MCS-032

MCA (Revised)

Term-End Examination

June, 2007

MCS-032 : OBJECT ORIENTED ANALYSIS AND DESIGN

Time : 3 hours *Maximum Marks : 100*

Note : *Question number 1 is* ***compulsory****. Attempt any* ***three*** *questions from the rest.*

1. (a) Explain the concept of object. How is it different from class ? Show the representation of class and object in case of UML. 5

(b) Compare object oriented databases with relational databases. 5

(c) What is meant by inheritance adjustment ? Explain the process of doing this in case of object oriented model. 5

(d) Explain the usage of five different relationships in case of UML. 5

(e) Explain various components used in Data Flow Diagram. What is the need of levels in case of DFD ? 5

(f) Explain three major constraints while using object oriented model. How can you implement constraints in this model ? 5

(g) "Inventory control systems are used to manage the stocks of companies and big distribution organizations." Draw any two diagrams used in dynamic modelling of inventory control system. 10

2. (a) Explain the process of storing a persistent object in case of object oriented database. 6

(b) Write the three major steps required for design optimization. Show the design of different types of association, with suitable diagrams. 9

(c) What is the importance of collaboration diagram ? Draw a collaboration diagram for the production management system. 5

3. (a) Write different types of models used in case of object oriented modeling. Compare the usage of generalization and inheritance with a suitable example. 8

(b) What are integrity constraints ? Explain the types of integrity constraints. 5

(c) Identify the use of object diagram and deployment diagram. Explain and draw the appropriate deployment diagram for student administration system. 7

4. (a) What is encapsulation ? What are its advantages ? How can encapsulation be enforced in C++/Java ? 7

(b) Draw a state transition diagram for digital watch. 5

(c) Explain the various considerations while using functional model. Prepare a function model for university system. 8

5. (a) Write two major aspects of implementing association. Explain uni-directional and bi-directional association with its example. 9

(b) Write short notes on : 6

(i) Concurrency identification

(ii) Integrity constraints

(c) What is serialization ? Where is it used and why ? 5