Quiz 1 Solution Database Systems

Question 1

DDL for `Suppliers` Table:

```sql
CREATE TABLE suppliers (
    snum INT PRIMARY KEY,
    sname VARCHAR(100),
    status INT,
    city VARCHAR(100)
);
```

DDL for `Shipments` Table:

```sql
CREATE TABLE shipments (
    snum INT,
    pnum INT,
    jnum INT,
    quantity INT,
    PRIMARY KEY (snum, pnum, jnum), -- Composite primary key
);
```

Question 2

```sql
ALTER TABLE shipments
ADD CONSTRAINT Supplier_Shipment
FOREIGN KEY (snum) REFERENCES suppliers(snum)
```

```
ON DELETE CASCADE
ON UPDATE CASCADE;
```

Question 3

On deleting the supplier `S1` from the `suppliers` table, the effect on the `shipments` table will depend on the foreign key constraint and the cascading rules we've set. Since we added a **foreign key constraint** (`Supplier_Shipment`) with **ON DELETE CASCADE**, therefore when a record in the `suppliers` table is deleted, all related records in the `shipments` table (where `snum = S1`) are also automatically deleted.

Rows in `shipments` that will be deleted:

- The rows in the `shipments` table related to `S1` are:

S#	P#	J#	QTY
S1	P1	J1	200
S1	P1	J4	700

These two rows will be **automatically deleted** when you delete supplier `S1` from the `suppliers` table.

Question 4

```
SELECT snum AS 'Serial no.', sname AS 'Name', city
FROM suppliers
WHERE status > 20
OR city LIKE '%don%';
```

Final Output:

This will return the rows where either `status > 20` or `city LIKE '%don%'` , which includes:

Serial no.	Name	City
S1	SMITH	LONDON
S3	BLAKE	PARIS

S4	CLARK	LONDON
S5	ADAMS	ATHENS

Question 5

```
SELECT * INTO table2
FROM parts
WHERE color <> 'Red';
```