B.TECH. COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2013

BICSE-010 : DATA MODELLING AND UML

Time : 3 hours   *Maximum Marks : 70*

Note :   (i)   Answer **any seven** questions.

    (ii)   *Assume suitable missing data, if any.*

    (iii)   *All questions **carry equal** marks.*

1. (a) How Object Oriented Analysis is different from Object Oriented Design ? Explain.   5

 (b) Differentiate between functional model and Dynamic model.   5

2. (a) Draw a class diagram to illustrate University Enrolment System.   5

 (b) Why different types of notations are important in software design ?   5

3. (a) How event classes are constructed ? Explain with suitable example.   5

 (b) What do you mean by "Application domain" in object oriented modelling Approach ?   5

4. (a) Differentiate between Multiplicity and   5
       Cardinality.

   (b) Write the need of "Communication   5
       relationships".

5. (a) What are 'events' and 'States' in a student   5
       database ? The specific purpose of this
       database system is managing student
       semester wise academic performance.

   (b) Differentiate between Include relationships   5
       and Extend relationships with example.

6. (a) What are the benefits of reusability in   5
       Object Oriented Development ?

   (b) Design a state chart diagram for online   5
       booking of an Air ticket.

7. (a) Define the following terms :   1x5=5

       (i)   Objects

       (ii)   Class

       (iii) Messages

       (iv)   Abstraction

       (v)   Polymorphism

   (b) Explain Association and Aggregation   5
       relationships in a class diagram with their
       required notations.

8. (a) Explain the terms "Traditional Paradigm"   5
        and " Object Oriented Paradigm".

    (b) Draw a use case diagram for Library   5
        Management System.

9. (a) Define Abstract Data Type(ADT).   5

    (b) Draw an Activity diagram for Performing   5
        operations in ATM machine.

10. Write short notes on *any two* :   5x2=10

    (a) Prototyping
    (b) System Models and views
    (c) UML

―――――