Code No: **R32125**

R10

Set No. 1

Time: 3 hours   Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1 a) What is meant by unified in UML? Explain the structure of UML.   [9]

   b) When and why to use <<extend>> and <<include>> terms in usecase modeling?   [6]

2 a) How to find classes by noun/verbal analysis in object oriented modeling? Explain.   [8]

   b) State the rules of thumb for creating well-formed analysis classes.   [7]

3 a) Define the following relationships in UML along with their notations and an example: [6]
       association, link,
   b) Explain in detail about association relationship and various attributes associated with [9]
       it.

4 a) Identify various use-case realizations for a student course registration system and [8]
       explain the actions and activities associated with it.
   b) List the contents of communication diagram and explain their representation and used [7]
       in UML.

5 a) Differentiate between template classes and nested classes.   [5]

   b) Explain various techniques for refining analysis relationships into design   [10]
       relationships.

6 a) Explain how components and interfaces are combined in Component-Based   [8]
       Development model.
   b) Give the procedure for modeling concurrency in an activity diagram with an example. [7]

7 a) Draw a state machine for the controller in a home security system, which is   [7]
       responsible for monitoring various sensors around the perimeter of the house.
   b) Explain the following terms related to state machines: [8]
          i) Submachine state   ii) submachine communication

8 a) Explain the relationship between the implementation model and the design model.   [7]

   b) Draw and explain the deployment diagram for an online reservation system.   [8]

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