

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

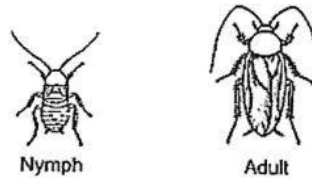
Name: _____ () Class: 4.()

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.

13. The diagram shows the nymph and adult of a cockroach.

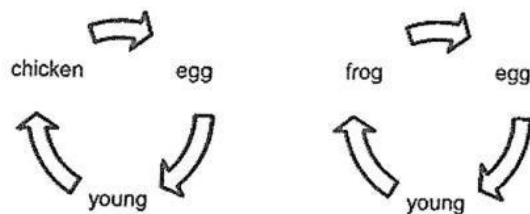


Which of the following statements are correct about them?

- A Both have feelers.
- B The nymph does not resemble the adult.
- C The nymph does not have wings but the adult has wings.
- D The nymph moults several times but the adult does not moult.

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

14. The diagrams show the life cycles of a chicken and a frog.



Which of the following describe the similarities between the two life cycles?

- A Both life cycles have three stages.
- B Both life cycles have an egg stage.
- C The young of both animals resemble the adult.
- D The young of both animals live both on land and in water.

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

15. Shanti investigated the conditions needed for the germination of green bean seeds. She prepared three set-ups, A, B and C, containing the same amount of cotton and the same number of green bean seeds.

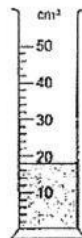
A tick (✓) in the table indicates the condition present in each set-up.

Set-up	Condition		
	Light	Water	Air
A	✓	✓	
B		✓	✓
C	✓	✓	✓

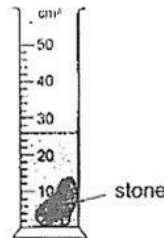
She observed that the seeds in set-ups B and C germinated.

What can she conclude from her experiment?

- (1) Light is needed for germination.
 - (2) Only air is needed for germination.
 - (3) Water and air are needed for germination.
 - (4) The seeds in set-up B did not need warmth to germinate.
16. Helen wanted to find the volume of a stone. She poured some water in a measuring cylinder, and then placed the stone into the cylinder of water.



Before putting in the stone

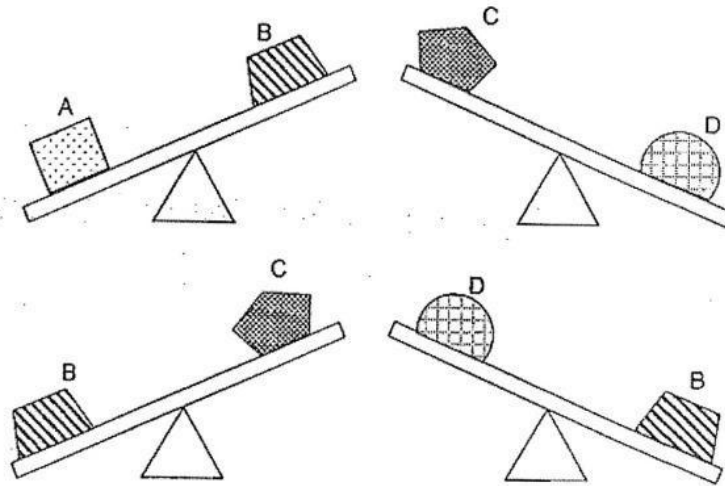


After putting in the stone

Which of the following statements is correct?

- (1) The mass of the stone is 26g.
- (2) The water displaced the stone.
- (3) The volume of the stone is 8cm³.
- (4) The stone takes up more space than the water.

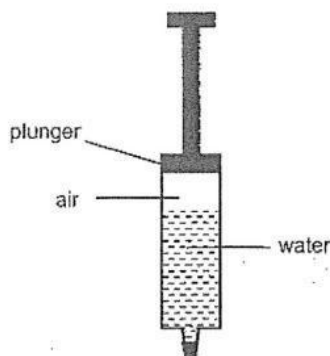
17. The diagram shows four objects, A, B, C and D of different mass placed on a balance, two at a time.



Which of the following correctly shows the mass of A, B, C and D from the greatest mass to the least mass?

	Greatest → Least			
(1)	A	B	D	C
(2)	A	C	B	D
(3)	C	D	B	A
(4)	D	A	B	C

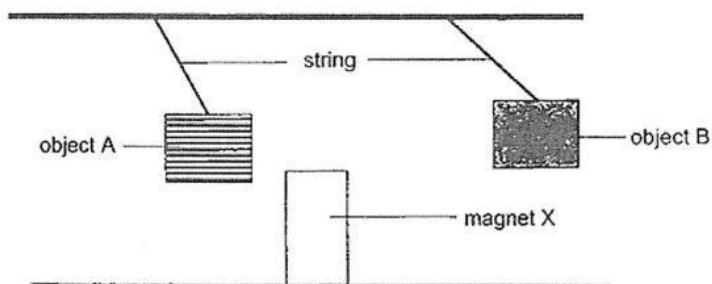
18. Kamal filled a syringe with some water and sealed it. He observed that there was air in the syringe.



He pushed down the plunger of the syringe slightly. What will happen to the volumes of the water and air in the syringe?

	Volume (cm ³)	
	water	air
(1)	decrease	decrease
(2)	same	increase
(3)	same	decrease
(4)	increase	decrease

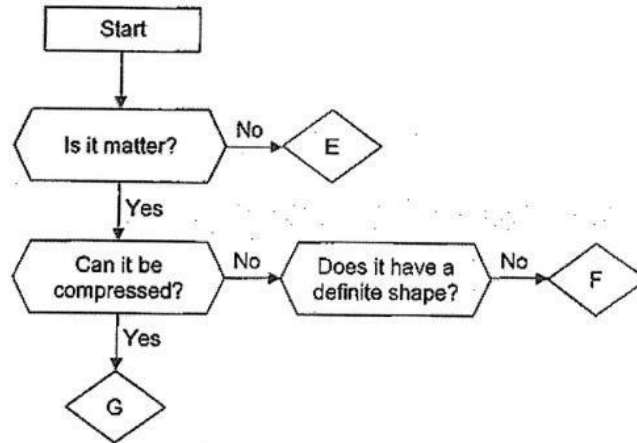
19. Jay set up an experiment as shown and observed how objects A and B interacted with magnet X.



Which of the following is correct?

	Object A	Object B
(1)	magnetic material	non-magnetic material
(2)	magnetic material	magnet
(3)	magnet	non-magnetic material
(4)	non-magnetic material	magnet

20. Study the flow chart carefully.



Which one of the following correctly identifies E, F and G?

	E	F	G
(1)	heat	juice	air
(2)	light	gas	juice
(3)	music	juice	light
(4)	air	music	gas

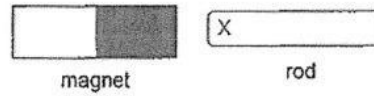
21. Four identical mugs each containing 300ml of water at different temperatures were left in the kitchen with a room temperature of 25°C.



Which of the following is most likely the temperature of the water in each mug after five minutes?

Temperature of water in the mug (°C)				
	Mug A	Mug B	Mug C	Mug D
(1)	20	20	20	25
(2)	30	30	30	30
(3)	50	40	30	25
(4)	70	40	20	20

22. Part X of four rods, P, Q, R and S, of identical size were placed one at a time next to a magnet as shown.



The interactions between the magnet and the rods were recorded in the table.

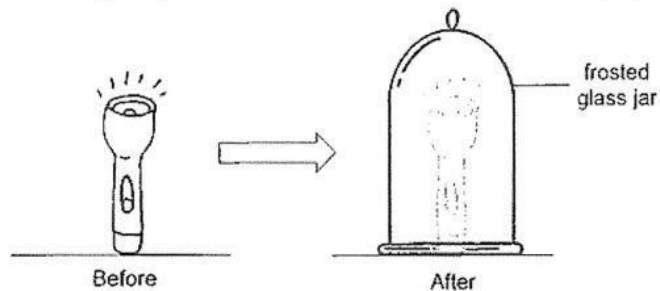
Rod	Attracted	Repelled	No interaction
P	✓		
Q		✓	
R			✓
S	✓		

Based on the results, which of the following conclusion(s) can be made?

- A Rod Q is a magnet.
- B Rod S is made of wood.
- C Rod R is made of a magnetic material.
- D Rods P, Q and S are magnetic materials.

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

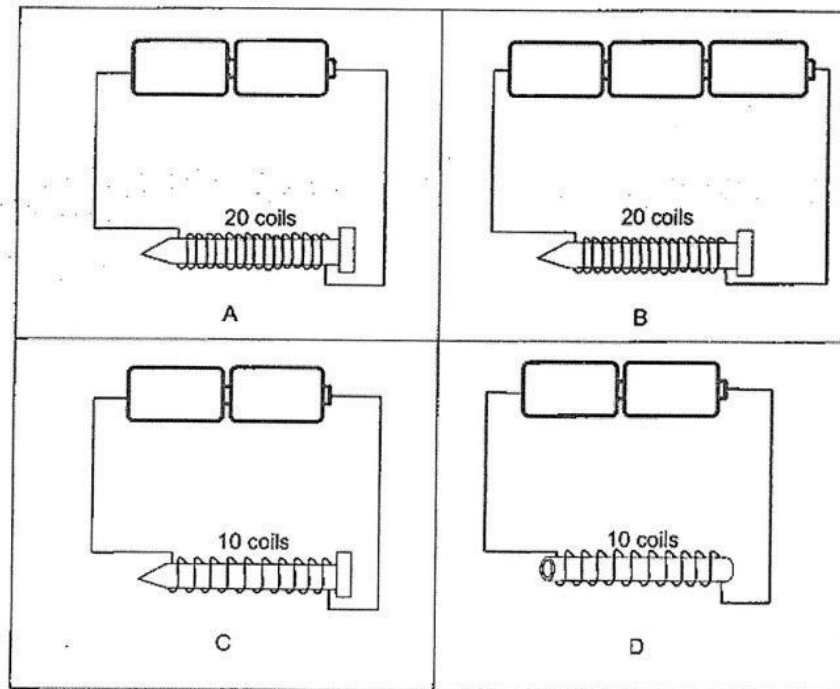
23. A dark room was brightly lit when Ally turned on a torch on the table. She then placed a frosted glass jar over the lit torch. The room became less brightly lit.



Which of the following explains why the room became less brightly lit?

- (1) Light from the torch is reflected into Ally's eyes.
- (2) No light is reflected from the torch into Ally's eyes.
- (3) The frosted glass jar blocks all light from the torch.
- (4) The frosted glass jar blocks some light from the torch.

24. Isa wants to find out how the number of batteries affects the strength of an electromagnet.



Which two set-ups should he use to test his aim?

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