

**MCA (Revised) / BCA (Revised)**

**Term-End Examination**

**June, 2016**

08496

**MCS-014 : SYSTEMS ANALYSIS AND DESIGN**

*Time : 3 hours*

*Maximum Marks : 100*

*(Weightage : 75%)*

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

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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 : 2×4=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

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

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
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