Code No: 813AN

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA III Semester Examinations, June/July - 2018
OBJECT ORIENTED ANALYSIS AND DESIGN (USING UML)

Time: 3 Hours   Max. Marks: 60

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.   Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks and may have a, b, c as sub questions.

PART - A

5 × 4 Marks = 20

1.a) Why the modeling is required? Explain the four basic principles of modeling.   [4]
  b) Describe the common uses of class and object diagrams in detail.   [4]
  c) How the use-cases and relationships among use-cases can be organized and rendered in UML.   [4]
  d) Define state and event. What are the various parts of a state? Explain.   [4]
  e) What is the significance of Artifact Diagrams? Discuss.   [4]

PART - B

5 × 8 Marks = 40

2.a) Explain the various phases of object oriented software development life cycle using appropriate diagram.
  b) How the Unified Modeling Language can be useful in Object Oriented Modeling? Explain with appropriate example.   [4+4]

OR

3.a) Compare and contrast the object-oriented model with the E-R and EER models.
  b) How the architecture of a software intensive system can be described? Explain different views of it in UML.   [4+4]

4. Explain the concepts of stereotypes, tagged values and constraints with reference to UML using appropriate diagrams.   [8]

OR

5.a) Explain the relationship between the Class diagram and Object diagram using appropriate example.
  b) With an example, explain the steps to reverse engineer an object diagram.   [4+4]

6. Explain the steps for modeling the context of a system using use-case diagram. Draw the use-case diagram for modeling a course registration system.   [8]

OR

7.a) What is meant by semantic equivalence between the two kinds of interaction diagrams?
  b) Enumerate the steps to model activity diagram and explain with an example.   [4+4]

8.a) Explain the concept of components. How it is represented? Specify the different kinds of components.

 b) Explain the contents and common uses of component diagrams.   [4+4]

OR

9. Explain the various contents of a deployment diagram. With the help of an example, explain the modeling of a fully distributed payroll system with reference to the deployment diagrams.   [8]

10.a) Discuss the differences between software design patterns and frameworks with examples.

 b) Draw the state chart and activity diagrams for unified library system.   [4+4]

OR

11.a) Draw the use case diagram for the Unified library system and explain the relationships.

 b) Draw a class diagram of business objects in the Unified library system and explain.   [4+4]

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