:::::::::::::::::::::::::::::::: FIRST SET ::::::::::::::::::::::::::::::

I) ON EMP AND DEPT TABLES

1) Write the commands to apply foreign key on MGR column referring empno on the same table and add ON DELETE CASCADE option.

a) Write this with CREATE TABLE COLUMN LEVEL

ANS:

CREATE TABLE emp(

eno INT PRIMARY KEY,

ename VARCHAR(30) NOT NULL,

esal NUMERIC(10,2) NOT NULL,

mgr INT REFERENCES emp(eno) ON DELETE CASCADE

);

b) write this with ALTER TABLE TABLE LEVEL

ANS:

ALTER TABLE emp ADD CONSTRAINT fk1\_mgr FOREIGN KEY(mgr) REFERENCES emp(eno) ON DELETE CASCADE;

2) Write a query to list all employees who are earning more than at least any one employee in 20th dept.

Exclude the employees who are working as CLERKS.

ANS:

SELECT \*

FROM emp

WHERE job not like 'CLERK' AND sal > any ( select sal from emp where deptno=20);

or

ANS:

SELECT \*

FROM emp

WHERE job<>'CLERK' AND sal > ( select min(sal) from emp where deptno=20);

3) Write a query to list the departments that are having their avg salary more than 30th dept avg sal.

Exclude the departments having less than two employees.

ANS:

SELECT deptno

FROM emp

GROUP BY deptno

HAVING count(\*)>=2 and AVG(sal) >

(SELECT avg(sal)

FROM emp

WHERE deptno=30);

4) WRITE A SELECT statement to list all the duplicated records.

ANS:

SELECT \*

FROM emp

WHERE empno IN (SELECT empno

FROM emp

GROUP BY empno

HAVING COUNT(\*)>1);

OR

ANS:

SELECT e1.\*

FROM emp e1

WHERE 1<(SELECT COUNT(\*)

FROM emp e2

WHERE e1.empno=e2.empno);

5) Write a query to list the departments that are having at least 2 clerks with minumum of 10000 salary.

Exclude clerks who have joined in 2020.

ANS:

SELECT deptno

FROM emp

WHERE job='CLERK' AND sal>=10000 AND EXTRACT(year from hiredate) <> 2020

GROUP BY deptno,job

HAVING (job='CLERK' AND COUNT(\*)>=2);

II)

Write a query to list all the accounts with these fields of information( accno,op\_date,current\_bal,last tranaction date,last transaction amount)

ANS:

SELECT a.accno,a.op\_date,a.current\_bal,t.tr\_date,t.amount

FROM accounts a,transactions t

WHERE a.accno=t.accno AND ROW (t.accno,t.tr\_date) IN ( SELECT accno,max(tr\_date)

FROM transactions

GROUP BY accno );

III)

1) write a query to list the products (prod\_id,name,batchno,qty,unitprice,expdate,gsttax).

Exclude the products that are expired already. And also exclude the products that are gaving gst more than 25%.

ANS:

SELECT p.prod\_id,p.name,ps.batchno,ps.qty,ps.unitprice,ps.expdate,h.gst

FROM products p, productstock ps, hsncodes h

WHERE p.prod\_id=ps.prod\_id AND p.hsncode=h.hsncode AND NOT ps.expdate<NOW()::date AND h.gst<=25;

2)write a query to list the orders(ord\_id,customer\_name,order\_date,total) that are having at least 5 products in their order.

ANS:

SELECT o.order\_id,o.customer\_name,o.order\_date,o.total

FROM orders o

WHERE 5<=( SELECT count(\*)

FROM orderproducts op

where o.order\_id=op.order\_id);

3) Write a query to list the products (prod\_id,name,gst,avg\_gst percentage of all products). Exclude the products categories of "Electronics" and "Mobile".

ANS:

SELECT p.prod\_id,p.name,h.gst,(select avg(h.gst) from products p, hsncodes h where p.hsncode=h.hsncode)

FROM products p, hsncodes h

WHERE p.hsncode=h.hsncode AND p.category NOT IN ('ELECTRONICS','MOBILE')

4) Write a query to list the orders(Order\_id,order\_date,customer\_name,total,highest order total of that day).

ANS:

SELECT o.order\_id,o.order\_date,o.customer\_name,o.total,(SELECT MAX(total) FROM orders o1 WHERE o.order\_date=o1.order\_date)

FROM orders o

::::::::::::::::::::: SECOND SET :::::::::::::::::::::

1)

select \*

from emp e ,emp m

where e.mgr=m.empno and e.sal>m.sal;

2)

select \*

from emp

where extract(year from hiredate) not in(2020,2021,2022) AND sal>all(select sal from emp where deptno=10);

or

select

from emp

where extract(year from hiredate) not in(2020,2021,2022) AND sal>(select max(sal) from emp where deptno=10);

3)

create table emp

(

empno int primary key,

sal numeric(8,2),

deptno int,

mgr int references emp(empno),

CONSTRAINT fk\_emp FOREIGN KEY(deptno) REFERENCES dept(deptno),

CONSTRAINT ck\_sal CHECK(sal>=5000 and sal<=10000)

)

4)

select deptno

from emp

where job='CLERK' OR job='MANAGER'

GROUP BY deptno,job

HAVING (job='CLERK' AND count(\*)=2) or (job='MANAGER' AND count(\*)=3);

5)

select deptno

from emp

GROUP BY deptno

HAVING sum(sal)>(select sum(sal)

from emp

where job='MANAGER');

6)

select deptno,avg(sal),min(sal),max(sal),count(\*)

from emp

group by deptno

having count(\*)>=2 and avg(sal)>=2000;

7)

select \*

from emp

where row(deptno,sal) in (select deptno,min(sal)

from emp

group by deptno);

8)

select deptno

from emp

where sal>=3000

group by deptno

having count(\*)>=4;

9)

select \*

from emp

where sal>=10000 and sal = (select max(sal) from emp);

10)

select deptno

from emp

group by deptno

having count(\*)>=2 and avg(sal) >(select avg(sal) from emp where deptno=30);

12)

select extract(year from hiredate)

from emp

where job='CLERK'

GROUP BY extract(year from hiredate),job

HAVING count(\*) >= all(

select count(\*)

from emp

where job='CLERK'

GROUP BY extract(year from hiredate),job);