Roll No.....................

BCA-602(N)

B.C.A. (Semester-VI) Examination-2014
(New Course)
Information System: Analysis
Paper: Second
Design and Implementation

Time: Three Hours]   [Maximum Marks: 75

Note: Section A is compulsory. Attempt any seven questions from Section B and attempt any one question from Section C.

Section-A

Note: Both questions are compulsory. Each question carries 9 marks.   (9x2=18)

1. "Give a discount of 5% if the customer pays in advance, or if the purchase is for 10,000 or more and the customer is a regular customer". For the above stated problem use the following to describe.
   (a) Decision Tree
   (b) Structured English
   (c) Decision Table

2. What is DFD? Explain the meaning of symbols used in DFD. Draw Level O and Level 1 DFD for Library Management System.

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14. (a) What is an E-R diagram?
   Suppose we informally derive the data in the database of a department store as follows-
   (i) Each employee is represented. The data about an employee are his employee number, name, address and the department he works for.
   (ii) Each department is represented. The data about department are its name, employees, managers and items sold.
   (iii) Each item sold is represented. The data about an item are its name manufacturer, price, model number (assigned by manufacturer) and an internal item number (assigned by the store).
   (iv) Each manufacturer is represented. The data about a manufacturer are its name, address, items supplied to the store and their prices.

   Give an ER diagram for the data base.

   Note that some information may be represented by attributes and other may be represented by relationship.

   (b) What is an SDLC? Explain each step of SDLC in brief with the document generated at the end of step.

Section-B

(Short Answer Type Questions)

Note: (Attempt any seven questions. Each question carries 2 marks. (6x7=42)

3. Give the brief description of process elicitation model for requirement analysis.

4. What do you mean by Prototyping? List any three advantages and three disadvantages of prototyping.

5. Describe the following terms in reference of object modeling-
   (a) Values and Attributes
   (b) Operations and Methods
   (c) Links and Association

6. What do you mean by software quality metrics? Explain in detail.

7. Draw a class diagram to show the relationship between employee and company. In your class diagram show attribute, operation, Links, multiplicity and association classes.

8. Explain the COCOMO model for cost estimation in brief.

9. What is User Interface Design? Also explain the purpose and types of interfaces.

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10. What are the features of Data Dictionary? List the steps for creating data dictionary. Also list the reasons to use Data Dictionary.

11. Explain the SEI-CMM model in detail.

12. What is system? Give any two definitions. List and explain the elements and characteristics of system.

Section-C

(Long Answer Type Questions)

Note: Attempt any one question. Each question carries 10 marks. (15x1=15)

13. (a) Differentiate between the following-
    (i) Black Box Testing and White Box Testing
    (ii) User Documentation and System Documentation
    (iii) MIS and DSS
    (iv) PERT chart and Gantt chart

    (b) In your opinion, what skills are required by system analyst?

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