

**Question 1:**

Write queries for (i) to (iv) and find outputs for SQL queries (v) to (viii), which are based on the tables.

**Table :**  
**VEHICLE**

VCODE	VEHICLETYPE	PERKM
V01	VOLVO BUS	150
V02	AC DELUXE BUS	125
V03	ORDINARY BUS	80
V05	SUV	30
V04	CAR	18

**Table : TRAVEL**

CNO	CNAME	TRAVELDATE	KM	VCODE	NOP
101	K. Niwal	2015-12-13	200	V01	32
103	Fredrick Sym	2016-03-21	120	V03	45
105	Hitesh Jain	2016-04-23	450	V02	42
102	Ravi Anish	2016-01-13	80	V02	40
107	John Malina	2015-02-10	65	V04	2
104	Sahanubhuti	2016-01-28	90	V05	4
106	Ramesh Jaya	2016-04-06	100	V01	25

**Note:**

- PERKS is Freight Charges per kilometer.
  - Km is kilometers Travelled
  - NOP is number of passangers travelled in vechicle.
1. To display CNO, CNAME, TRAVELDATE from the table TRAVEL in descending order of CNO.
  2. To display the CNAME of all customers from the table TRAVEL who are travelling by vechicle with code Vo<sub>1</sub> or Vo<sub>2</sub>
  3. To display the CNO and CNAME of those customers from the table TRAVEL who travelled between '2015-1231' and '2015-05-01'.
  4. To display all the details from table TRAVEL for the customers, who have travel distacne more than 120 KM in ascending order of NOE
  5. SELECT COUNT (\*), VCODE FROM TRAVEL GROUP BY VCODE HAVING COUNT (\*) > 1;
  6. SELECT DISTINCT VCODE FROM TRAVEL :
  7. SELECT A.VCODE, CNAME, VEHICLETYPE FROM TRAVEL A, VEHICLE B WHERE A. VCODE = B. VCODE and KM < 90;
  8. SELECT CNAME, KM\*PERKM FROM TRAVEL A, VEHICLE B WHERE A.VCODE = B.VCODE AND A. VCODE 'V05';

[Type here]

**Question 2:**

Consider the following tables SCHOOL and ADMIN and answer this question :  
Give the output the following SQL queries :

1. Select Designation Count (\*) From Admin Group By Designation Having Count (\*) <2;
2. SELECT max (EXPERIENCE) FROM SCHOOL;
3. SELECT TEACHER FROM SCHOOL WHERE EXPERIENCE >12 ORDER BY TEACHER;
4. SELECT COUNT (\*), GENDER FROM ADMIN GROUP BY GENDER;

TABLE: SCHOOL

CODE	TEACHER	SUBJECT	DOJ	PERIODS	EXPERIENCE
1001	RAVI SHANKAR	ENGLISH	12/3/2000	24	10
1009	PRIYA RAI	PHYSICS	03/09/1998	26	12
1203	LIS ANAND	ENGLISH	09/04/2000	27	5
1045	YASHRAJ	MATHS	24/8/2000	24	15
1123	GANAN	PHYSICS	16/7/1999	28	3
1167	HARISH B	CHEMISTRY	19/10/1999	27	5
1215	UMESH	PHYSICS	11/05/1998	22	16

TABLE: ADMIN

CODE	GENDER	DESIGNATION
1001	MALE	VICE PRINCIPAL
1009	FEMALE	COORDINATOR
1203	FEMALE	COORDINATOR
1045	MALE	HOD
1123	MALE	SENIOR TEACHER
1167	MALE	SENIOR TEACHER
1215	MALE	HOD

**Question 3:**

Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii), which are based on the tables TRANSPORT and TRIP

**TABLE: TRANSPORT**

TCODE	TTYPE	PERKM
103	ORDINARY BUS	90
105	SUV	40
104	CAR	20
103	ORDINARY BUS	90
101	VOLVO BUS	160
102	AC DELUXE BUS	140

**TABLE: TRIP**

NO	NAME	TDATE	KM	TCODE	NOP
11	Tanish Khan	2015-12-13	200	101	32
13	Danish Sahai	2016-06-21	100	103	45
15	Ram Kumar	2016-02-23	350	102	42
12	Fen Shen	2016-01-13	90	102	40
17	Aan Kumar	2015-02-10	75	104	2
14	Veena	2016-06-28	80	105	4
16	Rajpal Kirti	2016-06-06	200	101	25

1. To display NO, NAME, TDATE from the table TRIP in descending order of NO.
2. To display the NAME of the drivers from the table TRIP who are traveling by transport vehicle with code 101 or 103.
3. To display the NO and NAME of those drivers from the table TRIP who travelled between '2015-02-10' and '2015-04-01'.
4. To display all the details from table TRIP in which the distance travelled is more than 100 KM in ascending order of NOP
5. SELECT COUNT (\*), TCODE From TRIP  
GROUP BY TCODE HAVING Count (\*) > 1;
6. SELECT DISTINCT TCODE from TRIP;
7. SELECT A.TCODE, NAME, TTYPE  
FROM TRIP A, TRANSPORT B  
WHERE A. TCODE = B. TCODE AND KM < 90;
8. SELECT NAME, KM \*PERKM  
FROM TRIP A, TRANSPORT B  
WHERE A. TCODE = B. TCODE AND A. TCODE = 105';

[Type here]

**Question 4:**

Write SQL query to add a column total price with datatype numeric and size 10, 2 in a table product.

**Answer:**

ALTER TABLE PRODUCT ADD TOTAL PRICE NUMBER (10,2).

**Question 5:**

Somali needs to display name of teachers, who have "0" as the third character in their name. She wrote the following query.

SELECT NAME FROM TEACHER WHERE NAME = "\$\$0?";

But the query isn't producing the result. Identify the problem.

**Answer:**

The wildcards are incorrect. The corrected query is SELECT NAME FROM TEACHER WHERE NAME LIKE '\_\_0%'.

**Question 6:**

Deepak wants to remove all rows from the table BANK. But he needs to maintain the structure of the table. Which command is used to implement the same?

**Answer:**

DELETE FROM BANK.

**Question 7:**

While creating table 'customer', Rahul forgot to add column 'price'. Which command is used to add new column in the table. Write the command to implement the same.

**Answer:**

ALTER TABLE CUSTOMER ADD PRICE NUMBER (10, 2).

**Question 8:**

What is the use of wildcard

**Answer:**

The wildcard operators are used with the LIKE operator to search a value similar to a specific pattern in a column. There are 2 wildcard operators.

% – represents 0,1 or many characters – – represents a single number or character

**Question 9:**

Differentiate between DELETE and DROP table commands ?

**Answer:**

DELETE command is used to remove information from a particular row or rows. If used without condition, it will delete all row information but not the structure of the table. It is a DML command.

DROP table command is used to remove the entire structure of the table and information. It is a DDL command

### Long Answer Type Questions

#### Question 1:

Write SQL commands for the queries (i) to (iv) and output for (v) & (viii) based on a table COMPANY and CUSTOMER.

**COMPANY**

CID	NAME	CITY	PRODUCTNAME
111	SONY	DELHI	TV
222	NOKIA	MUMBAI	MOBILE
333	ONIDA	DELHI	TV
444	SONY	MUMBAI	MOBILE
555	BLACKBERRY	MADRAS	MOBILE
666	DELL	DELHI	LAPTOP

**CUSTOMER**

CUSTID	NAME	PRICE	QTY	CID
101	ROHAN SHARMA	70,000	20	222
102	DEEPAK KUMAR	50,000	10	666
103	MOHAN KUMAR	30,000	5	111
104	SAHIL BANSAL	35,000	3	333
105	NEHA SONI	25,000	7	444
106	SONAL AGGARWAL	20,000	5	333
107	ARUN SINGH	50,000	15	666

1. To display those company name which are having prize less than 30000.
2. To display the name of the companies in reverse alphabetical order.
3. To increase the prize by 1000 for those customer whose name starts with „S?
4. To add one more column totalprice with decimal] 10,2) to the table customer
5. SELECT COUNT(\*) , CITY FROM COMPANY GROUP BY CITY;
6. SELECT MIN(PRICE), MAX(PRICE) FROM CUSTOMER WHERE QTY>10;
7. SELECT AVG(QTY) FROM CUSTOMER WHERE NAME LIKE “%r%”;
8. SELECT PRODUCTNAME,CITY, PRICE  
FROM COMPANY, CUSTOMER WHERE  
COMPANY. CID=CUSTOMER.CID AND  
PRODUCTNAME=”MOBILE”;

[Type here]



**Question 2:**

Consider the following tables SCHOOL and ADMIN and answer this question :

Table : SCHOOL

CODE	TEACHER NAME	SUBJECT	DOJ	PERIODS	EXPERIENCE
1001	Ravi Shankar	English	12/3/2000	24	10
1009	Priya Rai	Physics	03/09/1998	26	12
1203	Lisa Anand	English	09/04/2000	27	5
1045	Yashraj	Maths	24/08/2000	24	15
1123	Ganan	Physics	16/07/1999	28	3
1167	Harish B	Chemistry	19/10/1999	27	5
1215	Umesh	Physics	11/05/1998	22	16

Table: Admin

Code	Gender	Designation
1001	Male	Vice Principala
1009	Female	Co-ordinator
1203	Female	Co-ordinator
1045	Male	HOD
1123	Male	Senior Teacher
1167	Male	Senior Teacher
1215	Male	HOD

Write SQL statements for the following:

1. To display TEACHERNAME, PERIODS of all teachers whose periods are more than 25.
2. To display all the information from the table SCHOOL in descending order of experience.
3. To display DESIGNATION without duplicate entries from the table ADMIN.
4. To display TEACHERNAME, CODE and corresponding DESIGNATION from tables SCHOOL and ADMIN of Male teachers.

[Type here]

**Question 3:**

Write SQL commands for the queries (i) to (iv) and output for (v) to (viii) based on the tables Watches' and Sale given below.

**Watches**

Watchid	Watch_Name	Price	Type	Qty_Store
W001	High Time	10000	Unisex	100
W002	Life Time	15000	Ladies	150
W003	Wave	20000	Gents	200
W004	High Fashion	7000	Unisex	250
W004	Golden Time	25000	Gents	100

**Sale**

Watchid	Qty_Sold	Quarter
W001	10	1
W003	5	1
W002	20	2
W003	10	2
W001	15	3
W002	20	3
W005	10	3
W003	15	4

1. TO DISPLAY ALL THE DETAILS OF THOSE WATCHES WHOSE NAME ENDS WITH 'TIME'
2. TO DISPLAY WATCH'S NAME AND PRICE OF THOSE WATCHES WHICH HAVE PRICE RANGE IN BE-TWEEN 5000-15000.
3. TO DISPLAY TOTAL QUANTITY IN STORE OF UNISEX TYPE WATCHES.
4. TO DISPLAY WATCH NAME AND THEIR QUANTITY SOLD IN FIRST QUARTER;
5. SELECT MAX (PRICE), MIN(QTY\_STORE) FROM WATCHES;
6. SELECT QUARTER, SUM(QTY SOLD) FROM SALE GROUP BY QUARTER;
7. SELECT WATCH\_NAME, PRICE, TYPE FROM WATCHES W, SALE S WHERE W. WATCHID=S.WATCHID; (viii) SELECT WATCH\_NAME, QTYSTORE, SUM (QTY\_SOLD), QTY\_STORESUM (QTYSOLD) "STOCK" FROM WATCHES W, SALE S WHERE W. WATCHID = S.WATCHID GROUP BY S.WATCHID;

**Question 4:**

Answer the questions (a) and (b) on the basis of the following tables SHOP and ACCESSORIES.

**Table: SHOP**

Id	SName	Area
S001	ABC computronics	CP
S002	All Infotech Media	GK II
S003	Tech Shop	CP
S004	Geeks Tecno Soft	Nehru Place
S005	Hitech Tech Store	Nehru Place

**Table: ACCESSORIES**

No	Name	Price	Id
A01	Mother Board	12000	S01
A02	Hard Disk	5000	S01
A03	Keyboard	500	S02
A04	Mouse	300	S01
A05	Mother Board	13000	S02
A06	Keyboard	400	S03
A07	LCD	6000	S04
T08	LCD	5500	S05
T09	Mouse	350	S05
T10	Hard Disk	4500	S03

(a) Write the SQL queries:

1. To display Name and Price of all the Accessories in ascending order of their Price.
2. To display Id and SName of all Shop located in Nehru Place.
3. To display Minimum and Maximum Price of each Name of Accessories.
4. To display Name, Price of all Accessories and their respective SName where they are available.

(b) Write the output of the following SQL

1. SELECT DISTINCT NAME FROM ACCESSORIES WHERE PRICE >= 5000;
2. SELECT AREA, COUNT(\*) FROM SHOPPE GROUP BY AREA;
3. SELECT COUNT (DISTINCT AREA) FROM SHOPPE;
4. SELECT NAME, PRICE\*0.05 DISCOUNT FROM ACCESSORIES WHERE SNO IN ('S02','S03');

[Type here]



**Question 5:**

Write SQL queries for:

**Table: Applicants**

ID	Name	Course	Phone
1	Ravi	BCA	4210716
2	Rita	MBA	215611
3	Sunil	MCA	321157
4	Kumar	BCA	512771

**Table: Courses**

Name	Duration	Fee
MBA	2 year	40,000
MCA	3 year	70,000
BCA	3 year	20,000

1. To display name, fee, gender, joinyear about the applicants, who have joined before 2010.
2. To display names of applicants, who are playing fee more than 30000.
3. To display names of all applicants in ascending order of their joinyear.
4. To display the year and the total number of applicants joined in each YEAR from the table APPLICANTS.
5. To display the C\_ID (i.e., CourseID) and the number of applicants registered in the course from the APPLICANTS and table.
6. To display the applicant's name with their respective course's name from the tables APPLICANTS and COURSES.
7. Give the output of following SQL statements:
  - SELECT Name, Joinyear FROM APPLICANTS  
WHERE GENDER='F' and C\_ID='A02';
  - SELECT MIN (Joinyear) FROM  
APPLICANTS  
WHERE Gender='m';
  - SELECT AVG (Fee) FROM APPLICANTS  
WHERE C\_ID='A0T OR C\_ID='A05';
  - SELECT SUM- (Fee), C\_ID FROM C\_ID  
GROUP BY C\_ID  
HAVING COUNT(\*)=2;

**Question 6:**

Write SQL queries for (a) to (g) and write the output for the SQL queries mentioned shown in (hi) to (h4) parts on the basis of table ITEMS and TRADERS :

Table: ITEMS

CODE	INAME	QTY	PRICE	COMPANY	TCODE
1001	DIGITAL PAD 12i	120	11000	XENITA	T01
1006	LED SCREEN 40	70	38000	SANTORA	T02
1004	CAR GPS SYSTEM	50	21500	GEOKNOW	T01
1003	DIGITAL CAMERA 12X	160	8000	DIGICLICK	T02
1005	PEN DRIVE 32 GB	600	1200	STOREHOME	T03

Table: TRADERS

TCode	TName	City
T01	ELECTRONIC SALES	MUMBAI
T03	BUSY STORE CORP	DELHI
T02	DISP HOUSE INC	CHENNAI

1. To display the details of all the items in ascending order of item names (i.e., INAME).
2. To display item name and price of all those items, whose price is in the range of 10000 and 22000 (both values inclusive).
3. To display the number of items, which are traded by each trader. The expected output of this query should be:
4. To display the price, item name and quantity (i.e., qty) of those items which have quantity more than 150.
5. To display the names of those traders, who are either from DELHI or from MUMBAI.
6. To display the names of the companies and the names of the items in descending order of company names.
7. Obtain the outputs of the following SQL queries based on the data given in tables ITEMS and TRADERS above.
  - SELECT MAX (PRICE), MIN (PRICE) FROM ITEMS;
  - SELECT PRICE\*QTY  
FROM ITEMS WHERE CODE=1004;
  - SELECT DISTINCT TCODE FROM ITEMS;
  - SELECT INAME, TNAME FROM ITEMS I, TRADERS T WHERE I.TCODE=T.TCODE AND QTY< 100;

**Question 7:**

Write SQL queries for (a) to (f) and write the outputs for the SQL queries mentioned shown in (g1) to (g4) parts on the basis of tables PRODUCTS and SUPPLIERS

Table: PRODUCTS

PID	PNAME	QTY	PRICE	COMPANY	SUPCODE
101	DIGITAL CAMERA 14X	120	12000	RENBIX	S01
102	DIGITAL PAD 11i	100	22000	DIGI POP	S02
104	PEN DRIVE 16 GB	500	1100	STOREKING	S01
106	LED SCREEN 32	70	28000	DISPEXPERTS	S02
105	CAR GPS SYSTEM	60	12000	MOVEON	S03

Table: SUPPLIERS

SUPCODE	SNAME	CITY
S01	GET ALL INC	KOLKATA
S03	EASY MARKET CORP	DELHI
S02	DIGI BUSY GROUP	CHENNAI

1. To display the details of all the products in ascending order of product names (i.e., PNAME).
2. To display product name and price of all those products, whose price is in the range of 10000 and 15000 (both values inclusive).
3. To display the number of products, which are supplied by each supplier. i.e., the expected output should be;
  - o S01 2
  - o S02 2
  - o S03 1
4. To display the price, product name and quantity (i.e., qty) of those products which have quantity more than 100.
5. To display the names of those suppliers, who are either from DELHI or from CHENNAI.
6. To display the name of the companies and the name of the products in descending order of company names.
7. Obtain the outputs of the following SQL queries based on the data given in tables PRODUCTS and SUPPLIERS above.
  - o SELECT DISTINCT SUPCODE FROM PRODUCTS;
  - o SELECT MAX (PRICE), MIN (PRICE) FROM PRODUCTS;
  - o SELECT PRICE\*QTY  
FROM PRODUCTS WHERE PID = 104; (g4)
  - o SELECT PNAME, SNAME  
FROM PRODUCTS P, SUPPLIERS S WHERE S SUPCODE = P.  
SUPCODE  
AND QTY>100;

[Type here]

**Question 8:**

Consider the following tables CARDEN and CUSTOMER and answer (b) and (c) parts of this question:

**Table : CARDEN**

Ccode	CarName	Make	Colour	Capacity	Charges
501	A-Star	Suzuki	RED	3	14
503	Indigo	Tata	SILVER	3	12
502	Innova	Toyota	WHITE	7	15
509	SX4	Suzuki	SILVER	4	14
510	C Class	Mercedes	RED	4	35

**Table : CUSTOMER**

Code	Cname	Ccode
1001	Hernant Sahu	501
1002	Raj Lal	509
1003	Feroza Shah	503
1004	Ketan Dhal	502

1. Give a suitable example of a table with sample data and illustrate Primary and Alternate Keys in it.
2. Write SQL commands for the following statements:
  - To display the names of all the silver coloured cars.
  - To display names of car, make and capacity of cars in descending order of their sitting capacity.
  - To display the highest charges at which a vehicle can be hired from CARDEN.
  - To display the customer name and the corresponding name of the cars hired by them.
3. Give the output of the following SQL queries:
  - SELECT COUNT(DISTINCT Make) FROM CARDEN;
  - SELECT MAX(Charges), MIN (Charges) FROM CARDEN;
  - SELECT COUNTS), Make FROM CARDEN;

[Type here]

**Question 9:**

Consider the following tables CABHUB and CUSTOMER and answer (b) and (c) parts of this question :

Table : CABHUB

Vcode	VehicleName	Make	Colour	Capacity	Charges
100	Innova	Toyota	WHITE	7	15
102	SX4	Suzuki	BLUE	4	14
104	C Class	Mercedes	RED	4	35
105	A-Star	Suzuki	WHITE	3	14
108	Indigo	Tata	SILVER	3	12

Table : CUSTOMER

Ccode	Cname	Vcode
1	Hemant Sahu	101
2	Raj Lal	108
3	Feroza Shah	105
4	Ketan Dhal	104

1. Give a suitable example of a table with sample data and illustrate Primary and Candidate Keys in it.
2. Write SQL commands for the following statements:
  - To display the names of all the white coloured vehicles.
  - To display name of vehicle name and capacity of vehicles in ascending order of their sitting capacity.
  - To display the highest charges at which a vehicle can be hired from CABHUB.
  - To display the customer name and the corresponding name of the vehicle hired by them.
3. Give the output of the following SQL queries :
  - SELECT COUNT(DISTINCT Make) FROM CABHUB;
  - SELECT MAX(Charges), MIN(Charges)
  - FROM CABHUB;
  - SELECT COUNT (\*) Make FROM CABHUB;
  - SELECT Vehicle FROM CABHUB WHERE Capacity=4;

[Type here]



**Question 10:**

Consider the following tables EMPLOYEE and DEPARTMENT and answer (a) and (b) parts of this question.

Table : EMPLOYEE

TCode	TName	DepCde	Salary	Age	JoinDate
15	Sameer Sharma	123	75000	39	01-Apr-2007
21	Ragvinder K	101	86000	29	11-Nov-2005
34	Rama Gupta	119	52500	43	03-Mar-2010
46	C R Menon	103	67000	38	12-Jul-2004
77	Mohan Kumar	103	63000	55	25-Nov-2000
81	Rajesh Kumar	119	74500	48	11-Dec-2008
89	Sanjeev P	101	92600	54	12-Jan-2009
93	Pragya Jain	123	32000	29	05-Aug-2006

Table: DEPARTMENT

DepCde	DepName	DepHead
101	ACCOUNTS	Rajiv Kumar
103	HR	P K Singh
119	IT	Yogesh Kumar
123	RESEARCH	Ajay Dutta

1. Write SQL commands for the following statements:

- To display all DepName along with the DepCde in descending order of DepCde.
- To display the average age of Employees in DepCde as 103.
- To display the name of DepHead of the Employee named "Sanjeev P"
- To display the details of all employees who has joined before 2007 from EMPLOYEE table.

2. Give the output of the following SQL queries:

- SELECT COUNT (DISTINCT DepCde) FROM EMPLOYEE;
- SELECT MAX(JoinDate), MIN (JoinDate) FROM EMPLOYEE;
- SELECT TName, DepHead FROM EMPLOYEE E, DEPARTMENT D WHERE E.DepCde = D.DepCde;
- SELECT COUNT (\*) FROM EMPLOYEE WHERE Salary > 60000 AND Age > 30;

**Question 11:**

Consider the following tables WORKER and PAYLEVEL and answer (a) and (b) parts of this question:

Table: WORKER

ECODE	NAME	DESIGN	PLEVEL	DOJ	DOB
11	Radhe Shyam	Supervisor	P001	13-Sep-2004	23-Aug-1981
12	Chander Nath	Operator	P003	22-Feb-2010	12-Jul-1987
13	Fizza	Operator	P003	14-Jun-2009	14-Oct-1983
15	Ameen Ahmed	Mechanic	P002	21-Aug-2006	13-Mar-1984
18	Sanya	Clerk	P002	19-Dec-2005	09-Jun-1983

Table : PAYLEVEL

PLEVEL	PAY	ALLOWANCE
P001	26000	12000
P002	22000	10000
P003	12000	6000

(a) Write SQL commands for the following statements:

1. To display the name of all Workers in descending order of DOB.
2. To display NAME and DESIGN of those Workers, whose PLEVEL is either P001 or
3. To display the content of all the workers table, whose DOB is in between '19-JAN- 1984' and '18-JAN-1987'.
4. To add a new row with the following:  
19, 'DayaKishore', 'Operator', 'P003', '19- Sep-2008', '11-Jul-1984'

(b) Give the output of the following SQL queries :

1. SELECT COUNT (PLEVEL), PLEVEL FROM WORKER GROUP BY PLEVEL;
2. SELECT MAX(DOB), MIN(DOJ) FROM WORKER;
3. SELECT Name,PAY FROM WORKER  
W,PAYLEVEL P WHERE W.LEVEL=  
P.PLEVEL AND W.ECODE<13;
4. SELECT PLEVEL, PAYLEVEL  
WHERE PLEVEL="POO3";

[Type here]

**Question 12:**

Consider the following tables EMPLOYEE and SALGRADE and answer (b) and (c) parts of this question:

Table : EMPLOYEE

ECODE	NAME	DESIGN	SGRADE	DOJ	DOB
101	Abdul Ahmad	EXECUTIVE	S03	23-Mar-2003	13-Jan-1980
102	Ravi Chander	HEAD-IT	S02	12-Feb-2010	22-Jul-1987
103	John Ken	RECEPTIONIST	S03	24-Jun-2009	24-Feb-1983
105	NazarAmeen	GM	S02	11-Aug-2006	03-Mar-1984
108	Priyam Sen	CEO	S01	29-Dec-2004	19-Jan-1982

Table : SALGRADE

SGRADE	SALARY	HRA
S01	56000	18000
S02	32000	12000
S03	24000	8000

(a) What do you understand by Selection and Projection operations in relational algebra ?

(b) Write SQL commands for the following statements :

1. To display the details of all EMPLOYEES in descending order of DOJ.
2. To display NAME and DESIGN of those EMPLOYEES, whose SAL-GRADE is either S02 or S03.
3. TO display the content Of all the EMPLOYEES table, whose DOJ is in between '09-Feb-2006' and '08-Aug-2009'.
4. To add a new row with the following:  
109, 'HarishRoy', 'HEAD-IT', 'SOX', '09-Sep-2007', '21-Apr-1983'

(c) Give the output of the following SQL queries :

1. SELECT COUNT(SGRADE), SGRADE  
FROM EMPLOYEE GROUP BY  
SGRADE;
2. SELECT MIN(DOB), MAX(DOJ) FROM EMPLOYEE;
3. SELECT NAME, SALARY FROM  
EMPLOYEE E, SAL-GRADE S WHERE  
E.SGRADE= S.SGRADE AND E.ECODE<103';
4. SELECT SGRADE, SALARY +HRA FROM SALGRADE WHERE SGRADE  
=SGRADE='S02;'

[Type here]

## THEORY QUESTIONS IMPORTANT

**Question 1:**

What is the difference between Char and Varchar data type of MySQL?

**Question 2:**

Compare Having Clause and Order by clause with example?

**Question 3:**

What is SAVEPOINT?

**Question 4:**

What is Primary Key?

**Question 5:**

What do you mean by null value in MYSQL ?

**Question 6:**

Difference between where and having clause

**Question 7:**

What is the function of ALTER command?

**Question 8:**

What is an SQL result set?

**Question 9:**

Make difference between DELETE and DROP command. Explain with suitable examples of each.