No. of Printed Pages : **4**

MCS-032

MCA (Revised)

09642

Term-End Examination
June, 2010

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.*

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1. (a) Identify class objects instances generalization, associations, inheritance of the followings : **5**

(i) Computer-ROM

(ii) Brother - sister

(iii) My computer-Network book

(iv) Employee-Section Officer

(v) Aircraft-Pilot

(b) Draw a state diagram for online submission of examination form. **5**

(c) ABC Co. deals with on-line selling, purchasing and booking of shares. A user enters his/her user name and password (assigned at the time of registration) user choosep one of the above actions and finally receives the transaction details perform the following tasks.

(i) Draw a class diagram **5**

(ii) Draw a object diagram **5**

(iii) Draw use case diagram **4**

(iv) Draw association and inheritance diagram **6**

(d) What is the purpose of dynamic modelling. **5**

(e) Explain the two strategies to implement state charts. **5**

2. Differentiate between the followings with appropriate examples : **5x4=20**

(a) Static binding and dynamic binding

(b) Functional modelling and object modelling.

(c) Abstract classes and concrete classes.

(d) Aggregation and Generalization.

(e) Activity diagram and state chart diagram

3. (a) Define the following terms : 10

(i) metaclass and metadata

(ii) object identity

(iii) maintainability

(iv) collaboration diagram

(v) state diagram.

(b) Draw a DFD for changing your existing program centre to a new program centre. 5

(c) Draw an instance diagram $x = y + z/m$. 5

4. (a) What do you mean by concurrency, which model is perfect enough to describe concurrency in a UML diagram and why ? When can you say that two objects are concurrent ? Briefly describe any two concurrency issues. 2+2+2+4=10

(b) What do you mean by association in a UML diagram ? Briefly describe various types of associations available in UML. 5

(c) Explain important features of object oriented language. 5

5. (a) How are events happening between objects controlled ? 5

(b) How do you may object classes to tables. 5

(c) How do you implement association as classes ? 5

(d) How do you identify concurrency ? What are the important issues related to concurrency ? 5