Anglo-Chinese School (Junior)

BITE-SIZED ASSESSMENT 2 (2022)

PRIMARY 5

SCIENCE

Friday **6 May 2022**

Name: _____ ( ) Class: 5.( ) Parent's Signature:

INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.

2 Follow all instructions carefully.

3 There are **11 questions** in this booklet.

4 Answer ALL questions.

5 The marks are given in the brackets [ ] at the end of each question or part question.

Question Paper	Possible Marks	Marks Obtained
Total	**30**	

This question paper consists of 11 printed pages (inclusive of cover page).

For questions 1 to 11, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question.

(30 marks)

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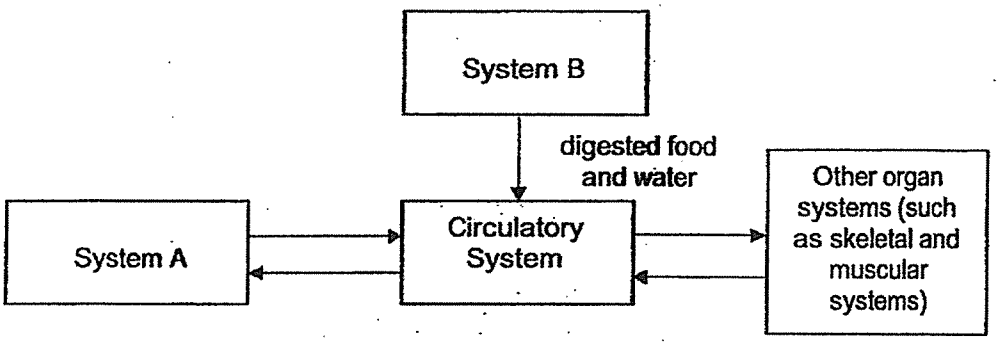
1. The diagram shows how substances are transported in the human body.



(a) Name systems A and B. [1]

System A: _____

System B: _____

(b) Name **two** substances that are transported in the blood away from other parts of the body for removal. [1]

_____

2 (a) What is the function of the heart? [1]

_____

_____

(b) Other than the heart, name two other parts of the circulatory system. [1]

_____

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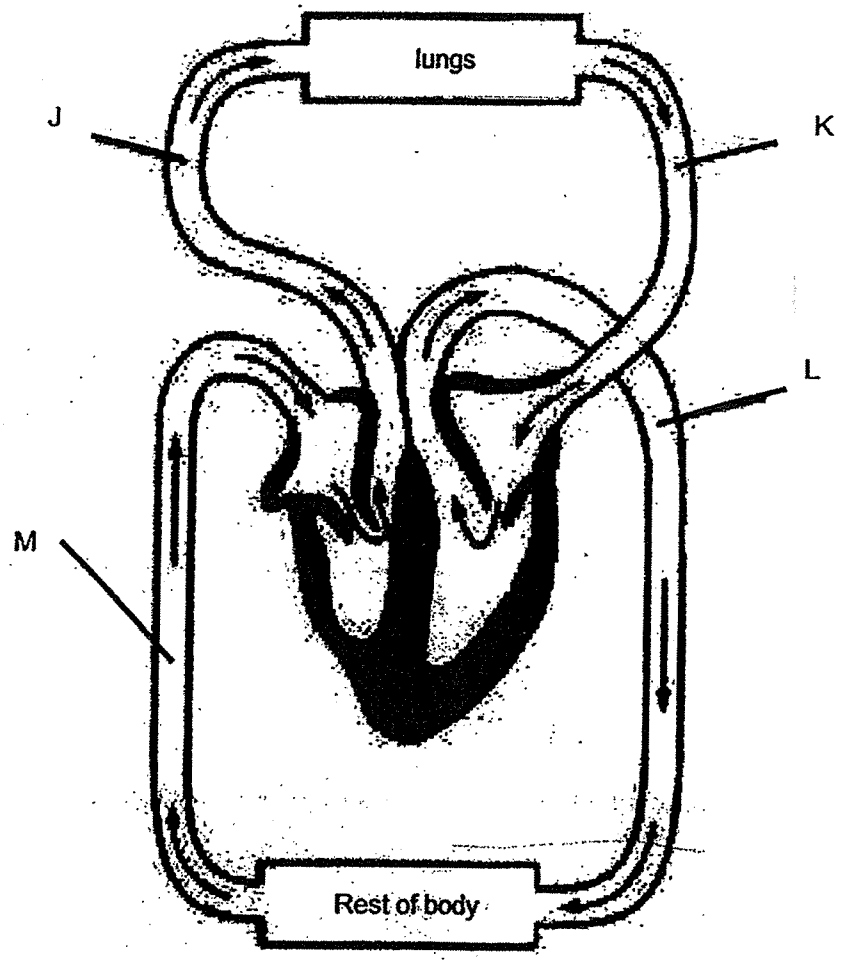
SCORE	/ 4

3. The diagram shows the flow of blood in the human body. Letters J, K, L and M represent blood at different parts of the human body.



Classify which parts of the human body, J, K, L and M, is the blood rich in oxygen and carbon dioxide in the table. [1]

Blood	
Rich in Oxygen	Rich in Carbon Dioxide

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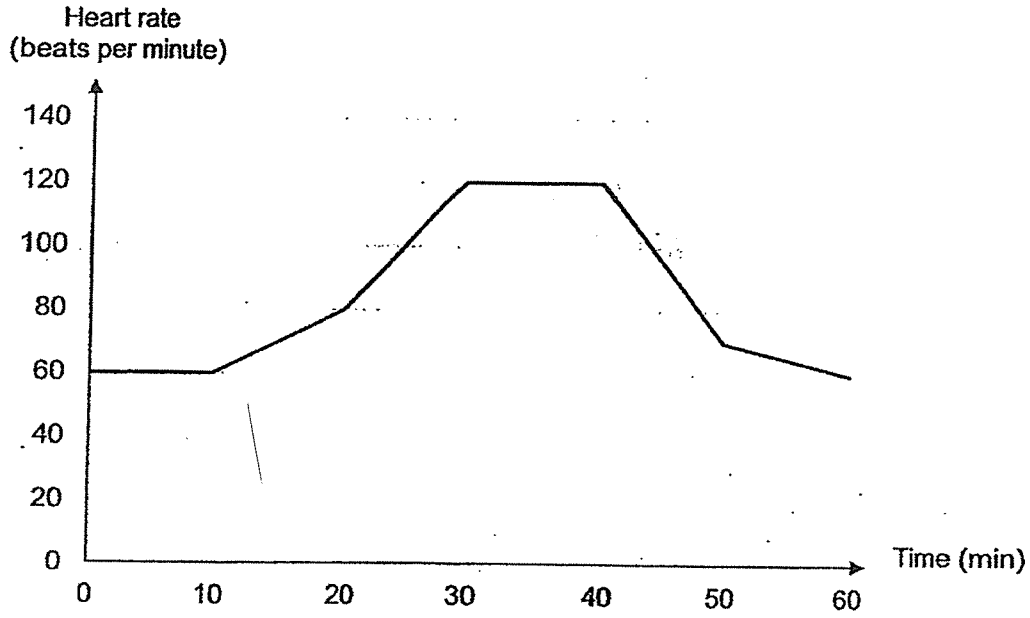
SCORE	
	1

4. The graph shows Huishan's heart rate when she was exercising around the park.



(a) What was Huishan's resting heart rate? [1]

_____

(b) At which minute did Huishan start exercising? [1]

_____

(c) Why did Huishan's heart rate increase when she was jogging? [2]

_____

_____

_____

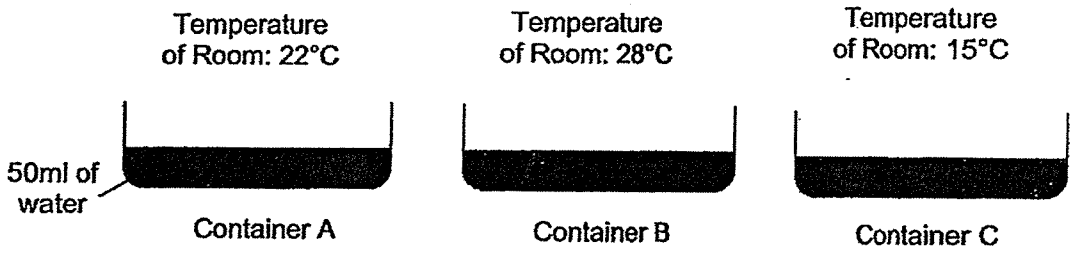
_____

(Go on to the next page)

SCORE	/ 4

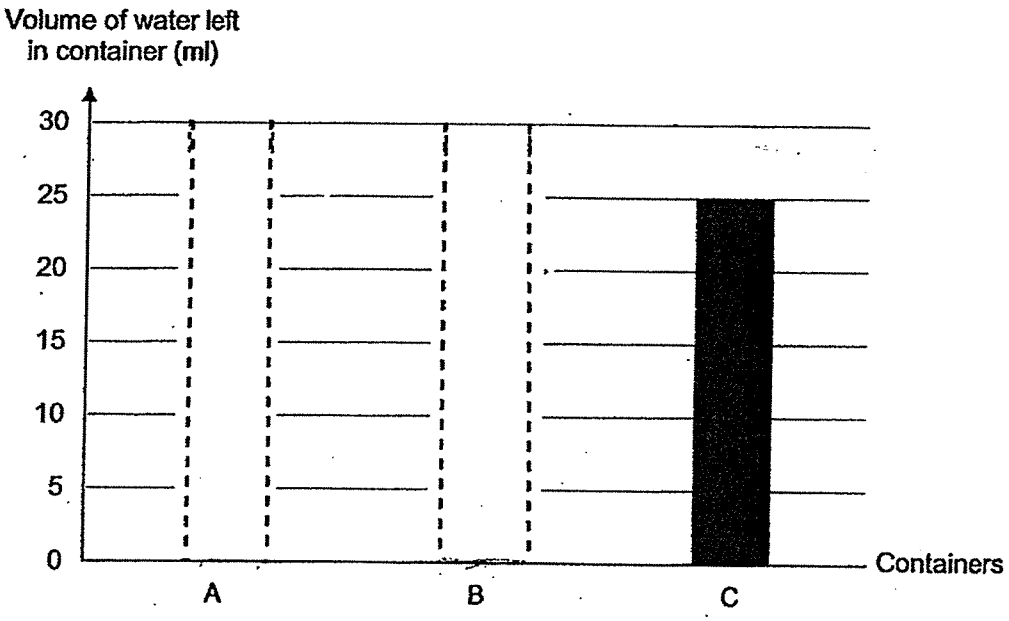
5(a) Jordan wanted to find out how the temperature of the surroundings affect the rate of evaporation of water.

He placed 50 ml of water each into three identical containers, A, B and C, and left them in three different rooms with different temperatures as shown.



He measured the volume of water left in each container after three hours and observe that container C had the greatest volume of water left.

(a)(i) Predict the volumes of water left in containers A and B by drawing the bars in the following graph. [1]



(a)(ii) Give a reason why container C had the greatest volume of water left after three hours. [1]

_____

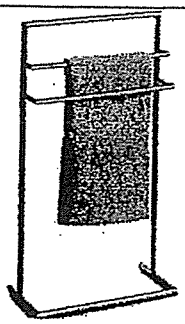
_____

(Go on to the next page)

SCORE	/ 2

5 (b)(i) After taking a shower, Jordan wanted to dry his wet towel as fast as possible.

Which of the following should he do to ensure that his towel dries the fastest? Place a tick (✓) in the correct box. [1]

		
Leave his towel crumpled on the floor	Hang his towel on a rack	Fold his towel and place it in his cupboard

(b)(ii) Suggest another way that would help Jordan dry his towel faster. [1]

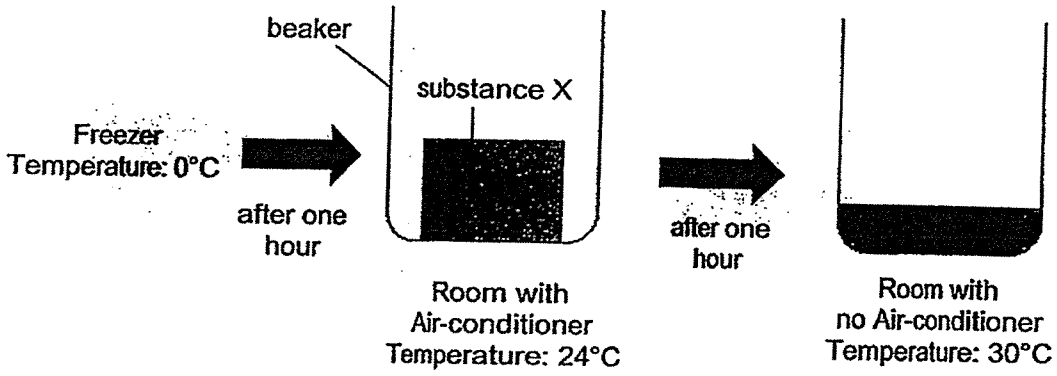
_____

_____

(Go on to the next page)

SCORE	2

6. Mirabel took out substance X from the freezer and placed it into a beaker in an air-conditioned room. After one hour, she switched off the air-conditioner and left the beaker with substance X for another hour.



(a) Why did substance X remain a solid after the first hour? [1]

_____

(b) Suggest a possible melting point for substance X. [1]

_____

7. Jeremy measured and recorded the resting heart rate of four different people in the table.

Name	Age (years)	Resting Heart Rate (beats per minute)
Amirah	5	100
Bala	10	85
Charlene	25	60
Daniel	60	75

What was the aim of Jeremy's experiment? [1]

_____

_____

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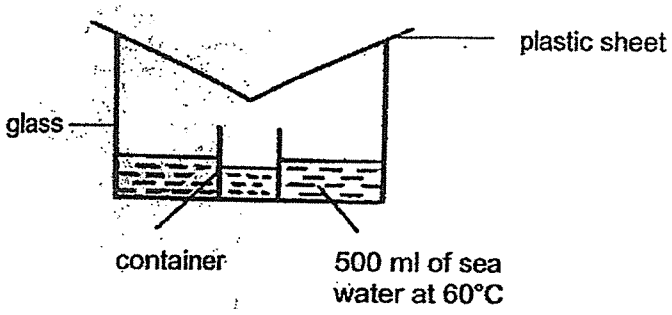
SCORE ___/3

8. Hassan wanted to collect water from sea water. He sets up an experiment as shown using plastic sheets of different temperatures.



He measured and recorded the amount of water collected for each setup after fifteen minutes in the table.

Temperature of plastic sheet at the start of the experiment (°C)	Amount of water collected in the container (ml)
10	110
20	80
30	50

(a) What is the relationship between the temperature of the plastic sheet and the amount of water collected? [1]

_____

_____

_____

(b) Would the amount of water collected be more or less if a metal sheet of 30°C was used instead of a plastic sheet at 30°C? [1]

_____

(c) Without adding more sea water and changing the plastic sheet, suggest what Hassan can do to the set-ups to collect more water in the same amount of time. [1]

_____

_____

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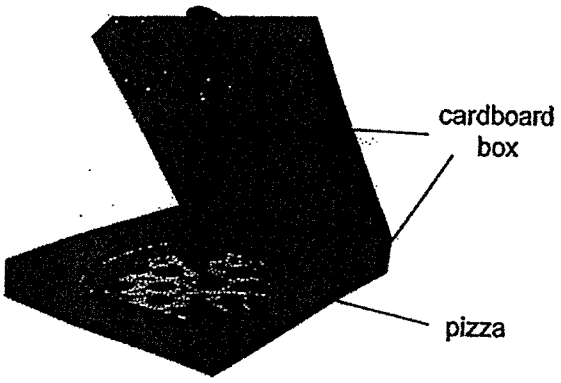
SCORE	
-	3

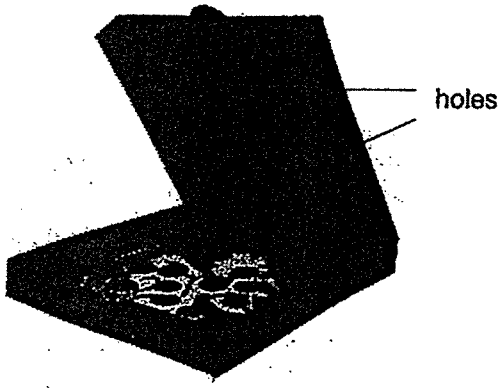
9. Mrs Tan placed a freshly baked pizza into a cardboard box to have it delivered to her customer.



Upon receiving the pizza, her customer complained that the inner surface of the cardboard box and the pizza were wet

(a) Explain why the inner surface of the cardboard box and the pizza were wet. [2]

Mrs Tan sent the same customer another pizza in a similar box with holes as shown.



(b) This time round, the pizza box was less wet. Explain why. [1]

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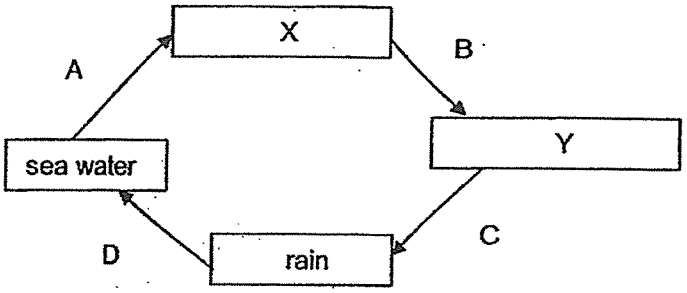
SCORE	
	3

10. The diagram represents the water cycle.



(a) What are X and Y? [1]

X: _____

Y: _____

(b) At which part(s), A, B, C or D, of the water cycle is there a change in the state of matter? [1]

_____

(c) Many human activities have caused our water bodies to become polluted and unsuitable for use.

Which of the following human activities will result in water pollution? Place a tick(✓) in the correct box(es). [1]

Human Activities	Tick (✓)
Using rainwater to water plants.	
Throwing plastic bags into the sea.	
Removing harmful substances from used water through a cleaning process.	

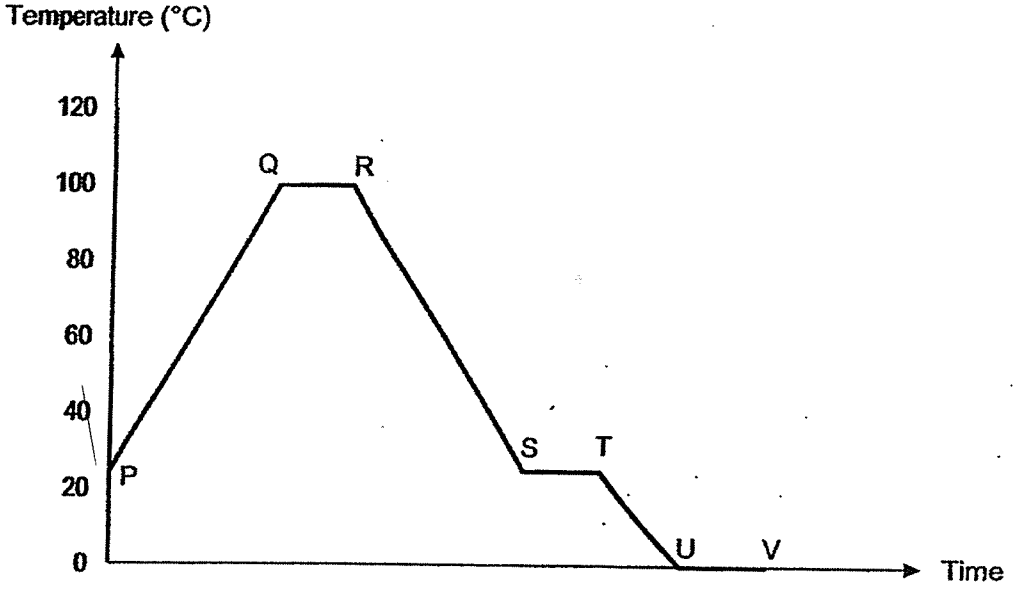
(d) Water is a limited resource. Give an example of how we can reduce the use of water while washing dishes at home. [1]

_____

(Go on to the next page)

SCORE	/ 4

11. Harris heated a beaker of water over a flame for some time. He then removed the flame. He also placed the beaker of water in the freezer. He recorded the changes in the temperature of the contents of the beaker in the graph.



(a) **Name** the process that is happening at QR. [1]

_____

(b) **Which** of the following letters, P, Q, R, S, T, U or V, best represent when the **flame** was removed and when the beaker of water was placed into the **freezer**? [1]

Flame was removed:	
Beaker of water was placed in the freezer:	

(c) **Based** on the graph, which of the following statements are true? Write 'T' if the **statement** is true and 'F' if the statement is false. [2]

Statements	T or F
Water is freezing at UV.	
Water is gaining heat at PQ only.	
Liquid is the only state of matter in the beaker at ST.	
Water does not evaporate throughout the **experiment**.	

End of Paper

SCORE	/ 4

Anglo-Chinese School (Junior)

BITE-SIZED ASSESSMENT 3 (2022)

PRIMARY 5

SCIENCE

Tuesday **23 August 2022**

Name: _____ ( ) Class: 5.( ) Parent's Signature: _____

INSTRUCTIONS TO PUPILS

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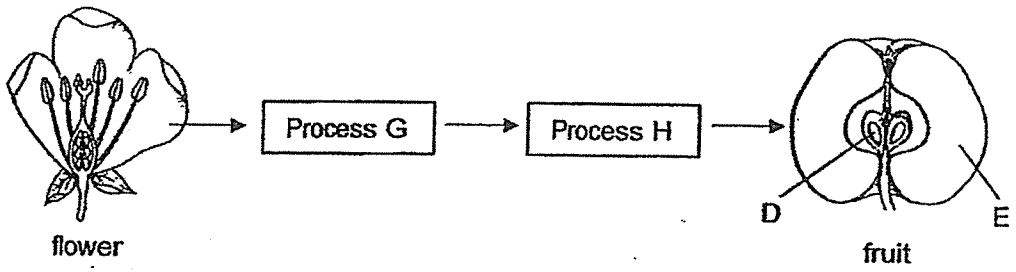
Question Paper	Possible Marks	Marks Obtained
Total	**30**	

This question paper consists of 12 printed pages (inclusive of cover page).

1. The diagram shows how a fruit is formed from the flower of a plant. The fruit has been cut open.



(a) State and describe process G. [1]

_____

_____

(b) State and describe process H. [1]

_____

_____

(c) State the part of the flower that D and E developed from. [1]

D: _____

E: _____

2. The table shows the characteristics of three different plants A, B and C.

Plant	Does it have flowers?	Can the flower develop into a fruit?	Length of petals (cm)	Does it have nectar?
A	Yes	Yes	6	No
B	Yes	No	2	No
C	Yes	Yes	6	Yes

(a) The flower of plant B **cannot** develop into a fruit. Give a possible reason. [1]

_____

_____

(b) Which plant can best attract pollinators? Give a reason for your answer. [1]

_____

_____

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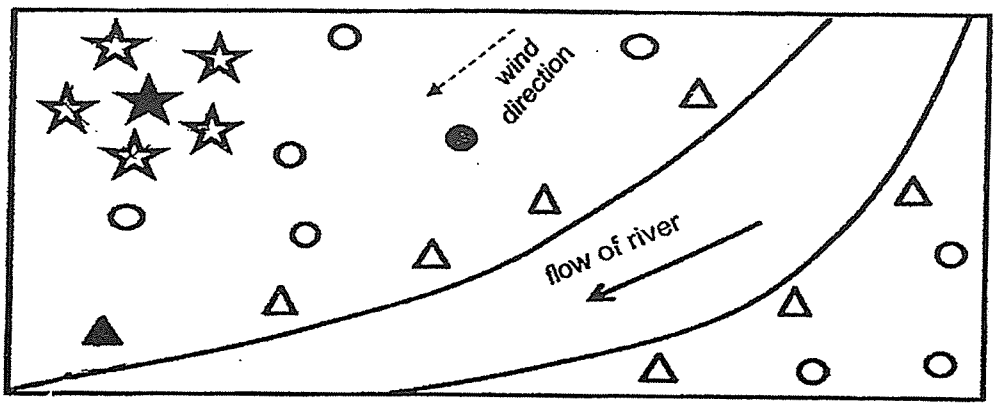
SCORE	/ 2

3. Samuel drew a diagram to show three different types of plants, A, B, and C, in a forest.



Key:

Plant	A	B	C
Parent	★	▲	●
Young	☆	△	○

(a) Samuel drew the position of a parent plant wrongly. Circle the parent plant in the diagram above that is in the **wrong** position and give a reason for your answer. [1]

_____

_____

(b) State the method of seed/fruit dispersal of plants A, B and C in the table. [1]

Plant	Method of dispersal
A	
B	
C	

(c). **Describe how the characteristic of the** seed/fruit of Plant A helps in its dispersal. [1]

_____

_____

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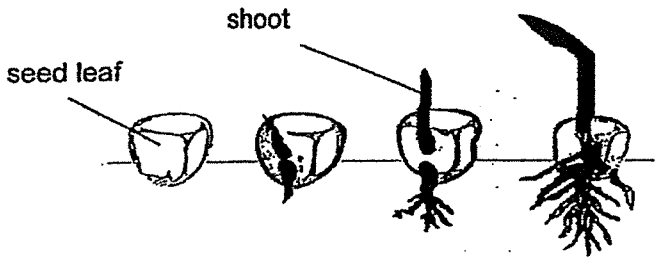
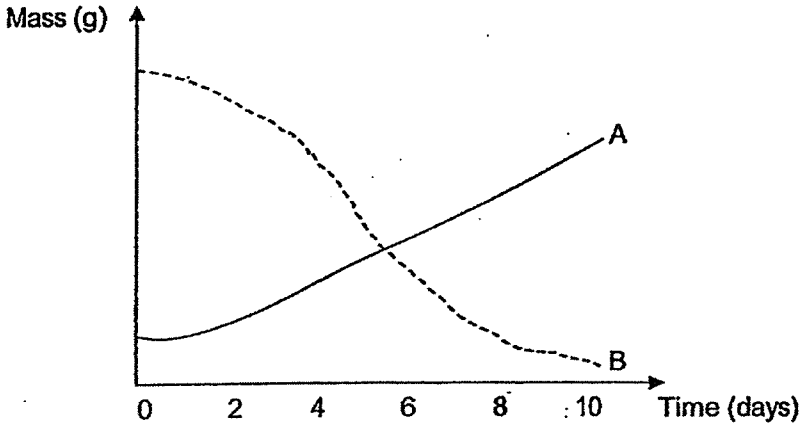
SCORE	3

4. The diagram shows a germinating seed.



The graph shows the changes in the mass of the seed leaf and the shoot over a period of time.



(a) Which line, A or B, shows the change in the mass of the seed leaf? Explain your answer. [1]

_____

_____

(b) Another seed was placed in a pot of dry soil and left in the dark corner of the living room. What would be observed about the seed after 10 days? Give a reason for your answer. [1]

_____

_____

(Go on to the next page)

SCORE	/ 2

5. The statements, A, B, C and D, describe the reproduction in humans.

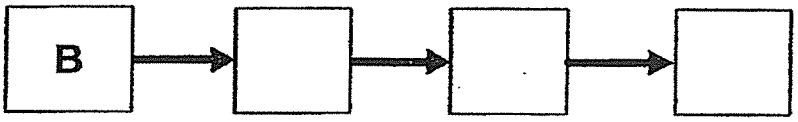
A : Organs of the developing baby begin to form.

B : Many sperms reach the egg.

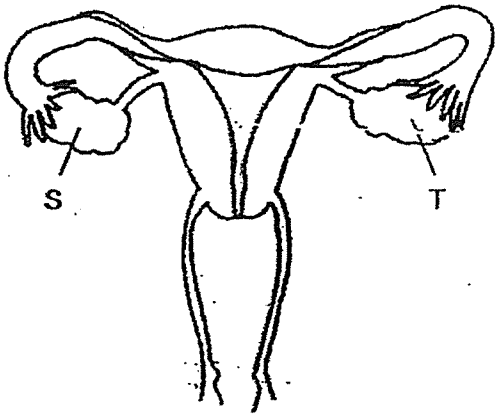
C : One sperm fuses with the egg.

D : The fertilised egg starts to divide to form more cells.

(a) Arrange the above statements in the correct order in the boxes provided. [1]



(b) The diagram shows the female reproductive parts. In the diagram, label and name the part where the fertilised egg develops. [1]



(c) Will the female be able to reproduce if parts S and T are removed? Explain your answer. [1]

_____

_____

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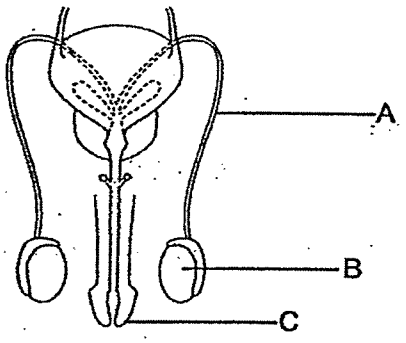
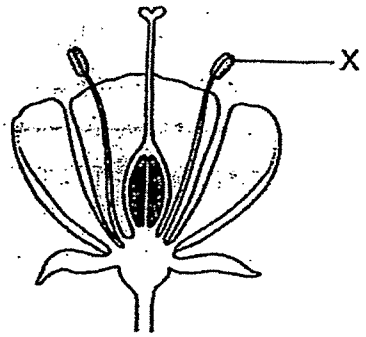
SCORE	/ 3

6. The diagrams show the human and the plant reproductive parts.



Human reproductive part



Plant reproductive part

(a) Which part, A, B or C, of the human reproductive part, has a similar function as part X of the plant reproductive part? State its function. [1]

Part: _____

Function: _____

_____

(b) Give a reason why the human male releases a large number of sperms at a time from his body. [1]

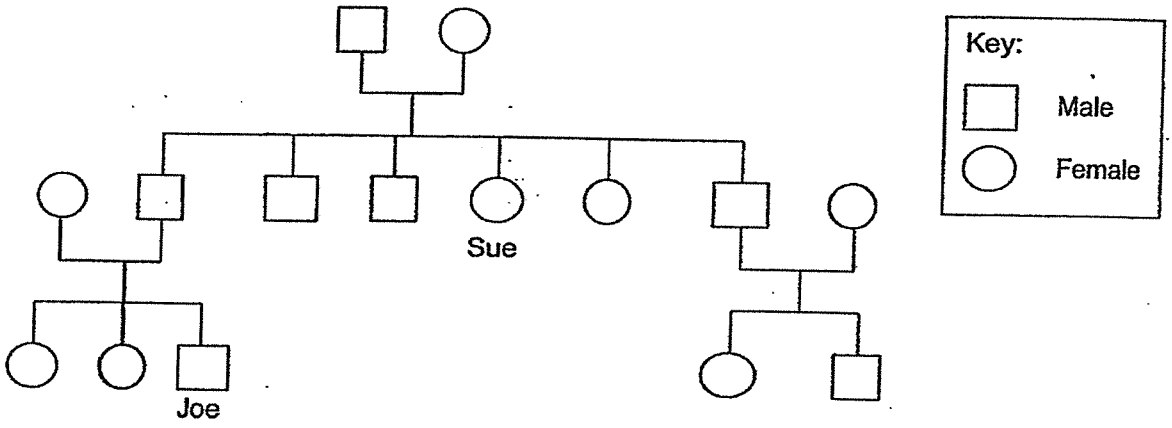
_____

_____

(Go on to the next page)

SCORE	/ 2

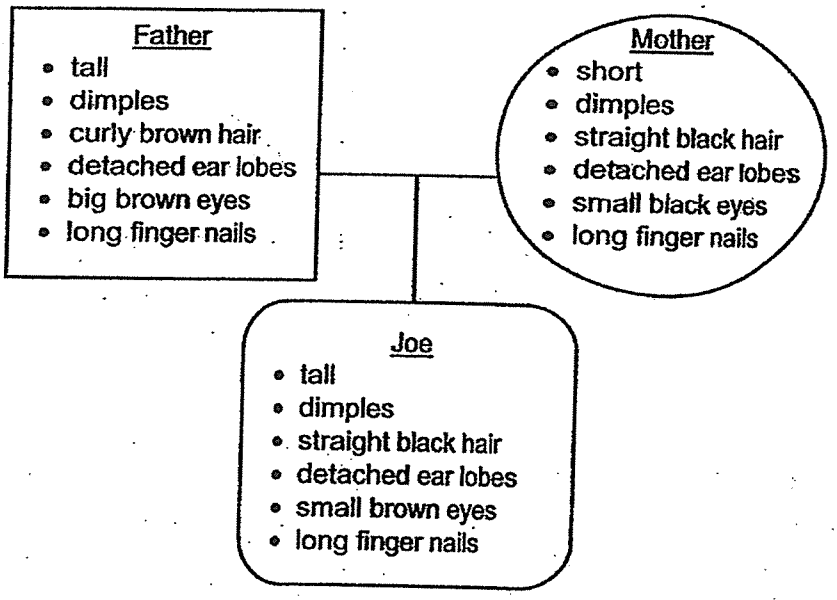
7. Joe drew his family tree.



(a) Read the following statements. Decide whether they are true, false or not possible to tell by placing a tick (✓) in the boxes provided. [1]

Statement	True	False	Not possible to tell
Joe has 3 uncles.			
Both Joe and Sue have attached ear lobes.			

(b) The diagram shows some characteristics of Joe and his parents.



Which characteristic(s) did Joe inherit that is/are common to both parents? [1]

_____

_____

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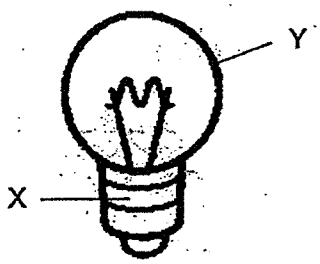
SCORE ___/2

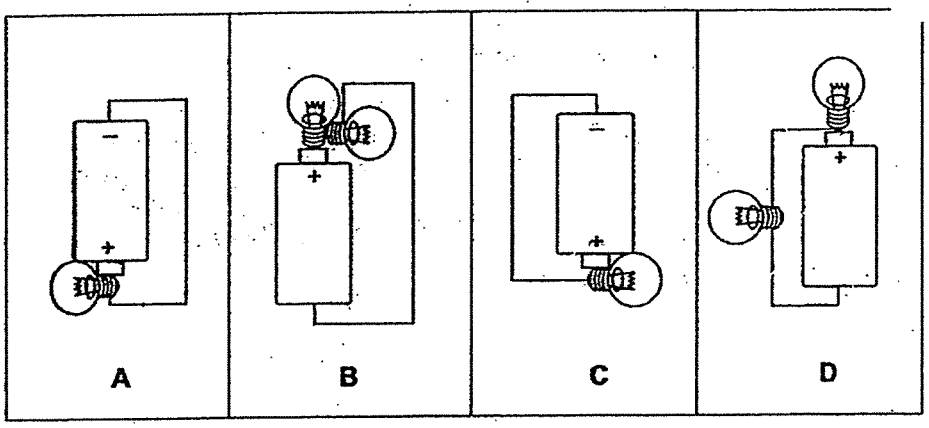
8. The diagram shows a bulb.



(a) What material are parts X and Y made of? State the property of each material that makes it suitable for its function. [2]

	Material	Property
X		
Y		

(b) The diagrams show bulbs connected in four different circuits.



In which circuit(s) will the bulb(s) light up? [1]

_____

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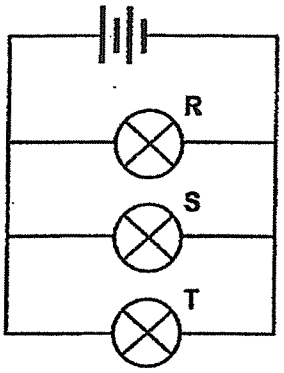
SCORE	/ 3

9. The diagram shows a circuit with three identical bulbs, R, S and T. The bulbs and batteries are in working condition.



(a) Is bulb T brighter than bulb R? Explain your answer. [1]

_____

_____

(b) If bulb S blows, what would happen to bulbs R and T? Give a reason for your answer. [1]

_____

_____

(c) The circuit was rearranged using the same electrical parts. Using two additional switches, draw a closed circuit diagram based on the following conditions:

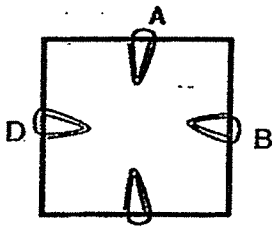
- Bulbs R and S are of the same brightness
- Bulb T is brighter than bulbs R and S
- Bulbs R and S are controlled by one of the switches
- Bulb T is controlled by the other switch

Label the bulbs in your circuit diagram.

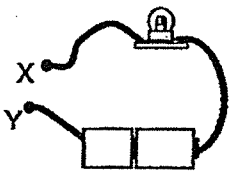
(Go on to the next page)

SCORE	/ 4

10. Alex wanted to find out how the wires in a circuit card are connected. He connected the points, X and Y, of a circuit tester to two metal paper clips on the circuit card, of a different combination each time. He recorded the results in the table as shown.



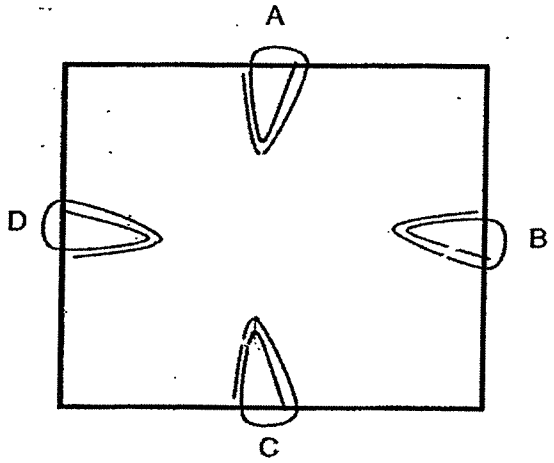
circuit card



circuit tester

Paper Clips	Did the bulb light up?
A and B	No
A and C	Yes
A and D	Yes
B and C	No
C and D	Yes

(a) Based on the results, draw **two** lines in the circuit card below to show how the wires are connected. [1]



(b) Alex used only one battery instead of two in the circuit tester. How will this affect the bulb when the bulb is lit? [1]

_____

_____

(c) Alex replaced all the metal paper clips on the circuit card with plastic paper clips. Give a reason why the bulb did not light up when the circuit tester was connected to any two of the plastic paper clips. [1]

_____

_____

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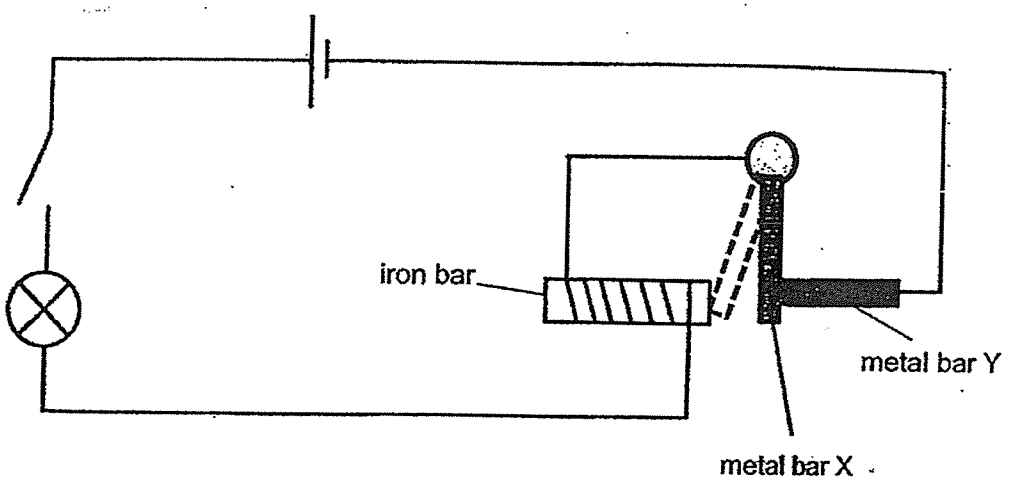
SCORE	/ 3

11. Charles set up the circuit as shown.



When he closed the switch, the bulb lit up. After a short while, metal bar X moved away from the metal bar Y and touched the iron bar.

(a) Give a reason why the bulb lit up when the switch was closed. [1]

_____

_____

(b) What would you observe about the bulb when metal bar X moves towards the iron bar? Give a reason for your answer. [1]

_____

_____

(c) Without making any changes to the metal bars or iron bar, suggest how Charles can make the bulb brighter. [1]

_____

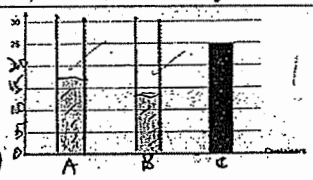
_____

End of Paper

(Go on to the next page)

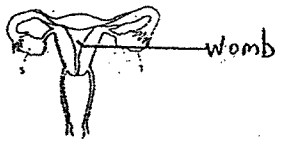
SCORE	/ 3

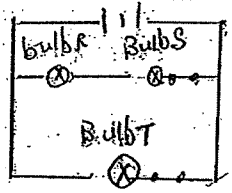
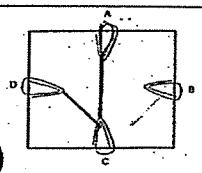
Bite-Sized Assessment 2

<table>
<tr><td>Q1</td><td>(a) System A : Respiratory system
System B : Digestive system
(b) Carbon dioxide and waste materials</td></tr>
<tr><td>Q2</td><td>(a) The function of the heart is to pump blood to all parts of the body .
(b) Blood vessels and blood</td></tr>
<tr><td>Q3</td><td><table><tr><td>Rich in Oxygen</td><td>Rich in Carbon Dioxide</td></tr><tr><td>K, L</td><td>J, M</td></tr></table></td></tr>
<tr><td>Q4</td><td>(a) Her heart rate was 60 beats per minute.
(b) She started excercising at the 10th minute.
(c) When a person excercises, the heart pumps blood faster so that more oxygen and digested food in the blood can be sent to all parts of the body to release more energy.</td></tr>
<tr><td>Q5</td><td>(a)(i) 
(ii) C was placed in the room with the lowest temperature thus the rate of evaporation is the slowest, resulting in C having the greatest volume of water after three hours.
(b) (i) Tick : Hang his towel on a rack
(ii) He could put his towel near a fan.</td></tr>
<tr><td>Q6</td><td>(a) X's melting point was more than the room temperature of 24°C.
(b) 25°C</td></tr>
<tr><td>Q7</td><td>To find out if the age of a person affects the resting heart rate of a person.</td></tr>
<tr><td>Q8</td><td>(a) As the temperature of the plastic sheet increases, the amount of water collected in the container decreases.
(b) The amount of water collcted would be more if a metal sheet of 30°C was used.
(c) Hassan could heat up the seawater.</td></tr>
<tr><td>Q9</td><td>(a) The water from the pizza gained heat and evaporated to form water vapour which lost heat to and condensed on the cooler surface of the box into water droplets.</td></tr>
</table>

<table>
<tr><td></td><td>(b) The holes in the pizza box allowed the water vapour in the box to escape, hence the pizza box was less wet.</td></tr>
<tr><td>Q10</td><td>(a) X : water vapour
Y : clouds
(b) Parts A and B
(c) Tick : Throwing plastic bags into the sea.
(d) We can wash the dishes in a basin.</td></tr>
<tr><td>Q11</td><td>(a) Boiling
(b)<table><tr><td>Flame was removed :</td><td>R</td></tr><tr><td>Beaker of water was placed in the freezer :</td><td>T</td></tr></table>(c) T, F, F, F</td></tr>
</table>

Bite-Sized Assessment 3

<table>
<tr><td>Q1</td><td>(a) Pollination. Pollen grains from the anther of the flower is transferred to the stigma of the flower.
(b) Fertillisation. The male reproductive cell fuses with the female reproductive cell.
(c) D : Ovule
E : Ovary</td></tr>
<tr><td>Q2</td><td>(a) It is a male flower.
(b) Plant C. It has nectar to attract pollinators.</td></tr>
<tr><td>Q3</td><td>(a) Blant B was dispersed by water, hence, the seeds of plant B could not go against the flow of the river and the parent Plant B should be positioned at the upstream of the river.
(b) A : splitting
B : water
C : animals
(c) The pods split open when dry.</td></tr>
<tr><td>Q4</td><td>(a) B. The mass of the seed leaves decrease as the stored food is used for the growth of the seedling.
(b) The seed would not germinate. Seed needs water to germinate, since there was no water, the seed would not be able to germinate.</td></tr>
<tr><td>Q5</td><td>(a) B -> C -> D -> A
 
(b)
(c) No. No eggs will be released so fertilisation did not occur.</td></tr>
</table>

<table>
<tr><td>Q6</td><td>(a) Part : B
Function : It produces the male reproductive cell.
(b) the human male releases a large number of sperms to increase the chances of a sperm fusing with an egg.</td></tr>
<tr><td>Q7</td><td>(a) True
Not possible to tell
(b) Detached ear lobes and dimples.</td></tr>
<tr><td>Q8</td><td>(a)
<table>
<tr><td>X</td><td>Metal</td><td>Electrical conductor</td></tr>
<tr><td>Y</td><td>Glass</td><td>Transparent</td></tr>
</table>
(b) Circuits B and C.</td></tr>
<tr><td>Q9</td><td>(a) No. The bulbs are connected in parallel and will have the same brightness.
(b) They will still be lighted up. Electricity can still flow through the close circuit.
(c) 
</td></tr>
<tr><td>Q10</td><td> 

(a)
(b) The bulb will be dimmer.
(c) Plastic is not a conductor of electricity, hence when the metal paper clips were replaced, an open circuit was formed and electric current was not able to pass through.</td></tr>
<tr><td>Q11</td><td>(a) When the switch was closed, a closed circuit was formed causing electric current to flow through the circuit causing the bulb to light up.
(b) The bulb will not light up. Electricity will not be able to flow through an open circuit.
(c) Add another battery to the circuit.</td></tr>
</table>