

MCA (Revised)
Term-End Examination
June, 2008

**MCS-014 (S) : SYSTEMS ANALYSIS AND
DESIGN**

Time : 3 hours

Maximum Marks : 100

(Weightage 75%)

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

1. (a) Draw an Entity Relationship Diagram for an inventory management system. Also list the set of requirements for this system and develop SRS document for it. 10

- (b) Explain Database Design and its types. Also differentiate (in detail) between a network model and a relational model. 10

(c) Write short notes on :

$$2\frac{1}{2} \times 4 = 10$$

- (i) Prototyping
- (ii) User Acceptance Testing
- (iii) Expert System
- (iv) JAD

(d) What is the need for fact finding in System Analysis and Design ? Elaborate its categories. 10

2. (a) Construct a context level, 1-level and 2-level DFD for Airways Reservation system. 8
- (b) What are concurrent audit techniques ? Explain their types. 6
- (c) Construct a data dictionary and a decision tree for a problem statement of your choice and explain them. 6
3. (a) What are the basic tasks performed by a system analyst ? 4
- (b) Categorize systems maintenance. Which type consumes the maximum time and which is the most difficult to implement ? Also provide the flowchart for the maintenance process. 8
- (c) Consider an organisation developing the software products and selling them to the customers. Suggest the features/options for MIS and its supportive systems for this organisation. Present the working of each level (module) of MIS. 8

4. (a) Give procedure of a form design. What are the essential characteristics of a form ? Give examples. 6
- (b) What are the features of a user interface design ? What are the problems faced during design of such an interface ? 6
- (c) Explain the Analysis phase of SDLC. Give relevant diagram also. 8
5. (a) Give the utility of a decision table in System analysis and design. 4
- (b) What is the need of prevention of a computer from risks and security threats ? Give various techniques to prevent the system from these risks and threats. 6
- (c) Write short notes on : $2\frac{1}{2} \times 4 = 10$
- (i) TPS
 - (ii) Unit Testing
 - (iii) Relational Model
 - (iv) System Audit

