



DURATION: 1 ½ HOURS

Date: 26.10.2011

Time: 4.00 p.m. – 5.30 p.m.

Answer **ALL** the following questions.

- Q1. What is Prototyping? Use the prototyping model to enhance the Waterfall model.
- Q2. The following narration describes a process that determines whether a customer receives an item which has been ordered.

If the ordered item is an item we stock, and the customer is an approved customer, and we have sufficient inventory on hand, then subtract the quantity ordered from the inventory count, send a shipment authorization for the item and quantity to shipping, and log this transaction. If the item is not something we stock, reject the order. If the customer is not an approved customer, reject the order. If we stock the item, and the customer is approved, but we have insufficient inventory to fill the order, then place this order on backorder, send a notice to that effect, and add this order to the follow-up log.

- I. Draw a suitable Decision Table for the above scenario. In this table, indicate all the rules that can apply. *Hint: You may get 8 rules.*
- II. Simplify the rules and obtain the reduced decision table.
- Q3. The following scenario is described several categories of admission charges according of age limit.

children under 5 years of age are to be admitted free of charge, children 5 years and over but under 18 years are charged Rs.50.00, adults 18 years and over but under 55 years of age are charged Rs.100.00, unless they have a permission card, in which case they are charged the child price. Senior citizens, 55 years and over are charged only Rs.75.00. Below is a decision table which represents these conditions

Draw a decision tree to illustrate the above description.

- Q4. A department has employees. An employee has a unique number, a name, and a salary. A department has a unique number, and a name which is also unique.

Draw an Entity Relationship Diagram including attributes and primary keys.

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