Q1. (SQL)
Consider the following table HOSPITAL. Write SQL commands for the statements (i) to (v)

Table : HOSPITAL

No	Name	Age	Department	Date of adm	Charges	Sex
1	Arpit	62	Surgery	21.01.98	300	M
2	Zarina	22	ENT	12.12.97	250	F
3	Kareem	32	Orthopedic	19.02.98	200	M
4	Arun	12	Surgery	11.01.98	300	M
5	Zubin	30	ENT	12.01.98	250	F

(i)To create the above table

(ii) To insert a new row in the HOSPITAL table.

(iii)To list the names of female patients who are in ENT department

(iv) To list names of all patients with their date of admission in ascending order.

(v) To display patients name, charges, age for only female patients.

Q2. (SQL)
Consider the following table EXAM . Write SQL commands for the statements (i) to (v)

Table: EXAM

Scode	SubjectName	NumberOfStudents	AvgMarks	ExamDate
083	Computer Sc	67	95	22-Mar-2014
301	English	110	85	01-Mar-2014
041	Maths	110	80	20-Mar-2014
042	Physics	100	90	05-Mar-2014
043	Chemistry	100	85	11-Mar-2014

(i) Write SQL Command to create above Table.

(ii) Write Sql Command to insert a row in the above table.

(iii) To display the name of all Subjects in descending order of their subject codes.

(iv) To display Average of AvgMarks for each number of students groupings. (As shown in column NumberOfStudents 67, 110, 100)

(v) To display the content of the EXAM table in alphabetic order of SubjectName whose exam date is on or after 20-Mar-2014.

Q3. (SQL)
Consider the following table EMPLOYEE. Write SQL commands for the statements (i) to (v)

Table : EMPLOYEE

EmpNo	EmpName	Job	Hiredate	Salary	DeptNo
7839	KING	PRESIDENT	17-NOV-81	5000	10
7698	BLAKE	MANAGER	01-MAY-81	3000	30
7782	CLARK	MANAGER	19-JUN-81	2450	10
7566	JONES	MANAGER	02-APR-81	4975	29
7654	MARTIN	SALESMAN	28-SEPT-81	1250	30

(i) To create the above table

(ii) To insert a new row in the above table.

(iii) Display details of all employee whose names include either of substring "AK" or "AR".

(iv) Display NAME & JOB for all MANAGERs who earn between 2000 and 3000.

(v) Display Name & Salary for all employees sorted by their salary in descending order.

Q4. (SQL)
Consider the following table ITEM. Write SQL commands for the statements (i) to (v)

TABLE: ITEM

I_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

(i) To create the above table

(ii) To insert a new row in the above table.

(iii) To display the details of Items whose Price is in the range of 35000 to 55000 (Both values included)
(iv) To display all the contents in the table Item in the descending order of the ItemName.
(v) To display detail of items whose name contains "Computer" as substring.

Q5. (SQL)
Consider the following table TEACHER.Write SQL commands for the statements (i) to (v)

Table:TEACHER

No.	Name	Age	Department	Dateofadm	Salary	Sex
1	Jugal	34	Computer	10/01/97	12000	M
2	Sharmila	31	History	24/03/98	20000	F
3	Sandeep	32	Maths	12/12/96	30000	M
4	Sangeeta	35	History	01/07/99	40000	F
5	Rakesh	42	Maths	05/09/97	25000	M
6	Shyam	50	History	37/06/98	30000	M
7	Shivam	44	Computer	25/02/97	21000	M
8	Shalakha	33	Maths	31/07/97	20000	F

(i) To create the above table

(ii) To insert a new row in the above table.

(iii) To show all information about the teacher of History department.

(iv) To list the names of female teachers who are in Maths department.

(v) To list names of all teachers with their date of admission in ascending order.

Q6. (SQL)
Consider the following table ACTIVITY.Write SQL commands for the statements (i) to (v)

Table: ACTIVITY

ACode	ActivityName	ParticipantsNum	PrizeMoney	ScheduleDate
1001	Relay 100x4	16	10000	23-Jan-2004
1002	High jump	10	12000	12-Dec-2003
1003	Shot Put	12	8000	14-Feb-2004
1005	Long Jump	12	9000	01-Jan-2004
1008	Discuss Throw	10	15000	19-Mar-2004

(i) To create the above table

(ii) To insert a new row in the above table.

(iii) To display the name of all activities with their Acodes in descending order.

(iv) To display sum of PrizeMoney for each of the Number of participants groupings (as shown in column ParticipantsNum 10,12,16)

(v) To display the Activity name and ACodes in descending order of ACode

Q7. (SQL)

Consider the following table DRESS. Write SQL commands for the statements (i) to (v)

Table : DRESS

DCODE	DESCR	PRICE	MCODE	LAUNCHDATE
101	Shirt	515	M004	12-Jan-2008
120	Formal Shirt	1213	M001	09-Sep-2007
112	Frock	450	M002	06-Jun-2008
119	Evening Gown	650	M003	15-Jul-2009
189	Slacks	340	M002	09-Jan-2008
107	Jeans	770	M001	15-Sep-2009
124	Jacket	2050	M003	25-Mar-2009
109	Fancy Top	350	M004	31-Dec-2007

(i) To create the above table

(ii) To insert a new row in the above table.

(iii) To display all information of table DRESS in descending order of PRICE that were launched before 2009.

(iv) To display dresses detail that prices go beyond 1000 and have been launched between 2007-2008

(v) To modify the schema of table dress by adding an extra attribute namely QTY as integer type.

Q8. (SQL)

Consider the following table CLIENT. Write SQL commands for the statements (i) to (v)

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 create the above table

(ii) To insert a new row in the above table.

(iii) To display Information about the clients belonging to city Delhi.

(iv) To display the name of clients whose name starts with F.

(v) To count the number of clients from each city with city name

Q9. (SQL)
Consider the following table PRODUCT . Write SQL commands for the statements (i) to (v)

Table: PRODUCT

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

(i) Write SQL Command to create above Table.

(ii) Write Sql Command to insert a row in the above table.

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

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

(v) To display detail of products in descending order of price.

Q10. (SQL)
Consider the following table WORKER. Write SQL commands for the statements (i) to (v)

Table: WORKER

ECODE	NAME	DESIG	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**

(i) Write SQL Command to create above Table.

(ii) Write SQL Command to insert a row in the above table.

(iii) To display the details of all Workers in descending order of DOB

(iv) To display Name and Desig of those Workers, whose Plevel is either P001, or P002.

(v) To display the content of all the workers table whose DOB is in between '19-Jan-1984' and '18-Jan-1987'.

Boolean Algebra Assignments

Q1. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(A,B,C,D) = \sum(0,1,2,3,4,5,6,8,9,10,11,15)$$

Q2. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(U,V,W,Z) = \pi(0,1,2,4,5,6,8,10)$$

Q3. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(A,B,C,D) = \sum(0,2,3,4,6,7,8,10,12)$$

Q4. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(U,V,W,X) = \prod(0,1,3,4,7,8,11,12,15)$$

Q5. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(U,V,W,X) = \prod(1,3,5,8,10,12)$$

Q6. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(U,V,W,X) = \sum(1,3,5,8,10,12)$$

Q7. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(A,B,C,D) = \sum(0,2,4,5,7,8,10,12,13,15)$$

Q8. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(U,V,W,X) = II(0,1,4,5,6,7,8,11,12,13,14,15)$$

Q9. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(P,Q,R,S) = \pi(0,1,3,5,6,7,10,14,15)$$

Q10. (K-Map)
Draw a digital circuit diagram for the following Boolean expression (after reduction using K-map):

$$F(A,B,C,D) = \pi(1,3,4,5,6,7,12,13)$$