

Name: _____ ()

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (Primary)



Primary 6 2010 First Semestral Assessment SCIENCE

BOOKLET A

12 May 2010

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

30 questions
60 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

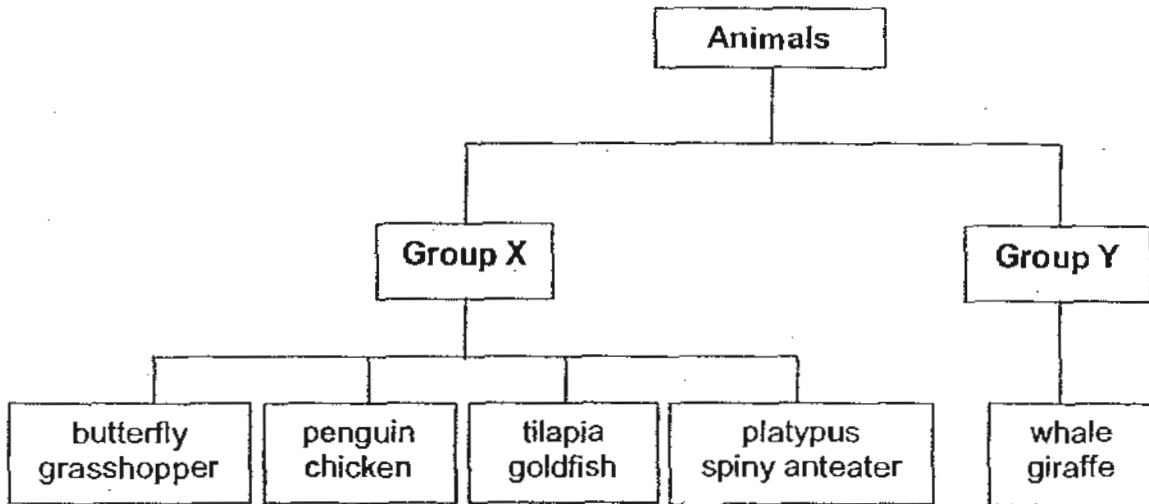
Parent's Signature / Date

This paper consists of 28 printed pages.

Section A : (30 x 2 marks)

For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

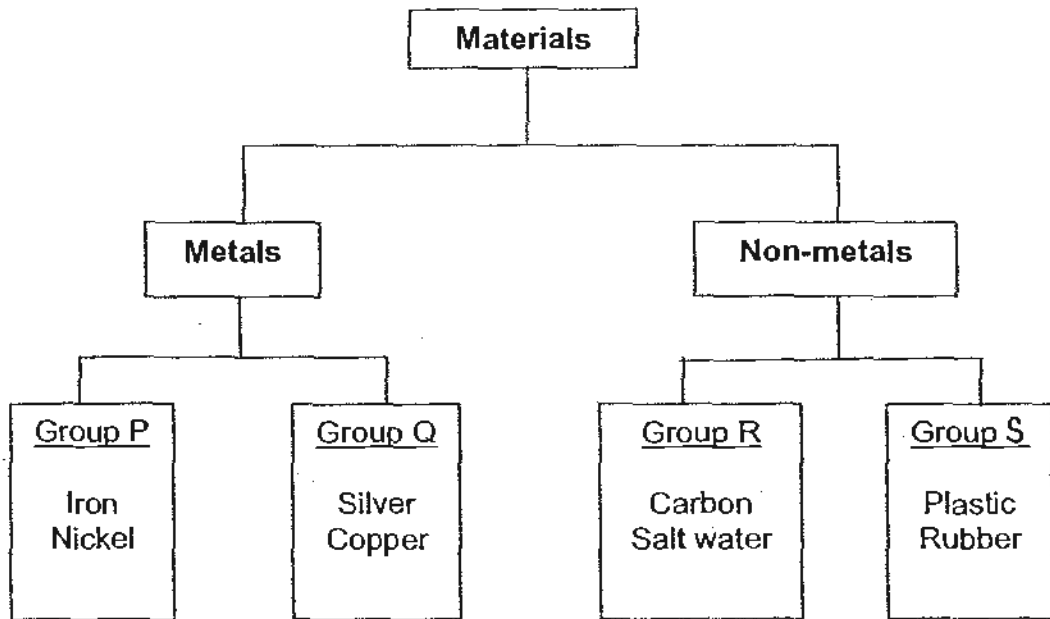
1. The animals below are classified into two groups, X and Y.



Based on the information given above, the animals in Groups X and Y have been classified according to _____.

- (1) their body coverings
- (2) the way they breathe
- (3) the way they reproduce
- (4) the type of food they eat

2. Study the classification chart on some materials.



Which one of the following sets has the correct headings for groups P, Q, R and S?

	P	Q	R	S
(1)	Dull metal	Shiny metal	Natural	Man-made
(2)	Natural	Man-made	Good conductor of heat	Poor conductor of heat
(3)	Magnetic	Non-magnetic	Conductor of electricity	Insulator of electricity
(4)	Good conductor of heat	Poor conductor of heat	Conductor of electricity	Insulator of electricity

3. An experiment was carried out to study how different types of materials, R, S, T and U used to make windows can affect the temperature inside a house.

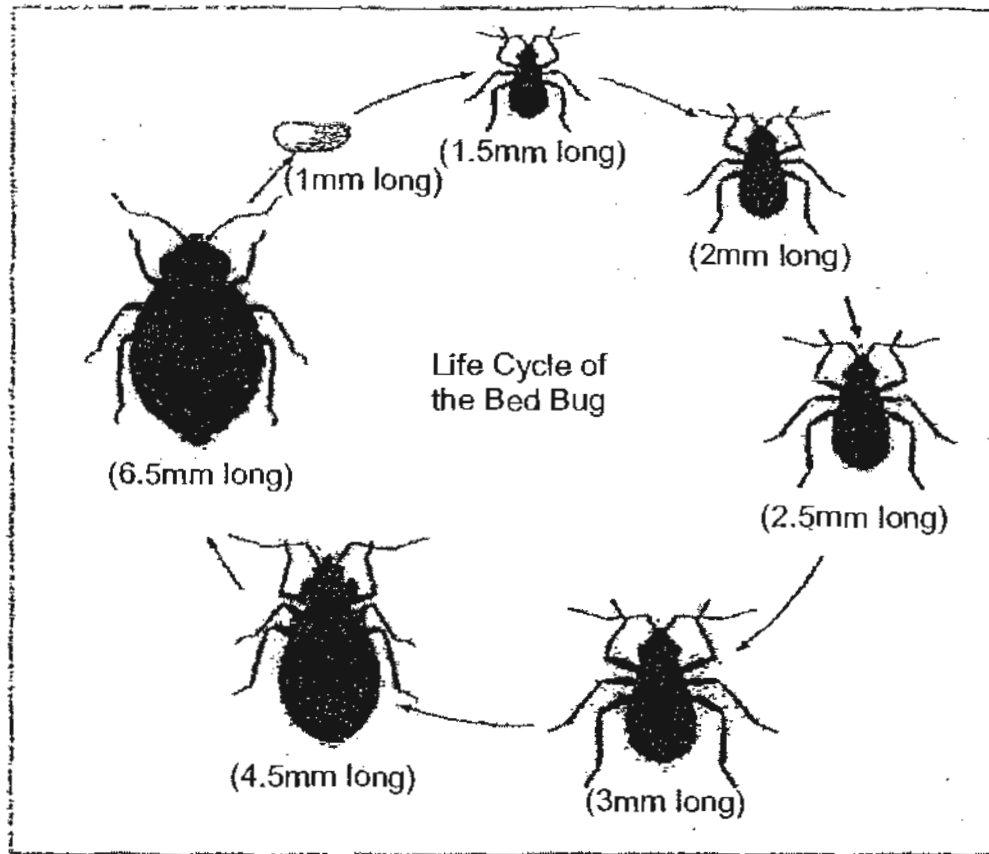
The temperature of the air inside the house was measured over a period of time in a day when each type of material was used for the windows. The results were tabulated as shown below.

Material used	Temperature of the air inside the house at the following time of the day (°C)					
	8.00 a.m.		12 p.m.		4 p.m.	
R	23	8°C	31	4°C	27	
S	22	3°C	25	3°C	22	
T	23	6°C	29	3°C	26	
U	22	8°C	30	2°C	28	

Which one of the following materials would be most suitable for making the windows of the house during winter?

- (1) R
- (2) S
- (3) T
- (4) U

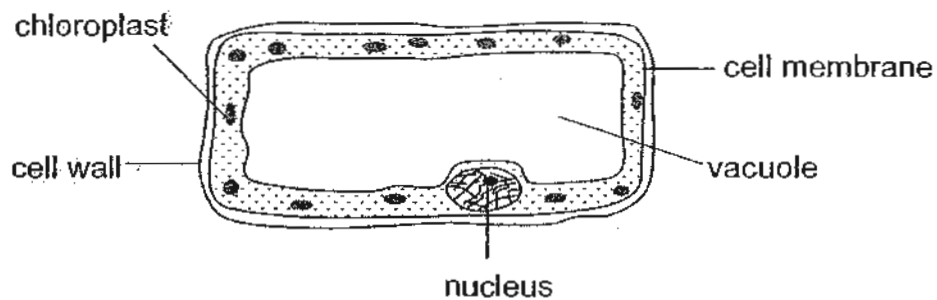
4. The life cycle of a bed bug takes between 5 weeks to 4 months to complete. The diagram below shows the development of a bed bug from an egg to an adult.



How many stages are there in the life cycle of a bed bug?

- (1) 3
- (2) 4
- (3) 5
- (4) 7

5. The diagram below shows a plant cell.



At which plant part can the above cell be found?

- (1) Tree bark.
- (2) Leaf blade.
- (3) Onion bulb.
- (4) African tulip fruit.

6. The table below shows the different cell parts of 4 types of cells, A, B, C and D. The tick (✓) indicates the cell parts that can be found in each cell.

Cell parts	A	B	C	D
Cell wall	✓		✓	
Nucleus	✓		✓	✓
Chloroplast	✓			

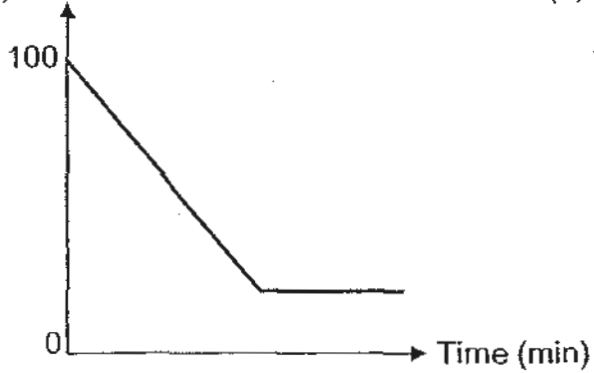
Which one of the following best represents cells, A, B, C and D?

	A	B	C	D
(1)	animal skin cell	root cell	red blood cell	cactus stem cell
(2)	cactus stem cell	red blood cell	root cell	cheek cell
(3)	nydrilla leaf cell	root cell	red blood cell	cheek cell
(4)	cactus stem cell	animal skin cell	onion cell	root cell

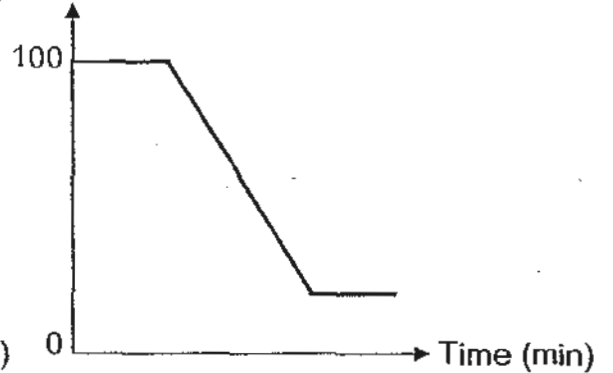
7. Janissa left a beaker of boiling water on the table to cool. She recorded the temperature of the water in the beaker at regular intervals.

Which one of the graphs shown below represents correctly the change in the temperature of the water in the beaker?

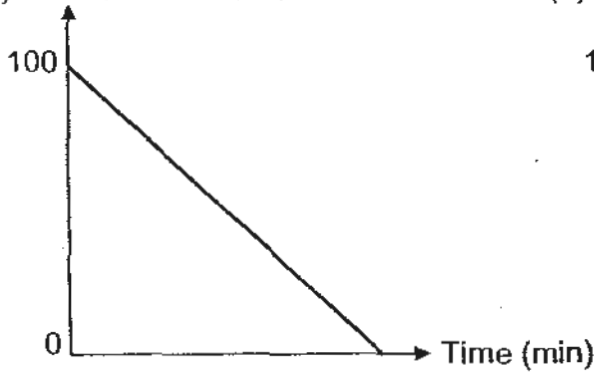
(1) Temperature ($^{\circ}\text{C}$)



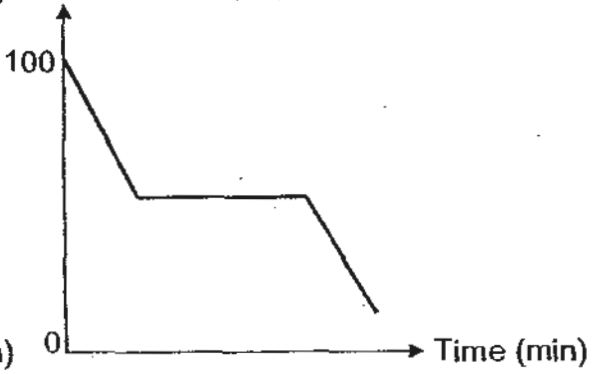
(2) Temperature ($^{\circ}\text{C}$)



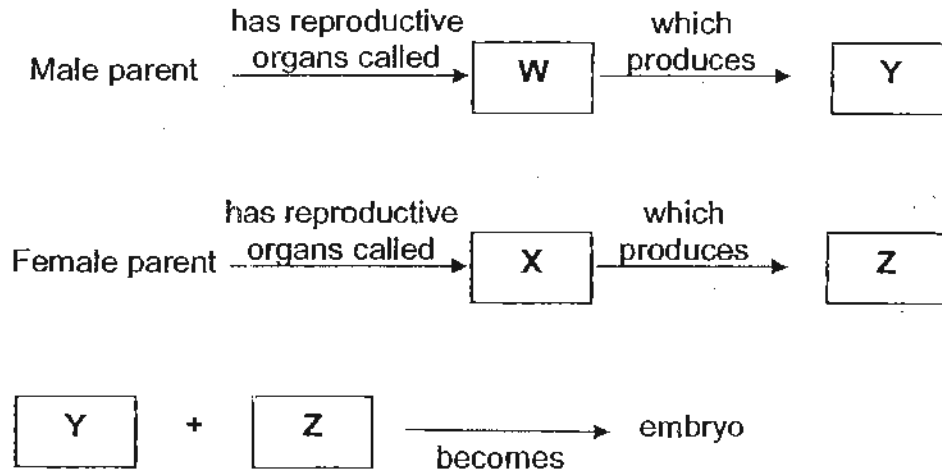
(3) Temperature ($^{\circ}\text{C}$)



(4) Temperature ($^{\circ}\text{C}$)



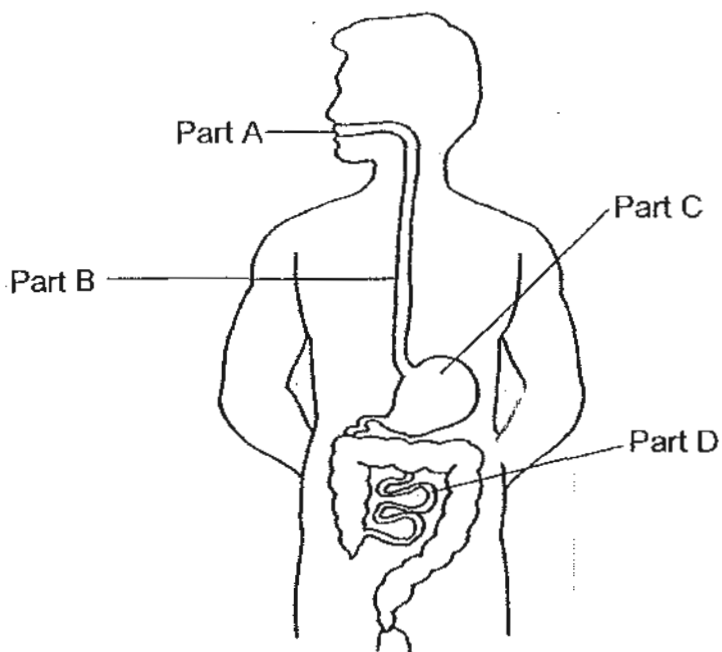
8. The diagram below shows how fertilisation takes place between the male parent and the female parent in animal reproduction.



What are W, X, Y and Z?

	W	X	Y	Z
(1)	ovaries	testes	egg	sperm
(2)	testes	ovaries	sperm	egg
(3)	womb	penis	egg	sperm
(4)	penis	womb	sperm	egg

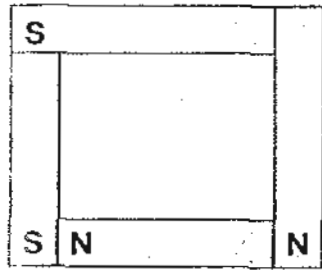
9. The diagram below shows parts of the human digestive system.



Which one of the following sets of information correctly compares the changes in the amount of digested food in parts A, B, C and D?

Changes in the amount of digested food in				
	Part A	Part B	Part C	Part D
(1)	No change	Increases	Increases	Decreases
(2)	Increases	No change	Increases	Increases
(3)	Increases	No change	Increases	Decreases
(4)	No change	No change	Increases	Increases

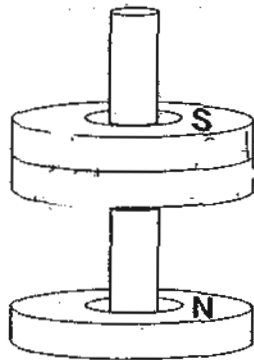
10. Study the diagrams of the four set-ups, G, H, J and K below.



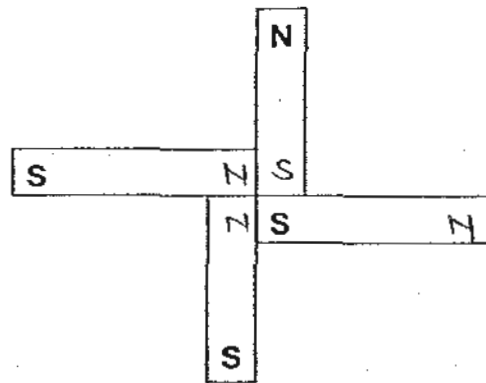
Set-up G



Set-up H



Set-up J

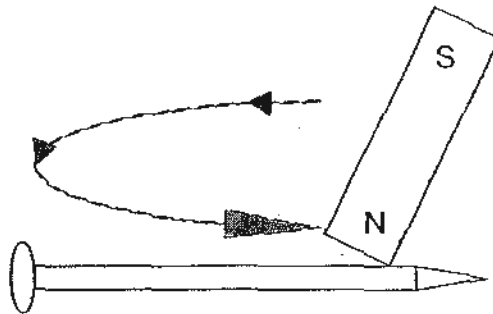


Set-up K

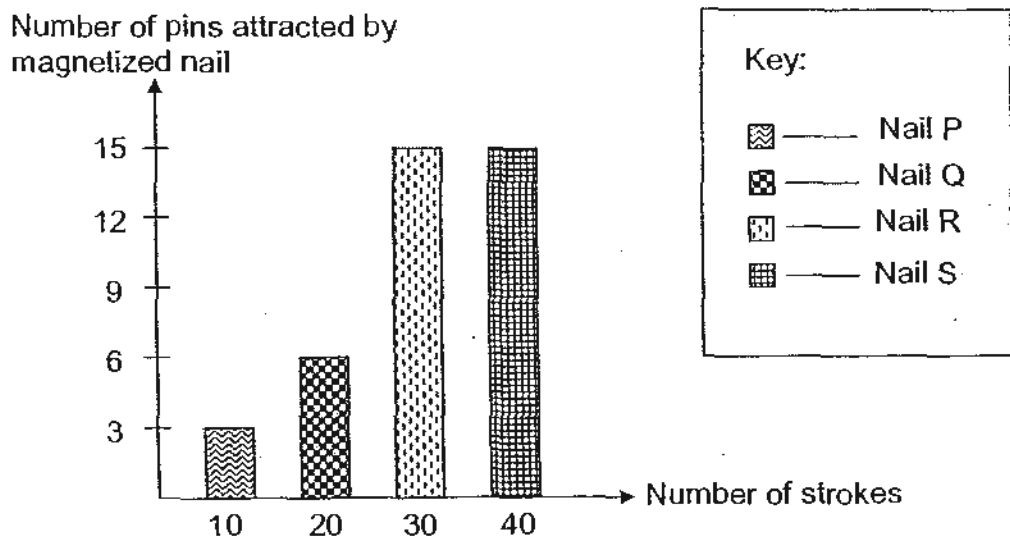
If bar magnets are used in set-ups G, H and K while ring magnets are used in set-up J, which of the above arrangements will be possible?*

- (1) G and H only
- (2) J and K only
- (3) G and J only
- (4) H and K only

11. Amos conducted an experiment with 4 identical nails to find out if the number of strokes made by a magnet would affect their magnetic strength. He stroked each nail with a magnet in the same direction as shown below.



He counted the number of times he stroked each nail with the magnet. He then tested each magnetised nail by holding it close to some pins. He counted the number of pins attracted to each magnetised nail and represented his results in the graph below.



From the graph above, which one of the following statements is true?

- (1) A nail can become a temporary magnet after stroking it with a magnet 10 times.
- (2) Nail S has become the strongest magnet after stroking it 40 times with a magnet.
- (3) The number of pins attracted by the magnetised nail increases at a constant rate.
- (4) The number of pins picked up by a magnetised nail is always dependent on the number of times the nail was stroked with a magnet.

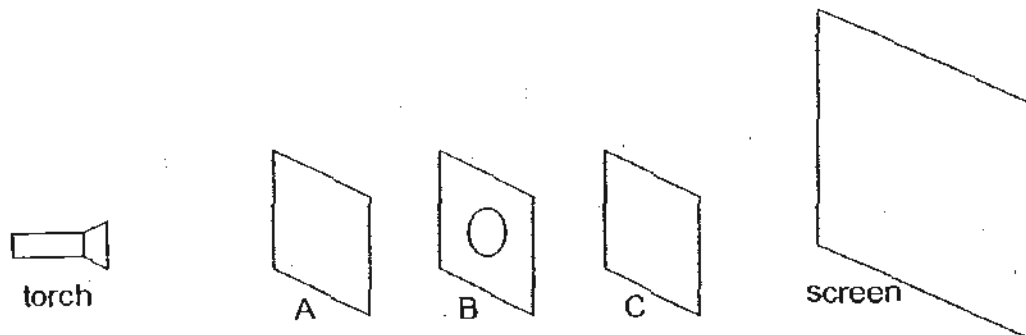
12. The table below shows the boiling and ^{freezing} melting points of 3 substances, X, Y and Z.

Substances	X	Y	Z
Boiling Point (°C)	19	110	72
Freezing Point (°C)	5	38	13
State at room temperature (26 °C)	?	?	?

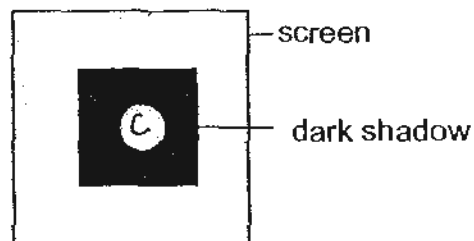
What is the state of the substances, X, Y and Z at room temperature? ^(26°C)

	X	Y	Z
(1)	gas	liquid	solid
(2)	liquid	solid	gas
(3)	gas	solid	liquid
(4)	solid	gas	liquid

13. The experiment shown below was carried out in a dark room. Objects A, B and C are each made of a different material and object B has a hole in it.



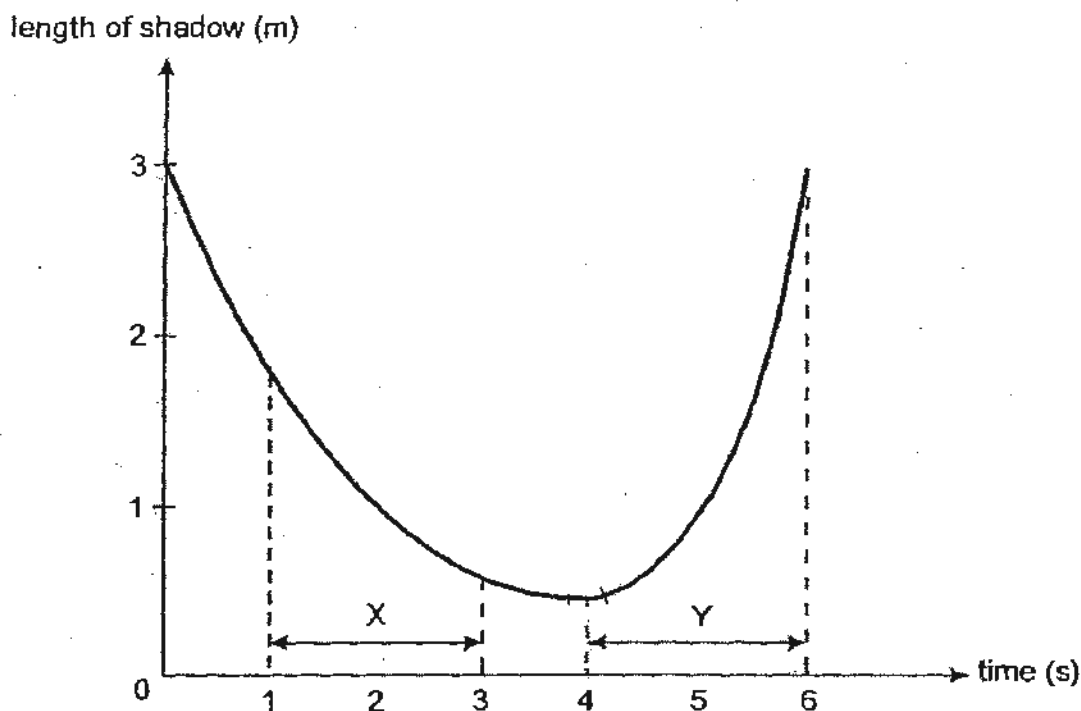
When the torch was switched on, a shadow, as shown below, was formed on the screen.



Which one of the following correctly shows the material that each object, A, B and C, is most likely to be made of?

	A	B	C
(1)	frosted glass	tracing paper	clear glass
(2)	clear glass	wood	clear plastic
(3)	metal	clear glass	frosted glass
(4)	clear plastic	frosted glass	cardboard

14. The graph below shows how the length of Louise's shadow changes over a period of time as she walks in a straight line near a street lamp at night.



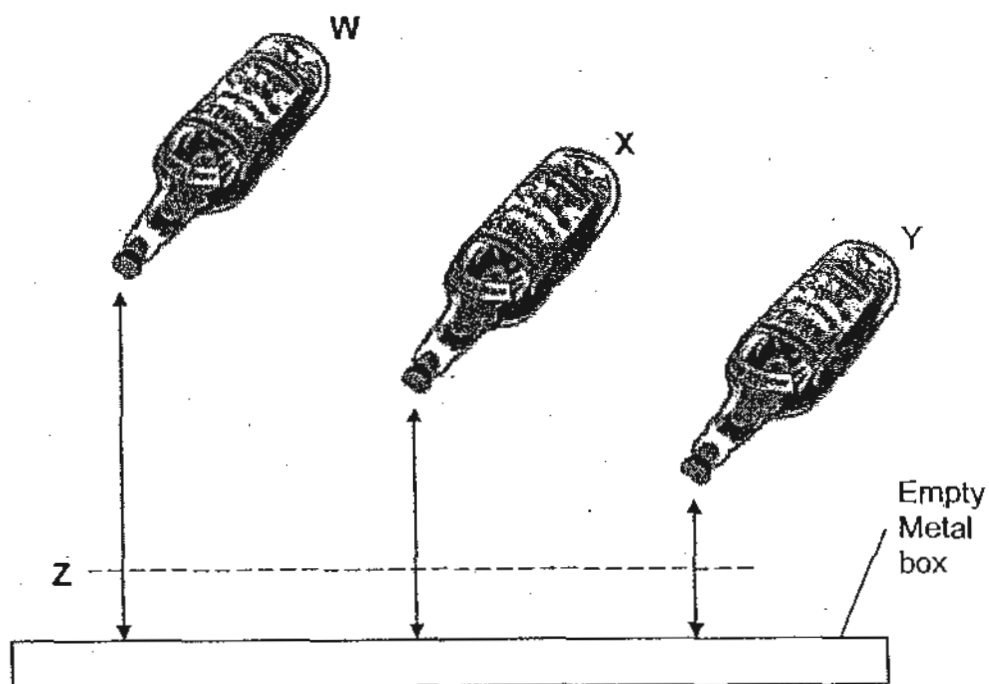
Which of the following statements are correct?

- A Louise is walking directly below the lamp at the 4th second.
 - B Louise is walking towards the lamp during the period X and away from the lamp during the period Y as shown in the graph.
 - C Louise is walking at a faster speed during the period X compared to the period Y.
 - D Louise is walking towards the lamp during the period Y and away from the lamp during the period X as shown in the graph.
- (1) A and B only
(2) C and D only
(3) A, B and C only
(4) A, C and D only

15. 3 similar bottles, W, X and Y, were filled to the brim with water. The opening of each bottle was fitted with a rubber stopper which had two holes as shown below.



The bottles were tilted at the same angle but held at different heights from a metal box.

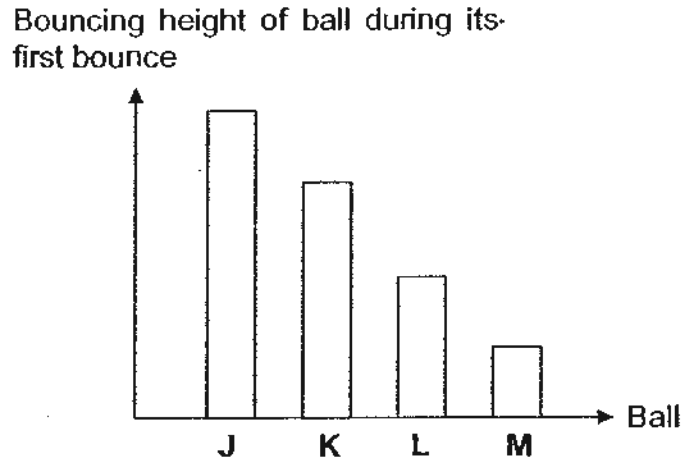


Which of the following statements are true of the above experiment?

- A Water flows out of bottles W, X and Y at the same rate.
- B Water from bottle W produced the loudest sound upon hitting the metal box.
- C Water from bottles W, X and Y possessed the same amount of kinetic energy at point Z.
- D Water from bottles W, X and Y possessed gravitational potential energy and kinetic energy when the bottles were tilted.

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

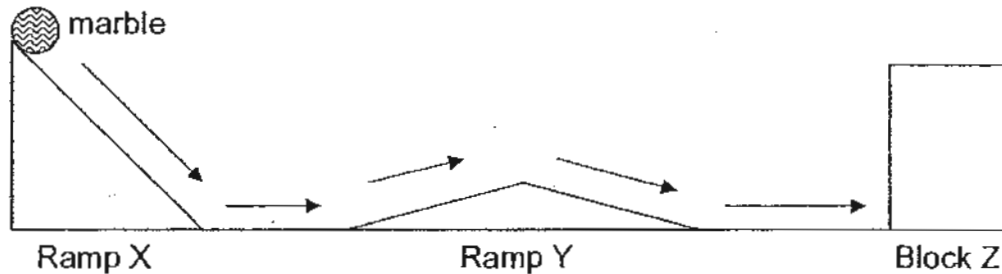
16. Mei Yin conducted an experiment with 4 balls, J, K, L and M which are made from different materials. She released each ball from the same height and allowed it to bounce off the ground. She measured the bouncing height of each ball during its first bounce and presented her results in the bar graph as shown below.



Based on the bar graph, what can Mei Yin infer from the results?

- A Ball J would come to a complete stop first.
 - B Ball M bounced the least number of times.
 - C Ball L had more kinetic energy than ball K after they hit the ground.
 - D The balls had different amounts of chemical potential energy at the point of release.
- (1) B only
(2) B and D only
(3) A and C only
(4) A and D only

17. Bee Eng set up an experiment to study the energy changes which took place when an object was moving.

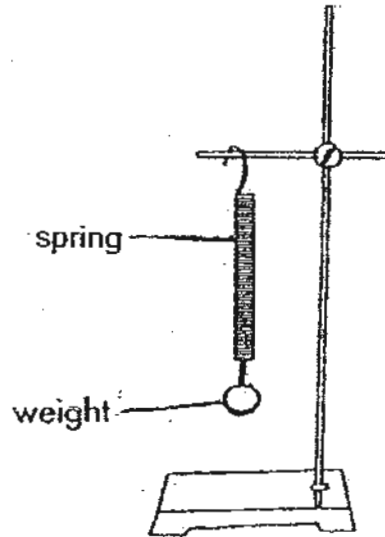


She released a marble from the top of ramp X. It rolled downwards and along the floor before it travelled up ramp Y and rolled down again. It hit against metal block Z and stopped moving.

Which of the following statements are true of the above experiment?

- A When the marble was released, it lost its potential energy.
 - B When the marble was travelling up ramp Y, kinetic energy was converted to potential energy.
 - C When the marble hit the metal block Z, some of its energy was converted to heat and sound energy.
 - D When the marble was moving along the floor, some of its energy was converted to kinetic energy.
- (1) A and D only
(2) B and C only
(3) A, B and C only
(4) B, C and D only

18. The diagram below shows a weight being hung from a spring whose original length was 5cm.



The table below shows the extension of the spring when different weights were hung from it.

Weight (g)	Extension of the spring (cm)
100	3
200	6
250	7.5
350	10.5

What would the weight of a dictionary be if the length of the spring was 17cm when the dictionary was hung on it?

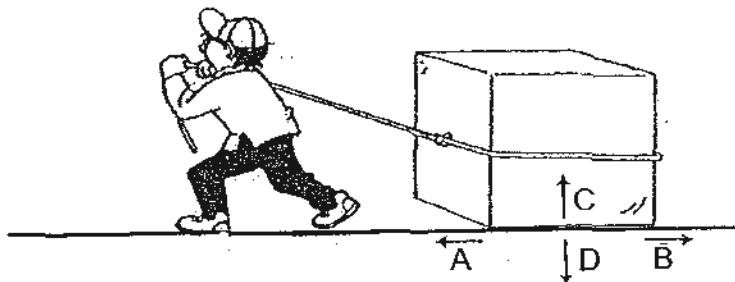
- (1) 350g
- (2) 400g
- (3) 450g
- (4) 550g

19. During a Science lesson, the teacher told 4 pupils to give examples of forces at work. The table below shows the responses from the 4 pupils.

Pupils	Examples of forces at work...
Susan	Stretching a chest expander
Carrie	Raindrops falling from the sky
Robin	A cruise ship sailing in the sea
Mike	A soccer ball coming to a stop

Which pupils have given the correct examples of forces at work?

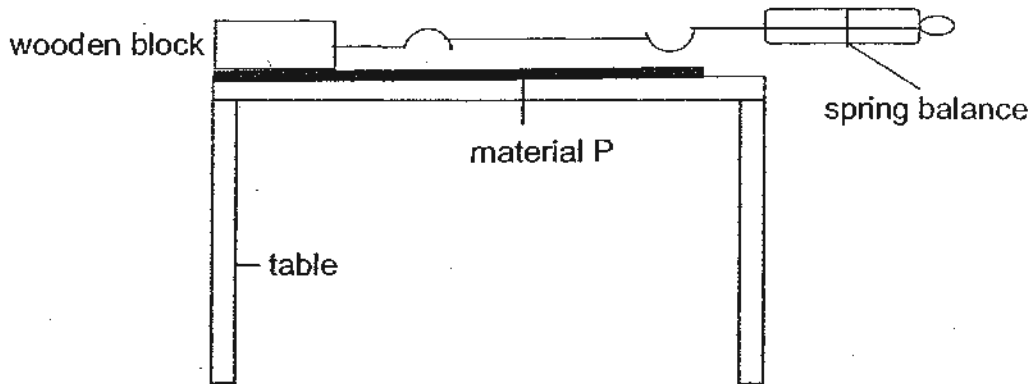
- (1) Susan and Carrie only
 - (2) Susan, Carrie and Mike only
 - (3) Carrie, Robin and Mike only
 - (4) Susan, Carrie, Robin and Mike
20. A wooden crate was tied with a rope and pulled across the floor as shown in the diagram below.



Which of the arrows (A, B, C or D) correctly represent the directions that frictional force and gravitational force act on the crate?

	Gravitational Force	Frictional Force
(1)	D	A
(2)	C	B
(3)	D	B
(4)	A	C

21. Shinee set up an experiment as shown below.

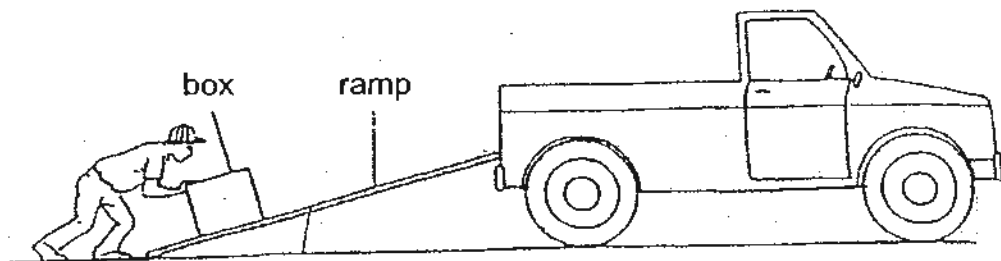


Shinee used a spring balance to find out the force needed to pull a wooden block across 4 different materials, P, Q, R and S. He started off with material P before subsequently replacing it with materials, Q, R and S, one at a time.

He then presented his results in the table below.

Material	P	Q	R	S
Force required (g)	203	186	145	167

Shinee wanted to use a suitable material to place on the surface of a ramp so that he could load his cartons up to his vehicle more easily as shown below.



Based on his experimental results, which material would Shinee **not** choose to place on the surface of the ramp?

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

22. The table below shows some animals and their habitats.

Habitat	Animals
A	whale, jellyfish, dolphin
B	grasshopper, butterfly, snail
C	earthworm, millipede, wood louse
D	tadpole, water beetle, guppy

In which one of these habitats would you most likely find the dragonfly nymph?

- (1) A
(2) B
(3) C
(4) D
23. Geri was taking a walk in his garden when he spotted some organisms. He then classified them into two groups, plants and animals.

Plants	Animals
3 orchid plants	3 caterpillars
2 rambutan trees	1 squirrel
4 bird's nest ferns	3 sparrows
	7 butterflies
	2 aphids

How many populations had he spotted altogether?

- (1) 5
(2) 6
(3) 7
(4) 8

24. Thomas conducted an experiment using some similar seedlings over a period of two weeks. The table below shows details of his experiment.

Pot	Type of soil	Amount of water used daily (cm ³)	Number of seedlings planted in each pot	Average height of the seedlings in each pot after 2 weeks (cm)
S	Clayey soil	100	15	4
T	Loamy soil	200	23	8.5
U	Clayey soil	100	23	6.5
V	Loamy soil	100	15	5

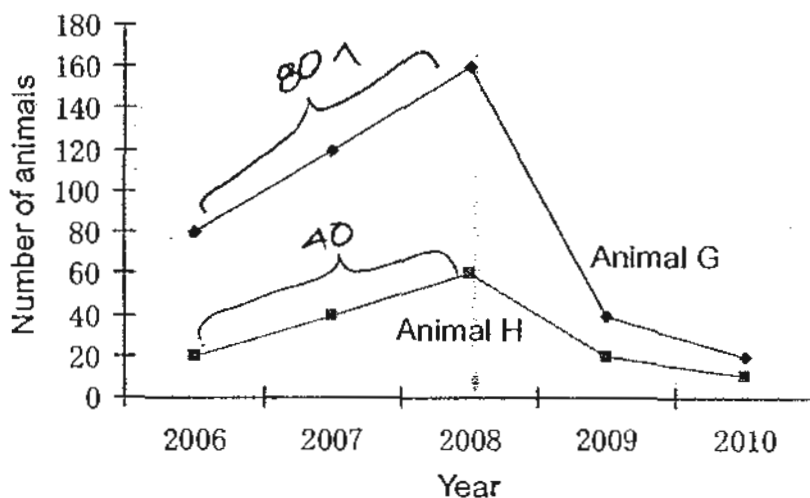
Which of the following are possible aims of Thomas' experiment?

- A To find out if overcrowding affects the average height of the seedlings
- B To find out if different types of soil used affect the average height of the seedlings
- C To find out if different amounts of water used daily affect the average height of the seedlings

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

25. A study was conducted by a group of researchers on 2 types of animals, G and H, in a community.

They recorded the number of each type of animals every year for 5 years. The results are shown in the graph below.



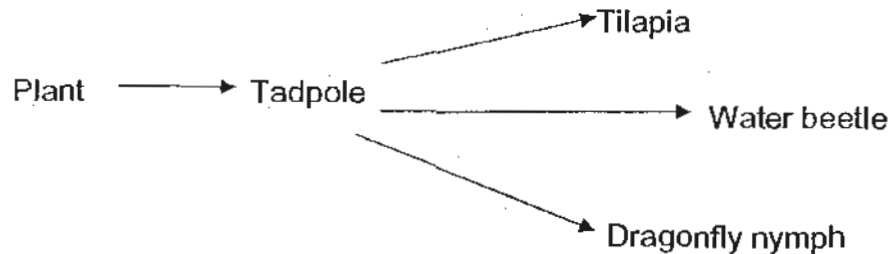
Based on the information above, the group of researchers made the following statements:

Researcher	Statement
A	The number of G increased at a faster rate than the number of H between year 2006 and 2008.
B	The number of G and H was the highest in year 2008.
C	The sudden drop in the number of G and H in 2009 could be due to the introduction of a prey into the community.
D	The fall in the number of G and H from 2008 to 2010 could be due to G preying on H.

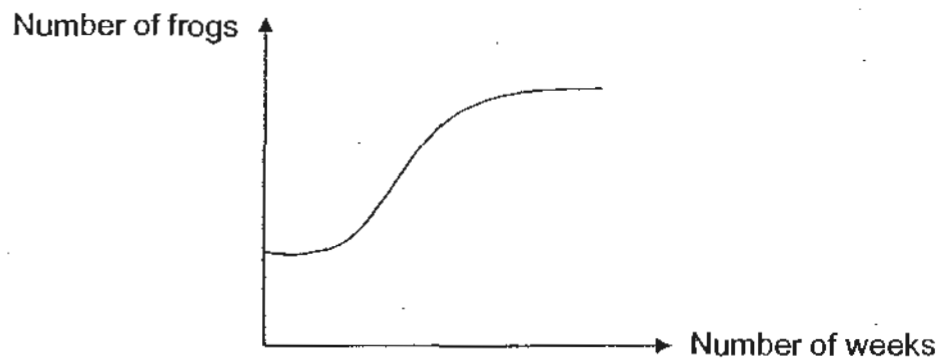
Which of the researchers have made the correct statements?

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

26. The food chains below show the food relationships between the tadpoles and other organisms in the pond.



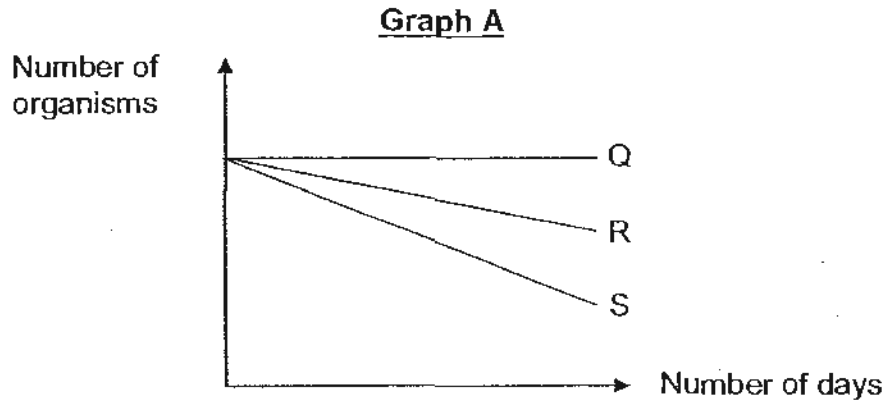
The graph below shows the change in the frog population in the same pond after some time.



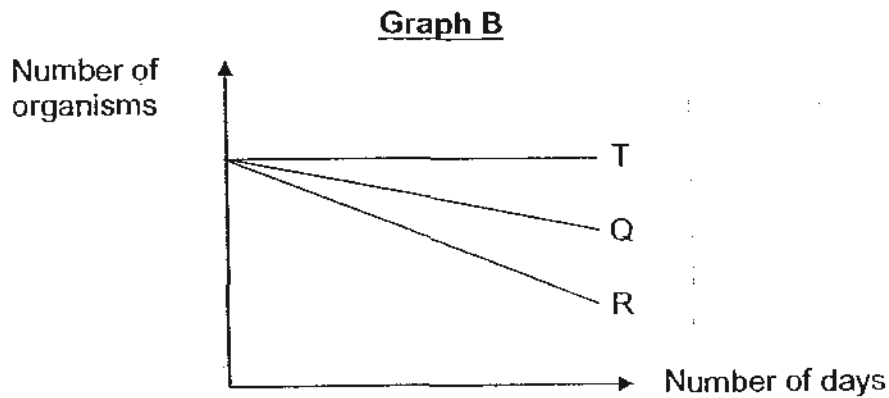
What are the possible causes for the change in the population of frogs as shown in the graph above?

- A An increase in the number of dragonfly nymphs
 - B A decrease in the number of tilapias in the pond.
 - C An increase in the amount of pollutants in the pond.
 - D An outbreak of a disease affecting the water beetles only.
- (1) A and B only
(2) A and C only
(3) B and D only
(4) C and D only

27. Q, R, S and T are 4 populations of organisms in a food chain. 3 populations of organisms, Q, R and S were put together in an enclosure for a few days. Graph A shows the changes in their population after a few days.



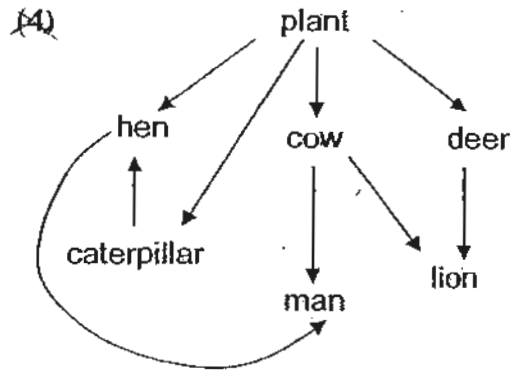
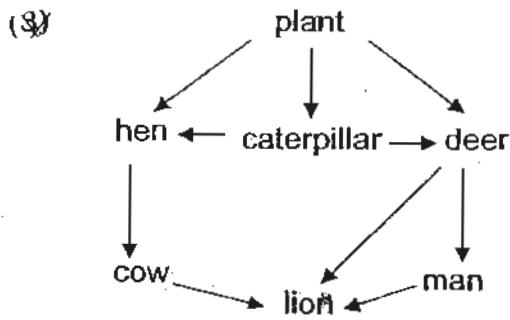
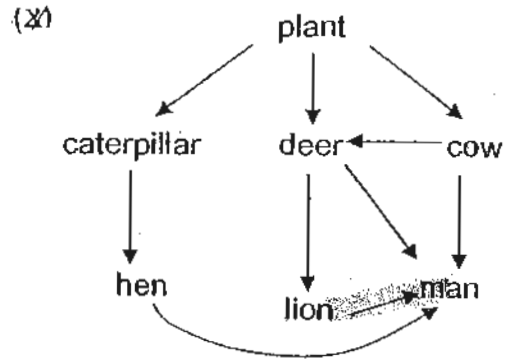
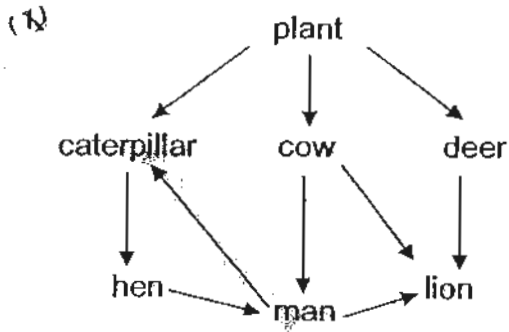
Graph B below shows the changes in the number of organisms Q, R and T when they were put together in a similar enclosure for a few days.



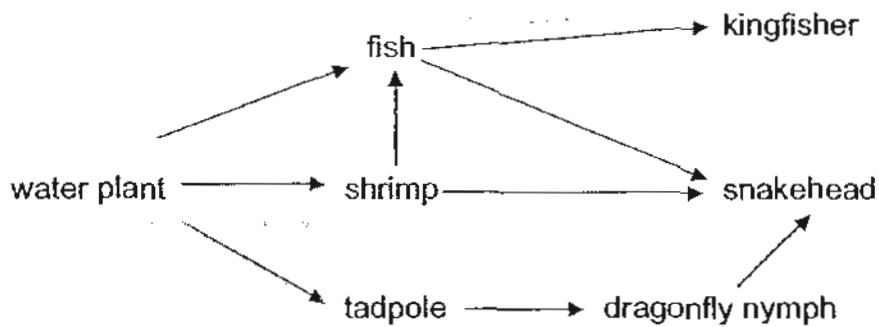
Based on the above graphs, which one of the following correctly describes organisms Q, R, S and T?

	Food producer	Prey	Predator	Prey and predator
(1)	Q	S	R	T
(2)	R	T	Q	S
(3)	S	R	T	Q
(4)	T	Q	S	R

28. Which one of the following food webs is correct?



29. Study the food web below.

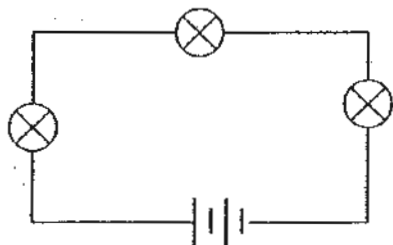


Which of the following statements about the food web is/are true?

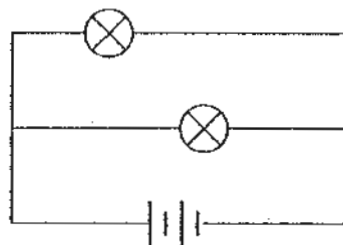
- A There are 5 food chains in this food web.
- B The sun is the main source of energy for this food web.
- C Energy from the shrimp is totally passed on to the kingfisher.
- D The shrimp, dragonfly nymph and fish are both a prey and a predator.

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

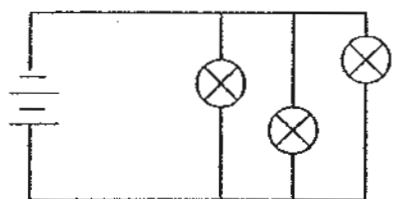
30. Jean wants to find out if the arrangement of bulbs would affect the brightness of the bulbs.



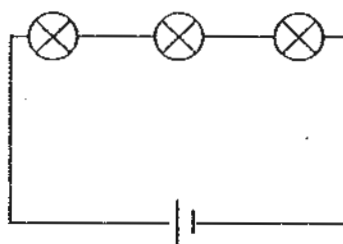
Set-up V



Set-up W



Set-up X



Set-up Y

Which two set-ups should she use to ensure a fair test, assuming that all the bulbs are similar and the batteries are of equal voltage?

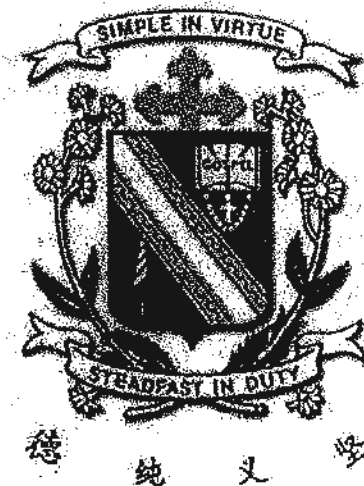
- (1) Set-ups V and W
- (2) Set-ups V and X
- (3) Set-ups W and Y
- (4) Set-ups X and Y

***** END OF SECTION A *****

Name: _____ ()

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (Primary)



Primary 6 2010 First Semestral Assessment SCIENCE

BOOKLET B

12 May 2010

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

14 questions
40 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Booklet A	60
Booklet B	40
Total	100

Parent's Signature / Date

This paper consists of 17 printed pages.

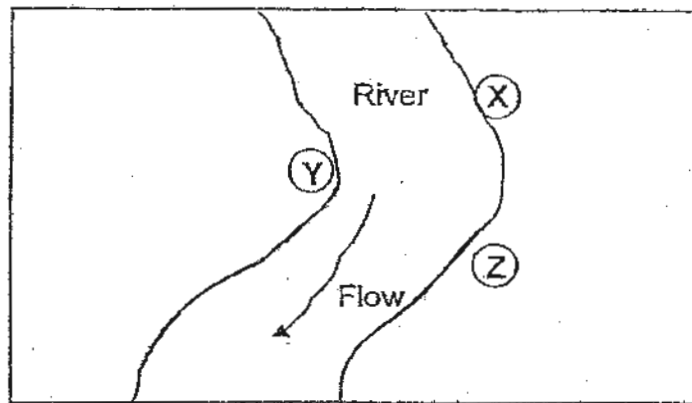
Section B: 40 marks

For questions 31 to 44, 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.

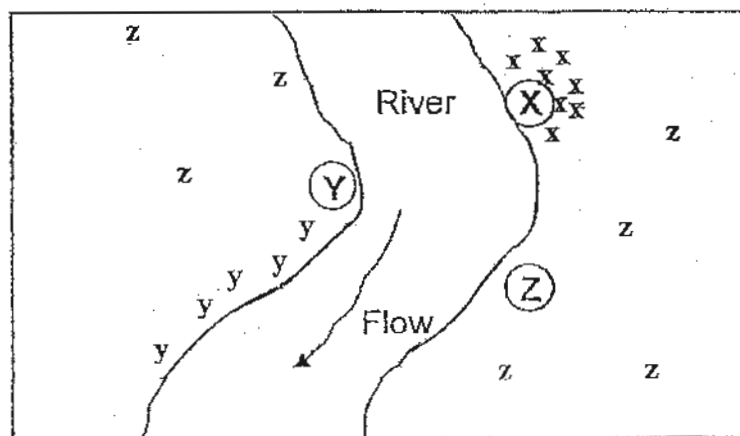
31. Three plants, X, Y and Z are found along a river bank as shown in Figure 1 below.

Figure 1



A year later, the locations of the young plants, x, y and z, in relation to their parent plants are as shown in Figure 2 below.

Figure 2



- (a) Based on the location of the young plants shown in Figure 2, suggest the method of dispersal for each of the fruit of the following plants in the table below. [1½]

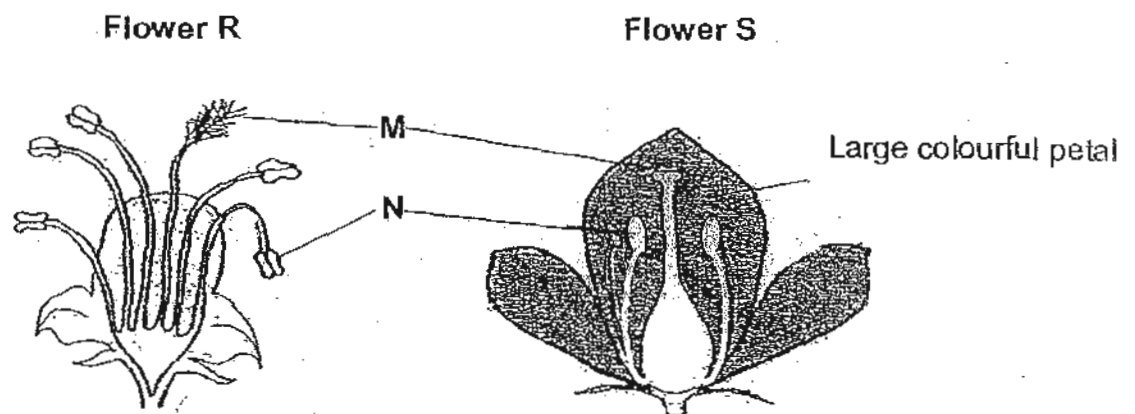
Fruits of plant	Method of dispersal
X	
Y	
Z	

- (b) What are the physical characteristics of the fruits that enable them to be dispersed by the methods mentioned above? [1½]

Fruits of plant	Physical Characteristics
X	
Y	
Z	



32. Michelle is shown a picture featuring two flowers, R and S, as shown below.



- (a) Name the flower parts labelled "M" and "N".

[1]

Flower part	Name
M	
N	

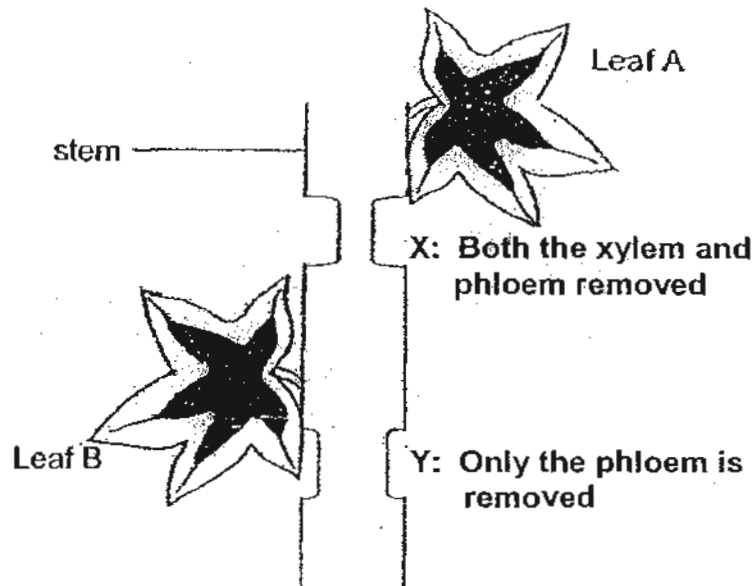
- (b) Michelle said that Flower S is wind-pollinated but her teacher told her that she is wrong. Give **two** reasons why Michelle's teacher told her so.

[2]

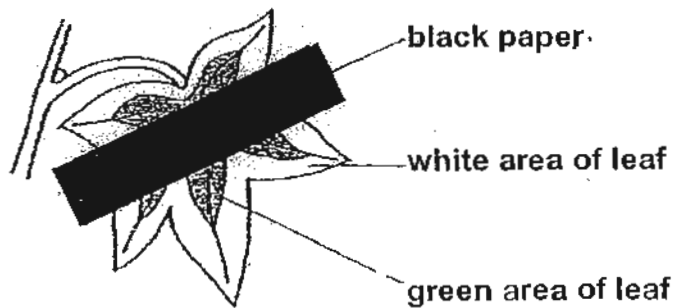
- (i) _____
- (ii) _____



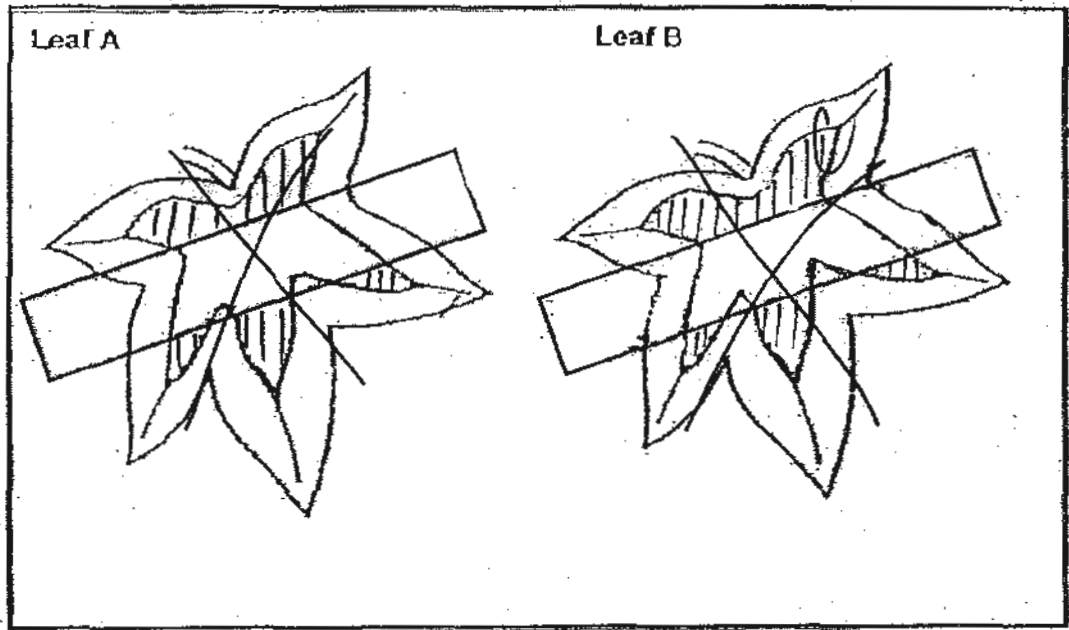
33. Hao Yao had a pot of plant with leaves that are green in the centre but white around the edges. He cut rings of different thickness of the bark around the stem at points X and Y as shown below.



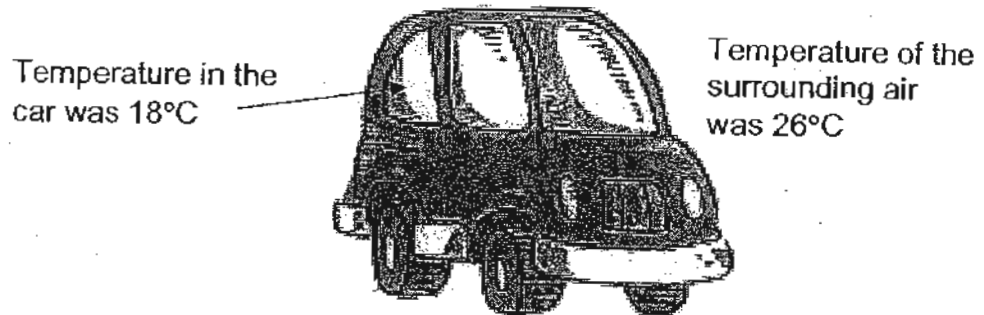
He watered the plant daily and kept it in the dark for 2 days. Both leaf A and leaf B were partly covered with black paper on both sides of the leaf as shown below. The plant was then placed under bright light for 12 hours.



After 12 hours, leaf A and leaf B were tested for starch using iodine solution. Shade the part(s) that Hao Yao would observe turning iodine solution dark blue. [2]



34. As Aaron was driving to work in the morning, he turned on the air-conditioner in his car. After a while, he noticed that the windows of his car had become misty.

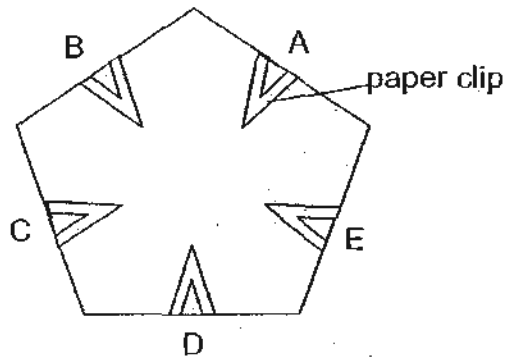


- (a) On which surface (interior or exterior) of the windscreen would Aaron find the mist? Explain your answer. [2]

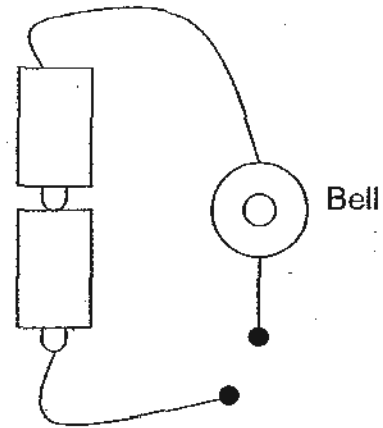
- (b) Would Aaron make the same observation if the temperature of the surrounding is 34°C ? Give a reason for your answer. [1]



35. Weixiang was given a circuit card as shown below with paper clips, A, B, C, D and E attached to it. The back of the circuit card which was sealed was connected using wires.



Circuit card

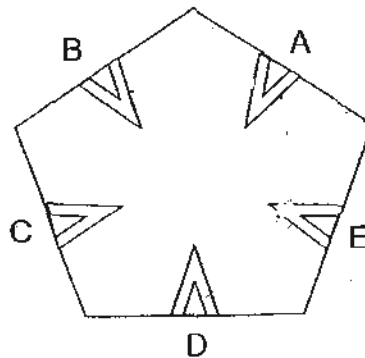


Circuit tester

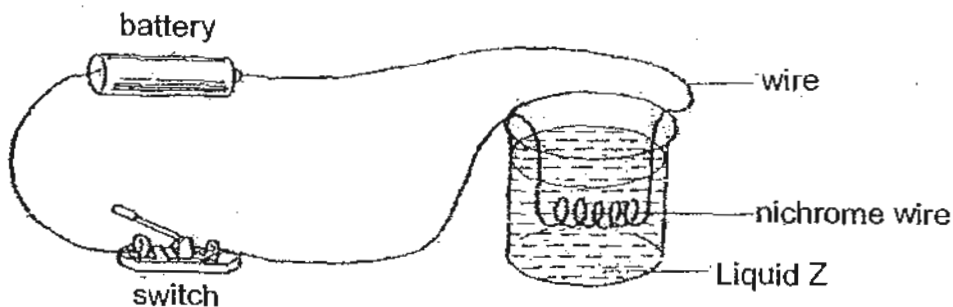
He used a circuit tester to test the card and tabulated his results as shown in the table below.

Testing points	Bell sounded?
A and B	Yes
A and D	Yes
A and C	No
B and E	Yes
B and D	Yes
B and C	No
C and E	No
C and D	No
D and E	Yes

Indicate on the diagram below, by drawing only 3 straight lines, to show how the wires in the circuit card are connected. [1½]



36. Robby set up the experiment shown below. He measured the temperature of liquid Z just before closing the circuit. He then measured the temperature of liquid Z at every 5 minute interval for the next half an hour.



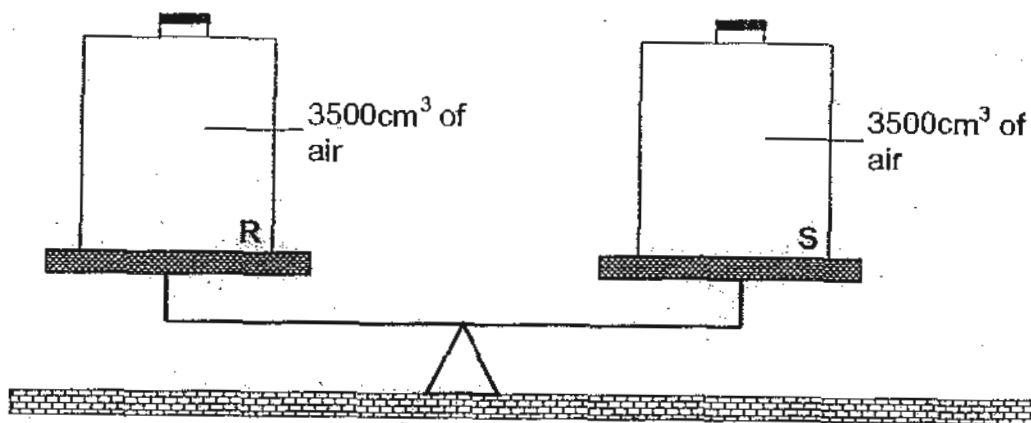
- (a) What would happen to the ~~water~~ ^{Liquid Z} at the end of half an hour? [1]

- (b) Write down the energy conversion for the above experiment. [1]

- (c) Robby wanted to increase the temperature of the same amount of liquid Z within a shorter time period. List down two ways in which he could do so. [2]



37. Mei Feng had two identical containers, R and S, of equal capacity of 3500cm^3 each. She placed them on a balance as shown in the diagram below.



- (a) In the space below, draw and label what Mei Feng would observe of the balance and the containers when she pumped in another 1000cm^3 of air into container S. [1]

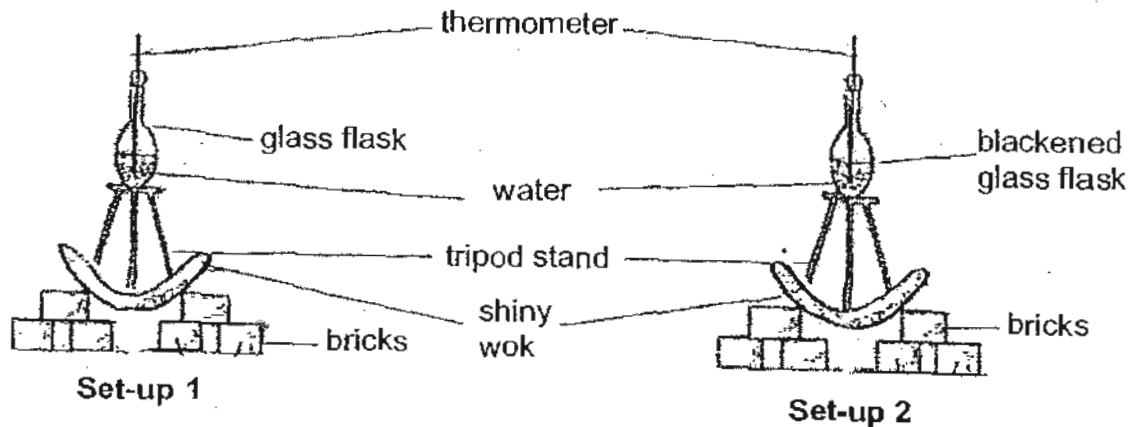


- (b) What would the volume of air in S be after Mei Feng had pumped in the 1000cm^3 of air into the container S? Explain your answer.

- (c) State one similarity between a liquid and a gas. [1]



38. Geri used 2 shiny woks to make 2 solar cookers as shown in the diagram below. In set-up 1, he filled a glass flask with some water and sealed it using a rubber stopper with a thermometer. He did the same for set-up 2 but he painted the glass flask black.



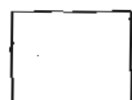
The initial temperatures of the water in both flasks were taken. The set-ups were then left in the sun for an hour. The temperature of the water was then measured again and recorded in the table as shown below.

	Initial temperature (°C)	Final temperature (°C)
Set-up 1	26	60
Set-up 2	26	87

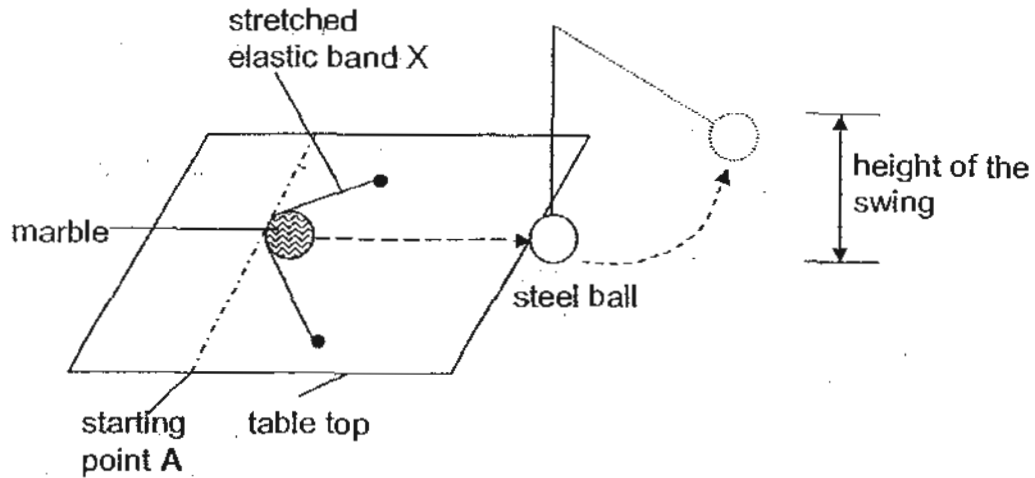
- (a) What was the aim of Geri's experiment? [1]

- (b) Why was there a difference in the final temperature of the water in the two flasks? [1]

- (c) Why do you think Geri used the shiny woks? [1]



39. Jean hung a steel ball at the edge of the table as shown below.



She stretched an elastic band X and placed a marble against it. She released the marble to hit the steel ball, causing the steel ball to swing upwards.

Jean repeated the experiment with 2 other types of elastic bands, Y and Z, one at a time. She recorded the height of the swing reached by the steel ball when it swung away from the edge of the table and presented her results in the table as shown.

Elastic band	X	Y	Z
Height of the swing (cm)	12	18	9

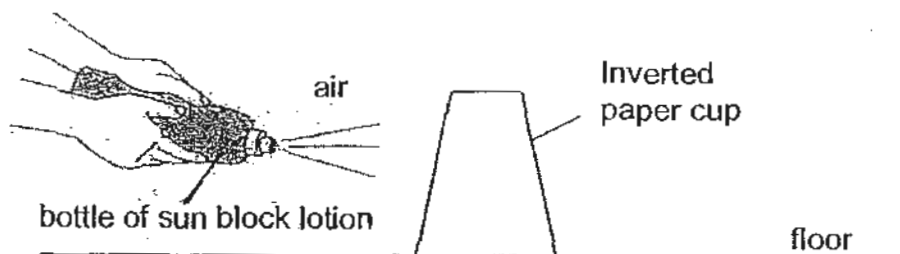
- (a) Based on the results above, which elastic band, X, Y or Z, has the least elastic potential energy? Give a reason for your answer. [1]

- (b) Why do you think Jean has indicated the starting point A on the table top? [1]

Write down the energy conversion for the above experiment. [1]



40. Royston carried out an experiment with a bottle of sunblock lotion and a paper cup as shown below. The bottle can hold a maximum of 50g of sunblock lotion.



Before carrying out the experiment, Royston would hold the bottle upright to allow all the lotion to settle at the bottom of the bottle. He then squeezed the upper part of the bottle with the mouth of the bottle facing the paper cup. He observed that the paper cup moved across the floor and no lotion spilt out of the bottle. He repeated this experiment with different amounts of sunblock lotion in the bottle and tabulated his results as shown below.

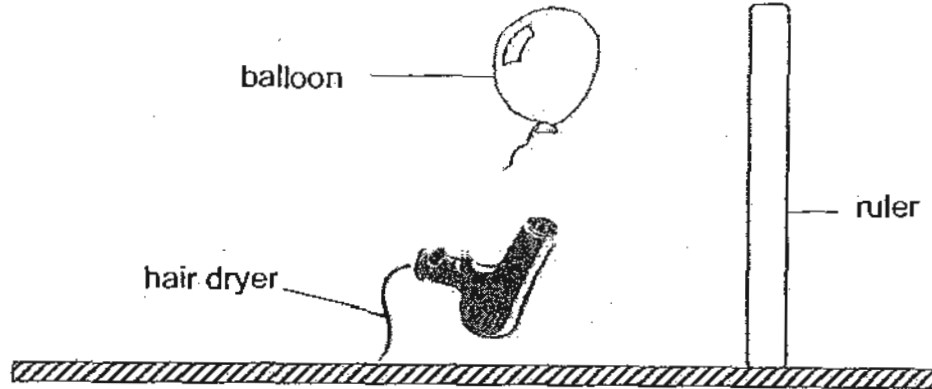
Amount of sunblock lotion (g)	Distance moved by paper cup (cm)
40	0.2
30	2.8
20	5.4
10	8.8

- (a) What is the relationship between the volume of air in the bottle and the distance moved by the paper cup? [1]

- (b) Suggest a reason why Royston allowed all the lotion to settle at the bottom of the bottle before carrying out the experiment. [1]



41. A hair dryer was used to blow a balloon which remained suspended in the air as shown below.



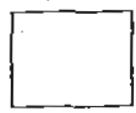
The height of the balloon from the ground was measured and the results were recorded as shown below.

Height of balloon (cm) \ Speed of hair dryer	1 st reading	2 nd reading	3 rd reading	Average reading
Low	28	30	29	29
Medium	37	39	41	39
High	46	44	48	46

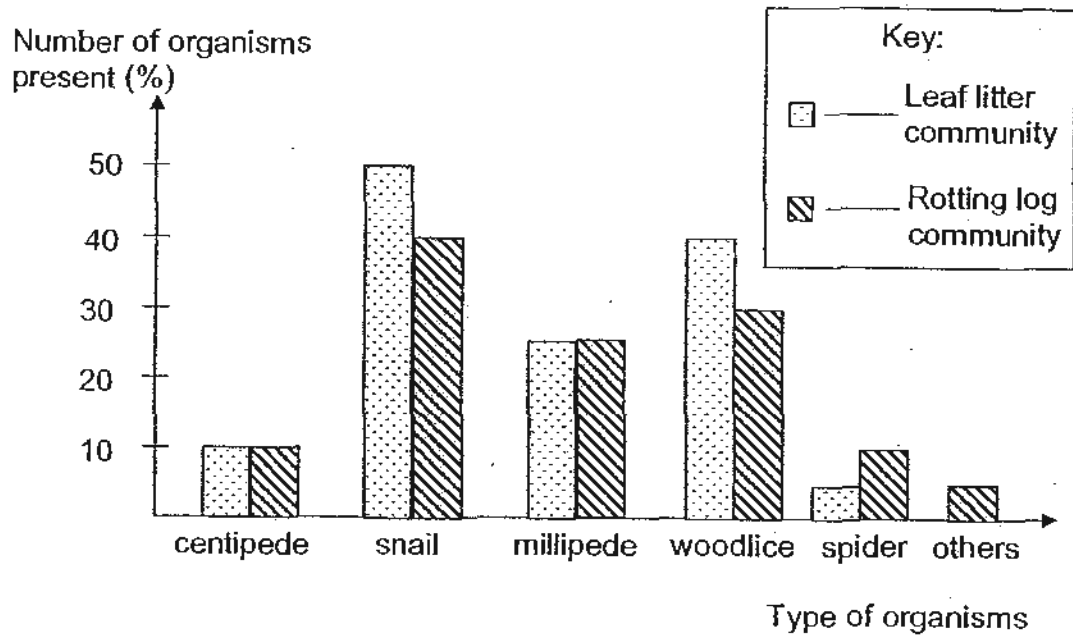
- (a) What is the relationship between the speed of the hair dryer and the height of the balloon? [1]

- (b) Why was the experiment repeated three times? [1]

- (c) When the balloon was blown at low speed for 5 minutes, it burst. Suggest a reason why this is so. [1]

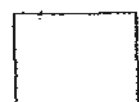


42. The following bar graphs show the composition of organisms found in a leaf litter community and a rotting log community.

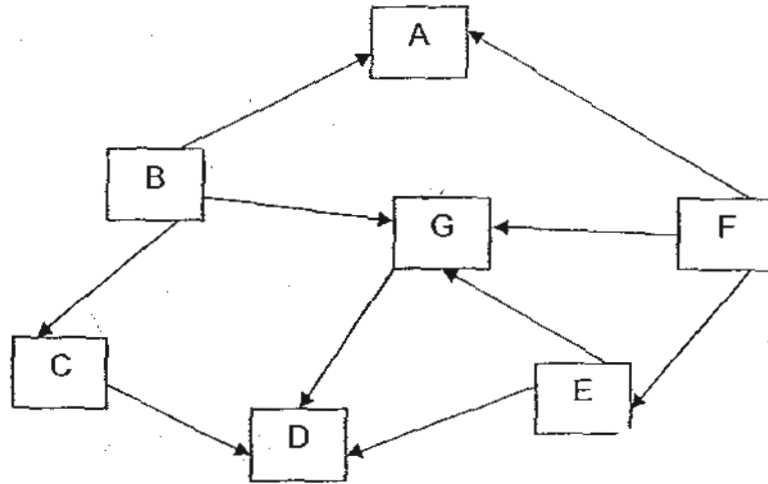


Put a tick (✓) in the appropriate boxes to indicate whether each of the statements is "True", "False" or "Not possible to tell". [2]

	Statements	True	False	Not possible to tell
(a)	The number of centipedes in both the leaf litter and rotting log community are the same			
(b)	In the leaf litter community, the percentage of centipedes is lower than that of the millipedes.			
(c)	There are only 6 animal populations in the rotting log community.			
(d)	There are more types of organisms in the rotting log community than the leaf litter community.			



43. The food web below shows seven populations of organisms living in a community.



- (a) Based only on the food web above, fill in the table below with the appropriate letters, A, B, C, D, E, F and G. [2]

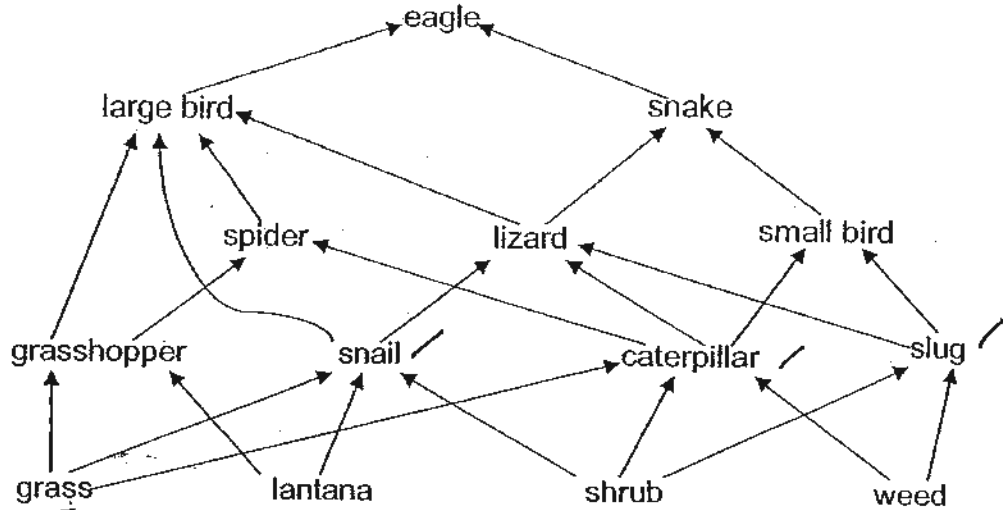
	Type of organism	Letter (s)
(i)	Food producer	
(ii)	Herbivore	
(iii)	Carnivore	
(iv)	Omnivore	

- (b) Using the following information, add in Organism H in the food web above. [1½]

- (i) Organism H is an omnivore.
- (ii) When the population of Organism H increases, the population of Organism B decreases.
- (iii) When the population of Organism H decreases, the populations of Organism A and C increase.



44. The food web below shows a field community.



(a) List the food sources of the lizard. [1]

(b) Write down a food chain that involves only 4 organisms. [1]

(c) A large amount of pesticides was sprayed by the National Environment Agency to control the populations of pests that are destroying the plants. Will the eagle population be affected by the pesticides? Explain your answer. [1]



ANSWER SHEET

EXAM PAPER 2010

SCHOOL : CHIJ PRIMARY
SUBJECT : PRIMARY 6 SCIENCE

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
3	3	2	1	2	2	1	2	2	3	1	3	2	1	4	1	2

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
2	4	3	1	4	2	2	1	3	3	4	1	2

31)a)

Fruits of plant	Method of dispersal
X	Explosive action
Y	dispersed by water
Z	dispersed by animal

b)

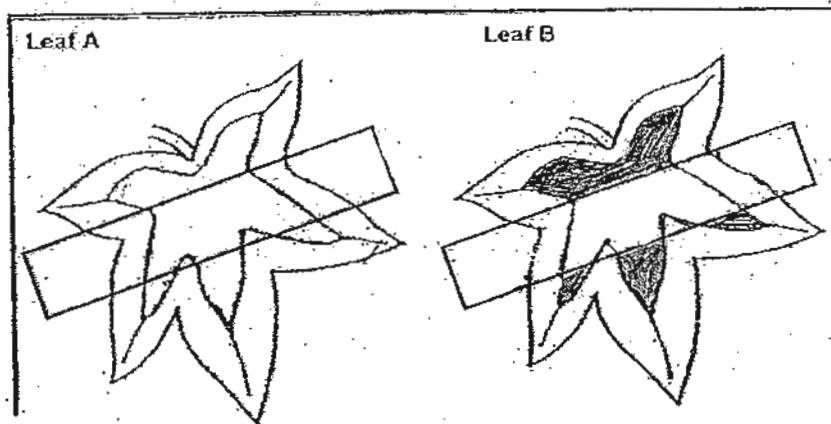
Fruit of plant	Physical Characteristics
X	dry fruit wall
Y	have a fibrous husk that float
Z	have bright colour and hook to cling on animal

32)a)

Flower part	Name
M	stigma
N	anther

- b)i) Flower S has large colourful petal that is used to attract insect.**
ii) Flower S has large colourful petals to attract insect.

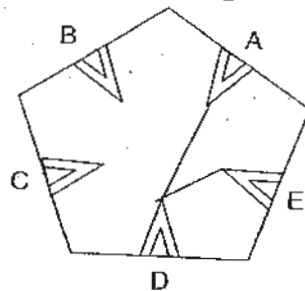
33)



34)a) Exterior warm water vapour from the surrounding air condenses on the cool surface of the glass and to form tiny droplet.

b) No. The window surface will be too hot for the water vapour to condense on them.

35)

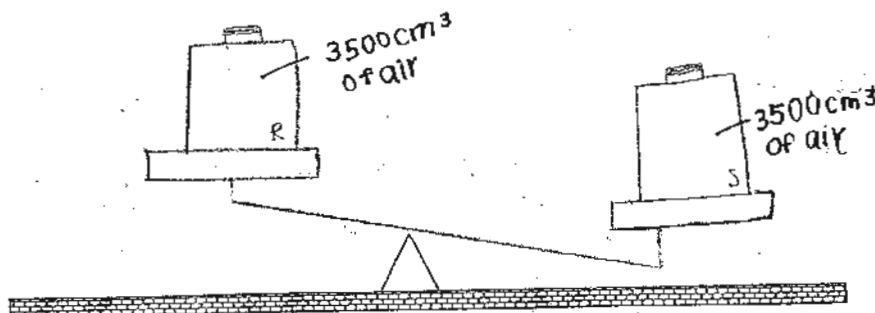


36)a) The temperature of liquid Z will increase.

b) Chemical potential energy \rightarrow Electrical energy \rightarrow Heat energy.

c) Robby can add more batteries and add salt into liquid Z.

37)a)



b) 3500 cm³. Air can be compressed.

c) Both of it does not have definite shape.

38)a)Geri's aim of experiment is to find out whether the colour of the flask affect the temperature of water.

b)Black colour absorb more heat, thus heating the water to a higher temperature.

c)The spin works reflect the light to the flask enabling the water to be heated up faster.

39)a)Z. It cause the height of the swing to swing the lowest.

b)His make a indication is to make that experiment a fair test.

c)Elastic potential energy→kinetic energy (+ sound) →gravitational potential energy.

40)a)As the volume of air in the bottle increases, the distance moved by the paper cup also increases.

b)This allowed air to occupy the upper portion of the bottle enabling him to carry out the experiment more accurately.

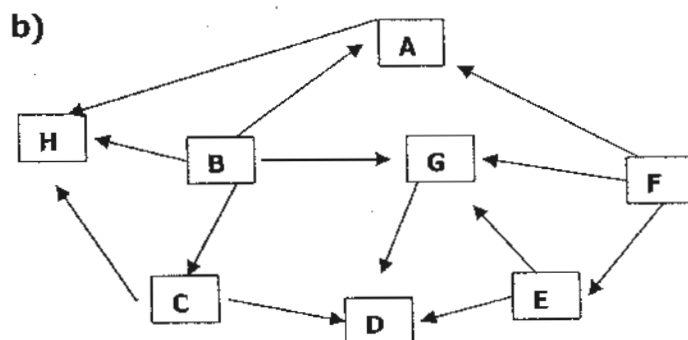
41)a)The relationship is that the higher speed it has, the higher the balloon will be blown up.

b)This is to ensure a more reliable result.

c)The intense heat caused the air in the balloon to expand, causing the balloon to burst. Intense heat cause balloon to burst.

42)a)Not b)T c)Not d)T

43)a)i)B,F ii)A,C,E iii)D iv)G



44)a)Snail, caterpillar and slug.

b)Lantana→snail→large bird→eagle

c)Yes. They will get poisoned too when they consume the organism that have consumed poisoned insect.