

Anglo-Chinese School (Junior)



END-OF-YEAR EXAMINATION (2023)

PRIMARY 4  
SCIENCE  
BOOKLET A

27 October 2023

Total Time for Booklet A and Booklet B : 1 h 45 min

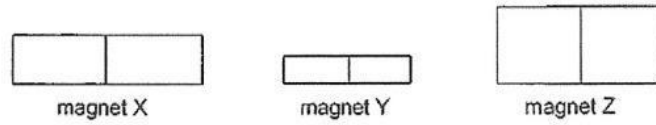
Name: \_\_\_\_\_ ( ) Class: 4.( )

**INSTRUCTIONS TO CANDIDATES**

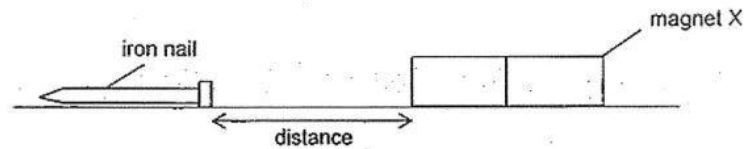
1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Use a 2B pencil to shade your answers on the Optical Answer Sheet (OAS).

This booklet consists of 17 printed pages.

25. Janet carried out an experiment with an iron nail and three magnets, X, Y and Z, of different sizes.



She moved magnet X towards the nail until the magnet attracted the nail.



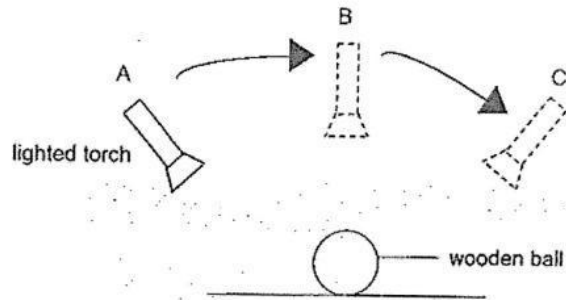
She then measured the distance between the nail and magnet X. She repeated the experiment with magnets Y and Z and recorded the results in the table.

| Magnet | Distance (cm) |
|--------|---------------|
| X      | 10            |
| Y      | 5             |
| Z      | 15            |

Based on her results, what could Janet conclude?

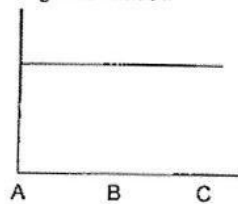
- (1) Magnet Z is the weakest magnet.
- (2) The bigger the magnet, the stronger it is.
- (3) The size of the magnet does not affect its strength.
- (4) Magnet X is stronger than magnet Z but weaker than magnet Y.

26. Sara wanted to find out how the different positions of a lighted torch affects the length of the shadow of a wooden ball. She prepared the set-up as shown and slowly moved the lighted torch from position A to C.

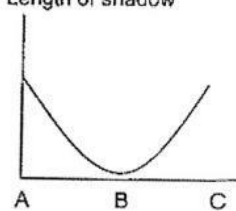


Which graph correctly shows the length of the shadow cast by the ball?

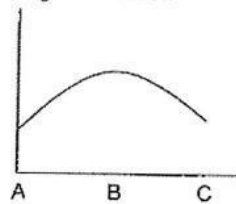
(1) Length of shadow



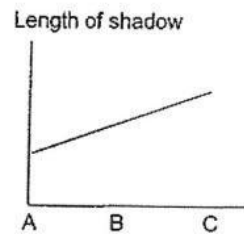
(2) Length of shadow



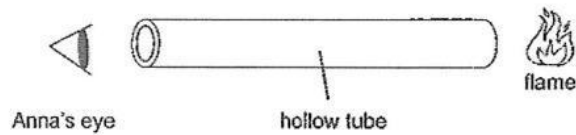
(3) Length of shadow



(4) Length of shadow



27. Anna used a hollow wooden tube to look at a flame.

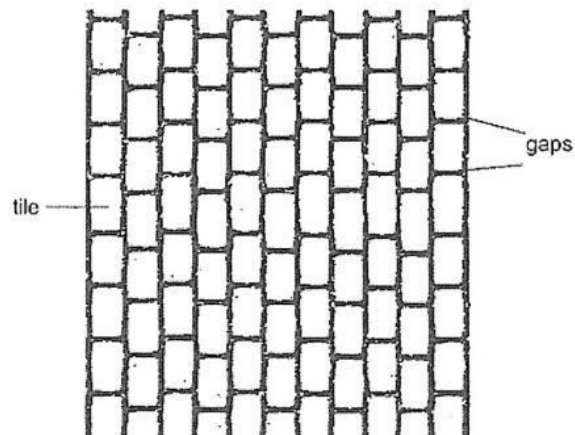


Which two statements explain why she was able to see the flame through the hollow wooden tube?

- A Light travels in a straight line.
- B Light from the flame enters her eyes.
- C Light is reflected away from her eyes.
- D Light from her eyes is reflected off the flame.

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

28. Laila noticed that there are gaps in the between the tiles on pavements.



What would happen to the gaps on a hot day?

- (1) They will become larger.
- (2) They will become narrower.
- (3) They will expand more than the tiles.
- (4) They will gain heat from the surroundings.

End of Booklet A

ACS (Junior) P4 End-of-Year Examination 2023

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## Anglo-Chinese School (Junior)



### END-OF-YEAR EXAMINATION (2023)

#### PRIMARY 4 SCIENCE BOOKLET B

27 October 2023

Total Time for Booklet A and Booklet B : 1 h 45 min

Name: \_\_\_\_\_ (    )      Class: 4.(    )

Parent's Signature: \_\_\_\_\_

#### INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

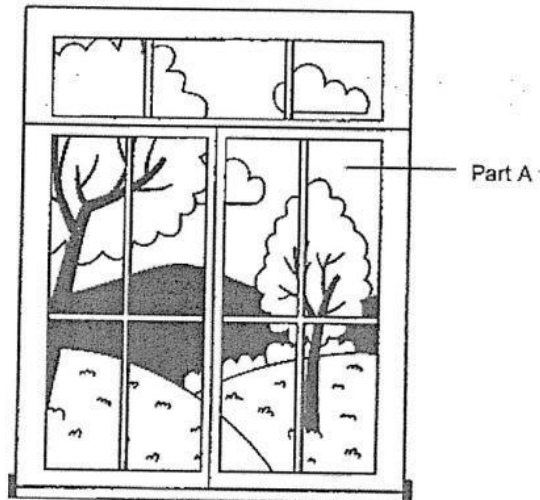
| Booklet | Possible Marks | Marks Obtained |
|---------|----------------|----------------|
| A       | 56             |                |
| B       | 44             |                |
| Total   | 100            |                |

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This question paper consists of 16 printed pages

For questions 29 to 41, write your answers in this booklet.  
The number of marks available is shown in the brackets [ ] at the end of each question or part question.  
(44 marks)

29. The diagram shows a window.



Fill in the blanks using the correct words in the box.

[3]

|       |        |       |
|-------|--------|-------|
| heat  | breaks | metal |
| bends | light  | glass |

Part A is made of \_\_\_\_\_ because it allows \_\_\_\_\_

to pass through so that we can see the trees outside. However, part A

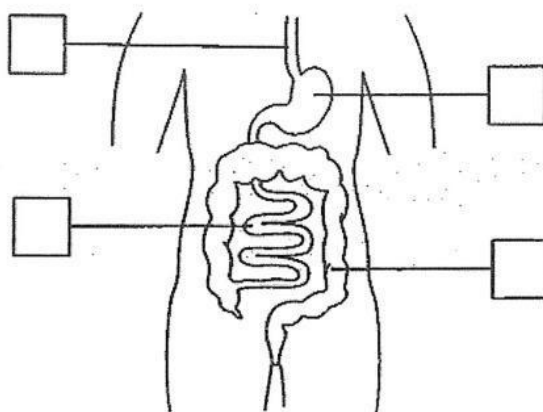
\_\_\_\_\_ easily when dropped.

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|       |   |
|-------|---|
| SCORE | 3 |
|-------|---|

30. (a) The diagram shows part of the human digestive system. Tick (✓) one box to show where the large intestine is.

[1]



- (b) Fill in the blank using the following helping words.

[1]

|        |       |                 |                 |
|--------|-------|-----------------|-----------------|
| gullet | mouth | large intestine | small intestine |
|--------|-------|-----------------|-----------------|

Food from the stomach is next passed on to the \_\_\_\_\_

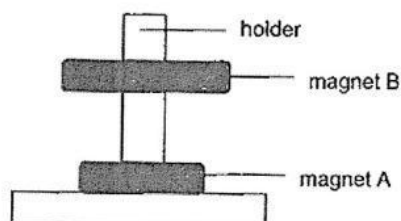
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|-------|---|
| SCORE | 2 |
|-------|---|

31. Tick (✓) in the box if each of the following has a definite shape and/or a definite volume. [3]

|                  | Has definite shape       | Has definite volume      |
|------------------|--------------------------|--------------------------|
| (a) fruit juice  | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) air          | <input type="checkbox"/> | <input type="checkbox"/> |
| (a) water bottle | <input type="checkbox"/> | <input type="checkbox"/> |

32. Kayden placed two ring magnets, A and B, through a holder as shown.



- (a) The holder was made of glass and did not attract the magnets. [1]

Glass is a \_\_\_\_\_ material.

- (b) Why was magnet B floating above magnet A? [1]

Magnet B was \_\_\_\_\_ magnet A.

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|       |   |
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| SCORE | 5 |
|-------|---|

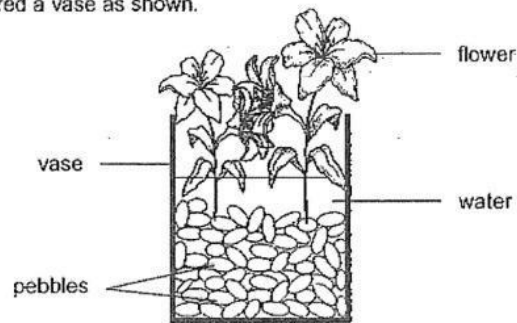
33. (a) State what matter is.

[1]

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Violet prepared a vase as shown.



- (b) Identify the state(s) of matter found in the vase.

[1]

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- (c) Violet added more pebbles to beautify the vase. Soon, the water in the vase overflowed. Explain why this happened based on the property of matter.

[2]

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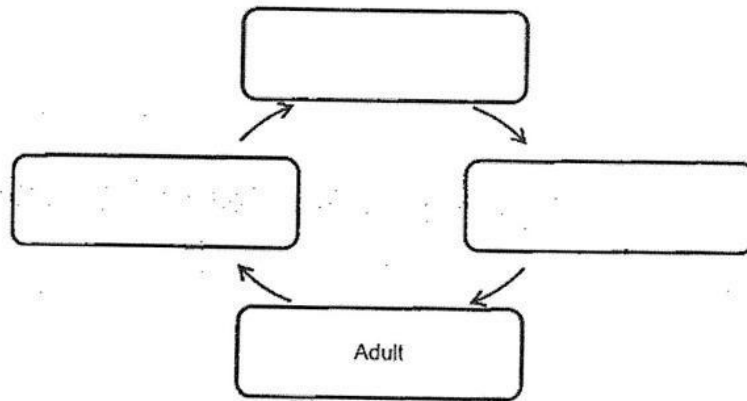
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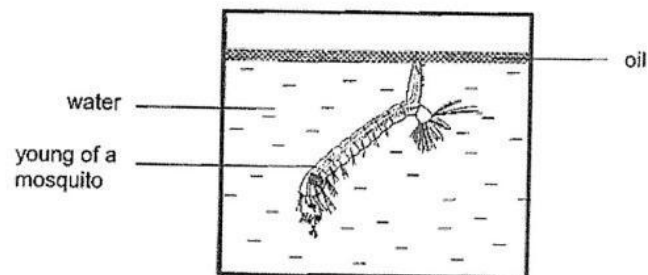
|       |   |
|-------|---|
| SCORE |   |
|       | 4 |

34. (a) State the stages in the life cycle of a mosquito by filling in the boxes.

[1]



- (b) Oil is sprayed on stagnant water as shown.



[2]

Explain how this prevents mosquitoes from breeding.

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|       |   |
|-------|---|
| SCORE |   |
|       | 3 |

- (c) A scientist wanted to find out the conditions that affect the life cycle of mosquitoes.

He set up an experiment by placing 30 eggs in a container of stagnant water. He recorded the number of mosquito eggs that hatched in a day at different temperatures.

| Temperature of the surrounding (°C) | Numbers of eggs hatched in a day |
|-------------------------------------|----------------------------------|
| 22                                  | 18                               |
| 25                                  | 23                               |
| 28                                  | 28                               |

State how the temperature of the surrounding affects the numbers of mosquito eggs hatched in a day. [1]

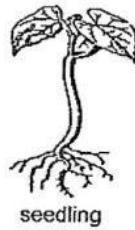
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|       |                                                                                                                                                                           |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SCORE | <div style="border: 1px solid black; width: 50px; height: 50px; position: relative;"><div style="position: absolute; top: 0; right: 0; bottom: 0; left: 0;">1</div></div> |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

35. Chandra observed the growth of a seedling for one week.



- (a) He recorded his observations in a table.

Tick (✓) the boxes to indicate which of Chandra's observations are true and false. [1]

|       | Observation                                      | True | False |
|-------|--------------------------------------------------|------|-------|
| (i)   | The leaves allow the seedling to exchange gases. |      |       |
| (ii)  | The shoot grew before the roots.                 |      |       |
| (iii) | The roots absorb water for the seedling.         |      |       |

- (b) As the seedling grew, Chandra observed that the size of the seed leaves decreases. Explain why. [1]

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- (c) The seedling died when Chandra cut away all its leaves. Explain why. [1]

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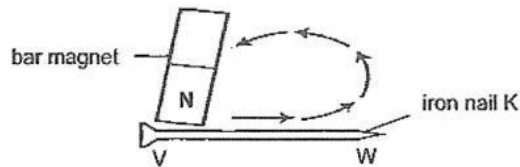


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|-------|---|

36. Ayra made a temporary magnet using iron nail K with ends V and W as shown.



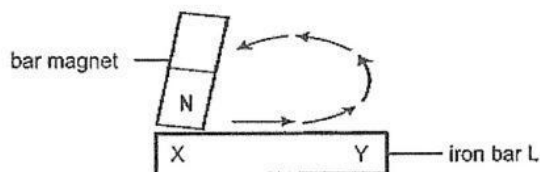
Set-up 1

She found out that end W is the South pole of the temporary magnet.

- (a) Name the method Ayra used to make the temporary magnet.

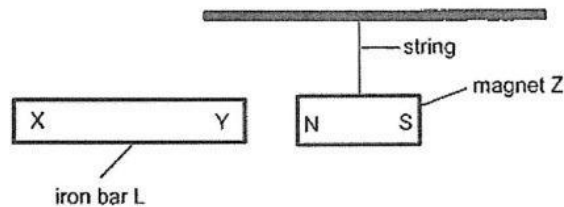
[1]

Ayra made another temporary magnet using iron bar L with ends X and Y.



Set-up 2

She brought the temporary magnet near a hanging magnet, Z, as shown.



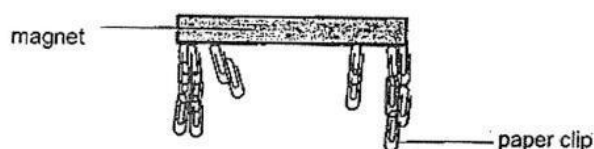
- (b) How will iron bar L and magnet Z interact? Explain your answer.

[2]

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|       |   |
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| SCORE |   |
|       | 3 |

The diagram shows magnet Z after Ayra lifted it from a tray of metal paper clips.



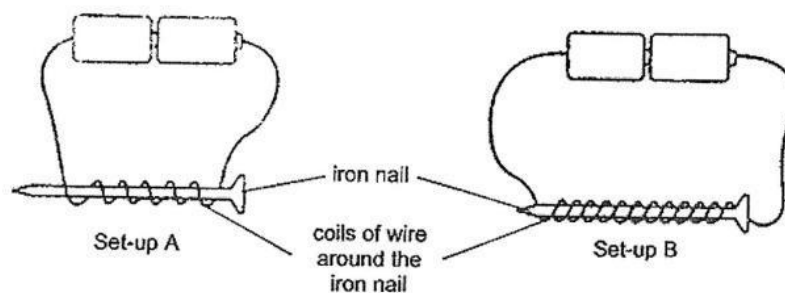
- (c) Based on her observation, what can she conclude about the ends of the magnet? [1]

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37. Maria conducted an experiment with similar iron nails, wires and batteries in setups A and B as shown. The batteries are in working condition.



She placed the electromagnets near some steel pins and recorded the number of pins attracted to each electromagnet in the table.

| Set-up | Number of steel pins attracted |
|--------|--------------------------------|
| A      | 3                              |
| B      | 5                              |

- (a) State the aim of Maria's experiment. [1]

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|       |   |
|-------|---|
| SCORE | 2 |
|-------|---|