

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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SCIENCE

Paper 1

0846/01

April 2016

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Pen Calculator
 Pencil
 Ruler

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 **22** printed pages and **2** blank pages.

- 1 The three states of matter are solid, liquid and gas.

The table shows the state of matter at room temperature, 25 °C, of some materials.

Complete the table.

Tick (✓) the correct boxes.

One has been done for you.

material	solid	liquid	gas
water		✓	
iron			
mercury			
oxygen			
carbon dioxide			
copper			
salt			

[3]

2 Here is a forest habitat.



(a) Humans can have a **positive** effect on this habitat.

Circle the **best** way that humans can have a positive effect.

littering the forest

making paths through the forest

protecting the species in the forest

removing the fruits from the forest

[1]

(b) Human action can have other **positive** effects on the forest.

Draw a line to connect the **action** to its **positive effect**.

action

positive effect

educating people

number of trees increases

planting new trees

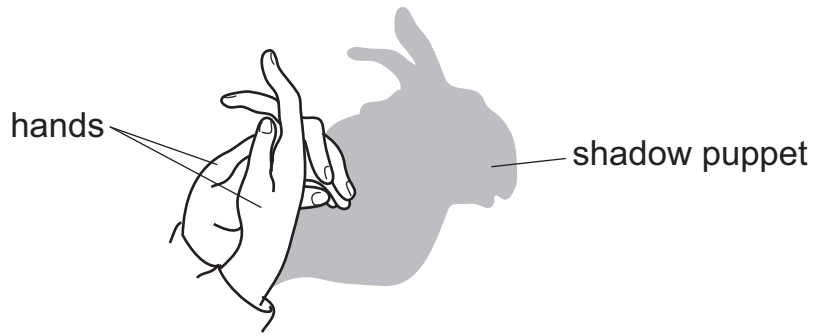
know how to care for the
environment

removing old dead trees

more space for new trees to grow

[2]

3 Hassan makes a shadow puppet with his hands.



(a) Describe how Hassan can make the shadow puppet a different size.

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

(b) Complete the sentence.

Choose the **correct** word from the list.

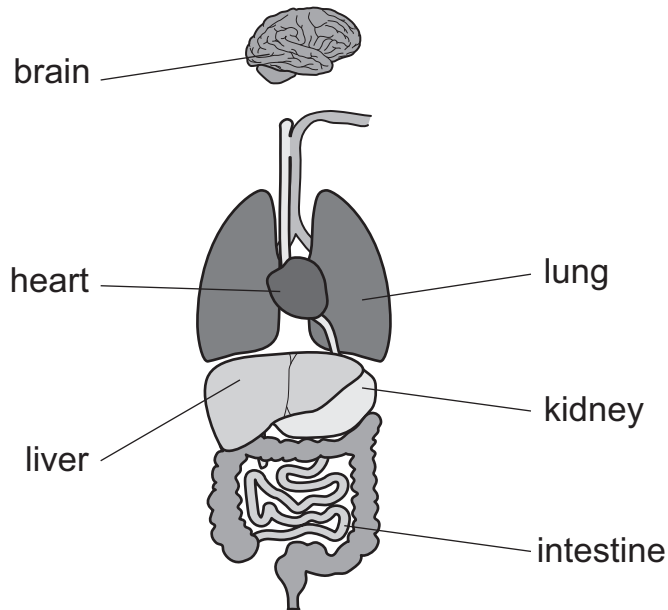
- flexible** **large** **opaque** **transparent**

Hassan makes a shadow puppet because his hands are

..... [1]

4 The body has many different organs.

Angelique labels this diagram of different organs in the body.



One of the labels is **wrong**.

Which label is **wrong**?

..... [1]

5 Oskar investigates what happens when four white solids are mixed with water.

- He puts 10 cm³ of water into a test tube.
- He measures the temperature of the water.
- He then puts 1.0g of solid into the same test tube.
- He stirs the solid and water for 1 minute.
- He then measures the temperature of the water again.

Here are his results.

solid	temperature before in °C	temperature after in °C	appearance of the mixture
A	20	30	colourless solution
B	20	23	blue solution
C	20	17	colourless solution
D	19	19	cloudy mixture

(a) Match the piece of equipment needed to make the measurements.

Draw a line between the correct **piece of equipment** and the **measurement**.

piece of equipment

measurement

balance

10 cm³ of water

measuring cylinder

temperature of water

stop watch

1.0g of solid

thermometer

1 minute

[2]

(b) Which solids made the water warmer?

..... [2]

(c) Which solid did **not** dissolve in water?

..... [1]

6 This question is about sound.

Decide if these statements are **true** or **false**.

Tick (✓) the correct box next to each statement.

	true	false
Sound can travel through air.	<input type="checkbox"/>	<input type="checkbox"/>
Sound travels as vibrations.	<input type="checkbox"/>	<input type="checkbox"/>
Sound travels at the same speed in all materials.	<input type="checkbox"/>	<input type="checkbox"/>
We hear sounds when vibrating air hits our eardrums.	<input type="checkbox"/>	<input type="checkbox"/>

[2]

7 Class six have a quiz about organs in the human body.

Write the answer for each clue.

Clue 1: I pump blood around the body.

What organ am I?

Answer

Clue 2: I control all other organs.

What organ am I?

Answer

Clue 3: I get oxygen from the air and put it into the blood.

What organ am I?

Answer

Clue 4: If I stop working, waste builds up in the blood.

Your blood will need to be filtered by a machine.

What organ am I?

Answer

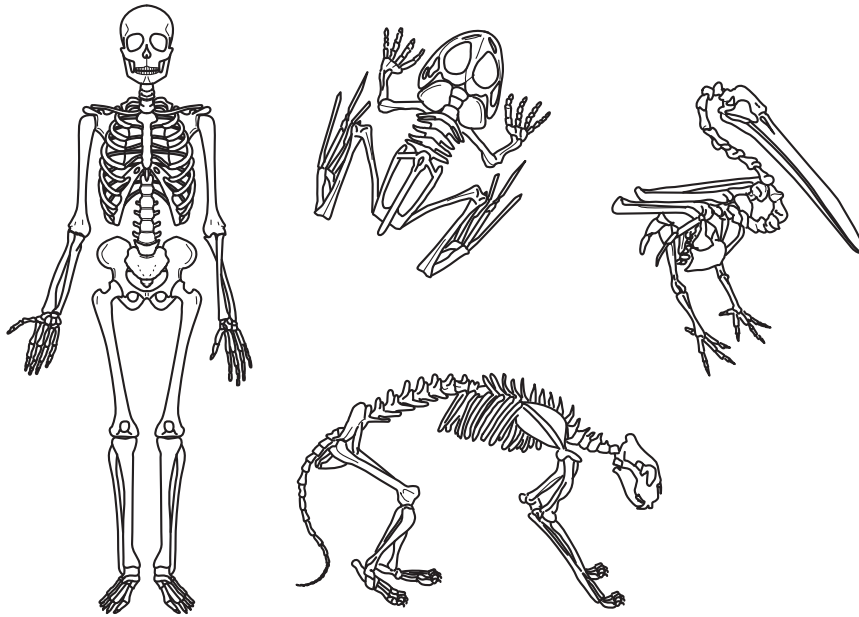
Clue 5: I hold food when it is broken down.

What organ am I?

Answer [3]

8 Many animals have skeletons.

Look at these animal skeletons.



(a) Are these statements **true** or **false**?

The first one has been done for you.

All the skeletons have a skull. **true**

All the skeletons protect the organs inside the body.

All the skeletons grow as the animals grow. [1]

(b) Are these statements **true** or **false**?

Two of the skeletons are human.

Only humans have muscles attached to the bones. [1]

9 (a) Which statements about a magnet are true?

Tick (✓) the box next to the **two** correct statements.

Like poles of two magnets attract.

Magnetism is a force.

Most magnets are made of iron.

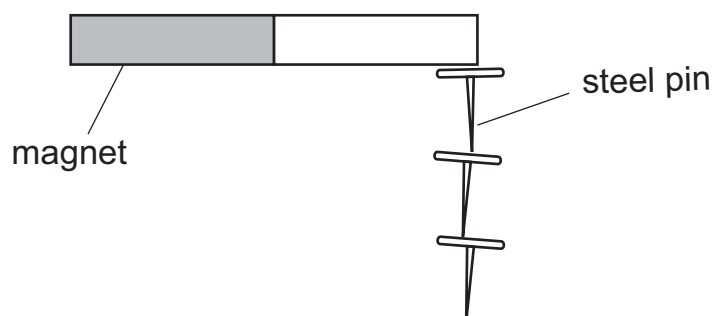
Most metals are attracted towards a magnet.

[2]

Mia has five magnets **A B C D E**.

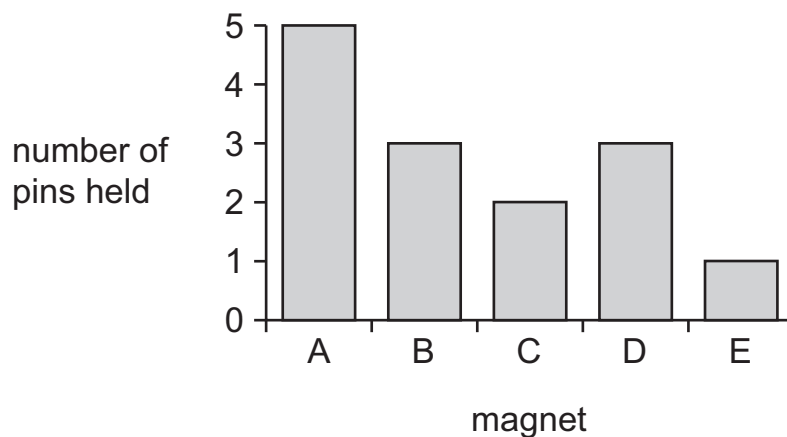
She wants to know how strong each of them is.

She hangs steel pins from each of the magnets as shown.



She hangs as many pins as the magnet can hold.

The results are shown in the bar graph.



Use the information in the graph to answer the questions below.

(b) Which magnet is the strongest?

Explain your answer.

.....
..... [2]

(c) State one thing that Mia must do to make sure that this is a **fair test**.
..... [1]

10 Pierre investigates different materials.

- He writes his name on a piece of paper.
- He puts different materials over his name.



Here are his results.

! ! Pierre	!	!
!	! Pierre	!

(a) How many of the materials are opaque?

Circle the correct answer.

- 1 2 3 4 5 6

[1]

(b) Pierre thinks that one of the materials is more transparent than the others.

Use his results to explain why.

.....

..... [1]

11 Which of these sentences about water are correct?

Tick (✓) the **two** correct boxes.

At sea level water boils at 90 °C.

Steam condenses to make water vapour.

The boiling of water is an irreversible process.

The freezing point of water is the same as the melting point of ice.

The melting point of ice is 0 °C.

Water evaporates to make ice.

[2]

12 Seeds can be dispersed in different ways.

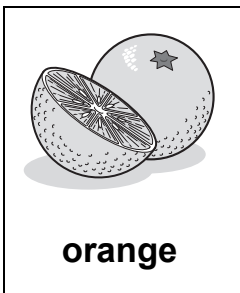
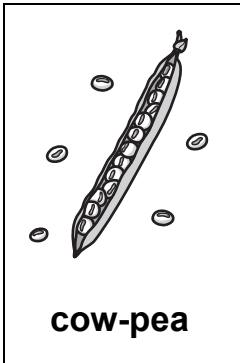
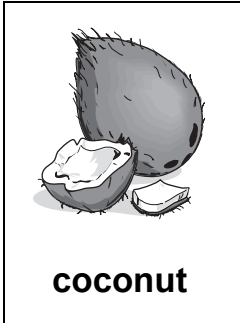
Choose the correct word for how each seed is dispersed.

animal

explosion

water

wind



[2]

13 Chen, Mike and Oliver write notes about the Earth and the Sun.

Look at their notes.

Chen

The Sun spins on its own axis.
It takes a year to orbit the Earth.

Mike

The Earth spins on its own axis.
It takes a year to orbit the Sun.

Oliver

The Earth spins on its own axis.
It takes a day to orbit the Sun.

Only one is correct.

Circle the name of the child who is correct.

Chen

Mike

Oliver

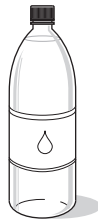
[1]

14 The table shows some properties of substances.

material	does it dissolve in water?	colour	melting point
chalk	no	white	above 700 °C
fertiliser	yes	white	above 700 °C
plastic	no	colourless	80 °C
pottery	no	white	above 700 °C

(a) Complete the sentences about the uses of materials.

Use information from the table.



Plastic is used to make containers for cold water.

This is because plastic

[1]



Pottery is used to make cups for hot tea.

This is because pottery

[1]

(b) Safia separates a mixture of chalk and fertiliser.

Tick (✓) the method she uses.

add water, filter and evaporate the filtrate

evaporate the mixture and then condense the vapour

filter the mixture

use a magnet

[1]

(c) Aiko separates a mixture of iron powder and chalk.

Tick (✓) the method she uses.

add water, filter and evaporate the filtrate

evaporate the mixture and then condense the vapour

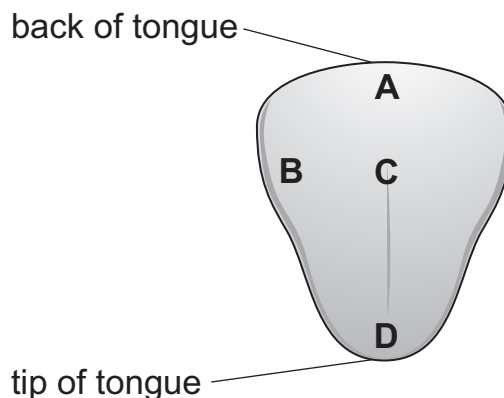
filter the mixture

use a magnet

[1]

15 Fatima and Jamila investigate the sense of taste.

Here are the areas of Jamila's tongue.



They use four different liquids.

Fatima puts a drop of each liquid onto different areas of Jamila's tongue.

Jamila puts a tick (✓) in the table when she can taste the liquid.

type of liquid	area A	area B	area C	area D
bitter	✓			
salty				✓
sour		✓		
sweet				✓

(a) Which area of the tongue can taste the **most** different types of liquid?

..... [1]

(b) Fatima predicts that **area C** has the fewest taste buds.

Describe how the results show that her prediction is correct.

.....
 [1]

(c) Jamila puts some sweet solution on the tip of her tongue.

Can she taste it?

Circle the correct answer.

yes

no

Explain your answer.

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

16 Which scientist **first** explained how gravity works?

Tick (✓) the correct scientist.

Albert Einstein

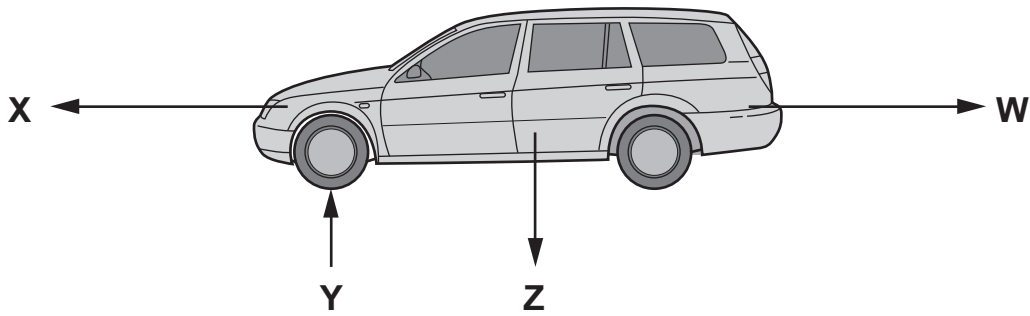
Galileo Galilei

Isaac Newton

Robert Hooke

[1]

17 Cars have different forces acting on them.



The car is moving in the direction of arrow **X**.

(a) Which letter shows the **weight** of the car?

Circle the correct answer.

X **Y** **Z** **W**

[1]

(b) Which letter shows the **air resistance**?

Circle the correct answer.

X **Y** **Z** **W**

[1]

18 Carlos adds some salt to a beaker of water.

He also adds some sand to another beaker of water.

Complete these sentences about adding salt and sand to water.

Choose from the words below.

condenses

evaporates

dissolves

insoluble

soluble

solute

solvent

(a) Salt in water to make a solution. [1]

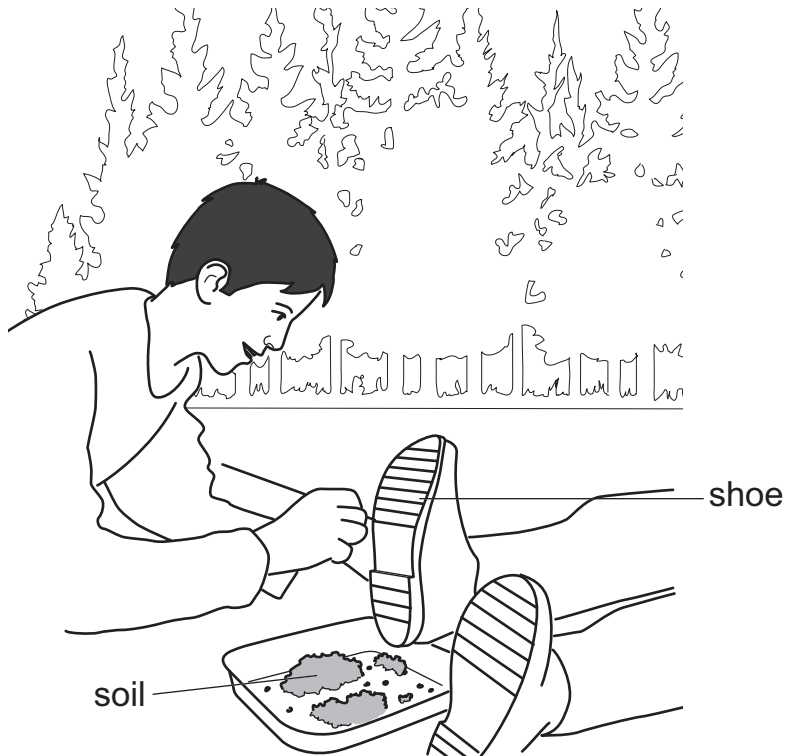
(b) Water is the in this process. [1]

(c) Salt is the in the solution. [1]

(d) When all water from the salt solution
a white solid is left behind. [1]

(e) Sand does not make a solution when mixed with water because it is
..... [1]

19 Ahmed and Hassan investigate plant seeds.



- Ahmed walks in a forest.
- Hassan collects the soil from the bottom of Ahmed's shoe.
- They look at the soil they have collected.
- They repeat the investigation in different places.

(a) Ahmed always walks the same distance in each place.

Why does he do this?

..... [1]

(b) Write down **one** other factor they keep the same in each place.

..... [1]

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