0 1 A relational database has been developed for a youth club to store information about their members and the awards they are given.

The database contains two tables: **Member** and **Award**

Figure 4 shows some data from the tables.

Figure 4

Member

MemberID	FirstName	LastName	DateJoined
1	Zarah	Tariq	2020-01-05
2	Penny	Hill	2020-01-05
3	Peter	Boyes	2020-02-14
4	Reuben	Bailey	2020-10-20

Award

AwardID	MemberID	DatePresented	AwardName
1	1	2020-09-10	Teamwork
2	1	2020-10-13	Outdoors
3	3	2020-06-19	Challenge
4	2	2020-11-11	Leader

0 1 . 1 Define the term **relational database**.

[2 marks]

0 1 . 2 State **one** benefit of using relational databases.

[1 mark]

0 1 . 3 State the name of the field from the **Member** table that is the most suitable to use as the primary key.

[1 mark]

0 1 . 4 State the name of the field from the **Award** table that is a foreign key.

[1 mark]

0 2 A teacher keeps a record of books loaned to students.

The teacher uses a relational database containing three tables, **BookCopy**, **Student** and **Loan**. **Figure 5** shows some data from the tables.

Figure 5

BookCopy

CopyID	BookTitle
HT001	HTML 4 Fun
PB002	Python Basics
GC001	GCSE Computing
GC002	GCSE Computing
GC003	GCSE Computing
GC004	GCSE Computing
RG001	GCSE Revision Guide

Student

StudentID	FirstName	LastName	YearGroup
TUC004	Barry	Tucker	8
WAY002	Shania	Wayneton	10
KOW001	Bartek	Kowalski	11
AZE001	Faisal	Azeez	9
BAK007	Jolene	Baker	11
ANA002	Aisha	Anand	11
OKA003	Sani	Okafor	10

Loan

LoanID	StudentID	CopyID	DepositPaid
L0001	TUC004	HT001	0.50
L0002	WAY002	GC004	2.00
L0003	KOW001	GC001	2.00
L0004	TUC004	PB002	0.75
L0005	BAK007	RG001	2.50
L0006	BAK007	GC002	2.00
L0007	OKA003	GC003	2.00

0 2 . 1 Shade **two** lozenges to show which of the following statements are benefits of relational databases.

[2 marks]

A All the information can be stored in one table. ⬭

B Redundant data is less likely to be stored. ⬭

C Tables don't need primary keys. ⬭

D There are less likely to be data inconsistencies. ⬭

0 2 . 2 State **one** field in the **Loan** table that is a foreign key.

[1 mark]

_____

0 2 . 3 State the most suitable data type for the **DepositPaid** field in the **Loan** table.

[1 mark]

_____

_____

0 3 A relational database is being developed to store information about the games that are available to play at a games café and the advance bookings that have been made for those games. Each game has a unique name.

The database contains two tables: **Game** and **Booking**.

The database is currently being tested by the person who has developed it so the database tables only contain a small amount of data that is being used for testing.

The contents of the tables are shown in **Figure 5**.

Figure 5

Game

Name	MinPlayers	MaxPlayers	LengthOfGame	Complexity
Friday	1	1	25	2.12
Scythe	1	5	90	3.37
Terra Mystica	2	5	100	3.95
Agricola	1	4	90	3.31
Pandemic	2	4	45	2.42

Booking

GameTableID	Name	Date	StartTime	Customer	Hours
1	Friday	28/05/19	11	Hawkins	1
2	Scythe	28/05/19	11	Jemisin	1
3	Pandemic	28/05/19	15	Gormally	1
1	Pandemic	28/05/19	13	Van Perlo	2
1	Terra Mystica	29/05/19	15	Hawkins	2

0 3 . 1 State the field in the **Booking** table that is a foreign key.

[1 mark]

0 3 . 2 State the most suitable data type to use for the `Complexity` field.

[1 mark]

0 4 . 1 Define the term **database**.

[1 mark]

0 4 . 2 Explain what is meant by **data inconsistency** within a database.

[2 marks]

0 4 . 3 Define the term **foreign key**.

[2 marks]

A relational database is being developed to store information about actors and the films they have performed in.

The database contains three tables: **Film**, **Performance** and **Actor**.

Some of the contents of the tables are shown in **Figure 8**.

Figure 8

Film

FilmID	Title	Year
100	Forrest Gump	1994
101	Toy Story 3	2019
102	Back to the Future	1985

Performance

PerformanceID	FilmID	ActorID
52	100	8
53	101	8
54	102	9

Actor

ActorID	Firstname	Lastname
8	Tom	Hanks
9	Lea	Thompson

0 4 . 4 State the identifier of a field from the **Actor** table in **Figure 8**.

[1 mark]