14. A driving school uses a relational database to store details of driving instructors, pupils and bookings in three linked tables.

The relational database uses the following three tables.

Instructor	Pupil	Booking
instructorID	pupilRef	bookingNo
name	name	instructorID*
dayOff	address	pupilRef*
hourlyRate	town	date
		time
		duration

(a) The driving school would like a list of the names of all the instructors who have an hourly rate of more than £35 and the names of all their pupils.

Complete the SQL statement below to produce this list. **3**

```
SELECT Instructor.name AS [Instructor], Pupil.name AS
[Pupil]
```

[Turn over

(b) Sample data from the pupil table is shown below.

Pupil			
pupilRef	**name**	**address**	**town**
PU1	P Clifford	21 Clark Street	Kilmarnock
PU2	N Price	76 Burnside Ave	Greenock
PU3	M Flood	41 Sinclair Street	Greenock
PU4	A Singh	92 Rugby Road	Kilmarnock
PU5	J Wilson	8 Stadium Way	Falkirk
PU6	M Ali	56 Lime Road	Falkirk
PU7	S McGuire	18 Craigneuk Ave	Airdrie
PU8	D McGregor	120 Wallace Place	Greenock
...	...	...	...

The driving school use the following SQL statement to display the number of pupils in each town.

```
SELECT town, COUNT(*) AS [Number Per Town]
FROM Pupil
GROUP BY town
ORDER BY COUNT(*) DESC, town ASC
```

(i) Using the sample data provided, write the expected output from the SQL statement above.

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town	Number Per Town

(ii) The SQL statement above makes use of the GROUP BY command.

Explain why the GROUP BY command is required in the SQL statement above to produce the expected output.

1

14. (continued)

(c) The data from the instructor table is shown below.

Instructor			
instructorID	name	dayOff	hourlyRate
001	C Robertson	Saturday	35
002	L MacLean	Sunday	40
003	T Jack	Wednesday	35
004	B Avidal	Saturday	36
005	F Shabnam	Tuesday	36

The output below shows the average hourly rate of instructors who have their day off at the weekend.

Average Hourly Rate
37

Write the SQL statement that would produce the output above. **3**

[Turn over

14. **(continued)**

(d) The driving school would like to know the `pupilRef` of all the pupils who have lessons with the instructor who offers lessons at the cheapest hourly rate.

```
SELECT pupilRef
FROM Booking,Instructor
WHERE Booking.instructorID = Instructor.instructorID
AND hourlyRate = MIN(hourlyRate);
```

When tested the SQL statement did not execute because an aggregate function cannot be included in a `WHERE` clause in this way.

Describe one solution to this problem.

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