



NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 1 2013
PRIMARY SIX
SCIENCE

Name : _____

Class : Primary 6 / _____

Date : 1 March 2013

Duration : 1 hr 45 min

MARKS	
Sect A:	/ 60
Sect B:	/ 40
Total	/ 100

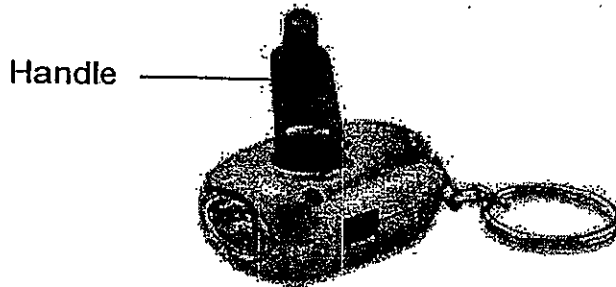
Parent's Signature : _____

Section A: (30 x 2marks = 60marks)

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.

1. Which of the following is not a source of energy?
- (1) Rain
 - (2) Sea water
 - (3) Water in a river
 - (4) Water in a puddle

2. John is using a handheld dynamo torch as shown in the picture below. To use it, he will rotate the handle, which drives the dynamo found within the torch. Electricity is generated and the bulb lights up. The faster he rotates the handle, the brighter the bulb.



Which of the following shows the energy conversion that is taking place?

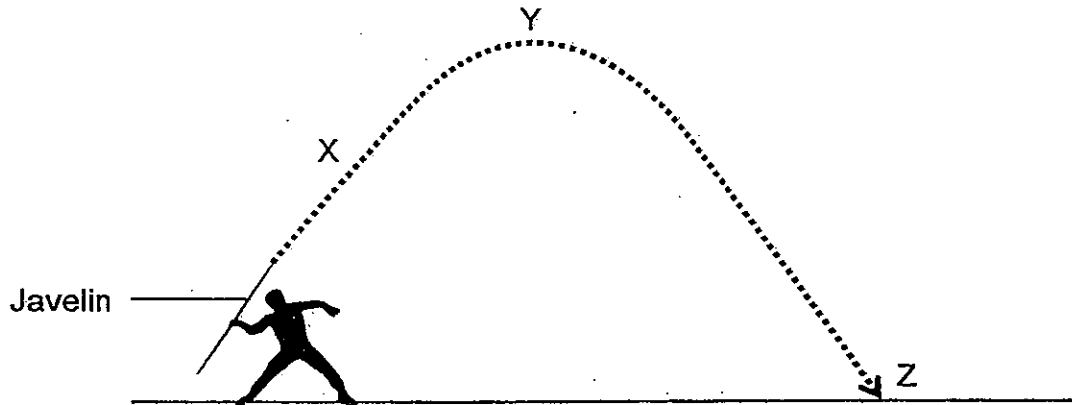
- (1) Kinetic energy \rightarrow heat and light energy
- (2) Chemical potential energy \rightarrow heat energy \rightarrow light energy
- (3) Kinetic energy \rightarrow electrical energy \rightarrow heat and light energy
- (4) Chemical potential energy \rightarrow kinetic energy \rightarrow heat and light energy

3. Which of the following force(s) can act from a distance?

- A Gravity
- B Friction
- C Magnetic Force
- D Elastic Spring Force

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

4. A man is throwing a javelin up into the air in a competition. The dotted line shows the path the javelin will travel through the air.

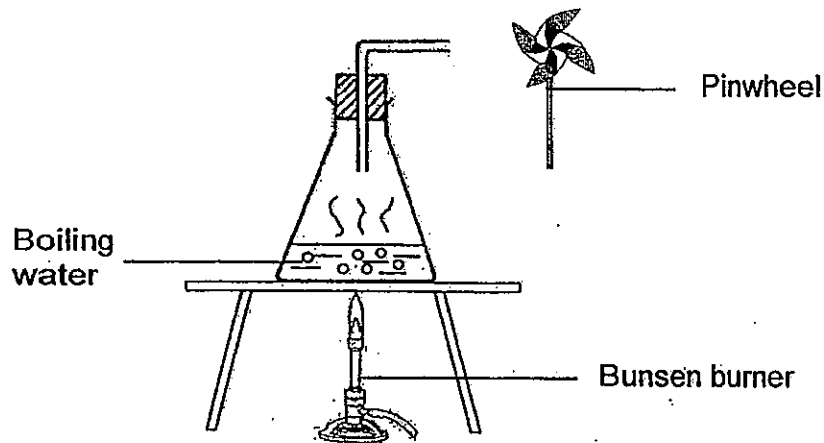


At which point(s) is gravitational force acting on the javelin?

- | | |
|------------------|------------------|
| (1) Y only | (2) X and Y only |
| (3) Y and Z only | (4) X, Y and Z |
5. Study the following statements about elastic spring force.
- A Elastic spring force can be a pushing or pulling force.
B Elastic spring force only acts on any object that is stretched.
C Elastic spring force has the tendency to cause the object to go back to its original size.

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

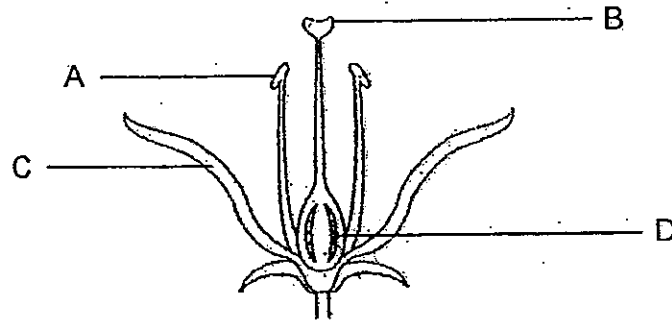
6. Study the set-up below carefully.



Which of the statements below about the set-up is correct?

- (1) Heat energy from the boiling water causes the pinwheel to spin.
- (2) Kinetic energy from the boiling water causes the pinwheel to spin.
- (3) Kinetic energy from the hot water vapour causes the pinwheel to spin.
- (4) Heat energy from the flame of the bunsen burner causes the pinwheel to spin.

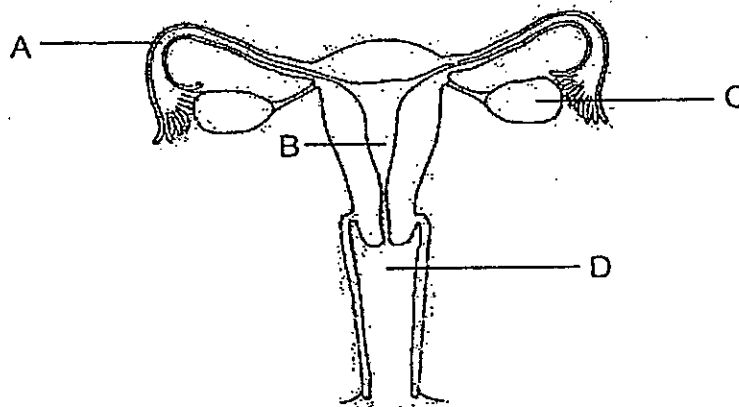
7. The diagram below shows the cross-section of a flower.



Which of the following shows correctly what will happen if the specified part is removed.

	Part Removed	Consequence
(1)	A	Pollination will not take place
(2)	B	Fertilization will not take place
(3)	C	Fertilization will not take place
(4)	D	Pollination will not take place

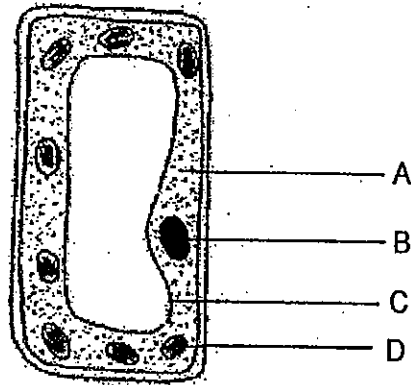
8. The picture below shows the reproductive system of a female human being.



In which part of the system are the eggs stored?

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

9. Genetically modified foods are foods that have their genes modified so that certain desirable features are enhanced. To do so, food scientists have to modify certain part of the cell.



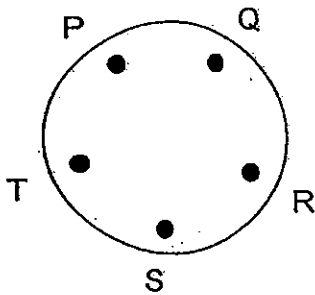
Which one of the following parts, A, B, C or D should the food scientists modify?

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

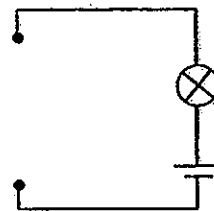
10. Mr Tan created a circuit card below and told his pupils that out of the 5 contact points on the circuit card, only one of them is not a conductor of electricity. He painted all the contact points black.

He then set up a circuit tester as shown for his pupils to test out the card. He also gave them some wires to connect the points to test the points.

Circuit Card



Circuit Tester



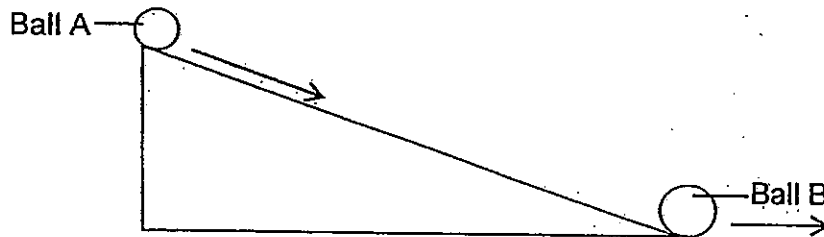
His pupils tested the card for three rounds before discovering the contact point that is not a conductor of electricity. The result of their tests is shown below.

Did the bulb in the circuit tester light up?		
Yes	No	No

Based on the results in the above table, which point of contact is not a conductor of electricity?

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

11. Susan released Ball A from the top of a ramp as shown in the diagram below.



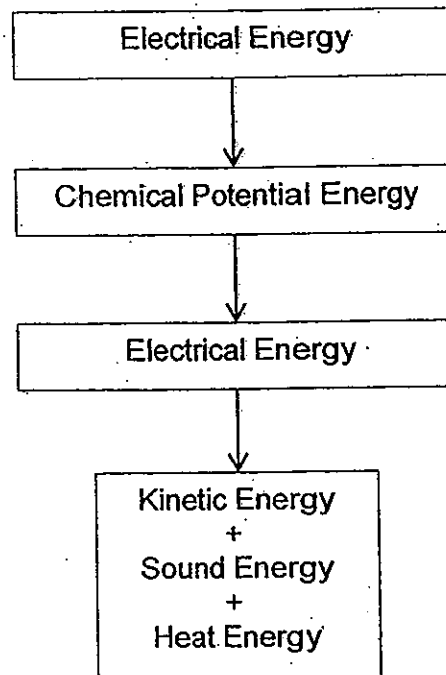
Ball A rolled down the ramp and hit Ball B at the bottom. Ball B moved 100cm away from its original position.

Susan wants Ball B to travel a shorter distance instead. Which of the following can she do to ensure that Ball B would fulfill her requirement?

- A Use a lighter Ball A
- B Use a heavier Ball B
- C Increase the height of the ramp
- D Decrease the height of the ramp

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

12. Study the energy conversion below carefully.

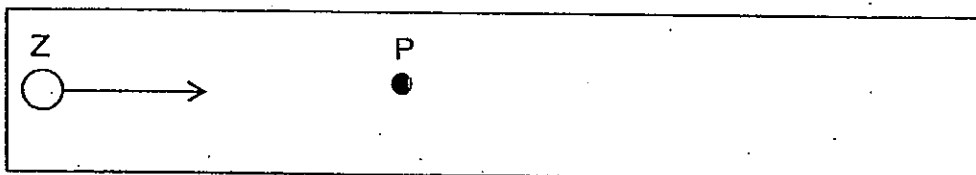
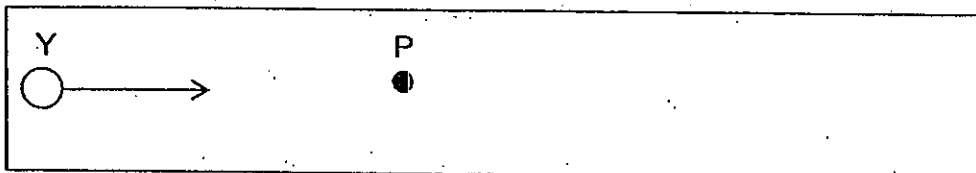
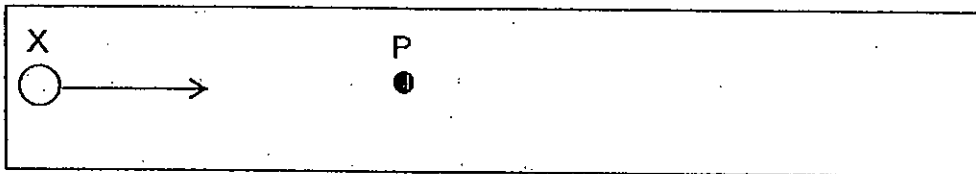
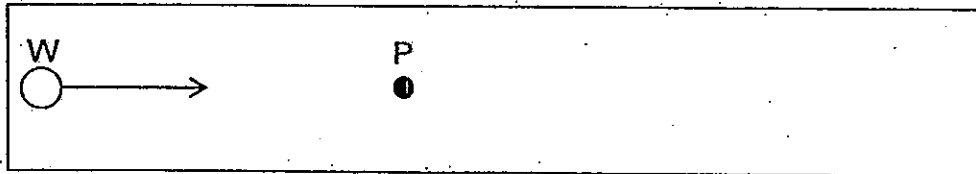


Which of the following will result in the energy conversion shown above?

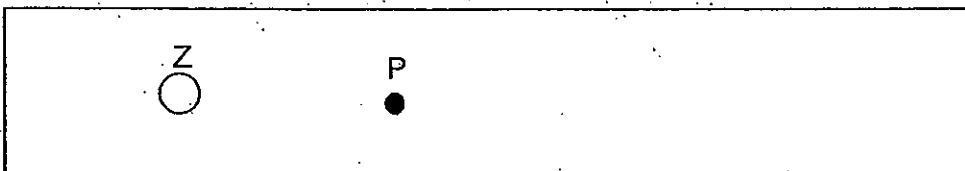
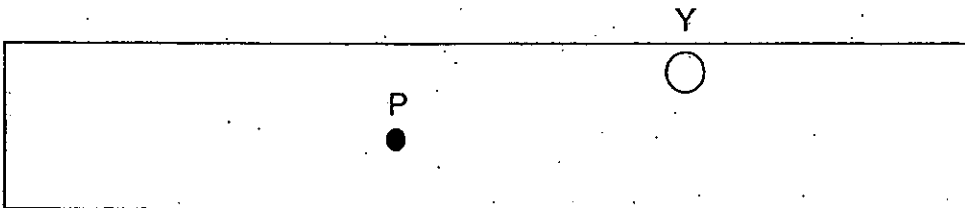
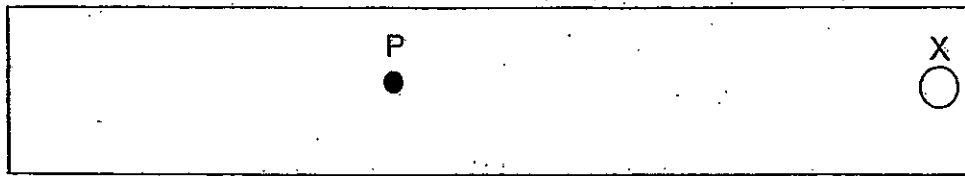
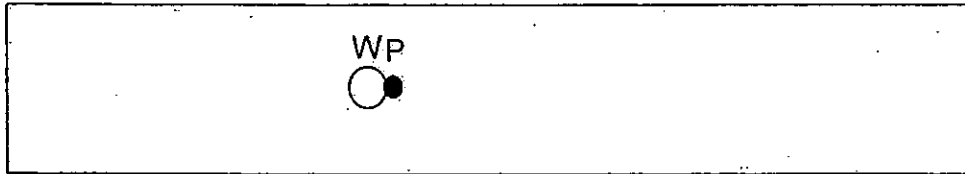
- (1) Plugging in and turning on the table fan.
- (2) Plugging in and turning on the television.
- (3) Charging of a vacuum cleaner and then using it.
- (4) Charging of a mobile phone and then using it to make a call.

13. Ali set up an experiment below to find out how the direction and amount of force applied on a moving ball can affect the ball.

All the four balls, W, X, Y and Z in the set up are identical and they travelled at the same speed and direction. At point P, a force is applied to the ball.



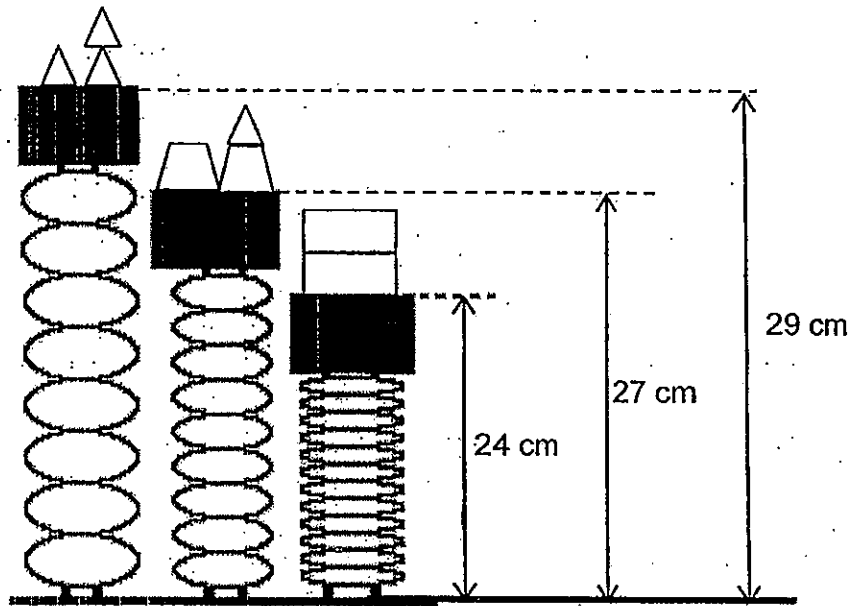
Their final positions are recorded in the pictures below.






Which of the following correctly shows the direction of the force that is applied on the moving balls?

Direction of force applied				
	W	X	Y	Z
(1)	←	←	↗	→
(2)	→	↗	←	←
(3)	←	→	↗	←
(4)	↗	←	→	→

14. The diagram below shows what happened when weights of different mass are placed on the same spring.



Key:

-  → 4 Kg
 → 2 Kg
 → 1 Kg

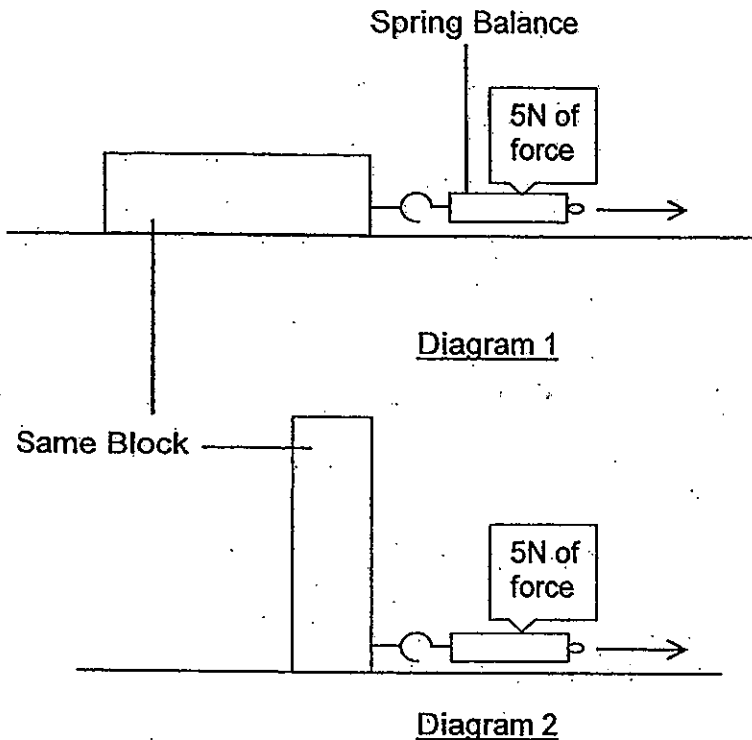
What is the length of the spring when it is not compressed?

- (1) 16 cm
 (2) 24 cm
 (3) 32 cm
 (4) 35 cm

15. Mike conducted an experiment to find out if the area of contact between two surfaces affects the frictional force between them.

He attached a spring balance to a block as shown in Diagram 1. He pulled the spring balance and noted down the force taken for it to just start to move.

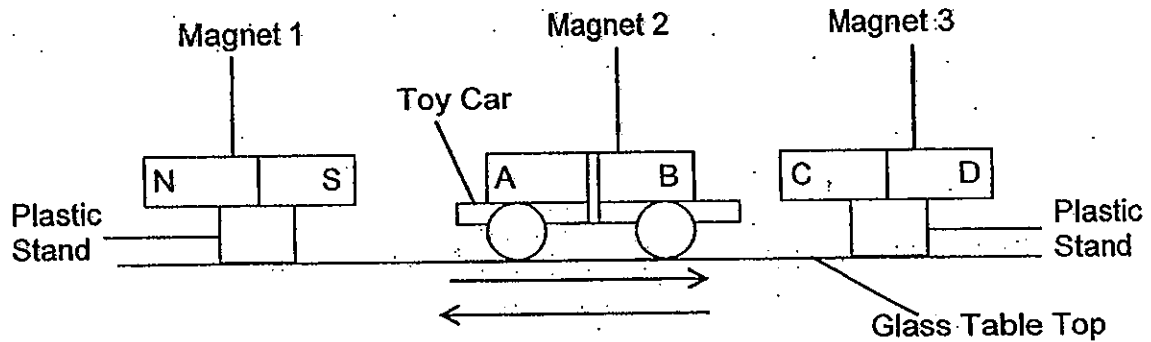
He then placed the same block in the position as shown in Diagram 2. He pulled the spring balance again and noted down the force taken for it to just start to move.



Based on the results above, what conclusion can Mike make?

- (1) The greater the area of contact between the block and the table, the greater the frictional force between the two surfaces.
- (2) The greater the area of contact between the block and the table, the smaller the frictional force between the two surfaces.
- (3) The area of contact between the block and the table does not affect the amount of frictional force between the two surfaces.
- (4) The area of contact between the block and the table affect the amount of frictional force between the two surfaces only for the first few seconds the block moves across the surface.

16. Oliver made a toy car as shown in the diagram below. The car was a piece of wood attached with four wheels. He then tied a piece of magnet to it and placed it in between two magnets which were mounted on plastic stands.

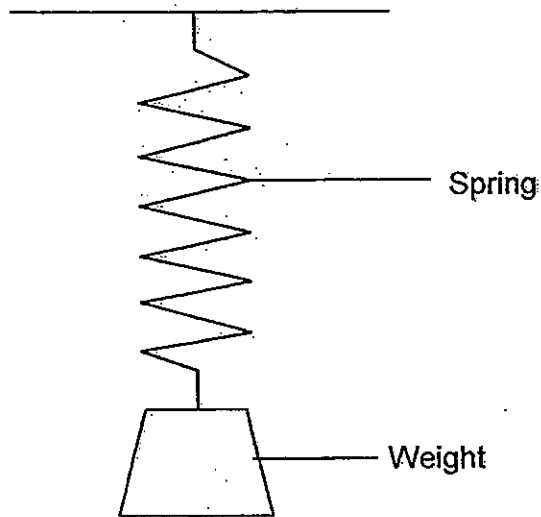


He then pushed the toy car towards one of the magnets and observed that the toy car travelled to and fro the two magnets continuously without touching either one of the magnets. The poles of Magnet 1 are shown in the diagram above.

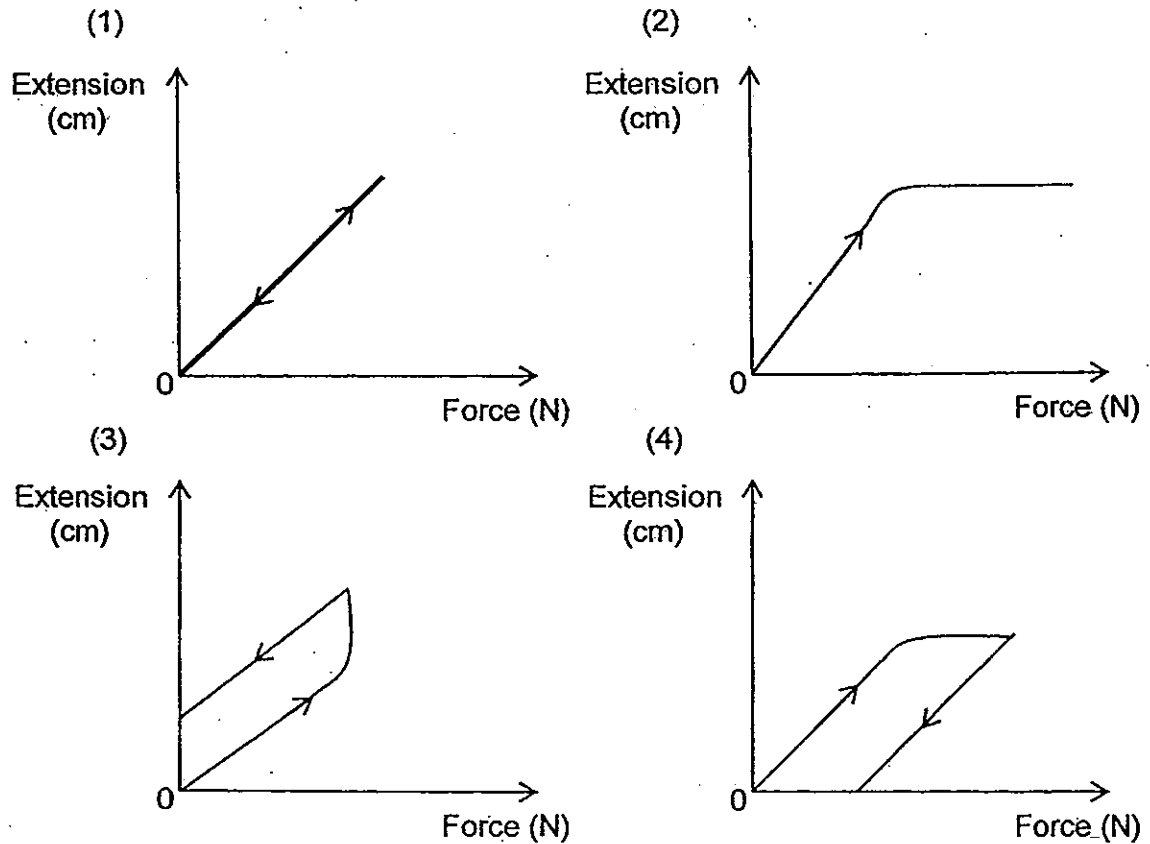
Which of the following conclusions can Oliver make with regards to the set-up above?

- (1) Pole D of Magnet 3 is a North Pole.
- (2) The toy car is running on battery as it is moving non-stop.
- (3) Magnetic force of repulsion is causing the car to move non-stop between Magnet 1 and 3.
- (4) There is no frictional force acting between the wheels of the car and the glass table top since the car is moving non-stop.

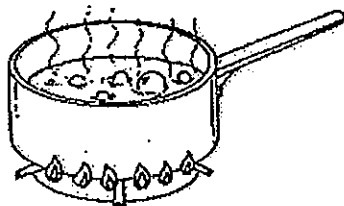
17. Alice hung a heavy weight on a spring such that it stretches beyond its elastic limit and could not return to its original length when the weight is removed.



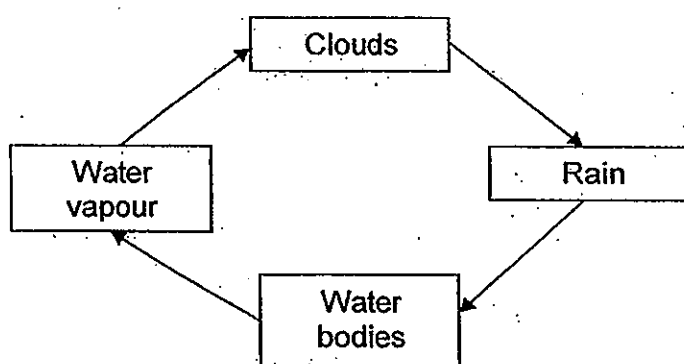
Which of the following graph shows what happened when the spring is stretched beyond its elastic limit and then the weight is removed?



18. Aaron was boiling some water in a pot when he observed some white mist above the pot of boiling water.



Which part of the water cycle is the white mist most similar to?



- (1) Rain
- (2) Clouds
- (3) Water bodies
- (4) Water vapour

19. The table below compares the sexual reproduction of flowering plants and humans.

	Flowering Plants	Humans
The part where the male reproductive cell is stored	A	B
The part where the male reproductive cell fuses with female reproductive cell	Ovary	C
The process whereby the male reproductive cell fuses with the female reproductive cell	D	Fertilisation

Which one of the following correctly identifies A, B, C and D?

	A	B	C	D
(1)	Stigma	Testis	Womb	Pollination
(2)	Anther	Testis	Fallopian tube	Fertilisation
(3)	Anther	Ovary	Fallopian tube	Pollination
(4)	Stigma	Ovary	Womb	Fertilisation

20. Diagram 1 shows the movement of substances P and Q in a human system. Diagram 2 shows the movement of substances R and S in a plant system during the day.

Diagram 1 (Human System)

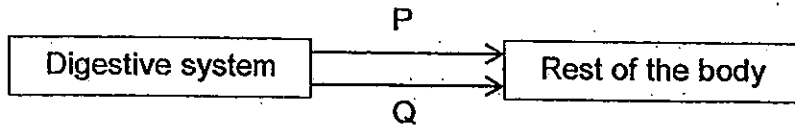
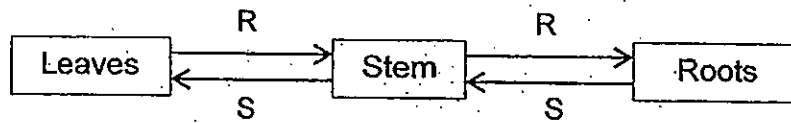


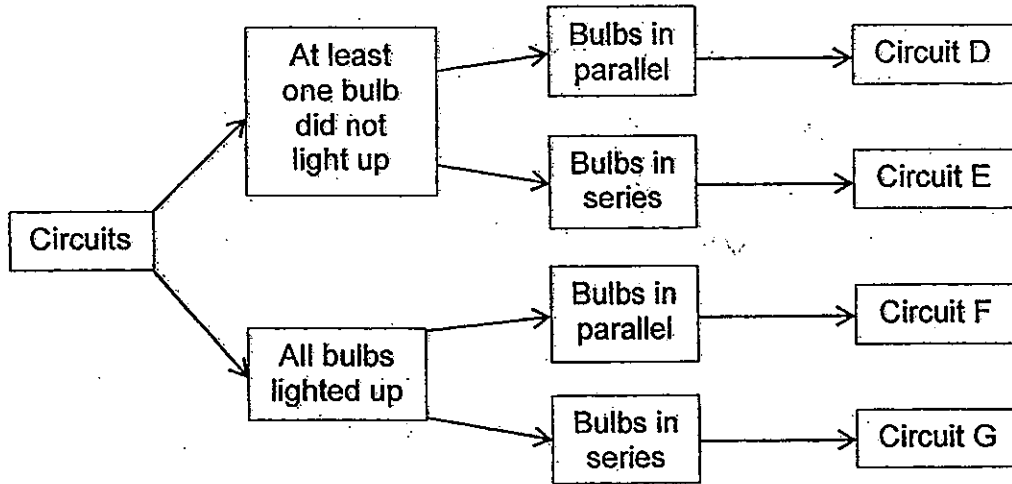
Diagram 2 (Plant System)



From the diagrams above, identify substances P, Q, R and S.

	P	Q	R	S
(1)	Oxygen	Water	Carbon dioxide	Water
(2)	Water	Food	Oxygen	Carbon dioxide
(3)	Oxygen	Carbon dioxide	Oxygen	Carbon dioxide
(4)	Food	Water	Food	Water

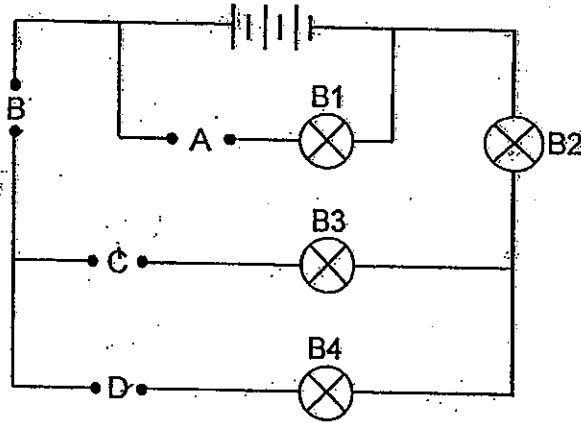
21. Study the flow chart below.



Which of the following circuits matches the circuits shown in the chart above?

(1)	D	F	G	E
(2)	G	E	F	D
(3)	E	G	D	F
(4)	F	D	E	G

22. Mrs Tan passed Sarah 4 rods, W, X, Y and Z of different materials and asked her to test if they are conductors of electricity. Sarah set up a circuit as shown in the diagram below.



The table below shows the positions where the rods were placed to connect the circuit and the results of the experiment.

Position at which the rod was placed				Did the bulb light up?			
A	B	C	D	B1	B2	B3	B4
Rod W	Rod X	Rod Y	Rod Z	No	Yes	Yes	No

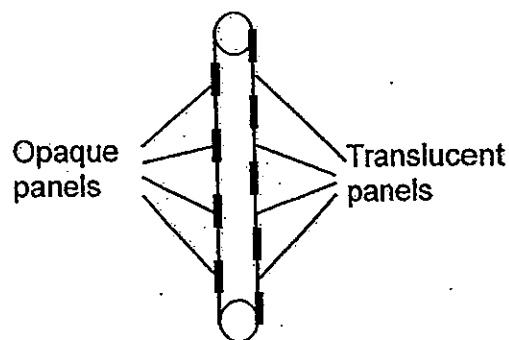
She then rearranged the rods and placed them in a new arrangement as shown in the table below.

Position at which the rod was placed			
A	B	C	D
Rod Y	Rod Z	Rod W	Rod X

Which of the following shows the correct set of bulbs that will light up?

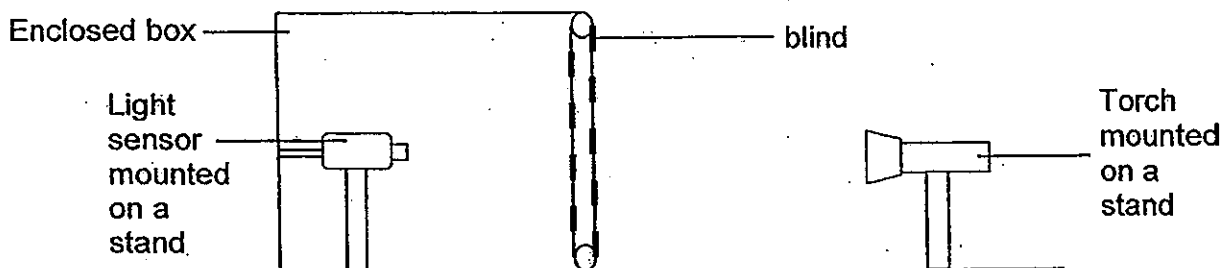
	Did the bulb light up?			
	B1	B2	B3	B4
(1)	Yes	Yes	No	No
(2)	Yes	No	No	No
(3)	No	No	Yes	No
(4)	Yes	No	Yes	Yes

23. Mr Lee recently came across a new type of blind for his windows, as shown in the diagram below. The blind consisted of alternating opaque and translucent panels. When the blind was rolled up or down, the opaque and translucent panels moved up or down. When that happened, it allowed the user to control the amount of light entering the house.



Side view of blind

Mr Lee decided to conduct an experiment to find out how effective the blind is. He prepared the following set up.



He put a light sensor inside an enclosed box. Then, he put the blind in front of the box such that it covered the entire opening of the box. He then shone a torch at the blind and used the light sensor to record the amount of light that passed through the blind.

After that, he tested the blind again when the panels of the blind were in 3 other positions. The result of his experiment is shown in the table below.

Set-up	Amount of light received by the light sensor (lux)
W	156
X	403
Y	685
Z	920

Which of the following shows the position of the panels of the blind for Set-up Y?

(1)



(2)



(3)

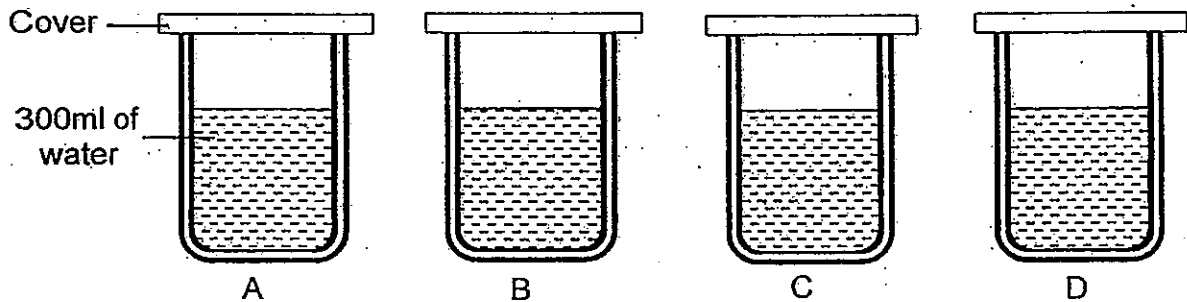


Blind is fully rolled up

(4)



24. Gina bought 4 containers, A, B, C and D, of the same size, shape, thickness and colour. They are made of 4 different materials. She filled each container with 300ml of water and covered them with a cover. The temperature of the water is at 90°C. She then left the containers at the same place and recorded the time for the water in the container to reach a temperature of 30°C.



Gina recorded the results in the table below.

Container	Time taken to reach 30°C
A	3 hours 15 min
B	2 hours
C	7 hours 30 min
D	5 hours

Based on the results above, which container should Gina use as a food container to bring hot food to work in the morning such that the food will be the warmest at lunch time?

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

25. Julia conducted an experiment as shown in Diagram 1 below.

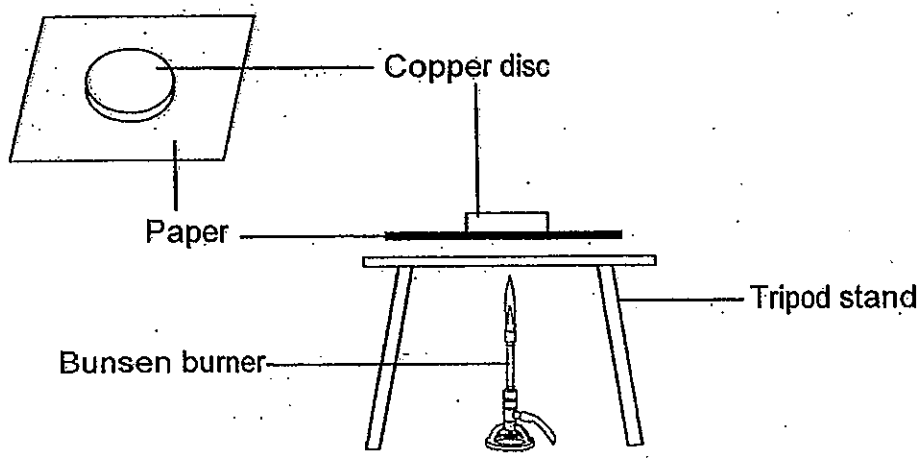


Diagram 1

She placed a copper disc on a piece of paper and held it over the burner for 3 minutes. She then moved the paper away from the flame. She observed that after removing the copper disc, the paper had a scorched area as shown in Diagram 2 below.

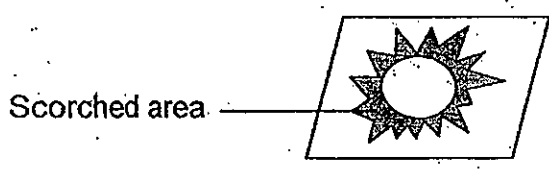
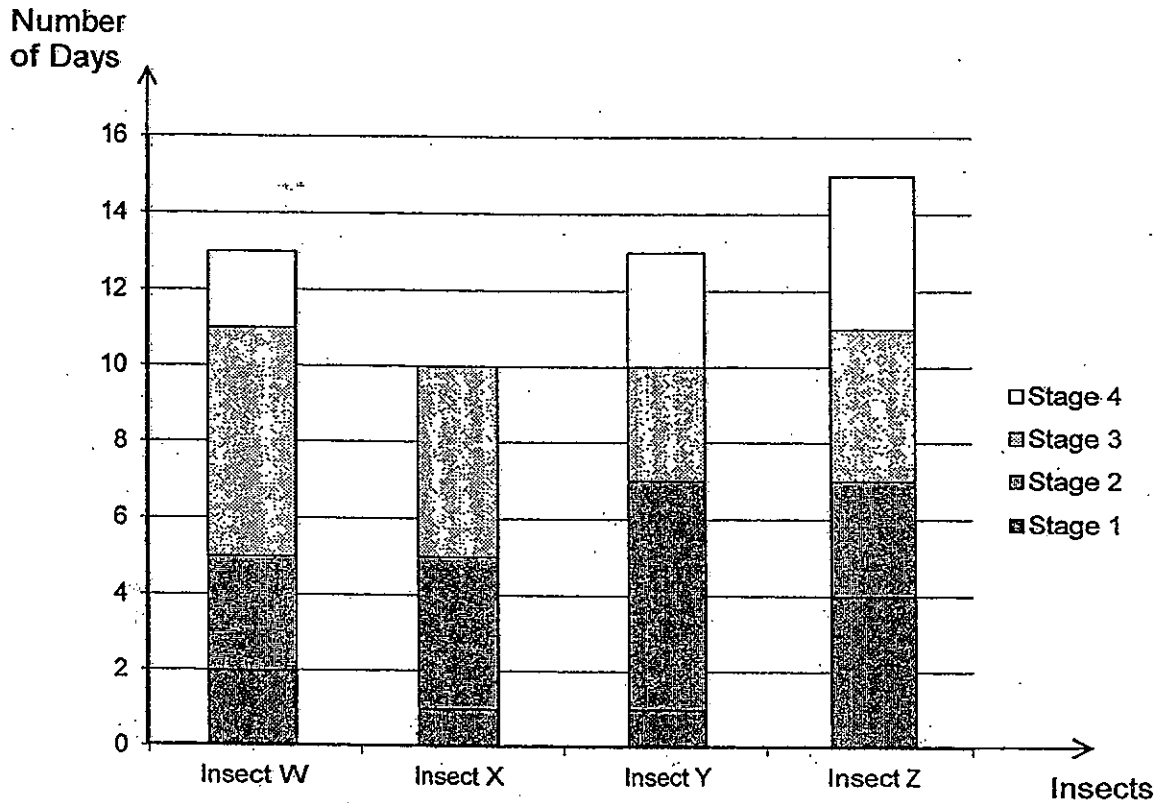


Diagram 2

She repeated the experiment with a wooden disc on a new piece of paper. What would be the outcome of the paper? :

- (1)
- (2)
- (3)
- (4)

26. Study the graph below carefully. It shows the number of days for each stage in the life cycle of 4 Insects, W, X, Y and Z.



Mary studied the graph above. Based on the graph above, she made the following inferences:

- A Insect W has the longest Pupa Stage
- B All insects have 4 stages in their life cycle.
- C The eggs of Insect Z take the longest time to hatch.
- D Insect X spent more time as a young than as an adult.

Her friend, Susan, commented that some of her inferences were not correct. Which of Mary's inferences is/are correct?

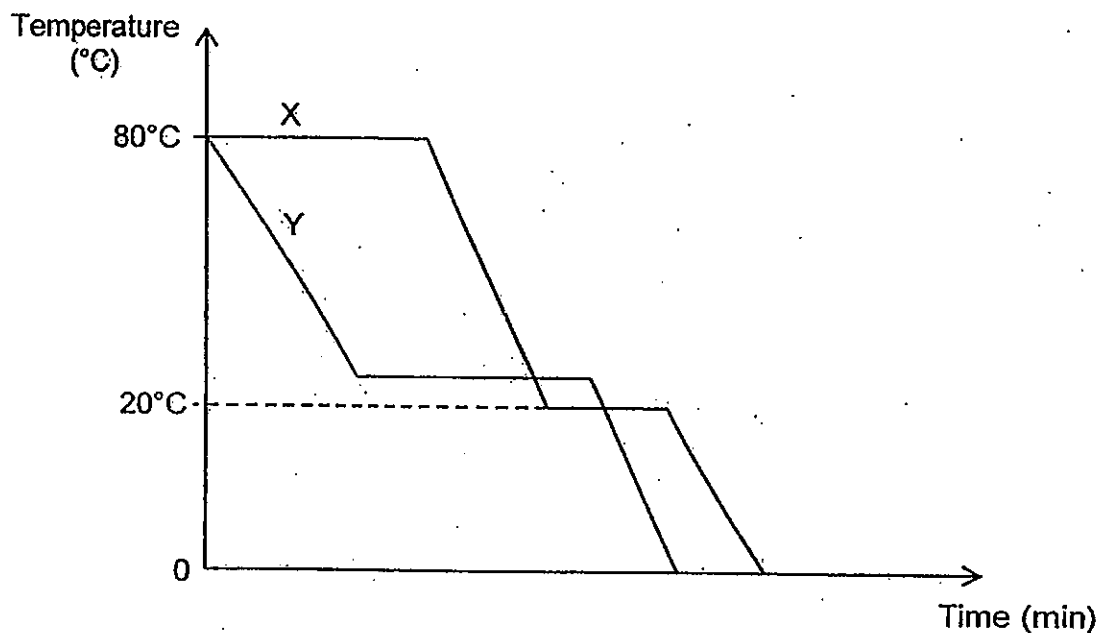
- (1) B only
- (2) A and C only
- (3) B and D only
- (4) A, C and D only

27. Mrs Lim heated 2 substances, X and Y, to a temperature of 80°C . She then provided her pupils with the following 2 pieces of information.

Information 1 The freezing point of Substance X is 20°C .

Information 2 Y is in the liquid state at 80°C .

The graph for the time taken for both substances to reach 0°C is plotted below.



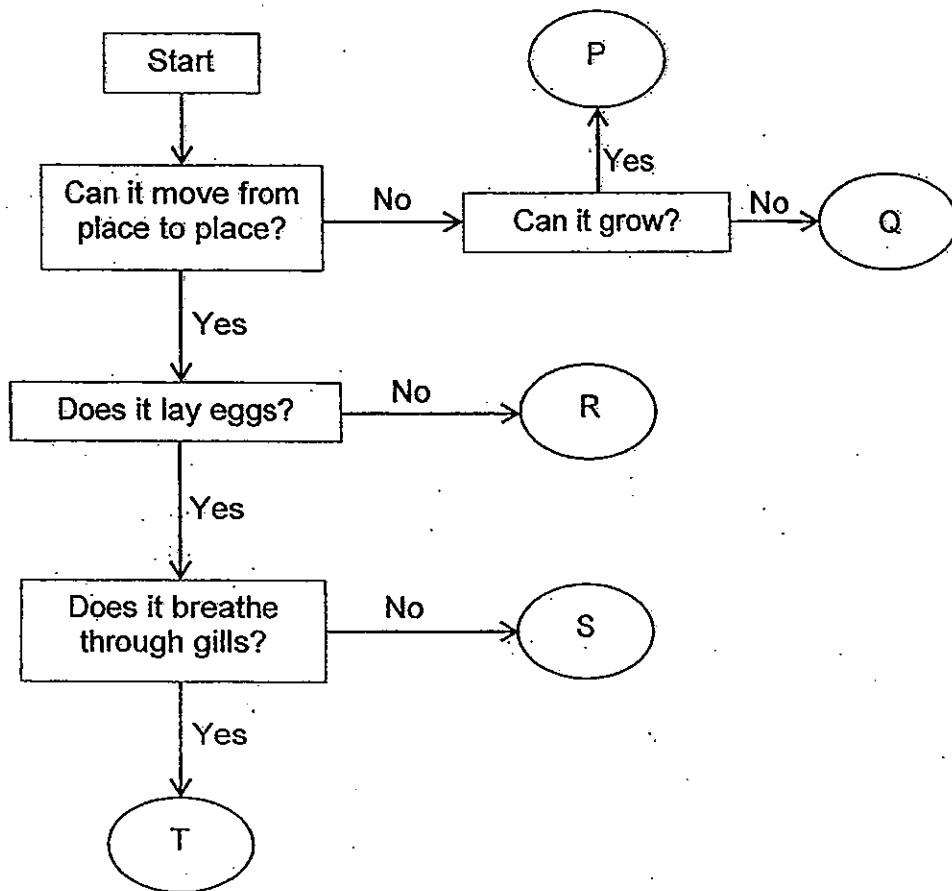
Based on the 2 pieces of information given by Mrs Lim and the graph above, 4 pupils came up with the following inferences.

- | | |
|---------|---|
| Andy | X reaches freezing point earlier than Y. |
| Benny | 80°C is the boiling point of Substance X. |
| Crystal | Y freezes at a lower temperature than X. |
| Dan | It takes a longer time for X to experience a change of state from liquid to solid as compared to Y. |

Out of the four pupils, who has made a correct inference?

- (1) Andy
- (2) Benny
- (3) Crystal
- (4) Dan

28. The diagram below shows how some things have been classified.



Which of the following statements can you infer from the flow chart above?

- A Q could be a mushroom.
- B R and S could be mammals.
- C P and S require air to survive.
- D R and T have different method of reproduction.

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

29. The table below shows the characteristics of four animals, W, X, Y and Z.

Animal	Number of legs				Wings
	0	2	4	6	
W				√	√
X			√		
Y		√			√
Z	√				

After looking at the table, the following pupils made some observations.

- Ali Animal W will most likely have a pair of feelers.
Ben Animal Y could be a human since it has two legs.
Carl Animal Z could be an animal that breathes through gills.

Whose observation is most likely correct?

- (1) Ali only
(2) Ben only
(3) Ali and Carl only
(4) Ben and Carl only

30. Mr Pang ^{brought} bought 3 mobile phone casings to his Science class. He told his pupils that he would like to conduct a test to find out which of the 3 casings is the hardest. The 3 casings are of the same shape, size, colour and design. However, they are made of different materials.



Mobile phone casing

Mr Pang then requested his pupils to give suggestions on tests to test for hardness in the 3 different mobile phone casings.

4 pupils made the following suggestions:

Pupil	Test suggested	Reason given
Lily	Bend Test	If the casing can withstand large forces without bending and breaking, it is hard.
June	Drop Test	If the casing can be dropped from a high location without breaking, it is hard.
Nancy	Scratch Test	If the casing can withstand large forces used to scratch its surface without any scratches to the surface, it is hard.
Susan	High Temperature Test	If the casing can withstand high temperature without melting or deforming, it is hard.

Which pupil has suggested the correct test?

- (1) Lily
- (2) June
- (3) Nancy
- (4) Susan





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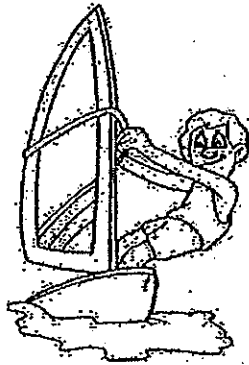
MARKS	
	40

Section B: (40marks)

Write your answers to question 31 to 44.

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

31. The picture shows a windsurfer.

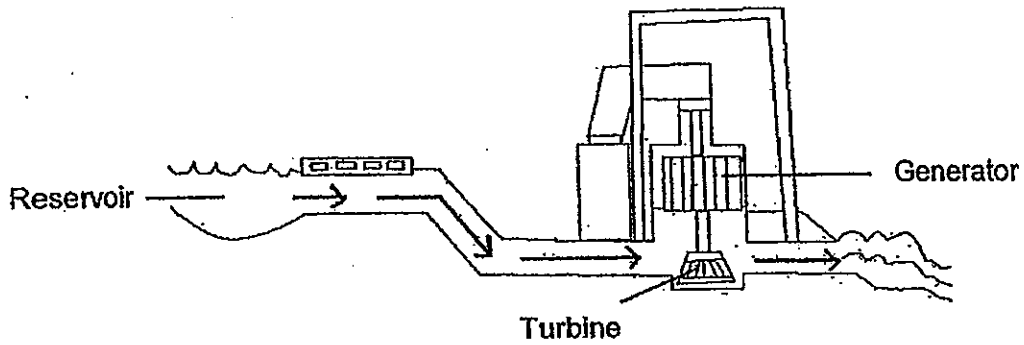


(a) What is the source of energy for the sport? [1]

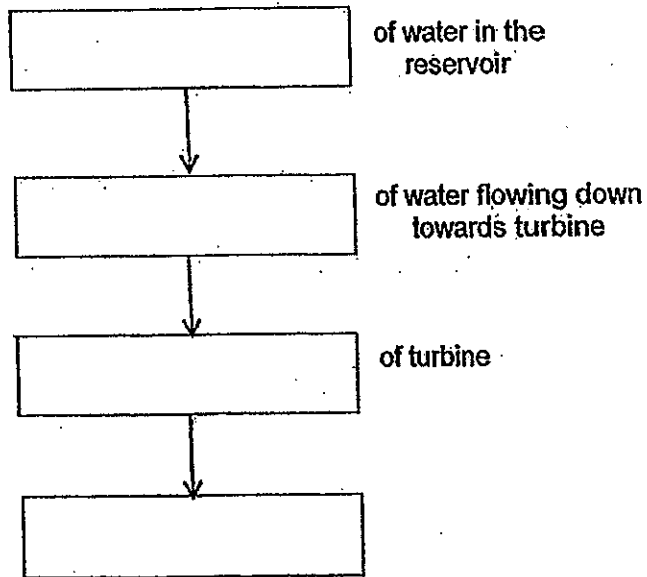
(b) Name another object that make use of the energy source in (a) to work. [1]

Score	2
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32. The diagram below shows a hydroelectric power station.



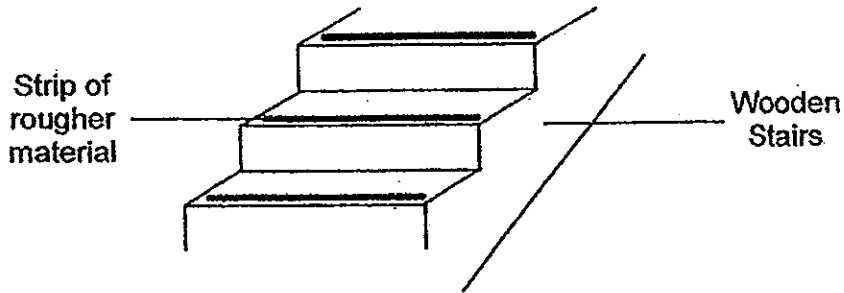
(a) State the energy conversion from the water in the reservoir to the electricity produced. [2]



(b) State one environmental advantage a hydroelectric power station has over a power station that burns fossil fuels to generate electricity. [1]

Score	3
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33. Julie's new house has a flight of wooden stairs. On every step, there is a strip of material pasted near the edge of the step. Upon feeling it, Julie felt that it was very much rougher than the wood used to make the stairs.

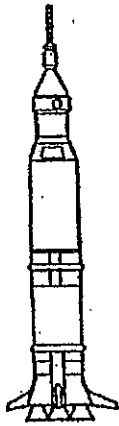


- (a) What purpose does the strip of rougher material serve? Explain your answer clearly. [2]

- (b) After a few years of use, Julie noticed that she would slip on the steps occasionally as she went up and down the stairs. What do you think is the reason for this to happen? [2]

Score	4
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34. The picture below shows a rocket flying into the sky.

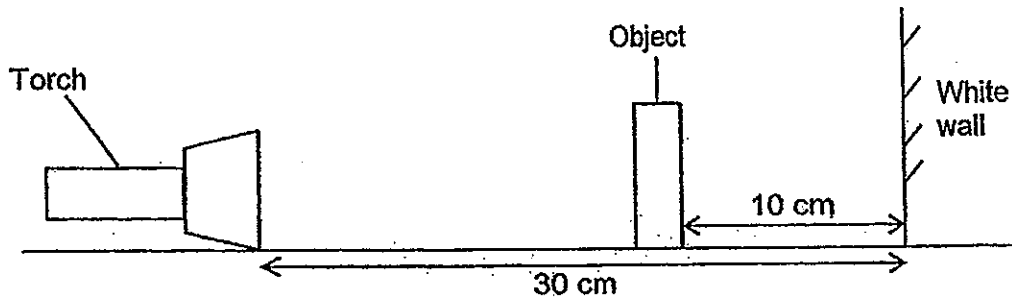


(a) What is/are the force(s) acting on the rocket when it is travelling up into the sky? [1]

(b) In the diagram above, indicate the force(s) acting on the rocket with an arrow. Label the arrow(s) clearly. [1]

Score	2
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35. Jacob set up the experiment as shown below. He wanted to find out how changing the distance between the torch and the white wall affect the height of the shadow formed on the white wall. The initial distance between the torch and the white wall is 30 cm. The same torch is used throughout the experiment.

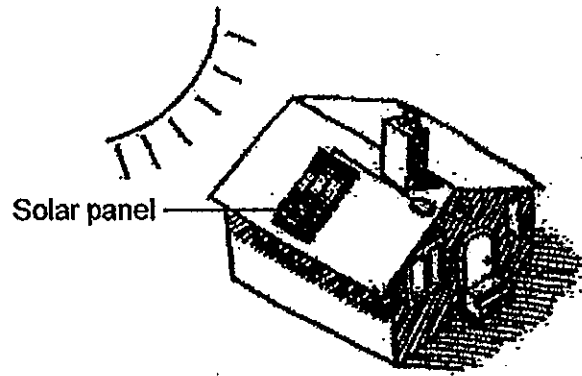


- (a) Identify one controlled variable for this experiment. [1]

- (b) Write down the steps that he needs to take to conduct the experiment in the space given below. [3]

Score	4
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36. The diagram below shows a house with solar panels installed on the roof.

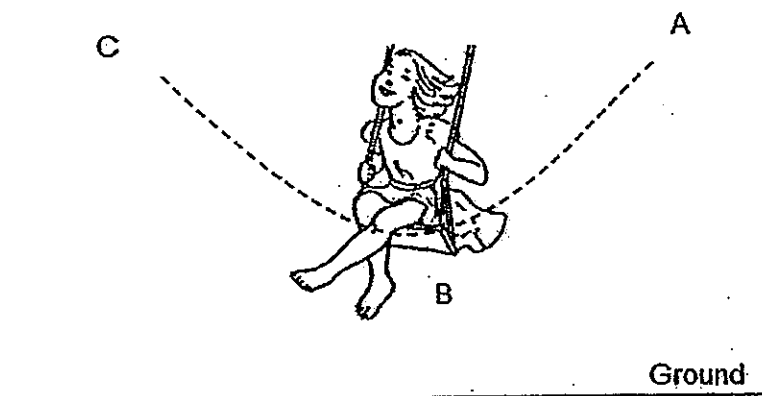


(a) State one change that could be made to the solar panels on the roof so that more light energy could be harnessed and used. [1]

(b) Explain clearly how the change suggested in (a) could help the people staying in the house [1]

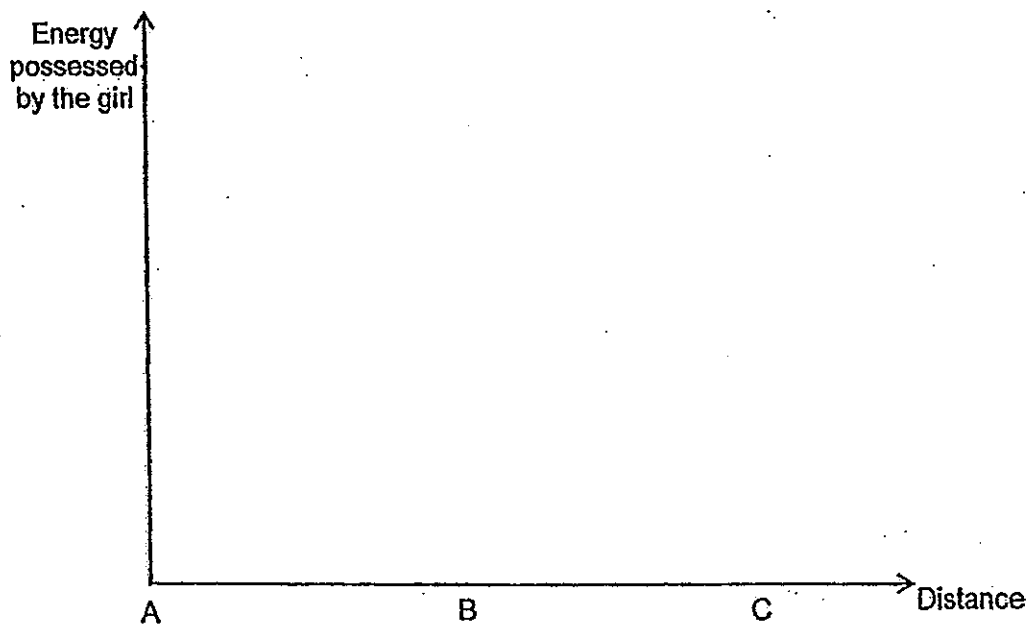
Score	2
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37. The picture below shows a girl on a swing. She swings from point A to B to C and back again.



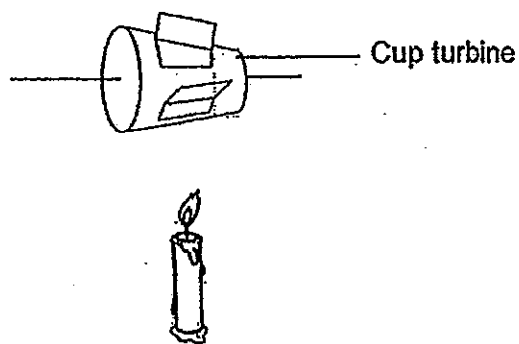
- (a) Write down the energy conversion as she swings from A to B to C. [1]

- (b) In the graph below, draw in the lines that show how the two forms of energy mentioned in (a) change with the time. Label the lines clearly. [2]



Score	3
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38. Jessie set up an experiment as shown below.



She conducted one round of the experiment and recorded down her reading. She then repeated her experiment with two and three candles.

No. of Candles	Speed of Cup Turbine (rounds per minute)
1	5
2	8
3	10

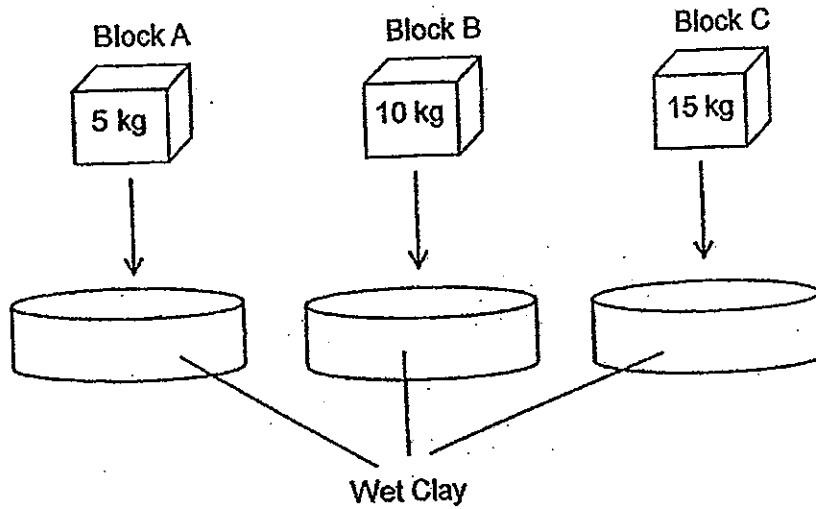
(a) Write down the independent variable in this experiment. [1]

(b) How can she ensure the reliability of her results? [1]

(c) Without any changes made to the physical appearance of the cup, state another way to increase the speed at which the cup rotates. [1]

Score	3
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39. Jane set up an experiment below.



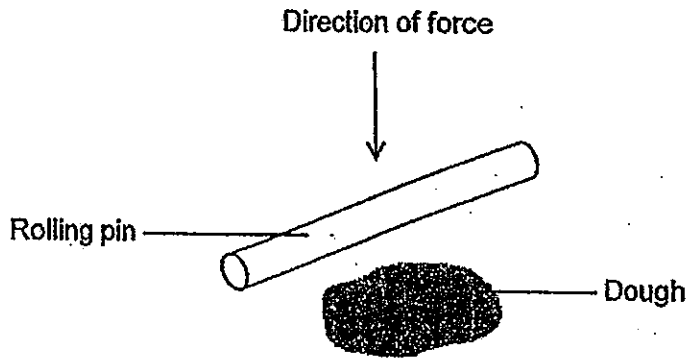
Blocks A, B and C were of the same size. However, they had different mass. They were placed on the slabs of wet clay which had the same size and shape. After 10 minutes, the depth of the depression made by each of the blocks were measured and recorded in the table below.

Blocks	Depth of Depression (cm)
A	2
B	5
C	9

(a) Based on the table above, which block exerted ^{the greatest} a greater force on the wet clay? Explain your answer. [1]

Score	1
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- (b) Mrs Lim recently bought a new rolling pin to help her to roll out the dough for her pies.



However, she realized that she actually needed to use a lot of force to flatten the dough. Her husband passed her another rolling pin which made her job easier. The new rolling pin is of the same size as the previous one.

Why do you think the new rolling pin made rolling out the dough easier? Explain your answer clearly. [2]

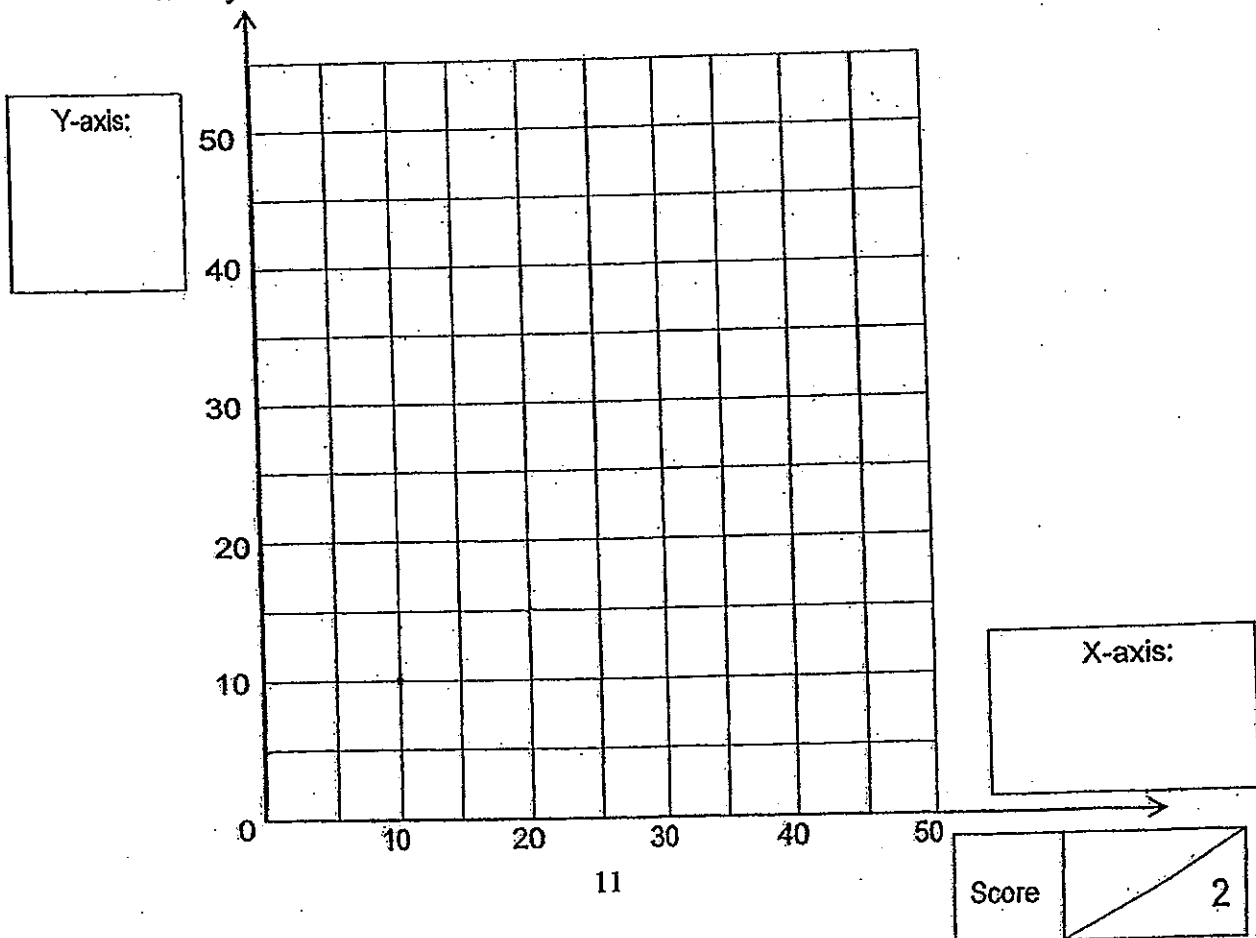
40. Tom wanted to find out the relationship of the extension of a spring with each additional weight added to the set-up below.



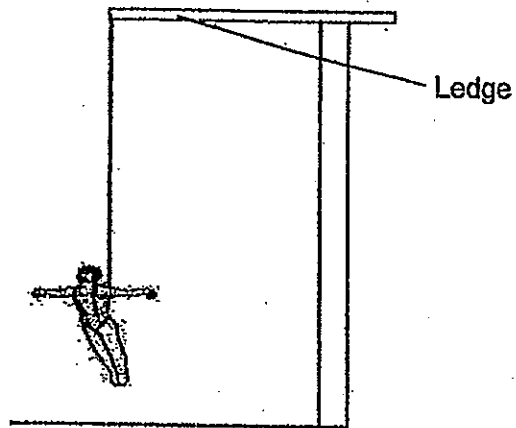
He conducted the experiment and recorded the readings in the table below. The original length of the spring is 5cm.

Mass of weight added (g)	Length of spring (cm)
10	10
20	15
30	20
40	25

Plot the readings in the graph provided below. Label the axis in the boxes clearly. [2]



41. The picture below shows a person enjoying bungee jumping.

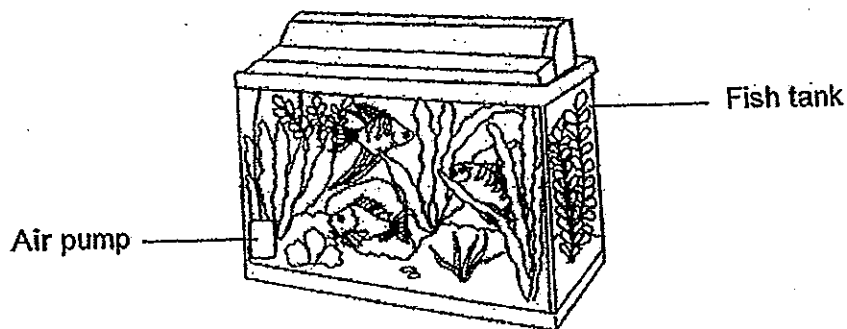


(a) What makes the person fall towards the ground when he jumps off the ledge? [1]

(b) When the person reaches the bottom of the jump, what pulls him up again? [1]

Score	2
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42. Peter bought a fish tank to rear some fish. He kept it in his balcony where it is exposed to a lot of sunlight.



- (a) Recently, he went on a holiday and forgot to get someone to feed his fish during his absence. At the end of a week, he came back and found that all his fish had died but his water plants were still thriving. Explain clearly why. [2]

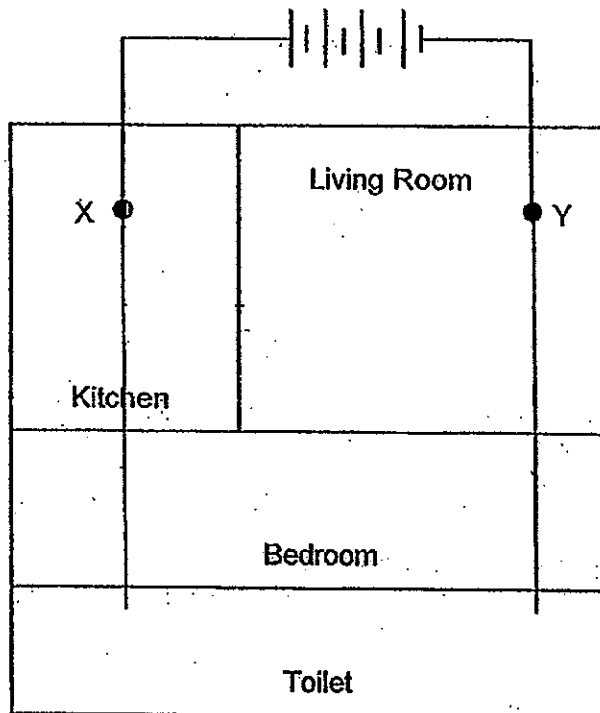
- (b) He then bought new fish to add to his tank. At the same time, he bought an automatic fish food feeder so that his fish would be fed at 8a.m. every day without fail. However, he shifted his fish tank to a place which did not receive much light throughout the day. He was sent overseas for a week for work. When he came back, he found that the air pump that he had installed in the fish tank was spoilt. Also, his fish and water plants were all dead. Why do you think this had happened? Explain clearly. [2]

Score	4
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43. Pat received a new dollhouse for her birthday. Her father decided to help her install some lighting in her dollhouse.

Each room should have a light. Each light should be able to be turned on independent of the rest of the lights, except for the living room and kitchen lights. The lights in the living room and kitchen have to be switched on together.

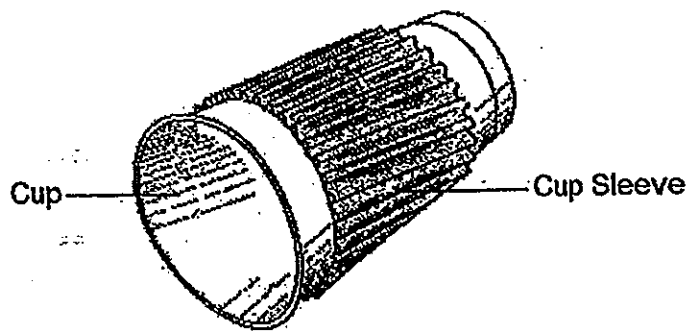
Construct a circuit diagram to show the position of the bulbs and switches. Connect your circuit diagram to points X and Y. [2]



Score	2
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44. A cup sleeve is something that wraps around a cup so that the user can comfortably hold a cup of hot drink. There are many different materials used to make a cup sleeve.

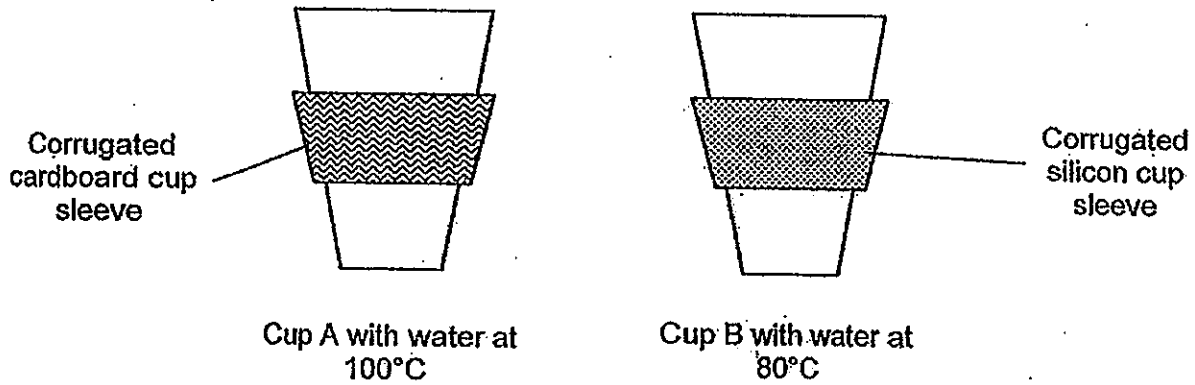
In the diagram below, the cup sleeve is made up of corrugated cardboard wrapped around the cup.



- (a) Explain clearly how a cup sleeve helps a user hold a hot drink comfortably. [2]

Score	2
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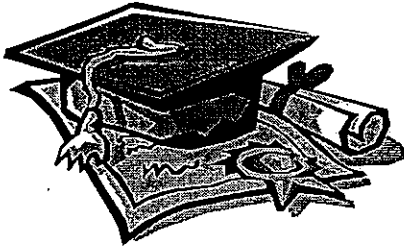
Gina wanted to compare the efficiency of a corrugated cardboard cup sleeve to a corrugated silicon cup sleeve. She set up an experiment as shown below using a temperature logger to find the time taken for the surface of both the cup sleeves to reach a specific temperature.



(b) Her teacher said that her experiment is not a fair test. Do you agree? Explain your answer clearly. [2]

End of paper

Score	2
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ANSWER SHEET

EXAM PAPER 2013

SCHOOL : NAN HUA

SUBJECT : PRIMARY 6 SCIENCE

TERM : CA1

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

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

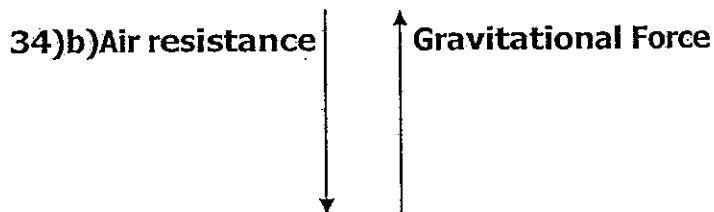
31)a)Wind b)Windmills

32)a)Gravitational Potential energy → Kinetic energy → Kinetic energy → Electrical energy

b)It is a renewable source of energy.

33)a)It prevents the user from slipping. When the surface is rougher, the friction between the strip of material and the user feet would be the greatest, allowing the user to have a better grip on the stairs.

b)The strip of rougher material become smoother due to wear and tear, so, there is less friction between the soles of the feet and the step.



a)Gravitational Force and Air resistance.

35)a)The size of the object.

b)1)Place the torch at a distance of 30cm from the white wall.

2)Switch on the torch.

3)Measure and record the size of the shadow in the table.

4)Repeat the experiment at least twice and take the average and record it in the table.

5)Repeat steps 1-4 by decreasing the distance between the torch and the white wall to 20cm.

6)Compare the results.

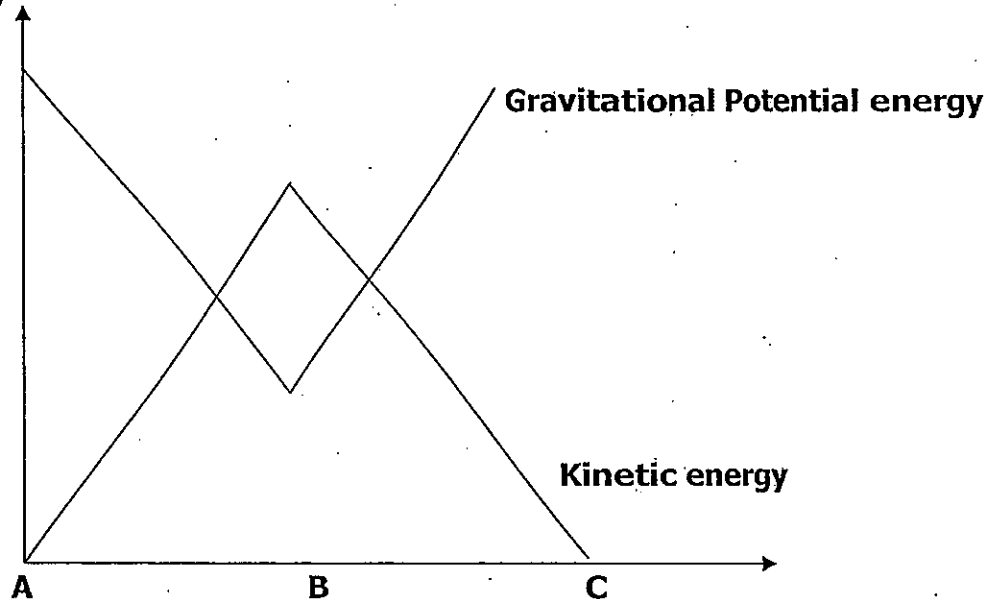
7)Conclude the experiment.

36)a)Increase the number of Solar panels on the roof.

b)With more solar panels, more light can be harnessed and converted to other forms of energy.

37)a)Gravitational Potential energy \rightarrow Kinetic energy \rightarrow Gravitational Potential energy.

b)



38)a)The number of candles.

b)She can repeat her experiment at least twice and take the average reading.

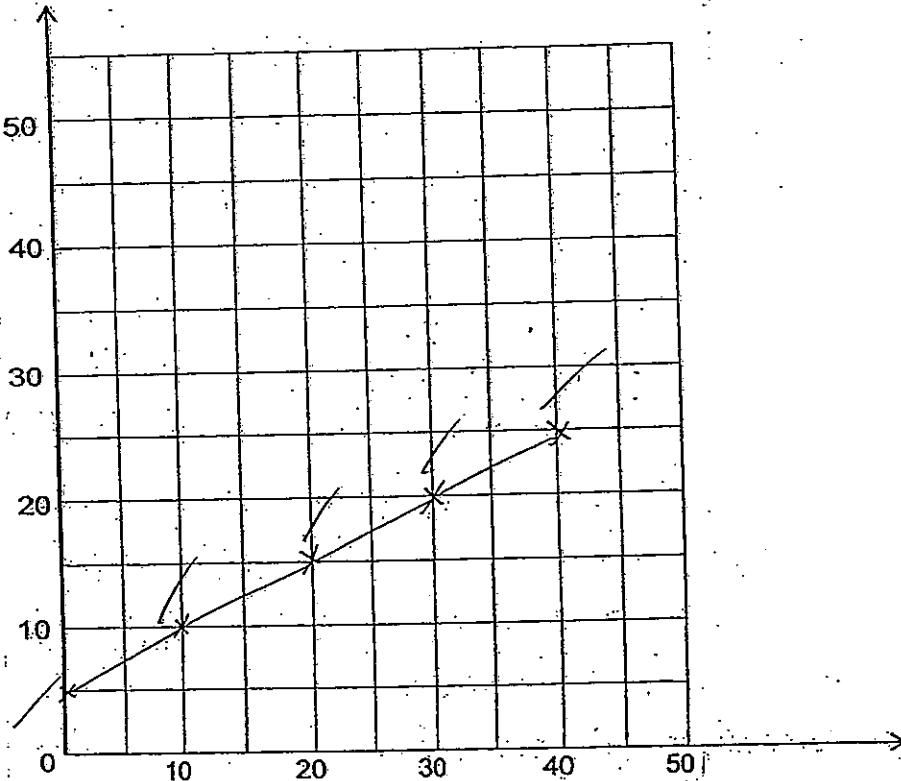
c)Move the cup nearer to the candle.

39)a)Block C. The depth of the depression it made was the greatest among the three blocks.

b)The new rolling pin might have a greater mass. The greater the mass of the rolling pin, the greater the force to roll out the dough even if you use the same force to roll the rolling pin.

40)

Y-axis
Length of
spring
(cm)



X-axis
Mass of weight
hung on the
spring (g)

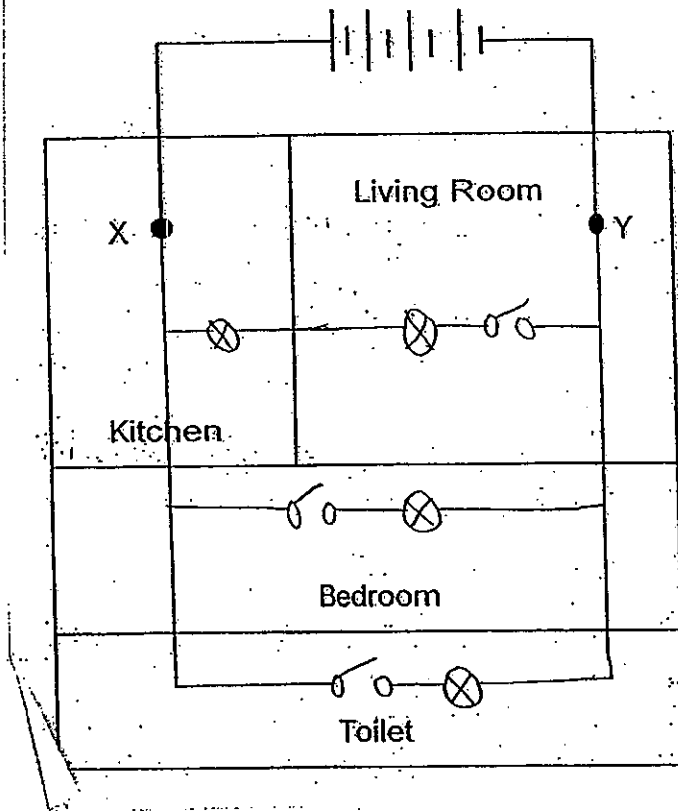
41)a) Gravitational Force.

b) Elastic spring force due to the bungee cord acting on the person will pull the person up.

42)a) The fish were not fed any food and had starved to death. The water plants were able to make their own food as they receive ample sunlight for photosynthesis to take place.

b) The water plants did not receive enough sunlight for photosynthesis to take place and so died, with the air pump spoiled and without the plants to photosynthesize to produce oxygen the fish can not get enough oxygen to respire and died as well.

43)



44)a) The cup sleeve helps to reduce the contact surface area between the hand and the cup, thus slowing down the heat transfer from the hot drink to the outer surface of the cup sleeve and from the cup sleeve to hand.

b) Yes, I agree with her teacher. In an experiment, there should only be one independent variable, and in this experiment, it should be the material of the cup sleeve, not the temperature of the water. Changing the temperature of the water would affect the results of the experiment.