

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

**Term-End Examination**

**December, 2022**

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

*Time : 3 hours*

*Maximum Marks : 100*

*(Weightage : 75%)*

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**Note :** *Question no. 1 is compulsory. Attempt any three questions from the rest.*

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1. (a) What is a software system ? Define SDLC. Should development of information system be considered as capital investment ? Justify your answer. 10
- (b) List and explain any two object-oriented CASE tools, with the help of suitable examples. 10
- (c) What is a Form ? How are forms designed ? Briefly explain the criteria for form design. 10
- (d) Explain why design principles are necessary for efficient software design. Differentiate between Top-down design and Bottom-up approach of software design. 10

2. (a) Why is proper system analysis important for successful system development ? Briefly explain the role of a system analyst in the overall system development. 10
- (b) What is software maintenance ? Explain adaptive maintenance and preventive maintenance, with examples. 10
3. (a) Explain ER Modelling, with an example. Also describe how ER Model is helpful in Database design. 10
- (b) What is a Data Dictionary ? Create a Data Dictionary for an “Online Shopping System”. Make necessary assumptions. 10
4. (a) Prepare outline of SRS for an “Online Shopping System”. Make necessary assumptions. 10
- (b) What is an Expert System ? What are its features ? Explain the advantages and disadvantages of Expert Systems. 10
5. Write short notes on the following : 4×5=20
- (a) Information Security
- (b) Data Flow Diagram
- (c) Transaction Processing System
- (d) Quality of Software
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