Anglo-Chinese School (Junior)

CONTINUAL ASSESSMENT 1 (2018)
PRIMARY 6

SCIENCE

BOOKLET A

TUESDAY **27 FEBRUARY 2018** **1 Hour**

Name: _____ ( ) Class : 6.( )

INSTRUCTIONS TO PUPILS

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

Follow all instructions carefully.

There are 14 questions in this booklet.

Answer **ALL** questions.

INFORMATION FOR PUPILS

The total marks for this booklet is 28.

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 (28 marks)

For each question from 1 to 14, four options are given. One of them is the correct answer. Choose the correct option **(1, 2, 3 or 4)** and shade the correct oval on the Optical Answer Sheet (OAS). (14 x 2 marks)

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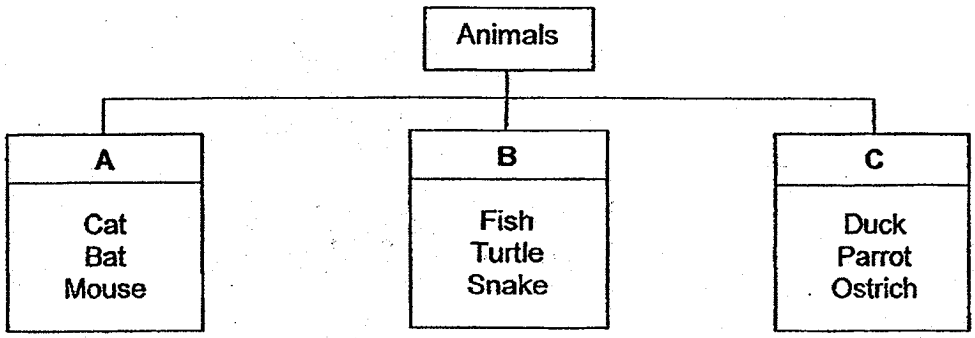
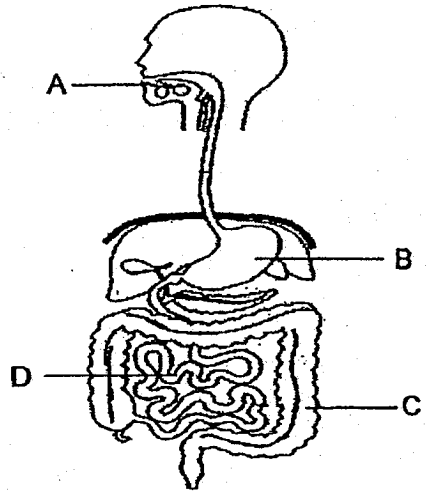
1 How have the animals been classified in the classification table?



(1) Type of habitat
(2) Method of breathing
(3) Method of reproduction
(4) Type of outer body covering

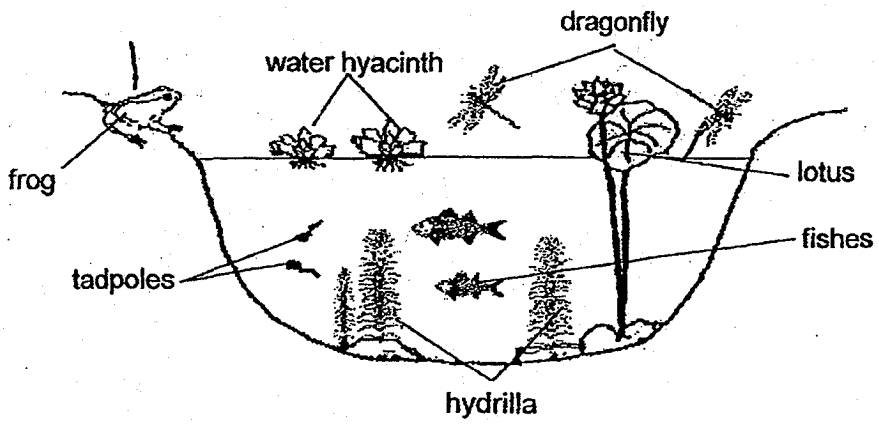
2 The diagram shows the human digestive system.



Which of the following parts A, B, C and/or D match their function(s)?

	Digest food	Absorption of food	Absorption of excess water
(1)	A and B only	B and C only	C only
(2)	B and D only	D and C only	D only
(3)	A, B and D only	D only	C only
(4)	A, B, C and D only	B only	D and C only

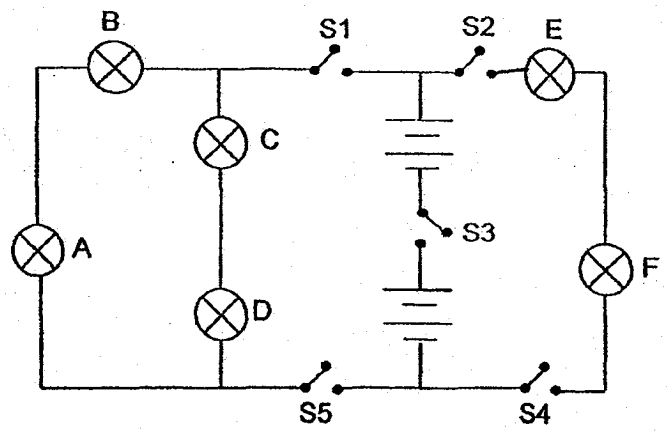
3 The diagram below shows a pond community.



How many populations of organisms are there?

(1) 3
(2) 6
(3) 7
(4) 12

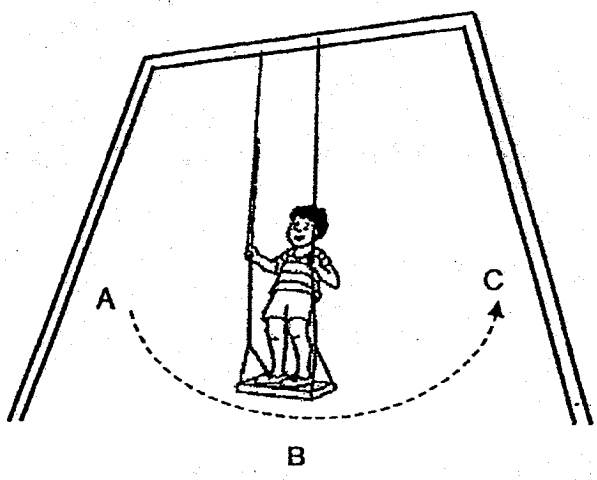
4 Study the circuit diagram below.



Which of the following switches must be closed so that only 4 bulbs will light up?

(1) S1, S3 and S5
(2) S2, S3 and S4
(3) S1, S2, S4 and S5
(4) S1, S2, S3, S4 and S5

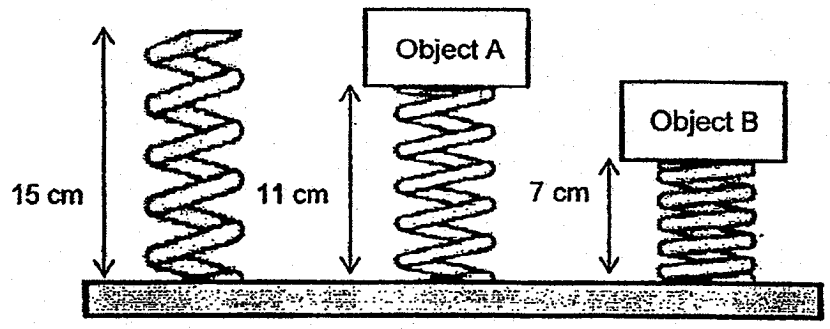
5 Sam was on a swing and moved to and fro as shown by the arrow in the diagram below.



How did the gravitational force acting on Sam and the gravitational potential energy he possessed change as he moved from B to C?

	Gravitational force	Gravitational potential energy
(1)	increase	increase
(2)	decrease	no change
(3)	no change	increase
(4)	no change	decrease

6 Raj conducted an experiment with two rectangular objects, A and B, of the same size but made of different materials. He placed them on two identical springs as shown in the diagram below.



Based on his observation of the experiment, what correct conclusions can he make?

A Object B has more mass than Object A.

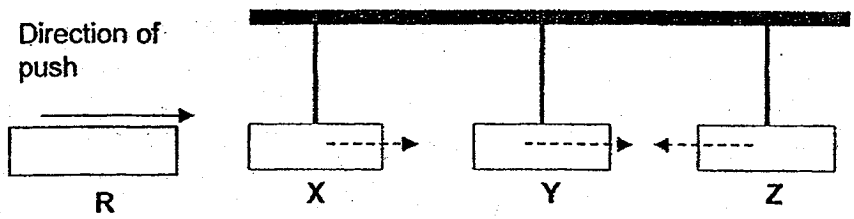
B Object A has more gravitational force acting on it than Object B.

C The spring with Object B has less elastic spring force than the spring with Object A.

D The spring with Object A has less elastic potential energy than the spring with Object B.

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

7 Magnets, X, Y and Z, were hung as shown in the diagram below.



The arrow (---►) shows the direction in which magnets, X, Y and Z, moved when magnet R was pushed towards magnet X.

Which of the following two conclusions are correct?

A The like poles of magnets R and Y are facing each other.

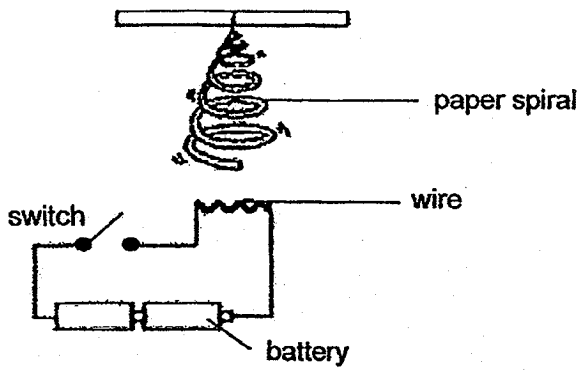
B The like poles of magnets X and Y are facing each other.

C The unlike poles of magnets X and Z are facing each other.

D The unlike poles of magnets R and Z are facing each other.

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

8 The paper spiral began to spin soon after the circuit was closed. Which of the following correctly describes the energy changes from the time the switch was closed till the paper spiral spun?



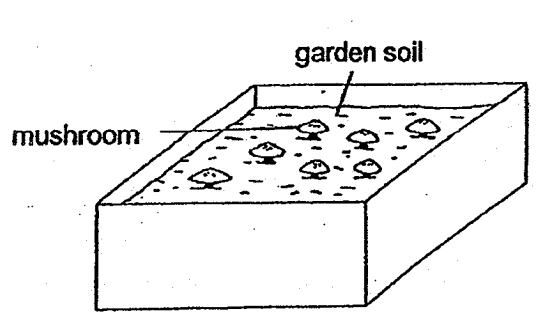
(1) potential energy → heat energy + light energy → kinetic energy

(2) electrical potential energy → kinetic energy → heat energy + light energy

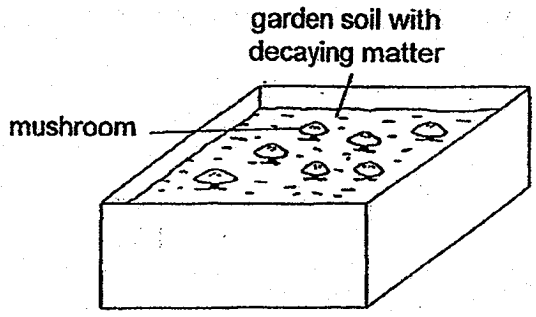
(3) chemical potential energy → electrical energy → kinetic energy + heat energy

(4) chemical potential energy → electrical energy → heat energy → kinetic energy

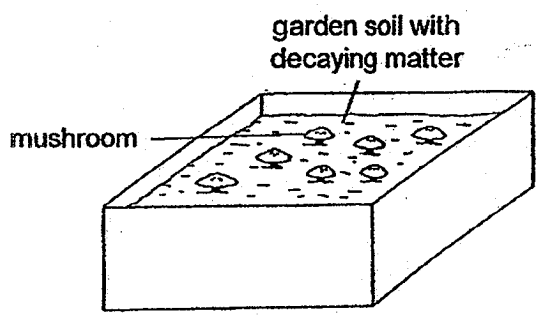
9 Zhixi set up four experiments shown below.



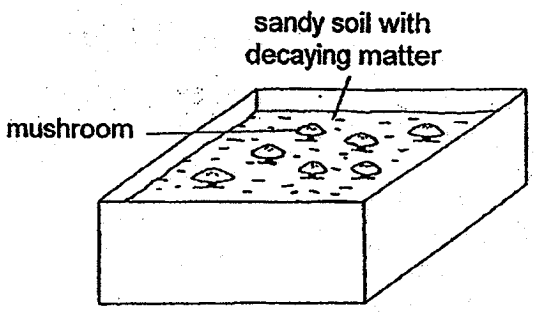
Set-up A (in the cupboard)



Set-up B (in the field)



Set-up C (in the cupboard)



Set-up D (in the field)

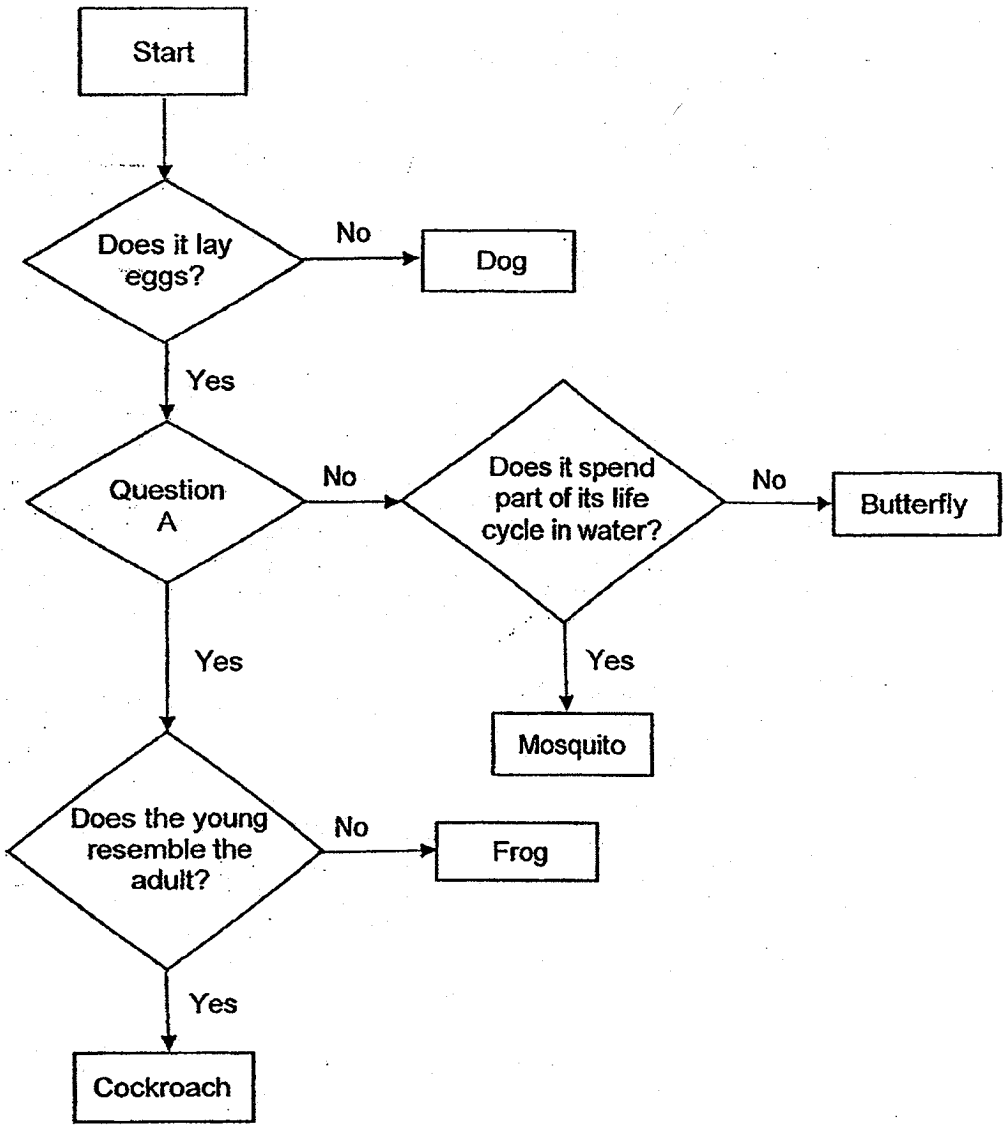
Which of the above two set-ups should Zhixi use to test if mushrooms require sunlight to survive?

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

10 The table below shows some information on four cells A, B, C and D. A tick (✓) indicates the presence of that part of the cell. Based on the table above, which of the following is a cell from the leaves of a plant?

		Parts of a cell				
	Cell	Nucleus	Cell Wall	Cytoplasm	Chloroplast	Cell membrane
(1)	A	✓	✓	✓	✓	✓
(2)	B	✓		✓		✓
(3)	C	✓	✓	✓		✓
(4)	D			✓		✓

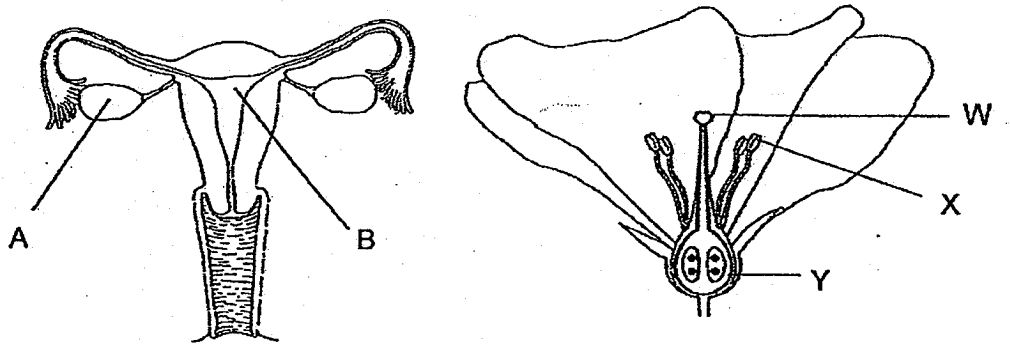
11 Study the flowchart about animals below.



What could question A be?

(1) Does it have wings?
(2) Does it lay only one egg?
(3) Has four stages in its life cycle?
(4) Has three stages in its life cycle?

12 Study the human and plant reproductive systems shown below.

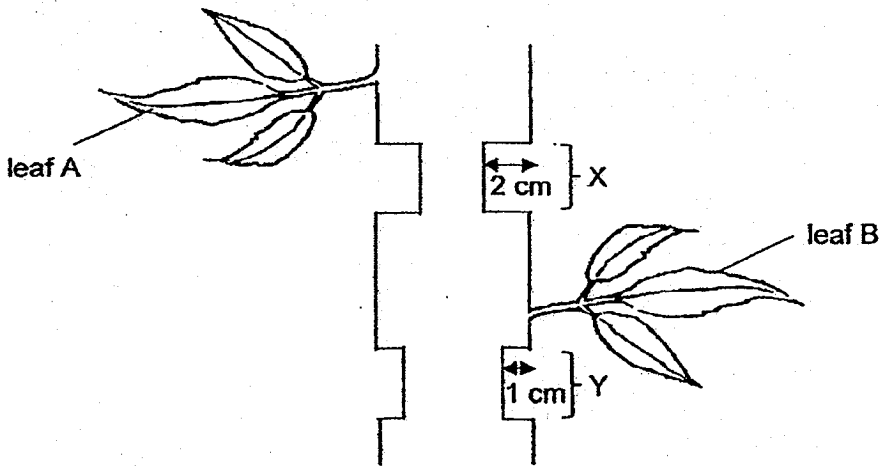


Human reproductive system Plant reproductive system

Which one of the following functions match the parts of the reproductive systems?

(1) Part A and Part X produce male reproductive cells.
(2) Part A and Part W produce female reproductive cells.
(3) Part B and Part W hold the fertilized egg cell till it is fully developed.
(4) Part B and Part Y allow for the fusion of reproductive cells to take place.

13 Calvin used a knife to cut away the outer ring of the stem at part X and part Y of a plant as shown below.



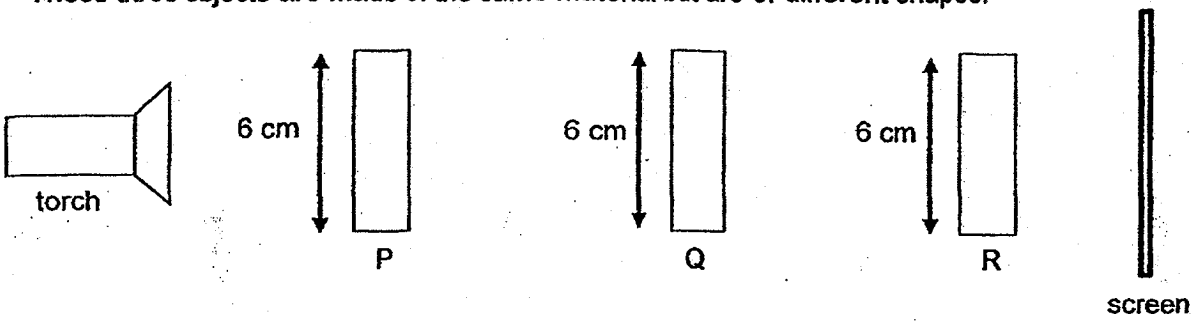
After one week, Calvin noticed that leaf A died while leaf B survived.

Based on his observation, which of the following statement(s) is/are correct?

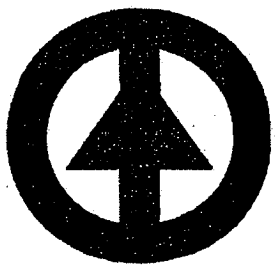
A The water-carrying tubes at Y were removed.
B The water-carrying tubes at X were removed.
C The food-carrying tubes at both X and Y were still present.

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

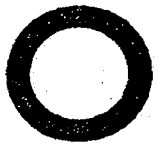
14 Three objects, P, Q and R, are arranged in a straight line over a distance as shown below. These three objects are made of the same material but are of different shapes.



The diagram below shows the shadow on the screen when the torch was turned on.



What are the likely shapes of P, Q and R?

	P	Q	R
(1)			
(2)			
(3)			
(4)			

Anglo-Chinese School (Junior)

CONTINUAL ASSESSMENT 1 (2018)
PRIMARY 6

SCIENCE

BOOKLET B

TUESDAY **27 FEBRUARY 2018** **1 Hour**

Name: _____ ( ) Class : 6.( ) Parent's Signature:_____

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 22.

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

This question paper consists of 10 printed pages (inclusive of cover page).

Booklet	Possible Marks	Marks Obtained
A	28	
B	22	
Total	50	

Booklet B (22 marks)

For questions 15 to 21, write your answers in this booklet.
The number of marks awarded is shown in the brackets [ ] at the end of each question or part question.

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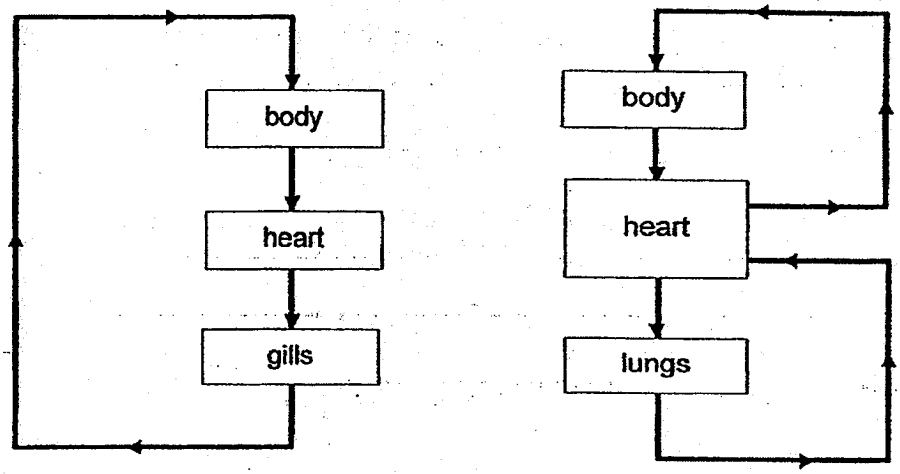
15 The diagrams show the circulatory systems of a fish and a human respectively.



Fish Human

(a) State a difference between the flow of blood in a fish and in a human. [1]

(b) State one difference in the way the lungs and gills obtain air from the surroundings. [1]

(Go on to the next page)

SCORE	
	2

(c) The diagrams below show the cross-section of a healthy blood vessel and a narrowed blood vessel.

	
Cross-section of a healthy blood vessel	Cross-section of a narrowed blood vessel

The table below shows the heart rates of persons X and Y at rest and while exercising.

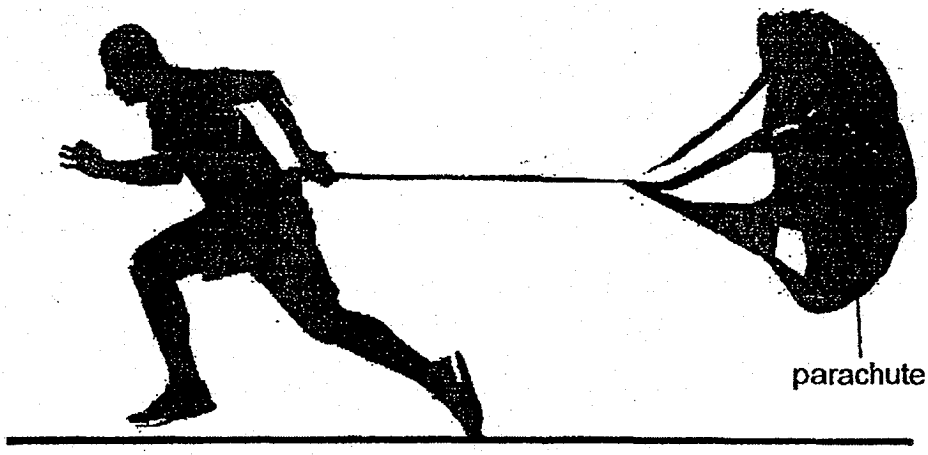
Heart rate (beats per minute)	Activity	
	Resting	Exercising
X	85	150
Y	65	120

Based on the above data, which person, X or Y, is more likely to have a narrowed blood vessel? Explain your answer. [2]

(Go on to the next page)

SCORE	

16 Harry wanted to find out how the surface area of a parachute affects the time taken for him to run ten metres with it, as shown in the diagram.



He recorded his timings in the table below.

Surface area of parachute (cm^2)	Time taken to run ten metres (s)
1000	20
1100	26
1200	34
1300	44
1400	56

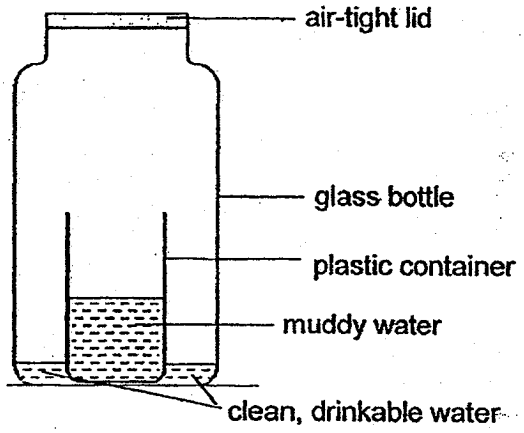
(a) Based on the information above, what is the relationship between the surface area of the parachute and the time taken to run ten-metre? [1]

(b) Harry cut a few holes on the 1400-cm^2 parachute and then ran with it. Would the time recorded for Harry to complete running ten metres be "more than", "less than" or "the same" as 56 seconds? Explain your answer clearly. [2]

(Go on to the next page)

SCORE	/ 3

17 Dave made a simple set-up that helps a person obtain clean, drinkable water from muddy water as shown below.



(a) Based on the set-up, explain how the clean, drinkable water is collected. [2]

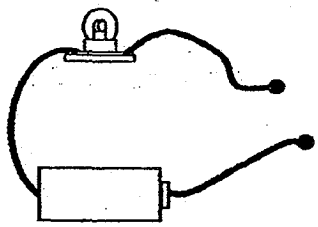
(b) Suggest one change Dave could make to the set-up if he wanted to get more drinkable water. [1]

(Go on to the next page)

SCORE	
	3

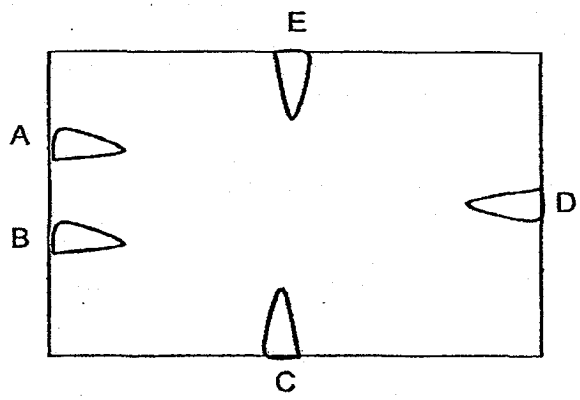
18 Using a circuit tester, Aaron conducted an experiment to test a circuit card and recorded his results in the table below.

Clips connected to paper clips on circuit card	Bulb of circuit tester
A and B	Did not light up
A and C	Lighted up
C and D	Lighted up
B and C	Did not light up
B and E	Did not light up
A and D	Lighted up

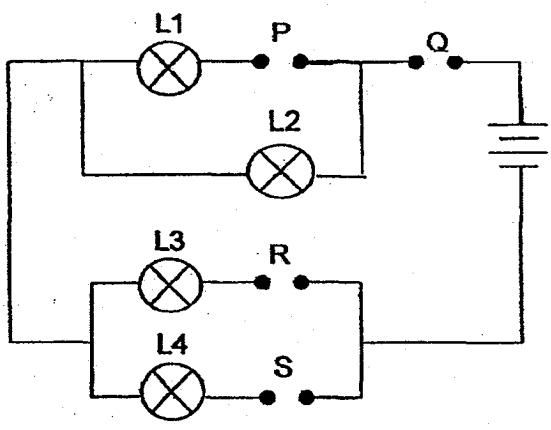


circuit tester

(a) Based on the information above, draw **two** lines in the circuit card below to show how the wires were connected. [1]



Aaron then set up circuit W with four gaps, P, Q, R and S.



Circuit W

(Go on to the next page)

SCORE 1

He connected the ends of four rods A, B, C and D to each of the gaps. He recorded his observation in the table below. A tick (✓) in the box indicated that the bulb lit up.

Position of rod				Light bulb(s) that lit up			
Gap P	Gap Q	Gap R	Gap S	L1	L2	L3	L4
A	B	C	D		✓	✓	

(b) Based on the above circuit, what can you conclude about rods A, B, C and D? [1]

_____

(c) The rods A, B, C and D are re-arranged in two different ways in the table shown below. Put a tick (✓) in the appropriate boxes to show which bulbs L1, L2, L3 or L4 will light up. [1]

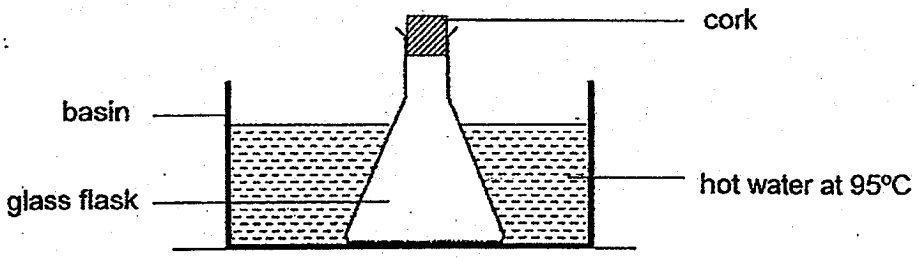
	Position of rod				Light bulb(s) that lit up			
	Gap P	Gap Q	Gap R	Gap S	L1	L2	L3	L4
(i)	B	C	D	A				
(ii)	D	B	A	C				

(d) Using the components in circuit W and some switches, draw a circuit diagram that allows Aaron to control L1, L2, L3 and L4 individually. [1]

(Go on to the next page)

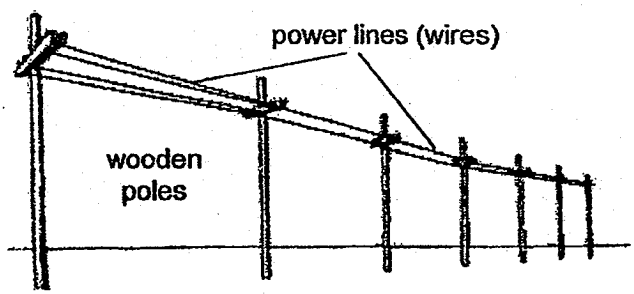
SCORE	
	3

19 Isaac set up an experiment as shown below. After a while, the cork popped out of the empty glass flask.



(a) What caused the cork to pop out? Explain your answer. [1]

The diagram below shows an electrical power line along the streets in a city. When the temperature became very cold suddenly, the wires of the power line snapped.



(b) Explain how the change in temperature caused the electrical power lines to snap. [1]

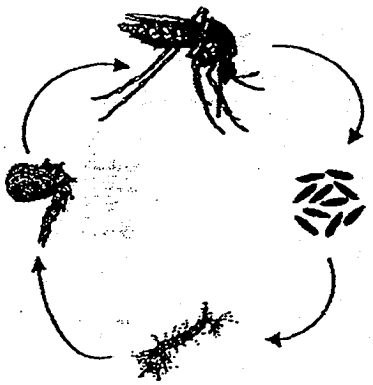
(c) Suggest one change that can be made to the power lines (wires) to ensure that it does not snap under extremely cold temperatures again. [1]

(Go on to the next page)

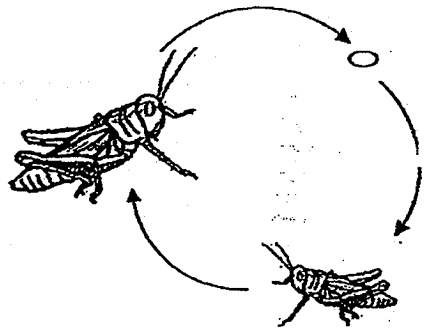
SCORE	
	3

20 The diagrams below show the life cycles of two animals.

Life cycle of A



Life cycle of B



(a) State 2 differences between the life cycles of animals A and B. [2]

(i) _____

_____

(ii) _____

_____

(b) At which stage in animal A's life cycle is it considered a pest? Suggest a way to prevent organism A from breeding. [1]

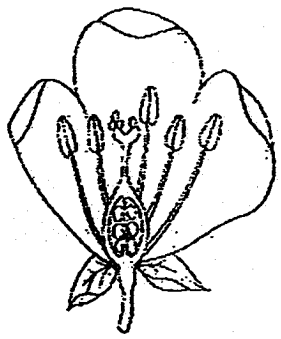
_____

_____

(Go on to the next page)

SCORE	/ 3

21 The diagram below shows a flower with both male and female reproductive parts.



flower

(a) Name and describe the process that takes place after pollination. [1]

_____

_____

(b) Suggest one characteristic that the flower has to attract insects to help in the pollination process. [1]

_____

End of paper

SCORE	/ 2

EXAM PAPER 2018(P6)

SCHOOL : ACS

SUBJECT : SCIENCE

TERM : CA1

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

15)a)The flow of the blood in a fish is in one loop but the flow of the blood in a human is in two loops.

b)Lungs obtain air from the atmosphere but the gills obtain from the water.

c)X. The heart must beat faster to carry same oxygen and digested food to all parts of his body.

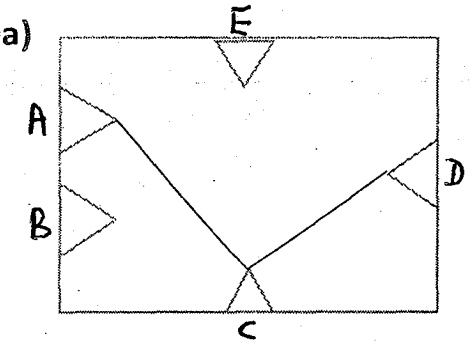
16)a)The smaller the surface area of the parachute, the faster the time taken to run ten-metre.

b) It has less surface area of the parachute thus there is less air resistance acting on it.

17)a)The water from the muddy water evaporated into water vapour which condenses on the cooler surface of the lid to form water droplets which is collected at the bottom of the glass bottle.

17)b)Add move more muddy water into the plastic container.

18)a)

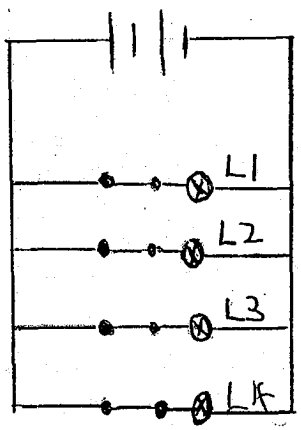


b)Rod B and C are electric conductors while A and D are not.

c)i)

ii)L2 , L4

d)



19)a)The air in the glass flask will gain heat due to the hot water, it will then expand and pop the cork out.

b)When the weather gets too cold, the power lines will lose heat and contract till it reaches the max, the it will snap as it could no longer contract.

c)Increase the length of the wires.

20)a)i)Animal A has a 4-stage life cycles while animal B has a 3-stage life cycle.

ii)The young of animal B resembles its adult while the young of animal A does not resemble its adult.

b)Adult stage. A layer of could be sprayed to prevent stagnant water organism A form breeding,as it could not take in any oxygen.

21)a)When the male cell of the pollen grain fuses with the egg of the ovule.

b)Nectar