, Break and Parallel **[6]**

c) Explain the significance of timing diagram **[4]**

OR

Q8) a) Draw a Sequence diagram for the following system: **[8]**

Facebook user authentication in a web application how Facebook user could be authenticated in a web application to allow access to his/her Facebook resources. Facebook uses a framework which enables web application (called "client") to request access to resources controlled by the FB user and hosted by the Facebook server. Assume and make suitable assumptions.

b) What are the elements of communication diagram. **[6]**

c) Explain with an example What are combined fragments in Sequence diagram. **[4]**

Q9) a) Give notation and explanation for following concepts related to deployment **[8]**

diagram. : Node, artifact, <<manifest>>, communication path.

b) Explain Black Box view and White box view in Components diagram **[8]**

OR

Q10)a) Enlist the differences between component diagram and deployment diagram. **[8]**

b) Identify any two possible components and the interfaces they support for a hypothetical typical college library system that issues (returns) books to student members. The students can search for the books details as well as check availability. Draw a COMPONENT diagram to show the two identified components with interfaces they support. **[8]**

Q11)a) Explain the Iterator design pattern with an example **[8]**

b) Explain the concept and significance of forward engineering and reverse engineering in UML diagrams **[8]**

OR

Q12)a) Explain the proxy design pattern with an example. **[8]**

b) How do you reverse engineer a class diagram? **[8]**