5.

mysql> create database product;

mysql> use product;

mysql> create table suppliers(

    -> Sno int(8) primary key,

    -> Sname varchar(20) not null,

    -> Status char(20) not null,

    -> Scity char(30) not null);

mysql> create table Parts(

    -> PNo int(8) primary key,

    -> Pname varchar(20) not null,

    -> Colour varchar(20) not null,

    -> Weight int(4) not null,

    -> City char(20) not null);

mysql> create table Project(

    -> Jno int(8) Primary key,

    -> Jname char(20) not null,

    -> Jcity char(20) not null);

mysql> create table  Shipment(

    -> Sno varchar(20) not null,

    -> Pno int(8) not null,

    -> Jno int(8) not null,

    -> Quantity int(8) not null,

    -> foreign key(Sno) references suppliers(Sno),

    -> foreign key(Pno) references Parts(Pno),

    -> Foreign key(Jno) references Project(Jno));

mysql> insert into suppliers values(101,"S1",30,"London");

mysql> insert into suppliers values(102,"S2",19,"New York");

mysql> insert into suppliers values(103,"S1",22,"Paris");

mysql> insert into suppliers values(104,"S2",70,"Los Angeles");

mysql> insert into suppliers values(105,"S3",15,"Singapore");

mysql> insert into parts values( 501,"P1","Black",16,"Paris");

mysql> insert into parts values( 502,"P2","Red",40,"London");

mysql> insert into parts values( 503,"P3","Gray",20,"London");

mysql> insert into parts values( 504,"P2","Green",60,"Singapore");

mysql> insert into parts values( 505,"P2","Black",10,"New York");

mysql> insert into project values(1001,"J1","London");

mysql> insert into project values(1002,"J2","New York");

mysql> insert into project values(1003,"J3","New York");

mysql> insert into project values(1004,"J4","Singapore");

mysql> insert into project values(1005,"J4","Delhi");

mysql> insert into shipment values(101,504,1002,250);

mysql> insert into shipment values(103,505,1003,100);

mysql> insert into shipment values(105,502,1003,500);

mysql> insert into shipment values(101,503,1001,300);

mysql> insert into shipment values(102,501,1005,750);

mysql> insert into shipment values(101,501,1002,100);

Q (a) Primary Key- Sno in table Suppliers

                            Pno in table Parts

                            Jno in table Project

        Foreign Key- Sno in table Shipment

                            Pno in table Shipment

                            Jno in table Shipment

Q (b) mysql> select Sno from suppliers where scity="Paris" and Status>20;

Q (c) mysql> Select \* from suppliers where Sno in(select Sno from shipment where Pno in(select Pno from parts where Pname="P2")) Order by sno;

Q (d) mysql> Select Sname from suppliers where Sno in(Select distinct sno from shipment where Pno in(select Pno from parts where Pname!="P2"));

Q (e) mysql> select s.Sno, s.Pno, s.Jno, s.Quantity, s.quantity\*p.weight as "Total\_shipment\_weight" from shipment as s, parts as p where s.pno=p.pno;

Q (f) mysql> Select \* from shipment where quantity between 300 and 750;

Q (g) mysql> select Pno from parts where weight>16 or pno in(select pno from shipment where sno in(select s.sno from shipment as s, suppliers as su where s.sno=su.sno and su.sname="S2"));

Q (h) mysql> select city from parts where colour="Red" and Pno in(select pno from shipment where quantity>5);

Q (i) mysql> select \* from parts where pno in(select Pno from shipment where sno in(select sno from suppliers where Scity="London"));

Q (j) mysql> select Pno from shipment where sno in(select sno from suppliers where scity="London") and Jno in(Select jno from project where Jcity="London");

Q (k) mysql> select count(distinct(Jno)) as "No. of Project Supplied by supplier S1" from shipment where sno in(select sno from suppliers where Sname="S1");

Q (l) mysql> select count(\*) from parts where Pno in(Select Pno from shipment where sno in(select Sno from suppliers where sname ="S1")) and Pname="P1";