Write the following queries in SQL.

1. What are the #prods whose name begins with a ’p’ and are less than$300.00?

SELECT

 prodid

FROM

 product

WHERE

 pname LIKE 'p%' AND

 price < 300;

2. Names of the products stocked in ”d2”.

(a) without in/not in(b) with in/not in

--- (a) without in/not in

SELECT

 stock.depid,

 product.pname

FROM

stock s,

product p

WHERE

 s.prodid = p.prodid AND

 s.depid = 'd2';

--- (b) with in/not in

SELECT

 stock.depid,

 product.pname

FROM

stock s,

product p

WHERE

s.prodid = p.prodid AND

 s.depid IN ('d2');

3. #prod and names of the products that are out of stock.

(a) without in/not in(b) with in/not in

--- (a) without in/not in

SELECT

 product.pname,

 product.prodid

FROM

 product p,

 stock s

WHERE

 p.prodid = s.prodid AND

 s.quantity < 1;

--- (b) with in/not in

SELECT

 product.pname,

 product.prodid

FROM

 product p,

 stock s

WHERE

 p.prodid = s.prodid AND

 s.quantity IN (

 SELECT

  quantity

 FROM

  stock

 WHERE

  quantity<1);

4. Addresses of the depots where the product ”p1” is stocked

.(a) without exists/not exists and without in/not in(b) with in/not in(c) with exists/not exists

--- (a) without exists/not exists and without in/not in

SELECT

 depot.addr

FROM

 depot d,

 stock s

WHERE

 d.depid = s.depid AND

 stock.prodid = 'p1' AND

 stock.quantity > 0;

--- (b) with in/not in

SELECT

 depot.addr

FROM

 depot d,

 stock s

WHERE

 d.depid = s.depid AND

 s.prodid IN ('p1') AND

 s.quantity IN (

 SELECT

  quantity

 FROM

  stock

 WHERE

  quantity>0);

--- (c) with exists/not exists

SELECT

 depot.addr

FROM

 depot d,

 stock s

WHERE EXISTS (

   SELECT \*

   FROM

    stock

   WHERE

    s.depid = d.depid AND

    prodid = 'p1' AND

    quantity > 0 );

5. #prods whose price is between $250.00 and $400.00.(a) using intersect.(b) without intersect.

--- (a) using intersect.

SELECT

 prodid

FROM

 product

WHERE

 price >= 250

 INTERSECT

   SELECT

prodid

   FROM

product

   WHERE price < 400;

--- (b) without intersect.

SELECT

 prodid

FROM

 product

WHERE

 price BETWEEN 250 AND 400;

6. How many products are out of stock?

SELECT

 COUNT(prodid)

FROM

 stock

WHERE

 quantity < 1;

7. Average of the prices of the products stocked in the ”d2” depot.

SELECT

 AVG(product.price)

FROM

 product p,

 stock s

WHERE

 p.prodid = s.prodid AND

 s.depid = 'd2';

8. #deps of the depot(s) with the largest capacity (volume).

SELECT

 depid

FROM

 depot

WHERE

 volume IN (

SELECT

 MAX(volume)

FROM

 depot);

9. Sum of the stocked quantity of each product.

SELECT

 prodid,

 SUM(quantity) AS TOTAL\_EACH

FROM

 stock

GROUP BY

 prodid;

10. Products names stocked in at least 3 depots.(a) using count(b) without using count

SELECT

 product.pname,

 COUNT(stock.depid)

FROM

 product p,

 stock s

WHERE

 p.prodid = s.prodid

GROUP BY

 p.pname

HAVING COUNT(depid) >= 3;

11. #prod stocked in all depots.(a) using count(b) using exists/not exists1

SELECT

 COUNT(depid),

 prodid

FROM

 stock

GROUP BY

 prodid

HAVING COUNT(depid) = 3;