Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

INTERNATIONAL CENTRE FOR APPLIED SCIENES
II SEMESTER B.Sc.(Applied Sciences) IN ENGINEERING END SEMESTER THEORY EXAMINATION-APRIL/MAY 2019
Software Design Using Object Oriented Paradigm [CS 122]

Marks: 100   **Duration: 180 mins.**

Answer 5 out of 8 questions.

1)
   A) Explain UP Model in detail, with an example (10)

   B) What is Use Case diagram? Explain with an example (10)

2)
   A) How do you give Domain Class Diagrams? Explain. (10)

   B) What are the relationships in class diagrams? Explain (10)

3)
   A) What do you mean by Noun Phrase Approach for Class diagrams? Explain (10)

   B) Write a simple case study with few requirements and identify the classes and member variables using the noun phrase approach (10)

4)
   A) How do you give an Activity Diagram? Explain (10)

   B) Write the activity diagram for the following case study "Student admits to a bachelor course in engineering and obtains their degree by the end of the fourth year" (10)

5)
   A) Explain the method of drawing Interaction Diagrams? (10)

   B) What are the differences between the sequence diagram and the collaboration diagram (10)

6)
   A) Explain State Chart Diagrams with an example (10)

   B) Write the state chart diagram for the following use case "The ice cubes are formed in the freezer. The freezer is opened, and the container is kept outside or one hour. The ice cubes melt into water. And this water is boiled to form vapors. The vapors are collected in another container and kept in the freezer for an hour. With this, the vapors are (10)

converted to ice cubes again.
Hint: The object is ice cube which sees different states with some activity

7)

A)

What are Package Diagrams? Explain (10)

B) You have a software system in an Academic section of MIT, Manipal. Represent all the entities of this system through the package diagram (10)

8)

A)

What do you mean by stereotypes in UML? Explain (10)

B) The ICAS office wants to procure software for the student information management. This yourself as the head of ICAS who is going to give the job of the software development to a company. As head, list the requirements what you want to give to the company (10)

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