Total No. of Questions : 12]

SEAT No. :

P2791

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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) Give the Extensibility mechanisms in UML. **[8]**

b) What are the different phases of RUP? **[8]**

OR

Q2) a) Explain and elaborate the building blocks of UML. **[8]**

b) Write a short note on MDA. **[8]**

Q3) a) Draw use case diagram for Library management system with advanced use case notations. **[8]**

b) Explain include and extend stereotype in use case diagram with and example. **[8]**

OR

Q4) a) Draw a activity diagram for the business process described below **[8]**

A student applies for admission to a college. He can join one of the engineering branches. The student applications are sorted on merit. Top students are offered and admission on merit order. The joining process involves student being shown available branches. Student's selects branch, chooses optionally a hostel seat. In parallel makes payments, selects memberships to gym and select elective courses to attend. On successful admission he is enrolled, given a admit card and is given a copy of academic calender. The students not admitted can register their interest in waitlist. Make additional assumptions about scope, use advanced activity diagram 2.0 features if relevant.

b) What are functionalities & how are they depicted in use case diagram? **[8]**

P.T.O.

Q5) a) What is multiplicity, association class & association navigability. **[6]**

b) Draw a class diagram for a banking system. Make and state suitable assumptions for the same. **[6]**

c) What is the significance of package diagram? **[6]**

OR

Q6) a) What are interfaces & ports & where are they used? **[6]**

b) Explain the concept of composition and Aggregation. **[6]**

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

SECTION - II

Q7) a) Explain the significance of communication diagram with example. **[6]**

b) What are different interaction operators? Explain its use. **[6]**

c) Give the state diagram for a printer for printing a document. **[6]**

OR

Q8) a) Identify the objects and messages for a student course registration sequence in a course management system and represent it using the sequence diagram. **[6]**

b) Explain the components of Interaction Overview Diagram. **[6]**

c) Explain the significance of timing diagram. **[6]**

Q9) a) What are the differences between component diagram and deployment diagram. **[8]**

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

OR

Q10)a) 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]**

b) Give notation and explanation for following concepts related to deployment diagram: **[8]**

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

Q11)a) Explain the concept and significance of forward engineering and reverse engineering in UML diagrams. **[8]**

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

OR

Q12)a) How do you reverse engineer a class diagram? **[8]**

b) Explain the Iterator design pattern with an example. **[8]**