Anglo-Chinese School
(Primary)
A Methodist Institution
(Founded 1886)

MILESTONE CHECK 2023
SCIENCE
PRIMARY FIVE
BOOKLET A

Name: _____ ( ) Class: Primary 5 ___

Date: _____ Duration of paper: 55 min

INSTRUCTION TO CANDIDATES

1. This question paper consists of 9 printed pages including this cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answer on the Optical Answer Sheet (OAS) provided.

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) and shade your answer on the Optical Answer Sheet.

(28 marks)

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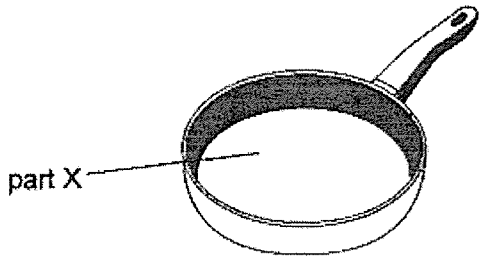
1 The diagram shows a frying pan. Part X is used to fry food and is made of metal.



Which of the following properties makes metal the most suitable material to make part X.

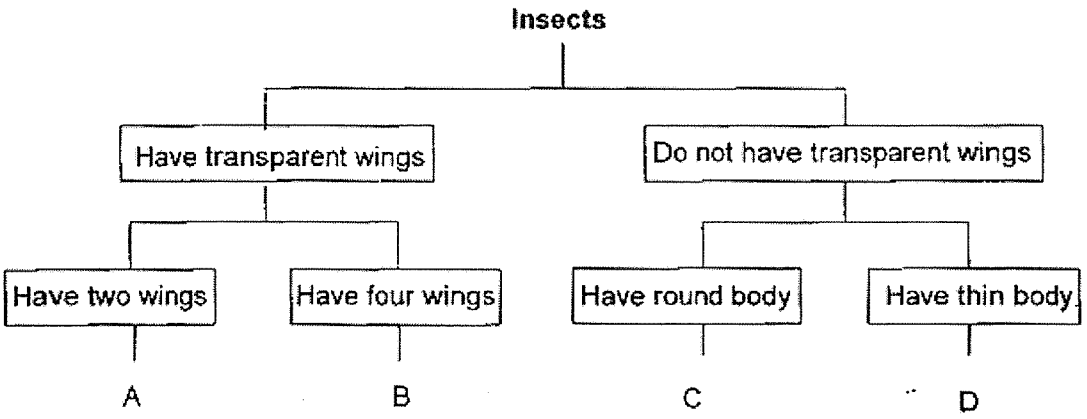
(1) It absorbs water well

(2) It is a good conductor of heat

(3) It is a conductor of electricity

(4) It does not allow light to pass through

2 The classification diagram shows how four insects A, B, C and D are classified.



Insects A, B, C and D are not classified according to the _____.

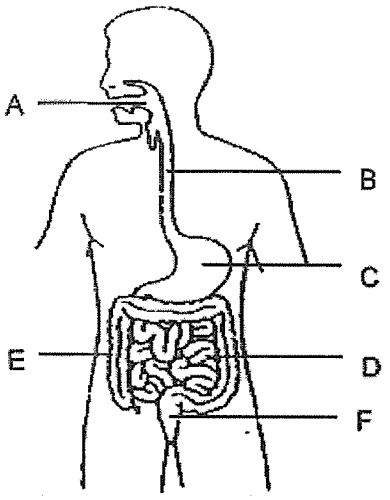
(1) body shape

(2) way they fly

(3) type of wings

(4) number of wings

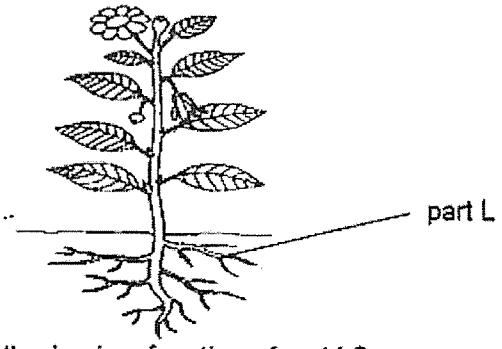
3 The diagram shows the digestive system of a human body.



At which of the organs (A, B, C, D, E and F) does digestion start and end?

	Start of digestion	End of digestion
(1)	A	F
(2)	A	D
(3)	B	E
(4)	C	D

4 The diagram shows a plant.



Which of the following is a function of part L?

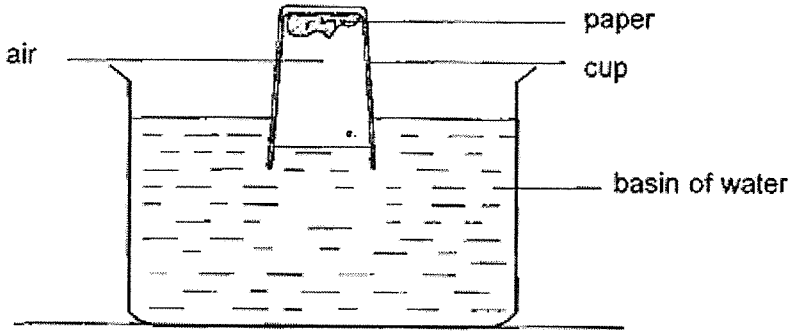
(1) It holds the leaves upright.

(2) It makes food for the plant.

(3) It absorbs water for the plant.

(4) It takes in carbon dioxide and gives out oxygen.

5 Study the diagram.



A piece of paper was pasted onto the inner bottom surface of a cup. When the cup was pushed upside down into the basin of water, the piece of paper remained dry.

Which property of air did this experiment demonstrate?

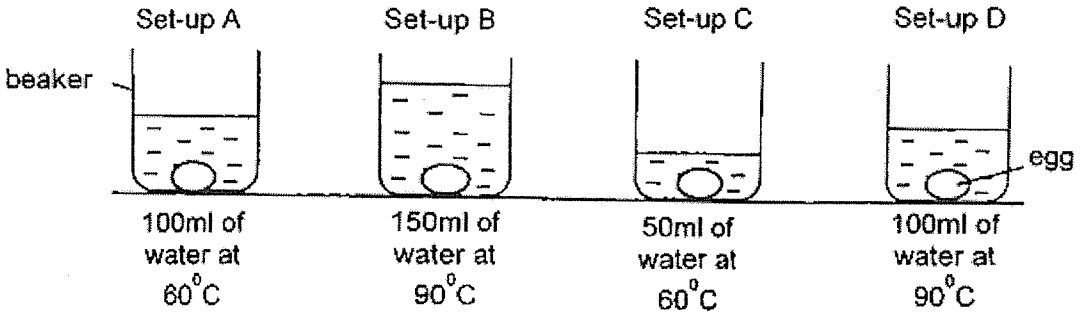
(1) Air has mass.

(2) Air occupies space.

(3) Air has no definite shape.

(4) Air has no definite volume.

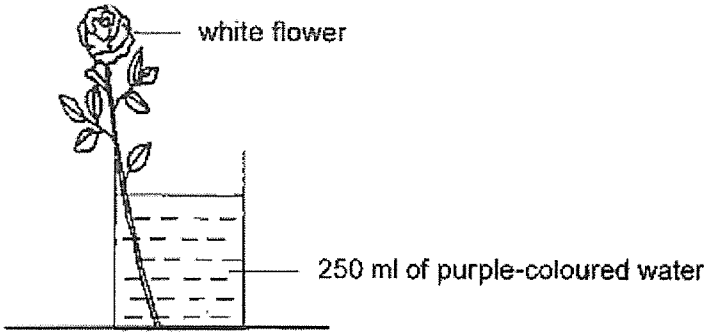
6 Rhys conducted an experiment with the four set-ups as shown in the picture below. Four identical eggs were left in each beaker for 5 minutes before being taken out and cracked, to see how cooked each egg was.



Which one of the following shows the correct arrangement?

	Most cooked egg → Least cooked egg			
(1)	C	A	D	B
(2)	D	A	B	C
(3)	A	C	B	D
(4)	B	D	A	C

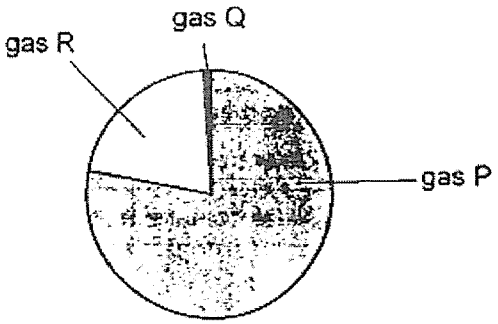
7 Susan set up an experiment as shown.



What will she observe about the colour of the flower and the amount of water in the beaker after three days?

	Colour of the flower	Amount of water in the beaker (ml)
(1)	White	200
(2)	White	250
(3)	Purple	200
(4)	Purple	250

8 The pie chart shows the composition of gases in the air.



Which of the following statement(s) is/are true about the air that we breathe out?

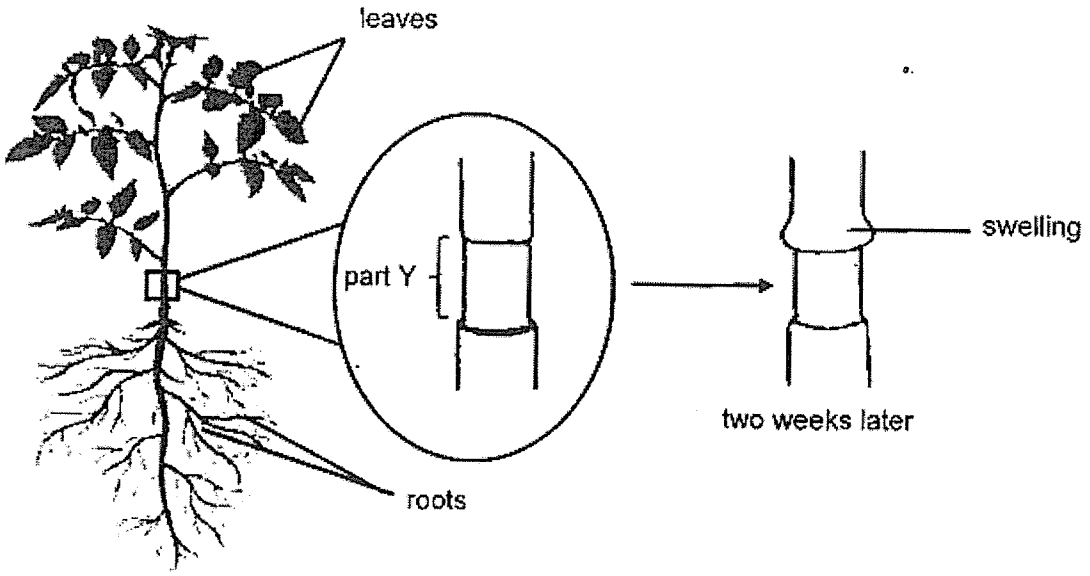
A The amount of P will decrease.

B The amount of Q will decrease.

C The amount of R will decrease.

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

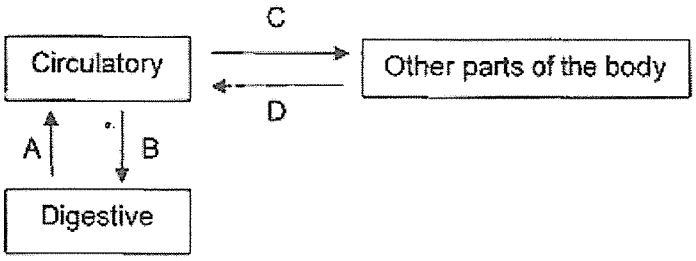
9 Paul removed the outer ring of a plant at part Y. After two weeks, he observed a swelling above part Y.



Which tube at part Y was removed and what was the correct explanation for Paul's observation?

	Tube removed	Explanation
(1)	food-carrying tube	Food made from the leaves was not able to travel to the roots.
(2)	food-carrying tube	Food made from the leaves was able to travel to the roots.
(3)	water-carrying tube	Water from the leaves was not able to travel to the roots.
(4)	water-carrying tube	Water from the leaves was able to travel to the roots.

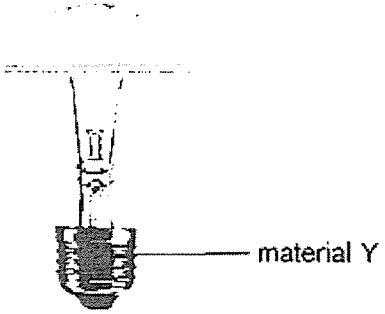
10 The diagram represents the movement of substances around the human body.



Which two arrows best represent the movement of digested food?

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

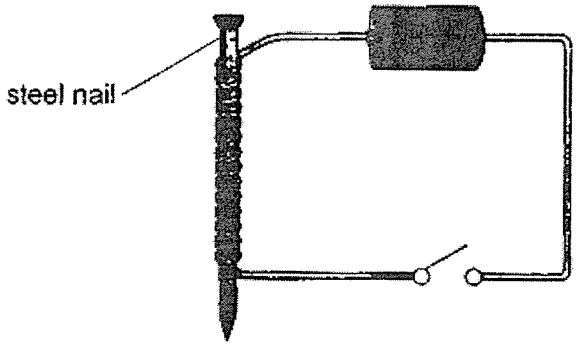
11 Material Y is used to make the casing of a light bulb as shown.



Which of the following is a correct reason for choosing material Y?

(1) It is a magnetic material.
(2) It is a conductor of electricity.
(3) It is a good conductor of heat.
(4) It allows the most light to pass through it.

12 The diagram shows a circuit which is used to make an electromagnet.



When the switch is closed, electric current will pass through the circuit and the steel nail will become an electromagnet.

Which one of the following methods helps to increase the strength of the electromagnet?

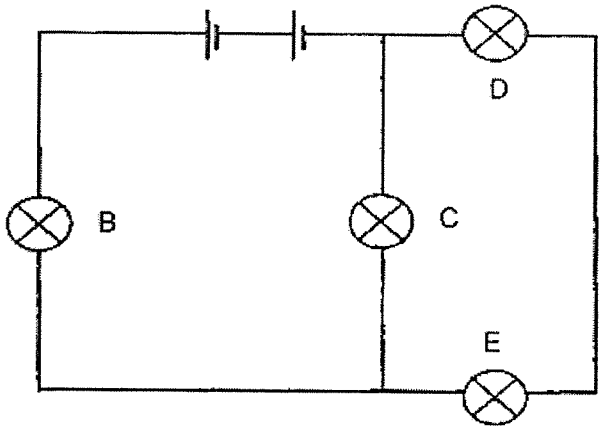
(1) Use a longer wire in the circuit.

(2) Place one more battery in the circuit.

(3) Change the material of the nail from steel to copper.

(4) Reduce the number of coils of wires around the nail.

13 The diagram shows an electrical circuit with four bulbs.



Which of these bulbs will remain lit when bulb E fuses?

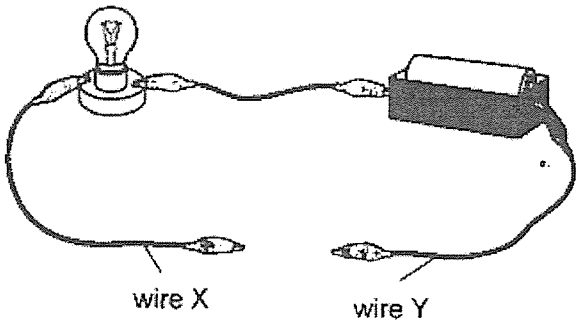
(1) B only

(2) B and C only

(3) C and D only

(4) B, C and D

14 Steven tested a circuit card using a circuit tester as shown in the diagram.

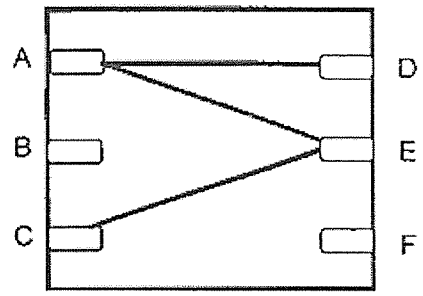


The table shows the results when wires X and Y are connected to different steel paper clips of the circuit card.

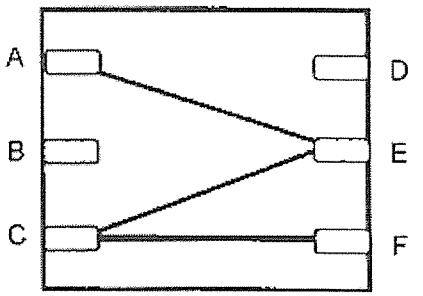
Steel paper clips tested	Did the bulb light up?
A and B	No
A and D	Yes
A and F	Yes
C and E	No
D and E	No

Which of the following circuit cards did he use?

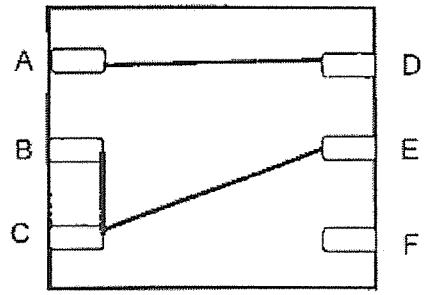
(1)



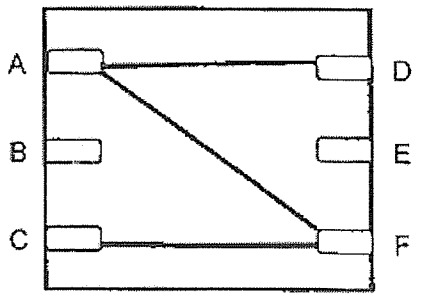
(2)



(3)



(4)



END OF BOOKLET A

Anglo-Chinese School
(Primary)
A Methodist Institution
(Founded 1886)

MILESTONE CHECK 2023
SCIENCE
PRIMARY FIVE
BOOKLET B

Name: _____ ( ) Class: Primary 5 ___

Date: _____ Duration of paper: 55 min

_____
Parent's/Guardian's signature

INSTRUCTION TO CANDIDATES

1. This question paper consists of 9 printed pages including this cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write all your answers in this booklet.

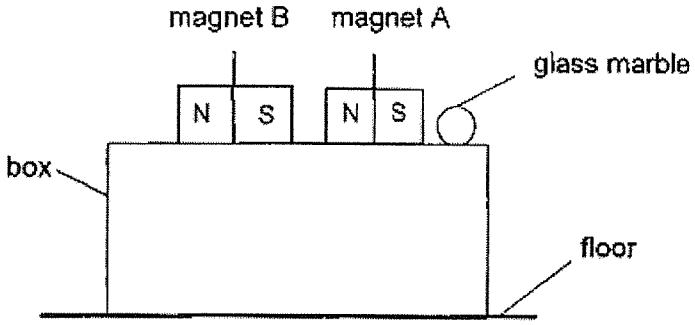
Booklet	Maximum marks	Marks obtained
A	28	
B	22	
Total	50	

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 Zahid created a set-up as shown.



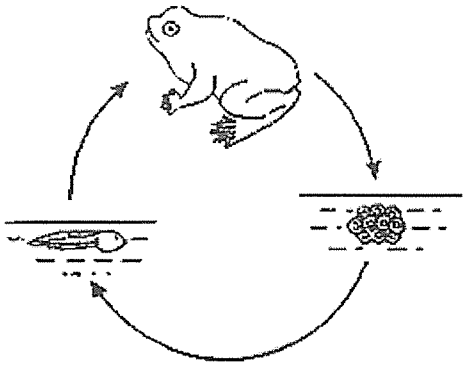
(a) Without touching magnet A or the marble, explain how Zahid can use magnet B to cause the glass marble to drop to the floor. [2]

(b) Zahid then replaced magnet B with object C and observed that object C was attracted to magnet A. Suggest a material that object C could be made of. [1]

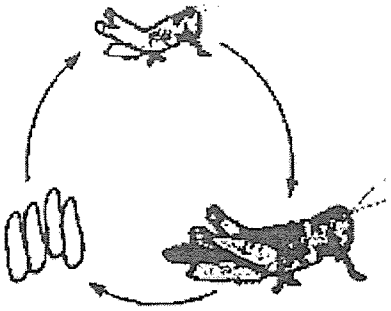
(Go on to the next page)

Score 3

16 The two diagrams show the life cycles of a frog and a grasshopper.



life cycle of a frog



life cycle of a grasshopper

(a) Based on the diagrams above only, state one difference between the stages of the life cycle of a frog and a grasshopper. [1]

_____

_____

(b) Animals like frogs lay many eggs at a time, Give a reason why doing so increases the chances of the frogs' survival. [1]

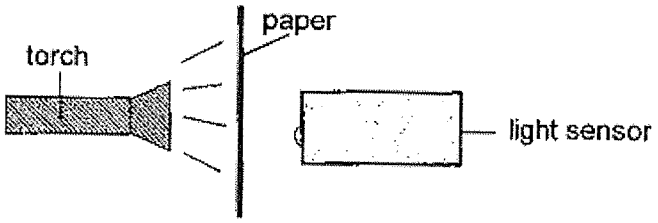
_____

_____

(Go on to the next page)

Score	/2

17 Dave conducted an experiment in a dark room. He wanted to find out how the number of sheets of paper used affected the amount of light passing through them. He placed a piece of paper between a lit torch and a light sensor as shown.



He slowly increased the number of sheets of paper used and recorded his results as shown.

Number of sheets of paper used	1	2	3	4
Amount of light detected by the light sensor (units)	80	60	40	20

(a) What can be concluded from the experiment? [1]

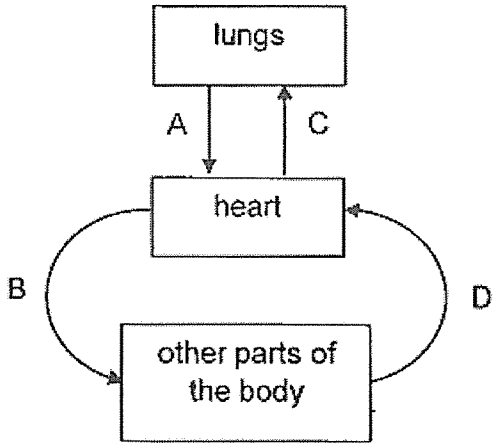
(b) Other than the light sensor and paper, state one other variable to be kept constant to ensure a fair test. [1]

(c) Why was the experiment conducted in a dark room? [1]

(Go on to the next page)

Score 3

18 The diagram represents how blood is circulated in the human body. A, B, C and D represent blood vessels.



(a) (i) State the two blood vessels that contain blood rich in oxygen. [1]

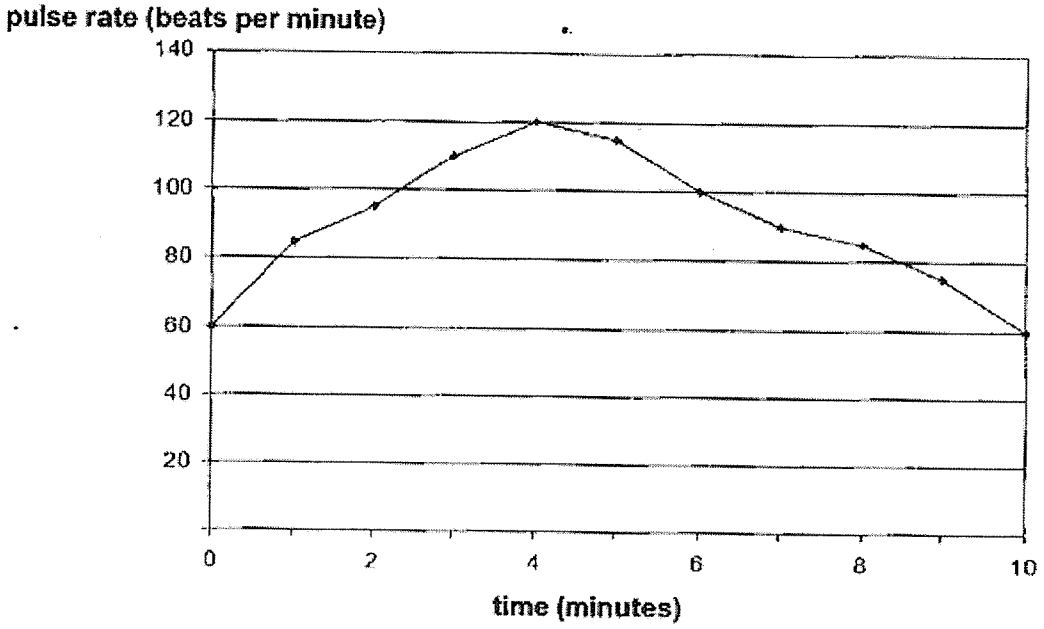
(ii) State the two blood vessels that contain blood rich in carbon dioxide. [1]

Q18 continues on page 6

(Go on to the next page)

Score 2

Nurul conducted a test to find out what happens to her pulse rate when she exercises. She measured her pulse rate at the start of the experiment and jogged on the spot for four minutes. She measured her pulse rate every minute for ten minutes and represented her results in a graph as shown.



(b) Based on the graph above, what is Nurul's pulse rate at rest? [1]

_____ beats per minute

(c) What happened to Nurul's pulse rate when she exercised? Explain why. [2]

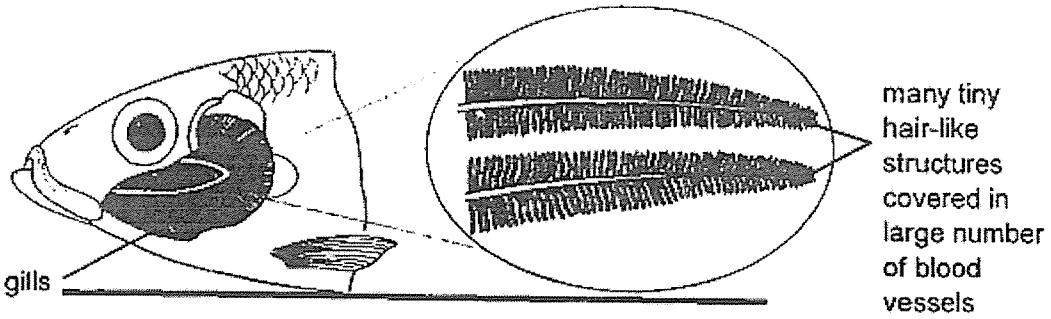
_____

_____

(Go on to the next page)

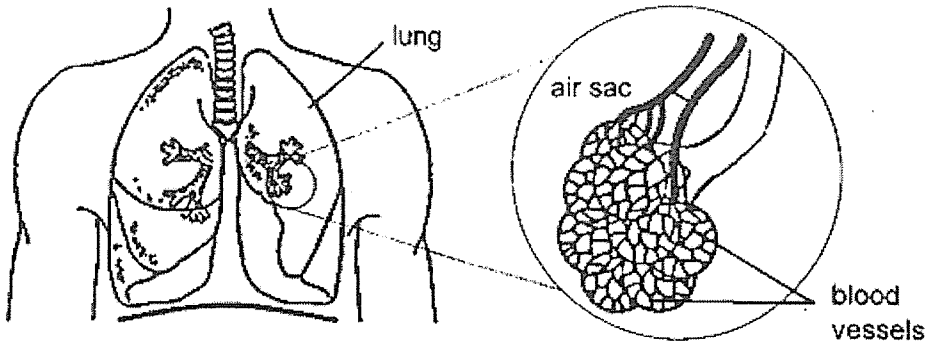
Score	3

19 The diagram shows the respiratory system of a fish. Fishes absorb dissolved oxygen from the water as the water passes through the gills.



(a) Explain how having many tiny hair-like structures help the fish get more dissolved oxygen. [1]

The diagram shows part of the human respiratory system.



(b) How does oxygen in the environment reach the blood vessels of the air sacs? [1]

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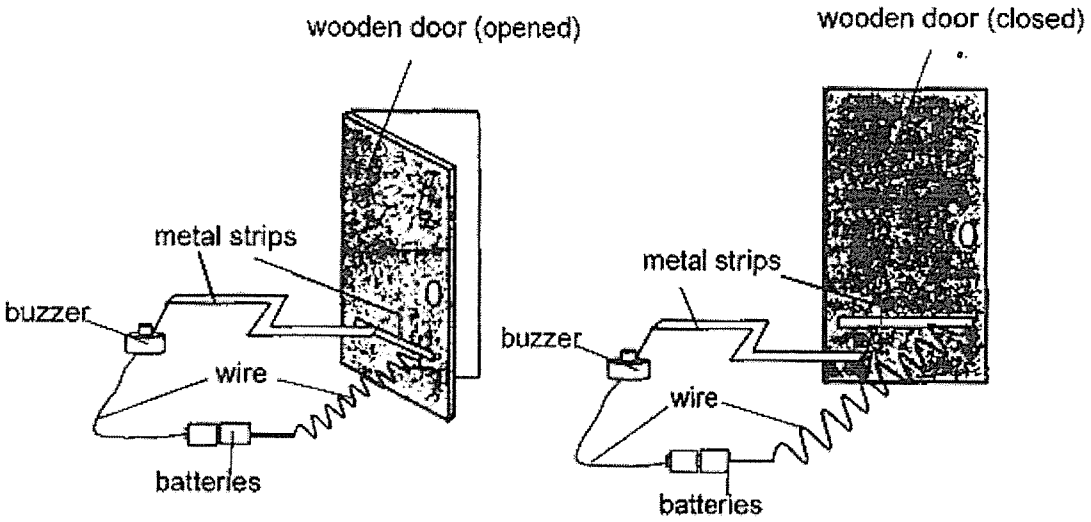
Score	/2

20 Alex connected a circuit using a buzzer, two batteries, some metal strips and wires to a wooden door as shown. He noticed that when the door was closed, the buzzer stopped buzzing.



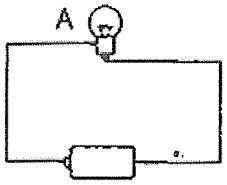
(a) Explain why the buzzer stopped buzzing when the door was closed. [2]

(b) Alex observed that that the buzzer was too soft to be heard clearly and wanted to modify his circuit. Without changing the buzzer, suggest what Alex could do to the circuit to make the buzzer produce a louder sound. [1]

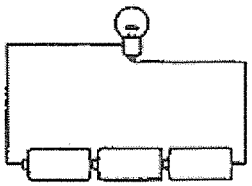
(Go on to the next page)

Score / 3

21 Meera set up the two electrical circuits as shown using similar batteries and bulbs.



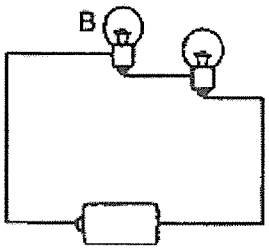
circuit X



circuit Y

(a) Based on the set-ups, what is the aim of her experiment? [1]

Meera then set up another circuit as shown below.



circuit Z

(b) Draw the circuit diagram of circuit Z, using circuit symbols, a ruler and a pencil in the space provided below. [2]

(c) Which bulb lit up more brightly, A or B? Explain your answer. [1]

END OF BOOKLET B

END OF MILESTONE CHECK

Score	/4

Name: _____ ( ) Class: _____ Date: _____

2023 P5 Science Milestone check

Students' Corrections Template

Booklet A

No	Ans	No	Ans	No	Ans
1	2	6	4	11	2
2	2	7	3	12	2
3	2	8	3	13	2
4	3	9	1	14	4
5	2	10	1		

Booklet B

QN.	SUGGESTED ANSWERS
15a	Twins magnet B around so the north pole of B faces towards the north pole of magnet A. The two magnets will repel each other. This will cause magnet A to move to the right and push the marble down.
15b	Iron / Steel/ Nickel / Cobalt

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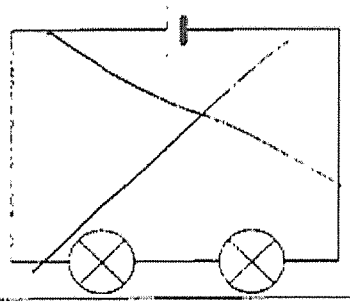
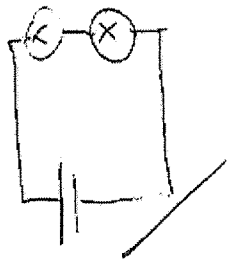
16a	The young of a frog does not look like the adult while the young of a grasshopper looks like the adult. (vice-versa) **OR** The grasshopper has a nymph stage but not the frog. **OR** The frog has a tadpole stage while the grasshopper has a nymph stage. **OR** The life cycle of a frog takes place partly in water while the life cycle of a grasshopper takes place entirely on land.
16b	It is to ensure that at least some of the eggs will hatch into young tadpoles (to increase the chance of the frog's survival.)
17a	The greater the number of sheets of paper used, the lesser the amount of light detected.
17b	Distance between the torch and the paper Other acceptable answers Distance between the torch and light sensor/ Distance between the paper and light sensor/ Brightness of the torch
17c	This is to ensure that no other light source affected the results of the experiment.
18a	(i) A and B (ii) C and D
18b	60
18c	Her pulse rate increases Her heart needs to pump blood faster to transport more oxygen and digested food to the other parts of the body/muscles to produce more energy.
19a	It increases exposed surface area to the water more (dissolved) oxygen to be absorbed (into the blood).

19b	Air enters the nose, travels down the windpipe to the ___lungs___ where oxygen in air is then ___absorb___ into the blood vessels (of the air sacs).
20a	When the door is closed, the metal strips are ___not___ touching each other, so ___electricity___ cannot pass through the circuit and the buzzer cannot buzz. Other acceptable answers (For the second 1 mark) it becomes an open circuit there is a gap in the circuit
20b	He can add more ___batteries___ to the set up.
21a	To find out how the ___number___ of batteries (arranged in series) affects the ___brightness___ of the bulb.
21b	- *Drawing of a circuit diagram*  - all three components drawn correctly - circuit can work Deduction for: - gap spotted - each wrong component drawn 

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21c	The bulb A is brighter than bulb B. There is more electric current / electricity flowing through bulb A than B.