7.1) $T_1 \times T_2$

P	Q	$T_1.R$	A	B	$T_2.R$
10	a	5	10	b	6
10	a	5	25	c	3
10	a	5	10	b	5
15	b	8	10	b	6
15	b	8	25	c	3
15	b	8	10	b	5
25	a	6	10	b	6
25	a	6	25	c	3
25	a	6	10	b	5

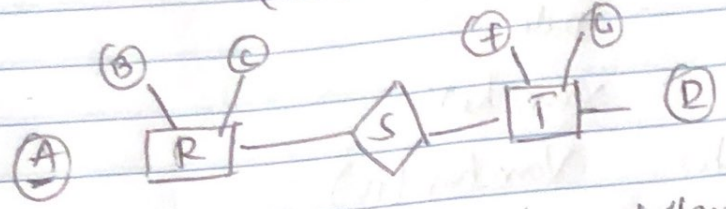
8.2)

```
Create table Supplier (
    Sid       INT,
    Sname     Varchar
    address   Varchar
    primary key (SID)
)

Create table part (
    PID       INT
    Pname     Varchar
    colour    Varchar
    primary key (PID) )

Create table Catalog (
    SID       INT
    PID       INT
    Cost      Real
    primary key (PID, SID)
)
    primary key (SID , PID)
    foreign key SID Reference Catalog
    foreign key PID Reference Catalog.
```

8.1) given R(A, B, C)

S(A, D)

T(D, f, G)



In one-to-one mapping between R & T can be written as.

R(A, B, C) and S(A, D)

T(D, f, G)

S could also used D for primary key

participation T in S is total. So combine S to R would require NULL values for A in R without D' values

Better to combine S into T schema

R(A, B, C)

T(D, f, G, A)

So the given relations can be requiring rearranging.

R(A, B, C)

T(D, f, G, A)

8.3) select C.pID

From parts P, Catalog C

where P.colour = 'red' and P.colour = 'green'

10.)) Create table employee (

Emp_ID INT
E-name varchar
Gender Varchar(10)
DOB Date
disability varchar
health status Varchar(10)
primary key (Emp_ID)

Create table company (

Company_name varchar
Term_ID varchar
Company status varchar
primary key (company name)

Create table lives (

Emp_ID INT
Street Varchar(10)
City Varchar(10)
primary key (emp_ID))

Create table works (

Emp_ID INT
Company name Varchar

salary Numeric
primary key (Emp ID, company name))

create located-in (
company name Varchar
city Varchar
primary key company name

(Employee x works)

10.20) π (σ work.CompanyName = "Rustin Bank")
c Employee.Fname (works.Emp_ID = Employee.Emp_ID