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.  
(b) Explain the characteristics of an Information System in detail.  
(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.  
(d) Differentiate between function-oriented design and object-oriented design. Also, explain the problems which arise if two modules have high coupling.
(e) Explain various criteria and specifications to be considered while designing forms and Reports.

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.

(b) Explain the characteristics of MIS. Give the components of MIS. Also differentiate between DSS and expert system.

(c) Give an example of a structure chart and explain it.

3. (a) Distinguish between technical, operational and economic feasibility with suitable examples.

(b) Prepare SRS for 'Airline Reservation System.' Make assumptions wherever necessary.

(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.

4. (a) What is a Test Design Document? Explain the contents of this document.

(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.

5. (a) Give short notes on: 3×3=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.

   (c) Explain the concept of Information Security and its architecture. Write a short note on threats and risks in a system.