MCS-032

MCA (Revised)

Term-End Examination

June, 2012

066067

MCS-032 : OBJECT ORIENTED ANALYSIS AND DESIGN

Time : 3 hours   *Maximum Marks : 100*

Note :   *Question no. 1 is compulsory. Attempt any three questions from the rest.*

1. (a)   What are the benefits of object oriented   5
    development over structure development.

    (b)   How one way association is different than   5
    two way association.

    (c)   Microwave oven contains simple control
    button which is available for the users of
    the oven. If the oven door is closed and a
    user pushes the button, the oven will cook
    for two minute. If the user pushes the button
    at any time when the oven is cooking, the
    user gets an additional minute of cooking
    time. For e.g if the user has 30 sec more

cooking time to go and he pushes the button twice, the cook time is now for 2 minutes and 30 seconds. If door of oven is open then light is on otherwise off.

(i) Draw a class diagram. 5

(ii) Draw an instance diagram. 5

(iii) Draw use case diagram. 5

(iv) Draw sequence diagram. 4

(v) Identify the states and transitions. 6

(d) Create an activity diagram for railway reservation system. 5

2. Differentiate between the following : 5x4=20

(a) Static binding and dynamic binding

(b) Generalization and aggregation

(c) Attributes and behaviour

(d) Packages and subsystems

(e) Dynamic model and functional model

3. (a) Write short notes on : 2x5=10

(i) Meta classes

(ii) Association class

(iii) Object constraint language

(iv) Derived attributes

(v) Persistency

(b) Why do we use integrity constraints in   5
     relational database management system.
     Justify your answer with appropriate
     example.

(c) What is state diagram ? Draw the state   5
     diagram for 'Issue of Book'.

4. (a) Explain how DFD are designed in an object   14
         oriented approach. Discuss it with teaching
         learning system.

    (b) Explain probe in sequential diagram.   6

5. (a) Explain major features of UML.   5

    (b) Why we need of approach object oriented   5
         decomposition ?

    (c) What is inheritance ?   How we can   5
         incorporate inheritance adjustment in object
         oriented methodology ?

    (d) Briefly explain the concept of collaboration   5
         diagram.