MCA (Revised)

Term-End Examination

December, 2013

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)   Draw a state diagram for the submission of   10
             an examination form. Following are some
             of the considerations :

      (i)   All the assignments pertaining to the
              semester needs to be submitted
              within the due date.

      (ii)   Demand draft for all the courses to be
              approved   need   to   be   taken
              (@ Rs.60/- per course).

      (iii)   Examination form need to be filled up.

      (iv)   It should be verified by the Study
              Centre Coordinator.

      (v)   The attested form should be submitted
              to the Regional centre concerned.

(b)	Draw a component diagram for an ATM.	**10**

(c)	With the help of illustration for each, explain the following w.r.t. Decomposition :	**10**

    (i)	Process-oriented decomposition

    (ii)	Object-oriented decomposition

(d)	Describe the factors that contributes to the "Design Optimization".	**10**

2.	(a)	Draw a D.F.D. for "Library Management System at any Regional Centre of IGNOU". Assumptions can be made wherever necessary. Draw the DFD's till level -2.	**10**

(b)	Discuss the following w.r.t. the unidirectional Implementation in a class diagram :	**10**

    (i)	Optional Association

    (ii)	Associations with multiplicity

3.	(a)	Draw an object model for the payment process involved in a sales order system. Conventional notation for diagram should be followed.	**10**

(b)	Explain, with the help of a diagram extended to three schema architecture for object models.	**10**

4. (a) Draw a collaboration diagram for the **10** Inventory Control System.

   (b) Explain how the integrity constraints are **10** applied in the Object Oriented Model.

5. Write short notes on *any four* of the following :

   5x4=20

   (a) Advantages and disadvantages of OOAD

   (b) Metaclass and metadata

   (c) Mapping Generalizations to tables

   (d) Deployment diagram

   (e) Composite States

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