UNIT III (RDBMS)
(From this unit: 13 Questions - 30 Marks)

One Mark Questions

1. What is MySQL?
2. While using pattern matching, what is difference between "_" (underscore) and "%" wildcard symbols?
3. How Primary key constraint is different from Unique key constraint?
4. Define the term Composite key.
5. What do you understand by degree and cardinality of a table?
6. Rama is not able to change a value in a column to NULL. What constraint did she specify when she created the table?
7. Distinguish between a primary key and candidate key with suitable example of each.
8. Distinguish between ALTER TABLE and UPDATE commands of MySQL.
   Ans. ALTER TABLE command is used to modify the structure of a table. This command falls in DDL category.
   UPDATE command is used to make changes in the data stored in a table. This command falls in DML category.
9. Mention any two categories in which MySQL commands are broadly classified.
10. Give two characteristics of Primary key.
11. What happens when "ROLLBACK" command is issued in a transaction process?
12. Name the function of MySQL used to give the location of first occurrence of a str2 in str1.
13. Write a MySQL command to display the names of tables available in currently opened database.
14. What is difference between SYSDATE( ) and NOW( ) functions in MySQL.
15. Monica has written the following query :-
    SELECT * FROM EMP WHERE SALARY = NULL;
    This query has some error(s). Write the correct query after removing the error(s).
16. Explain the use of **AS** keyword with SELECT statement.
17. Write function which returns the character string by converting each character to lower case.
18. Which function returns the length of a string?
19. Bank accountant needs to change the last name of one of his customers in table Customer.

Which command should he use for this?

20. What is difference between a where and having clause of SQL Select query?

21. What is difference between equi join and non equi join ?

22. Ranbeer has created a table namely trial1 with 7 columns and 3 test records and another table namely trial2 with 4 columns and 7 records. What will be the degree & cardinality of resulting table when he performs cartesian product on these two tables?

23. Which MySQL command helps you to see existing databases?

24. Rakesh created a table in Mysql. Later he found that table is wrongly created and he wants to remove it. Name the command by which Rakesh can do it.

25. Reena created a table named student, she wants to see those students whose name ending with 'p' She wrote a query-

SELECT name.* FROM student WHERE name="p%";

Help Reena to run the query by removing the errors from the query and rewriting it.

26. Sanjeev is not able to reduce the salary of employee. Which constraint has he used while creating table?

27. Can we use an expression in UPDATE command? Give example.

Ans. Yes, we can use an expression in UPDATE command.

UPDATE STUDENT SET FEE=FEE+1000;

28. Which method will you use to remove leading and trailing spaces from the string?

29. What is the use of **IN** and **LIKE** clause.

30. What is difference between Equi join and Cross join?

31. Define any two TCL commands.

32. Ramita created a table named **Student,** she wants to see those students whose name is starting with **"T"**. She wrote a query:

Select * from student where name = "%T";

Help Ramita to run the query by removing the error(s) from the query and rewriting it.

33. If database "Emplyoee" exists, which Mysql command helps you to starts working in that database?

34. Mr. Sondi created two tables with DEPTNO as Primary key in Table1 and Foreign Key in Table2. While inserting a row in Table2. Mr. Sondi is not able to enter a value in the column DEPTNO. What could be the possible reason for it?

35. Mr. Mittal is using a table **STUDENT** with following columns:

Name, Class, Stream_Id, Stream_name

He needs to display names of students who have not been assigned any stream OR stream name ends with

"computers".

He wrote the following command, which did not give the desired result. SELECT Name, Class FROM Students
SELECT NAME FROM STUDENT WHERE Stream_name=NULL OR Stream_name="%computers";

Help Mr. Mittal to run the query by removing the error and write correct query.

36. Disscuss the role of foreign key in MySQL.

37. Differentiate between COMMIT and SAVEPOINT.

38. What is MySQL?

39. Is NULL value the same as 0 (zero)? Write the reason for your answer.

40. Table employee has four records and Table Dept has 3 records in it. Mr. Jain wants to display all information stored in both of these related table. He forgot to specify equi-join condition in the query. How many rows will get displayed on execution of this query?

41. Write the UPDATE command to increase the commission.
(Column name: COMM by 500 of all the Salesman who have achieved Sales (Column name ; SALES) more than 200000. The table's name is COMPANY.

42. While using SQL pattern matching, what is the difference between '_' (underscore) and '%' wildcard symbol?

43. Mohit created a table in Mysql .lateron he found that there should have been another column in the table. Which commands should he use to add another column to the table?

44. Which command is used in MySql to make the changes in database permanents?

45. Read the questions and give the output of the following queries in MySQL:-

TABLE: CAMPUS

C_ ID	C_ Name	City	State	Phone
2005	APS	DELHI	DELHI	0116514327
2006	DPS	DELHI	DELHI	0115143073
2007	DAV	MUMBAI	MAHARASHTRA	0225432768
2008	APS	MUMBAI	MAHARASHTRA	0225678432
2009	APS	BANGALORE	KARNATAKA	0224567889
20010	DPS	HYDERABAD	ANDHRA	1448654567
20011	DAV	CHANDIGARH	PUNJAB	NULL
20012	APS	AHEMADABAD	GUJARAT	098754332
20013	HOLLICHI	AMRITSAR	PUNJAB	NULL

(i) SELECT CONCAT (city , " ",state) FROM Campus WHERE C_Name= "APS";
(ii) SELECT CITY, INSTR(CITY, "I") FROM CAMPUS WHERE C_NAME= "DPS"
(iii) SELECT DISTINCT (CITY) FROM CAMPUS;
(iv) SELECT RIGHT(C_ NAME, 2) FROM CAMPUS WHERE C_ID=2009;

46. Write the MySQL commands to open the database named **TEST.**

47. Write SQL command to show the names of tables starting with **"ST"** in database named as **EMPLOYEE.**.

48. Write SQL command which will not use BETWEEN clause and produce the same result as produced by the given following command:
SELECT * FROM BOOKS WHERE PRICE BETWEEN 350 AND 550;

49. Write an alternate SQL command to produce the same result as that of the given command :
SELECT * FROM BOOKS WHERE PUBLISHER= 'BPB' OR
PUBLISHER='OXFORD' OR PUBLISHER= 'JPH';

50. There is a column **FEE** in the table **STUDENT.** The following two statements:
SELECT COUNT (*) FROM STUDENT;
SELECT COUNT (FEE) FROM STUDENT;
are giving different output as 12 and 9 respectively. What may be the possible reason?

51. Write SQL statement to extract the word "net" from the string "Internet Superhighway".

52. Write SQL command to display the position of "My" in the string "Enjoying MySQL".

53. Write the output for the command: SLEECT ROUND(754.89,-2);

54. Write a SQL command to create the following table 'MCA' with MNO as Primary key and Fee and Semester with NOT NULL constraints.

TABLE: MCA

MNO	Name	Address	Join_ DT	Fee	Semester	Grade
1001	ADITYA	B-4, DWARKA	2007-07-23	4500	I	A1
1234	`KOMAL	SEC 5, R.K PURAM	2009-06-15	500	III	B2
5678	ANUSHIKA	B3/2, V.VIHAR	2008-06-22	7000	I	C1
9854	HIMANSHU	SEC 2, PUNA	2009-03-13	8000	II	B2
3265	MUMTA	123/A, MUMBAI	2013-02-17	4500	I	A2
4512	PRERNA	53/2, CHANDIGARH	2008-05-10	6500	III	C3
7645	AMIT	11/7, CHENNAI	2010-05-25	10000	II	B1
9054	SUMIT	117-N, DELHI	2008-3-27	10500	III	A2
8326	REKHA	56/E, AHEMADABAD	2012-04-12	7600	I	C2
7324	SAVITRI	73/C, FARIDABAD	2013-06-15	8700	I	C1

Write SQL query for the following based on table 'MCA'
(i) To display Name, MNO of those students who joined after year 2010.

(ii) To display all the information in Descending order of MNO.
(iii) To add record with the following data:
8326, “AMIT”, “0G2-8, MALVIYA NAGAR”, “2010-07-12”, 6700, “II”, “A1”
(iv) To count unique SEMESTER numbers in given table.
(v) To add new column REMARKS of data type VARCHAR of size 20.
(vi) To change the FEE of AMIT from 10000 to 7000.

55. Write SQL commands for the questions from (i) to (viii) on the basis of table **HOSPITAL**

TABLE: HOSPITAL

No.	Name	Age	Department	Dateofadm	Charges	Sex
1	Arprit	62	Surgery	2008-01-21	1300	M
2	Zarina	22	ENT	2007-12-12	1250	F
3	Kareena	32	Orthopedic	2008-02-19	1200	M
4	Arun	12	Surgery	2008-01-11	1300	M
5	Zubin	30	ENT	2007-01-12	1250	M
6	Ketaki	16	ENT	2008-02-04	1250	F
7	Ankita	29	Cardiology	2008-02-20	1800	F
8	Zareen	45	Gynecology	2007-02-10	1300	F
9	Kush	19	Cardiology	2008-01-13	1800	M
10	Shilpa	23	Nuclear Medicine	2008-02-21	1400	F

(i) To select all the information of patients of cardiology department
(ii) To list the names of female patients who are in ENT department
(iii) To list names of all patients with their date of admission in ascending order
(iv) To display patient’s name, charges, age for only male patients.
(v) To count the number of female patients
(vi) To reduce the charges of male patients of cardiology department by 5%.
(vii) To display the departments existing in the Hospital table
(viii) To display records of those patients who were admitted in the year 2007

56. Write SQL commands for the queries given from (i) to (iv) and (v) to(viii)write the output of the SQL commands based on a table LIBRARY shown below:

Table: LIBRARY

No.	**Title**	**Author**	**Subject**	**Publisher**	**Qty**	**Price**
1	Data Structure	Lipschute	DS	McGraw	4	217.00
2	DOS Guide	NORTRON	OS	PHI	3	175.00
3	Turbo C++	Robort Lafore	Prog	Galgotia	5	270.00
4	Dbase Dummies	Palmer	DBMS	PustakM	7	130.00
5	Mastering Windows	Cowart	OS	BPB	1	225.00
6	Computer Studies	French	FND	Galgotia	2	75.00
7	COBOL	Stern	Prog	John W	4	1000.00
8	Guide Network	Freed	NET	Zpress	3	200.00
9	Basic for Beginners	Norton	Prog	BPB	3	40.00
10	Advanced Pascal	Schildt	Prog	McGraw	4	350.00

(i) To display the title of all books with Price between 100 and 300.
(ii) To display Title and Author of all the books having type Prog and published by BPB.
(iii) To display the list of all the books with price more than 130 in ascending order of Qty.
(iv) To display the list of all books whose quantity is less than 4.
(v) Select MIN(Price) from Library;
(vi) Select Sum(Price * Qty) from Library where Qty > 3;
(vii) Select Avg(Price) from Library where Qty < 4;
(viii) Select Count(Distinct Publisher) from Library;

57. Consider the Table Shop given below .Write commands in SQL for (i)to (iv) and output for (v) to (vi)

SHOP

No	Shop_Name	Sale	Area	Cust_percent	Rating	City
1	West Side	250000	West	68.5	C	Delhi
2	Pantaloons	500000	South	80.5	B	Amritsar
3	Sir's & Her's	300000	North	90.8	A	Amritsar
4	Sports King	380000	North	88.0	A	Baroda
5	Adidas	NULL	East	90.5	NULL	Delhi
6	Big Bazar	300000	South	69.8	C	Delhi

(i) To display the Name and Sale of shops which are in the area North.
(ii) To display list of all the shops with Sale>300000 in ascending order of Shop_Name.
(iii) To display the city along with sum of sale in each City.
(iv) To display Sale and incentive of all shops. Incentive to be calculated as 7% of Sale.
(v) Select Avg(Sale) from shop where City=' Delhi';
(vi) Select Count(Distint City) from shop;

58. Write SQL Commands for (i) to (v) on the basis of table :

Table : FURNITURE

ID	ITEMNAME	TYPE	DATEOFSTOCK	PRICE	DISCOUNT_PERC
1	White Lotus	Double Bed	2002-02-23	3000	25
2	Pink feathers	Baby Cot	2002-01-29	7000	20
3	Dolphin	Baby Cot	2002-02-19	9500	20
4	Decent	Office Table	2002-02-01	25000	30
5	Comfort zone	Double Bed	2002-02-12	25000	30
6	Donald	Baby cot	2002-02-24	6500	15
7	Royal Finish	Office Table	2002-02-20	18000	30
8	Royal tiger	Sofa	2002-02-22	31000	30
9	Econo sitting	Sofa	2001-12-13	9500	25
10	Eating Paradise	Dining Table	2002-12-19	11500	25

(i) To show all the information about the Baby cots from the furniture table.
(ii) To list the itemname and net price of items from furniture table. Net price to be calculated by using appropriate fields.
(iii) To list itemname and type of those items, in which dateofstock is before 2002-02-01 from the furniture table in descending order of itemname.
(iv) To display itemname and dateofstock of those items, in which the discount percentage is more than 25 from the furniture table.
(v) To modify the table by declaring ID as Primary Key.

59. Write the SQL commands on the basis of following table **"Scholars":**

Adm_No	Name	Address	Join_DT	Fee	Semester	Grade
1256	ADITYA	B-4, DWARKA	2012-07-23	45000	I	A1
5678	AMIT	SEC 5, R.K PURAM	2014-06-15	35000	III	B2
1425	KARINA	B3/2, V.VIHAR	2013-06-22	26000	II	C1
8954	BIKRAM	SEC 2, PUNA	2012-03-13	75000	I	A2
1789	VIJAY	123/A, MUMBAI	2014-02-17	35000	II	B1
8376	GANESH	53/2, CHANDIGARH	2012-10-05	22000	III	C3
2938	ARUN	11/7, CHENNAI	2012-06-24	25000	II	B2
6498	TANU	117-N, DELHI	2011-05-25	32000	I	A1
5420	RAJAN	56-E, AHEMADABAD	2014-02-30	44000	III	B2
8567	ANITA	73/C, FARIDABAD	2012-08-22	38000	I	C2

(i) To display Name, Adm_No of those students who joined after year 2012.
(ii) To display all the information in descending order of Adm_No.
(iii) To add record with the following data:
8326, "ANKIT", "2013-10-25"
(iv) To count unique SEMESTER numbers in given table.
(v) To make Adm_No as Primary Key.
(vi) To change the FEE of VIJAY from 35000 to 30000.

60. Consider the following table named "SOFTDRINK". Write command of SQL for (i) and (iv) and output for (v) to (vii).

Table : SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nectar	15.00	115
104	Green Mango	15.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahaar	12.00	150

(i) To display names and drink codes of those drinks that have more than 120 calories.
(ii) To display drink code, names and calories of all drinks, in descending order of calories.
(iii) To display names and price of drinks that have price in the range 12 to 18 (both 12 and 18 included.
(iv) Increase the price of all drinks in the given table by 10%.

(v) SELECT COUNT (DISTINCT (PRICE)) FROM SOFTDRINK;
(vi) SELECT MAX (CALORIES) FROM SOFTDRINK;
(vii) SELECT DNAME FROM SOFTDRINK WHERE DNAME LIKE "% Mango % ";

61. What is the degree and cardinality of ' SOFTDRINK ' TABLE?

62. Consider the table Movie with the following data and answer the question that follows:

TABLE: Movie

Movie_Id	Movie_Title	Category	Total_Sales	Release_date	Stars_Received
M001	Harry Potter	Thriller	30000000	2007-07-20	5
M002	100 Days	Suspense	NULL	NULL	NULL
M003	Phir Hera Pheri	Comedy	27500000	2006-10-06	3.5
M004	Partner	Comedy	12000000	2007-09-07	4

(i) Display Movie_Id and "Directors Commission" as 2% of total sales.
(ii) Display Movie_Id, Movie_Title and Category of only those movies which are not yet released.
(iii) Display the details of Movies according to Stars_Received with Movies receiving maximum stars at the top.
(iv) Modify the stars received from 5 to 10 for the movies released in 2007.
(v) Delete all the movies in the Suspense category.
(vi) Add a column Rating which can hold values 'UA' or 'U'.

63. Consider the following COURSE table and answer the questions below:

TABLE:COURSE

NAME	AGE	DEPARTMENT	DATE OFADM	FEES	SEX
Pankaj	24	Computer	2009-01-10	720	M
Shalini	21	History	2008-03-24	800	F
Sanjay	22	Hiindi	2006-12-12	900	M
Sudha	25	History	2009-01-07	700	F
Rakesh	22	Hindi	2007-05-09	NULL	M
Shakeel	30	History	2008-07-27	900	M
Surya	34	Computer	2010-02-25	NULL	M
Shikha	23	Hindi	2011-07-31	900	F

Write SQL command for the following statements:

(i) To find total number of department in the table.
(ii) To list the maximum fees for each department.
(iii) To enter the fees Rs 1000 for those records which has NULL entry in fees column .
(iv) To display the all departments, names and fees arranged in department wise, fees wise order.
(v) Select Avg(fees) from COURSE where Sex="M";
(vi) Select Sum(fees) from COURSE where Month(DATEOFADM)= 7;

64. Consider the following table named "EXAM" with details of marks. Write commands of MySQL for (i) to (v) and output for (vi) to (viii).

Table: EXAM

Adno	SName	Percentage	ClSection	Stream
ROO1	Sushant	90.2	12A	Science
ROO2	Mohan	81.5	12B	Commerce
ROO3	Srijan	65.5	12A	Science

ROO4	Miara	96.5	12B	Commerce
ROO5	Santosh	88.5	12C	Humanities
ROO6	Mridul	78.0	11A	Science
ROO7	Sunita	88.6	11B	Commerce

(i) To display all information of students of Commerce stream in ascending order of percentage.
(ii) To display Adno, Name, Percentage and stream of those students whose name is less than 4 characters long.
(iii) To add another column of Bus_Fees with datatype and size as Decimal(8,2).
(iv) To increase the percentage by 2% of all the Science students.
(v) To display the records of students of class 12.
(vi) To display the Names and Percentage of students of all classes who are studying in section "A".
(vii) SELECT COUNT(DISTINCT STREAM) FROM EXAM;
(viii) SELECT ROUND(PERCENTAGE) FROM EXAM WHERE CLASS LIKE = "12A";

65. Pranay, who is an Indian, created a table named "**Friends**" to store his friend's detail. Table "Friends" is shown below. Write commands in SQL for (i) to (iv) and output for (v) to (vii).

S_No	Name	Age	City	Country	Email_id
1	Alice	14	Washington	USA	alice@gmail.com
2	Charles	12	Copenhagen	Denmark	harles@yahoo.com
3	Angel	16	Chicago	USA	angel@gmail.com
4	Jasmine	15	Sydney	Australia	jasmine@yahoo.com
5	Raj	14	New Delhi	India	raj@gmail.com
6	Jette	13	Nykobing	Denmark	jette@gmail.com
7	Alexender	15	Melbourne	Australia	NULL
8	Shashank	16	Banglore	India	NULL

(i) To display list of all foreigner friends.
(ii) To list name, city and country in descending order of age.
(iii) To count how many friends have email id on gmail.
(iv) To list name and city of those friends who don't have an email id.
(v) Select name,country from friends where age>12 and name like 'A%';
(vi) Select ucase(concat(name,"*",city)) from friends where country like 'Denmark';
(vii) Select mid(name,1,4) as "UID" from friends where country like 'USA';

66. Consider the table RESULT given below. Write commands in MySQL for (i) to (iv) and output for (v) to (vii)

Table: RESULT

No.	**Name**	**Stipend**	**Subject**	**Average**	**Division**
1	Sharon	400	English	38	THIRD
2	Amal	680	Mathematics	72	FIRST
3	Vedant	500	Accounts	67	FIRST
4	Shakeer	200	Informatics	55	SECOND
5	Anandha	400	History	85	FIRST
6	Upansaa	550	Geography	45	THIRD

(i) To list the names of those students, who have obtained Division as FIRST in the ascending order of Name.
(ii) To display a report listing Name, Subject and Annnual stipend received assuming that the stipend column has monthly stipend.

(iii) To count the number of students who have either Accounts or Informatics as Subject.
(iv) To insert a new row in the table RESULT:
7,"SUMITRA",675,"MATHEMATICS",75,"FIRST"
(v) SELECT AVG(Stipend) FROM RESULT WHERE DIVISION= "THIRD";
(vi) SELECT COUNT(DISTINCT Subject) FROM RESULT;
(vii) SELECT MIN(Aveerage) FROM RESULT WHERE Subject= "English"

67. Consider the following table GYM with details about fitness items being sold in the store. Write SQL commands for (i) to (iv).

ICODE	**INAME**	**PRICE**	**BRANDNAME**
G101	Power Fit Exerciser	20000	Power Gymea
G102	Aquafit Hand Grip	1800	Reliable
G103	Cycle Bike	14000	Ecobike
G104	Protoner Extreme Gym	30000	Coscore
G105	Massage Belt	5000	Massage Expert
G106	Cross Trainer	13000	GTC Fitness

(i) To display the names of all the items whose name starts with "A";
(ii) To display ICODE and INAMEs of all items, whose Brandname is Reliable or Coscore.
(iii) To change the Brandname to "Fit Trend India" of the item, whose ICODE is "G101".
(iv) Add a new row item in GYM with the details : "G107"," Vibro Exerciser", 21000 , "GTC Fitness"

68. Consider the following table FITNESS with details about fitness products being sold in the store. Write command of SQL for (i) to (iv) and output for (v) to (vii).

Table: FITNESS

PCODE	PNAME	PRICE	MANUFACTURER
P1	Treadmill	21000	Coscore
P2	Bike	20000	Aone
P3	Cross Trainer	14000	Reliable
P4	Multi Gym	34000	Coscore
P5	Massage chair	5500	Regrosene
P6	Belly Vibrator Belt	6500	Ambaway

(i) To display the names of all the products with price more than 20000.
(ii) To display the names of all products by the manufacturer "Aone".
(iii) To change the price data of all the products by applying 25% discount reduction.
(iv) To add a new row for product with the details: "P7", "Vibro Exerciser", 28000, "Aone".
(v) SELECT * FROM FITNESS WHERE MANUFACTURER LIKE "%e";
(vi) SELECT COUNT (DISTINCT (MANUFACTURER)) FROM FITNESS;
(vii) SELECT MAX (PRICE) FROM FITNESS;

Two Marks Questions

1. What is NULL value? Is it equivalent to 0(zero) value?

2. Define the following terms:
   (i) Attribute (ii) Tuple

3. Emp_no, Emp_name and Basic of table "EMP" are given below

Emp_No	Emp_Name	Basic
6985	Anuj	6700
5874	Kirti	7500
6587	Kiran	NULL
5478	Krihsna	5500

Based on this information, find output of the following queries.
   (i) SELECT MIN(Basic) FORM EMP;
   (ii) SELECT Name, Basic+100 FROM emp WHERE Basic IS Null;

4. Consider the following table TOUR and answer the following questions:

GCODE	DESCRIPTION	PRICE	FCODE	READYDATE
10023	FORMAL SHIRT	1150	F03	2015-01-05
10001	INFORMAL SHIRT	1250	F01	2014-12-08
10024	BABY TOP	750	F02	2013-08-23
10019	FROCK	750	F03	2014-12-08

   (i) Identify the Candidate keys. Can you enter NULL values in Candidate key?
   (ii) What is cardinality and degree of the table GARMENT?

5. What is a transaction? Which command is used to make changes done by a transaction permanent?

6. What is a **Primary key** and **Foreign key**?

7. What is a constraint? Write briefly about any two types of constraints supported by MySQL along with their usage.

8. What is the purpose of Delete command? How is it different from Drop Table command?

9. The name and Mob_No columns of a table Mobile is given below:

Table: Mobile

Name	Mob_No
Sumit	9416557683
Anjali	9813210967
Robin	0466612315
Raveena	9996514287
Mehak	9416836868

   (i) Select name from Mobile where name like '%i_'
   (ii) Select Mob_No from Mobile where Mob_No like '_8%';

10. A character expression **Name** contains **"Informatics Practices"**. Write a command to pick the following set of characters from it.
    (i) First 6 characters (ii) From 3rd to 11th character

11. What is SQL? Write any two categories of SQL commands along with one example of each.

12. What is the significance of **DELETE** statement? How **WHERE** clause restrict on MySQL query?

13. What is the use of **LIKE** clause? Name the wildcards used with LIIKE clause.

14. Give at least four date functions .

15. A numeric data field NUM contains 1256.8495. Write command to round off NUM to
(a) Whole Number (b) Up to 1 decimal place

16. In students table ,out of rollno,name,address which column can be set as primary key and why?

17. The itemno and cost column of a table "ITEM" are given below:

itemno	Cost
101	5000
102	NULL
103	4000
104	6000
105	NULL

Find the output of the following queries:
(i) SELECT AVG(cost) FROM ITEMS;
(ii) SELECT cost+100 FROM ITEM WHERE itemno>102;

18. A table PET in a database has 5 column and no rows in it. What is its cardinality?
What will be its cardinality if 4 rows are added in the table?

19. Differentiate DDL and DML commands with examples of each.

20. Write the output of the following SQL queries:
i) SELECT ROUND(8.6755,2)+ POW(4,3);
ii) SELECT TRUNCATE(6.2465,1);
iii) SELECT DAYOFMONTH('2009-08-24');
iv) SEL ECT MID('STUDENTS',2,3);

21. Create a table **Employee** as per following Table Instance Chart:

Column Name	Emp_id	Emp_name	Emp_address	Emp_phone	Emp_sal	Dept_id
Key Type	Primary					
Nulls/Unique		Not null				

DataType	Numeric	Varchar	Varchar	Varchar	Numeric	varchar
Length	6	20	30	10	9,2	2

22. How would you add constraint in the existing table? Give example also.

23. What is (i) Candidate key (ii) Alternate key?

24. What is the purpose of Substr() and Instr() functions?

25. What is output of
    (i) Select Null+100 from Dual;
    ii)Select MID('class12' ,5);

26. Write output of:
    (i) Select Truncate(475.3856,-2) ;
    (ii)Select ceil(100.32)+Round(200.53);

27. Write SQL Command for creating a table **PAYMENT** having following Structure :

Field Name	Data Type	Size	Constraints
Loan_Number	Numeric	5	Part of Primary Key
Payment_Number	Varchar	3	Part of Primary Key
Payment_Date	Date		Not Null
Payment_amount	Numeric	7	>0
Payment_Type	Varchar	10	Cheque,Cash

28. Create a table **Emp** as per the Specifications given below:

Column Name	Type	Length	Constraint
Ecode	Int	5	Primary key
Name	Varchar	25	Not Null
Sex	Char	1	Not Null Default M
Hiredate	Date		
Job	Varchar	30	Not Null
Sal	Int	10	>=10000
Deptno	Char	3	Foreign Key=>Dept(dno)

29. Explain AND, OR operators with example in MySQL.

30. Write output of the following SQL statements:
    (i) SELECT ROUND (5678.77, -4);

    (ii) SELECT TRUNCATE (15.78, -1);

31. Write output of the following SQL statements:
    (i) SELECT LENGTH ("INDIA") * 4;
    (ii) SELECT POWER (2, -2);

32. What is primary key? How is it different from candidate key? Explain with the help of suitable example.

33. Choose the DDL and DML commands from the following:
    CREATE, SELECT , DELETE, COMMIT, DROP ,ROLLBACK

34. Write an SQL query to create the table "Books" with the following structure-

Field	**Type**	**Constraint**
Book_Id	Varchar(6)	Primary Key
Book_Name	Varchar(25)	
Author_Name	Varchar(30)	
Publisher	Varchar(20)	
Price	Integer	
Type	Varchar(15)	Should be Magazine or Text Book
Quantity	Integer	Not Null

35. Create table **CLUB** as per following Table Instance Chart.

Field Name	**Data type**	**Size**	**Constraint**
Member_No	Numeric	5	Primary Key
Member_Name	Varchar	40	Not Null
Age	Numeric	2	>18
Type	Varchar	10	Temporary or Permanent
Games	Varchar	20	Foreign Key= Master(Facilities)
Fees	Numeric	6,2	>800
Fees_Date	**Date**		**NOT NULL**

36. Write SQL command to add a new column called Phno in table CLUB. To which category this command belongs to?

37. Give concession in fees by 5% to Permanent employees in table CLUB (ref. Question 79). Also write the category this command belongs to?

38. In a database there are two tables 'company' and 'model' as shown below:

Company

Compid	Compname	Comphq	contperson
1	Titan	Okhla	C.B.Ajit
2	Maxima	Shahdara	V.P.Kohli
3	Ajanta	Najafgarh	R.Mehta

Model

Modelid	Compid	modelcost
T020	1	2000
M032	4	2500
M059	2	7000
A167	3	800
T024	1	1200

(i) identify the foreign key column in the table model.
(ii) Check every value in compid column of both the tables. Do you find any discrepancy.

39. In a database there are two tables Books and Issues.

Table: Books

Book_ID	BookName	AuthorName	Publisher	Price	Qty
L01	Math	Raman	BPB	70	20
L02	Science	Agarkar	Tata	90	15
L03	Social	Suresh	BPB	85	30
L04	Computer	Sumita	Goyal	75	7
L05	Punjabi	Gursharan	BPB	60	25
L06	English	Wordsworth	Tata	55	12

Table: Issues

Issue_ID	Book_ID	Qty_Issued
14	L01	13
19	L02	5
3	L05	21
5	L01	20

(i) Identify the foreign key in table Issues & justify your answer also.
(ii) What will be the Cardinality if equi join is performed on these two tables?
(iii) Write command to display the Author Name and Qty issued of those books which are published by BPB.
(iv) Write command to display the publisher and the total Quantity of books published of those publshers who have published less than 20 books.

40. Study the following tables Doctor and Salary and write SQL Commands

Table : DOCTOR

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

Table : SALARY

ID	BASIC	ALLOWANCE	CONSULTATION
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 and basic more than 10000.

(ii) Display the Name, Dept and Salary of doctors working in "ENT" department using the DOCTOR and where Salary=basic + allowance.

(iii) Display the Number of doctors in each Dept.

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

(v) What will be the cardinality if equi join is performed on these two tables.

(vi) Identify the foreign key in table SALARY.

41. What is the use of Order by and Group by clause?

42. In a database there are two tables 'Patient' and 'Doctors' are shown below-

Table: **Patient**

Name	Patient_No	Date_Adm	Doctor_No
Kishore	P104	2012-05-15	502
Ragini	P202	2013-01-11	165
Reshu	P754	2003-12-31	325
Kanti	P612	2014-04-22	165

Table: **Doctor**

Doctor_No	Doctor_Name	Speciality
122	M. K Singh	Dentist
165	R. K. Tiwari	Neurology
325	V. K. Chauhan	Surgery
502	N. Singh	Nephrology
530	K. P. Sinha	Urology

(i) Name the columns which can be made '**Primary Key**' in both the tables.

(ii) What will be the cardinality of Cartesian product of both the tables?

43. Consider the tables given below.

Table : STOCK

Itcode	Itname	Dcode	Qty	Unitpr	Stkdate
444	Drawing Copy	101	10	21	31-June-2009
445	Sharpener Camlin	102	25	13	21-Apr-2010
450	Eraser Natraj	101	40	6	11-Dec-2010
452	Gel Pen Montex	103	80	10	03-Jan-2010
457	Geometry Box	101	65	63	15-Nov-2009
467	Parker Premium	102	40	109	27-Oct-2009

469	Office File	103	27	34	13-Sep-2010

Table : DEALERS

Dcode	Dname	Location
101	Vikash Stationers	Lanka Varanasi
102	Bharat Drawing Emporium	Luxa Varanasi
103	Banaras Books Corporation	Bansphatak Varanasi

With reference to these tables, write commands in SQL for (i) and (ii) and output for (iii) below-

(i) To display the amount (Qty*Unitpr) that has been spent to purchase Office file & Sharpener camlin.

(ii) To display all the items of Vikash Stationers.

(iii) SELECT DCODE,COUNT(QTY),AVG(UnitPr) FROM STOCK GROUP BY DCODE;

44. Consider the following tables **VEHICLE** & **CUSTOMER**

Table : VEHICLE

Vcode	VehicleName	Make	Color	Capacity	Price(Rs in Lacs)
501	A-Star	Suzuki	Red	3	4
503	Indigo	Tata	Silver	3	4
502	Innova	Toyota	White	7	15
509	SX4	Suzuki	Silver	4	14
510	C Class	Mercedes	Red	4	35

Table :CUSTOMER

Ccode	Vcode	Cname	City
1001	501	Hemant Sahu	Chandigarh
1001	509	Raj Lal	Amritsar
1002	503	Feroza Shah	Banglore
1003	503	Ketan Dhal	Delhi
1003	509	BM Rai	Amritsar

(i) Identify the composite primary key and foreign key in customer table.

(ii) Write SQL command to display the CName and City of those customers who have purchased Indigo Or A-Star.

(iii) What will be the cardinality if Equi join is performed on tables ITEM & CUSTOMER. Also write SQL command for the same.

45. What is a transaction and write the properties of a transaction.

46. Giving suitable example explain the purpose of SAVEPOINT and ROLLBACK TO statement?

47. A table EMPLOYEE has 4 records and table DEPT has 3 records in it. Mr. Jain wants to display all information stored In both these related tables. He forgot to specify equi join condition in query. Name the type of JOIN formed. What will be the cardinality of output displayed on execution of this query?

48. A numeric column MONEY contains 34567.7896. Write a command to get:

(i) Expected result as 34567.78

(ii) Expected result as 34000

49. What happens when DDL command is issued in a transaction process? Explain with example.

50. Rishi Mehra is using a table Employee. It has the following columns.

Admno, Name, Agg, Stream

[column Agg contains Aggregate marks]

He wants to display highest Agg obtained in each Stream.

SELECT Stream , MAX (Agg) FROM Employee;

But he did not get the desired result. Rewrite the above query with necessary changes to help him to get the desired output.

51. In a database – SAMS and VENDOR are two tables with the following information. Write MySQL queries for (i) to (iv) based on tables SAMS and VENDOR:

Table: SAMS

ICode	**IName**	**Price**	**Colour**	**VCode**
S001	Refrigerator	20000	Blue	P01
S002	Mobile Phone	45000	White	P02
S003	LCD	60000	Silver	P03
S004	Washing Machine	12500	Smoke	P01
S005	Air Conditioner	16000	White	P03

Table: VENDOR

VCode	**VName**
P01	Satish
P02	Manoj
P03	Subodh
P04	Jacob

(i) To display ICode, IName and VName of all the vendors, who manufacture “Mobile Phone”.

(ii) To display IName, ICode, VName and Price of all the products whose price is more than 20000.

(iii) To display vendor names and names of all items manufactured by vendor code is “P03”.

(iv) With reference to SAMS table, which column should be set as the Primary key? Which column is the foreign key? Give reasons also.

52. Kuhu has already created a table ‘Hospital’ as shown below:

Patient_No	Patient_Name	Disease	Age	Charges
P001	Alya	Viral Fever	14	500
P002	Kavita	Lung Infection	16	1500
P003	Manya	Cough and Cold	20	500
P004	Amar	Bone Fracture	22	2500
P005	Deep	Viral Fever	15	500

Now she wants to add a new column ‘Address’ in the above given table. Suggest to her suitable MySQL command for the same. Also write the category of this command.

53. Amit works as a database administrator in a Multinational bank. He wants to undo the changes made in the current transaction. Suggest to him a suitable MySQL command for the same. Write category of this command.
54. What will be the output of the following queries on the basis of Employee table:

```
+-------+-------+--------+
| EmpId | EName | Salary |
+-------+-------+--------+
| A001  | Bob   |  5600  |
| A002  | John  |  NULL  |
| A003  | Tom   |  5000  |
+-------+-------+--------+
```

(i)Select avg(Salary) from Employee;

(ii) Select Salary+100 from Employee where EmpId='A002';

55. Saumya had previously created a table named 'Product' in a database using MySQL. Later on she forgot the table structure. Suggest to her the suitable MySQL command through which she can check the structure of the already created table.

56. Roli wants to list the names of all the tables in her database named 'Gadgets'. Which command (s) she should use to get the desired result.

57. A table named 'GAMES' has the following contents:

GCode	GameName	Number_of_Players	PrizeMoney
101	Carom Board	2	5000
102	Badminton	2	12000
103	Table Tennis	4	8000

Write the output that will be displayed by statements (i) and (ii). SELECT * FROM GAMES;
SET AUTOCOMMIT = 0;
INSERT INTO GAMES VALUES(105,'CHESS',2,9000);
ROLLBACK; SAVEPOINT S1;
SELECT * FROM GAMES; ---------- (i)
INSERT INTO GAMES VALUES(108,'LAWN TENNIS',4,25000);
SAVEPOINT S2;
INSERT INTO GAMES VALUES(109,'CRICKET',11,20000);
ROLLBACK TO S2;
SELECT * FROM ITEM; ---------- (ii)

58. Observe the given statements carefully:

(i)SELECT * FROM club WHERE salary between 20000 and 30000;
(ii) SELECT * FROM club WHERE salary IN (20000, 30000);
(iii) SELECT * FROM club WHERE salary >= 20000 and salary <=30000;
(iv) SELECT * FROM club WHERE salary = 20000 OR salary = 30000;

Make pairs of the equivalent SQL statements given above (which give the same output) and place each pair in a group.

59. Observe the table 'Club' given below:

Club

Member_id	Member_name	Address	Age	Fees
M001	Sumit	New Delhi	20	1000
M002	Nisha	Gurgaon	19	1500
M003	Niharika	New Delhi	21	2100
M004	Sachin	Faridabad	18	1500

(i) What is the cardinality and degree of the above given table?

(ii) If a new column contact_no has been added and two more members have joined the club then how these changes will affect the degree and cardinality of the above given table.

60. Write the output of the following SQL queries:

(i) SELECT INSTR('INTERNATIONAL', 'NA');
(ii) SELECT LENGTH(CONCAT('NETWORK','ING'));
(iii)SELECT ROUND(563.345,-2);
(iv) SELECT DAYOFYEAR('2014-01-30');

61. Write SQL query to create a table 'Bank_Customer' with the following structure:

Field	Type	Constraint
Acc_No	Integer	Primary Key
Cust_Name	Varchar(20)	Not Null
Cust_Add	Varchar(20)	
Cust_City	Varchar(20)	

62. In a Bank's database, there are two tables '**Customer_info**' and '**Transaction_Detail**' as shown below:

Customer_info

Acc_No	Cust_Name	Cust_Add	Cust_City	Cust_Phone
1001001	Ram	Vasundhara Enclave	New Delhi	8710557614
1001002	Kavita	Punjabi Bagh	New Delhi	7123545233
1001003	Raj	Civil Lines	Allahabad	9872136576
1001004	Sohan	Krishnanagar	Kanpur	9921305453

Transaction_Detail

Trans_Id	Acc_No	Transaction_Type	Amount
T001	1001001	Credit	5000
T002	1001002	Credit	10000
T003	1001001	Debit	2000
T004	1001004	Credit	6000
T005	1001001	Credit	4000

i. Is it possible to have primary key and foreign key in one table? Justify your answer.

ii. A table can have maximum how many primary keys and foreign keys?

63. Consider the tables 'Flights' & 'Fares' given below:

Flights

FNO	SOURCE	DEST	NO_OF_FL	NO_OF_STOP
IC301	MUMBAI	BANGALORE	3	2
IC799	BANGALORE	KOLKATA	8	3
MC101	DELHI	VARANASI	6	0
IC302	MUMBAI	KOCHI	1	4
AM812	LUCKNOW	DELHI	4	0
MU499	DELHI	CHENNAI	3	3

Fares

FNO	AIRLINES	FARE	TAX
IC301	Indian Airlines	9425	5
IC799	Spice Jet	8846	10
MC101	Deccan Airlines	4210	7
IC302	Jet Airways	13894	5
AM812	Indian Airlines	4500	6
MU499	Sahara	12000	4

With reference to these tables, write commands in SQL for (i) and (ii) and output for (iii) below:

i. To display flight number, source, airlines of those flights where fare is less than Rs. 10000.

ii. To count total no of Indian Airlines flights starting from various cities.

iii. SELECT FLIGHTS.FNO, NO_OF_FL, AIRLINES FROM FLIGHTS,FARES WHERE FLIGHTS.FNO = FARES.FNO AND SOURCE='DELHI';

64. How is Primary key constraint different from Unique key constraint?

65. Write one similarity and one difference between CHAR and VARCHAR data types.

66. What is Transaction? Which command is used to make changes done by a Transaction permanent on a database?

67. Distinguish between Single Row and Aggregate functions of MySQL. Write one example of each.

68. Write MYSQL command to create the table 'LIBRARY' with given constraints.

TABLE: LIBRARY

COLUMN_NAME	DATATYPE(SIZE)	CONSTRAINT
BookId	Int(10)	Primary Key
BookName	Varchar(40)	Not Null
Type	Char (4)	
Author	Varchar(40)	
No_Copies	Int()6)	
Price	Decimal(8,2)	

69. In a Database Company, there are two tables given below:

Table: SALES

SALESMANID	NAME	SALES	LOCATIONID
S1	ANITA SINGH ARORA	250000	102
S2	Y.P.SINGH	1300000	101
S3	TINA JAIWAL	1400000	103
S4	GURDEEP SINGH	1250000	102
S5	SIMI FAIZAL	1450000	10.3

TABLE : LOCATION

LOCATIONID	LOCATIONNAME
101	Delhi
102	Mumbai
103	Kolkata
104	Chennai

Write SQL queries for the following:

(i) To display SalesmanID, name of salesman, LocationID with corresponding location names

(ii) To display name of salesmen, sales and corresponding location names who have achieved Sales more than 1300000.

(iii) To display names of those salesman who have 'SINGH' in their names.

(iv) Identify Primary key in the table SALES. Give reason for your choice.

(v) Write SQL command to change the LocationID to 104 of the salesman with ID as s3 in the table 'SALES'.

70. Mr. William wants to remove all the rows from Inventory table to release the storage space, but he does not want to remove the structure of the table. What MySQL statement should he use? Write the command also.

71. Give one difference between COMMIT and ROLLBACK commands used in MySQL.

72. A Table FLIGHT has 4 rows and 2 columns and another table AIRHOSTESS has 3 rows and 4 columns. How many rows and columns will be there if we obtain the Cartesian product of these two tables? Write command also.

73. What is the role of UNIQUE constraint? How is PRIMARY KEY constraint different from UNIQUE key constraint.

7 4 . Write the output of the following SQL queries.

(i) SELECT CONCAT(LOWER('Class'), UPPER('xii'));

(ii) SELECT SIGN(2);

(iii)SELECT DAYOFYEAR('2010-02-13'); (iv)SELECT MOD(11,4);

75. Name three categories into which SQL commands can be categorized.Also give one example of SQL commands in each category.

76. What is the purpose of ALTER TABLE command in MySQL?How is it different from UPDATE command?

77. Consider the tables Doctors and Patient given below:

Table : Doctors

DocID	DocName	Department	OPD_days
101	K.K.Mathur	ENT	TTS
102	Ashish Sharma	Paed	MWF
201	Vivek Khurana	Ortho	MWF

Table : Patients

	PatName		
1	Akash	ENT	101
2	Sameer	Ortho	201
3	Rahul	ENT	101
4	Neha	Paed	102
5	Manoj	Ortho	201

With reference to these two tables, write a SQL query for (i) and (ii) and output for (iii).

(i) Display Patient Name,Patient No and corresponding doctor name for each patient.

(ii) Display the list of all patients whose OPD_days are 'TTS'.

(ii) SELECT OPD_days,count(*) FROM Doctors,Patients WHERE Doctors.Department=Patients.Department GROUP BY OPD_days;

78. Given the tables : CUSTOMER

Booking_code	Customer_name	No_of_tkts	BClerk_code
B001	Veer	4	BC003
B002	Milan	2	BC004
B003	Jahmu	3	BC003
B004	Michal	20	BC001
B005	Meera	5	BC001

BCLERK

BClerk_Code	Name
BC001	Varsha
BC002	Richeal
BC003	Vineet
BC004	Payal
BC005	Nisha

(i) Write a query to display the total number of tickets booked by booking clerk "Varsha"

(ii) Write the command to display customer name & booking clerk name in lowercase

(iii) Display the number of customers with each clerk

79. What is the purpose of DROP TABLE command in MySQL? How is it different from DELETE command?

80. Write a MySQL command for creating a table "**PAYMENT**" whose structure is given below:

Field Name	Datatype	Size	Constraint
Loan_number	Integer	4	Primary Key
Payment _ number	Varchar	3	
Payment_date	Date		
Payment_amount	Integer	8	NOT NULL

81. In a database there are two tables "Product" and "Client" as shown below:

Table: PRODUCT

P_ID	ProductName	Manufacture	Price
P001	Moisturizer	XYZ	40
P002	Sanitizer	LAC	35
P003	Bath Soap	COP	25
P004	Shampoo	TAP	95
P005	Lens Solution	COP	350

Table: CLIENT

C_ID	ClientName	City	P_ID
01	Dreamz Disney	New Delhi	P002
05	Life Line Inc.	Mumbai	P005
12	98.4	New Delhi	P001
15	Appolo	Banglore	P003

Write the commands in SQL queries for the following:

(i) To display the details of Product whose Price is in the range of 40 and 120(Both values included).

(ii) To display the ClientName, City from table CLIENT and ProductName and Price from table PRODUCT, with their corresponding matching P_ID.

(iii) To increase the Price of all the Products by 20.

82. In a database School there are two tables Member and Division shown below.

Table: MEMBER

EmpId	Name	Pay	Divno
1001	Shankhya	34000	10
1002	Ridhima	32000	50
1003	Sunish	45000	20

Table: DIVISION

Divno	Divname	Location
10	Media	TF02
20	Dance	FF02
30	Production	SF01

(i) Identify the Foreign Key in the table Member.
(ii) What output you will get, when an equi-join query is executed to get the Name from Member table and corresponding Divname from Division table.

83. Write a SQL command for creating a table "BANK" whose structure is given below:

Table: BANK

FieldName	**Datatype**	**Size**	**Constraint**
Acct_number	Integer	4	Primary Key
Name	Varchar	3	
BirthDate	Date		
Balance	Integer	8	Primary Key

84. In a database School there are two tables "Employee" and "Dept" as shown below:

Table: EMPLOYEE

EmpId	**Name**	**Sal**	**Deptno**
T001	Vishakha	34000	10
T003	Mridul	32000	50
T002	Manish	45000	20

Table: DEPT

Deptno	DName	LocationId
10	Lights	HH02
20	Dance	FF02
30	Production	AB01

(i) Identify the Foreign Key in the table Employee.
(ii) What output, you will get, when an equi-join query is executed to get the NAME from Employee table and corresponding DNAME from Dept table?

85. Write MySQL command to open an existing database.Give example also.

86. Ms. Mirana wants to remove the entire content of a table "BACKUP" alongwith its structure to release the storage place. What MySQL statement should she use? To which category this command belongs to?

87. Give one similarity and one difference between ROLLBACK and COMMIT command used in MySQL.

88. A table STUDENT has 4 rows and 2 columns and another table TEACHER has 3 rows and 4 columns. How many rows and columns will be there if we obtain the Cartesian product of these two tables? Also write its degree and cardinality.

89. Mr. Sanghi created two tables with CITY as Primary Key in Table1 and Foreign Key Table2. While inserting a row in Table2, Mr. Sanghi is not able to enter a value in the column CITY. What could be the possible reason for it?

90. Mr. Janak is using a table with following columns:
Name, Class, Course_Id, Course_name
He needs to display names of students who have not been assigned any stream or have been assigned Course_name that ends with "economics".

He wrote the following command, which did not give the desired list

```
SELECT NAME, CLASS FROM STUDENTS WHERE COURSE_NAME= NULL OR
COURSE_NAME= "%economics";
```

Help Mr.Janak to run the query by removing the error and write the correct query.

91. Write a command to add a NOT NULL constraint on FEES column of a student table.

92. Define Foreign Key with reference to RDBMS.

93. Table BANK has 2 rows and 3 columns. Table CUSTOMER has 4 rows and 3 columns. What will be the cardinality and degree of the Cartesian product of them?

94. There is a column HOBBY in a table CONTACTS. The following two statements are giving different outputs. What may be the possible reasons?

```
SELECT COUNT(*) FROM CONTACTS;
SELECT COUNT(HOBBY) FROM CONTACTS;
```

95. Mr. Tondon is using table EMP with the following columns:

ECODE, DEPT, ENAME, SALARY

He wants to display all information of EMP table in ascending order of ENAME and within it in ascending order of DEPT. He wrote the following command, which did not show the desired output.

```
SELECT * FROM EMP ORDER BY NAME DESC,DEPT;
```

Rewrite the above query to get the desired output.

96. Write SQL command to create the Table **Callan** with given constraint.

Table: CHALLAN

COLUMN NAME	DATATYPE	CONSTRAINT
Challan_No	Decimal(10)	Primary Key
Ch_date	Date	
RegNo	Char(10)	
Offence	Decimal(3)	

97. In a Database Karnataka_Sangam there are two tables with the instances given below:

Table : STUDENTS

ADMNO	NAME	CLASS	SEC	RN	ADDRESS	PHONE
1211	MEENA	12	D	4	A-26	3245678
1212	VANI	10	D	1	B-25	5456789
1213	MEENA	12	A	1	NULL	NULL
1214	KARISH	10	B	3	AB-234	4567890
1215	SURAJ	11	C	2	ZW12	4345677

Table : SPORTS

ADMNO	GAME	COACHNAME	GRADE
1215	CRICKET	MR. RAVI	A
1213	VOLLEYBALL	B	B
1211	VOLLEYBALL	MR. GOVARDHAN	A
1212	BASKET BALL	MR TEWARI	B

Write SQL commands for the following:

(i) To count how many addresses are not NULL values in the address column of STUDENTS table.
(ii) To display Name,Class from STUDENTS table and corresponding Grade from SPORTS table.
(iii) To display Name of the student and their corresponding Coachnames from STUDENTS and SPORTS table.

98. Write a SQL command to view the constraints of EMP table.

99. Mr. Krishna swami is working on a database and has doubt about the concept of SAVEPOINT in a transaction. Write down the meaning of SAVEPOINT and provide a simple example considering yourself as an online web support executive.

100. What is the difference between CURDATE() and DATE() functions?

101. Table STUDENT has 4 rows and 2 columns. Table MARKS has 2 rows and 3 columns. What will be the cardinality and degree of the Cartesian product (cross join) of STUDENT and MARKS?

102. There is a column Salary in a Table EMPLOYEE. The following two statements are giving different outputs. What may be the possible reason?
SELECT COUNT(*) FROM EMPLOYEE;
SELECT COUNT(SALARY) FROM EMPLOYEE;

103. Mrs. Kumar is using table STUDENTS with the following columns:
RNO, ADMNO, NAME, AGGREGATE
She wants to display all information of students in descending order of name and within ascending order of aggregate. She wrote the following SQL query and she did not get the desired output:
SELECT * FROM STUDENTS ORDER BY NAME, AGGREGATE DESC;

104. What is the use of COMMIT statement in SQL? How is it different from ROLLBACK statement?

105. Mr. James created a table CLIENT with 2 rows and 4 columns. He added 2 more rows to it and deleted one column. What is the Cardinality and Degree of the Table CLIENT?

106. Write SQL command to create the table VEHICLE with given constraint:

Table: VEHICLE

COLUMN_NAME	DATATYPE(SIZE)	CONSTRAINT
RegNo	CHAR(10)	Primary Key
Regdate	DATE	
Owner	VARCHAR(30)	
Address	VARCHAR(40)	

107. In a database BANK, there are two tables with a sample data given below:

Table : EMPLOYEE

ENO	ENAME	SALARY	ZONE	AGE	GRADE	DEPT
1	Mona	70000	East	40	A	10
2	Muktar	71000	West	45	B	20
3	Nalini	60000	East	26	A	10
4	Sanaj	65000	South	36	A	20

5	Surya	58000	North	30	B		30

Table : DEPARTMENT

DEPT	DNAME	HOD
10	Computers	1
20	Economics	2
30	English	5

Write SQL queries for the following:
(i) To display ENO, ENAME, SALARY and corresponding DNAME of all the employees whose age is between 25 and 35 (both values inclusive).

(ii) To display DNAME and corresponding ENAME from the tables DEPARTMENT and EMPLOYEE.

(iii) To display ENAME, SALARY, ZONE and INCOME TAX
(Note: Income Tax to be calculated as 30% of salary) of all the employees with appropriate column headings

108. In a database STUDENT, there is a Table RESULT with the following contents:

Table :RESULT

REGNO	NAME	MARKS	SECTION	CLASS	TEACHER	ADMNO
10004	Mohit	90	A		Ms Nathani	Z101
10211	Mukta	85	B		Mr. Gokhle	Z109
10923	Mohit	92	B		Mr. Gokhle	Z120
10313	Sana	80	A		Ms Nathani	Z234

(i) Identify the attributes, which can be chosen as Candidate Keys in the table RESULT.

(ii) Write SQL Query to change the Marks of Mukta from 85 to 95 in the table RESULT.

109. Distinguish between Single Row and Aggregate functions of MySQL. Write one example of each.

110. Write one similarity and one difference between CHAR and VARCHAR data types.