MCS-014: SYSTEMS ANALYSIS AND DESIGN

Time: 3 hours  Maximum Marks: 100
(Weightage: 75%)

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

1. (a) Prepare SRS for a library management system. Make necessary assumptions. 8

(b) Draw ERD for a library management system. Explain various components and relationships in detail. 8

(c) Differentiate between DFD and Flow chart. Discuss the importance of levels of DFD. 8

(d) Explain the following diagrams with examples: 2x4=8

(i) Structured chart

(ii) State-machine diagram

(e) What are the guidelines for database design? Explain the term ‘Relational Database Schema’. Give an example of this schema. 8

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2. (a) Differentiate between Software Re-engineering and Reverse engineering. 8
(b) Draw a decision table and a decision tree for a problem statement of your choice. Make necessary assumptions. 8
(c) What is meant by 'Expert System'? Why is it required? Give its features. 4

3. (a) What are the components of a MIS? Differentiate between DSS and TPS. Also explain various components of TPS in detail. 8
(b) Explain various types of cohesion. Give an example of a cohesion module. Explain. 8
(c) Explain any three fact finding techniques. Give their merits and demerits. 4

4. (a) What is a 'User Interface'? Explain the guidelines for designing a user interface. 8
(b) Differentiate between various concurrent audit techniques explaining their merits and features. 6
(c) What are the various standards of documentation? Also, explain in brief, the various components of software user documentation. 6

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5. (a) Explain the differences between functional testing and structural testing. 8

(b) What are the various steps in logical design? Explain the use of normalization in database design. 8

(c) Explain the responsibilities of a system analyst. Give any two essential qualifications of a system analyst. 4