Question 1: Database Design and Querying (40 Marks)

You are tasked with designing a database schema for a library management system. The system should store information about books, authors, borrowers, and transactions. Create the necessary tables with appropriate attributes, primary keys, foreign keys, and constraints. Once the schema is created, write SQL queries to perform the following tasks:

1. Insert 5 records into the 'books' table.
2. Insert 3 records into the 'authors' table.
3. Insert 10 records into the 'borrowers' table.
4. Insert 15 records into the 'transactions' table.
5. Retrieve the names of all books borrowed by a specific borrower identified by their ID.
6. Retrieve the title and author of all books published after the year 2000.
7. Update the 'transactions' table to mark a specific transaction as returned.
8. Delete all records from the 'transactions' table that are older than 2 years.

Question 2: SQL Queries and Joins (30 Marks)

Given the following tables:

1. Students (student_id, name, age, class_id)
2. Classes (class_id, class_name, teacher_id)
3. Teachers (teacher_id, teacher_name)

Write SQL queries for the following tasks:

1. Retrieve the names of all students along with the class they belong to.
2. Retrieve the names of all students who are older than 15 years.
3. Retrieve the names of all teachers along with the classes they teach.
4. Retrieve the name of the teacher for a specific class.
5. Retrieve the number of students in each class.
6. Retrieve the names of all students along with the teacher who teaches their class.

Question 3: Database Normalization and Transactions (30 Marks)

Consider a database for a small e-commerce website with the following tables:

1. Customers (customer_id, name, email, address)
2. Orders (order_id, customer_id, order_date, total_amount)
3. Order_Items (order_item_id, order_id, product_id, quantity, unit_price)
4. Products (product_id, product_name, category, price)

Apply normalization to the given tables up to the third normal form (3NF). Write SQL queries to:

1. Insert a new customer into the 'Customers' table.
2. Place a new order for an existing customer.
3. Retrieve the total amount spent by a specific customer.
4. Update the quantity of a product in an order.
5. Delete a product from the 'Products' table and remove all associated order items.

Each question should be clear and concise, providing adequate details to perform the task.