```
Q1)   SELECT S.sname
FROM Parts P, Catalog C , Suppliers S
WHERE C.pid=P.pid AND C.sid=S.sid
AND P.color='red'
```

```
Q2) SELECT C.sid
FROM Parts P , Catalog C
WHERE P.pid = C.pid
AND (P.color = 'red' OR P.color = 'green')
```

```
Q3) SELECT S.sid
FROM Suppliers S
WHERE S.address = '221 Packer street'
OR S.sid IN ( SELECT C.sid
              FROM Parts P, Catalog C
              WHERE P.pid = C.pid  AND P.color='red' )
```

```
Q4) SELECT C.sid
FROM Parts P, Catalog C
WHERE P.pid = C.pid
AND P.color = 'red'
AND EXISTS ( SELECT P2.pid
             FROM Parts P2, Catalog C2
             WHERE P2.color = 'green' AND C2.sid = C.sid
                   AND P2.pid = C2.pid )
```

```
Q5) SELECT C.sid
FROM Catalog C
WHERE NOT EXISTS (SELECT P.pid FROM Parts P
                   WHERE NOT EXISTS
                   ( SELECT C1.sid
                   FROM Catalog C1
                   WHERE C1.sid = C.sid
                   AND C1.pid = P.pid ) )
```

```
Q6) SELECT C.sid
FROM Catalog C
WHERE NOT EXISTS (SELECT P.pid FROM Parts P
                        WHERE P.color = 'red'
                        AND NOT EXISTS
                        ( SELECT C1.sid
                        FROM Catalog C1
                        WHERE C1.sid = C.sid
                        AND C1.pid = P.pid ) )
```

```
Q7) SELECT C.sid
FROM Catalog C
WHERE NOT EXISTS (SELECT P.pid
                    FROM Parts P
                    WHERE (P.color = 'red' OR P.color = 'green')
                    AND (NOT EXISTS
                            ( SELECT C1.sid
                            FROM Catalog C1
                            WHERE C1.sid = C.sid
                            AND C1.pid = P.pid )
                        )
                    )
```

```
Q8) SELECT C.sid
FROM Catalog C
WHERE NOT EXISTS (SELECT P.pid
                    FROM Parts P
                    WHERE P.color = 'red'
                    AND (NOT EXISTS
                            ( SELECT C1.sid
                            FROM Catalog C1
                            WHERE C1.sid = C.sid
                            AND C1.pid = P.pid )))

    OR ( NOT EXISTS (SELECT P1.pid
                    FROM Parts P1
                    WHERE P1.color = 'green'
                    AND (NOT EXISTS (SELECT C2.sid
                            FROM Catalog C2
                            WHERE C2.sid = C.sid
                            AND C2.pid = P1.pid))))
```

```
Q9) SELECT C1.sid, C2.sid
FROM
Catalog C1, Catalog C2
WHERE C1.pid = C2.pid AND C1.sid <> C2.sid
AND C1.cost > C2.cost
```

```
Q10) SELECT C.pid
FROM
Catalog C
WHERE EXISTS (SELECT C1.sid
              FROM Catalog C1
              WHERE C1.pid = C.pid AND C1.sid <> C.sid )
```

```
Q11) SELECT C.pid
FROM
Catalog C, Suppliers S
WHERE S.sname = 'Yosemite Sham' AND C.sid = S.sid
AND C.cost ≥ ALL (Select C2.cost
FROM Catalog C2, Suppliers S2
WHERE S2.sname = 'Yosemite Sh am'
AND C2.sid = S2.sid)
```