4 A company makes ice cream and sells it to shops.

The ice cream is made in batches: a large quantity of one type and flavour of ice cream that is then split into smaller quantities for sale.

The company's owner has designed a relational database, ICECREAM, to store data about their ice cream and customers.

Some of the tables in the database are given. The database is not normalised.

BATCH(BatchID, Type, Flavour, Size, SellingPrice, EndDate)

CUSTOMER(CustomerID, CompanyName, EmailAddress, TelephoneNumber)

SALE(SaleID, BatchID, CustomerID, Quantity, Date)

(a) Identify **two** foreign keys in the table SALE **and** the table that each foreign key references.

Foreign key 1 .....

Table name 1 .....

Foreign key 2 .....

Table name 2 .....

[2]

(b) Write an SQL script to return the total quantity of ice cream sold to the customer with the ID of 0034E in the year 2023.

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(c) The table definition for BATCH is repeated here:

BATCH(BatchID, Type, Flavour, Size, SellingPrice, EndDate)

Sample data for the table BATCH is given:

BatchID	Type	Flavour	Size	SellingPrice	EndDate
KIV12	Plain	Vanilla	1	2.20	12/12/2024
RIC14	Plain	Chocolate	0.5	1.80	12/12/2024
TYL1	Non-dairy	Lemon	0.5	2.10	01/02/2025
FYV2	Non-dairy	Vanilla	0.25	1.50	02/02/2025
BIV13	Plain	Vanilla	1	2.20	02/02/2024

(i) Write an SQL script to define the table BATCH.

Include constraints (restrictions) on the data that can be entered into each field where appropriate.

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(ii) The table BATCH is not normalised.

Normalise the database table BATCH.

Write the table definitions for your new tables.

Identify any primary and foreign keys in your tables.

Do **not** change or include the tables CUSTOMER and SALE.

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..... [4]

(d) Complete the following table by defining each database term.

Database term	Definition
Entity	....
Attribute	....

[2]

(e) A Database Management System (DBMS) supports data integrity.

Explain how a DBMS supports data integrity.

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