1. DDL (Data Definition Language) Questions

Q1: Create a department table with the following columns: dept\_id (PK), dept\_name

(not null), dept\_location.

ANS) create table department18(dept\_id int primary key, dept\_name varchar(25) not null, dept\_location varchar(25));

Table created;

Q2: Write a SQL query to create an employee table with the following columns: emp\_id

(PK), emp\_name, emp\_salary (>20k), emp\_join\_date (between June 1998- till

date), dept\_id (FK).

ANS) create table Employee18(emp\_id INT PRIMARY KEY,emp\_name VARCHAR(25),emp\_salary numeric(10,2) CHECK (emp\_salary>20000),emp\_join\_date DATE CHECK(emp\_join\_date >= date '1998-06-01'),dept\_id INT,FOREIGN KEY(dept\_id) REFERENCES department18(dept\_id));

Table created;

Q3: Create table support table with s\_id (PK), emp\_id (FK), dept\_id (FK), status

(Yes/No).

ANS) create table support18(s\_id int primary key, emp\_id int, dept\_id int, status varchar(5) check (status IN('Yes','No')),foreign key(emp\_id ) references employee18(emp\_id),FOREIGN KEY(dept\_id) REFERENCES department18(dept\_id));

Table created;

Q4: Display the schema of the above three tables.

ANS) DESC department18;

DESC employee18;

DESC support18;

SQL> DESC support18;

Name Null? Type

----------------------------------------- -------- ----------------------------

S\_ID NOT NULL NUMBER(38)

EMP\_ID NUMBER(38)

DEPT\_ID NUMBER(38)

STATUS VARCHAR2(5)

SQL> DESC employee18;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMP\_ID NOT NULL NUMBER(38)

EMP\_NAME VARCHAR2(25)

EMP\_SALARY NUMBER(10,2)

EMP\_JOIN\_DATE DATE

DEPT\_ID NUMBER(38)

SQL> DESC support18;

Name Null? Type

----------------------------------------- -------- ----------------------------

S\_ID NOT NULL NUMBER(38)

EMP\_ID NUMBER(38)

DEPT\_ID NUMBER(38)

STATUS VARCHAR2(5)

Q5: Alter the employee table to add a new column emp\_email of type VARCHAR(100).

ANS) Alter table employee18 add emp\_email varchar(100);

SQL> DESC employee18;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMP\_ID NOT NULL NUMBER(38)

EMP\_NAME VARCHAR2(25)

EMP\_SALARY NUMBER(10,2)

EMP\_JOIN\_DATE DATE

DEPT\_ID NUMBER(38)

EMP\_EMAIL VARCHAR2(100)

Q6: Drop the support table if it is no longer required.

ANS) drop table support18;

Table dropped.

Q7: Modify the emp\_salary column in the employee table to allow values up to

DECIMAL(12, 2).

ANS) Alter table employee18 modify emp\_salary decimal(12,2);

Name Null? Type

----------------------------------------- -------- ----------------------------

EMP\_ID NOT NULL NUMBER(38)

EMP\_NAME VARCHAR2(25)

EMP\_SALARY NUMBER(12,2)

EMP\_JOIN\_DATE DATE

DEPT\_ID NUMBER(38)

EMP\_EMAIL VARCHAR2(100)

Q8: Add five suitable records to department table (Let value of dept\_id starts with 101).

insert into department18 values(101,'MCA','SOUTH BLOCK');

insert into department18 values(102,'MBA','SOUTH BLOCK');

insert intO department18 values(103,'ECE','NORTH BLOCK');

insert intO department18 values(104,'EEE','NORTH BLOCK');

insert intO department18 values(105,'CIVIL','NORTH BLOCK');

ANS)

SQL> SELECT \* FROM DEPARTMENT18;

DEPT\_ID DEPT\_NAME DEPT\_LOCATION

---------- ------------------------- -------------------------

101 MCA SOUTH BLOCK

102 MBA SOUTH BLOCK

103 ECE NORTH BLOCK

104 EEE NORTH BLOCK

105 CIVIL NORTH BLOCK

Q9: Insert the following employee record into the employee table: emp\_id = 1, emp\_name

= 'John Doe', emp\_salary = 60000, emp\_join\_date = '15-05-2021', dept\_id

= 101.

ANS) INSERT INTO employee18 VALUES (1, 'John Doe', 60000, TO\_DATE('2021-06-03', 'YYYY-MM-DD'), 101, 'john@gmail.com');

SQL> select \* from employee18;

EMP\_ID EMP\_NAME EMP\_SALARY EMP\_JOIN\_ DEPT\_ID EMP\_EMAIL

---------- ------------------------- ---------- --------- ---------- ----------

1 John Doe 60000 03-JUN-21 101 john@gmail.com

Q10: Insert multiple records of employees into the employee table with emp\_id, emp\_name,

emp\_salary, and dept\_id.

ANS) insert into employee18 values(2,'Sanju',50000,TO\_DATE('2021-06-15', 'YYYY-MM-DD'), 102, 'sanju@gmail.com');

insert into employee18 values(3,'Abhi',65000,TO\_DATE('2021-10-03', 'YYYY-MM-DD'), 103, 'abhi@gmail.com');

insert into employee18 values(4,'Esther',65000,TO\_DATE('2022-12-07', 'YYYY-MM-DD'), 104, 'esther@gmail.com');

insert into employee18 values(5,'Cijo',60000,TO\_DATE('2022-04-10', 'YYYY-MM-DD'), 105, 'cijo@gmail.com');

SQL> select \* from employee18;

EMP\_ID EMP\_NAME EMP\_SALARY EMP\_JOIN\_ DEPT\_ID EMP\_EMAIL

---------- ------------------------- ---------- --------- ---------- ----------------------------------------------------------------------------------------------------

1 John Doe 60000 03-JUN-21 101 john@gmail.com

2 Sanju 50000 15-JUN-21 102 sanju@gmail.com

3 Abhi 65000 03-OCT-21 103 abhi@gmail.com

4 Esther 65000 07-DEC-22 104 esther@gmail.com

5 Cijo 60000 10-APR-22 105 cijo@gmail.com

Q11: Update the salary of the employee with emp\_id = 1 by increasing it by 10%.

ANS) update employee18 set emp\_salary=emp\_salary\*1.10 where emp\_id=1;

SQL> select \* from employee18;

EMP\_ID EMP\_NAME EMP\_SALARY EMP\_JOIN\_ DEPT\_ID EMP\_EMAIL

---------- ------------------------- ---------- --------- ---------- ----------------------------------------------------------------------------------------------------

1 John Doe 66000 03-JUN-21 101 john@gmail.com

2 Sanju 50000 15-JUN-21 102 sanju@gmail.com

3 Abhi 65000 03-OCT-21 103 abhi@gmail.com

4 Esther 65000 07-DEC-22 104 esther@gmail.com

5 Cijo 60000 10-APR-22 105 cijo@gmail.com

Q12: Delete the record of the employee with emp\_id = 1.

ANS) delete from employee18 where emp\_id=1;

SQL> select \* from employee18;

EMP\_ID EMP\_NAME EMP\_SALARY EMP\_JOIN\_ DEPT\_ID EMP\_EMAIL

---------- ------------------------- ---------- --------- ---------- ----------------------------------------------------------------------------------------------------

2 Sanju 50000 15-JUN-21 102 sanju@gmail.com

3 Abhi 65000 03-OCT-21 103 abhi@gmail.com

4 Esther 65000 07-DEC-22 104 esther@gmail.com

5 Cijo 60000 10-APR-22 105 cijo@gmail.com

Q13: Update the emp\_salary of employees in dept\_id = 101 to 10% more if their current

salary is less than 50000.

ANS) update employee18 set emp\_salary=emp\_salary\*1.10 where dept\_id=101 and emp\_salary<50000;

0 rows updated.

update employee18 set emp\_salary=emp\_salary\*1.10 where dept\_id=102 and emp\_salary<50000;

update employee18 set emp\_salary=45000 where emp\_id=2;

update employee18 set dept\_id=101 where emp\_id=2;

SQL> select \* from employee18;

EMP\_ID EMP\_NAME EMP\_SALARY EMP\_JOIN\_ DEPT\_ID EMP\_EMAIL

---------- ------------------------- ---------- --------- ---------- ----------------------------------------------------------------------------------------------------

2 Sanju 49500 15-JUN-21 101 sanju@gmail.com

3 Abhi 65000 03-OCT-21 103 abhi@gmail.com

4 Esther 65000 07-DEC-22 104 esther@gmail.com

5 Cijo 60000 10-APR-22 105 cijo@gmail.com