COMP 4-5 (RC)

S.E. (Comp) (Sem. IV) (RC) Examination, May/June 2012
SYSTEM ANALYSIS AND DESIGN

Duration : 3 Hours | Total Marks : 100

Instructions : *i) Answer **5** questions, atleast **one** question from **each** Module.*
*ii) Make suitable assumptions, if **necessary**.*

Module – I

1. a) Explain the system development life cycle for a library MIS. 8

   b) A good system analyst must have the qualities of a "psychologist" Justify. 6

   c) Relate the following to the SDLC

      i) Initial Investigation Report 6

      ii) Feasibility study.

2. a) Discuss the different types of organisation structures possible in a MIS facility. Also discuss the advantages and disadvantages of each structure. 12

   b) Draw and explain the modified SDLC suggested by Neumann and Jenkins. 8

Module – II

3. a) Explain the different information gathering methods. 8

   b) The users of a system used the following strategies when defining their user requirements.

      i) Radha requested about 15 features when only 7 features were really required.

      ii) Ram stated that he required everything that Radha required.

      iii) Saurabh provided a list, overstating every requirement in the list.

      Identify the type of user and their strategy in the above cases. 6

   c) What is onsite observation ? What are the different methods employed for on-site observation ? 6

P.T.O.

4. a) What are the five major varieties of closed questions ? 5

   b) Draw a DFD for the following

      i) Issuing a book from a library

      ii) Returning a book to the library. 8

   c) A project costs Rs. 2 lakhs and the net benefits are Rs. 50,000 (1st year), Rs. 80,000 (2nd year), Rs. 90,000 (3rd year), Rs. 70,000 (4th year), Rs. 50,000 (5th year), Rs. 30,000 (6th year). Assuming 10% interest rate would you proceed after a cost/benefit analysis. 7

Module – III

5. a) Explain the different types of Database, structures and the types of relationships possible in each structure. 9

   b) Differentiate between the following :

      i) Snapout and fanfold forms

      ii) Completeness check and consistency check.

      iii) Connection and couple. 6

   c) Describe and explain the following file organisation structures

      i) Sequential

      ii) Direct Access 5

6. a) With a neat block diagram explain the different system design activities. 8

   b) Design a structure chart using the following information :

      a) Calling module : Record Student Grades

      b) Called module : Get Academic Record

      Get Valid Grades

      Add New Grades

      Report Errors

      Check List

      Indicate all input and output couples. 8

   c) Explain in brief the role of a DBA. 4

Module – IV

7. a) What is implementation ? How does it differ from conversion ? Elaborate. 6

   b) Differentiate between the fall :

      i) Event and Milestone

      ii) Task and Activity

      iii) Precedence and successor relationships

      iv) Data security and Data integrity. 8

   c) Explain Gantt chart ? How can you develop one ? 6

8. a) State and explain the different criteria for software selection in a project. 8

   b) Explain the various strategies used to control the negotiation process. 4

   c) Differentiate clearly between the three types of system failures. 8