

# Anglo-Chinese School (Junior)



CONTINUAL ASSESSMENT 1 (2016)

PRIMARY 6

SCIENCE

BOOKLET A

WEDNESDAY

9 MARCH 2016

1 HOUR

Name : \_\_\_\_\_ ( )

Class : P6 \_\_\_\_\_

## INSTRUCTIONS TO PUPILS

DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO

Follow all instructions carefully.

There are 15 questions in this booklet.

Answer ALL questions.

## INFORMATION FOR PUPILS

The total marks for this booklet is 30.

The total time for Booklets A and B is 1 hour.

This question paper consists of 9 printed pages (inclusive of cover page).

**Booklet A (30 marks)**

For each question from 1 to 15, 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. (15 x 2 marks)

1. The table below shows two groups of living things.

Group A	Group B
cow	onion
rabbit	balsam
monkey	water lily

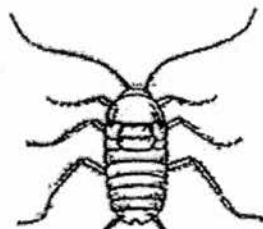
Which of the following statements correctly describe the difference between the two groups of living things?

	Group A	Group B
(1)	Live on land	Live in water
(2)	Breathe all the time	Breathe only at night
(3)	Feed on other animals	Make their own food
(4)	Able to move from place to place	Unable to move from place to place

2. The diagram below shows a caterpillar and a nymph of a cockroach.



Caterpillar



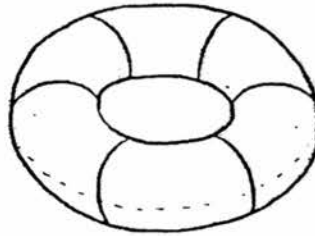
Nymph

Which of the following are true about the caterpillar and the nymph of a cockroach?

- A They are wingless.
- B They go through moulting several times.
- C They grow into adults that look different from them.

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

3. The diagram below shows a rubber float of volume  $200\text{cm}^3$ .



Rubber float

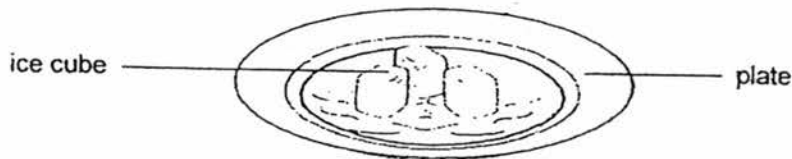
Initially, it had  $150\text{cm}^3$  of air pumped in. An additional  $100\text{cm}^3$  of air is pumped in. What is the final volume of air in the float?

- (1)  $100\text{cm}^3$   
 (2)  $150\text{cm}^3$   
 (3)  $200\text{cm}^3$   
 (4)  $250\text{cm}^3$
4. John recorded the events in one reproduction cycle of a flowering plant.

- A First shoot appears.  
 B Reproductive cells meet in the ovule.  
 C Seeds are dispersed from the fruit by wind.  
 D Pollen grains are transferred from the anther to the stigma of another flower.  
 E First roots appear.

Which of the following states the correct sequence of the events?

- (1) D, C, A, E, B  
 (2) D, B, C, E, A  
 (3) D, A, E, B, C  
 (4) D, B, C, A, E
5. Sam left some ice cubes on a plate in the kitchen and observed them for some time.



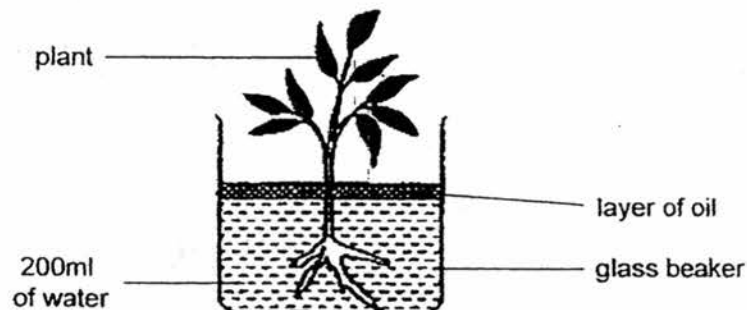
Which one of the following statements about the melting of ice is **not true**?

- (1) There is a change of state during melting.  
 (2) The ice cubes lose heat to the surrounding air.  
 (3) The water on the plate is a result of the ice cubes gaining heat.  
 (4) Heat affects the time taken for the ice cubes to melt completely.

6. Which of the following shows the correct path taken by the food in a human digestive system?
- (1) mouth → windpipe → stomach → small intestine → large intestine
  - (2) mouth → gullet → small intestine → large intestine → anus
  - (3) mouth → windpipe → stomach → small intestine → large intestine
  - (4) mouth → gullet → stomach → small intestine → large intestine
7. Zander made the following statements about the stomata of a plant and the gills of fish.
- A: The stomata carry out photosynthesis for the plant.
  - B: Both the stomata and the gills are part of the respiratory system of the plant and fish respectively.
  - C: The stomata are part of the digestive system of the plant while the gills are part of the circulatory system of the fish.
  - D: The function of the gills is to carry out gaseous exchange for respiration to take place in the fish.

Which of his statements are true?

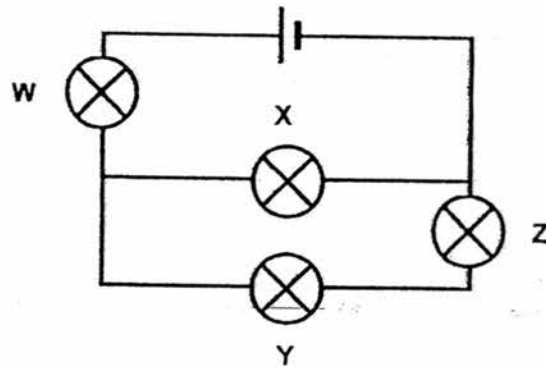
- (1) A and C only
  - (2) B and D only
  - (3) C and D only
  - (4) A, B and D only
8. Theo set up an experiment as shown below. He filled a beaker with 200ml of water and placed a plant in it. Then, he left the set-up by the classroom window for 5 days.



At the end of the 5 days, he observed a change in the amount of water in the beaker. Which of the following is the correct amount of water he recorded and its reason?

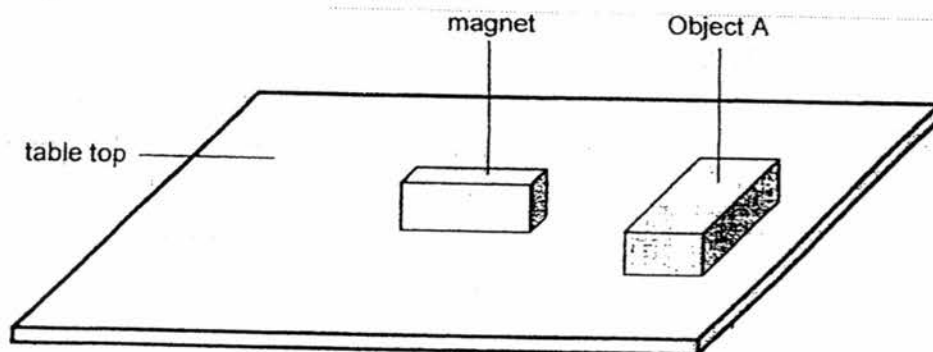
	Amount of water left	Reason
(1)	220ml	The plant gave out some water during photosynthesis.
(2)	150ml	The roots of the plant took in some water.
(3)	100ml	Some of the water from the beaker evaporated to the surrounding air.
(4)	20ml	Some of the water from the beaker evaporated and some was taken in by the plant.

9. Study the circuit diagram below.



Which bulb, if it blows, will result in an open circuit?

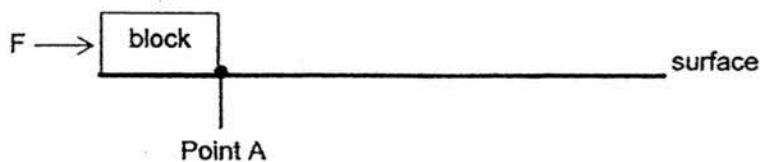
- (1) W
  - (2) X
  - (3) Y
  - (4) Z
10. Ali carries out an experiment using a magnet and Object A. When he placed the magnet near Object A, he noticed that Object A moved away from the magnet.



What can he conclude about Object A from this experiment?

- (1) It is made of iron.
- (2) It has a very smooth surface.
- (3) Its pole attracted the magnet.
- (4) It is made of a non-magnetic material.

- 11 Reese conducted an experiment by exerting a push force,  $F$ , on a block at point A as shown below.



He measured the distance the block moved across the surface. He repeated his experiment by exerting the same push force,  $F$ , on the same surface. He used blocks of the same material but of different mass. The area of contact between the block and the surface was different. He recorded his results in the table below.

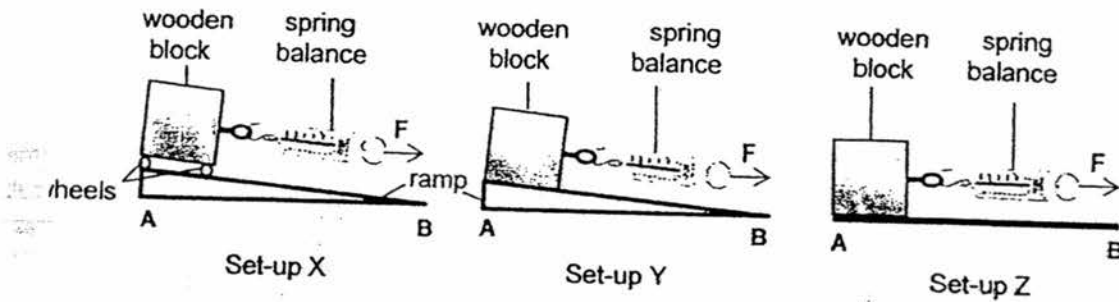
Block	Mass (g)	Area of contact with the surface ( $\text{cm}^2$ )	Distance moved (cm)
S	50	80	18
T	50	60	18
U	100	100	12
V	150	100	10
W	200	120	5

Based on Reese's results, which of the following statement(s) is/are correct?

- A The mass of the blocks affect the distance travelled by the blocks.
- B Block U requires a greater force to move the same distance as W.
- C The area of contact between the block and the surface does not affect the distance moved by the block.
- D The smaller the area of contact between the block and the ~~table~~<sup>surface</sup>, the further the distance moved by the block.

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

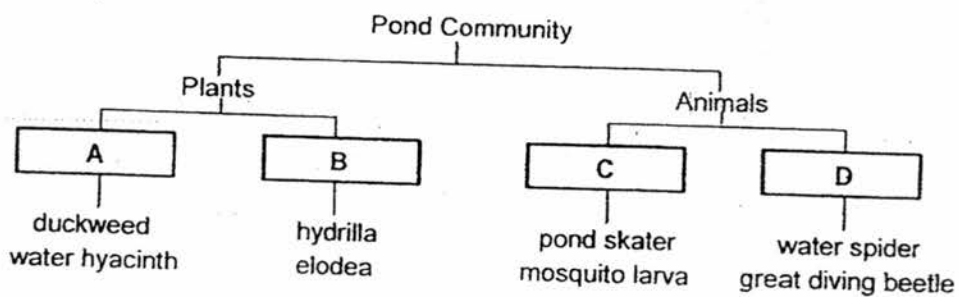
12. Raju wanted to find out the amount of force needed to move a wooden block from Point A to B. He prepared 3 set-ups with identical wooden blocks on identical surfaces as shown below.



Which of the following correctly identifies the amount of force (F) needed to move the wooden block in Set-ups X, Y and Z?

	Least amount of force (F) -----> Most amount of force (F)		
(1)	X	Z	Y
(2)	Y	X	Z
(3)	Z	Y	X
(4)	X	Y	Z

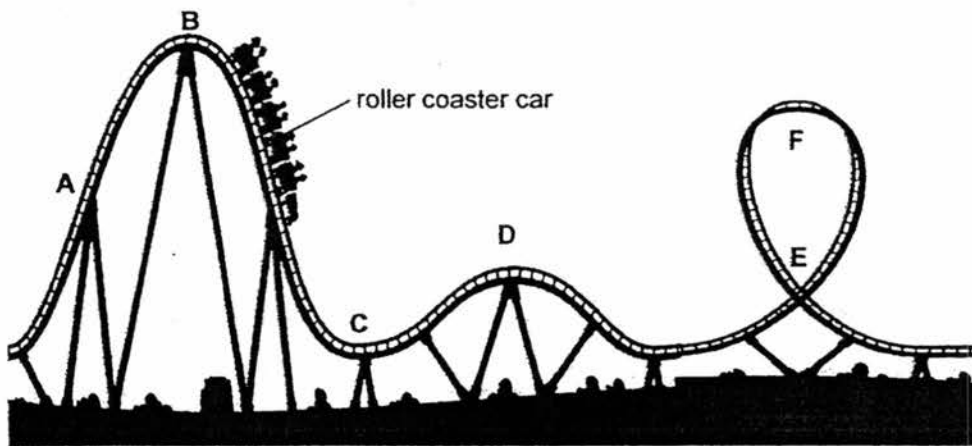
13. The classification chart below shows the different organisms living in a pond community.



Which of the following shows the correct headings for A, B, C and D?

	A	B	C	D
(1)	Floating plants	Submerged plants	Deeper part of the pond	Near the water's surface
(2)	Submerged plants	Floating plants	Near the water's surface	Deeper part of the pond
(3)	Floating plants	Submerged plants	Near the water's surface	Deeper part of the pond
(4)	Submerged plants	Floating plants	Deeper part of the pond	Near the water's surface

14. The picture below shows a roller coaster track.

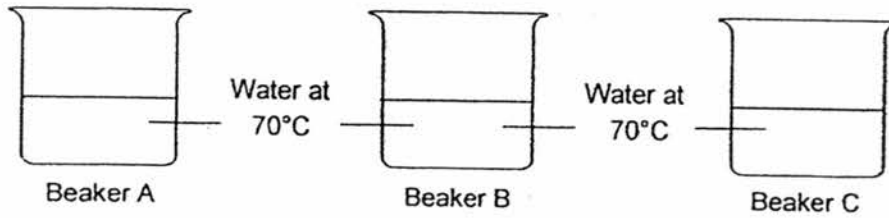


At which points on the track does the roller coaster car have the most potential energy and the most kinetic energy?

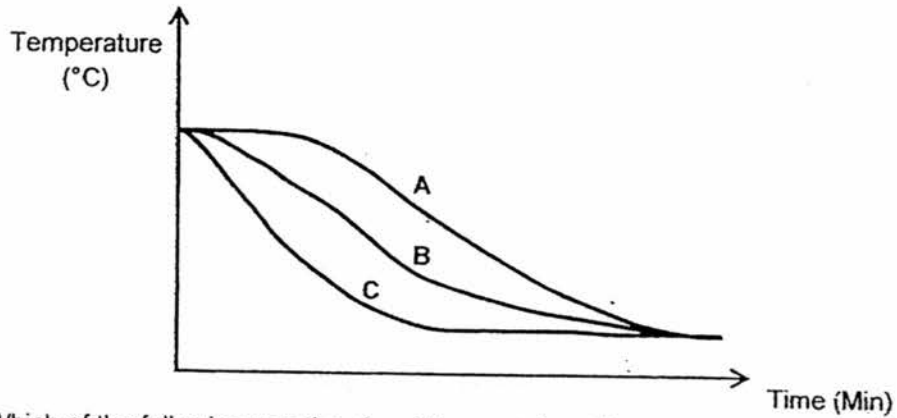
	Most Potential Energy	Most Kinetic Energy
(1)	A	B
(2)	E	D
(3)	C	F
(4)	B	C



15. Tom carried out an experiment as shown below. He used three similar beakers made of different materials, each with the same amount of water at  $70^{\circ}\text{C}$ .



The graph below shows the change in the temperature of the water in the three beakers over a period of time.



Which of the following was the aim of the experiment?

- (1) To find out which material is the best conductor of heat.
- (2) To measure the temperature of the beakers at different times.
- (3) To find out which beaker can hold water at different temperature.
- (4) To measure the amount of water that has evaporated from the beakers.

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## CONTINUAL ASSESSMENT 1 (2016)

PRIMARY 6

SCIENCE

BOOKLET B

WEDNESDAY

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1 HOUR

Name : \_\_\_\_\_ (     )

Class : P6 \_\_\_\_\_

### INSTRUCTIONS TO PUPILS

**DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO**

Follow all instructions carefully.

There are 7 questions in this booklet.

Answer **ALL** questions.

### INFORMATION FOR PUPILS

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

The total marks for this booklet is 20.

The total time for Booklets A and B is 1 hour.

**This question paper consists of 8 printed pages (inclusive of cover page).**

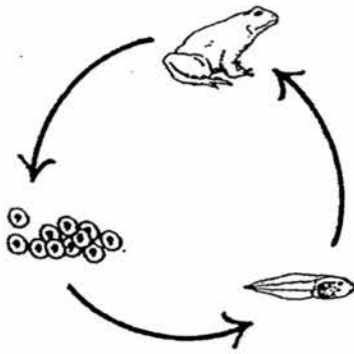
BOOKLET A	/ 30
BOOKLET B	/ 20
TOTAL	/ 50
Parent's signature/ Date:	

**Booklet B (20 marks)**

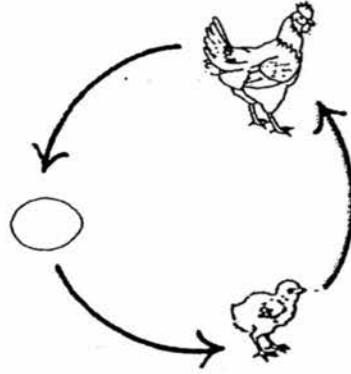
For questions 16 to 22, write your answers in this booklet.

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

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



Life cycle of a frog



Life cycle of a chicken

- (a) State two similarities between the two life cycles.

[2]

i.

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ii.

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- (b) State one difference between the two life cycles.

[1]

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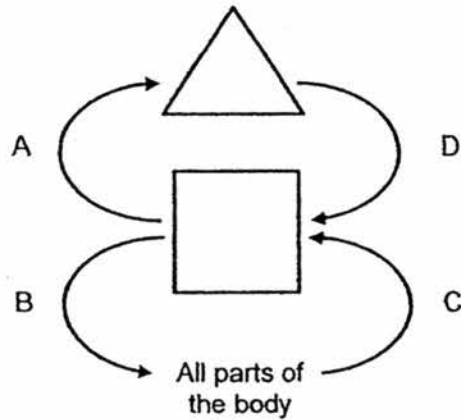


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SCORE	3
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17. The diagram below is a simplified representation of the human circulatory system showing blood flow to the different parts of the body.



- (a) The triangle and the square represent two different organs in the system. Identify the organs. [1]

Square: \_\_\_\_\_

Triangle: \_\_\_\_\_

- (b) State the difference between the blood in blood vessels A and D. Explain your answer clearly. [2]

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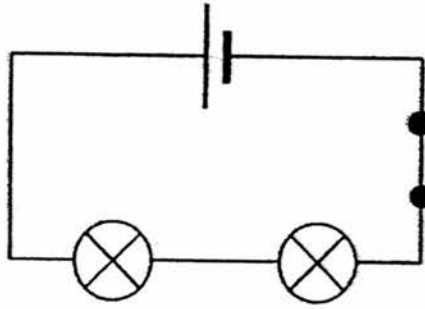


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SCORE	
	3

18. Study the circuit diagram below carefully.



- (a) After some time, the bulbs did not light up. State two possible reasons for this. [1]

i. \_\_\_\_\_

\_\_\_\_\_

ii. \_\_\_\_\_

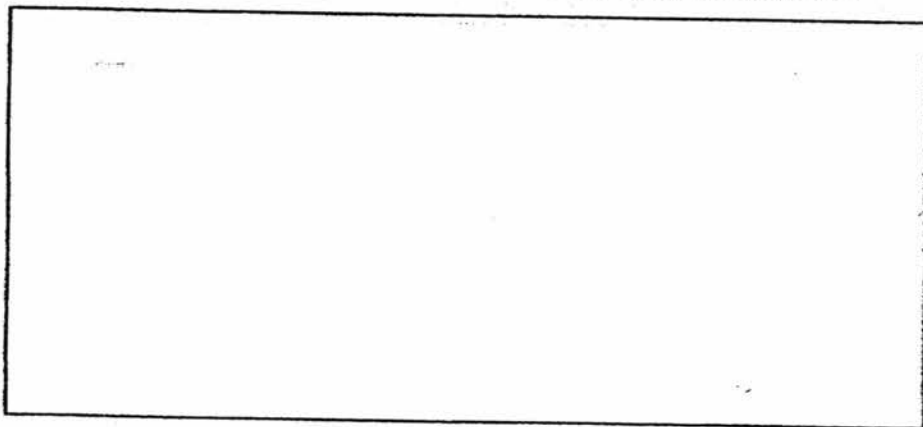
\_\_\_\_\_

- (b) Name a material that the switch can be made of and its property. [1]

\_\_\_\_\_

\_\_\_\_\_

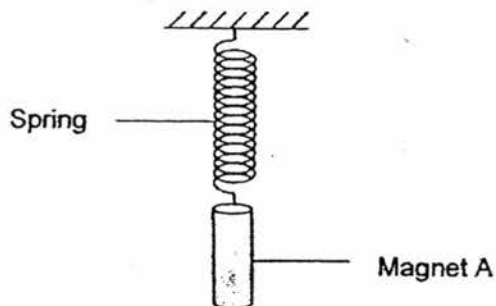
- (c) In the box provided, draw a circuit diagram using 2 bulbs, 2 switches and 1 battery so that each bulb can be controlled individually with the switches. [1]



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SCORE	
	3

19. The diagram below shows a set-up where a magnet is hung from a spring.



- (a) Name the main forces acting on the magnet.

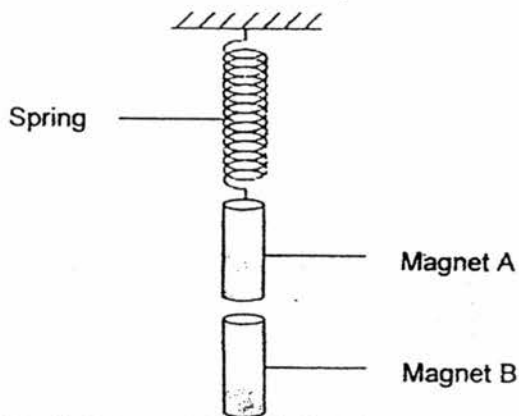
[1]

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- (b) Magnet B is then placed as shown in the set-up below.



- Predict what will happen to the spring and magnet A. Explain your prediction. [1]

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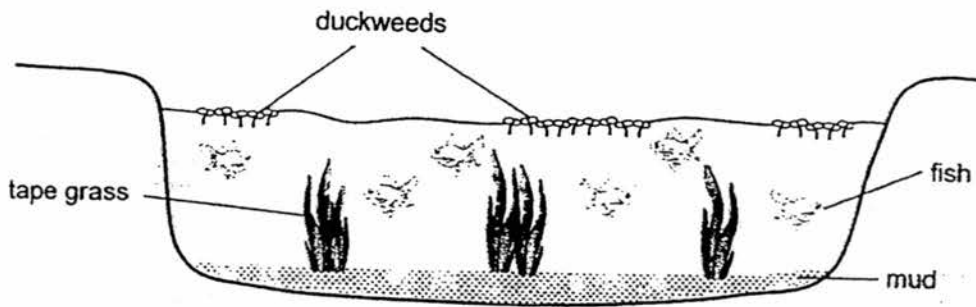


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SCORE	2
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20. Study the pond shown in the diagram below. The pond has clear water that is rich in nutrients and with a depth of 1.5 metres.



- (a) State two benefits of the presence of the tape grass to the aquatic animals that do not feed on it. [1]

- i. \_\_\_\_\_  
 \_\_\_\_\_
- ii. \_\_\_\_\_  
 \_\_\_\_\_

- (b) There was a large increase in the population of duckweed. How will this affect the population of the tape grass? Explain your answer clearly. [2]

\_\_\_\_\_

\_\_\_\_\_

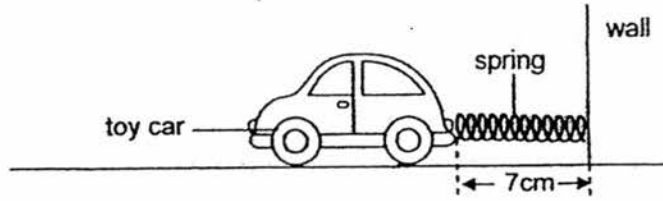
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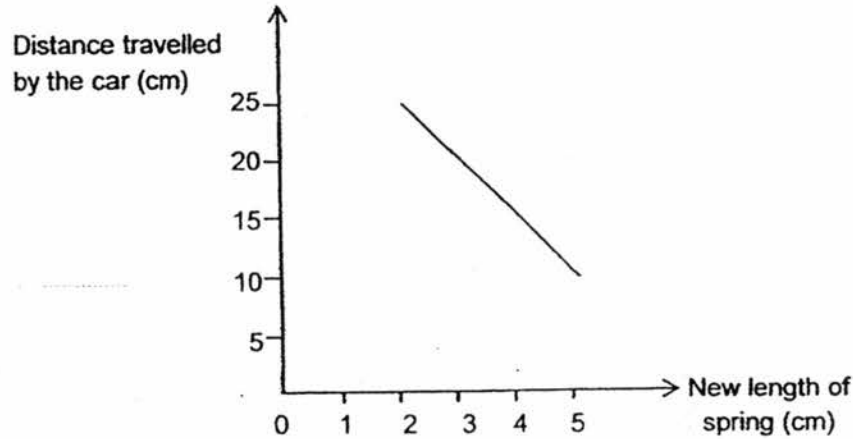
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SCORE	
	3

21. Willy fixed a spring with an original length of 7cm to a wall. He then placed a toy car against the spring as shown in the diagram below.



He pushed the car against the spring, which caused the spring to compress and measured the new length of the spring. Then he released the car and measured the distance travelled by the car. He repeated this several times and recorded his findings in the graph below.



- (a) State the relationship between the length of the compressed spring and the distance travelled by the car. [1]

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- (b) When Willy pushed the car as far back as possible, the new length of the spring remained at 2cm. Explain why this is so. [1]

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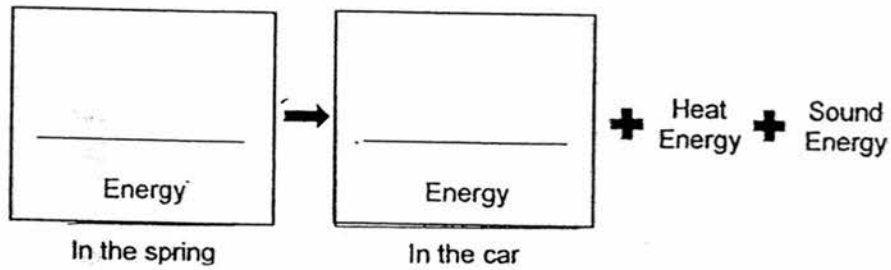
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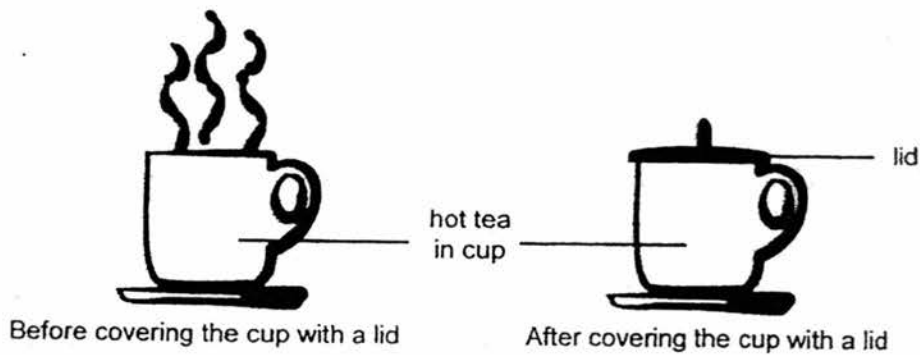
SCORE	2
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- (c) After Willy had pushed the car back against the spring, state the changes in the form of energy from the time he releases the car till it comes to a stop in the boxes below. [1]



22. Alain poured some hot tea into a cup and placed a lid over the cup.



- (a) What did he notice when he looked under the lid after a short while? [1]

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- (b) Describe how your answer in (a) occurred. [2]

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End of Paper

SCORE	4
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YEAR : 2016  
LEVEL : PRIMARY 6  
SCHOOL : ANGLO-CHINESE (JUNIOR)  
SUBJECT : SCIENCE  
TERM : CA1

Booklet A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
4	1	3	2	2	4	2	2	1	1	2	4	3	4	1

Booklet B

- Q16a (i) They both have a 3-stage life cycle.  
(ii) They both have egg, young and adult stage in their life cycles.

Q16b The young of the frog looks different from the adult while the young of a chicken looks similar to its adult.

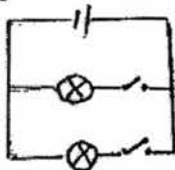
Q17a Square : Heart  
Triangle : Lungs

Q17b Blood vessel A carries blood which has more carbon dioxide than blood vessel D as all parts of the body has used up the oxygen from the lungs and it will travel to blood vessel C and then to A. Blood vessel D has a lot of oxygen as it is taken in from the lungs.

- Q18a (i) The bulbs fused.  
(ii) All the chemical potential energy in the battery was used up.

Q18b Iron as it is a conductor of electricity.

Q18c



**Q19a** Gravitational force and elastic spring force.

**Q19b** Magnet A would attract Magnet B and the spring will extend. As the unlike poles of magnet A and magnet B are facing each other, magnets A and B would attract each other. Therefore, the spring would extend.

**Q20a** (i) When the tape grass photosynthesizes, it will take in carbon dioxide and give out oxygen. Therefore, the aquatic animals would respire.  
(ii) It provides shelter and shade for the aquatic animals.

**Q20b** The tape grass cannot photosynthesize as it will have no sunlight to be able to photosynthesize. This is because the duckweeds covered more of the surface of the water. Therefore, the tape grass would eventually die.

**Q21a** The shorter the distance travelled by the car, the longer the spring.

**Q21b** The spring could not be compressed any further.

**Q21c** Elastic Potential Energy → Kinetic Energy

**Q22a** It had water droplets on it.

**Q22b** The water from the hot tea gained heat and evaporated into water vapour. The water vapour then condensed into water droplets on the cooler surface of the lid.

End