**1)What is Database**

Data base is a collection of information(Data).Its support storage and manipulation of data.

Data bases make data management easy.

**2) What is column?**

column is a set of data values of a simple type, one for each row of the table

The columnsprovide the structure according to which the rows are composed.

**3) What is row?**

In a database, a row (Sometimes called a record) is the set of fields within a table that are relevant to a specific entity. For example, in a table called *customer contact information*, a row would likely contain fields such as, ID Number, Name, Street Address, City, telephone number.

**4) Inner join?**

The INNER JOIN keyword selects all rows from both tables as long as there is a match between the columns in both tables.

Select column\_name(s)

From table1

Inner Join table2

On table 1.column\_name=table2.column\_name;

**5)Left outer join?**

The LEFT JOIN keyword returns all rows from the left table (table1), with the matching rows in the right table (table2). The result is NULL in the right side when there is no match.

Ex: SELECT column\_name(s)  
FROM table1  
LEFT JOIN table2  
ON table1.column\_name=table2.column\_name;

**6) Right outer join?**

RIGHT JOIN performs a join starting with the second (right-most) table and then any matching first (left-most) table records.

RIGHT JOIN and RIGHT OUTER JOIN are the same.

SELECT column-names

FROM table-name1 RIGHT OUTER JOIN table-name2

ON column-name1 = column-name2

WHERE condition

**7) Example for Max, sum, Avg?**

The MAX () function returns the largest value of the selected column.

SQL MAX() Syntax

SELECT MAX(column\_name) FROM table\_name;

The SUM() function returns the total sum of a numeric column.

**SQL SUM() Syntax**

SELECT SUM(column\_name) FROM table\_name;

The AVG() function returns the average value of a numeric column.

**SQL AVG() Syntax**

SELECT AVG(column\_name) FROM table\_name

**8) Example for groupby?**

The GROUP BY statement is used in conjunction with the aggregate functions to group the result-set by one or more columns.

SQL GROUP BY Syntax

SELECT column\_name, aggregate\_function(column\_name)  
FROM table\_name  
WHERE column\_name operator value  
GROUP BY column\_name;

**9) Example for having**

The HAVING clause was added to SQL because the WHERE keyword could not be used with aggregate functions.

SQL HAVING Syntax

SELECT column\_name, aggregate\_function(column\_name)  
FROM table\_name  
WHERE column\_name operator value  
GROUP BY column\_name  
HAVING aggregate\_function(column\_name) operator value;

**10) Example for primary key**

The PRIMARY KEY constraint uniquely identifies each record in a database table.

Primary keys must contain UNIQUE values.

A primary key column cannot contain NULL values.

Most tables should have a primary key, and each table can have only ONE primary key.

SQL PRIMARY KEY Constraint on CREATE TABLE

The following SQL creates a PRIMARY KEY on the "P\_Id" column when the "Persons" table is created:

MySQL:

CREATE TABLE Persons  
(  
P\_Id int NOT NULL,  
LastName varchar(255) NOT NULL,  
FirstName varchar(255),  
Address varchar(255),  
City varchar(255),  
PRIMARY KEY (P\_Id)  
)

**11) Example for foreign key?**

A FOREIGN KEY in one table points to a PRIMARY KEY in another table.

a FOREIGN KEY on the "P\_Id" column when the "Orders" table is created

CREATE TABLE Orders  
(  
O\_Id int NOT NULL,  
OrderNo int NOT NULL,  
P\_Id int,  
PRIMARY KEY (O\_Id),  
FOREIGN KEY (P\_Id) REFERENCES Persons(P\_Id)  
)

12) Finding second highest salary from row table?

Syntax:Select MAX(Salary) From Employee;

SELECT Id, Salary

FROM Employee

 WHERE 2=(SELECT COUNT(DISTINCT Salary) FROM Employee

 WHERE e.Salary<=p.Salary)

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