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St Hilda's Primary School

P4 Term 1 Science Unweighted Assessment 2023

40

Name:_____ Date: _____

Class: P4_____ Parent's Signature: _____

Duration: 50 mins Topics: Human System, Matter

1. The structures below are grouped according to the body systems that they belong to. Which one has been placed <u>incorrectly</u>?

Digestive system	Skeletal system	Circulatory system
Lungs	Skull	Heart
Gullet	Backbone	Blood in blood vessels

1) Skull
2) Lungs
3) Backbone
4) Heart

( )

2. Which of the following systems work together to help Fiona run?



A. Respiratory system
B. Circulatory system
C. Muscular system
D. Skeletal system

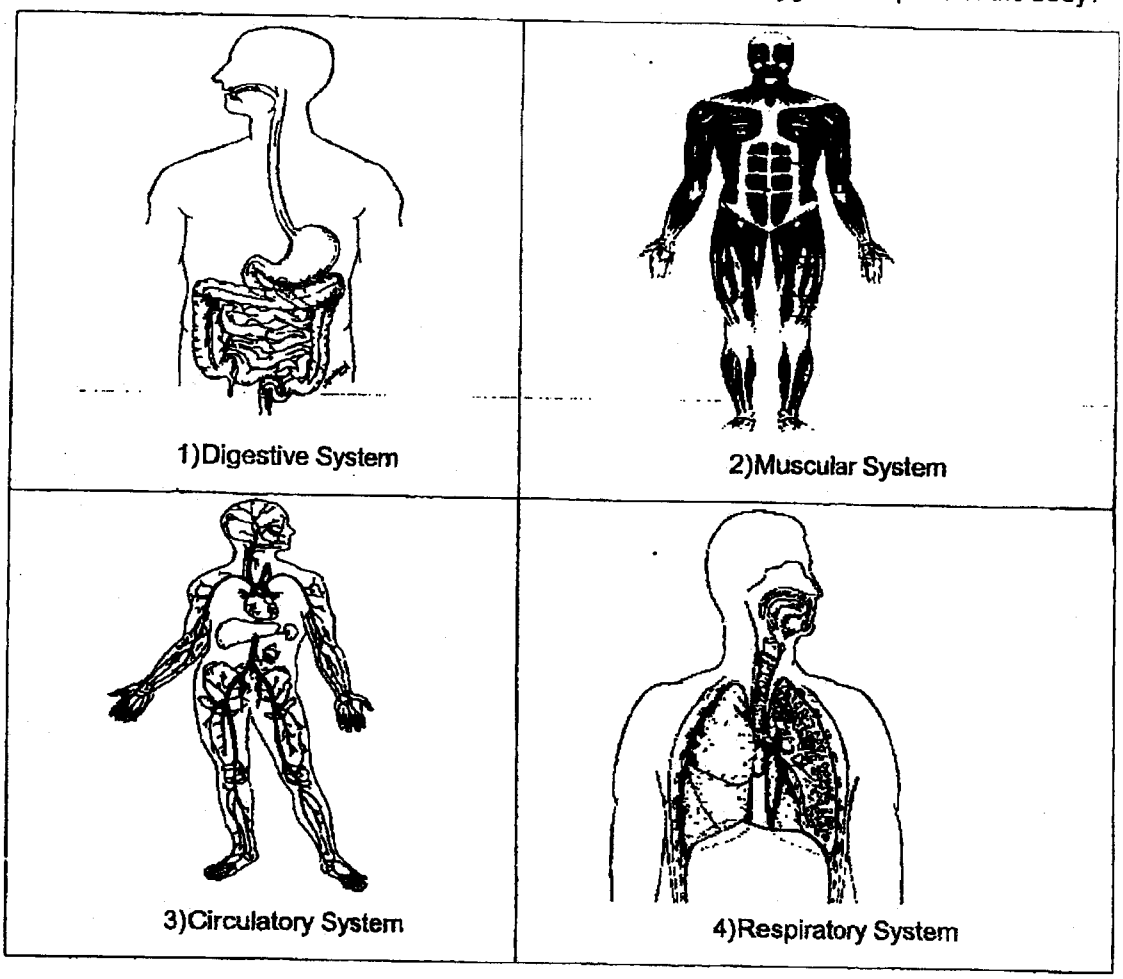
1) A and B only
2) C and D only
3) A, C and D only
4) A, B, C and D

( )

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3. Which one of the following systems delivers digested food and oxygen to all parts of the body?



( )

4. Digestion takes place at the _____.

A: Mouth
B: Gullet
C: Stomach
D: Small intestine
E: Large intestine

1) C and D only
2) A, C and D only
3) B, C and D only
4) B, D and E only

( )

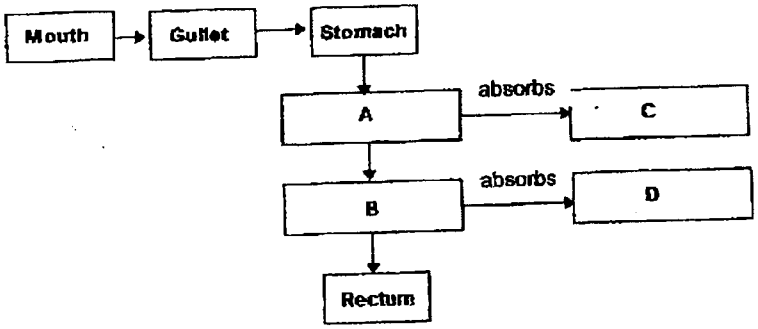
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5. Which of the following functions does **not** match with the human body system?

	System	Function
(1)	Skeletal	supports the body
(2)	Muscular	protects our vital organs
(3)	Respiratory	removes air from the body
(4)	Digestive	breaks down our food into simple substances

( )

6. Study the diagram below.



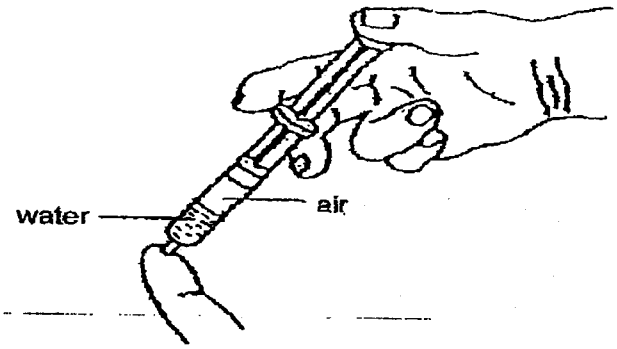
Which of the following is correct?

	A	B	C	D
1)	Small intestine	Large intestine	Digested food	Water
2)	Large intestine	Small intestine	Water	Digested food
3)	Small intestine	Large intestine	Water	Undigested food
4)	Large intestine	Small intestine	Undigested food	Water

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7. A syringe is filled with an equal volume of air and water. The nozzle of the syringe is covered tightly by a finger as shown below.



Which of the following is true when the plunger is pushed in?

	Volume of Air	Volume of Water
1	Decrease	Decrease
2	Decrease	No Change
3	No Change	Decrease
4	No Change	No Change

( )

8. Study the table below. Which object is **not** ticked **correctly**?

√ means "has that property", X means "does not have that property".

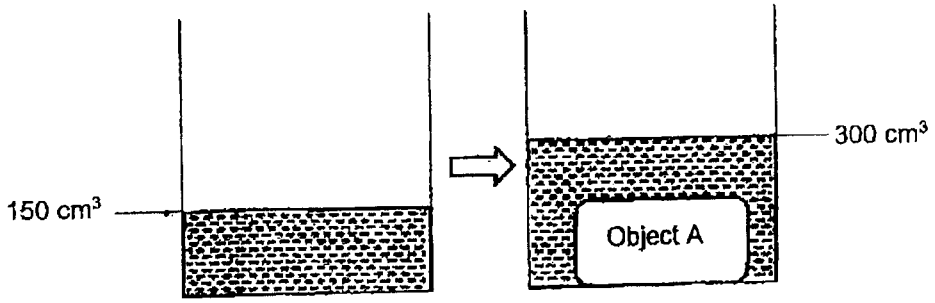
Objects	Definite Shape	Definite Volume
Small Pebbles	√	√
Oxygen	√	X
Milk	X	√
Pen	√	√

1) Milk
2) Pen
3) Oxygen
4) Small Pebbles

( )

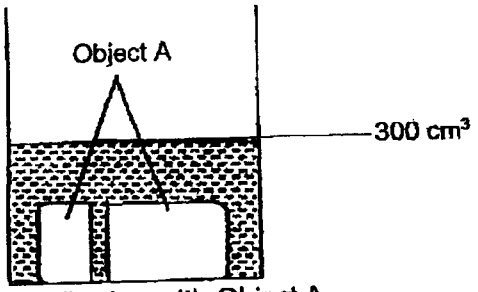
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9. Karen placed Object A into a beaker of 150 cm^3 of water. The water level then rose to 300 cm^3.



Beaker without Object A Beaker with Object A

She removed Object A and cut it into two separate pieces. The diagram below shows the water level when she placed the two cut pieces of Object A back into the beaker.



Beaker with Object A

From the above observation, what can Karen conclude about the properties of Object A?

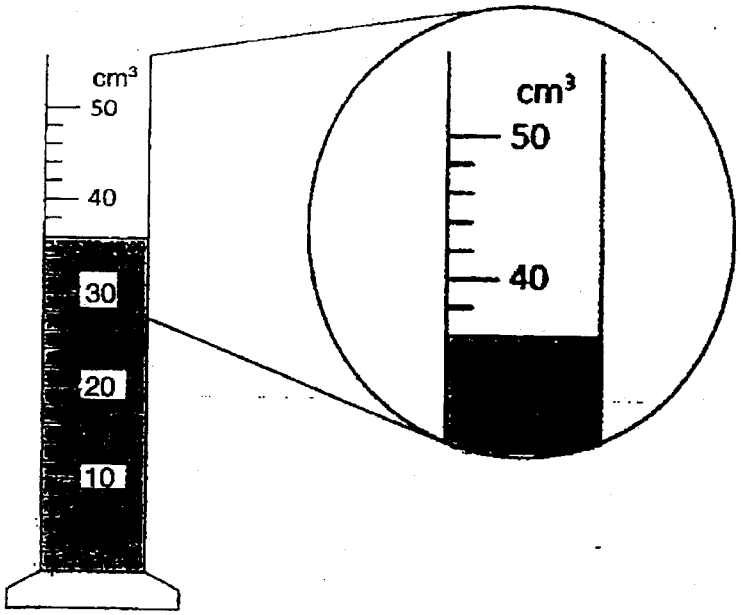
A) Has mass
B) Can be compressed
C) Has definite volume
D) Has no definite volume

1) C only
2) A and B only
3) B and D only
4) All of the above

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10. Study the diagram shown below.



What is the volume of the liquid shown above?

1) 33 cm^3

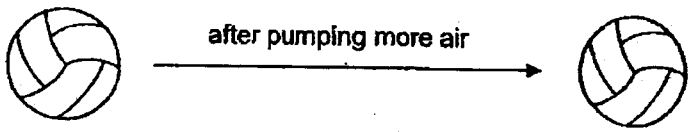
2) 35 cm^3

3) 36 cm^3

4) 38 cm^3

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11. When more air is pumped into a volley ball as shown in the diagram below, it does not get any bigger.



Which one of the following property of air does the above diagram show?

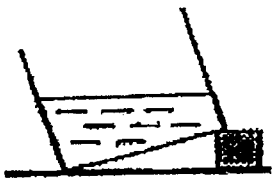
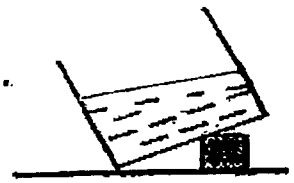
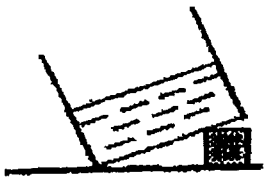
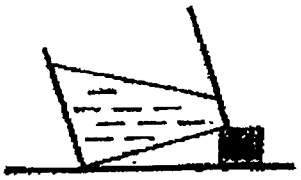
This shows that air _____.

1) has mass
2) has volume
3) can be compressed
4) does not occupy space

( )

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12. Which one of the following diagrams shows the correct water level in the container when the container is placed on the table after awhile?

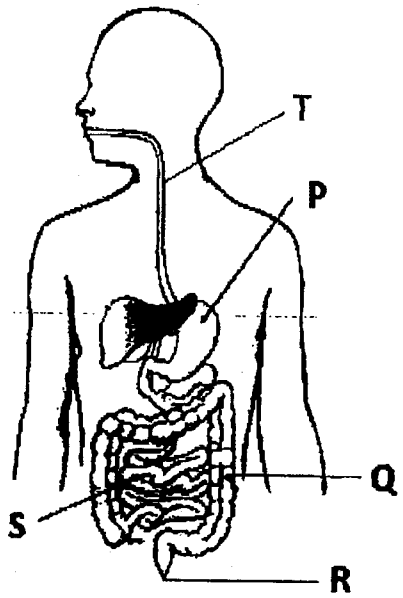
	
(1)	(2)
	
(3)	(4)

( )

End of Booklet A

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13. Study the diagram below and answer Questions 13 (a) and (b).



(a) Write the parts, P, Q, R, S and T in the blanks below to match them with the descriptions stated. (2m)

	Parts
Digested food enters the blood stream.	
Water is removed from the undigested food here.	
The muscle contracts to churn food and produces digestive juices to break them down into simple substances.	
Undigested food leaves the body here.	

(b) Mr George is eighty years old and he has lost some of his tooth due to his old age. His doctor has advised him to cut his food into smaller pieces when consuming food. Explain how this helps him in the digestion of his food. (2m)

_____

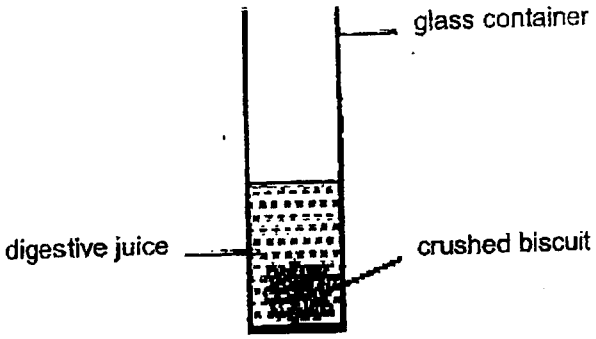
_____

_____

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14. Daniel crushed a piece of biscuit 10 times and placed it into a glass container containing some digestive juice as shown in the diagram below.



He repeated the same process for another 3 pieces of similar biscuits, each crushed for a different number of times. He recorded the time taken for the biscuits to be completely broken down into simpler substances.

Mass of the biscuit (grams)	20	20	20	20
Number of times the biscuit was crushed	10	15	20	25
Time taken for the biscuit to be completely broken down into simpler substances (minutes)	48	44	35	29

(a) Besides those stated above, what is **one** more variable that Daniel must **keep the same** in order to make the experiment a fair test? (1m)

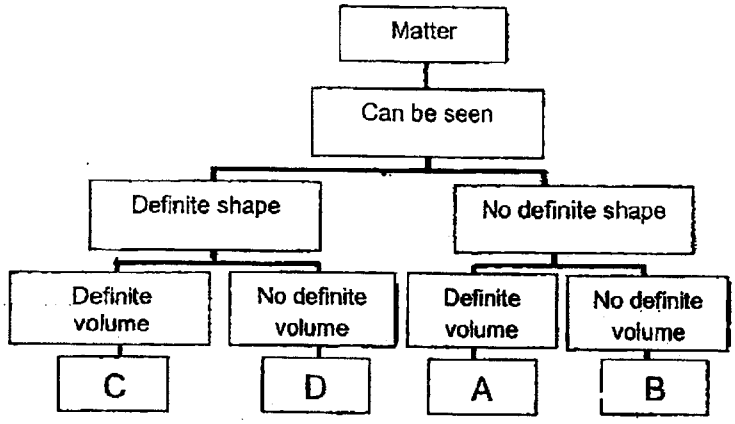
(b) Based on the information in the table above, what is the relationship between the number of times a piece of biscuit is crushed and the time taken for it to be completely broken down into simpler substances? (1m)

(c) What is the aim of Daniel's experiment? (1m)

3

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15. Study the classification chart below.



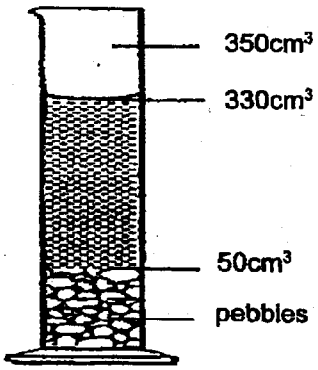
(a) Based on the classification chart above, state two characteristics of matter C. (1m)

_____

(1m)

_____

16. A measuring cylinder was packed with pebbles to the 50cm³ mark. 300 cm³ of water was added but the water level did not reach the 350cm³.



(a) Explain why the water level did not reach 350cm³. (1m)

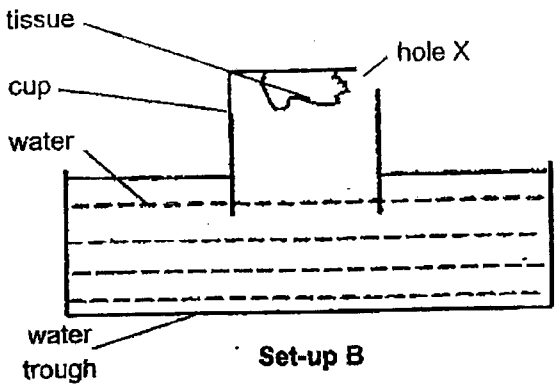
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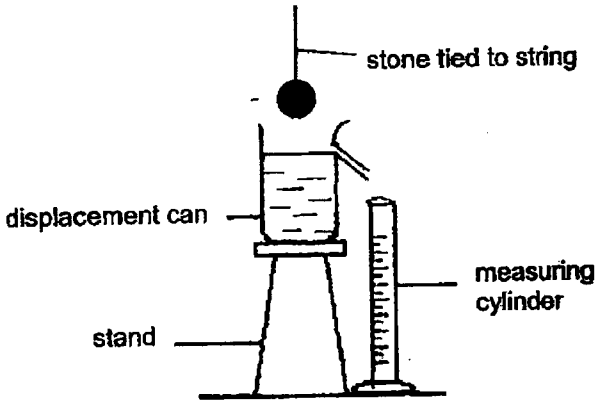
(b) In the diagram below, Ariel stuck a piece of dry tissue in a cup. She cut hole X in a corner of the cup. She then inverted the cup and pushed it directly into a trough of water.



Set-up B

Will the tissue paper remain dry? Explain why. (1m)

17. Florence conducted the experiment as shown below.



(a) What would happen when the stone was lowered into the above displacement can that was filled with water? (1m)

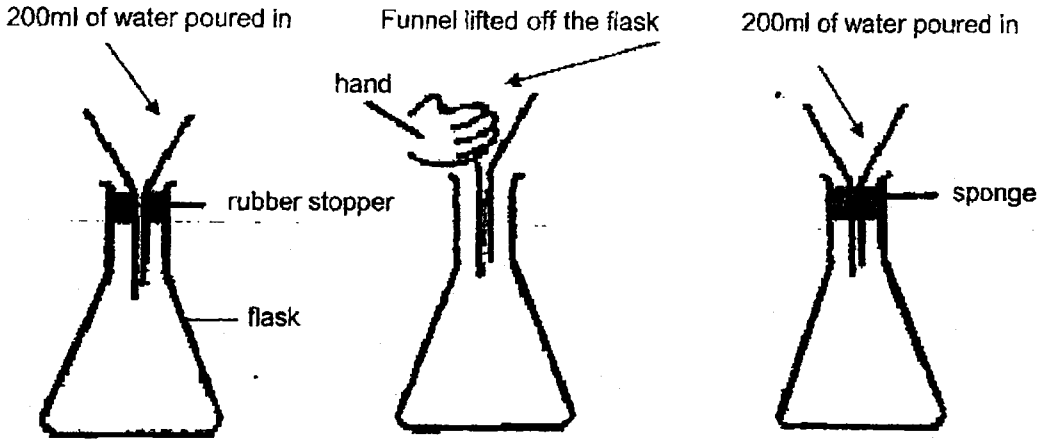
(b) Fill in the blank with the correct answer. (1m)

In the above experiment, Florence measured the _____ of the stone.

3

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18. Billy prepared 3 set-ups A, B and C as shown below. He then poured 200 ml of water into each funnel **at the same time** with help from his classmates. He observed the time taken for the water to flow into the flask.



Set Up A **Set Up B** **Set Up C**

(a) Arrange in ascending order how fast water would flow through the funnel from the slowest to the fastest in the boxes below using letters A, B and C only. **(1m)**

Slowest →		Fastest

(b) Water **flowed the least** into one of the set ups. Which set up is this? Explain your answer. **(2m)**

_____

_____

_____

3

End of Booklet B

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St Hilda's Primary School
Primary 4
Science
Term 3 Weighted Assessment, 2023

Section A	20
Section B	15
Total Score	35

Name: _____ ( )

Class: P4 _____

Duration: 45 minutes

Date: 18 August 2023

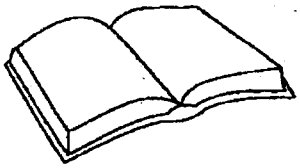
Section A: 20 Marks

Parent's Signature: _____

For questions 1 to 10, write your answer (1, 2, 3 or 4) in the bracket provided.

[2 marks each]

1 Which one of the following is a source of light?

(1)  hot tea	(2)  the moon
(3)  lit candle flame	(4)  a book

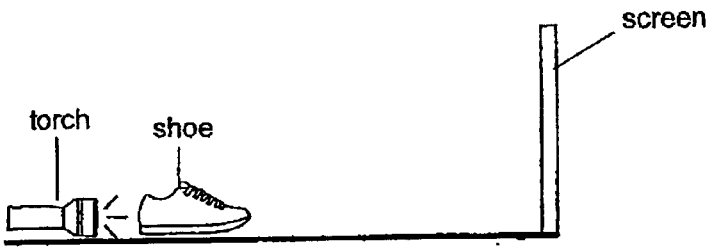
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SCORE	2

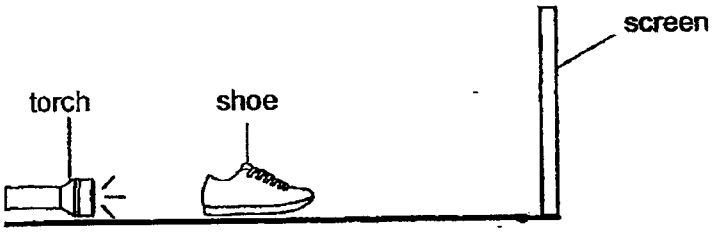
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2 Judy wanted to find out if the distance between the torch and the shoe affects the size of the shadow formed on the screen.
Which of the following setups would result in the smallest shadow formed on the screen?

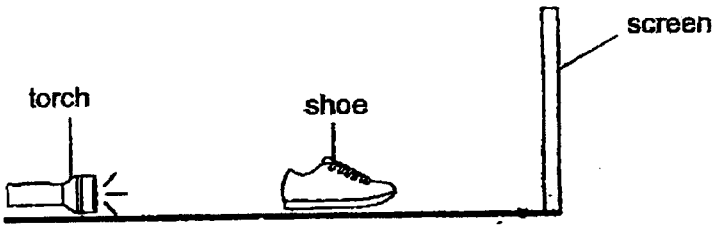
(1)



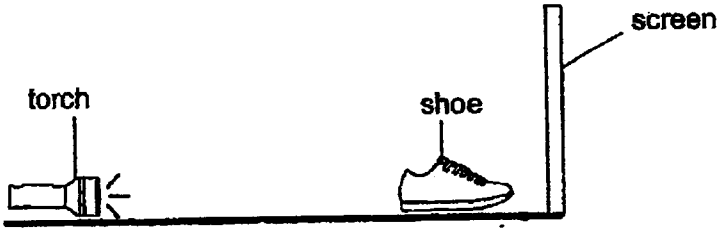
(2)



(3)



(4)



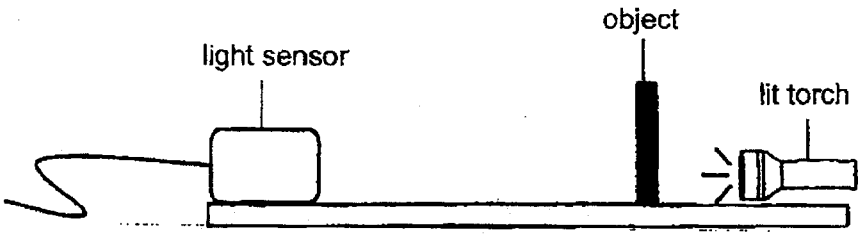
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2

SCORE	/ 2

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3 Sam wanted to find out how the thickness of an object affects the amount of light detected by the light sensor as shown in the experiment below.



Which of the following variables should be kept the same to ensure a fair test?

A The thickness of the object.
B The amount of light from the torch.
C The type of material used for the object.
D The distance between the light sensor and the object.

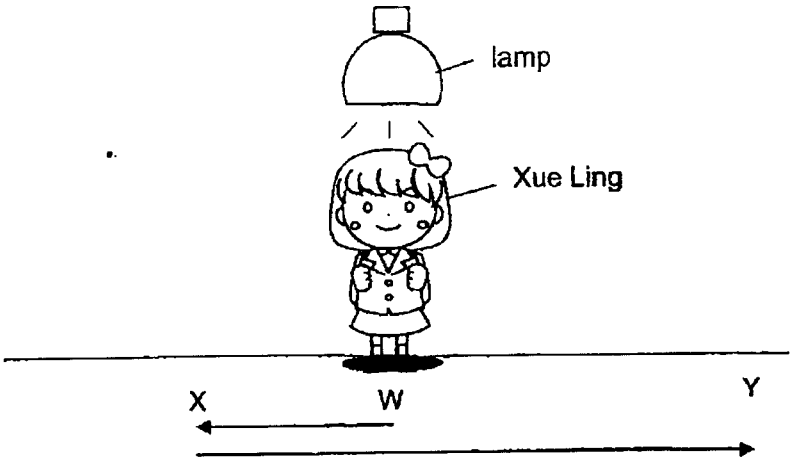
(1) A and C only
(2) A, B and D only
(3) B, C and D only
(4) A, B, C and D

( )

SCORE	/ 2

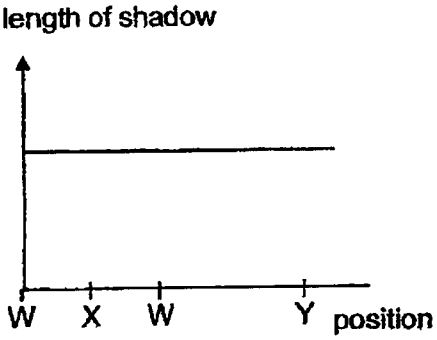
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4 Xue Ling stood under a lamp as shown in the diagram below.

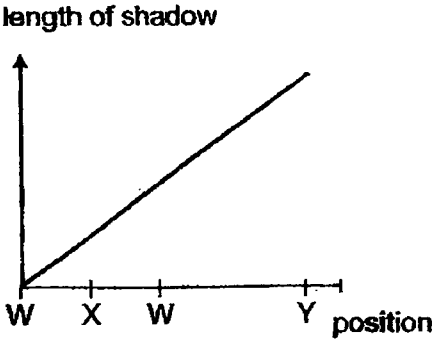


She walked from position W to position X and then to position Y in a straight line.
Which graph shows how the length of her shadow changes at different positions?

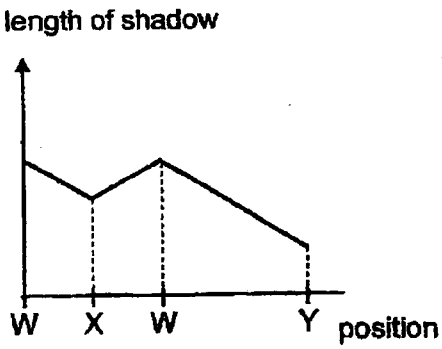
(1)



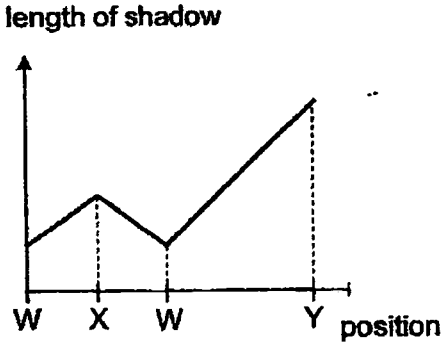
(2)



(3)



(4)

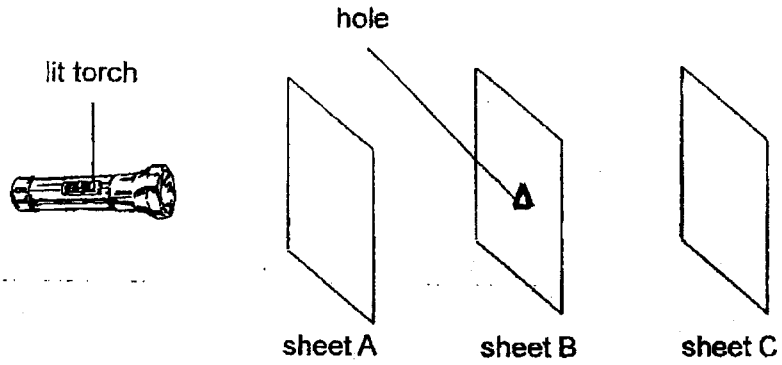


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SCORE 2

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5 An experiment was carried out in a dark room as shown below.



Sheets A, B and C were arranged in a straight line. When the torch was switched on, a bright triangular patch of light was seen on sheet C only.

Which one of the following correctly describes the properties of the sheets?

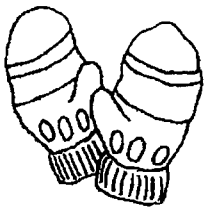
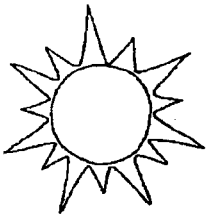
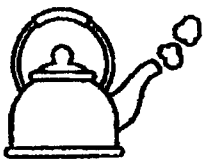
	Properties of Sheets	
	Allows most light to pass through	**Does not allow light to pass through**
(1)	B	A and C
(2)	B and C	A and C
(3)	A and C	B
(4)	A	B and C

( )

SCORE	/ 2

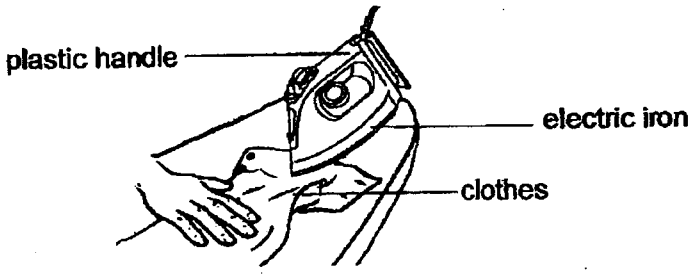
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6 Which of the following is not a source of heat?

(1)  gloves	(2)  Sun
(3)  fire	(4)  boiling water in kettle

( )

7 Devi used an electric iron to iron her clothes as shown below.



She is able to hold the electric iron using the plastic handle because plastic is a _____.

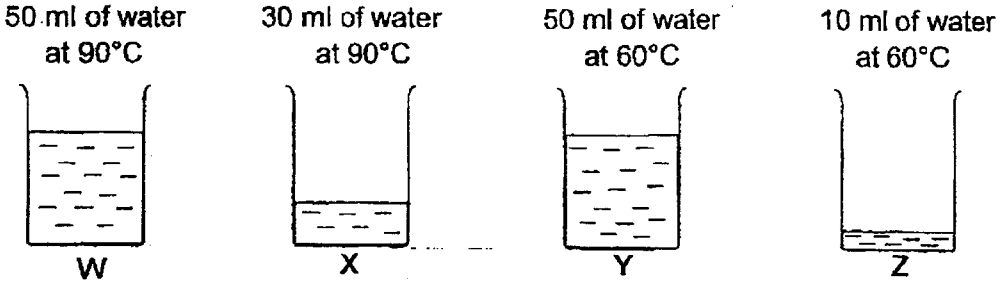
(1) transparent material
(2) waterproof material
(3) poor conductor of heat
(4) good conductor of heat

( )

SCORE	/4

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8 Fandi has 4 beakers of water, W, X, Y and Z with different volumes and temperatures as shown below.



He wants to find out if ice melts faster in water with a higher temperature.
Which two beakers should he use in his experiment?

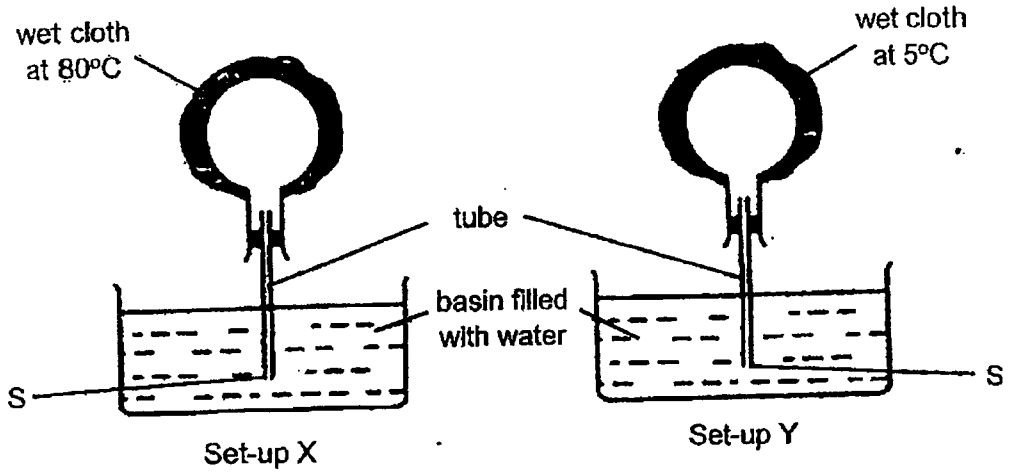
(1) W and X
(2) W and Y
(3) X and Z
(4) Y and Z

( )

SCORE	/ 2

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9 Study set-ups X and Y below.



Which of the following could be observed two minutes after the cloth was placed on the flask in set-ups X and Y?

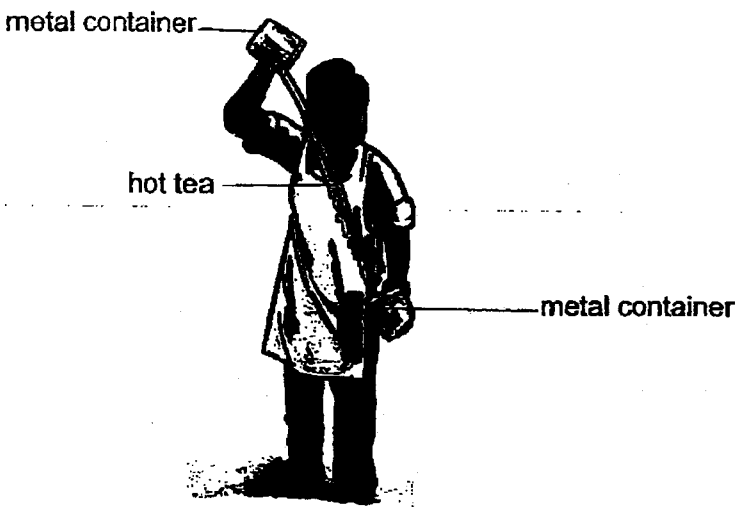
	Observations	
	Set-up X	**Set-up Y**
(1)	Water entered the tube and rose up the tube.	Water entered the tube and rose up the tube.
(2)	Water entered the tube and rose up the tube.	Bubbles escaped from the tube at S.
(3)	Bubbles escaped from the tube at S.	Water entered the tube and rose up the tube.
(4)	Bubbles escaped from the tube at S.	Bubbles escaped from the tube at S.

( )

SCORE	/ 2

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10 Mr Raju prepared his 'teh tarik' (pulled tea) by pouring the hot tea from a metal container to another metal container repeatedly as shown in the diagram below.



He poured the tea back and forth repeatedly between the two metal containers from a height to ensure that the tea is not too hot for the customers to drink.

Which of the following correctly explains why the tea was less hot after Mr Raju's action?

(1) Coldness from the surroundings travels to the hot tea.

(2) The hot tea will lose heat faster to the surroundings.

(3) The metal containers lose heat to the hot tea.

(4) The hot tea will gain heat faster from the surroundings.

( )

SCORE	/ 2

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Section B: 15 marks

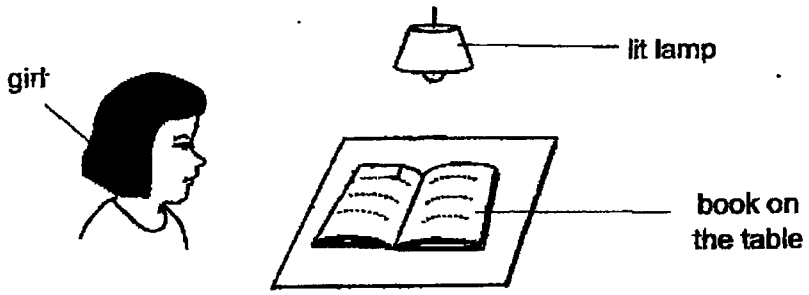
For questions 11 to 14, write your answers in this booklet.

The number of marks available is shown in brackets [ ] at the end of each question or part question.

---

11 Look at the picture below and answer questions **(a)** and **(b)**.

(a) **Draw arrows** to show the path of light that allows the girl to see the book on the table. [1]



(b) Fill in the blanks using the words in the table below. [1]

absorbed	blocked	reflected	source

The lamp is a _____ of light.

Light is _____ from the book and enters her eyes.

(c) Fill in the blank.

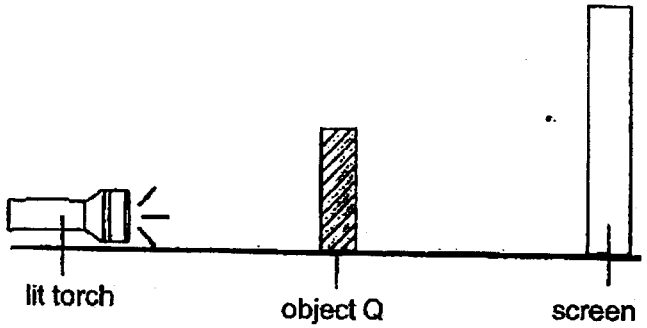
How are shadows formed? [1]

Shadows are formed when light is completely or partially _____ by an object.

SCORE	/ 3

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12 Kai Wei placed object Q between a screen and a torch as shown below. He observed a dark shadow on the screen.



(a) **Without moving the screen or changing the items**, state two methods to make a bigger shadow on the screen formed by object Q. [2]

(i) Method 1: _____

_____

(ii) Method 2: _____

_____

(b) What will Kai Wei observe on the screen if he replaces object Q with a sheet of clear glass? [1]

_____

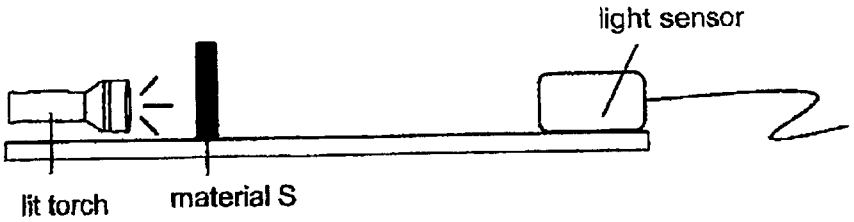
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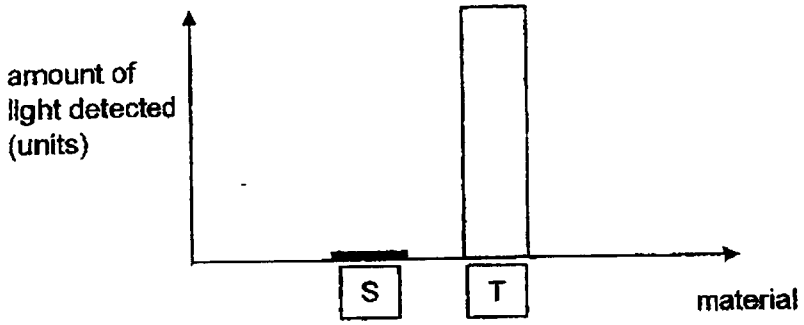
SCORE	/ 3

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Kai Wei conducted another experiment in a dark room to compare how much light can pass through two different materials, S and T. He placed material S in between the lit torch and the light sensor and recorded the amount of light detected by the light sensor as shown below.



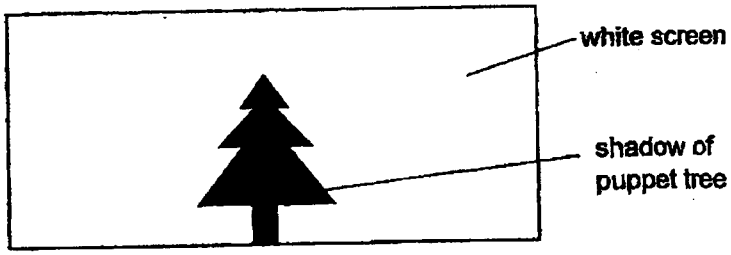
He repeated the same experiment by replacing material S with material T and recorded his results in the bar graph below.



Kai Wei then used either material S or T to make the puppet of a tree as shown below for a puppet show.



The diagram below shows what the audience saw on the white screen.



(c) Which material S or T is used to make the puppet of the tree? [1]

Material: _____

SCORE	/ 1

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13 Le Le conducted an experiment using a metal ball and a metal ring as shown in diagram 1 below. The metal ball was able to enter the ring as seen in diagram 2 below.

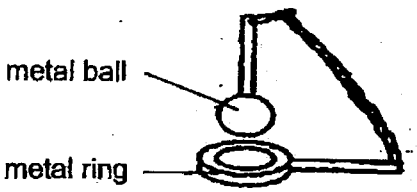


Diagram 1

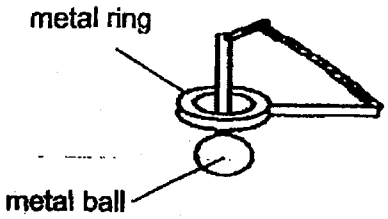
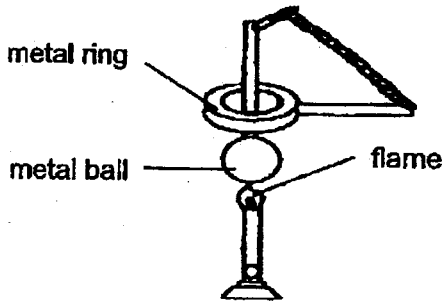


Diagram 2

He then heated the metal ball for 15 minutes as shown below. After 15 minutes, he realised that the metal ball was stuck and was not able to be pulled out from the metal ring.



(a) Explain what happened to the metal ball after it was heated for 15 minutes. [1]

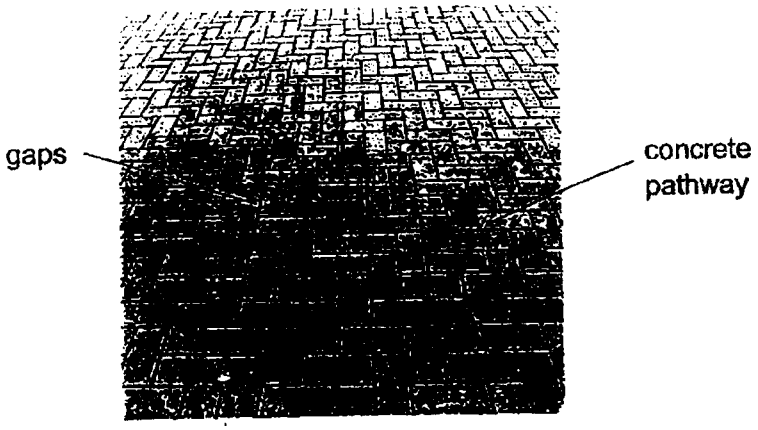
(b) What can Le Le do to remove the metal ball from the metal ring? [1]

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SCORE	/2

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Le Le noticed that there are gaps in concrete pathways as shown below.



(c) Why are there gaps in the concrete pathways? [1]

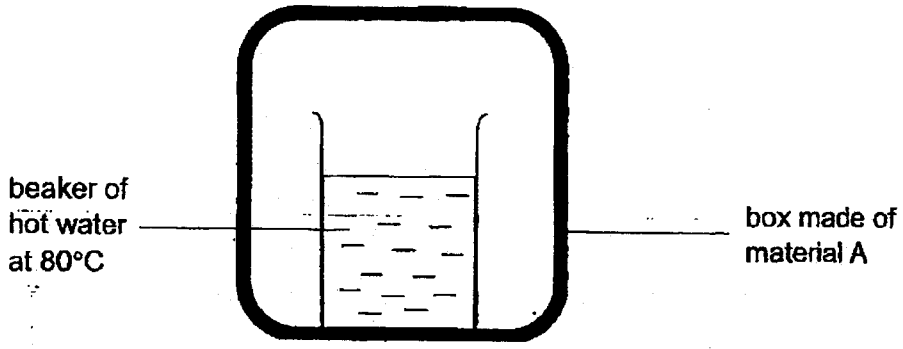
_____

_____

SCORE	/ 1

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14 Ali set up an experiment by placing a beaker of hot water at 80°C in a box made of material A as shown below. He measured the temperature of the hot water in the beaker after 10 minutes.



He repeated the experiment with boxes made of materials B and C. He then recorded his observations in the table below.

Box made of material	Temperature of water at the start (°C)	Temperature of water after 10 minutes (°C)
A	80	55
B	80	40
C	80	70

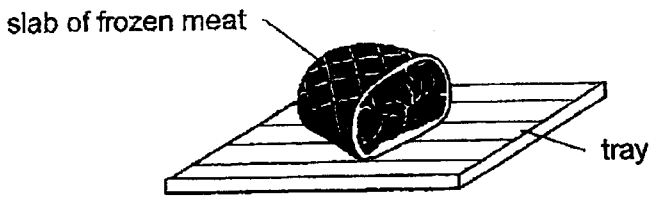
(a) What is the aim of Ali's experiment? [1]

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SCORE 1

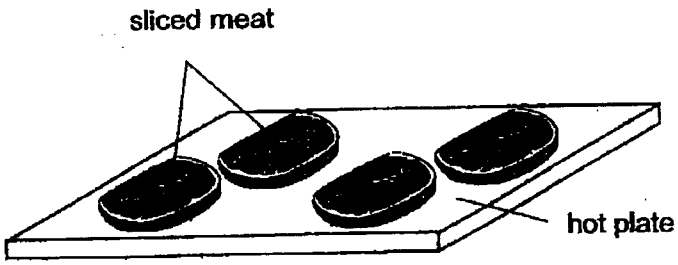
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Ali took a slab of frozen meat from the freezer and thawed it on a tray as shown below. Thawing is the process where the frozen substance becomes soft as a result of warming up.



(b) Which material, A, B or C, should the tray be made of so that the slab of frozen meat can be thawed in the shortest time? Explain your answer. [2]

After the meat was thawed, Ali cut the slab of meat into four thin slices and cooked them on a hot plate as shown below.



(c) He realised that the sliced meat cook faster than the whole slab of meat on the hot plate. Explain why. [2]

SCORE	/4

END OF PAPER

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LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2023 Term 1 Unweighted Sssessment

CONTACT :

SECTION A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	4	3	2	2	1	2	3	1	3
Q11	Q12								
3	1								

SECTION B

Q13)	a) Parts S Q P R b) Cutting the food into smaller pieces increases the surface area of food, speeding up digestion.
Q14)	a) The amount of digestive juices b) The more crushed the biscuit is, the faster it is completely broken down into simpler substances c) To find if the size of the biscuit will affect rate of digestion
Q15)	a) Matter C can be seen and has a definite shape b) Liquid
Q16)	a) Air between pebbles escape allowing water to occupy the space b) No. Air escaping from the hole only slows down the water, hence tissue will still get wet
Q17)	a) Some water will go in the measuring cylinder. b) Florence measured the volume of the stone
Q18)	a) A,C,B b) Air spaces occupies space in the flask and it cannot escape.

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SCHOOL : St HILDA'S PRIMARY SCHOOL
LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2023 Term 3 Weighted Assessment

CONTACT :

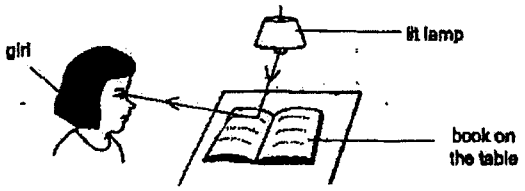
SECTION A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	4	3	4	4	1	3	2	3	2

SECTION B

Q11)

a)



b) The lamp is the source of light. light is reflected from the book and enters her eyes.

c) Shadows are formed when light is completely/partially blocked by an object

Q12)

a) (i) Method 1: Move Object Q closer to the lit torch
(ii) Method 2: Move object Q closer to th torch

b) Kai Wei will observe nothing on the screen

c) Material S

Q13)

a) The metal ball gained heat from the flame and expanded

b) Le Le can put the metal ball into a bucket of cold water

c) The gaps are for the concrete pathways to gain heat from surroundings and expand without cracking

Q14)

a) To find out which material is good or poor conductor of heat

b) Material B. The temperature of the water in the box made of B decreased the most after 10 minutes. Hence it is the best conductor of heat, hence frozen meat gains heat the fastest from the tray and thaws the fastest.

c) The sliced meat has a greater surface area in contact with the hot plate and will gain heat faster from the hot plate.

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