Q1: - Define the following:

(1) object-oriented model 
(2) data dictionary 
(3) super key 
(4) specialized users 
(5) mapping cardinalities

Q2: - A) construct an E-R diagram for a car insurance company with a set of customers with attributes (name, ss#, address), each of whom owns a number of cars with attributes (year, model, license), each car has a number of recorded accidents, the accidents has the attributes (date, driver, damage amount), a log of various accidents associated with each car?

B) explain the concept of aggregation, give an example of it?

Q3: transform the E-R diagram of figure(1) to a data-structure diagram assuming that the data model is:

a-Network
b-DBTG.

Figure(1)
Q4: What are the differences between the following:
1- Procedural DMLs & Nonprocedural DMLs
2- Instance & Scheme
3- Relational model & Network model

Q5: A) Explain with example the steps of normalization with in relational model?
   B) Discuss the meaning of the DBTG-set?

Q6: A) For the data-structure diagram corresponding to the E-R diagram of figure(2) construct the following DBTG queries:

1. Find the sum of all the account balances that belong to the customer 'Ahmad'.
2. Print customer name of all customer in branch 'Basra'.
3. Add new customer with data ('Suha', 'plastain street', 'baghdad')

B) What are the advantages of the hierarchal model?