

MCA (Revised) / BCA (Revised)

Term-End Examination

June, 2014

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

Time : 3 hours

Maximum Marks : 100

(Weightage: 75%)

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

1. (a) What type of projects are amenable for Spiral model ? Justify your answer with an example. 8
- (b) Explain the characteristics of an Information System in detail. 8
- (c) Consider a software which registers students for different programmes. The students fill a form and submit it. This is sent to the departments for confirmation. Once it is confirmed, the form and the fees is sent to the account section. Draw a DFD 1 - level and 2 - level for development of software mentioned. 8
- (d) Differentiate between function-oriented design and object-oriented design. Also, explain the problems which arise if two modules have high coupling. 8

- (e) Explain various criteria and specifications to be considered while designing forms and Reports. 8
2. (a) List any five fact finding techniques for system study and explain any two of them in detail. Differentiate between these two with respect to their merits and demerits. 10
- (b) Explain the characteristics of MIS. Give the components of MIS. Also differentiate between DSS and expert system. 8
- (c) Give an example of a structure chart and explain it. 2
3. (a) Distinguish between technical, operational and economic feasibility with suitable examples. 4
- (b) Prepare SRS for 'Airline Reservation System.' Make assumptions wherever necessary. 8
- (c) What are the roles of a system analyst in system development ? What is a data dictionary ? Mention the uses of data dictionary by a system analyst, with the help of an example. Explain the contents of data dictionaries. 8
4. (a) What is a Test Design Document ? Explain the contents of this document. 8
- (b) Differentiate between the following : 2x2=4
- (i) Flat files and Database
- (ii) System Testing and Unit Testing

- (c) Categorise CASE tools. Give a diagram to explain various components of a CASE tool. 8
5. (a) Give short notes on : 3x3=9
- (i) Transaction Audit
 - (ii) Types of Coupling
 - (iii) Decision Trees.
- (b) What is the need of functional decomposition in software development ? Explain with an example. 5
- (c) Explain the concept of Information Security and its architecture. Write a short note on threats and risks in a system. 6
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