1. Create a table ***employee*** with fields Name (varchar (15)), Designation (varchar (15)), Dept. (varchar (15)), Salary (int), Phone\_number (bigint(10)).

CREATE TABLE employee(

Name varchar(15),

Designation varchar(15),

Dept varchar(15),

Salary int,

Phone\_number bigint(10)

);

OUTPUT:

+--------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+-------------+------+-----+---------+-------+

| Name | varchar(15) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

+--------------+-------------+------+-----+---------+-------+

1. Add a new column ID (int) as the first column in the *employee* table.

ALTER TABLE employee ADD ID int FIRST;

OUTPUT:-

+--------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+-------------+------+-----+---------+-------+

| ID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

+--------------+-------------+------+-----+---------+-------+

1. Add another column *City* (varchar (15))after the Salary column and Last\_name (varchar (5)) after the Name column.

ALTER TABLE employee ADD City varchar(15) AFTER Salary ,ADD Last\_name varchar(5) AFTER Name;

OUTPUT:-

+--------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+-------------+------+-----+---------+-------+

| ID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Last\_name | varchar(5) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | YES | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

+--------------+-------------+------+-----+---------+-------+

1. Change the size of the column Last\_name from 5 to 20.

ALTER TABLE employee MODIFY Last\_name varchar(20);

OUTPUT:-

+--------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+-------------+------+-----+---------+-------+

| ID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Last\_name | varchar(20) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | YES | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

+--------------+-------------+------+-----+---------+-------+

1. Add a new column *Date\_of\_joining* (date) at the end of the *employee* table.

ALTER TABLE employee ADD Date\_of\_joining date;

OUTPUT:-

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| ID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Last\_name | varchar(20) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | YES | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

| Date\_of\_joining | date | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+

6.) Change the name of the column IDtoEID

ALTER TABLE employee CHANGE COLUMN ID EID int FIRST;

OUTPUT:-

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| EID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Last\_name | varchar(20) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | YES | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

| Date\_of\_joining | date | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+

7.)Add *not null* constraint to City

ALTER TABLE employee MODIFY City varchar(15) NOT NULL;

OUTPUT:-

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| EID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Last\_name | varchar(20) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | NO | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

| Date\_of\_joining | date | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+

8.)Remove the Last\_name column from the *employee* table.

ALTER TABLE employee DROP COLUMN Last\_name;

OUTPUT:-

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| EID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | NO | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

| Date\_of\_joining | date | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+

9.)Create a table ***dup\_employee*** using *employee*(use create table as)

CREATE TABLE dup\_employee LIKE employe;

OUTPUT:-

+------------------+

| Tables\_in\_19pw21 |

+------------------+

| dup\_employee |

| employee |

+------------------+

10.)Change the name of the table *employee* to *employee\_data*.

ALTER TABLE employee RENAME TO employee\_data;

OUTPUT:-

**+------------------+**

**| Tables\_in\_19pw21 |**

**+------------------+**

**| dup\_employee |**

**| employee\_data |**

**+------------------+**

11.) Delete the *dup\_employee**table.*

DROP TABLE dup\_employee;

OUTPUT:-

+------------------+

| Tables\_in\_19pw21 |

+------------------+

| employee\_data |

+------------------+

12.)Display the schema of the *employee\_data* table. (use desc (or) show columns from).

DESC employee\_data;

OUTPUT:-

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| EID | int(11) | YES | | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | NO | | NULL | |

| Phone\_number | bigint(10) | YES | | NULL | |

| Date\_of\_joining | date | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+

13.) Insert the first three records given below into the *employee\_data* table

INSERT INTO employee\_data (EID,Name,Designation,Dept,Salary,City,Phone\_number,Date\_of\_joining) VALUES (101,’Smith’,’Manager’,’Accounts’,20000,’Chennai’,9290249125,’1980-12-27’), (407,’Allen’,’Clerk’,’Accounts’,5000,’Coimbatore’,9945533992,’1981-06-09’), (678,’Scott’,’Lecturer’,’ECE’,30000,’Trichy’,’9965542211’,’1980-05-01’);

OUTPUT:-

+------+-------+-------------+----------+--------+------------+--------------+-----------------+

| EID | Name | Designation | Dept | Salary | City | Phone\_number | Date\_of\_joining |

+------+-------+-------------+----------+--------+------------+--------------+-----------------+

| 101 | Smith | Manager | Accounts | 20000 | Chennai | 9290249125 | 1980-12-27 |

| 407 | Allen | Clerk | Accounts | 5000 | Coimbatore | 9945533992 | 1981-06-09 |

| 678 | Scott | Lecturer | ECE | 30000 | Trichy | 9965542211 | 1980-05-01 |

+------+-------+-------------+----------+--------+------------+--------------+-----------------+

14.)Remove the three records inserted into the *employee\_data* table using a single SQL statement.

DELETE FEOM employee\_data;

OUTPUT:-

Query OK, 3 rows affected (0.01 sec)

15.)Write a SQL statement to make sure that no duplicate data against column EID will be allowed at the time of insertion

ALTER TABLE employee\_data ADD UNIQUE (EID);

OUTPUT:-

Query OK, 3 rows affected (0.01 sec)

16.)Insert all the given data into the *employee\_data* table using a single SQL statement

INSERT INTO employee\_data (EID,Name,Designation,Dept,Salary,City,Phone\_number,Date\_of\_joining) VALUES (101,’Smith’,’Manager’,’Accounts’,20000,’Chennai’,9290249125,’1980-12-27’), (407,’Allen’,’Clerk’,’Accounts’,5000,’Coimbatore’,9945533992,’1981-06-09’), (678,’Scott’,’Lecturer’,’ECE’,30000,’Trichy’,’9965542211’,’1980-05-01’),(747,’Jones’,’Professor’,’Maths’,35000,’Coimbatore’,994667332,’1999-11-12’),(690,’Adams’,’Professor’,’EEE’,50000,’Vellore’,9866544332,’1979-05-25’),(579,’Miller’,’Lecturer’,’ECE’,25000,’Chennai’,9955778890,’1999-12-24’),(671,’Ram’,’Asst.professor’,’EEE’,48000,’Chennai’,9877466335,’1980-10-09’),(745,’Allex’,’Senior lecturer’,’ECE’,46000,’Trichy’,9942266788,’1999-08-19’),(742,’Arjun’,’Professor’,’EEE’,48000,’Coimbatore’,9977886765,’1999-12-06’),(749,’Robert’,’Lecturer’,’EEE’,30000,’Coimbatore’,9866778855,’2005-01-17’),(845,’Smyth’,’Clerk’,’Accounts’,9000,’Salem’,990000772,’1972-12-31’);

OUTPUT:-

+------+--------+-----------------+----------+--------+------------+--------------+-----------------+

| EID | Name | Designation | Dept | Salary | City | Phone\_number | Date\_of\_joining |

+------+--------+-----------------+----------+--------+------------+--------------+-----------------+

| 101 | Smith | Manager | Accounts | 20000 | Chennai | 9290249125 | 1980-12-27 |

| 407 | Allen | Clerk | Accounts | 5000 | Coimbatore | 9945533992 | 1981-06-09 |

| 678 | Scott | Lecturer | ECE | 30000 | Trichy | 9965542211 | 1980-05-01 |

| 747 | Jones | Professor | Maths | 35000 | Coimbatore | 994667332 | 1999-11-12 |

| 690 | Adams | Professor | EEE | 50000 | Vellore | 9866544332 | 1979-05-25 |

| 579 | Miller | Lecturer | ECE | 25000 | Chennai | 9955778890 | 1999-12-24 |

| 671 | Ram | Asst.professor | EEE | 48000 | Chennai | 9877466335 | 1980-10-09 |

| 745 | Allex | Senior lecturer | ECE | 46000 | Trichy | 9942266788 | 1999-08-19 |

| 742 | Arjun | Professor | EEE | 48000 | Coimbatore | 9977886765 | 1999-12-06 |

| 749 | Robert | Lecturer | EEE | 30000 | Coimbatore | 9866778855 | 2005-01-17 |

| 845 | Smyth | Clerk | Accounts | 9000 | Salem | 990000772 | 1972-12-31 |

+------+--------+-----------------+----------+--------+------------+--------------+-----------------+

17.)Create a table ***CBE\_employees*** (using *employee\_data* table) that includes the details of employees who are from Coimbatore city. (use create table as)

CREATE TABLE CBE\_employees AS SELECT \* FROM employee\_data WHERE City=’Coimbatore’;

OUTPUT:-

+------+--------+-------------+----------+--------+------------+--------------+-----------------+

| EID | Name | Designation | Dept | Salary | City | Phone\_number | Date\_of\_joining |

+------+--------+-------------+----------+--------+------------+--------------+-----------------+

| 407 | Allen | Clerk | Accounts | 5000 | Coimbatore | 9945533992 | 1981-06-09 |

| 747 | Jones | Professor | Maths | 35000 | Coimbatore | 994667332 | 1999-11-12 |

| 742 | Arjun | Professor | EEE | 48000 | Coimbatore | 9977886765 | 1999-12-06 |

| 749 | Robert | Lecturer | EEE | 30000 | Coimbatore | 9866778855 | 2005-01-17 |

+------+--------+-------------+----------+--------+------------+--------------+-----------------+

18.)Create a table ***Subset\_employee*** and store only the values of EID, Name, Designation, and Phone\_number columns of *employee\_data* table using a single SQL statement. (use create table as)

CREATE TABLE Subset\_employee AS SELECT EID,Name,Designation,Phone\_number FROM employee\_data;

OUTPUT:-

+------+--------+-----------------+--------------+

| EID | Name | Designation | Phone\_number |

+------+--------+-----------------+--------------+

| 101 | Smith | Manager | 9290249125 |

| 407 | Allen | Clerk | 9945533992 |

| 678 | Scott | Lecturer | 9965542211 |

| 747 | Jones | Professor | 994667332 |

| 690 | Adams | Professor | 9866544332 |

| 579 | Miller | Lecturer | 9955778890 |

| 671 | Ram | Asst.professor | 9877466335 |

| 745 | Allex | Senior lecturer | 9942266788 |

| 742 | Arjun | Professor | 9977886765 |

| 749 | Robert | Lecturer | 9866778855 |

| 845 | Smyth | Clerk | 990000772 |

+------+--------+-----------------+--------------+

19.)Add a constraint to the Department column so that the domain values for this column are restricted Accounts, ECE, EEE, and Maths. (use check constraint)

ALTER TABLE employee\_data ADD CONSTRAINT Dept CHECK (Dept IN(‘Accounts’,’ECE’,’EEE’,’Maths’));

OUTPUT:-

Query OK, 11 rows affected (0.02 sec)

Records: 11 Duplicates: 0 Warnings: 0

20.) Add a constraint to the Salary column so that it takes any value in the range 5000-50000. (use check constraint)

ALTER TABLE employee\_data ADD CHECK (Salary >=5000 AND Salary <=50000);

OUTPUT:-

Query OK, 0 rows affected (0.00 sec)

Records: 0 Duplicates: 0 Warnings: 0

21.) Add a constraint to Phone\_number column to store only distinct values. (use check constraint).

ALTER TABLE employee\_data MODIFY Phone\_number bigint(10) UNIQUE;

OUTPUT:-

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| EID | int(11) | YES | UNI | NULL | |

| Name | varchar(15) | YES | | NULL | |

| Designation | varchar(15) | YES | | NULL | |

| Dept | varchar(15) | YES | | NULL | |

| Salary | int(11) | YES | | NULL | |

| City | varchar(15) | NO | | NULL | |

| Phone\_number | bigint(10) | YES | UNI | NULL | |

| Date\_of\_joining | date | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+