

Code No: 126VQ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech III Year II Semester Examinations, December - 2019****OBJECT ORIENTED ANALYSIS AND DESIGN****(Common to CSE, IT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A**(25 Marks)**

- 1.a) State the advantages of object oriented model over ER Modeling. [2]
- b) List and explain any three aims of modeling. [3]
- c) Write the difference between association role and association class. [2]
- d) How interface is represented in UML? Explain. [3]
- e) Write the sample usecase template. [2]
- f) What is the purpose of collaboration diagram? Explain. [3]
- g) Write about the notations used for components and nodes. [2]
- h) Differentiate between sub states, nested states, and composite state. [3]
- i) What is the intent of artifact diagrams? Explain. [2]
- j) Explain how frameworks are different from patterns. [3]

PART - B**(50 Marks)**

2. With a neat sketch, describe the activities of the different phases of the object-oriented software development life cycle. [10]
- OR**
- 3.a) Describe the UML Architecture and explain each component in it.
 - b) What are the principles of modeling? Explain. [5+5]
- 4.a) Differentiate between class diagram and object diagrams with examples.
 - b) Explain the contents, common properties and uses of class diagrams. [5+5]
- OR**
- 5.a) Differentiate between aggregation, composition, association and reflexive association.
 - b) Explain the need for promoting n-ary associations to classes. [5+5]
- 6.a) Explain any four differences between the two kinds of interaction diagrams.
 - b) Explain the significance of join, fork and swim lanes in activity diagrams. [5+5]
- OR**
- 7.a) What is the purpose of a use-case model? Illustrate the different types of relationships between use cases with an example.
 - b) Draw the sequence diagram that specifies that specify the flow of control involved in initiating a simple, two party phone calls. [5+5]

- 8.a) Define event and signal. What are the four kinds of events modeled by UML? Illustrate them with suitable notations.
- b) Enumerate the steps to forward and to reverse engineer a deployment diagram. [5+5]

OR

- 9.a) Summarize the basic notations used in state machine diagrams.
- b) What are the characteristics and common uses of a well-structured deployment diagram? Discuss. [5+5]

10. Develop the following diagrams based on Unified Library application:

- a) Class diagram
b) State chart diagram
c) Deployment diagram
d) Activity diagram.

[10]

OR

- 11.a) Draw a usecase diagram to model the behavior of a unified library system with various relationships possible among usecases.
- b) Draw the interaction diagrams for a unified library application. [5+5]

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