SQL BASICS II

1. Consider the following relations with underlined primary keys.

   Product(P_code, Description, Stocking_date, QtyOnHand, MinQty, Price, Discount, V_code)

   Vendor(V_code, Name, Address, Phone)

   Here a vendor can supply more than one product, but a product is supplied by only one vendor. Write SQL queries for the following:

   (i) List the names of all the vendors who supply more than one product.

   (ii) List the details of the products whose prices exceed the average product price.

   (iii) List the Name, Address and Phone of the vendors who are currently not supplying any product.

2. Consider the following relations with key underlined

   Customer (C#, Cname, Address)

   Item (I#, Iname, Price, Weight)

   Order (O#, C#, I#, Quantity)

   Write SQL queries for the following:

   a. List the names of customers who have ordered items weighing more than 1000 and only those.

   b. List the names of customers who have ordered atleast one item priced over Rs.500.

   c. List the total cost of every order.

3. Consider the following tables.

   (Primary keys are underlined.)

   STUDENTS

Roll No	**Name**	**City**	**Mobile**
17	Ankit	Delhi	9891663808
16	Vivek	Meerut	9891468487
61	Vanita	Punjab	9804521224
75	Bhavya	Delhi	9810618396
70	Kawya	Punjab	9810617788
19	Ratnakumar	Meerut	9810687122

   MARKS

Roll No	Course	Marks
16	C	93
16	VB	56
17	C	85
17	VB	67
19	C	
19	DBMS	45
61	C	50
61	VB	
61	DBMS	78
70	C	88
70	DBMS	47
70	VB	65
75	VB	90
75	DBMS	88

NOTE: Marks column is blank for students who missed the exam. Those are graded as fail (F).

a. Write an SQL query to fetch the student names starting with V.
b. List the number of students from each city.
c. Find the student to score the highest mark for course – DBMS.
d. List the student-name, course and the grade obtained for each course by the students, depending on the below grading criteria.
   100 -75 → A
   74 – 60 → B
   60 – 50 → C
   <50 → F

4. Consider the below table.
   Table Name: **SUBJECTS**

SUBNO	SUBNAME
D20	Algorithm
D30	DataStructure
D30	C
D20	C++
D30	Python
D30	DBMS
D10	LinkedList
D20	Matrix
D10	String
D30	Graph
D20	Tree

a. Write an SQL query using LISTAGG function to output the subject names in a single field with the values comma delimited.
b. Write an SQL query to group each subject and show each subject in its respective department separated by comma with the help of LISTAGG function.
c. Write an SQL query to show the subjects belonging to each department ordered by the subject number (SUBNO) in the descending order with the help of LISTAGG function.

5. Assume you are given a table named *Employee* with two columns, EmployeeNo and Email. Write a single query for email validation.

6. Consider the below table.

   Table Name: **ORDERS**

CATEGORY_NAME	STATUS	ORDER_ID
CPU	Canceled	67
Video Card	Pending	68
CPU	Canceled	69
CPU	Shipped	74
Mother Board	Shipped	75
Video Card	Shipped	76
Video Card	Pending	78
Storage	Shipped	82
Storage	Shipped	89
Storage	Pending	91

Write a query to return the number of orders and order values by product category and order status in the below format.

STATUS	'CPU'	'Video Card'	'Mother Board'	'Storage'
Canceled	33	19	22	45
Pending	25	21	24	40
Shipped	101	65	92	178