

CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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SCIENCE

0846/02

Paper 2

April 2019

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

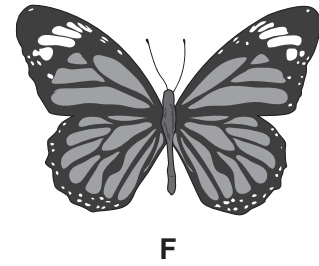
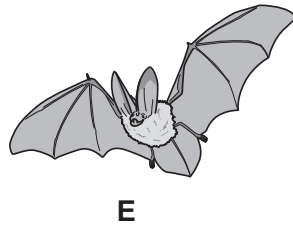
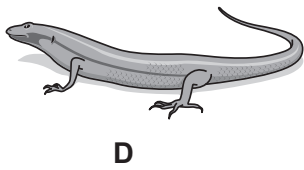
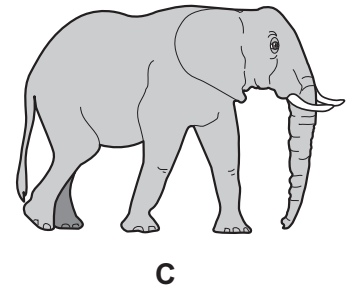
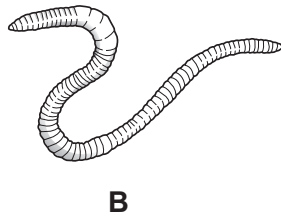
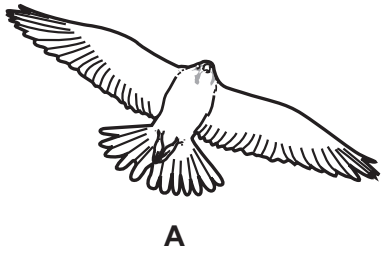
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.
You should show all your working in the booklet.
The total number of marks for this paper is 50.

This document consists of **23** printed pages and **1** blank page.

1 Living things can be sorted into groups.



(a) Put the living things into groups.

Three have been done for you.

group 1	group 2
A	D
F	

[1]

(b) Which feature is being used to sort the living things into these groups?

..... [1]

2 Look at the picture of a swan floating on water.



Which word describes why it looks like there are two swans in the picture?

Circle the correct answer.

intensity **opaque** **reflection** **shadow** **transparent**

[1]

3 Humans do good things and bad things to the environment.

Tick (✓) one **bad** thing humans do to the environment.

cause loss of species

plant forests

protect habitats

reduce waste

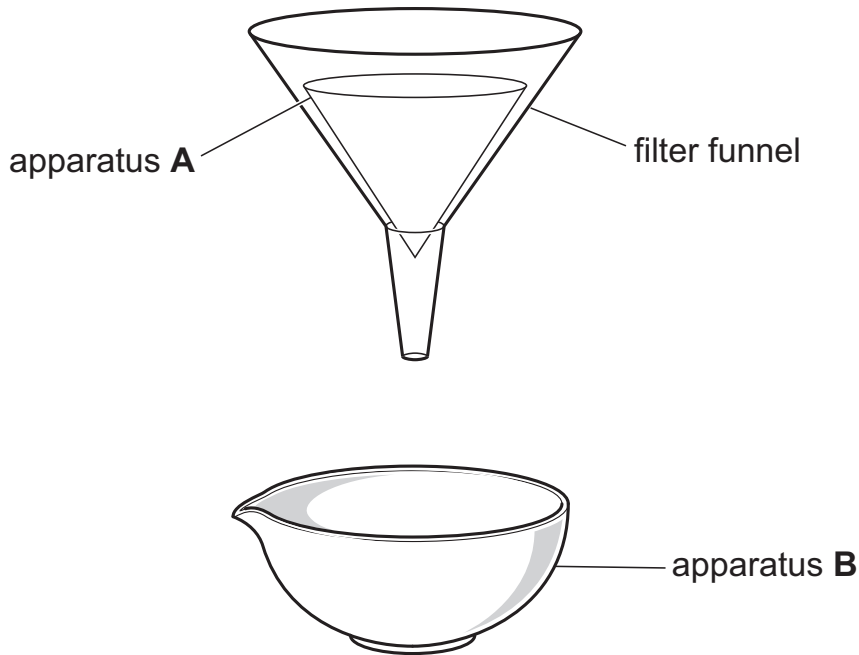
stop people killing animals

[1]

4 Carlos has a mixture of sand, salt and water.

He wants to separate the mixture.

Here is some of the apparatus that Carlos uses.



(a) What is the name of apparatus A?

..... [1]

(b) What is the name of apparatus B?

..... [1]

(c) Explain how you separate the mixture of sand, salt and water.

.....
.....
.....
.....
..... [3]

5 The Earth spins on its axis.



(a) How many times does the Earth spin on its axis in 24 **days**?

Circle the correct answer.

- 1 12 24 48 365

[1]

(b) What do the arrows on the diagram show?

.....
..... [1]

6 Cups for hot drinks are often made from foam plastic.



One reason why foam plastic is used is because it does **not** dissolve.

Write two **other** reasons why foam plastic is used to make a cup for hot drinks.

1
2

[2]

7 Look at the information about the length of intestines in different animals.

animal	length of intestines in m
A	30.0
B	57.1
C	4.8
D	32.7
E	24.9

(a) Where are the intestines?

Circle the correct answer.

in the abdomen

in the chest

in the head

in the legs

in the stomach

[1]

(b) Which animal do you predict is the **smallest**?

Complete the sentences.

I predict that animal is the smallest.

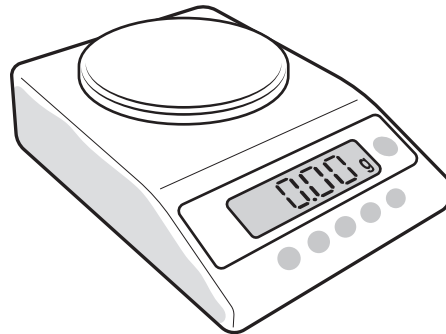
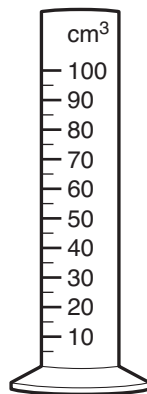
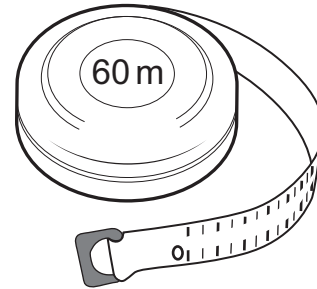
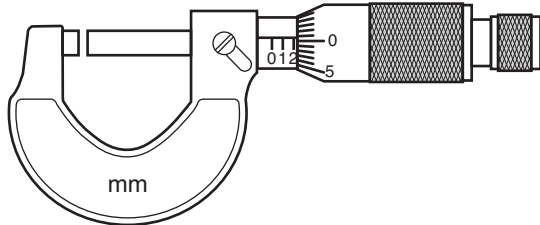
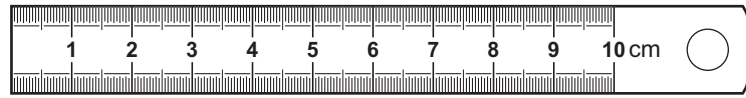
I predict this because

.....

[1]

(c) Which apparatus measures the length of the intestines of animal **B**?

Circle the correct answer.



[1]

8 Blessy investigates some colourless liquids.

She boils the liquids for 15 minutes.

Look at her results.

liquid	temperature of boiling liquid in °C	other observations
A	107	liquid completely disappears
B	104	liquid disappears and leaves behind a white solid
C	100	liquid completely disappears
D	65	liquid completely disappears
E	160	liquid completely disappears

(a) What is the name of the apparatus Blessy uses to measure the temperature?

..... [1]

(b) Blessy must be careful doing the experiment since the liquids may be flammable.

Explain why Blessy must be careful.

..... [1]

(c) Describe what happens to a liquid when it boils.

..... [1]

(d) One of the liquids is pure water.

Which one?

Explain your answer.

..... [1]

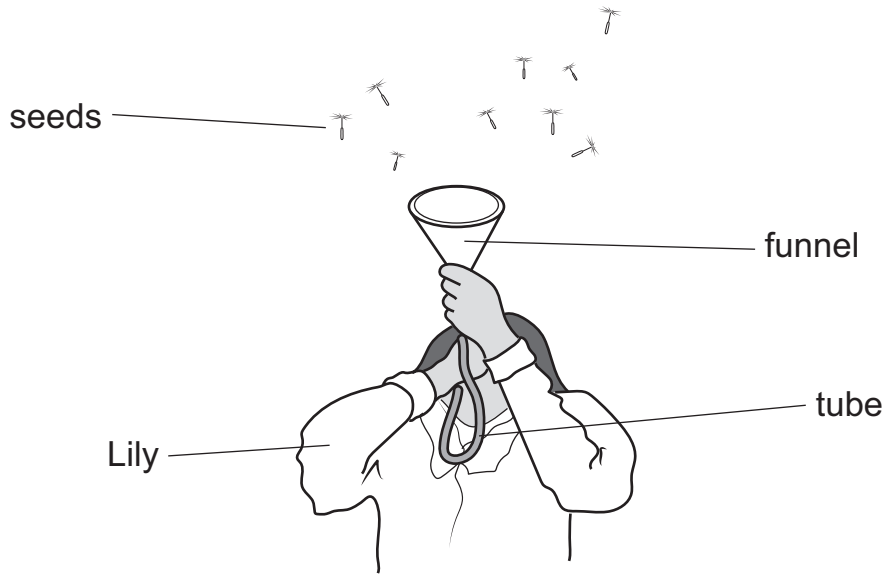
(e) One of the liquids is a solution.

Which one?

Explain your answer.

..... [1]

9 Lily investigates seed dispersal.



Lily puts seeds in the funnel.

She blows through the tube.

(a) Which type of seed dispersal is she investigating?

..... [1]

(b) Lily repeats the investigation with different seeds.

Describe two things she keeps the same to make it a fair test.

- 1
- 2

[2]

10 (a) Draw a line from the **measurement** to the correct **unit**.

You can draw a line to each **unit** once, more than once, or not at all.

measurement	unit
force	kilogram
mass	kilometre
weight	litre
	newton

[2]

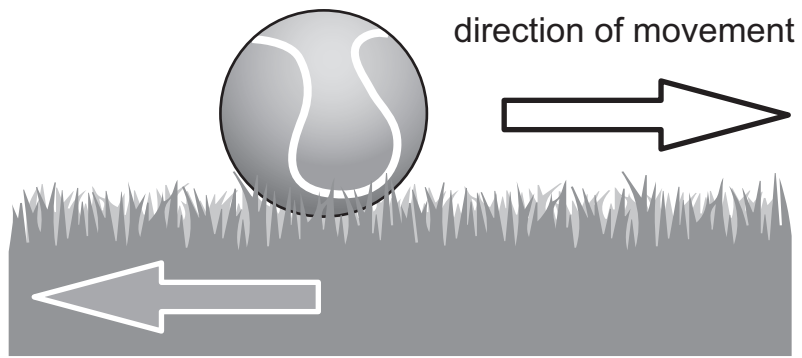
(b) This piece of apparatus is being used to measure a force.



What is the name of this piece of apparatus?

..... [1]

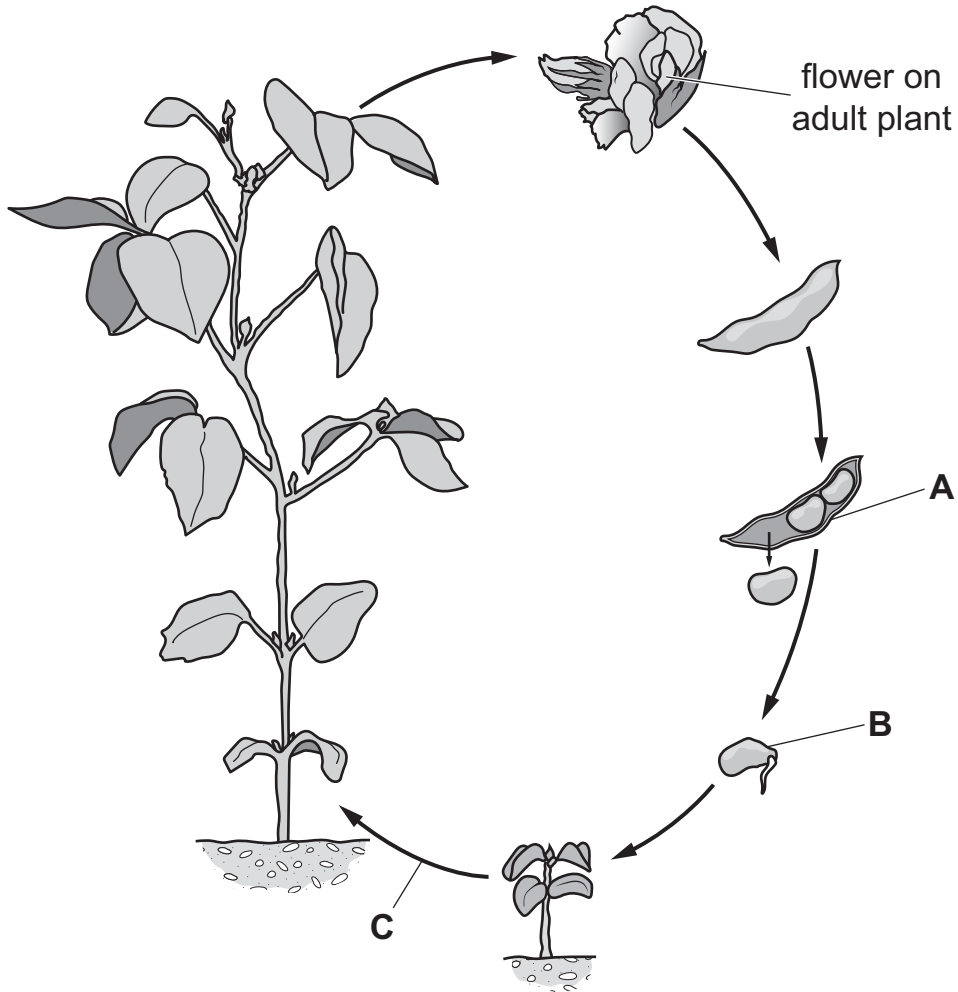
(c) This ball is moving across the grass.



[1]

.....
Label the arrow with the name of the force slowing the ball's movement.

11 The diagram shows some of the stages in the life cycle of a plant.



Draw a line to match each **label** with the **description** it shows.

label

description

A

fertilisation

B

germination

C

growth

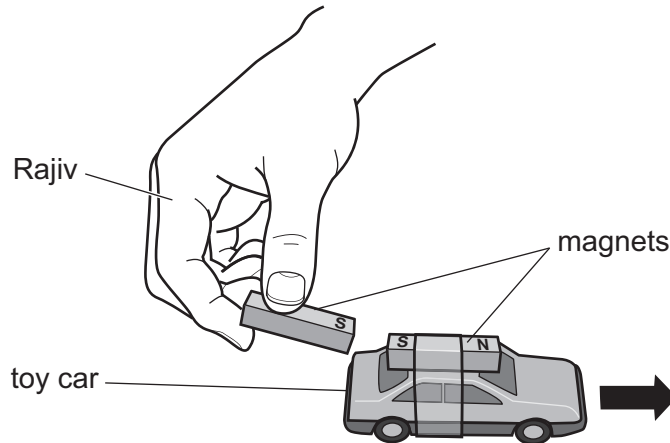
pollination

seed dispersal

[2]

12 Rajiv has two magnets.

- he sticks one magnet to his toy car
- he holds the other magnet
- the toy car moves



The arrow shows the direction the car moves.

(a) What happens between the two magnets?

Circle the correct answer.

a force of attraction

a force of repulsion

a negative force

a positive force

there is no force

[1]

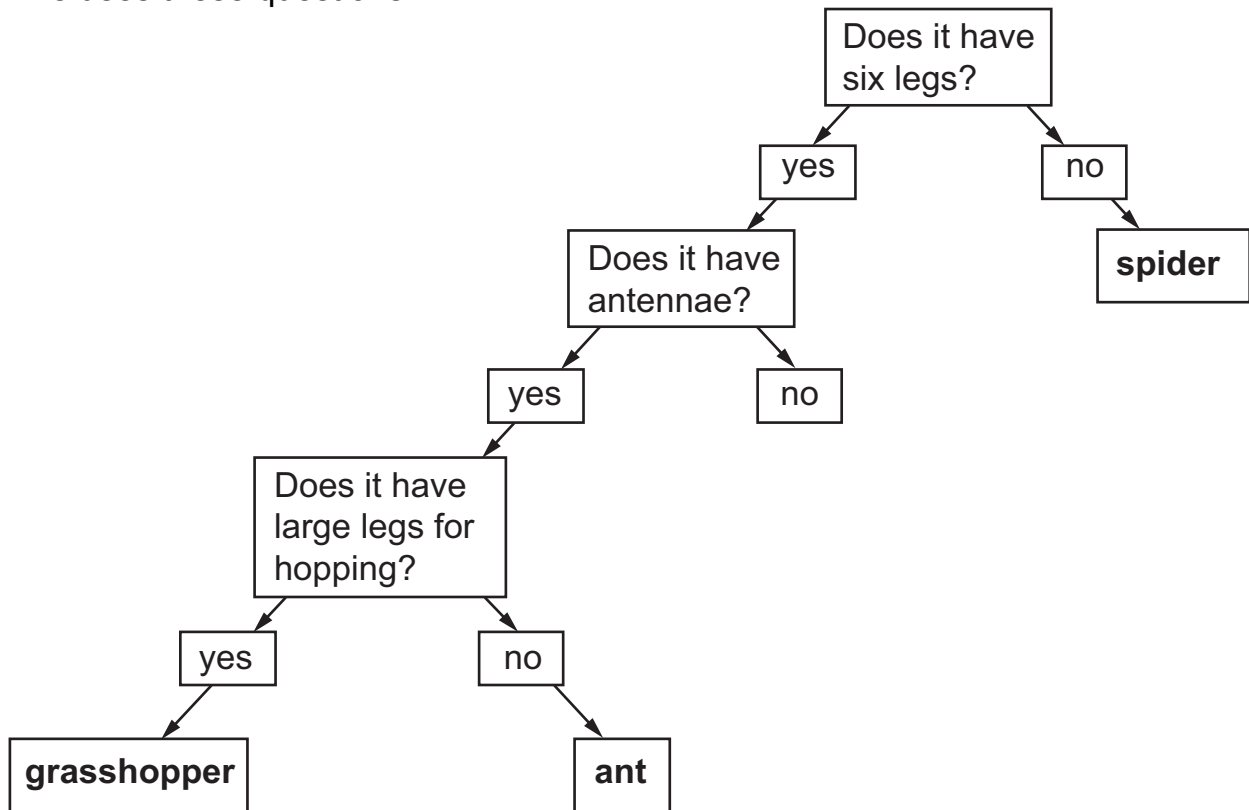
(b) Rajiv wants to make the toy car move in the opposite direction.

Describe what Rajiv does to the magnet in his hand.

.....
 [1]

13 Oliver wants to know what different organisms are called.

He uses these questions.



Complete the sentence.

Oliver finds out what animals are called by using this identification

Circle the correct answer.

- chart key table graph results**

[1]

14 Sound travels through some materials faster than others.

The table shows the speed of sound in different materials.

material	speed of sound in m/s
A	330
B	984
C	5890
D	4689
E	1479

(a) What is the difference between the speed of sound in material C and material D?

Circle the correct answer.

- 1199 1201 1211 1219 1910 [1]

(b) Sound travels **slower** through gases than solids or liquids.

Material B is a liquid.

Which material in the table is air?

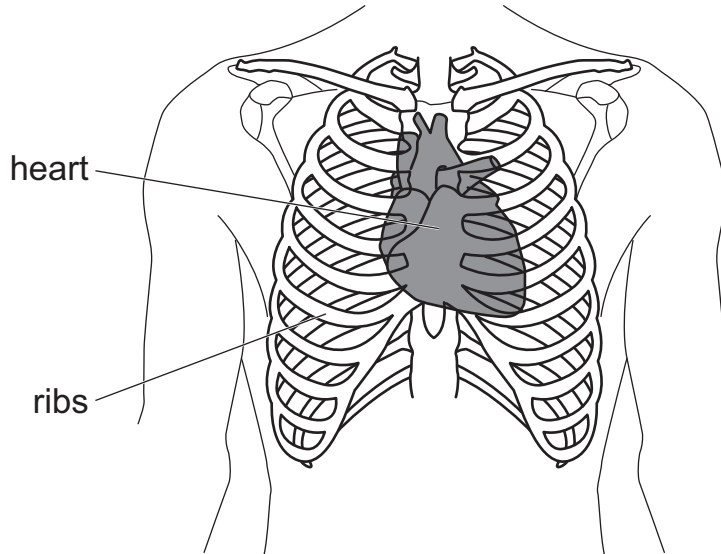
Circle the correct answer.

- A C D E [1]

(c) Describe what happens to air particles when sound travels through air.

.....
 [1]

15 The picture shows the position of the heart in the body.



(a) What is the function of the heart?

.....
..... [1]

(b) The heart is made of muscle.

What are the ribs made of?

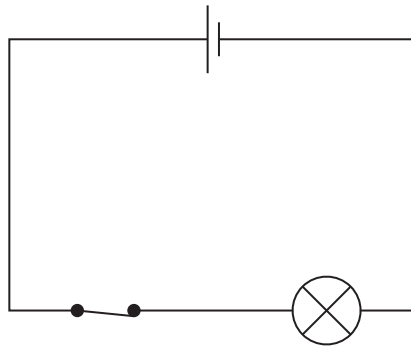
..... [1]

(c) The ribs protect the heart.

Write down the name of one other organ protected by the ribs.

..... [1]

16 Look at this electrical circuit.



Why does this electrical circuit **not** work?

Tick (✓) **one** box.

the lamp is on the wrong side of the switch

the switch is open

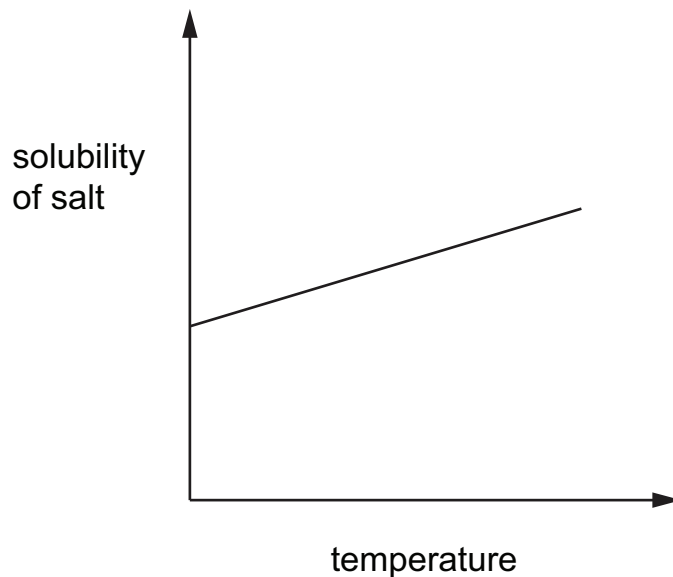
there is no cell

the circuit is **not** complete

[1]

17 Rajiv investigates the solubility of some substances using the internet.

(a) He finds a line graph about the solubility of salt.



Rajiv makes a conclusion.

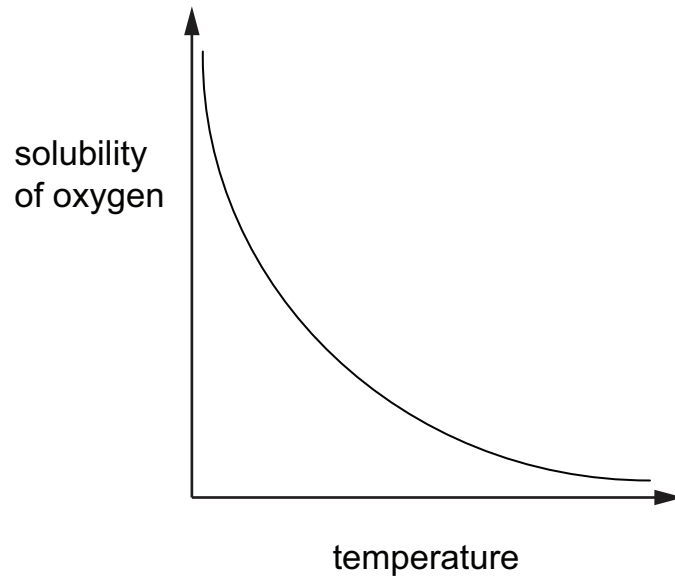
Complete his conclusion.

As the temperature the solubility of salt

.....

[1]

(b) He finds a line graph about the solubility of oxygen.



Rajiv makes a conclusion.

Complete his conclusion.

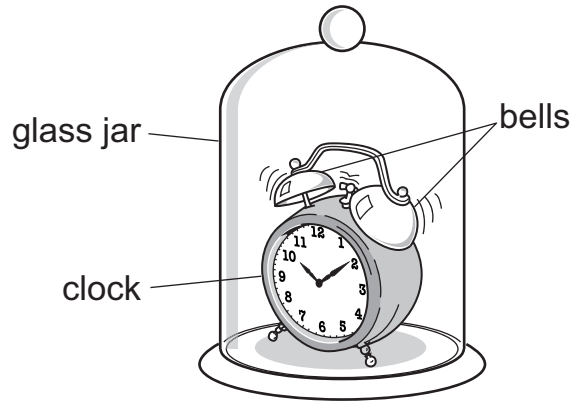
As the temperature the solubility of oxygen

.....

[1]

18 Priya and Carlos investigate sound.

They put a clock with bells in a glass jar.



They listen to the sound made by the bells.

(a) What apparatus do they use to measure the volume of sound?

..... [1]

(b) Carlos measures the volume of sound.

Priya says

‘We must measure the volume of sound more than once.’

Explain why they must measure the volume of sound more than once.

.....
..... [1]

(c) Carlos writes down the results.

volume in decibels
62
61
62
68
61

Describe two things about the results.

- 1
- 2

[2]

19 The ball has mass and weight.



(a) Circle the correct statement about the **mass** of the ball.

the mass is 0.45 cm^2

the mass is 0.45 kg

the mass is 0.45 m

the mass is 4.5 N

the mass is 4.5 s

[1]

(b) Circle the correct statement about the **weight** of the ball.

the weight is 0.45 cm^2

the weight is 0.45 kg

the weight is 0.45 m

the weight is 4.5 N

the weight is 4.5 s

[1]

20 Each of the following words is connected with dissolving.

Draw a line between the **word** and its correct **meaning**.

word	meaning
solute	a mixture of a dissolved solid and a liquid
solution	the liquid that dissolves a solid
solvent	the solid that dissolves in a liquid

[2]

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