NCIT college

Attempt All the Questions

1. What is DBMS architecture? Differentiate between 1,2,3 tier DBMS architecture with the appropriate figure. [7]

2. Describe the 3 levels of DBMS (physical, logical, and external) in detail with appropriate figures. [8]

3. What is data independence? Importance and types of Data Independence? [4]

4. Draw a well-labeled ERD for Tours and Travels Management System with extended features. [10]

5. Convert the ER diagram drawn in Que 4 to the schema diagram. [6]

6. Write a Relational Algebra for the following [10]

   Salesman (Sid,name,Scity,commission,Gender)
   Orders(Ono,Purchase_amount,Order_date,Cid,Sid)
   Customer(Cid,Name,CCity,grade,Gender)

   a. What is the customer's name, gender, and grade who purchased from the female salesman on the 2023-02-02 date
   b. What is the purchase amount purchased by either male or name A and the commission is 20000?
   c. What is the name, city, and grade of the customer who ordered on the date 2023-03-05 and the salesman's name is 'ABC'
   d. What is the customer grade and city who purchased >20000 and served by a female salesman?
   e. What is the commission and gender of the salesman who sold 10000 purchase on date 2023-02-02

7. Write SQL for the following [4*2=8]
   Salesman (Sid, name, Scity, commission, Gender)
   a. Create a given table with appropriate constraints
   b. Update salesman whose Commission has 0 as the last digit or male and scity is ktm.
   c. Update a salesman and make gender as female whose name starts with a and ends with m and sid >4.
   d. Delete the salesman whose name contains the pattern like ab and male.