

Anglo-Chinese School (Junior)



BITE-SIZED ASSESSMENT (2022)

PRIMARY 6

SCIENCE

BOOKLET A

Friday

4 March 2022

50 min

Name: _____ () Class: 6.()

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 14 questions in this booklet.
- 4 Answer ALL questions.
- 5 Shade your answers in the Optical Answer Sheet (OAS) provided.

Booklet A

For each question from 1 to 14, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet.

(28 marks)

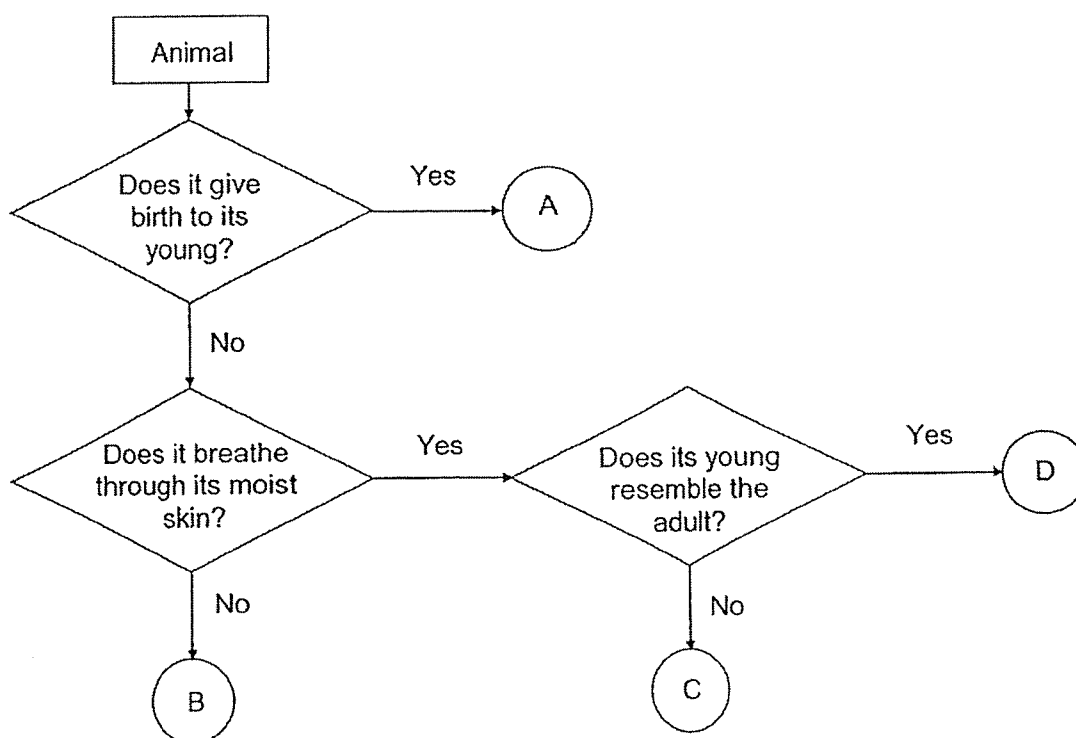
1. Organism A has the following characteristics:

- Can be found in yoghurt
- Cannot be seen with the naked eye
- Can be used to produce antibiotics

Organism A is most likely a _____.

- (1) yeast
- (2) mould
- (3) bacteria
- (4) mushroom

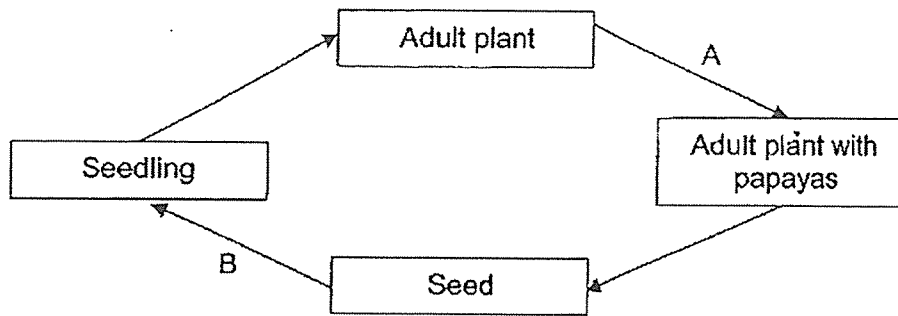
2. Study the flow chart.



Which one of the following is most likely to be a frog?

- (1) A
- (2) B
- (3) C
- (4) D

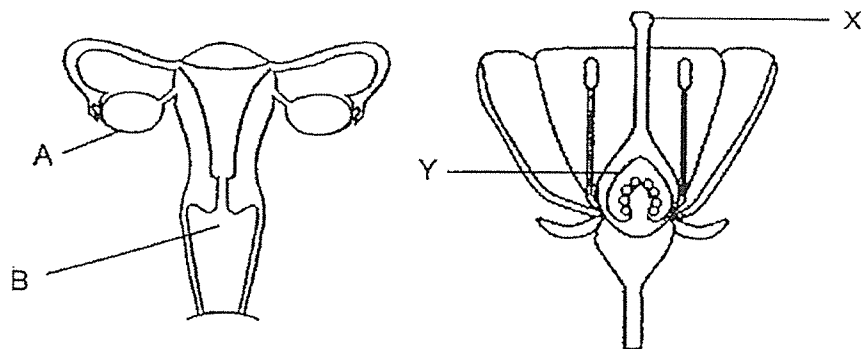
3. The diagram shows the stages of the growth of a papaya plant.



Which of the following correctly represent processes A and B?

	A	B
(1)	fertilisation	dispersal
(2)	dispersal	germination
(3)	fertilisation	germination
(4)	germination	dispersal

4. Study the diagrams of the human reproductive system and a plant reproductive system.



Human reproductive system

Plant reproductive system

Which of the following two parts have similar functions?

- (1) A and X
- (2) A and Y
- (3) B and X
- (4) B and Y

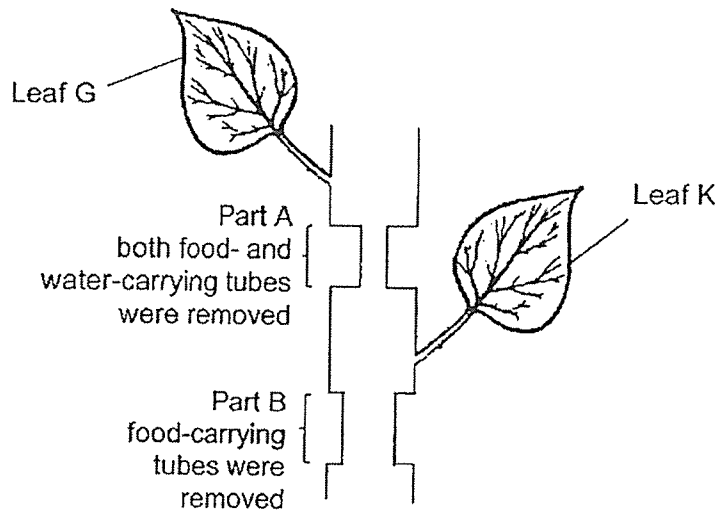
5. The following statements describe how the human circulatory system works.

Letter	Statement
A	Carbon dioxide in the blood is removed and oxygen is taken in.
B	The heart pumps blood rich in oxygen to the various body parts.
C	The body parts use the oxygen and digested food to carry out their functions.
D	Blood transports carbon dioxide and other waste materials away from the body parts.

Which of the following is the correct order of how the human circulatory system works?

(1)	<pre> graph TD A --> B B --> C C --> D D --> A </pre>	(2)	<pre> graph TD A --> C C --> B B --> D D --> A </pre>
(3)	<pre> graph TD A --> C C --> D D --> B B --> A </pre>	(4)	<pre> graph TD A --> D D --> C C --> B B --> A </pre>

6. The diagram shows a plant in the garden with parts of the stem cut off at A and B.

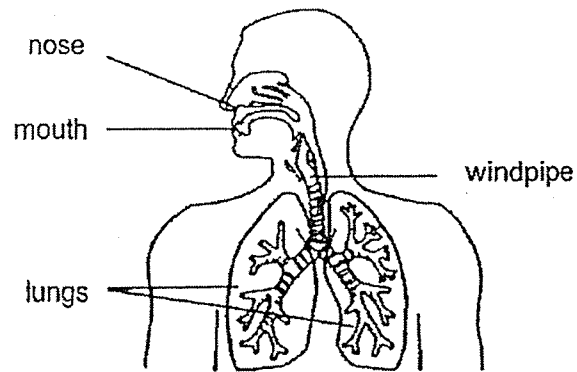


The plant was watered regularly. After a few days, leaf K survived and leaf G died.

Which of the following correctly explains the above observation?

- (1) Leaf K received food from leaf G.
- (2) Leaf G received water but not food.
- (3) Leaf G did not receive carbon dioxide.
- (4) Leaf K received water and made its own food.

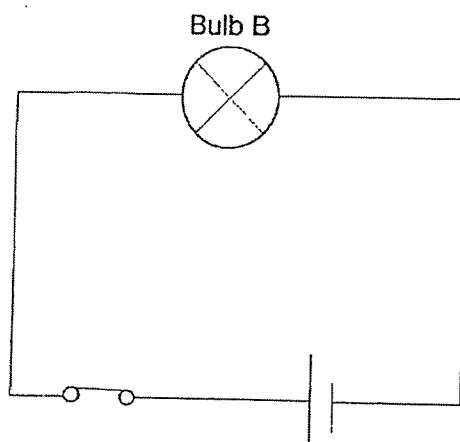
7. The diagram shows the human respiratory system.



Which of the following statements is true?

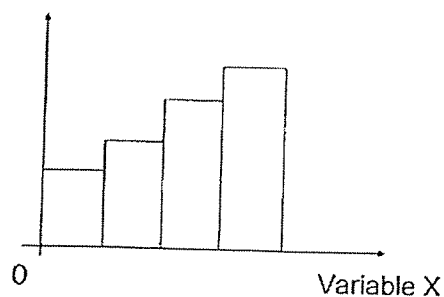
- (1) Exchange of gases takes place in the lungs.
- (2) The windpipe allows food to travel to the stomach.
- (3) Oxygen is taken in and carbon dioxide is removed at the nose.
- (4) There are tiny hairs in the nose and windpipe to remove dust in the air that is breathed in.

8. Cameron wanted to find out how variables X and Y affect the brightness of Bulb B. He constructed a circuit as shown.

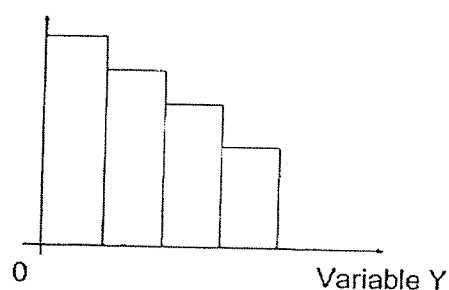


In the first experiment, he changed variable X and recorded the brightness of Bulb B. In the second experiment, he changed variable Y and recorded the brightness of Bulb B. He plotted two graphs as shown.

Brightness of
Bulb B



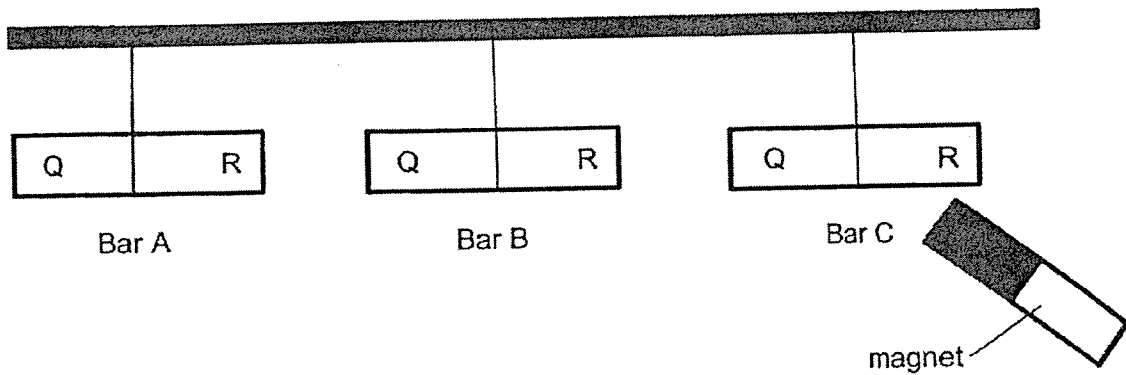
Brightness of
Bulb B



What could variables X and Y be?

	Variable X	Variable Y
(1)	Number of batteries in series	Number of bulbs in parallel
(2)	Number of bulbs in series	Number of batteries in series
(3)	Number of batteries in series	Number of bulbs in series
(4)	Number of bulbs in series	Number of bulbs in parallel

9. Janet hung three metal bars, A, B and C, from a rod as shown in the diagram. She labelled each end of the metal bars with letters Q and R.



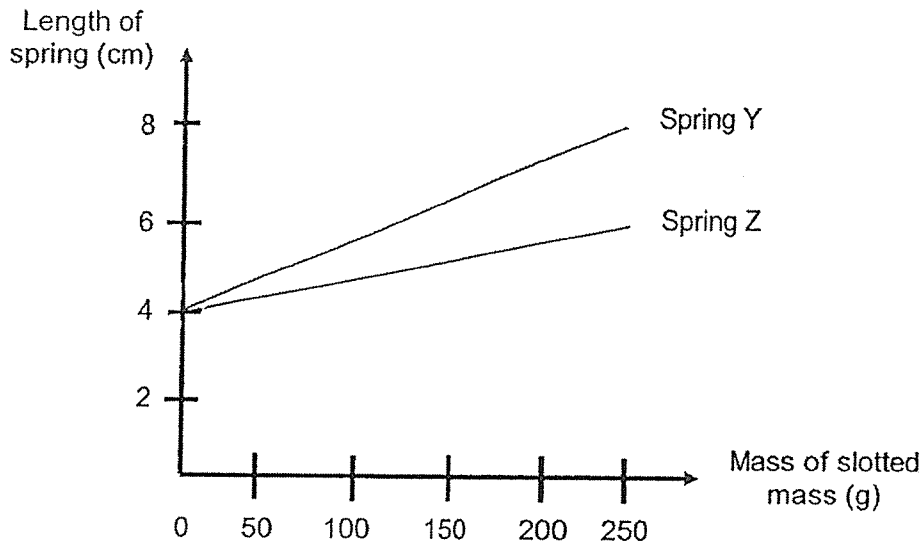
She then brought the north pole of a bar magnet close to each end of the metal bars and recorded her observations in the table.

Metal bar	Interactions of bar magnet with	
	End Q	End R
A	No interaction	No interaction
B	Attracted	Repelled
C	Attracted	Attracted

Which of the following best represents metal bars A, B and C?

	A	B	C
(1)	iron bar	magnet	steel bar
(2)	magnet	iron bar	copper bar
(3)	steel bar	iron bar	magnet
(4)	copper bar	magnet	iron bar

10. Mark added slotted masses of 50g to springs Y and Z and recorded the results in the graph.



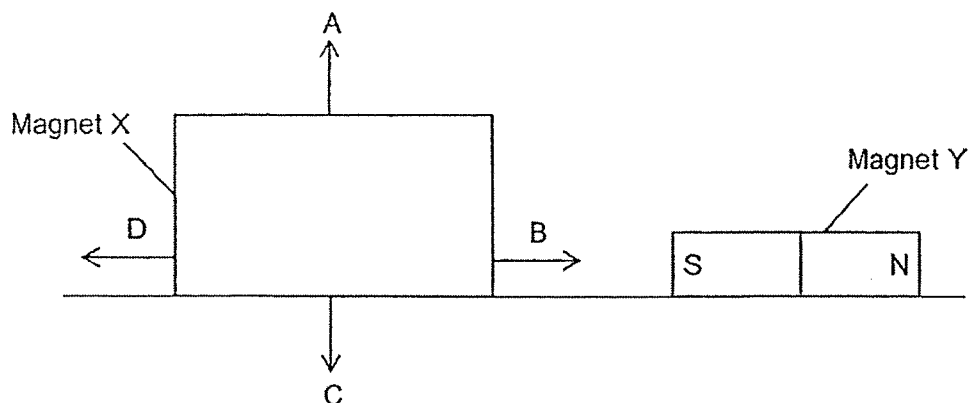
He made four statements.

- A The original length of both springs is 4 cm.
- B Spring Z extends by 4 cm when a mass of 250g is added.
- C The extension of both springs is 4 cm when no mass is added.
- D Spring Y extends more than spring Z when the same mass is added.

Which two of his statements are correct?

- (1) A and B
- (2) A and D
- (3) B and C
- (4) C and D

11. When June placed two magnets, X and Y, close to each other, they repelled.



Which of the arrows A, B, C and D correctly represent the direction of magnetic force, frictional force and gravitational force acting on Magnet X?

	Magnetic force	Frictional force	Gravitational force
(1)	D	D	A
(2)	D	B	C
(3)	B	C	A
(4)	B	D	C

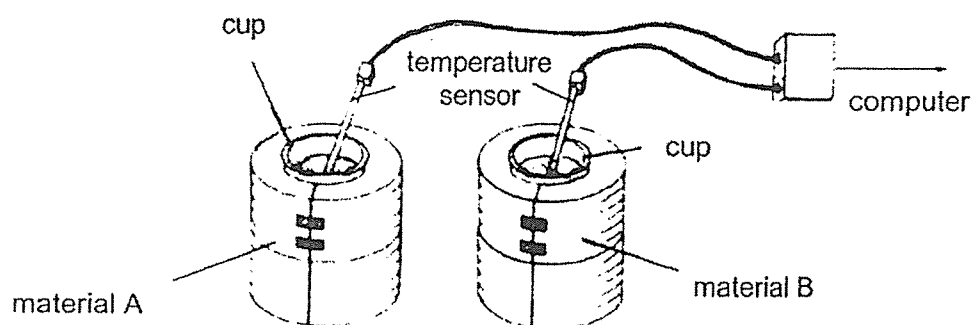
12. The table shows the effect of varying surrounding temperature on the population of Organism W.

Temperature of the surroundings (°C)	Population of Organism W	
	at the start	after 3 months
10	50	25
35	50	120
40	50	100
65	50	40

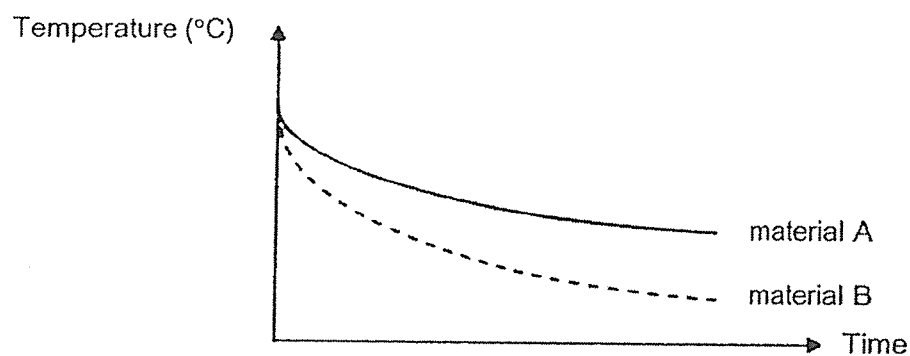
Organism W survives _____.

- (1) best at 35°C
- (2) best at any temperature
- (3) better at room temperature
- (4) better at higher temperatures

13. Rita wanted to find out if material A or B is a better conductor of heat. She wrapped two identical cups with materials A and B and filled each up with the same volume of water at 100°C .



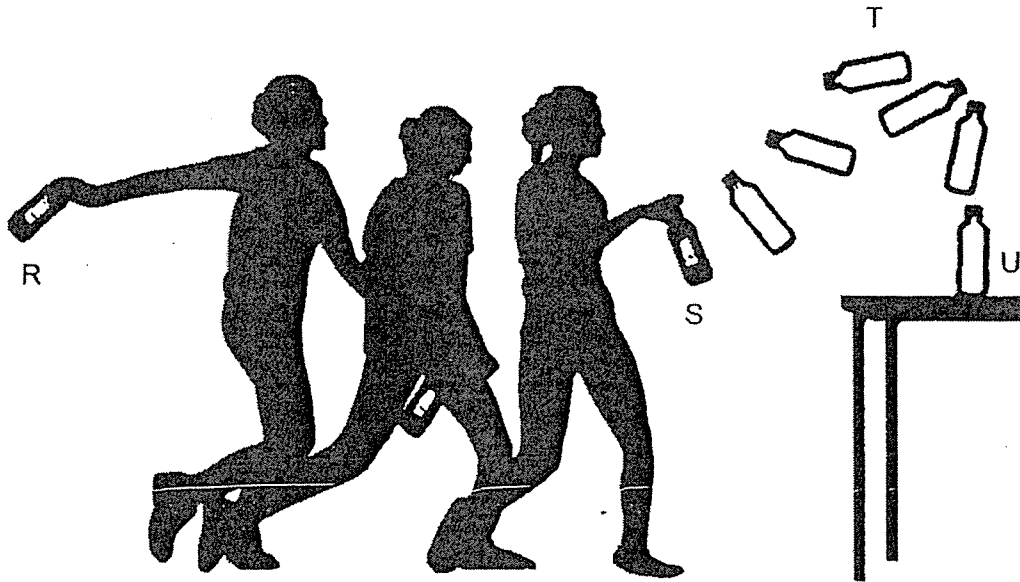
She measured the temperature of the water in each of the two cups regularly and recorded the results in the graph.



Which material(s) of containers would be more suitable for Rita to keep her food hot and her drinks cold for a longer time?

Material of containers for		
	hot food	cold drinks
(1)	A	B
(2)	B X	A
(3)	A	A
(4)	B X	B

14. Eliza swung a bottle to point R before swinging it to point S. At point S, she tossed the bottle into the air where it reached a maximum height at point T. The bottle flipped and landed at point U.



Which of the following statements is true?

- (1) The amount of kinetic energy of the bottle decreased from point S to T.
- (2) The bottle had more gravitational potential energy at point U than at point T.
- (3) The bottle had more gravitational potential energy at point S than at point R.
- (4) There was more gravitational force acting on the bottle at point T than at point U.

Anglo-Chinese School (Junior)



BITE-SIZED ASSESSMENT (2022)

PRIMARY 6

SCIENCE

BOOKLET B

Friday

4 March 2022

50 min

Name: _____ () Class: 6.() 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 7 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.

Booklet	Possible Marks	Marks Obtained
A	28	
B	22	
Total	50	

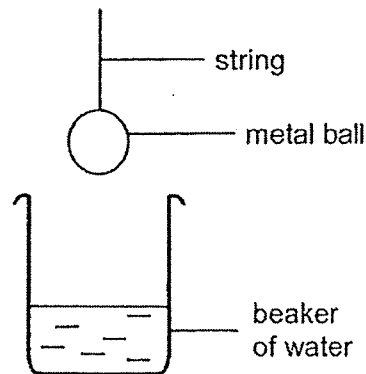
Booklet B

For questions 15 to 21, write your answers in this booklet.

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

(22 marks)

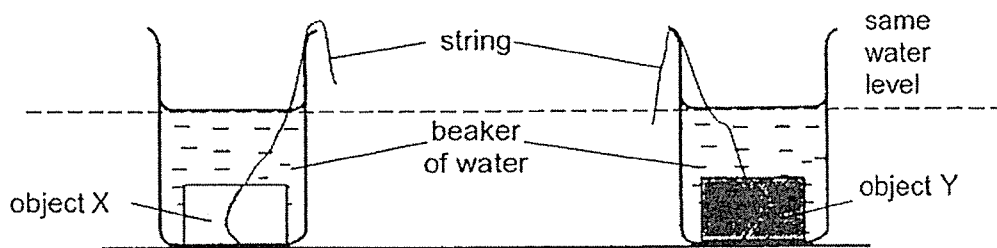
15. Umar placed a metal ball into a beaker of water.



- (a) (i) What would he observe? [1]

- (ii) Explain his observation in (a)(i). [1]

Umar conducted another experiment. He placed objects X and Y into identical beakers. He poured water into both beakers until they had the same water level as shown.

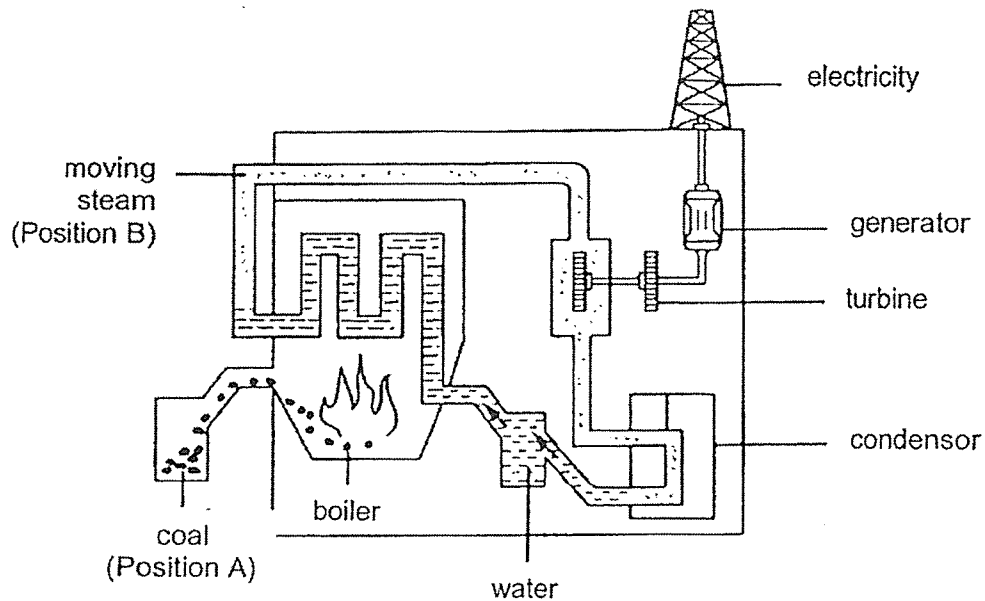


- (b) Without using any other apparatus or pouring water in or out of the beakers, how could he find out which object, X or Y, has a smaller volume? [1]

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SCORE	
	3

16. The diagram shows a power station.



- (a) Identify the forms of energy at the two positions, A and B, when the power station is functioning. [1]

(i) Position A: _____ energy

(ii) Position B: _____ energy

- (b) State two disadvantages of burning coal to generate electricity. [2]

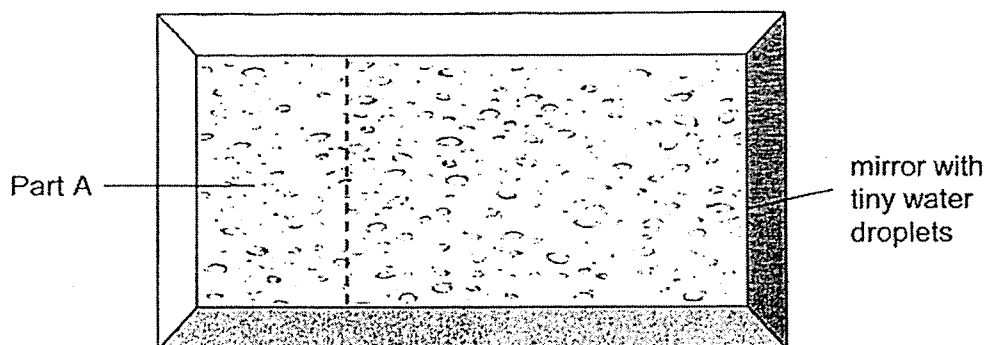
Disadvantage 1:

Disadvantage 2:

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SCORE	
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17. Robert observed that after taking a hot shower in a closed bathroom, the mirror in the bathroom was covered with tiny water droplets as shown.



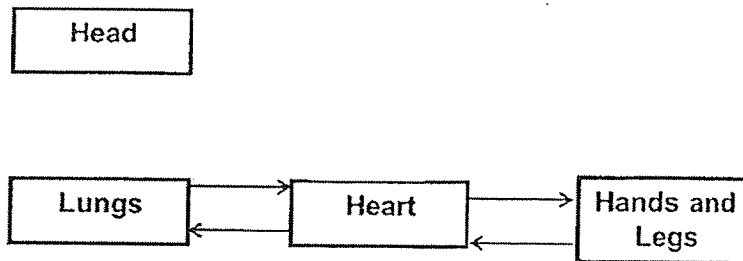
- (a) Explain how the water droplets formed on the mirror. [2]

- (b) Robert turned on his hair dryer and placed it at part A of the mirror. After some time, there were no more water droplets on part A. Explain his observation. [1]

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18. The diagram shows the direction of blood flow in some parts of the body.



Human circulatory system

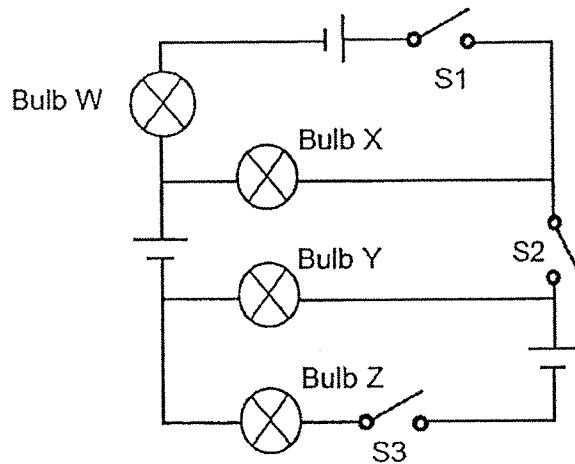
- (a) Draw two arrows (\rightarrow) to show the direction of blood flow to and from the head in the human circulatory system. [1]

- (b) Describe how oxygen in the air is able to reach the legs. [2]

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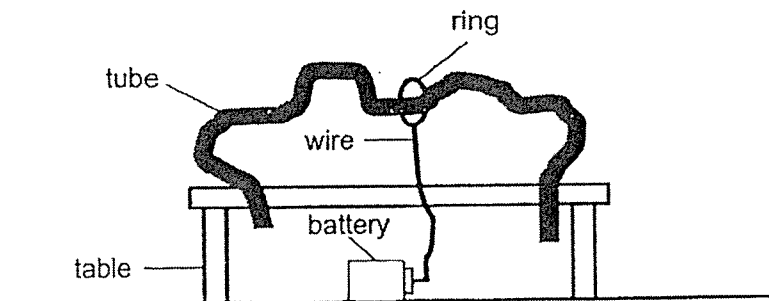
19. Andy sets up an electrical circuit as shown. All the electrical components are in working condition.



- (a) What is the greatest number of bulbs that light up when any two of the switches are closed? [1]

- (b) If bulb Y is fused, which bulb(s) will remain lit when all the switches are closed? [1]

Andy made a toy using a tube, some wires, a battery and a ring as shown. The ring can slide freely through the tube. When a buzzer is attached to the ring, wire and battery, a sound will be made when the ring touches the tube.



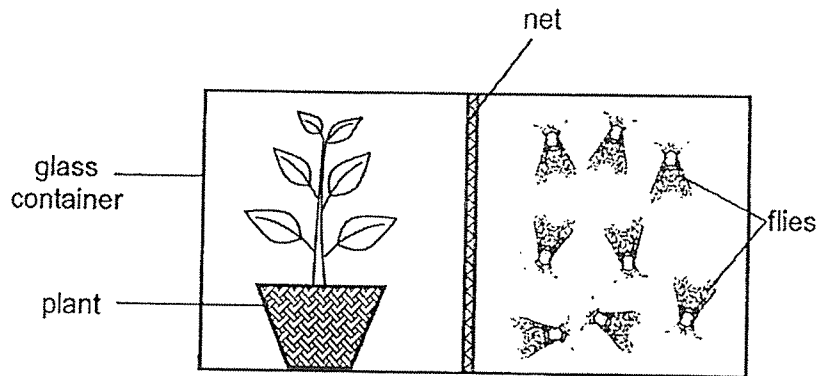
- (c) Add a buzzer and wires to the toy to draw a closed circuit. Use the symbol $\textcircled{\text{B}}$ for the buzzer. [1]

- (d) Suggest a suitable material to make the tube. Explain your choice. [1]

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SCORE	
	4

20. Lily wanted to find out if flies depend on plants for their survival. She placed a pot of plant and some flies into a glass container near a window from 12pm to 6pm as shown.



- (a) Explain how the flies depend on the plant for their survival.

[2]

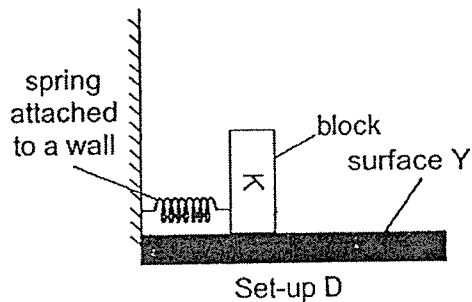
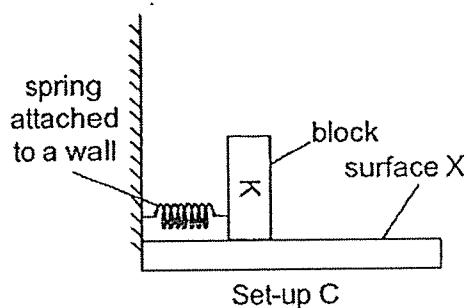
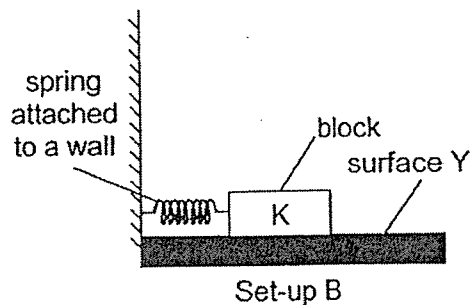
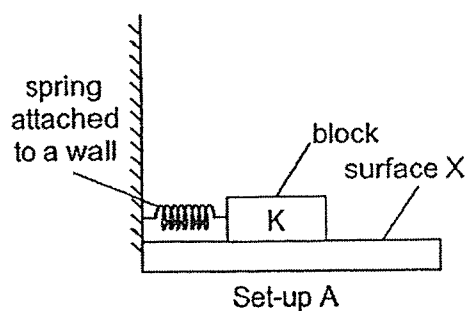
- (b) Other than the factor in (a), state two other factors of the environment that affect the survival of the flies.

[1]

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SCORE	
	3

21. Riley used identical rectangular blocks labelled K, identical springs and surfaces X and Y to prepare four set-ups A, B, C and D.



After placing the blocks differently in the set-ups, she pushed each block against the spring to compress it fully before releasing it. She recorded the distance the block moved for each set-up in the table.

Set-up	Surface area of block in contact with the board (cm ²)	Distance moved by the block (cm)
A	40	3.5
B	40	10.6
C	24	3.5
D	24	10.6

- (a) Riley concluded that there is less friction between a smaller surface area than a larger one and the board. Her teacher told her that her conclusion is **not** correct. By comparing set-ups A and C, explain why. [1]

- (b) Based on the results, which board, X or Y, has a rougher surface? Explain your answer. [2]

End of Paper

SCORE	3
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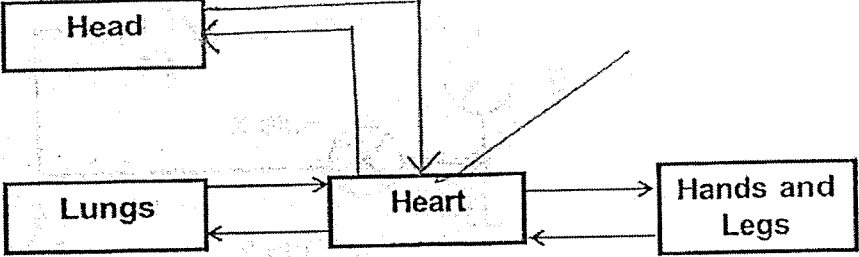
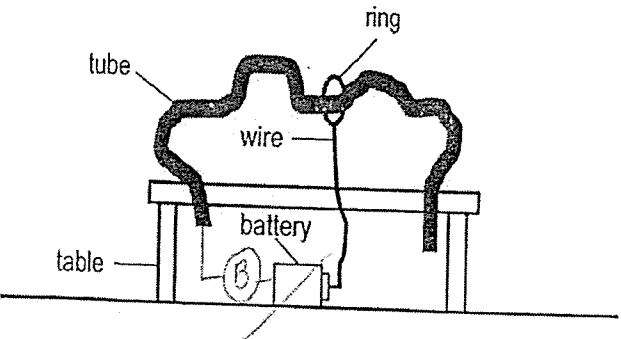
SCHOOL : ACS PRIMARY SCHOOL
 LEVEL : PRIMARY 6
 SUBJECT : SCIENCE
 TERM : 2022 WA

BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	3	3	3	1	4	1	3	4	2
Q 11	Q12	Q13	Q14						
2	1	3	1						

BOOKLET B

Q15)	<p>a) The water level in the beaker will increase.</p> <p>i) The metal ball takes up space so when ball is placed in the beaker, it will displace the water, increasing the water level.</p> <p>b) Umar could take out object X and Y from the beaker. He then can see which beaker has a lower water level and the beaker lower water level means that the object had a bigger volume.</p>
Q16)	<p>a) chemical potential</p> <p>ii) kinetic</p> <p>b1) It is a non-renewable source of energy.</p> <p>2) Burning coal will pollute the air.</p>
Q17)	<p>a) The water from the hot shower gained heat from the surrounding air and evaporated to form water vapour and when the warmer water vapour came into contact with cooler outer side of the mirror, it lost heat and condensed to form the water droplets</p> <p>b) The water droplets on part A gained heat from the hot air of the hair dryer and evaporated to form water vapour.</p>

Q18)	<p>a)</p>  <p>b) Air enters the nose to reach the lungs, where oxygen is absorbed into the bloods. The heart pumps more blood rich in oxygen to all parts of the body.</p>
Q19)	<p>a) 4</p> <p>b) Bulbs W , X, Z</p> <p>c)</p>  <p>d) Copper. Copper is a conductor of electricity so when the ring touches the tube, a closed circuit will be formed so electric current will flow through the closed circuit causing the buzzer to ring.</p>
Q20)	<p>a) The flies depend on the plant for oxygen because when the plant photosynthesises, it produces oxygen which is needed for the flies to respire.</p> <p>b) The presence of food and temperature of the environment.</p>

Q21)	<p>a) In set-up A and C both the surface were the same so only the amount of surface area of block in contact with the surface is changed but there surface is change in the distance travelled so the surface area in contact in the surface does not affect the amount of friction.</p> <p>b) X. The block moved a shorter distance on surface X than Y, which shows that there is more friction between the surface and the block.</p>
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