

**R13**

Code No: 126EQ

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, April - 2018****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) What is the importance of modeling? [2]
- b) Explain why object oriented approach is preferable when compared to other approaches? [3]
- c) What is visibility of an element owned by a package? [2]
- d) What are the steps to model simple collaborations of class diagram? [3]
- e) Distinguish between activity and action state in UML. [2]
- f) Explain briefly about usecase flow of events. [3]
- g) Discuss how to depict iterated and broadcast messages in interaction diagrams. [2]
- h) What are the properties of a well structured component diagrams? [3]
- i) Enumerate steps to model concrete instances in UML. [2]
- j) What is node? How to organize nodes in UML? [3]

**PART - B****(50 Marks)**

- 2.a) Write about structural things of UML vocabulary. Give UML notation.
  - b) What are principles of modelling? Explain. [5+5]
- OR**
3. Explain briefly about following terms:
    - a) Stereotypes
    - b) Tagged Values
    - c) Constraints [3+3+4]
  - 4.a) What is a class diagram? What are the common properties and uses of class diagrams?
  - b) With reference to class diagrams, enumerate the steps to forward engineer. [5+5]
- OR**
- 5.a) Enumerate steps to model vocabulary of a system.
  - b) Enumerate steps to model distribution of responsibilities in a system. [5+5]

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- 6.a) What is meant by usecase? Explain about use case description with an example.  
b) State and explain the common modeling techniques of usecase diagrams. [5+5]

OR

- 7.a) Explain about forking and joining concepts in activity diagram with an example.  
b) Draw swimlane flowchart for financial accounting template and customize it to show your processes and procedures. [5+5]

- 8.a) How will you model distribution of objects.  
b) What is an event? What are different types of events? [5+5]

OR

- 9.a) Enumerate the steps in modeling timing constraints. Illustrate with a UML diagram.  
b) Consider an object diagram that models the distribution of certain objects in a real time system. Draw the diagram and explain briefly. [5+5]

- 10.a) Draw an use case diagram for hospital information system aimed at collecting and storing complete information pertaining to the patients.  
b) Draw sequence diagram for hospital information system. [5+5]

OR

- 11.a) Draw a diagram that show set of nodes and their relations for library management system.  
b) Explain briefly about boundary, control and entity classes. Give suitable examples. [5+5]

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