NAME : SOHAIL SHAIKH

COLLEGE NAME : MANDKE COLLEGE

ROLL NO :

DIVISION : FY-BBA-CA (SEM1)

**Slip no1:Consider the following entities and their relationships.**

**Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Emp(eno ,ename ,designation ,salary, Date\_Of\_Joining)**

**Dept(dno,dname ,loc)**

**The relationship between Dept & Emp is one-to-many. Constraints: - Primary Key, ename should not be NULL, salary must be greater than 0.**

**Soluation:-----------**

**SQL> create table emp(eno number primary key,ename varchar(20),designation varchar(20),salary number,date\_of\_joining varchar(20));**

**Table created.**

**SQL> desc emp;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**ENO                                       NOT NULL NUMBER**

**ENAME                                              VARCHAR2(20)**

**DESIGNATION                                        VARCHAR2(20)**

**SALARY                                             NUMBER**

**DATE\_OF\_JOINING                                    VARCHAR2(20)**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(1,'Mr. Advait','Assistant',54000,'23/03/2002');**

**1 row created.**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(2,'Mr. Roy','ceo',50000,'15/06/2019');**

**1 row created.**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(3,'Mr. Abhay','manager',60000,'10/06/2013');**

**1 row created.**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(4,'Mr. Raghav','manager',420000,'01/03/2003');**

**1 row created.**

**SQL> select \* from emp;**

**ENO ENAME                DESIGNATION              SALARY**

**---------- -------------------- -------------------- ----------**

**DATE\_OF\_JOINING        PHONE\_NO**

**-------------------- ----------**

**1 Mr. Advait           Assistant                 54000**

**23/03/2002**

**2 Mr. Roy              ceo                       50000**

**15/06/2019**

**3 Mr. Abhay            manager                   60000**

**10/06/2013**

**ENO ENAME                DESIGNATION              SALARY**

**---------- -------------------- -------------------- ----------**

**DATE\_OF\_JOINING        PHONE\_NO**

**-------------------- ----------**

**4 Mr. Raghav           manager                  420000**

**01/03/2003**

**SQL> create table dept(dno number primary key,dname varchar(20),loc varchar(10),eno references emp);**

**Table created.**

**SQL> desc dept**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**DNO                                       NOT NULL NUMBER**

**DNAME                                              VARCHAR2(20)**

**LOC                                                VARCHAR2(10)**

**ENO                                                NUMBER**

**SQL> insert into dept(dno,dname,loc,eno)**

**2  values(101,'computer','pune',1);**

**1 row created.**

**SQL> insert into dept(dno,dname,loc,eno)**

**2  values(102,'computer science','mumbai',2);**

**1 row created.**

**SQL> insert into dept(dno,dname,loc,eno)**

**2  values(103,'Quqlity','mumbai',3);**

**1 row created.**

**SQL>**

**SQL>   insert into dept(dno,dname,loc,eno)**

**2  values(104,'Account','mumbai',4);**

**1 row created.**

**SQL> select \* from dept;**

**DNO DNAME                LOC               ENO**

**---------- -------------------- ---------- ----------**

**101 computer             pune                1**

**102 computer science     mumbai              2**

**103 Quqlity              mumbai              3**

**104 Account              mumbai              4**

**Q.3 Consider the above tables and Execute the following queries:**

**1. Add column phone\_No into Emp table with data type int.**

**SQL> alter table emp**

**2  add phone\_no int;**

**Table altered.**

**SQL> desc emp;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**ENO                                       NOT NULL NUMBER**

**ENAME                                              VARCHAR2(20)**

**DESIGNATION                                        VARCHAR2(20)**

**SALARY                                             NUMBER**

**DATE\_OF\_JOINING                                    VARCHAR2(20)**

**PHONE\_NO                                           NUMBER(38)**

**2. Delete the details of Employee whose designation is ‘Manager’.**

**SQL> Delete from emp**

**2  where designation='manager';**

**2 rows deleted.**

**Q4. Consider the above database and execute the following queries: [25 Marks]**

**1.**   **Display the count of employees department wise.**

**SQL> select count(emp.eno),dname from emp,dept**

**2  where emp.eno=dept.eno**

**3  group by dname;**

**COUNT(EMP.ENO) DNAME**

**-------------- --------------------**

**1 computer science**

**1 Account**

**1 computer**

**1 Quqlity**

**2.**   **Display the name of employee who is ‘Manager’ of “Account Department”.**

**SQL> select ename from emp,dept**

**2  where emp.eno=dept.eno**

**3  and designation='manager' and dname='Account';**

**ENAME**

**--------------------**

**Mr. Raghav**

**Mr. Abhay**

**3.**   **Display the name of department whose location is “Pune” and “Mr. Advait” is working in it**

**SQL> select dname from emp,dept**

**2  where emp.eno=dept.eno**

**3  and loc='pune' and ename='Mr. Advait';**

**DNAME**

**--------------------**

**Computer**

**4.**   **Display the names of employees whose salary is greater than 50000 and       department is “Quality”.**

**SQL> select ename from emp,dept**

**2  where emp.eno=dept.eno**

**3  and salary>50000 and dname='Quqlity';**

**ENAME**

**--------------------**

**Mr. Abhay**

**5.**   **Update Dateofjoining of employee to ‘15/06/2019’ whose department is ‘computer science’ and name is “Mr. Roy’.**

**update emp set date\_of\_joining='15/06/2019'**

**where ename='Mr.Roy' and dno in(select dno from dept where dname='computer science');**

**slip no:2--Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Sales\_order (ordNo, ordDate)**

**Client (clientNo, ClientName, addr**)

**The relationship between Client & Sales\_order is one-to-many.**

**Constraints: - Primary Key, ordDate should not be NULL**

**SQL> create table client(cno varchar(10) primary key,cname varchar(20),addr varchar(20));**

**Table created.**

**SQL> desc client**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**CNO                                       NOT NULL VARCHAR2(10)**

**CNAME                                              VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**SQL> insert into client values('CN001','Abhay','Pune');**

**1 row created.**

**SQL> insert into client values('CN002','Patil','Pune');**

**1 row created.**

**SQL> insert into client values('CN003','Mr.Roy','Pimpri');**

**1 row created.**

**SQL> insert into client values('CN004','Raj','Mumbai');**

**1 row created.**

**SQL> select \* from client;**

**CNO        CNAME                ADDR**

**---------- -------------------- --------------------**

**CN001      Abhay                Pune**

**CN002      Patil                Pune**

**CN003      Mr.Roy               Pimpri**

**CN004      Raj                  Mumbai**

**SQL> create table sales\_order(ordno int primary key,ordDate varchar(23) not null,**

**cno varchar(10) references client on delete cascade);**

**Table created.**

**SQL> desc sales\_order;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**ORDNO                                     NOT NULL NUMBER(38)**

**ORDDATE                                   NOT NULL VARCHAR2(23)**

**CNO                                                VARCHAR2(10)**

**SQL> insert into sales\_order values(1,'23/06/2015','CN001');**

**1 row created.**

**SQL> insert into sales\_order values(2,'09/03/2019','CN002');**

**1 row created.**

**SQL> insert into sales\_order values(3,'09/08/2009','CN004');**

**1 row created.**

**SQL> insert into sales\_order values(4,'09/08/2019','CN002');**

**1 row created.**

**SQL> select \* from sales\_order;**

**ORDNO ORDDATE                 CNO**

**---------- ----------------------- ----------**

**1 23/06/2015              CN001**

**2 09/03/2019              CN002**

**3 09/08/2009              CN004**

**4 09/08/2019              CN002**

**Q.3Consider the above tables and execute the following queries:**

**1. Add column amount into Sales\_order table with data type int.**

**SQL> alter table sales\_order**

**2  add amount int;**

**Table altered.**

**SQL> desc sales\_order;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**ORDNO                                     NOT NULL NUMBER(38)**

**ORDDATE                                   NOT NULL VARCHAR2(23)**

**CNO                                                VARCHAR2(10)**

**AMOUNT                                             NUMBER(38)**

**2. Delete the details of the clients whose names start with ‘A’ character.**

**SQL> delete from client**

**2  where cname like'A%';**

**1 row deleted.**

**SQL> select \* from client;**

**CNO        CNAME                ADDR**

**---------- -------------------- --------------------**

**CN002      Patil                Pune**

**CN003      Mr.Roy               Pimpri**

**CN004      Raj                  Mumbai**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Delete sales order details of client whose name is “Patil” and order date is “09/08/2019”.**

**SQL> delete from sales\_order**

**2  where ordDate='09/08/2019'**

**3  and cno in(select cno from client where cname='Patil');**

**1 row deleted.**

**SQL> select \* from sales\_order;**

**ORDNO ORDDATE                 CNO            AMOUNT**

**---------- ----------------------- ---------- ----------**

**2 09/03/2019              CN002             100**

**3**      **09/08/2009              CN004             100**

**2)Change order date of client\_No ‘CN001’ ‘18/03/2019’**.

**SQL> update sales\_order**

**2  set ordDate='18/03/2019'**

**3  where cno='CN001';**

**0 rows updated.**

**3)** **Delete all sales\_record having order date is before ‘10 /02/2018’.**

**SQL> delete from sales\_order**

**2  where ordDate<'20/10/2019';**

**2 rows deleted.**

**4)Display date wise sales\_order given by clients.**

**SQL> select ordDate,ordno,amount,cno from sales\_order**

**2  order by ordDate;**

**no rows selected**

**5) Update the address of client to “Pimpri” whose name is ‘Mr. Roy’**

**SQL> update client**

**2  set addr='pimpri'**

**3  where cname='Mr.Roy';**

**1 row updated.**

**Slip no-3:-Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Hospital (hno ,hname , city, Est\_year, addr)**

**Doctor (dno , dname , addr, Speciality)**

**The relationship between Hospital and Doctor is one - to – Many Constraints: - Primary Key, Est\_year should be greater than 1990.**

**SQL> create table hospital(hno int primary key,hname varchar(20),city varchar(20),est\_year numeric(4) check(est\_year>1990),addr varchar(20));**

**Table created.**

**SQL> desc hospital;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**HNO                                       NOT NULL NUMBER(38)**

**HNAME                                              VARCHAR2(20)**

**CITY                                               VARCHAR2(20)**

**EST\_YEAR                                           NUMBER(4)**

**ADDR                                               VARCHAR2(20)**

**SQL> insert into hospital values(101,'balaji','pune',1993,'kharadi road');**

**1 row created.**

**SQL>  insert into hospital values(103,'vedant','mumbai',1993,'dharavi');**

**1 row created.**

**SQL> insert into hospital values(104,'ruby','pimpri',1993,'kharadi road');**

**1 row created.**

**SQL> insert into hospital values(105,'birla','chinchwad',1993,'tyr');**

**1 row created.**

**SQL> insert into hospital values(106,'qw','pune',1993,'kalptaru');**

**1 row created.**

**SQL> select \* from hospital;**

**HNO HNAME                CITY                   EST\_YEAR**

**---------- -------------------- -------------------- ----------**

**ADDR**

**--------------------**

**101 balaji               pune                       1993**

**kharadi road**

**103 vedant               mumbai                     1993**

**dharavi**

**104 ruby                 pimpri                     1993**

**kharadi road**

**HNO HNAME                CITY                   EST\_YEAR**

**---------- -------------------- -------------------- ----------**

**ADDR**

**--------------------**

**105 birla                chinchwad                  1993**

**tyr**

**106 qw                   pune                       1993**

**kalptaru**

**SQL> create table doctor(dno int primary key,dname varchar(20),addr1 varchar(20),speciality varchar(20),hno int references hospital on delete cascade);**

**Table created.**

**SQL> desc doctor;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**DNO                                       NOT NULL NUMBER(38)**

**DNAME                                              VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**SPECIALITY                                         VARCHAR2(20)**

**HNO                                                NUMBER(38)**

**SQL> insert into doctor values(1,'dr.joshi','pune','skin',104);**

**1 row created.**

**SQL> insert into doctor values(2,'dr.mane','nashik','surgeon',103);**

**1 row created.**

**SQL> insert into doctor values(3,'dr.patil','pune','gynecologist',101);**

**1 row created.**

**SQL> insert into doctor values(4,'dr.Raghav','pune','skin',105);**

**1 row created.**

**SQL> insert into doctor values(5,'dr.Abhay','mumbai','internist',104);**

**1 row created.**

**SQL> insert into doctor values(6,'dr.joshi','pune','surgeon',106);**

**1 row created.**

**SQL> insert into doctor values(7,'dr.Riya','pune','skin',103);**

**1 row created.**

**SQL> insert into doctor values(8,'dr.Gawade','pune','head',104);**

**1 row created.**

**SQL> select \* from doctor;**

**DNO DNAME                ADDR                 SPECIALITY**

**---------- -------------------- -------------------- --------------------**

**HNO**

**----------**

**1 dr.joshi             pune                 skin**

**104**

**2 dr.mane              nashik               surgeon**

**103**

**3 dr.patil             pune                 gynecologist**

**101**

**DNO DNAME                ADDR                 SPECIALITY**

**---------- -------------------- -------------------- --------------------**

**HNO**

**----------**

**4 dr.Raghav            pune                 skin**

**105**

**5 dr.Abhay             mumbai               internist**

**104**

**6 dr.joshi             pune                 surgeon**

**106**

**DNO DNAME                ADDR                 SPECIALITY**

**---------- -------------------- -------------------- --------------------**

**HNO**

**----------**

**7 dr.Riya              pune                 skin**

**103**

**8 dr.Gawade            pune                 head**

**104**

**8 rows selected.**

**Q.3Consider the above tables and execute the following queries:**

**1. Delete addr column from Hospital** **table.**

**SQL> alter table hospital**

**2  drop column addr1;**

**2. Display doctor name, Hospital name and specialty of doctors from “Pune City” .**

**SQL> select dname,hname,speciality from doctor,hospital**

**2  where doctor.hno=hospital.hno**

**3  and city='pune';**

**DNAME                HNAME                SPECIALITY**

**-------------------- -------------------- --------------------**

**dr.patil             balaji               gynecologist**

**dr.joshi             qw                   surgeon**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display the names of the hospitals which are located at “Pimpri” city.**

**SQL> select hname from hospital,doctor**

**2  where doctor.hno=hospital.hno**

**3  and city='pimpri';**

**HNAME**

**--------------------**

**ruby**

**ruby**

**ruby**

**2.**   **Display the names of doctors who are working in “Birla” Hospital and**

**city name is “Chinchwad”**

**SQL> select dname from doctor,hospital**

**2  where doctor.hno=hospital.hno**

**3  and hname='birla' and city='chinchwad';**

**DNAME**

**--------------------**

**dr.Raghav**

**3.**   **Display the specialty of the doctors who are working in “Ruby” hospital.**

**SQL> select speciality from hospital,doctor**

**2  where doctor.hno=hospital.hno**

**3  and hname='ruby';**

**SPECIALITY**

**--------------------**

**skin**

**internist**

**head**

**4.**   **Give the count of doctor’s hospital wise which are located at “Pimple Gurav”.**

**SQL> select hname,count(dno) from doctor,hospital**

**2  where doctor.hno=hospital.hno**

**3  and addr='kharadi road'**

**4  group by hname;**

**HNAME                COUNT(DNO)**

**-------------------- ----------**

**ruby                          3**

**balaji                        1**

**5.**   **Update an address of Doctor to “Pimpri” whose hospital is “Ruby clinic”**

**SQL> update doctor set addr1='pimpri'**

**2  where hno in(select hno from hospital where hname='ruby');**

**3 rows updated.**

**Slip no-4:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Patient (PCode, Name, Addr, Disease)**

**Bed (Bed\_No, RoomNo, loc)**

**Relationship: - There is one-one relationship between patient and bed. Constraints: - Primary key, RoomNo must be greater than Bed\_No, Addr should not be null.**

**SQL> create table patient(pcode int primary key,name varchar(20) not null,addr varchar(20),disease varchar(10));**

**Table created.**

**SQL> desc patient;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**PCODE                                     NOT NULL NUMBER(38)**

**NAME                                      NOT NULL VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**DISEASE                                            VARCHAR2(10)**

**SQL> insert into patient values(11,'Raghav','pimple gurav','listeria');**

**1 row created.**

**SQL> insert into patient values(12,'Abhay','pune','norovirus');**

**1 row created.**

**SQL> insert into patient values(13,'Mr.Roy','mumbai','cholera');**

**1 row created.**

**SQL> insert into patient values(14,'Sachin','pimple gurav','dengue');**

**1 row created.**

**SQL> insert into patient values(15,'Priya','nashik','listeria');**

**1 row created.**

**SQL> select \* from patient;**

**PCODE NAME                 ADDR                 DISEASE**

**---------- -------------------- -------------------- ----------**

**11 Raghav               pimple gurav         listeria**

**12 Abhay                pune                 norovirus**

**13 Mr.Roy               mumbai               cholera**

**14 Sachin               pimple gurav         dengue**

**15 Priya                nashik               listeria**

**SQL> create table bed(bno int primary key,rno int not null,loc varchar(10) not null,pcode int references patient on delete cascade);**

**Table created.**

**SQL> desc bed;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**BNO                                       NOT NULL NUMBER(38)**

**RNO                                       NOT NULL NUMBER(38)**

**LOC                                       NOT NULL VARCHAR2(10)**

**PCODE                                              NUMBER(38)**

**SQL> insert into bed values(1,105,'pune',11);**

**1 row created.**

**SQL> insert into bed values(2,102,'2nd floor',12);**

**1 row created.**

**SQL> insert into bed values(3,103,'4th floor',13);**

**1 row created.**

**SQL> insert into bed values(4,104,'1st floor',11);**

**1 row created.**

**SQL> insert into bed values(5,105,'3rd floor',14);**

**1 row created.**

**SQL> insert into bed values(6,106,'2nd floor',15);**

**1 row created.**

**SQL> select \* from bed;**

**BNO        RNO LOC             PCODE**

**---------- ---------- ---------- ----------**

**1        105 pune               11**

**2        102 2nd floor          12**

**3        103 4th floor          13**

**4        104 1st floor          11**

**5        105 3rd floor          14**

**6        106 2nd floor          15**

**6 rows selected.**

**Q.3Consider the above tables and execute the following queries:**

**1. Display the details of patients who are from “Pimple Gurav”**

**SQL> select \* from patient**

**2  where addr='pimple gurav';**

**PCODE NAME                 ADDR                 DISEASE**

**---------- -------------------- -------------------- ----------**

**11 Raghav               pimple gurav         listeria**

**14 Sachin               pimple gurav         dengue**

**2.**   **Delete the details of patient whose Bed\_No is 1 and RoomNo is 105.**

**SQL> select \* from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and bno=1 and rno=105;**

**PCODE NAME                 ADDR                 DISEASE           BNO**

**---------- -------------------- -------------------- ---------- ----------**

**RNO LOC             PCODE**

**---------- ---------- ----------**

**11 Raghav               pimple gurav         listeria            1**

**105 pune               11**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display the count of patient room wise**.

**SQL> select count(patient.pcode) from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  group by rno;**

**COUNT(PATIENT.PCODE)**

**--------------------**

**1**

**2**

**1**

**1**

**1**

**2.**   **Display the names of patients who are admitted in room no 101.**

**SQL> select name from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and rno=102;**

**NAME**

**--------------------**

**Abhay**

**3.**   **Display the disease of patient whose bed\_No is 1**

**SQL> select disease from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and bno=1;**

**DISEASE**

**----------**

**Listeria**

**4.**   **Display the room\_no and bed\_no of patient whose name is “Mr Roy”**

**SQL> select rno,bno from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and name='Mr.Roy';**

**RNO        BNO**

**---------- ----------**

**103          3**

**5.**   **Give the details of Patient who is admitted on 2nd flr in roomno 102.**

**SQL> select \* from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and loc='2nd floor' and rno=102;**

**PCODE NAME                 ADDR                 DISEASE           BNO**

**---------- -------------------- -------------------- ---------- ----------**

**RNO LOC             PCODE**

**---------- ---------- ----------**

**12 Abhay                pune                 norovirus           2**

**102 2nd floor          12**

**Slip no-5:Q3. Consider the following entities and their relationships.**

**Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Customer (cust\_no, cust\_name, address, city)**

**Loan (loan\_no, loan\_amt)**

**The relationship between Customer and Loan is Many to Many Constraint:**

**Primary key, loan\_amt should be > 0.**

**Connected.**

**SQL>  create table customer(cno int primary key,cname varchar(20) not null,addr varchar(20),city varchar(10));**

**Table created.**

**SQL> desc customer**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**CNO                                       NOT NULL NUMBER(38)**

**CNAME                                     NOT NULL VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**CITY                                               VARCHAR2(10)**

**SQL> insert into customer values(101,'Dhiraj','kharadi','pune');**

**1 row created.**

**SQL> insert into customer values(102,'Patil','kalptaru','pimpri');**

**1 row created.**

**SQL> insert into customer values(103,'Abhay','west','pimpri');**

**1 row created.**

**SQL> insert into customer values(104,'Raghav','rt','nashik');**

**1 row created.**

**SQL> insert into customer values(105,'Dhanu','bvh','pune');**

**1 row created.**

**SQL> select \* from customer;**

**CNO CNAME                ADDR                 CITY**

**---------- -------------------- -------------------- ----------**

**101 Dhiraj               kharadi              pune**

**102 Patil                kalptaru             pimpri**

**103 Abhay                west                 pimpri**

**104 Raghav               rt                   nashik**

**105 Dhanu                bvh                  pune**

**SQL> create table loan(lno int primary key,lamt int check(lamt>0),cno int references customer on delete cascade);**

**Table created.**

**SQL>**

**SQL> insert into loan values(1,120000,101);**

**1 row created.**

**SQL> insert into loan values(2,100000,102);**

**1 row created.**

**SQL> insert into loan values(3,30000,103);**

**1 row created.**

**SQL> insert into loan values(4,120,104);**

**1 row created.**

**SQL> insert into loan values(5,1000000,105);**

**1 row created.**

**SQL> select \* from loan;**

**LNO       LAMT        CNO**

**---------- ---------- ----------**

**1     120000        101**

**2     100000        102**

**3      30000        103**

**4        120        104**

**5    1000000        105**

**Q.3Consider the above tables and execute the following queries:**

**1. Add Phone\_No column in customer table with data type int.**

**SQL> alter table customer**

**2  add phone\_no int;**

**Table altered.**

**SQL> desc customer**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**CNO                                       NOT NULL NUMBER(38)**

**CNAME                                     NOT NULL VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**CITY                                               VARCHAR2(10)**

**PHONE\_NO                                           NUMBER(38)**

**2)Delete the details of customer whose loan\_amt<1000.**

**Delete cno,cname,addr,city, from customer**

**Where customer.cno=loan.cno**

**And lamt<1000;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Find details of all customers whose loan\_amt is greater than 10 lack.**

**SQL> select \* from customer,loan**

**2  where customer.cno=loan.cno**

**3  and lamt>1000000;**

**no rows selected**

**2.**   **List all customers whose name starts with 'D' character.**

**SQL> select \* from customer**

**2  where cname like 'D%';**

**CNO CNAME                ADDR                 CITY         PHONE\_NO**

**---------- -------------------- -------------------- ---------- ----------**

**101 Dhiraj               kharadi              pune**

**105 Dhanu                bvh                  pune**

**3. List the names of customer in descending order who has taken a loan from Pimpri city.**

**SQL> select \* from customer**

**2  where city='pimpri'**

**3  order by cname desc;**

**CNO CNAME                ADDR                 CITY         PHONE\_NO**

**---------- -------------------- -------------------- ---------- ----------**

**102 Patil                kalptaru             pimpri**

**103hay                west                 pimpri**

**4.Display customer details having maximum loan amount**

**SQL> select max(lamt) from customer,loan**

**2  where customer.cno=loan.cno;**

**MAX(LAMT)**

**----------**

**1000000**

**5.Update the address of customer whose name is “Mr. Patil” and loan\_amt is greater than 100000.**

**update customer set addr='pune'**

**where cname='patil' and lno in(select lno from laon where lamt>100000);**

**Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Project (pno, pname, start\_date, budget, status) Department (dno, dname, HOD, loc)**

**The relationship between Project and Department is Many to One. Constraint: Primary key. Project Status Constraints:**

**C – Completed,**

**P - Progressive,**

**I – Incomplete**

**SQL> create table project(pno int primary key,pname varchar(20),sdate date,budget int,status varchar(20) check(status in('c','i','p')));**

**Table created.**

**SQL> desc project;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**PNO                                       NOT NULL NUMBER(38)**

**PNAME                                              VARCHAR2(20)**

**SDATE                                              DATE**

**BUDGET                                             NUMBER(38)**

**STATUS                                             VARCHAR2(20)**

**SQL> insert into project values(1,'abc','09/mar/20',2300000,'c');**

**1 row created.**

**SQL>  insert into project values(2,'xyz','01/apr/18',200000,'i');**

**1 row created.**

**SQL>  insert into project values(3,'st','23/mar/27',1200000,'p');**

**1 row created.**

**SQL> insert into project values(4,'vb','12/feb/20',600000,'c');**

**1 row created.**

**SQL>  insert into project values(5,'qrt','16/jan/23',3400000,'p');**

**1 row created.**

**SQL> select \* from project;**

**PNO       PNAME                SDATE         BUDGET STATUS**

**---------- -------------------- --------- ---------- --------------------**

**1 abc                  09-MAR-20    2300000 c**

**2 xyz                  01-APR-18     200000 i**

**3 st                   23-MAR-27    1200000 p**

**4 vb                   12-FEB-20     600000 c**

**5 qrt                  16-JAN-23    3400000 p**

**SQL> create table department(dno int primary key,dname varchar(20),hod varchar(20),loc varchar(20),pno int references project on delete cascade);**

**Table created.**

**SQL> desc department**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**DNO                                       NOT NULL NUMBER(38)**

**DNAME                                              VARCHAR2(20)**

**HOD                                                VARCHAR2(20)**

**LOC                                                VARCHAR2(20)**

**PNO                                                NUMBER(38)**

**SQL> insert into department values(101,'computer','desai','pune',1);**

**1 row created.**

**SQL> insert into department values(102,'commerce','mane','pune',2);**

**1 row created.**

**SQL> insert into department values(103,'computer','kadam','pune',3);**

**1 row created.**

**SQL> insert into department values(104,'engineering','sam','pune',4);**

**1 row created.**

**SQL> select \* from department;**

**DNO DNAME                HOD                  LOC**

**---------- -------------------- -------------------- --------------------**

**PNO**

**----------**

**101 computer             desai                pune**

**1**

**102 commerce             mane                 pune**

**2**

**103 computer             kadam                pune**

**3**

**DNO DNAME                HOD                  LOC**

**---------- -------------------- -------------------- --------------------**

**PNO**

**----------**

**104 engineering          sam                  pune**

**4**

**Consider the above tables and execute the following queries:**

**1.**   **Drop loc column from department table**.

**alter table department**

**drop  column loc;**

**2. Display the details of project whose start\_date is before one month and status is “Progressive”**

**SQL> select \* from project**

**2  where sdate>'12/feb/20' and status='p';**

**PNO PNAME                SDATE         BUDGET STATUS**

**---------- -------------------- --------- ---------- --------------------**

**3 st                   23-MAR-27    1200000 p**

**5 qrt                  16-JAN-23    3400000 p**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display the names of project and department who are worked on projects whose status is ‘Completed’**

**SQL>**

**SQL> Select pname,dname,hod,loc from department,project**

**2  where department.pno= project.pno**

**3  and project.status='c';**

**PNAME                DNAME                HOD**

**-------------------- -------------------- --------------------**

**LOC**

**--------------------**

**abc                  computer             desai**

**pune**

**vb                   engineering          sam**

**pune**

**2.**   **Display total budget of each department.**

**SQL> Select sum(budget),dname from department,project**

**2  where department.pno=project.pno**

**3  group by dname;**

**SUM(BUDGET) DNAME**

**----------- --------------------**

**200000 commerce**

**600000 engineering**

**3500000 computer**

**3.**   **Display incomplete project of each department.**

**SQL> select pname,status ,count(department.dno) from department,project**

**2  where department.pno=project.pno**

**3  and project.status='i'**

**4  group by status,pname;**

**PNAME                STATUS               COUNT(DEPARTMENT.DNO)**

**-------------------- -------------------- ---------------------**

**xyz                  i                                        1**

**4.**   **Display all project working under 'Mr.Desai'.**

**SQL> Select pname from department,project**

**2  where department.pno=project.pno**

**3  and hod= 'desai';**

**PNAME**

**--------------------**

**Abc**

**5.Display department wise HOD.**

**SQL> select dname,hod  from department,project**

**2  where department.pno=project.pno**

**3  order by dname;**

**DNAME                HOD**

**-------------------- --------------------**

**commerce             mane**

**computer             kadam**

**computer             desai**

**engineering          sam**

**slip no\_7:Q3. Consider the following entities and their relationships.**

**Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Room (roomno, desc, rate)**

**Guest (gno, gname, no\_of\_days)**

**The relationship between Room and Guest is One to One. Constraint:**

**Primary key, no of days should be > 0.**

**SQL> create table room(rno int primary key,des varchar(20),rate number);**

**Table created.**

**SQL> desc room;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**RNO                                       NOT NULL NUMBER(38)**

**DES                                                VARCHAR2(20)**

**RATE                                               NUMBER**

**SQL> insert into room values(101,’A/C’,1500);**

**1 row created.**

**SQL> insert into room values(102,’Non A/C’,750);**

**1 row created.**

**SQL> insert into room values(103,’A/C’,2000);**

**1 row created.**

**SQL> insert into room values(104,’Non A/C’,1200);**

**1 row created.**

**SQL> select \* from room;**

**RNO DES                        RATE**

**---------- -------------------- ----------**

**101 A/C                        1500**

**102 Non A/C                     750**

**103 A/C                        2000**

**104 Non A/C                    1200**

**SQL> create table guest(gno int primary key,gname varchar(20),nod number check (nod>0));**

**Table created.**

**SQL> desc guest;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**GNO                                       NOT NULL NUMBER(38)**

**GNAME                                              VARCHAR2(20)**

**NOD                                                NUMBER**

**SQL> insert into guest values(101,'Mr.Bharat',3);**

**1 row created.**

**SQL> insert into guest values(102,'Mr.Nilesh',4);**

**1 row created.**

**SQL> insert into guest values(103,'Mr.Advait',7);**

**1 row created.**

**SQL> insert into guest values(104,'Miss.Sapana',2);**

**1 row created.**

**SQL> select \* from guest;**

**GNO GNAME                       NOD**

**---------- -------------------- ----------**

**101 Mr.Bharat                     3**

**102 Mr.Nilesh                     4**

**103 Mr.Advait                     7**

**104 Miss.Sapana                   2**

**Consider the above tables and execute the following queries:**

**1.**   **Update the rate of room to 5000 whose type is “AC”**

**SQL> update room set rate=5000**

**2  where des='A/C';**

**2 rows updated.**

**SQL> select \* from room;**

**RNO DES                        RATE**

**---------- -------------------- ----------**

**101 A/C                        5000**

**102 Non A/C                     750**

**103 A/C                        5000**

**104 Non A/C                    1200**

**2.**   **Display the name of guest who is staying 2 days in roomno 101**

**select gname from room,guest**

**where room.rno=guest.rno**

**and nod=2 and rno=101;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display room details according to its rates in ascending order**

**SQL> select des,rate from room**

**2  order by des asc;**

**DES                        RATE**

**-------------------- ----------**

**A/C                        5000**

**A/C                        5000**

**Non A/C                    1200**

**Non A/C                     750**

**2.**   **Display the roomno in which “Mr. Advait” is staying for 7 days**

**select rno from room,guest**

**where room.rno=guest.rno**

**and gname='Mr.Advait' and nod=7;**

**3.**   **Find no. of AC rooms.**

**SQL> select count(rno) from room**

**2  where des='A/C';**

**COUNT(RNO)**

**----------**

**2**

**4.**   **Find names of guest with maximum room charges.**

**select gname from room,guest**

**where guest.rno=room.rno**

**and rate=(select max(rate) from room);**

**5.**   **Display guest wise halt days.**

**Select gname,nod from guest**

**Order by gname;**

**SQL> Select gname,nod from guest**

**2  Order by gname;**

**GNAME                       NOD**

**-------------------- ----------**

**Miss.Sapana                   2**

**Mr.Advait                     7**

**Mr.Bharat                     3**

**Mr.Nilesh                     4**

**Slip\_no 8:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Book (Book\_no, title, author, price, year\_published) Customer (cid, cname, addr)**

**Relation between Book and Customer is Many to Many with quantity as descriptive attribute. Constraint: Primary key, price should be >0;**

**SQL> create table book(bno int primary key,title varchar(10),author varchar(20),**

**price int check(price>0),yp number);**

**Table created.**

**SQL> desc book;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**BNO                                       NOT NULL NUMBER(38)**

**TITLE                                              VARCHAR2(10)**

**AUTHOR                                             VARCHAR2(20)**

**PRICE                                              NUMBER(38)**

**YP                                                 NUMBER**

**SQL> insert into book values(101,'dreams','mr.Raj',150,2017);**

**1 row created.**

**SQL> insert into book values(102,'life','mr.Raghav',100,2019);**

**1 row created.**

**SQL> insert into book values(103,'rt story','mr.Gadhave',190,2011);**

**1 row created.**

**SQL> insert into book values(104,'Dad','dr.Sam',200,2001);**

**SQL> insert into book values(105,'Struggle','mr.Raj',250,2017);**

**1 row created.**

**SQL> insert into book values(106,'Joker','Mr. Talore',230,2011);**

**1 row created.**

**SQL> select \* from book;**

**BNO TITLE      AUTHOR                    PRICE         YP**

**---------- ---------- -------------------- ---------- ----------**

**101 dreams     mr.Raj                      150       2017**

**102 life       mr.Raghav                   100       2019**

**103 rt story   mr.Gadhave                  190       2011**

**104 Dad        dr.Sam                      200       2001**

**105 Struggle   mr.Raj                      250       2017**

**106 Joker      Mr. Talore                  230       2011**

**6 rows selected.**

**SQL> create table customer(cid int primary key,cname varchar(20),addr varchar(20),bno int references book);**

**Table created.**

**SQL> desc customer;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**CID                                       NOT NULL NUMBER(38)**

**CNAME                                              VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**BNO                                                NUMBER(38)**

**SQL> insert into customer values(1,'Abhay','pune',101);**

**1 row created.**

**SQL> insert into customer values(2,'Sam','Mumbai',102);**

**1 row created.**

**SQL> insert into customer values(3,'Raghav','pimpri',103);**

**1 row created.**

**SQL> insert into customer values(4,'Abhay','mumbai',104);**

**1 row created.**

**SQL> insert into customer values(5,'Ganesh','Nashik',105);**

**1 row created.**

**SQL> select \* from customer;**

**CID CNAME                ADDR                        BNO**

**---------- -------------------- -------------------- ----------**

**1 Abhay                pune                        101**

**2 Sam                  Mumbai                      102**

**3 Raghav               pimpri                      103**

**4 Abhay                mumbai                      104**

**5 Ganesh               Nashik                      105**

**SQL> create table customerbook(bcid int primary key,bno int references book,**

**cid int references customer);**

**Table created.**

**SQL> desc customerbook;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**BCID                                      NOT NULL NUMBER(38)**

**BNO                                                NUMBER(38)**

**CID                                                NUMBER(38)**

**SQL> insert into customerbook values(11,101,1);**

**1 row created.**

**SQL> insert into customerbook values(12,102,2);**

**1 row created.**

**SQL> insert into customerbook values(13,101,3);**

**1 row created.**

**SQL> insert into customerbook values(14,103,1);**

**1 row created.**

**SQL> insert into customerbook values(15,106,4);**

**1 row created.**

**SQL> select \* from customerbook;**

**BCID        BNO        CID**

**---------- ---------- ----------**

**11        101          1**

**12        102          2**

**13        101          3**

**14        103          1**

**15        106          4**

**Consider the above tables and execute the following queries:**

**1.Display the name of book whose author is “Mr. Gadhave”.**

**SQL> select title from book**

**2  where author='mr.Gadhave';**

**TITLE**

**----------**

**rt story**

**2.Add column EMailId into customer table.**

**SQL> alter table customer**

**2  add emailID varchar2(20);**

**Table altered.**

**SQL> desc customer;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**CID                                       NOT NULL NUMBER(38)**

**CNAME                                              VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**BNO                                                NUMBER(38)**

**EMAILID                                            VARCHAR2(20)**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display customer details from 'Mumbai'.**

**SQL> select \* from customer**

**2  where addr='mumbai';**

**CID CNAME                ADDR                        BNO**

**---------- -------------------- -------------------- ----------**

**EMAILID**

**--------------------**

**4 Abhay                mumbai                      104**

**2. Display author wise details of book.**

**SQL> select author,title from book**

**2  order by author;**

**AUTHOR               TITLE**

**-------------------- ----------**

**Mr. Talore           Joker**

**dr.Sam               Dad**

**mr.Gadhave           rt story**

**mr.Raghav            life**

**mr.Raj               dreams**

**mr.Raj               Struggle**

**6**      **rows selected.**

**3)Display customer name that has purchased more than 3 books.**

**SQL> select count(book.bno),cname from customer,book,customerbook**

**2  where customer.cid=customerbook.cid**

**3  and book.bno=customerbook.bno and book.bno>3**

**4  group by cname;**

**COUNT(BOOK.BNO) CNAME**

**--------------- --------------------**

**1 Raghav**

**1 Sam**

**3 Abhay**

**3.**   **Display book names having price between 100 and 200 and published**

**year is 2019.**

**SQL> select book.title from book,customer,customerbook**

**2  where customer.cid=customerbook.cid**

**3  and book.bno=customerbook.bno**

**4  and yp=2019 and price between 100 and 200;**

**TITLE**

**----------**

**life**

**5. Update the title of book to “DBMS” whose author is “Mr. Talore”.**

**SQL> update book set title='DBMS'**

**2  where author='Mr. Talore';**

**1 row updated.**

**SQL> select \* from book;**

**BNO TITLE      AUTHOR                    PRICE         YP**

**---------- ---------- -------------------- ---------- ----------**

**101 dreams     mr.Raj                      150       2017**

**102 life       mr.Raghav                   100       2019**

**103 rt story   mr.Gadhave                  190       2011**

**104 Dad        dr.Sam                      200       2001**

**105 Struggle   mr.Raj                      250       2017**

**106 DBMS       Mr. Talore                  230       2011**

**6 rows selected.**

**Slip\_no:9 Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Property (pno, desc, area, rate)**

**Owner (owner\_name, addr, phno) The relationship between owner and Property is One to Many. Constraint: Primary key, rate should be > 0**

**SQL>  create table property(pno int primary key,des varchar(20) not null,area varchar(20) not null,rate int check(rate>0));**

**Table created.**

**SQL> desc property;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**PNO                                       NOT NULL NUMBER(38)**

**DES                                       NOT NULL VARCHAR2(20)**

**AREA                                      NOT NULL VARCHAR2(20)**

**RATE                                               NUMBER(38)**

**SQL> insert into property values(101,'vegr','nashik',1030000);**

**1 row created.**

**SQL> insert into property values(102,'tr','Pune',100000);**

**1 row created.**

**SQL> insert into property values(103,'vbh','pune',1030000);**

**1 row created.**

**SQL> insert into property values(104,'vsdr','mumbai',20000);**

**1 row created.**

**SQL> insert into property values(105,'hjjr','nashik',10000);**

**1 row created.**

**SQL> select \* from property;**

**PNO DES                  AREA                       RATE**

**---------- -------------------- -------------------- ----------**

**101 vegr                 nashik                  1030000**

**102 tr                   Pune                     100000**

**103 vbh                  pune                    1030000**

**104 vsdr                 mumbai                    20000**

**105 hjjr                 nashik                    10000**

**SQL> create table owner(name varchar(20),addr varchar(20),phno int,pno int references property);**

**Table created.**

**SQL> desc owner;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**NAME                                               VARCHAR2(20)**

**ADDR                                               VARCHAR2(20)**

**PHNO                                               NUMBER(38)**

**PNO                                                NUMBER(38)**

**SQL> insert into owner values('Mr.Mane','Mumbai',1762386534,101);**

**1 row created.**

**SQL> insert into owner values('Mr.Patil','Mumbai',1762386534,102);**

**1 row created.**

**SQL> insert into owner values('Mr.Joshi','Pune',6892386534,103);**

**1 row created.**

**SQL> insert into owner values('Mr.Bhagat','Pune',6876783865,101);**

**1 row created.**

**SQL> insert into owner values('Mr.Abhay','Pune',6753386534,104);**

**1 row created.**

**SQL> select \* from owner;**

**NAME                 ADDR                       PHNO        PNO**

**-------------------- -------------------- ---------- ----------**

**Mr.Mane              Mumbai               1762386534        101**

**Mr.Patil             Mumbai               1762386534        102**

**Mr.Joshi             Pune                 6892386534        103**

**Mr.Bhagat            Pune                 6876783865        101**

**Mr.Abhay             Pune                 6753386534        104**

**Consider the above tables and execute the following queries:**

**1. Display area of property whose rate is less than 100000**

**SQL> select area from property**

**2  where rate>100000;**

**AREA**

**--------------------**

**nashik**

**pune**

**2.**   **Give the details of owner whose property** **is at “Pune”**

**SQL> select \* from owner**

**2  where addr='Pune';**

**NAME                 ADDR                       PHNO        PNO**

**-------------------- -------------------- ---------- ----------**

**Mr.Joshi             Pune                 6892386534        103**

**Mr.Bhagat            Pune                 6876783865        101**

**Mr.Abhay             Pune                 6753386534        104**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display area wise property details.**

**SQL> select area,des from property**

**2  order by area;**

**AREA                 DES**

**-------------------- --------------------**

**Pune                 tr**

**mumbai               vsdr**

**nashik               vegr**

**nashik               hjjr**

**pune                 vbh**

**2.**   **Display property owned by 'Mr.Patil' having minimum rate.**

**SQL> select min(rate) from property,owner**

**2  where property.pno=owner.pno**

**3  and name='Mr.Patil';**

**MIN(RATE)**

**----------**

**100000**

**3.**   **Delete all properties from “pune” owned by “Mr. Joshi”.**

**SQL> delete from owner**

**2  where addr='Pune' and name='Mr.Joshi';**

**1 row deleted.**

**SQL> select \* from owner;**

**NAME                 ADDR                       PHNO        PNO**

**-------------------- -------------------- ---------- ----------**

**Mr.Mane              Mumbai               1762386534      101**

**Mr.Patil             Mumbai               1762386534        102**

**Mr.Bhagat            Pune                 6876783865        101**

**Mr.Abhay             Pune                 6753386534        104**

**4. Update the phone Number of “Mr. Joshi” to 9922112233 who is having property**

**at “Uruli Kanchan”**

**SQL> update owner set phno=9922112233**

**2  where addr='Urali Kanchan';**

**1 row updated.**

**SQL> select \* from owner;**

**NAME                 ADDR                       PHNO        PNO**

**-------------------- -------------------- ---------- ----------**

**Mr.Mane              Mumbai               1762386534        101**

**Mr.Patil             Mumbai               1762386534        102**

**Mr.Bhagat            Pune                 6876783865        101**

**Mr.Abhay             Pune                 6753386534        104**

**Mr.Sam               Urali Kanchan        9922112233        104**

**5.Delete column address from Owner table.**

**Alter table owner**

**drop column addr;**

**slip\_no-10:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Employee (emp\_no, name, skill, payrate)**

**Position (posting\_no, skill)**

**The relationship between Employee and Position is Many to Many with day and**

**shift as descriptive attribute. Constraint: Primary key, payrate should be > 0.**

**Connected.**

**SQL>  create table employee(eno int primary key,name varchar(20),skill varchar(20) not null,payrate int check(payrate>0));**

**Table created.**

**SQL> desc employee;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**ENO                                       NOT NULL NUMBER(38)**

**NAME                                               VARCHAR2(20)**

**SKILL                                     NOT NULL VARCHAR2(20)**

**PAYRATE                                            NUMBER(38)**

**SQL> insert into employee values(1,'Rghav','manager',23000);**

**1 row created.**

**SQL> insert into employee values(2,'Mane','waiter',23000);**

**1 row created.**

**SQL> insert into employee values(3,'Priya','ceo',23000);**

**1 row created.**

**SQL> insert into employee values(4,'Abhay','chef',23000);**

**1 row created.**

**SQL> select \* from employee;**

**ENO NAME                 SKILL                   PAYRATE**

**---------- -------------------- -------------------- ----------**

**1 Rghav                manager                   23000**

**2 Mane                 waiter                    23000**

**3 Priya                ceo                       23000**

**4 Abhay                chef                      23000**

**SQL> create table position(pno int primary key,skill varchar(20),eno int**

**references employee);**

**Table created.**

**SQL> desc position;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**PNO                                       NOT NULL NUMBER(38)**

**SKILL                                              VARCHAR2(20)**

**ENO                                                NUMBER(38)**

**SQL> insert into position values(201,'mg',1);**

**1 row created.**

**SQL> insert into position values(203,'ceo',2);**

**1 row created.**

**SQL> insert into position values(202,'wt',3);**

**1 row created.**

**SQL> insert into position values(205,'wdf',4);**

**1 row created.**

**SQL> insert into position values(204,'whd',2);**

**1 row created.**

**SQL> select \* from position;**

**PNO SKILL                       ENO**

**---------- -------------------- ----------**

**201 mg                            1**

**203 ceo                           2**

**202 wt                            3**

**205 wdf                           4**

**204 whd                           2**

**SQL> create table ep(epno int primary key,eno int references employee,pno int references position);**

**Table created.**

**SQL> desc ep;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**EPNO                                      NOT NULL NUMBER(38)**

**ENO                                                NUMBER(38)**

**PNO                                                NUMBER(38)**

**SQL> insert into ep values(11,1,201);**

**1 row created.**

**SQL> insert into ep values(12,2,202);**

**1 row created.**

**SQL> insert into ep values(13,2,203);**

**1 row created.**

**SQL> insert into ep values(14,3,202);**

**1 row created.**

**SQL> insert into ep values(15,1,204);**

**1 row created.**

**SQL> select \* from ep;**

**EPNO        ENO        PNO**

**---------- ---------- ----------**

**11          1        201**

**12          2        202**

**13          2        203**

**14          3        202**

**15          1        204**

**Consider the above tables and execute the following queries:**

**1. Display skill of employees name wise.**

**SQL> select name,skill from employee**

**2  order by name;**

**NAME                 SKILL**

**-------------------- --------------------**

**Abhay                chef**

**Mane                 waiter**

**Priya                ceo**

**Rghav                manager**

**2)Update the posting of employee to 220** **whose skill is “Manager”.**

**SQL> update position set pno=220**

**2  where skill='mg';**

**1 row updated.**

**SQL> select \* from position;**

**PNO SKILL                       ENO**

**---------- -------------------- ----------**

**220 mg                            1**

**203 ceo                           2**

**202 wt                            3**

**205 wdf                           4**

**204 whd                           2**

**208 manager                       2**

**6 rows selected.**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1. Find the names and rate of pay of all employees who has allocated a duty.**

**SQL> select name,payrate from employee;**

**NAME                    PAYRATE**

**-------------------- ----------**

**Rghav                     23000**

**Mane                      23000**

**Priya                     23000**

**Abhay                     23000**

**2. Give employee number who is working at posting\_no. 201, but don’t have the**

**skill of waiter**

**SQL> select employee.name,employee.skill from employee,position,ep**

**2  where employee.eno=ep.eno**

**3  and position.pno=ep.pno**

**4  and position.pno=201 and employee.skill not in('waiter');**

**no rows selected**

**3)Display a list of names of employees who have skill of chef and who has**

**assigned a duty.**

**select name from employee,position,ep**

**where employee.eno=ep.eno**

**and position.pno=ep.pno**

**and employee.skill='chef';**

**4.**   **Display shift wise employee details.**

**SQL> select name,employee.skill from employee,position,ep**

**2  where employee.eno=ep.eno**

**3  and position.pno=ep.pno**

**4  group by employee.skill,name;**

**no rows selected**

**5.**   **Update payrate of employees to 20000 whose skill is waiter.**

**SQL> update employee set payrate=20000**

**2  where skill='waiter';**

**1 row updated.**

**SQL> select \* from employee;**

**ENO NAME                 SKILL                   PAYRATE**

**---------- -------------------- -------------------- ----------**

**1 Rghav                manager                   23000**

**2 Mane                 waiter                    20000**

**3 Priya                ceo                       23000**

**4 Abhay                chef                      23000**

**Slip\_no:11:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Bill (billno, day, tableno, total)**

**Menu (dish\_no, dish\_desc, price)**

**The relationship between Bill and Menu is Many to Many with quantity as descriptive attribute.**

**Constraint: Primary key, price should be > 0.**

**SQL>  create table bill(bno int primary key not null,day varchar(10),tbno int,**

**total int);**

**Table created.**

**SQL> desc bill;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**BNO                                       NOT NULL NUMBER(38)**

**DAY                                                VARCHAR2(10)**

**TBNO                                               NUMBER(38)**

**TOTAL                                              NUMBER(38)**

**SQL> insert into bill values(301,'monday',109,1120);**

**1 row created.**

**SQL> insert into bill values(302,'sunday',123,9120);**

**1 row created.**

**SQL> insert into bill values(303,'tuesday',122,4200);**

**1 row created.**

**SQL> insert into bill values(304,'monday',176,2210);**

**1 row created.**

**SQL> select \* from bill;**

**BNO DAY              TBNO      TOTAL**

**---------- ---------- ---------- ----------**

**301 monday            109       1120**

**302 sunday            123       9120**

**303 tuesday           122       4200**

**304 monday            176       2210**

**SQL> create table menu(dno int primary key not null,ddes varchar(10), price int check(price>0),bno int references bill);**

**Table created.**

**SQL> desc menu;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**DNO                                       NOT NULL NUMBER(38)**

**DDES                                               VARCHAR2(10)**

**PRICE                                              NUMBER(38)**

**BNO                                                NUMBER(38)**

**SQL> insert into menu values(101,'veg',200,301);**

**1 row created.**

**SQL> insert into menu values(102,'non-veg',300,303);**

**1 row created.**

**SQL> insert into menu values(103,'non-veg',400,301);**

**1 row created.**

**SQL> insert into menu values(104,'veg',250,301);**

**1 row created.**

**SQL> insert into menu values(105,'non-veg',800,302);**

**1 row created.**

**SQL> insert into menu values(106,'veg',600,304);**

**1 row created.**

**SQL> select \* from menu;**

**DNO DDES            PRICE        BNO**

**---------- ---------- ---------- ----------**

**101 veg               200        301**

**102 non-veg           300        303**

**103 non-veg           400        301**

**104 veg               250        301**

**105 non-veg           800        302**

**106 veg               600        304**

**6 rows selected.**

**SQL> create table bm(bmno int primary key,ddate varchar(10),bno int references bill,mno int references menu);**

**Table created.**

**SQL> desc bm;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**BMNO                                      NOT NULL NUMBER(38)**

**DDATE                                              VARCHAR2(10)**

**BNO                                                NUMBER(38)**

**MNO                                                NUMBER(38)**

**SQL> insert into bm values(1,'12/02/10',301,102);**

**1 row created.**

**SQL> insert into bm values(2,'09/07/19',303,104);**

**1 row created.**

**SQL> insert into bm values(3,'02/06/11',302,101);**

**1 row created.**

**SQL> insert into bm values(4,'12/02/09',304,102);**

**1 row created.**

**SQL> select \* from bm;**

**BMNO DDATE             BNO        MNO**

**---------- ---------- ---------- ----------**

**1 12/02/10          301        102**

**2 09/07/19          303        104**

**3 02/06/11          302        101**

**4 12/02/09          304        102**

**Consider the above tables and execute the following queries:**

**1.**   **Display the tableno whose dish\_desc is “Veg”.**

**SQL> select tno from menu,bill,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and dis='veg';**

**TNO**

**----------**

**123**

**122**

**2.**   **Display the special menu of Monday.**

**SQL> select dis from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and day='monday';**

**DIS**

**----------**

**non-veg**

**non-veg**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display receipt which includes bill\_no with Dish description, price, quantity**

**and total amount of each menu.**

**SQL> select sum(bill.total),menu.dis,menu.price,bm.qunt from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  group by menu.dis,menu.price,bm.qunt;**

**SUM(TOTAL) DIS             PRICE       QUNT**

**--------------- ---------- ---------- ----------**

**9120 veg               200        102**

**4200 veg               250         23**

**1120 non-veg           300        123**

**2210 non-veg           300        312**

**2)Find total amount collected by hotel on date 09/07/2019.**

**SQL> select sum(total) from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and ddate='09/07/19';**

**SUM(TOTAL)**

**----------**

**4200**

**3)Count number of menus of billno 301**

**SQL> select count(dis) from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and bill.bno=301;**

**COUNT(DIS)**

**----------**

**1**

**4)Display menu details having price between 100 and 500.**

**SQL> select dis,price from menu**

**2  where price between 100 and 500;**

**DIS             PRICE**

**---------- ----------**

**veg               200**

**non-veg           300**

**non-veg           400**

**veg               250**

**5. Display the tableno and day whose bill amount is zero.**

**SQL> select tno,day from bill**

**2  where total=0;**

**no rows selected**

**slip-no:12 Q3 Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Movies (M\_name, release\_year, budget)**

**Actor (A\_name, role, charges, A\_address)**

**Producer (producer\_id, name, P\_address)**

**Relationship:- Each actor has acted in one or more movie. Each producer has produced many movies but each movie can be produced by more than one producers.**

**Each movie has one or more actors acting in it, in different roles.**

**Constraint: Primary key, release\_year > 2000, A\_address and P\_address**

**should not be same**.

**Consider the above tables and execute the following queries:**

**1. List the names of movies with the highest budget.**

**2. Display the details of producer who have produced more than one movie in a year.**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1. List the names of movies with the second highest budget 2. List the names of actors who have acted in the maximum number of movies.**

**3. List the names of movies, produced by more than one producer.**

**4. List the names of actors who are given with the maximum charges for their movie.**

**5. List the names of actors who have acted in at least one movie, in which ‘Akshay’ has acted.**

**Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Driver (driver\_id, driver\_name, address)**

**Car (license\_no, model, year)**

**Relation between Driver and Car is Many to Many with date and time as descriptive attribute.**

**Constraint: Primary key, driver\_name should not be null**

**SQL>  create table driver(did int primary key,dname varchar(10),addr varchar(10));**

**Table created.**

**SQL> desc driver;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**DID                                       NOT NULL NUMBER(38)**

**DNAME                                              VARCHAR2(10)**

**ADDR                                               VARCHAR2(10)**

**SQL> insert into driver values(101,'Raghav','pune');**

**1 row created.**

**SQL> insert into driver values(102,'ram','mumbai');**

**1 row created.**

**SQL> insert into driver values(103,'Abhay','pune');**

**1 row created.**

**SQL> insert into driver values(104,'Ganesh','Nanded');**

**1 row created.**

**SQL> insert into driver values(105,'Ritik','Nashik');**

**1 row created.**

**SQL> select \* from driver;**

**DID DNAME      ADDR**

**---------- ---------- ----------**

**101 Raghav     pune**

**102 ram        mumbai**

**103 Abhay      pune**

**104 Ganesh     Nanded**

**105 Ritik      Nashik**

**SQL> create table car(lno varchar(10) primary key,model varchar(10),year number,did int references driver);**

**Table created.**

**SQL> desc car;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**LNO                                       NOT NULL VARCHAR2(10)**

**MODEL                                              VARCHAR2(10)**

**YEAR                                               NUMBER**

**DID                                                NUMBER(38)**

**SQL> insert into car values('DPU123','w12b',1987,101);**

**1 row created.**

**SQL> insert into car values('DPU781','SUV300',2019,103);**

**1 row created.**

**SQL> insert into car values('DPU231','swif',2001,105);**

**1 row created.**

**SQL> insert into car values('DPU018','ty12',1999,102);**

**1 row created.**

**SQL> insert into car values('DPU810','nh79',2001,104);**

**1 row created.**

**SQL> select \* from car;**

**LNO        MODEL            YEAR        DID**

**---------- ---------- ---------- ----------**

**DPU123     w12b             1987        101**

**DPU781     SUV300           2019        103**

**DPU231     swif             2001        105**

**DPU018     ty12             1999        102**

**DPU810     nh79             2001        104**

**SQL> create table dc(dco int primary key,did int references driver,lno varchar(10) references car);**

**Table created.**

**SQL> desc dc;**

**Name                                      Null?    Type**

**----------------------------------------- -------- ----------------------------**

**DCO                                       NOT NULL NUMBER(38)**

**DID                                                NUMBER(38)**

**LNO                                                VARCHAR2(10)**

**SQL> insert into dc values(301,101,'DPU123');**

**1 row created.**

**SQL> insert into dc values(302,102,'DPU781');**

**1 row created.**

**SQL> insert into dc values(303,103,'DPU123');**

**1 row created.**

**SQL> insert into dc values(304,101,'DPU018');**

**1 row created.**

**SQL> insert into dc values(305,105,'DPU810');**

**1 row created.**

**SQL> select \* from dc;**

**DCO        DID LNO**

**---------- ---------- ----------**

**301        101 DPU123**

**302        102 DPU781**

**303        103 DPU123**

**304        101 DPU018**

**305        105 DPU810**

**Consider the above tables and execute the following queries:**

**1. Display the name of driver whose license no is “DPU123”.**

**SQL> select dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  and car.lno='DPU123';**

**DNAME**

**----------**

**Raghav**

**Abhay**

**2.**   **Delete the details of car whose model is “swift”.**

**SQL> delete from car**

**2  where model='swif';**

**1 row deleted.**

**SQL> select \* from car;**

**LNO        MODEL            YEAR        DID**

**---------- ---------- ---------- ----------**

**DPU123     w12b             1987        101**

**DPU781     SUV300           2019        103**

**DPU018     ty12             1999        102**

**DPU810     nh79             2001        104**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display details of all persons who are driving ‘Alto’ car**

**SQL> select dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  and model='Alto';**

**DNAME**

**----------**

**Ganesh**

**2.Update model of car to “SUV300” whose manufactured year is 2019.**

**SQL> update car set model='SUV300'**

**2  where year=2019;**

**2 rows updated.**

**SQL> select \* from car;**

**LNO        MODEL            YEAR        DID**

**---------- ---------- ---------- ----------**

**DPU123     w12b             1987        101**

**DPU781     SUV300           2019        103**

**DPU018     ty12             1999        102**

**DPU810     nh79             2001        104**

**DPU811     Alto             2001        104**

**DPU701     SUV300           2019        101**

**6**      **rows selected.**

**3.Display car details manufactured before year 2000.**

**4.In which day ‘Mr. Ram’ drives maximum number of cars.**

**SQL> select count(car.model),dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  and dname='ram'**

**5  group by dname;**

**COUNT(CAR.MODEL) DNAME**

**---------------- ----------**

**1**      **ram**

**5.Display total number of drivers who drives car in each year.**

**SQL> select count(driver.did),year,dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  group by year,dname;**

**COUNT(DRIVER.DID)       YEAR DNAME**

**----------------- ---------- ----------**

**1       1987 Abhay**

**1       1987 Raghav**

**1       1999 Raghav**

**1       2019 ram**

**2       2001 Ganesh**

**1       2001 Ritik**

**6 rows selected.**