

Q1. Consider the following tables Product and Client. Write SQL commands for the statement (i) to (iv) and give outputs for SQL queries (v) to (viii).

**Table: PRODUCT**

P_ID	Product Name	Manufacturer	Price
TP01	TalcomPowder	LAK	40
FW05	Face Wash	ABC	45
BS01	Bath Soap	ABC	55
SH06	Shampoo	XYZ	120
FW12	Face Wash	XYZ	95

**Table: CLIENT**

C_ID	Client Name	City	P_ID
01	TalcomPowder	Delhi	FW05
06	Face Wash	Mumbai	BS01
12	Bath Soap	Delhi	SH06
15	Shampoo	Delhi	FW12
16	Face Wash	Banglore	TP01

(i) To display the details of those Clients whose city is Delhi.

**Ans:** Select\* from Client where City="Delhi";

(ii) To display the details of Products whose Price is in the range of 50 to 100(Both values included).

**Ans:** Select\* from product where Price between 50 and 100;

(iii) To display the ClientName, City from table Client, and ProductName and Price from table Product, with their corresponding matching P\_ID.

**Ans:** Select ClientName,City,ProductName, Price from Product,Client where Product.P\_ID=Client.P\_ID;

(iv) To increase the Price of all Products by 10

**Ans:** Update Product Set Price=Price +10;

(v) SELECT DISTINCT Address FROM Client.

**Ans:**

City
Delhi
Mumbai
Bangalore

(vi) SELECT Manufacturer, MAX(Price), Min(Price), Count(\*) FROM Product GROUP BY Manufacturer;

**Ans:**

Manufacturer	Max(Price)	Min(Price)	Count(*)
LAK	40	40	1
ABC	55	45	2
XYZ	120	95	2

(vii) SELECT ClientName, ManufacturerName FROM Product, Client WHERE Client.Prod\_Id=Product.P\_Id;

**Ans:**

ClientName	ManufacturerName
CosmeticShop	ABC
TotalHealth	ABC
LiveLife	XYZ
PrettyWoman	XYZ
Dreams	LAK

(viii) SELECT ProductName, Price \* 4 FROM Product.

**Ans:**

ProductName	Price*4
TalcomPoweder	160
FaceWash	180
BathSoap	220
Shampoo	480
Face Wash	380

Q2. Consider the following tables Item and Customer. Write SQL commands for the statement (i) to (iv) and give outputs for SQL queries (v) to (viii).

**Table: ITEM**

C_ID	ItemName	Manufacturer	Price
PC01	Personal Computer	ABC	35000
LC05	Laptop	ABC	55000
PC03	Personal Computer	XYZ	32000
PC06	Personal Computer	COMP	37000
LC03	Laptop	PQR	57000

**Table: CUSTOMER**

C_ID	CustomerName	City	P_ID
01	N.Roy	Delhi	LC03
06	H.Singh	Mumbai	PC03
12	R.Pandey	Delhi	PC06
15	C.Sharma	Delhi	LC03
16	K.Agarwalh	Banglore	PC01

(i) To display the details of those Customers whose city is Delhi.

Ans: `Select* from Customer Where City="Delhi";`

(ii) To display the details of Item whose Price is in the range of 35000 to 55000 (Both values included).

Ans: `Select* from Item Where Price>=35000 and Price <=55000;`

(iii) To display the CustomerName, City from table Customer, and ItemName and Price from table Item, with their corresponding matching I\_ID.

Ans: `Select CustomerName,City,ItemName, Price from Item,Customer where Item.I_ID=Customer.I_ID;`

(iv) To increase the Price of all Items by 1000 in the table Item.

Ans: `Update Item set Price=Price+1000;`

(v) `SELECT DISTINCT City FROM Customer.`

Ans:

City
Delhi
Mumbai
Bangalore

(vi) SELECT ItemName, MAX(Price), Count(\*) FROM Item GROUP BY ItemName;

Ans:

ItemName	Max(Price)	Count(*)
PersonalComputer	37000	3
Laptop	57000	2

(vii) SELECT CustomerName, Manufacturer FROM Item, Customer WHERE Item.Item\_Id=Customer.Item\_Id;

Ans:

CustomerName	Manufacturer Name
N.Roy	PQR
H.Singh	XYZ
R.Pandey	COMP
C.Sharma	PQR
K.Agarwal	ABC

(viii) SELECT ItemName, Price \* 100 FROM Item WHERE Manufacturer = 'ABC';

Ans:

ItemName	Price*100
PersonalComputer	3500000
Laptop	5500000

Q3. Consider the following tables Consignor and Consignee. Write SQL command for the statements(i)to(iv) And give outputs for the SQL queries (v) to (viii).

**TABLE : CONSIGNOR**

CnorID	CnorName	CnorAddress	City
ND01	R singhal	24,ABC Enclave	New Delhi
ND02	AmitKumar	123,Palm Avenue	New Delhi
MU15	R Kohil	5/A,South,Street	Mumbai
MU50	S Kaur	7-K,Westend	Mumbai

**TABLE : CONSIGNEE**

CneeID	CnorID	CneeName	CneeAddress	CneeCity
MU05	ND01	RahulKishore	5,Park Avenue	Mumbai
ND08	ND02	P Dhingr a	16/j,Moore Enclave	New Delhi

<b>KO19</b>	MU15	A P Roy	2A,Central/ avenue	Kolkata
<b>MU32</b>	ND0 2	S mittal	P 245, AB Colony	Mumbai
<b>ND48</b>	MU5 0	B P jain	13,Block d,a,viha	New Delhi

**(i)** To display the names of all consignors from Mumbai.

**Ans:** Select CnorName from Consignor where city="Mumbai";

**(ii)** To display the cneeID, cnorName, cnorAddress, CneeName, CneeAddress for every Consignee.

**Ans:** Select CneeId, CnorName, CnorAddress, CneeName, CneeAddress from Consignor,Consignee where Consignor.CnorId=Consignee.CnorId;

**(iii)** To display the consignee details in ascending order of CneeName.

**Ans:** Select \* from Consignee Orderby CneeName Asc;

**(iv)** To display number of consignors from each city.

**Ans:** Select city, count(\*) from Consignors group by city;

**(v)** SELECT DISTINCT City FROM CONSIGNEE;

**Ans:**

<b>CneeCity</b>
<b>Mumbai</b>
<b>New Delhi</b>
<b>Kolkata</b>

**(vi)** SELECT A.CnorName, B.CneeName FROM Consignor A, Consignee B WHERE A.CnorID=B.CnorID AND B.CneeCity='Mumbai';

**Ans:**

<b>CnorName</b>	<b>CneeName</b>
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**(vii)** SELECT CneeName,CneeAddress FROM Consignee WHERE CneeCity Not IN ('Mumbai', 'Kolkata');

**Ans:**

<b>CneeName</b>	<b>CneeAddress</b>
P Dhingr a	16/j,Moore Enclave
B P jain	13,Block d,a,viha

**(viii)** SELECT CneeID, CneeName FROM Consignee WHERE CnorID = 'MU15' OR CnorID = 'ND01';

<b>senderCity</b>
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New Delhi
Mumbai

**Ans:**

CneeID	CneeName
MU05	Rahul
KO19 A P Roy	Kishore

Q4. Consider the following tables. Write SQL command for the statements (i)to(iv)and give outputs for the SQL queries (v) to (viii).

**TABLE : SENDER**

SenderID	SenderName	Sender Address	Sender City
ND01	R jain	2,ABC Appts	New Delhi
MU02	H sinha	12, Newton	Mumbai
MU1 5	S haj	27/ A,Park Street	New Delhi
ND5 0	T Prasad	122-K,SDA	Mumbai

**TABLE :RECIPIENT**

RecID	SenderID	ReCName	RecAddress	ReCCity
KO05	ND01	RBajpayee	5,Central Avenue	Kolkata
ND08	MU0 2	S Mahajan	116, A Vihar	NewDelhi
MU19	ND01	H sing	2A,Andheri East	Mumbai
MU32	MU1 5	PK Swamy	B5, CS erminus	Mumbai
ND48	ND50	S Tripathi	13, B1 D,Mayur Vihar	NewDelhi

**(i)** To display the names of all senders from Mumbai.

**Ans:** Select \* from Sender where SenderCity ='Mumbai';

**(ii)** To display the recID, senderName, senderAddress, RecName, RecAddress for every receipt.

**Ans:** Select recID, SenderName, SenderAddress, RecName, RecAddress from Sender, Recipient where Sender.Senderid=Recipient.RenderId;

**(iii)** To display the sender details in ascending order of SenderName.

**Ans:** Select \* from Sender order by SenderName;

(iv) To display number of Recipients from each city.

**Ans:** Select RecCity,Count(\*) from Recipient group by RecCity;

(v) SELECT DISTINCT SenderCity FROM Sender;

**Ans:**

Sender City
New Delhi
Mumbai

(vi) SELECT A.SenderName A, B.RecName FROM Sender A, Recipient B WHERE A.SenderID=B. SenderID AND B.RecCity='Mumbai';

**Ans:**

SenderName	RecName
R.Jain	H.Singh
S.Jha	P.K.Swamy

(vii) SELECT RecName,RecAddress FROMRecipient WHERE RecCity Not IN ('Mumbai',Kolkata');

**Ans:**

RecName	RecAddressS
Mahajan	116,A Vihar
S Tripathi	13, B1 D, Mayur Vihar

(viii) SELECT RecID, RecName FROM Recipient WHERE SenderID = 'MU02' OR SenderID = 'ND50';

**Ans:**

RecID	RecName
ND08	S Mahajan
ND48	S Tripathi

Q5. Study the following tables FLIGHTS and FARES and write SQL commands for the questions (i) to (iv).

**TABLE: FLIGHTS**

FL_NO	STARTING	ENDING	NO_FLGHTS	NO_STOPS
IC301	MUMBAI	DELHI	8	0
IC799	BANGALORE	DELHI	2	1

MC101	INDORE	MUMBAI	3	0
IC302	DELHI	MUMBAI	8	0
AM812	KANPUR	BANGLORE	3	1
IC899	MUMBAI	KOCHI	1	4
AM501	DELHI	TRIVENDRUM	1	5
MU499	MUMBAI	MADRAS	3	3
IC701	DELHI	AHMEDABAD	4	0

**TABLE:FLIGHTS**

FL_NO	AIRLINES	FARE	TAX%
IC701	INDIAN AIRLINES	6500	10
MU499	SAHARA	9400	5
AM501	JET AIRWAYS	13450	8
IC899	INDIAN AIRLINES	8300	4
IC302	INDIAN AIRLINES	4300	10
IC799	INDIAN AIRLINES	1050	10
MC101	DECCAN AIRLINES	3500	4

(i) Display FL\_NO and NO\_FLIGHTS from “KANPUR” TO “BANGALORE” from the table FLIGHTS.

**Ans:** Select FL\_NO, NO\_FLIGHTS from FLIGHTS where Starting=”KANPUR” AND ENDING=”BANGALORE”;

(ii) Arrange the contents of the table FLIGHTS in the ascending order of FL\_NO.

**Ans:** SELECT \* From FLIGHTS ORDER BY FL\_NO ASC;

(iii) Display the FL\_NO and fare to be paid for the flights from DELHI to MUMBAI using the tables FLIGHTS and FARES, where the fare to paid = FARE+FARE+TAX%/100.

**Ans:** Select FL\_NO, FARE+FARE+(TAX%/100) from FLIGHTS, FARES where Starting=”DELHI” AND Ending=”MUMBAI”;

(iv) Display the minimum fare “Indian Airlines” is offering from the tables FARES.

**Ans:** Select min(FARE) from FARES Where AIRLINES=”Indian Airlines”;

Q6. Study the following tables DOCTOR and SALARY and write SQL commands for the questions (i) to (iv) and give outputs for SQL queries (v) to (vi) :

**TABLE: DOCTOR**

ID	NAME	DEPT	SEX	EXPERIENCE
101	Johan	ENT	M	12
104	Smith	ORTHOPEdic	M	5
107	George	CARDIOLOGY	M	10
114	Lara	SKIN	F	3
109	K George	MEDICINE	F	9
105	Johnson	ORTHOPEdic	M	10
117	Lucy	ENT	F	3
111	Bill	MEDICINE	F	12
130	Murphy	ORTHOPEdic	M	15

**TABLE: SALARY**

ID	BASIC	ALLOWANCE	CONSULTAION
101	12000	1000	300
104	23000	2300	500
107	32000	4000	500
114	12000	5200	100
109	42000	1700	200
105	18900	1690	300
130	21700	2600	300

**(i)** Display NAME of all doctors who are in “MEDICINE” having more than 10 years experience from the Table DOCTOR.

**Ans:** Select Name from Doctor where Dept=”Medicine” and Experience>10;

**(ii)** Display the average salary of all doctors working in “ENT” department using the tables. DOCTORS and SALARY Salary =BASIC+ALLOWANCE.

**Ans:** Select avg(basic+allowance) from Doctor,Salary where Dept=”Ent” and Doctor.Id=Salary.Id;

**(iii)** Display the minimum ALLOWANCE of female doctors.

**Ans:** Select min(Allowance) from Doctro,Salary where Sex=”F” and Doctor.Id=Salary.Id;

**(iv)** Display the highest consultation fee among all male doctors.

**Ans:** Select max(Consulation) from Doctor,Salary where Sex=”M” and Doctor.Id=Salary.Id;

**(v)** SELECT count (\*) from DOCTOR where SEX = “F”

**Ans:** 4

**(vi)** SELECT NAME, DEPT , BASIC from DOCTOR, SALRY Where DEPT = “ENT” AND DOCTOR.ID = SALARY.ID

**Ans:**

Name	Dept	Basic
Jonah	Ent	12000

Q7. Consider the following tables EMPLOYEES and EMPSALARY. write SQL commands for the Statements (i) to (iv) and give outputs for SQL queries (v) to (viii).

EMPID	FIRSTNAME	LASTNAME	ADDRESS	CITY
010	GEORGE	Smith	83 First Street	Howard
105	MARY	Jones	842VineAve	Losantiville
152	SAM	Tones	33 Elm st	Paris
215	SARAH	Ackerman	440 U.S.110	Upton
244	MANILA	Sengupta	24 FriendsStreet	New Delhi
300	ROBERT	Samuel	9 Fifth Cross	Washington
335	HENRY	Williams	12 Moore Street	Boston
400	RACHEL	Lee	121 Harrison	New York
441	PETER	Thompson	11 Red road	Paris

#### EMPSALRAY

EMPID	SALARY	BENEFITS	DESIGNATION
010	75000	15000	Manager
105	65000	15000	Manager
152	80000	25000	Director
215	75000	12500	Manager
244	50000	12000	Clerk
300	45000	10000	Clerk
335	40000	10000	Clerk
400	32000	7500	Salesman
441	28000	7500	Salesman

(i) To display Firstname, Lastname, Address and City of all employees living in Paris from the table EMPLOYEES.

**Ans:** Select Firstname,Lastname,Address,City from Employees where City="Paris";

(ii) To display the content of EMPLOYEES table in descending order of FIRSTNAME.

**Ans:** Select \* from Employees Order By Firstname Desc;

**(iii)** To display the Firstname, Lastname, and Total Salary of all managers from the tables, where Total Salary is calculated as Salary+Benefits.

**Ans:** Select Firstname,Lastname,Salary+Benefits from Employees, Empsalary where Designation="Manager" and Employees.EmpId=EmpSalary.EmpId;

**(iv)** To display the Maximum salary among Managers and Clerks from the table EMPSALARY.

**Ans:** Select Designation,max(Salary) from EmpSalary where Designation="Manager" or Designation="Clerk";

**(v)** SELECT FIRSTNAME,SALARY FROM EMPLOYEES,EMPSALARY WHERE DESTINATION ='Salesman'AND EMPOLYEES.EMPID=EMPSALARY.EMPID ;

**Ans:**

Firstname	Salary
Rachel	32000
Peter	28000

**(vi)** SELECT COUNT (DISTINT DESIGNATION ) FROM EMPSALARY

**Ans:** 4

**(vii)** SELECT DESIGNATION , SUM(SALARY) FROM EMPSALARY GROUP BY DESIGNATION HAVING COUNT(\*)>2;

**Ans:**

Designation	Sum(Salary)
Manager	215000
Clerk	135000

**(viii)** SELECT SUM (BENEFITS) FROM EMPSALARY WHERE DESIGNATION='Clerk';

**Ans:** 32000

Q8. Consider the following tables WORKERS and DESIG. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii).

**WORKERS**

W_ID	FIRSTNAME	LASTNAME	ADDRESS	CITY
102	Sam	Tones	33 Elm St.	Paris
105	Sarah	Ackerman	44 U.S.110	NewYork
144	Manila	Sengup ta	24 Friends Street	New Delhi
210	George	Smith	83 First Street	Howard
255	Mary	Jones	842 Vine Ave.	Losantiville
300	Robert	Samuel	9 Fifth Cross	Washington

<b>335</b>	Henry	Williams	12 Moore Street	Boston
<b>403</b>	Ronny	Lee	121 Harrison St.	New York
<b>451</b>	Pat	Thomps on	11 Red Road	Paris

**DESIG**

<b>W_ID</b>	<b>SALARY</b>	<b>BENEFITS</b>	<b>DESIGNATION</b>
<b>102</b>	75000	15000	Manager
<b>105</b>	85000	25000	Director
<b>144</b>	70000	15000	Manager
<b>210</b>	75000	12500	Manager
<b>255</b>	50000	12000	Clerk
<b>300</b>	45000	10000	Clerk
<b>335</b>	40000	10000	Clerk
<b>400</b>	32000	7500	Salesman
<b>451</b>	28000	7500	Salesman

**(i)** To display W\_ID Firstname, address and City of all employees living in New York from the Table WORKERS

**Ans:** select W\_ID ,firstname,address,city from workers where city="New York";

**(ii)** To display the content of workers table in ascending order of LASTNAME.

**Ans:**Select \* from Worker Order By lastname Asc;

**(iii)** To display the FIRSTNAME, LASTNAME and Total Salary of all Clerks from the tables WORKERS And DESIG, where Total salary is calculated as Salary + benefits.

**Ans:** Select firstname, lastname, salary+benefits where worker.w\_id=desg.w\_id and Designation="Clerk";

**(iv)** To display the minimum salary among managers and Clerks from the tables DESIG.

**Ans:** Selet DESIGNATION,min(SALARY) From DESIG Group By DESIGNATION Having DESIGNATION In("Clerk","Manager");

**(v)** SELECT FIRSTNAME, SALARY FROM WORKERS, DESIG WHERE DESIGNATION = "MANAGER" AND WORKERS.W\_ID = DESIGN.W\_ID

**Ans:**

<b>FIRSTNAME</b>	<b>SALARY</b>
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Sam	75000
Manila	70000
George	75000

(vi) SELECT COUNT(DISTINCT DESIGNATION) FROM DESIGN ;

Ans: 4

(vii) SELECT DESIGNATION, SUM(SALARY) FROM DESIG GROUP BY DESIGNATION HAVING COUNT (\*) < 3;

Ans:

Designation	Sum(Salary)
Director	85000
Salesman	60000

(viii) SELECT SUM(BENIFTS) FROM DESIG WHERE DESIGNATION ="salesman";

Ans: 15000

Q9. Give the following table for database a LIBRARY. TABLE : BOOKS

BOOK_ID	BOOK_NAME	AUTHONAME	PUBLISHER	PRICE	TYPE	QUANTITY
F0001	The Tears	William Hopkins	First Publ	750	Fiction	10
F0002	Thund erbolts	Anna Roberts	First Publ.	700	Fiction	5
T0001	My first PYTHON	Brains & Brooke	EPB	250	Text	10
T0002	PYTHON Brain works	A.W.Ros saine	TDH	325	Text	5
C001	Fast Cook	Lata Kapoore	EPB	350	Cookery	8

TABLE:ISSUED

BOOK_ID	QUANTITY_ISSUED
F0001	3
T0001	1
C0001	5

Write SQL queries from b to g.

(i) To show Book name, Author name and Price of books of EPB publisher.

Ans: select Book\_name, Author\_name, price from books where Publisher ="EPB";

(ii) To list the names of the books of FICTIONS type.

**Ans:** Select Book\_name from books where type="FICTION";

**(iii)** To display the names and prices of the books in descending order of their price.

**Ans:** Select Book\_name, price from books order by price desc;

**(iv)** To increase the price of all books of First Pub.by 50.

**Ans:** update books set price= price+50 where publishers = "First Publ";

**(v)** To Display the Book\_ID, Book\_Name and Quantity Issued for all books Which have been issued.

**Ans:**Select Book\_ID, Book\_Name, Quantity\_Issued from Books,Issued where Books.BookId=Issued.BookId;

**(vi)** To insert a new row in the table Issued having the following data: "FOOO2",4

**Ans:** insert into Issued values("FOOO2",4);

**(vii)** Give the output of the following queries on the above tables:

**(1)** Select Count(Distinct Publishers) From Books;

**Ans:** 3

**(2)** Select Sum(Price) From Books Where Quantity>5;

Ans: 1350.

**(3)** Select Book\_Name,Author\_Name From Books Where Price<500;

**Ans:** Book\_Name Author\_Name My First PYTHON Brian & Brooks PYTHON Brainworks A.W.Rossaine Fast Cook Lata Kapoor.

**(4)** Select Count(\*) From Books;

**Ans:** 5

Q10. Write SQL commands for (b) to (g) and write the outputs for (h) on the basis of tables TNTERIORS and NEWONES.

**TABLE: INTERIORS**

NO	ITEM NAME	TYPE	DATEOFSTOCK	PRICE	DISCOUNT
1	Red rose	DoubleBed	23/02/02	32000	15
2	Soft touch	Baby cot	20/01/02	9000	10
3	Jerry'shome	Baby cot	19/02/02	8500	10
4	Rough wood	Office Table	01/01/02	20000	20
5	Comfort zone	Double Bed	12/01/02	15000	20

6	Jerry look	Baby cot	24/02/02	7000	19
7	Lion king	Office Table	20/02/02	16000	20
8	Royal tiger	Sofa	22/02/02	30000	25
9	Park sitting	Sofa	13/12/01	9000	15
10	Dine paradise	DinningTable	19/02/02	11000	15

**TABLE:NEWONES**

NO	ITEMNAME	TYPE	DATEOFSTOCK	PRICE	DISCOUNT
11	White wood	Doublebed	23/03/03	20000	20
12	James007	Sofa	20/02/03	15000	15
13	Tom look	Baby cot	21/02/03	7000	10

**(i)** To show all information about the sofas from the INTERIORS table.

**Ans:** Select \* from INTERIORS where type= "sofa";

**(ii)** To list ITEMNAME and TYPE of those items, in which DATEOFSTOCK is before 22/01/02 from the INTERIORS table in descending order of ITEMNAME.

**Ans:** Select Itemname,Type From Interiors Where Dateofstock<{22/01/02} order by Itemname;

**(iii)** To display ITEMNAME and DATEOFSTOCK of those items in which the Discount percentage is more than 15 from INTERIORS.

**Ans:** Select Itemname,Dateofstock from Interiors Where Discount>15;

**(iv)** To count the number of items whose type is "Double bed";

**Ans:** Select Count(\*) from Interiors Where Type="Double Bed";

**(v)** To insert new row in the NEWONES table with the following data:14, "True Indian ", "Office Table ", {28/03/03},15000,20.

**Ans:** Insert into Newones values(14,"True Indian","Office Table","{28/03/03},15000,20);

**(vi)** Give the outputs for the following SQL statements.

**(1)** Select COUNT (distinct TYPE) from INTERIORS;

**Ans:** 5

**(2)** Select AVG(DISCOUNT)from INTERIORS where TYPE = "Baby cot";

**Ans:** 13

**(3)** Select SUM(price)from INTERIORS where DATEOFSTOCK<{12/02/02};

**Ans:** 53000