9) Sids of suppliers who supply every red part.
 Select sid

From Suppliers S

Where not exists(Select * From Parts P

Where color = 'red' and

pid not in (select C.pid

from Catalog C

where C.sid = S.sid))

10) Sids of suppliers who supply every part that is either red or green part.

Select sid

From Suppliers S

Where not exists(Select * From Parts P Where (color = 'red' or color='green') and pid not in (select C.pid from Catalog C where C.sid = S.sid))

11) Sids of suppliers who supply every red part or every green part.

```
Select sid
From Suppliers S
Where not exists(Select * From Parts P
   Where color = 'red' and pid not in (select C.pid
                  from Catalog C where C.sid = S.sid))
UNION
Select sid
From Suppliers S
Where not exists(Select * From Parts P
   Where color = 'green' and pid not in (select C.pid
                  from Catalog C where C.sid = S.sid))
```

12) Find the average price of red partsSelect avg(cost)From Catalog Natural Join PartsWhere color = red

13) For each color, find the number of parts with that color.

Select color, count(*)

From Parts

Group By color

14) For each color, find the number of parts with that color, provided that the average cost (of parts with that color) is at least 40.

Select color, count(distinct pid)

From Parts P, Catalog C

Where P.pid = C.pid

Group By color

Having avg(cost)>=40

15) Find the number of parts that are not supplied by any supplier

Select count(*)

From Parts

Where pid not in (select pid from Catalog)

16) Find the total number of tuples in all three tables.

Select sum(c)

From ((select count(*) as c from Suppliers)
union all (select count(*) from Parts)
union all (select count(*) from Catalog)) T

17) Find the average number of tuples per table in the three database tables

Select avg(c)

From ((select count(*) as c from Suppliers)
 union all (select count(*) from Parts)
 union all (select count(*) from Catalog)) T

18) Find names of suppliers who supply at least6 different parts

Select sname

From Suppliers S, Catalog C

Where S.sid = C.sid

Group by S.sid, sname

Having count(pid) >= 6

19) Find all suppliers who supply a part with an unknown (i.e., null) color.

Select sid

From Catalog C, Parts P

Where C.pid = P.pid and color IS NULL

20) For each supplier, return the number of parts supplied by that supplier, which have an unknown (i.e., null) color.

Select sid, count(pid)

From Catalog C, Parts P

Where C.pid = P.pid and color IS NULL

Group by sid

21) Find the names of all parts whose color starts with the letter b.

Select pname

From Parts P

Where color LIKE 'b%'

22) For each part in Catalog, return its pid, along with the cheapest price and the most expensive price, for which it is supplied.

- Select pid, min(cost), max(cost)
- From Catalog C
- Group by pid

23) For each part in Part, return pid, along with the cheapest price and the most expensive price, for which it is supplied. If the part is not supplied, then the cheapest and most expensive prices should be null.

Select pid, min(cost), max(cost) From Parts Left Outer Join Catalog Group by pid