**PL/SQL**

Q1

Following sequences have been used

1. **SEQ\_PUR**

This is the Sequence used to give the value for primary key of purchase table.

1. **SEQ\_SUP**

This is the Sequence used to give the value for primary key of supplies table.

1. **SEQ\_LOG**

This is the Sequence used to give the value for primary key of logs table.

Q2

FOLLOWING FUNCTIONS ARE USED IN THIS QUESTION

1. **GETEMPLOYEES()**

This function returns all the values stored in the employees table

1. **GETCUSTOMERS()**

This function returns all the values stored in the customer table

1. **GETPRODUCTS()**

This function returns all the values stored in the products table

1. **GETPURCHASES()**

This function returns all the values stored in the purchases table

1. **GETSUPPLIERS()**

This function returns all the values stored in the suppliers table

1. **GET SUPPLIES()**

This function returns all the values stored in the supplies table

1. **GETLOGS()**

This function returns all the values stored in the logs table

1. **GETDISCOUNTS()**

This function returns all the values stored in the discounts table

Q3.

FOLLOWING FUNCTION HAS BEEN USED

1. **PURCHASE\_SAVING(PUR#)**

Here input to this function is purchase id which is used to calculate the total saving for given purchase using product table.

Q4.

FOLLOWING FUNCTION HAS BEEN USED

1. **MONTHLY\_SALE\_ACTIVITY(eid#)**

Here input to this function is employee id and it returns all the monthly sales along with quantity and total price as output from the purchase table

Q5.

We have used the following procedure for this question

1. **add\_customer(c\_id, c\_name, c\_telephone)**

It takes customer id, customer name and customer telephone number as input

We also set visit made to 1 and date to sysdate

Output of this procedure is to add new customers

Q6.

We have used the following triggers in this question

1. **Insert\_customer**

It inserts/adds new entry into logs after new customer is added

1. **update\_customers**

It insert/adds new entry into logs after the last visit made by the customer is updated

1. **insert\_purchases**

Inserts new entry into logs after new purchase is added

**4.** **up\_products**

It inserts into logs after update of quantity on hand of products

**5. insert\_supplies**

Inserts new entry into logs after new supplies is added

Q7.

We have used the following procedure

1. **add\_purchase(e\_id, p\_id, c\_id, pur\_qty)**

It takes the parameters employee id customer id and purchase quantity as input

It calculates total price and updates customer and also adds quantity on hand of products needed to purchase

We have also used the trigger

1. **insert\_purchases**

inserts into log after new purchase entry

updates quantity on hand

if quantity on hand is less than threshold it displays quantity is less

updates customers and increments visit\_made by 1

updates last\_visit\_date to sys\_date

adds new supplier entry with quantity= M +quantity on hand > quantity on hand threshold

1. **insert\_supplies**

sets new quantity on hand after insert in supplies table

Q8.

We have used the following trigger

1. **delete\_purchase**

This is triggered after the deletion of the new purchases which update the customer stats and qoh from products

Sets qoh= qoh total quantity

Increments Visits made by 1

Sets Last\_visit date to sysdate

Procedure used

1. **delete\_purchase(pur#)**

It takes purchase no. as input and deletes and deletes tuple from purchase table

**INTERFACE**

We start with HOME PAGE

Here a user has two options

1. **Register**
   * If it is a new customer and he needs to register
   * He is asked to fill the form
   * After he fills all the required entries his data will be added to customer table
   * If cid already exists it will give an error message that cid exists

**2. Login**

If it’s an existing Customer Admin or an Employee he can directly login

After login

1. **Admin**

Admin can see all the tables

1. **Employee**

After login an employee is able to view his monthly sale , products information ,list of customers to whom employee has sold product, product discount and purchases made by customers to whom employee has sold product

1. **Customer**

Customer has 3 more options

1. **New Purchase**

* Here the customer can buy a new product, select quantity and select employee who he wants to buy from
* If quantity of products he want is available he gets product supplied by supplier if not it gives error that the amount of quantity is unavailable

1. **View Purchases**

* In this page he can view his purchase history and on selecting a purchase he can see savings

1. **Return Purchase**

* Here customer can view his purchase history
* Selects item he wants to return
* Item he selects will be removed from his view purchase and purchase history
* Product quantity will be updated on the product table and the last visit date will be updated