14/6/16

S.E. (Comp.) (Semester – IV) Examination, May/June 2016
(Revised 07 – 08)
SYSTEM ANALYSIS AND DESIGN

Duration : 3 Hours   Total Marks : 100

Instructions : *1) Attempt **any five** full questions by selecting at least **1** full question from **each** Module.*
*2) Make suitable assumptions if **necessary**, state clearly assumptions made.*

Module – I

1. a) Draw a diagram and explain the stepwise procedure to demonstrate system development life cycle with prototyping ?   **8**

   b) What is the difference between analysis and design ? Can one begin to design without analysis and why ?   **6**

   c) When does an analyst terminate a project ? How does it tie in with post implementation ? Explain.   **6**

2. a) With the help of a diagram explain three levels of information in an organization requiring an information system.   **6**

   b) State the role and responsibility of the manager (System development) and the system analyst.   **6**

   c) Considering important characteristics distinguish between open and closed systems.   **4**

   d) Explain the significant role and responsibility of system analyst in system development life cycle.   **4**

Module – II

3. a) Elaborate on steps in feasibility analysis.   **7**

   b) What do you mean by Cost Benefit Analysis ? Explain and demonstrate any two methods of cost benefit analysis.   **8**

   c) With the help of an example compare a decision tree and a decision table.   **5**

4. a) Explain the makeup and the activities undertaken by the MIS organization ? Where does the analyst fit in ? **8**

b) Draw a DFD for buying a product using an online shopping system. **8**

c) With an appropriate example discuss the reliability-validity issue in information gathering. **4**

Module – III

5. a) What are the requirements of an effective form design ? **5**

b) How is the structured walkthrough conducted ? What is the role of the user in this activity ? Elaborate. **6**

c) Explain the following file organization methods. **9**

   i) Indexed sequential

   ii) Inverted List

   iii) Direct access

6. a) Consider the following data items : **5**

   Person : employee_name, birthdate, age; phone

   Education : degree_name, major

   Child : child_name, age, gender

   Draw the entity relationship diagram relating the given data items with suitable and relevant assumptions.

b) With the help of a diagram describe the two phases of system design. **7**

c) State the need and give an example to demonstrate each of the following : **8**

Module – IV

7. a) A project has the following activity details :   **6**

Activity	Immediate Predecessors	Activity Time (weeks)
A	–	3
B	–	4
C	–	3
D	C	12
E	B	5
F	A	7
G	E,F	3

Draw a Gannt chart to represent the project; determine those activities comprising the critical path; and estimate the project duration.

b) Stating the significant functions explain the major phases in hardware/software selection.   **6**

c) State the design specifications considered in preparing a test plan.   **2**

d) Consider the scenario of restoring a damaged database. Briefly explain the following recovery approaches :   **6**

     i) Rollforward   ii) Rollback   iii) Restore

8. a) Draw a neat labeled diagram to show the activities of a maintenance procedure.   **6**

b) With the help of an example explain the Encryption/Decryption procedure used for access control.   **6**

c) What is implementation ? How does it differ from conversion ? Elaborate.   **6**

d) Define the following :   **2**

     i) System testing

     ii) Stress testing