CS-70

BACHELOR IN COMPUTER APPLICATIONS

Term-End Examination

December, 2008

CS-70 : INTRODUCTION TO SOFTWARE ENGINEERING

Time : 3 hours *Maximum Marks : 75*

Note : *Question number 1 is* ***compulsory****. Attempt any* ***three*** *questions from the rest.*

1. A library (Audio & Video) has branches in different cities of India. Each branch has the popular/current sets of audio & video CDs, DVDs, cassettes etc. All branches have access to the database of all stock items available in the branch libraries. Each branch maintains the database of their customers which is updated weekly to the centralised database. Each branch can normally give items on rent as well as sell the items. Every branch can borrow the items from nearby branch, by taking permission from Head Office at Delhi.

Answer the following based upon the above given specifications :

(a) Design the DFDs upto two levels. 8

(b) Prepare SRS document. List assumptions, if any. 5

(c) Design an ER diagram. List all the entities, attributes, cardinality keys, strong and weak entities etc. 7

(d) Draw PERT chart for the problem and show the critical path. 5

(e) Specify the software life cycle model suitable for the specification. Also, explain briefly about the phases of this model. 5

2. (a) What is feasibility study ? Why is it important for system design ? How does cost benefit analysis contribute to it ? 8

(b) What is the importance of Risk Management ? Explain any five risk management techniques. 7

3. (a) Explain prototype approach. Give the steps for the prototype design. Also, list its main advantages and disadvantages. 8

(b) Define software crisis and explain six cases which contribute to a software crisis. 7

4. (a) How is coupling and cohesion related ? Explain each with an example. *5*

(b) Explain the cyclomatic complexity with a suitable example. *5*

(c) How are CASE tools useful for project management ? List their disadvantages. *5*

5. Explain the following with an example : *5×3=15*

(a) Bottom-up Design approach

(b) LOC based estimation

(c) Project Scheduling

(d) Data Dictionary

(e) Test Cases