RED SWASTIKA SCHOOL

2012 PRELIMINARY EXAMINATION
PRIMARY 6

Name : _____ ( )

Class : Primary 6/ _____

Date : 22 August 2012

BOOKLET A

Total time for Booklets A & B: 1h 45 min

Booklet A: 30 questions (60 marks)

Note:

1. Do not open the booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the booklet.
3. Do not waste time. If the question is too difficult for you, go on to the next question.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
   a. Page 1 to Page 24
   b. Questions 1 to 30

Section A

For Question 1 to 30, choose the most suitable answer and shade its number in the OAS provided.

1. Study the two groups of living things given below.

Group A	Group B
Molly	Ant
Whale	Platypus
Dolphin	Spiny anteater

How are they classified?

	Group A	Group B
(1)	Fish	Mammals
(2)	Herbivores	Carnivores
(3)	Have bones	Have no bones
(4)	Give birth to young alive	Lay eggs

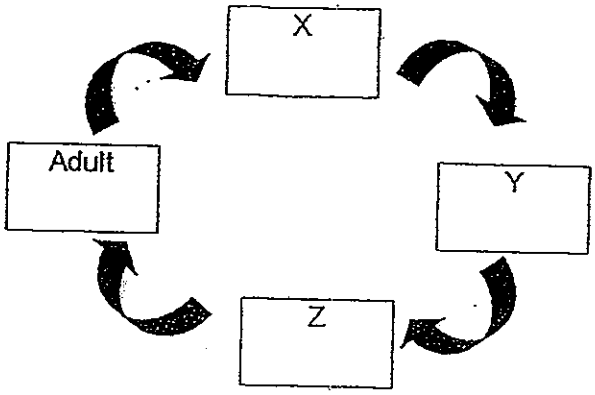
2. Study the characteristics of P, Q, R and S below.

	Characteristics			
	Move from place to place	Reproduce	Produce their own food	Respond to changes
P	×	×	×	✓
Q	✓	×	×	✓
R	×	✓	✓	✓
S	✓	✓	×	✓

Which of them is/are definitely living thing(s)?

(1) R only
(2) Q and S only
(3) R and S only
(4) P, Q, R and S only

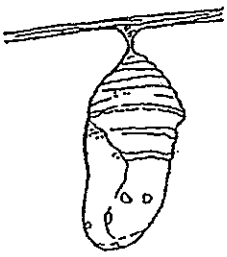
3. The diagram below shows the stages in the life cycle of a certain animal.



Which one of the following young an mals is at Stage Y?

(1)

(2)

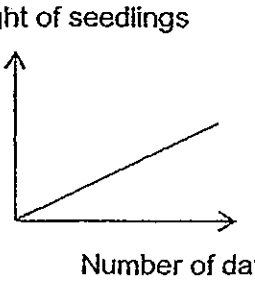


(3)

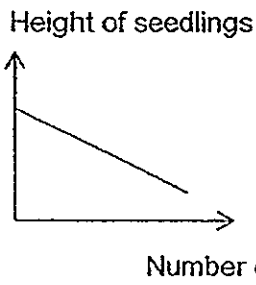
(4)

4. Suresh planted some beans in a pot of wet soil. He placed the pot in the dark for several days. Which of the graphs below is most likely to represent the change in height of the seedings from germination to four days after the leaves had appeared?

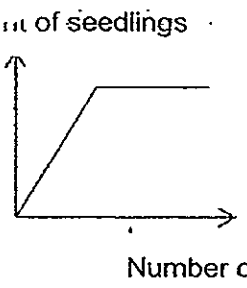
(1)



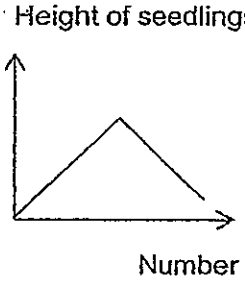
(2)



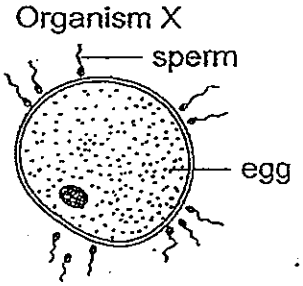
(2)

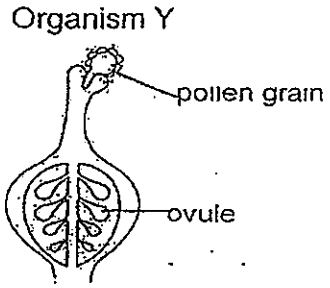


(4)



5. The diagrams below show the reproduction processes in two organisms, X and Y.



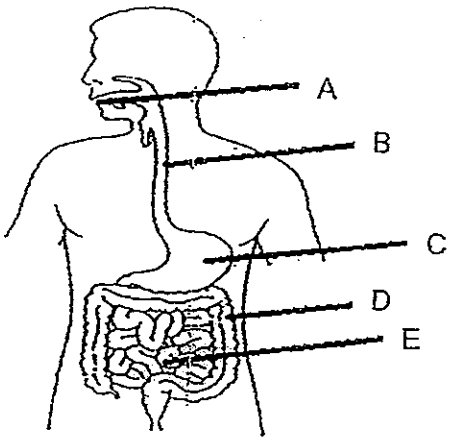


Which of the following statements are not true?

(A) After fertilisation, the ovule in organism Y will develop into a fruit.
(B) The nucleus of the sperm cell fuses with the nucleus of the egg cell for fertilisation to take place in Organism X .
(C) Both organisms X and Y reproduce sexually.
(D) Organism X reproduce sexually but organism Y does not reproduce sexually.

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

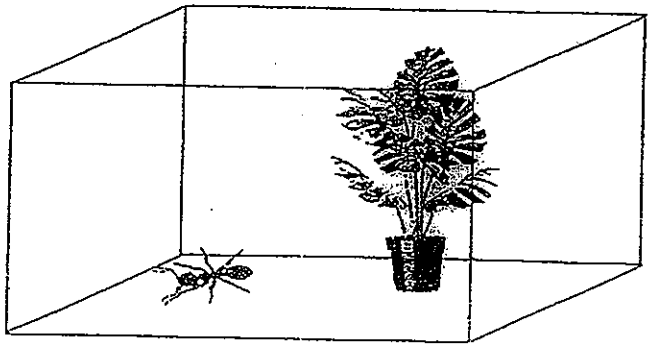
6.



The function of digestive juices is to digest food.Which of the following organs, as shown in the diagram above, produce digestive juices?

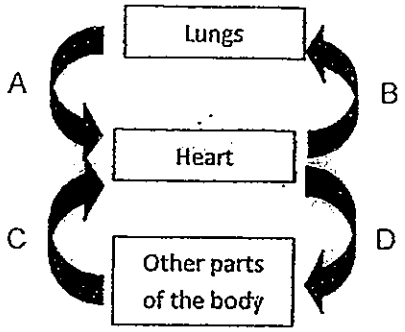
(1) A, C and D only
(2) A, C and E only
(3) C, D and E only
(4) A, B and C only

7. Ahmad put an ant together with a pot of plant inside a covered glass container. The glass container is left in a dark room for 24 hours. Which of the following shows how the amount of gases in the glass container changed after 24 hours?



	Carbon dioxide	Oxygen	Water vapour
(1)	Decrease	Increase	no change
(2)	Increase	Decrease	no change
(3)	Decrease	Increase	Increase
(4)	Increase	Decrease	Increase

8. Study the diagram below. The arrows A, B, C and D represent the blood flowing in the body.



Which of the arrows represent blood that is rich in oxygen ?

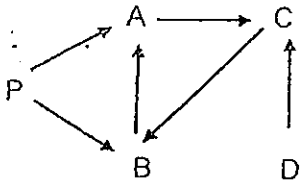
(1) A and C only
(2) A and D only
(3) B and C only
(4) B and D only

9. Daniel and his classmates studied five organisms living in the garden community. After observing the organisms closely for a week, they derived at several food relationships among the organisms. They recorded their findings in the table below.

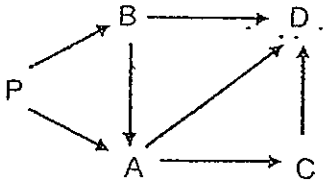
Food consumer	Food
A	P
B	P and A
C	B and D
D	A and B

Which one of the following food webs correctly represents the food relationship among the organisms?

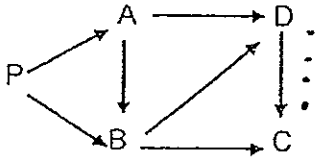
(1)



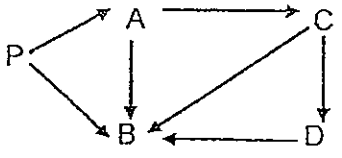
(2)



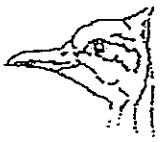
(3)



(4)



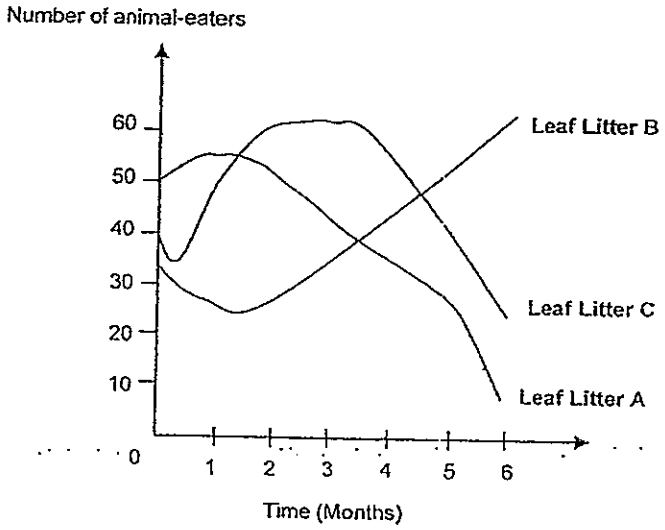
10. Birds have different types of beaks to help them survive in their environment.

Type of beak	Example of bird	Function of beak
A		To crush hard seeds and nuts.
B		To peck the ground for insects.
C		To pick organisms from the mud.
D		To scoop tiny organisms out of the water.

Which beak(s) has/have been **wrongly matched** to its/their function(s)?

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

11. The graph below shows the population size of the animal-eaters in three leaf litter communities A,B and C during a six-month period.



Which of the statements about the animal-eaters are true?

(A) There are fewer animal-eaters in leaf litter A than leaf litter B most of the time.
(B) The population size of the animal-eaters in all three leaf litter communities showed an increase after six months.
(C) The same number of animal-eaters was found in two of the leaf litter communities roughly in the middle of the fourth month.
(D) The population size of the animal-eaters in all three leaf litter communities has been changing throughout the six months.

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

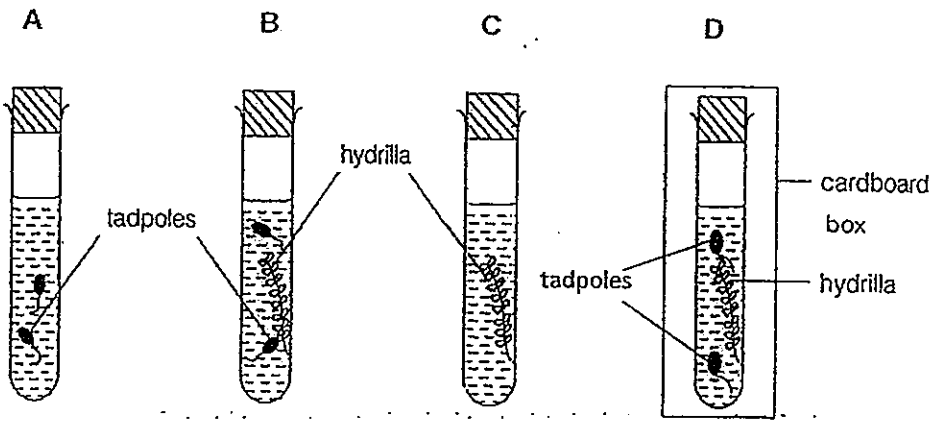
12. Organisms which have their characteristics changed by genetic engineering are known as genetically modified organisms (GMO). The table below contains information about some genetically modified (GM) food,

GM Food	Characteristics of GM Food
Capsicum	• Longer shelf life • Improved looks • Bigger size • Disease resistant
Grapes	• More variety in colour, flavour and sweetness • Higher yield due to greater pest and disease resistance
Corn	• Increased variety • Larger sizes • Disease resistant
Barley	• Higher yield • Disease resistant • Improved brewing efficiency

What do all the genetically modified food have in common?

(1) They are tastier and sweeter.
(2) They have a longer shelf life.
(3) They are more resistant to diseases.
(4) They are more colourful and larger in size.

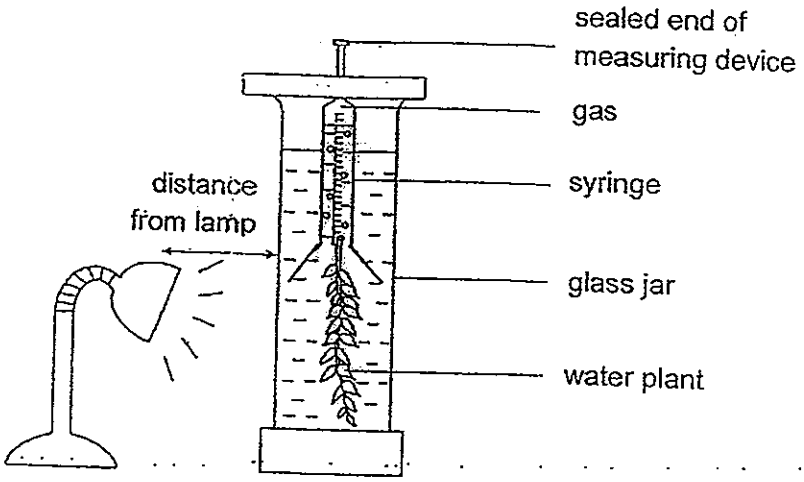
13. Linda conducted an experiment by placing four test tubes,A,B,C and D,as shown below under sunlight for eight hours



Arrange the test tubes in ascending order based on the amount of carbon dioxide found in the respective test tubes after eight hours.

(1) A, B, C, D
(2) B, A, D, C
(3) C, B, A. D
(4) D, A, B, C

14. Joey carried out an experiment using four water samples A, B, C and D collected from four different parts of the same river. Using the same amount of water sample and water plants, she set up the experiment as shown below.



After 6 hours, Joey recorded the amount of gas collected in the measuring device for each water sample in the table below.

Water sample	Volume of gas collected (cm^3)
A	25
B	13
C	11
D	18

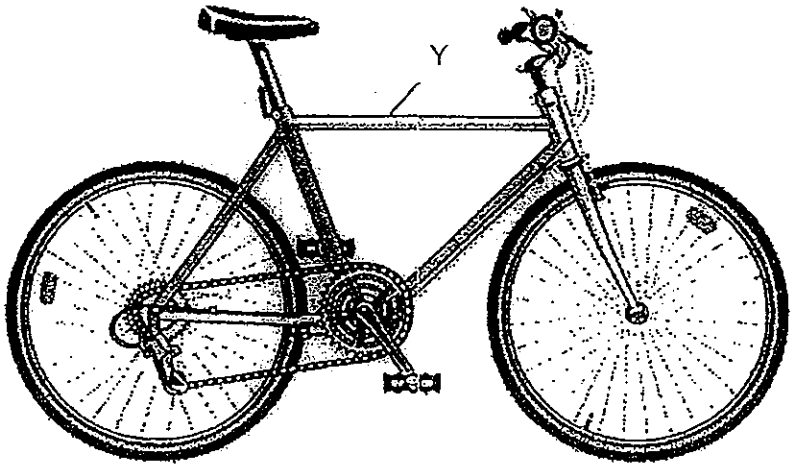
Joey made the following conclusions based on the data gathered.

A: The water plants in all the set-ups photosynthesised at different rates.
B: The type of water sample used affects the rate of photosynthesis of the water plants.
C: The river is the least polluted at the place where water sample C was collected.
D: The amount of light is the only factor which determines the rate of photosynthesis for all the water plants

Which of Joey's conclusions are correct?

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

15. The picture below shows a bicycle.



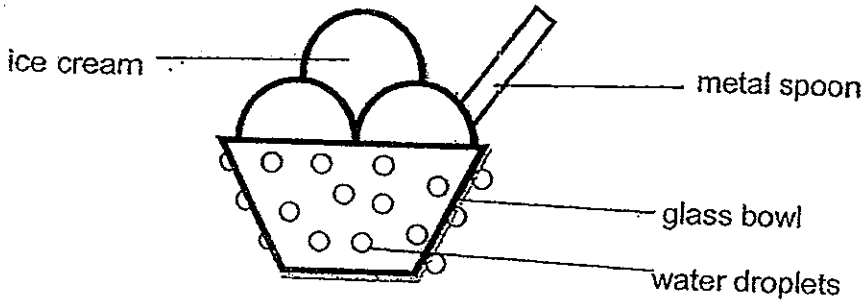
Four materials,A,B,C and D are being considered to construct the frame of the bicycle. The frame of the bicycle is labelled Y in the diagram. David conducts several tests on the four materials. The results of the tests are summarised in the table below.

Material	Properties		
	Can be bent easily	Can be scratched easily	Can support a heavy load without breaking
A	✓	×	✓
B	✓	✓	✓
C	×	✓	×
D	×	×	✓

Which material is the most suitable for making the frame of the bicycle?

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

16. The glass bowl below contains some ice cream. The bowl is left on the kitchen table at room temperature. After two minutes.droplets of water soon appear on the outside surface of the glass and the ice cream starts to melt



Which of the following explains the changes observed?

A: The glass bowl condenses to form water droplets.
B: The ice cream gains heat from the surroundings.
C: The glass bowl gains coldness frm the ice cream
D: The metal spoon conducts heat from the surroundings to the ice cream.
E: The surrounding water vapour loses heat to the cooler surface of the glass bowl.

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

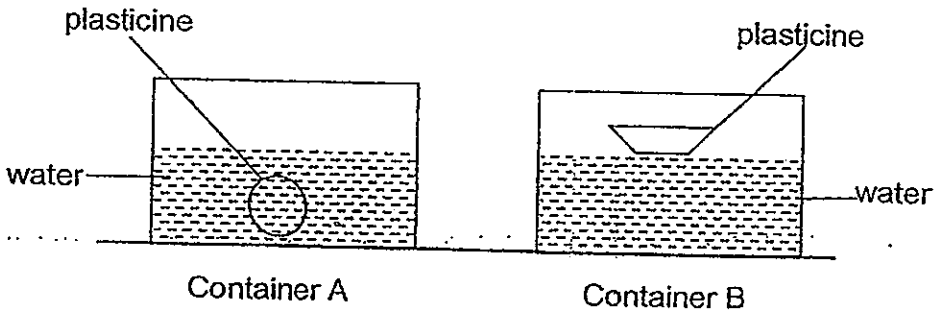
17. The table below shows the melting and boiling points of substances P, Q, R and S.

Substance	Melting point (°C)	Boiling point (°C)
P	26	96
Q	8	120
R	95	195
S	60	150

Which substance(s) will change from gas to solid when there is a decrease in temperature from 200°C to 30°C?

(1) R only
(2) R and S only
(3) P and Q only
(4) Q, R and S only

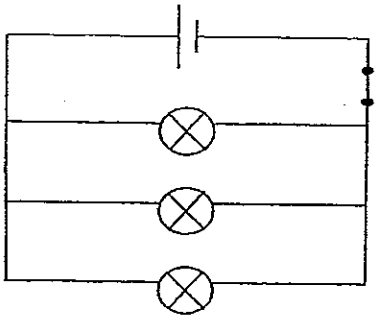
18. Justin divided a block of plasticine into halves, which weighed 50g each. He rolled one piece into a ball and made the other piece into the shape of a boat. He then gently placed both pieces of plasticine onto the surface of the water in two similar containers,A and B. The piece of plasticine in container A sank while the other piece in container B floated.



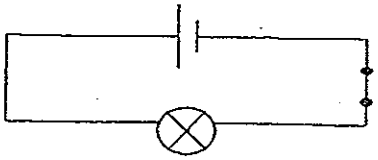
What was Justin trying to find out?

(1) If the volume of the plasticine affects its ability to float on water.
(2) If the shape of the plasticine affects its ability to float on water.
(3) If the mass of the plasticine affects its ability to float on water.
(4) If the size of the plasticine affects its ability to float on water.

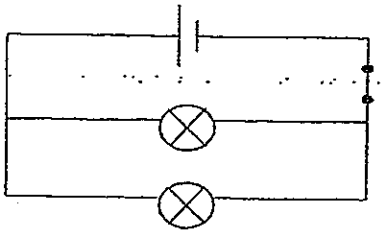
19. James set up some circuits as shown below.



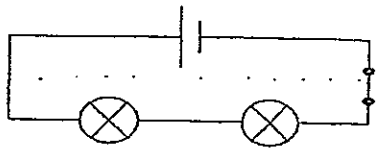
Circuit P



Circuit Q



Circuit R



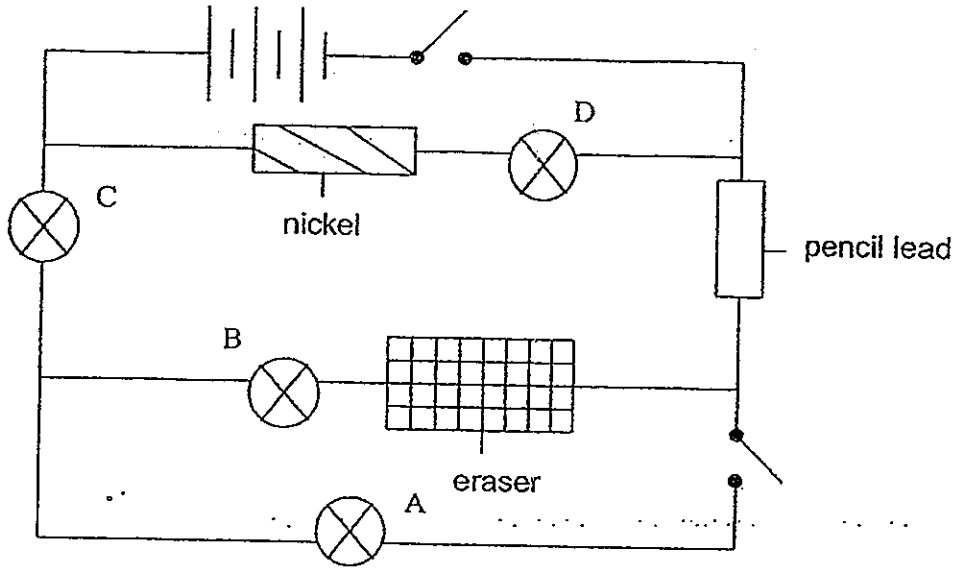
Circuit S

He compared the brightness of the bulbs in circuit R with the bulbs in circuit P,Q and S

Which circuit(s) would have bulbs that are just as bright as the bulbs in circuit R?

(1) S only
(2) Q only
(3) P and Q only
(4) None of the above

20. Identical switches, bulbs and dry cells are used in the circuit below.



Which of the bulbs will light up when all the switches are closed?

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

21. Country A has fossil fuels P, Q and R. The table shows some information regarding the fossil fuels.

Fossil Fuels	Soot produced when the fuel is burnt	Supply of fossil fuel may last for another
P	Some	30 – 40 years
Q	None	50 – 60 years
R	A lot	110 – 120 years

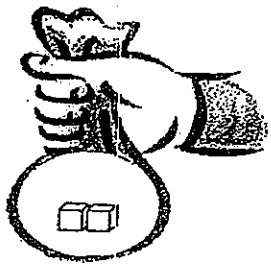
What information can you gather from the table ?

A: Fossil fuels P, Q and R cannot last forever.
B: Burning fossil fuel R causes air pollution.
C: Fossil fuels P, Q and R are used in power stations.
D: Fossil fuel Q will cause land pollution

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

22. Indra conducted an experiment with three bags containing similar wooden cubes Bag A contains 4 cubes, bag B contains 2 cubes and bag C contains 6 cubes.

Bag A



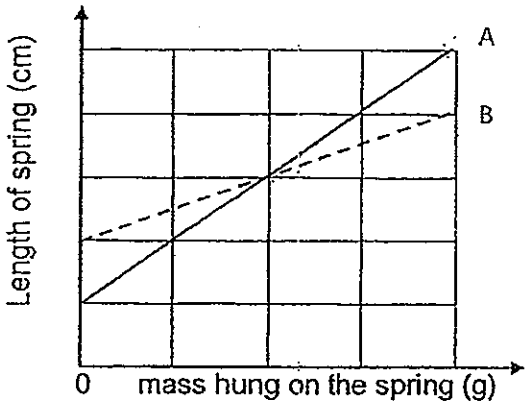
Bag B

Bag C

Indra dropped all three bags at the same time from the same height of two metres. Which one of the following is correct?

(1) Bag A has the least gravitational potential energy when it was released.
(2) Bag A has more kinetic energy than Bag C at the same level as it falls
(3) Bag C has the most kinetic energy before it was released.
(4) Bag B has less kinetic energy than Bag A at the same level as it falls.

23. The graph below shows the length of two springs, A and B, when a mass is hung on each of them.

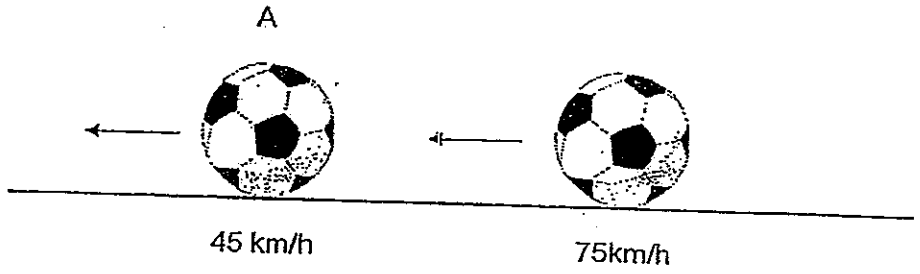


Which of the following statements about the graph are correct inferences?

A: The original length of spring A is longer than the original length of spring B.
B: For the same amount of mass hung on the spring, spring A extends more than spring B.
C: For the same amount of mass hung on the spring, spring B extends more than spring A.
D: Gravity acts on both the spring and the mass hung.

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

24. Jason placed two similar footballs on a smooth surface as shown. He kicked football A first followed by football B immediately. The two footballs travelled at different speeds. The arrows show the direction that the footballs are moving.

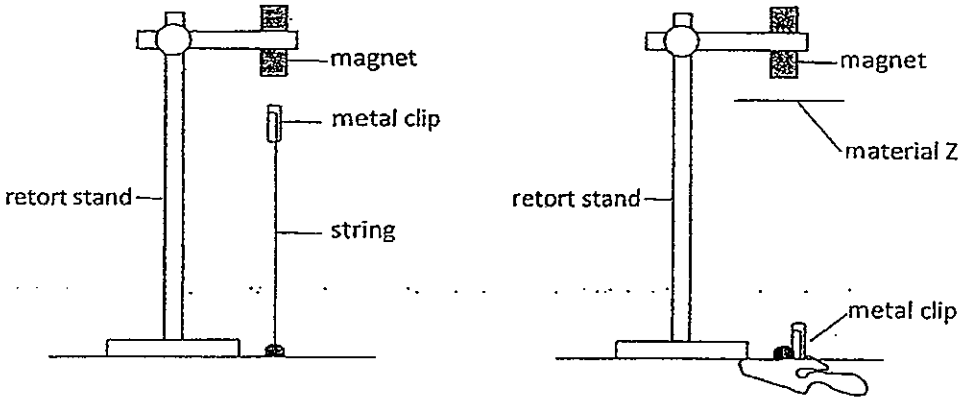


What will happen to both footballs after a few seconds?

A Ball B will hit ball A and continue to roll in the same direction
B Ball B will hit ball A and roll in the opposite direction.
C Ball B will stop rolling immediately after it hits ball A.
D Ball A will roll at a faster speed after being hit by ball B.

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

25. Nicky carried out the following experiment. He clamped the magnet as shown. A metal clip, tied to the table top by a string, was found to be suspended in the air. However, when Nicky slid a thin piece of material Z between the magnet and the metal clip, the metal clip dropped to the table top.

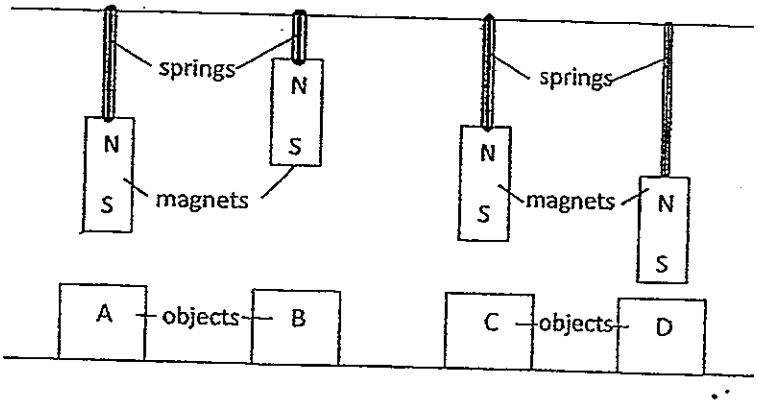


Which of the following could material Z be made of?

A: Nickel
B: Iron
C: Paper
D: Copper

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

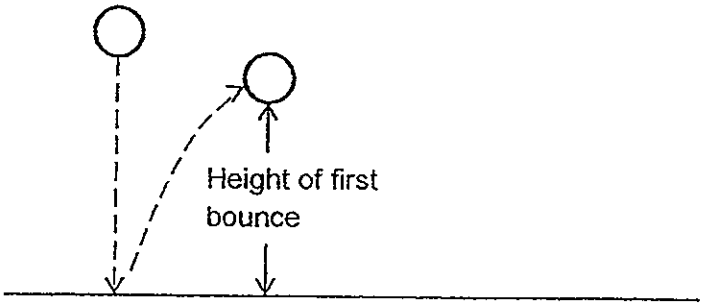
26. In the set-up shown. Jovi placed 4 objects A, B, C and D below identical magnets,which were attached to springs of equal length and elasticity

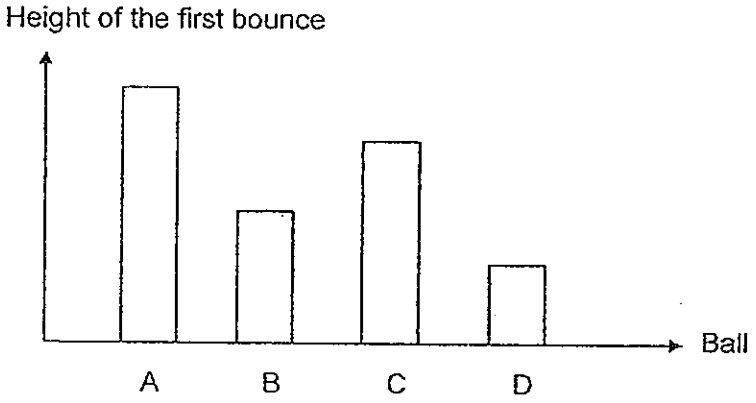


Which one of the following is possible?

	A	B	C	D
(1)	rubber	magnet	wood	magnet
(2)	plastic	lodestone	rubber	gold
(3)	wood	magnet	glass	aluminium
(4)	rubber	lodestone	wood	copper

27. Amelia conducted an experiment with 4 balls A,B,C and D, which are made of different material. She released each ball from the same height and recorded the beight of the first bounce from the ground. The findings of her experiment were presented in the bar graph below,



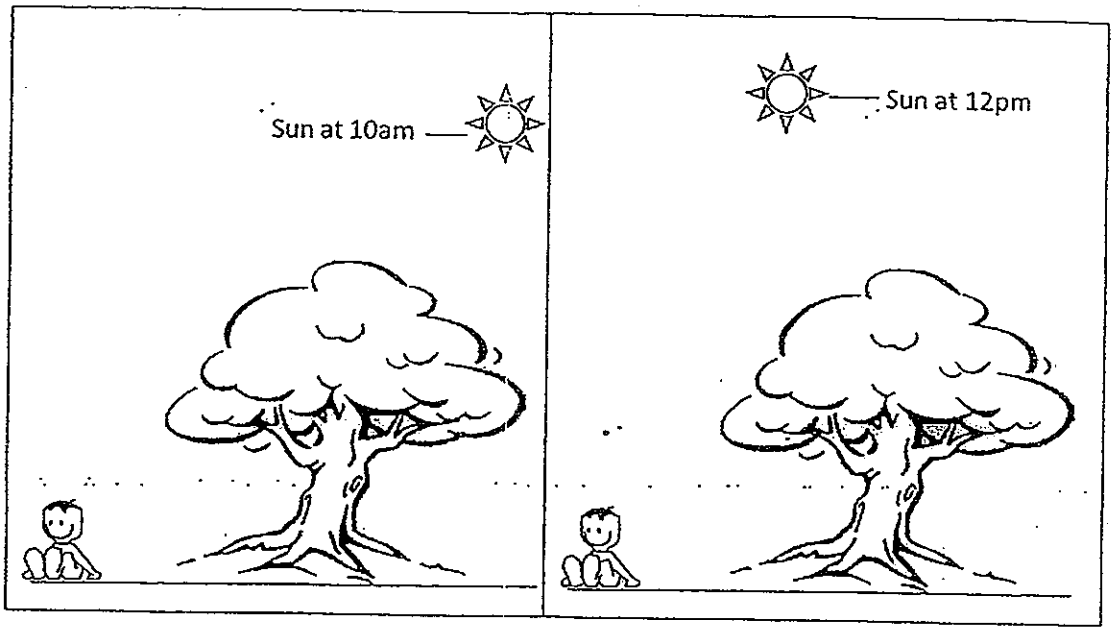


Based on the bar graph, what could Amelia infer from the results?

A Ball A most likely bounced the most number of times.
B Ball B had less kinetic energy than Ball D after the first bounce
C Ball C had more gravitational potential energy than Ball A after the first bounce.
D: Ball D had the least gravitational potential energy than the other balls after the first bounce.

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

28. The diagrams below show a boy sitting near a tree at 10am and 12pm respectively.



Based on the diagram shown. which one of the following statements is not correct?

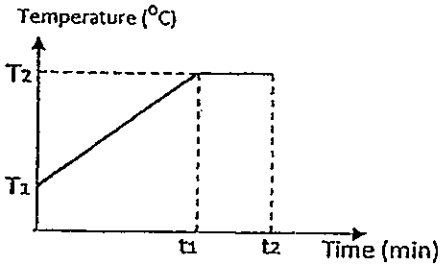
(1) Both the tree and the boy block the light rays and thus create shadows at 12pm.

(2) As the sun rises from 10am to 12pm, the shadow of the tree gets shorter.

(3) The length of the shadow of the tree at 10am is longer than the shadow of the boy at 12pm.

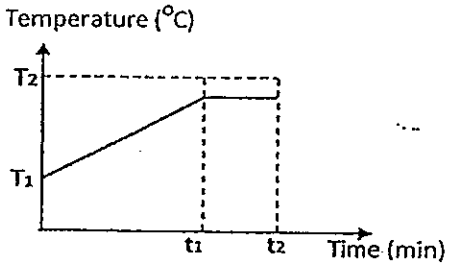
(4) The shadow of the boy will not be formed as all the light rays from the sun is blocked by the tree at 12pm.

29. Tom heats up a cup of distilled water over the gas stove. He records the change in temperature of the water over time and plotted the temperature-time graph below.

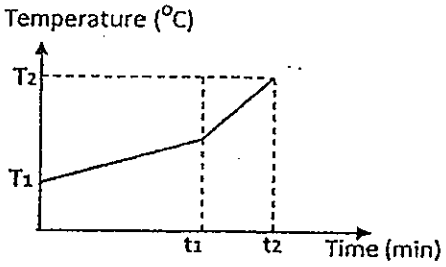


Which obe of the following shows the correct graph if he heats the same amount ofdistilled water in a more powerful microwave oven?

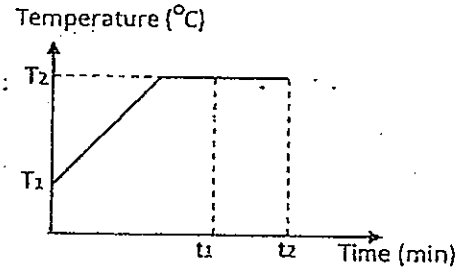
(1)



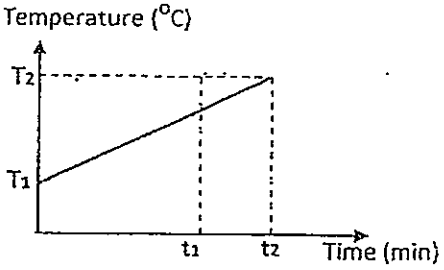
(2)



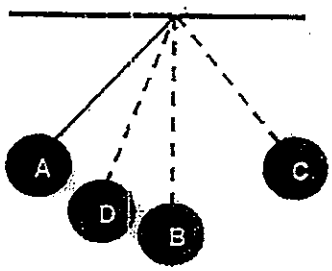
(3)



(4)

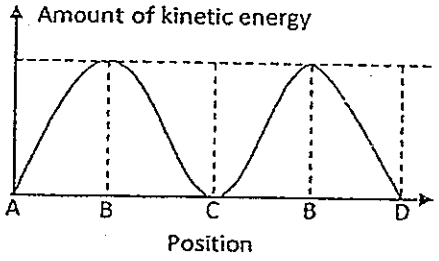


30. Xavier carried out an experiment with a pendulum as shown in the diagram below. He released the metal ball at position A and let it swing to position C and then back to position D.

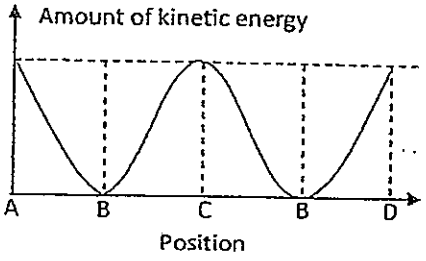


Which one of the following graph shows the change in kinetic energy of the metal ball as it swung from A to C and then back to D?

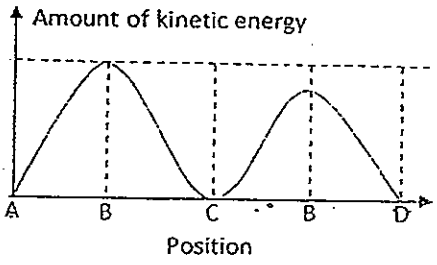
(1)



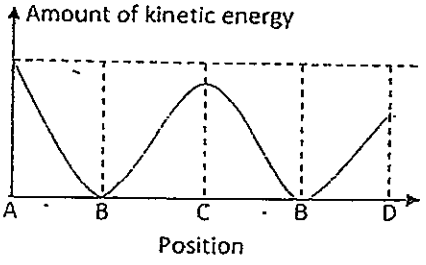
(2)



(3)



(4)



RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

2012 PRELIMINARY EXAMINATION
PRIMARY 6

Name : _____ ( )

Class : Primary 6/_____

Date : 22 August 2012

BOOKLET B

14 Questions
40 Marks

In this booklet, you should have the following:
a. Page 25 to Page 46
b. Questions 31 to 44

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		60
BOOKLET B		40
TOTAL		100

Parent's Signature : _____

Section B

Read the questions carefully and write the answers in the space provided.

31 Linda has three similiar pots of plants A,B and C

She did some research and found out that dried leaves can be added as fertilisers to help the plants grow better. However, the effect of using dried leaves on the growth of the plants is slower than that of using artificial fertilisers.

She added some artificial fertilisers to the soil of one of the pots and some dried leaves to the soil of another pot. She did not add any artificial fertiliser or dired leaves to the remaining pot She watered the plants with the same amount of water every day for two weeks. She measured the heights of the plants after two weeks and recorded the results as shown below.

Pot	Height of plants (cm)	
	Start of experiment	End of two weeks
A	10	17
B	10	14
C	10	21

(a) What was the purpose of setting up Pot B? Explain your answer. (2m)

_____

_____

_____

_____

(b) Which pot of plants, A, B or C. has dried leaves added to the soil? Explain your choice. (1m)

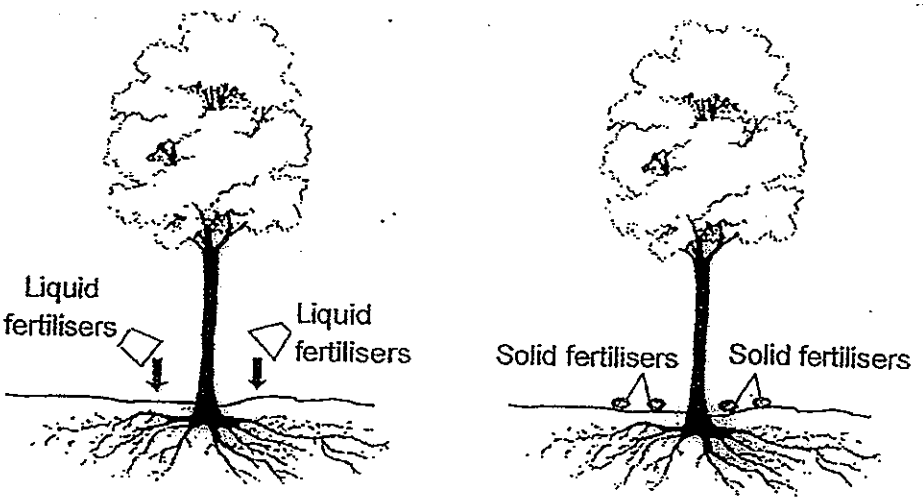
_____

_____

_____

_____

3



(c) Linda prefers to use liquid fertilisers to solid fertilisers even though the amount of nutrients in both liquid and solid fertilisers is the same. Explain why? (1m)

_____

_____

_____

_____

1

32(a) The table shows how some animals depend on different parts of a wild fruit tree for food. Study the table and answer the questions that follow.

Animals	Parts of the wild fruit tree			
	Bark	Leaves	Flowers	Fruit
Bat				√
Beetle	√			√
Caterpillar		√		
Humming bird			√	
Monkey				√
Mealy bug		√		

(i) If **pollination of flowers** does not take place, which animal population(s) will be affected **first** and decrease drastically due to the lack of food? (1m)

_____

_____

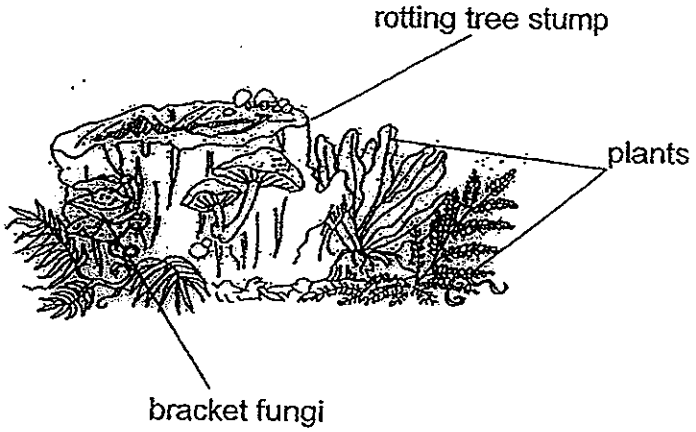
(ii) Explain your answer for part (i). (1m)

_____

_____

2

32(b) Bracket fungi are usually found growing on rotting tree stumps as shown in the diagram below.



Explain how the bracket fungi are useful to the surrounding plants by growing on rotting tree stumps.(1m)

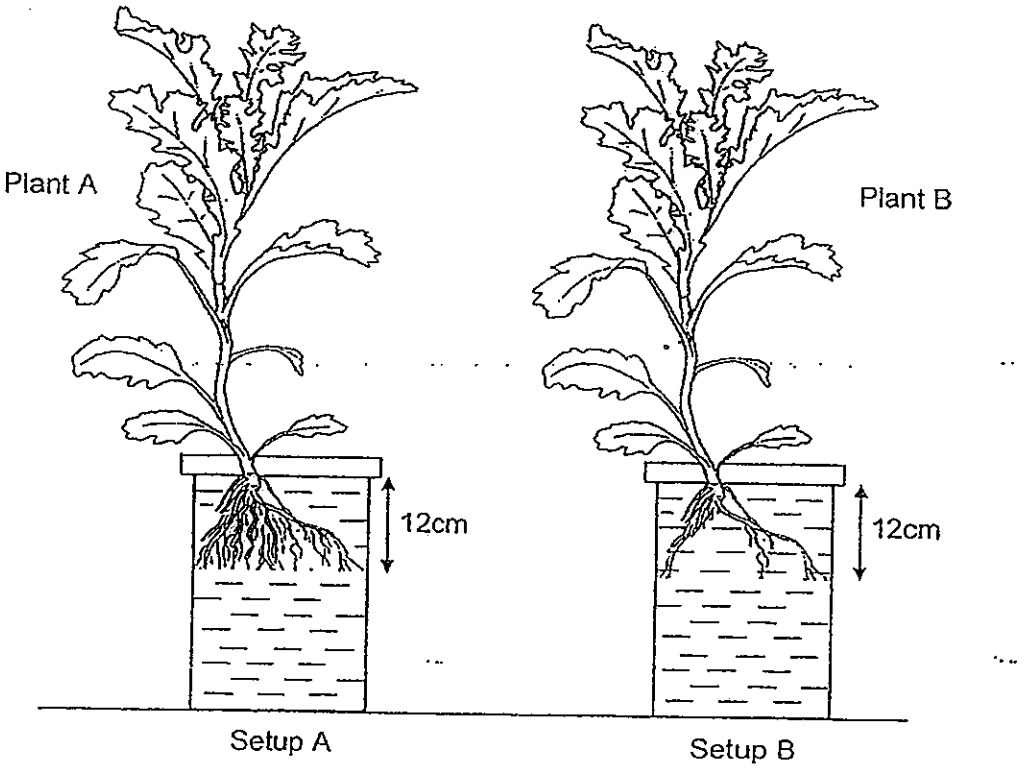
_____

_____

_____

1

33. Alice conducted an experiment by placing two similiar tyoes of plants in identical jars,each containing an equal amount of water filled to the brim,as shown below. She then placed tbe two setups A and B next a window for two days. After two days, she compared the amount of water left in setup A and B.



(a) What was Alice trying to find out? (1m)

_____

_____

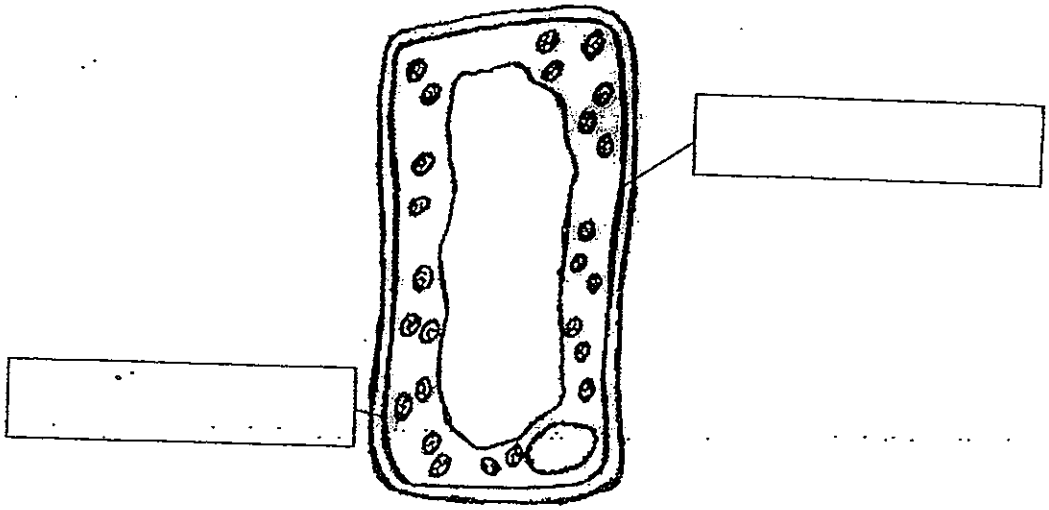
(b) After two days, Alice discovered that there was more water left in setup B. What conclusion could Alice draw from her experiment? (1m)

_____

_____

2

(c) Alice cut off a small part of a leaf from plant B before examining it under the microscope. She drew the parts of a leaf cell as shown below but she had forgotten to label some parts. Label the parts of the leaf cell shown below. (1m)



(d) Alice also cut off a root from plant B before examining it under the microscope. She discovered that a cell part was present in the leaf cell but missing in the root cell What could be the cell part that was present in the leaf cell but missing in the root cell? Why is this part important to the plant? (1m)

_____

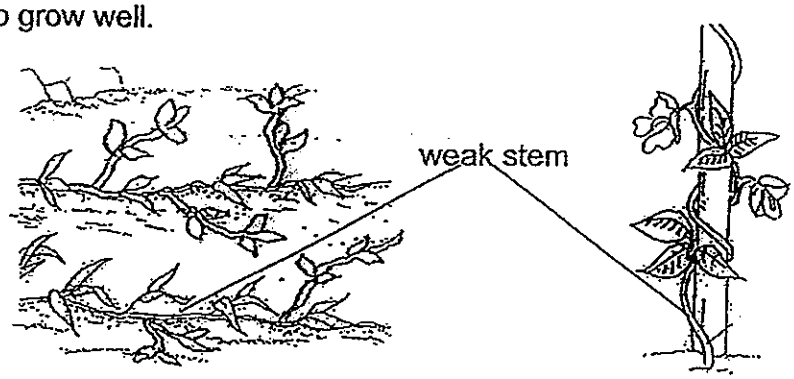
_____

_____

_____

2

34 The diagram below shows two plants, A and B, which have weak stems but are adapted to grow well.



Plant A Plant B

(a) Describe the adaptation of the stem of each of the plants that helps it to get enough sunlight. (2m)

Plant A : _____

_____

_____

Plant B : _____

_____

_____

2

(b) Organisms A, B, C, D and E are found in a habitat.

Organism A is a producer.

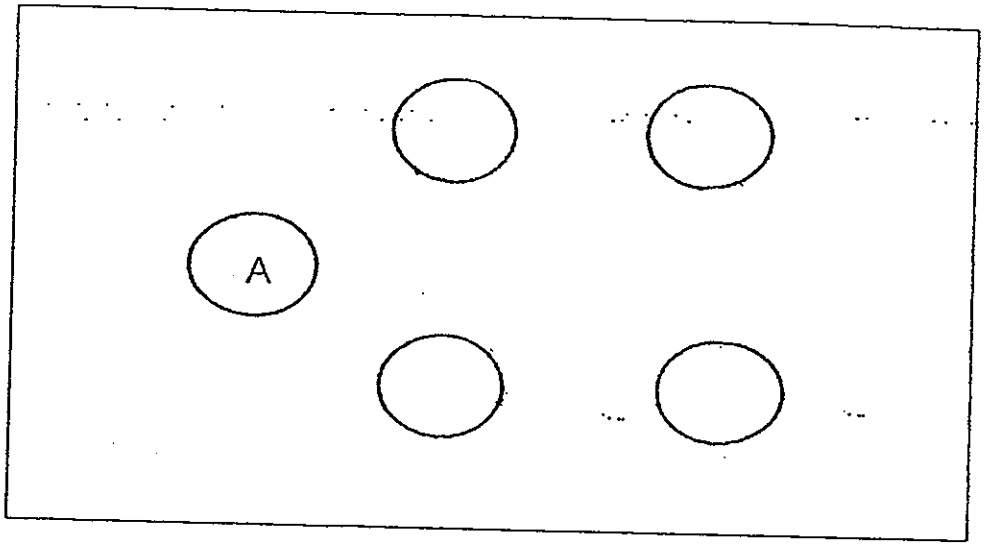
Organism B is a plant-eater.

Organism C eats B and D.

Organism D preys on E.

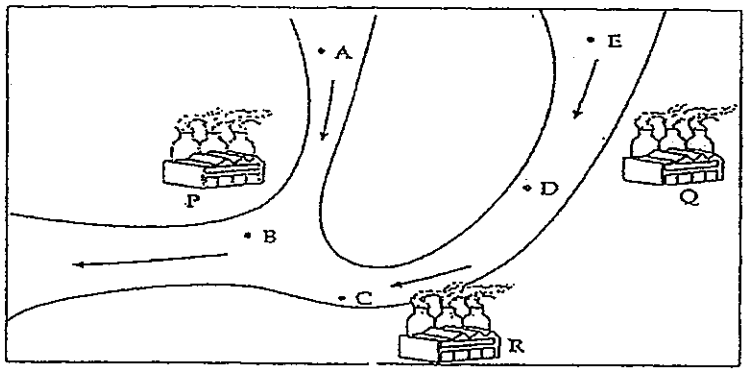
Organism E is the predator of C.

Use the above information to construct a **food web** in the space below. (1m)

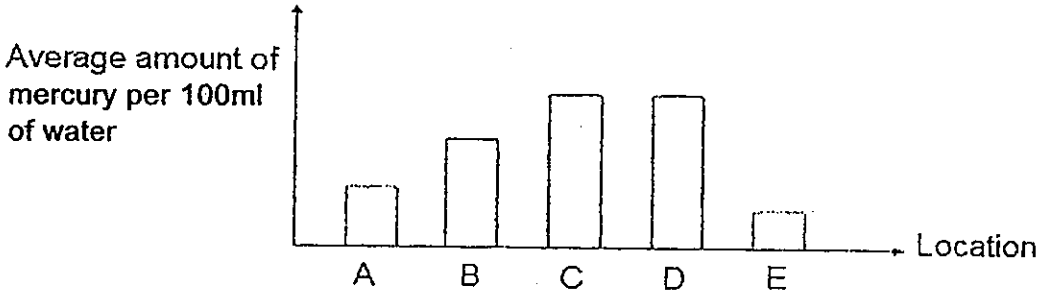


1

35. The map below shows the location of three factories, P, Q and R, by the river. The arrows show the direction of water flow in the river.



It is suspected that these factories dischange mercury wastes into the river. Water samples have been collected from five locations, A,B,C,D and E, for analysis. The results of the analysis are plotted in the graph below.



(a) Based on the graph above, which factory, Q or R, was the least likely to discharge mercury waste into the river. (1/2m)

_____

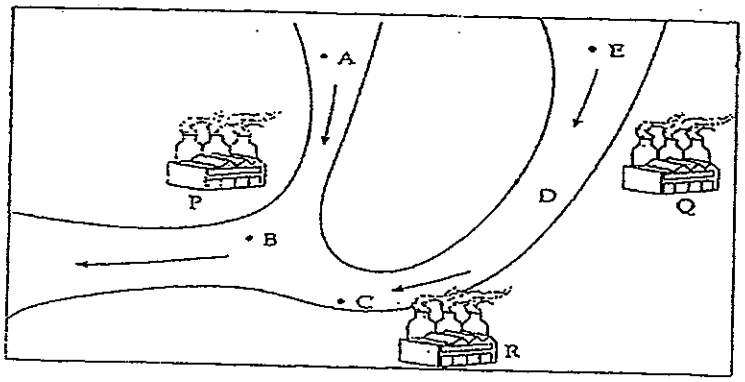
(b) Explain your answer in part (a). (1m)

_____

_____

1½

(c) The river water needs to be treated so that it is safe for drinking. Mark an 'X' on the map to indicate where a water treatment plant should be buit so that the government will spend the least amount of money to treat the water to make it safe for drinking. (1/2m)



(d) Give a reason for the choice of your location. (2m)

_____

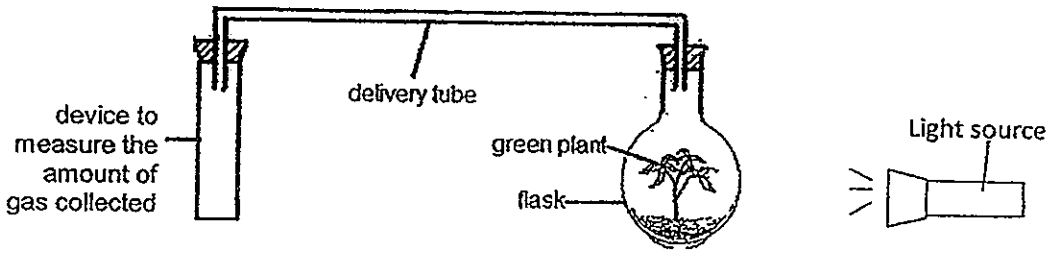
_____

_____

_____

2½

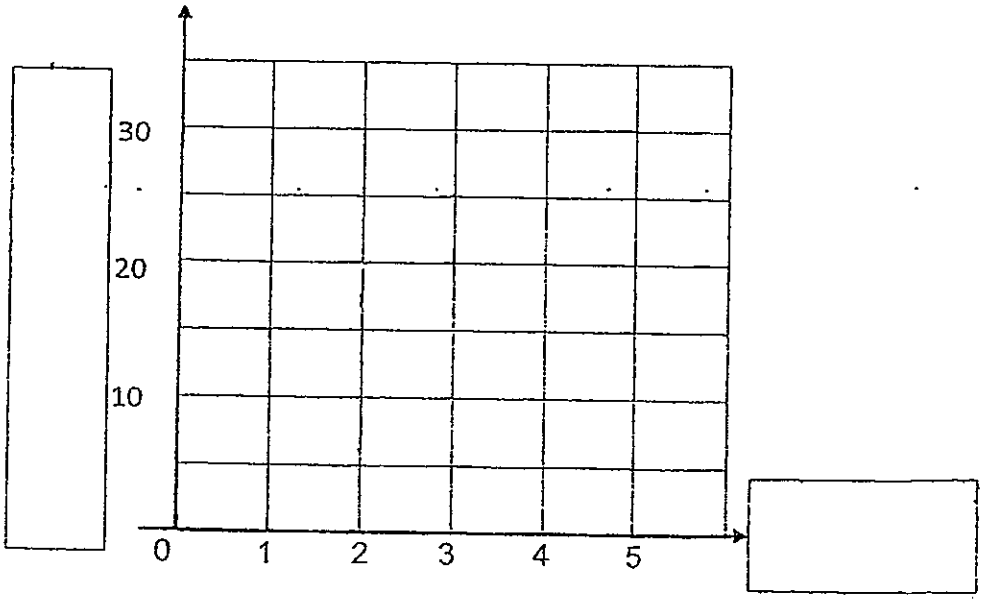
36 Hui Shan conducted an experiment to investigate photosynthesis as shown below. She repeated the experiment by exposing the green plant to different light intensities and the rate of photosynthesis was estimated by measuring the volume of gas collected in the device over two hours.



The results are as follows:

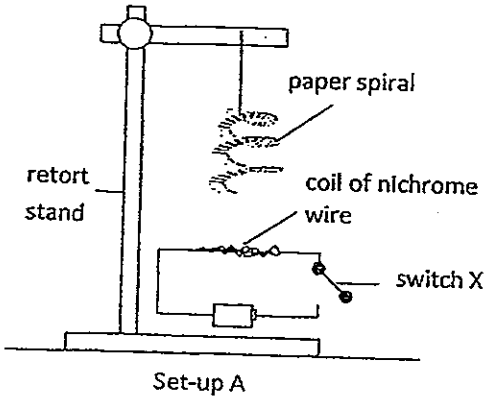
Light Intensity (unit)	1	2	3	4	5
Volume of gas collected in the device (cm^3)	15	20	25	30	30

Based on the table, draw a line graph and label the graph with 'Volume of gas collected in the device (cm^3)' and 'Light intensity (unit)' in the space below. (2m)

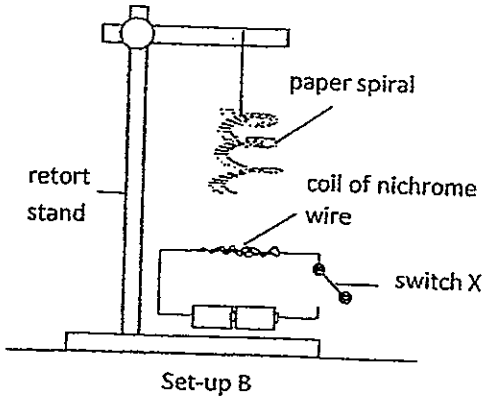


2

37 Nico set-up the experiment as shown below. She noticed that the paper spiral in set-up B started to spin one minute after switch X was closed but the one in set-up A started to spin two minutes later.



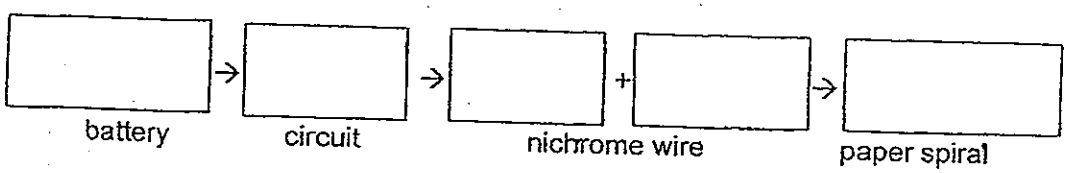
Set-up A



Set-up B

(a) Explained what caused the paper spiral in set-up B to spin earlier? (1m)

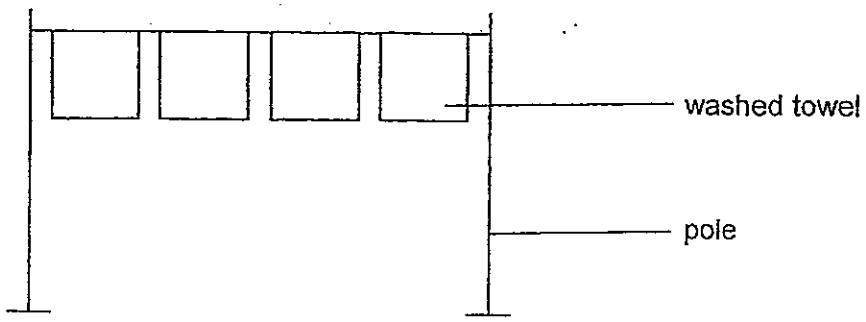
(b) Write the main energy conversion that takes place when switch X is closed for two minutes. (1m)



2

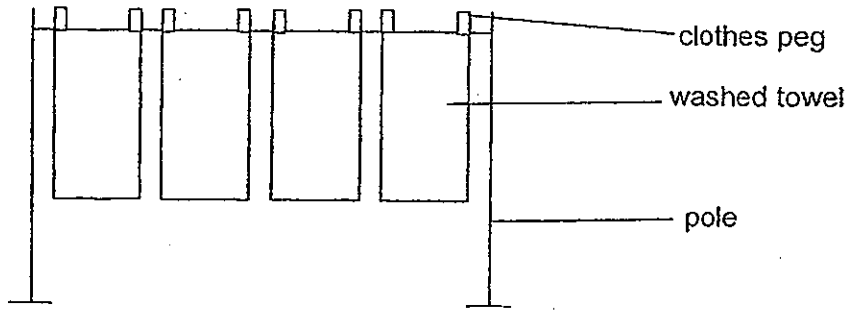
38 It was Sally's first day of work at a hair-dressing salon. She helped to hang the wet towels by folding them into halves as shown in Figure 1.

Figure 1



Her colleague told her that the towels would dry faster if she hung them in full length as shown in Figure 2.

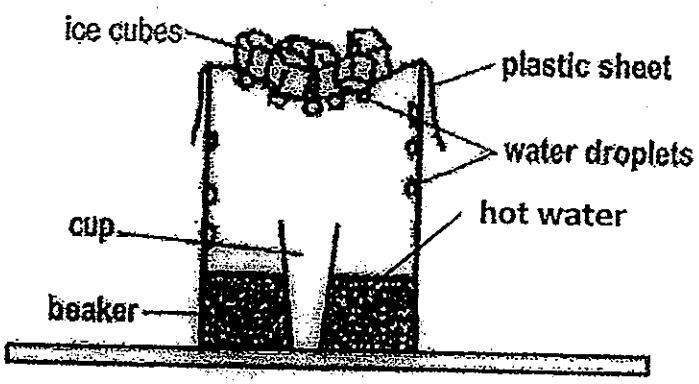
Figure 2



(a) Give a reason why the towels in Figure 2 would dry faster than those in Figure 1. (1m)

1

38(b) Jonathan used the set-up below to demonstrate the water cycle.



(i) What is the purpose of using hot water in the beaker?(1m)

_____

_____

(ii) A few hours later, Jonathan saw a small amount of water collected in the cup even though he did not remove the plastic sheet. Explain how the water was collected in the cup. (1m)

_____

_____

_____

2

39 Shafira filled up some connecting vessels with coloured water as shown in Diagram 1.She then covered vessel C tightly with a stopper and continued to pour some water into vessel B. She observed that the water levels in vessels A, B and D rose up more than that in vessel C as shown in Diagram 2.

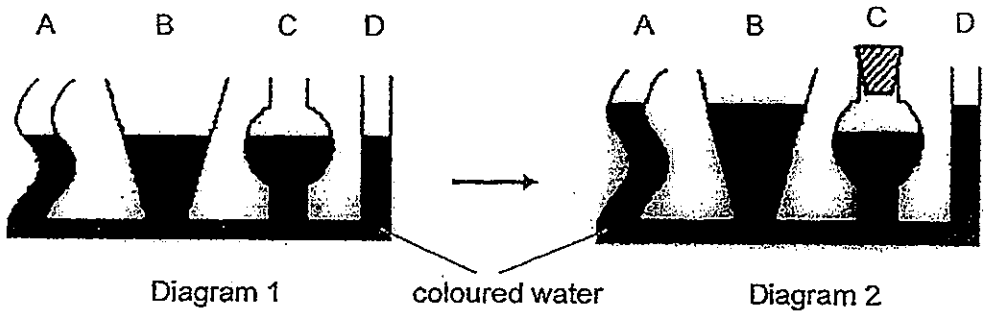


Diagram 1 coloured water Diagram 2

Explain why the water level in C did not rise up to the same level as that in A B and D for Figure 2. (2m)

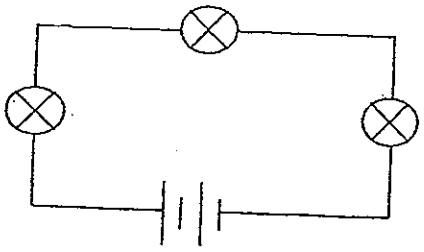
_____

_____

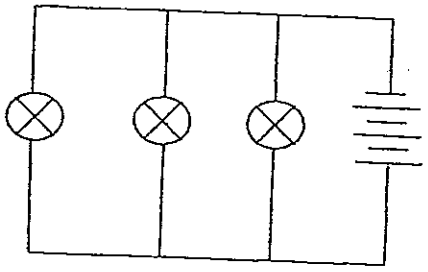
_____

2

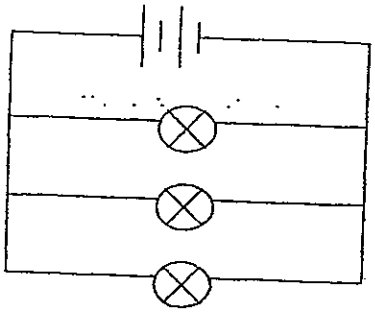
40. Jane sets up some circuits as shown below using similar types of bulbs, batteries and wires.



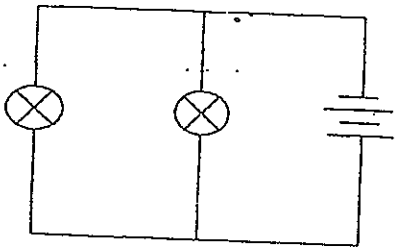
Circuit P



Circuit Q



Circuit R



Circuit S

(a) Jane discovers that all the bulbs in circuit P are very dim. What is another disadvantage of arranging the bulbs in the way shown in circuit P? Explain your answer. (1m)

_____

_____

_____

(b) Which two circuits (P, Q, R, S) should Jane use if she wants to find out if the number of bulbs affects the brightness of the bulbs. Explain your answer. (1m)

_____

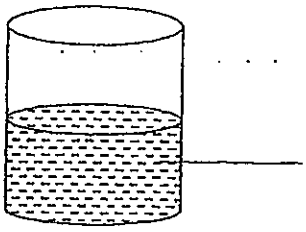
_____

_____

2

(c) What changes should be made to circuit R if she wants to find out if the number of batteries affects the brightness of bulbs using circuits P and R? (2m)

41. Jasmine accidentally dropped a mixture of silver filings, iron filings and some salt into a beaker of hot water.

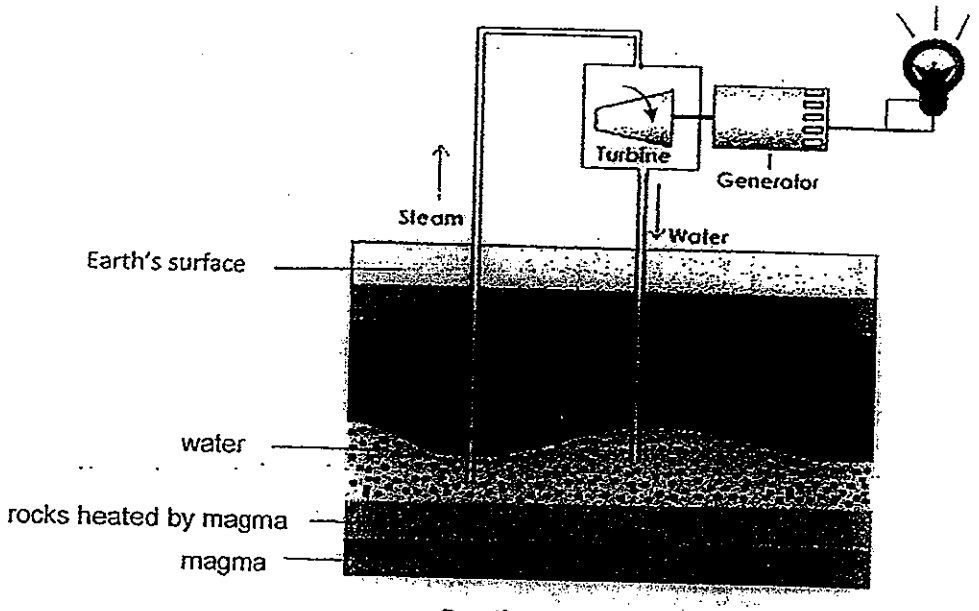


Jasmine was told to remove and separate the items from the water. She was also given a bar magnet, a funnel, some pieces of filter paper and a large basin.

Using all the materials given only, describe how Jasmine should go about separating the three items from the mixture. (2m)

4

42 The diagram below shows a geothermal power station which uses heat energy below the earth's surface to generate electricity.

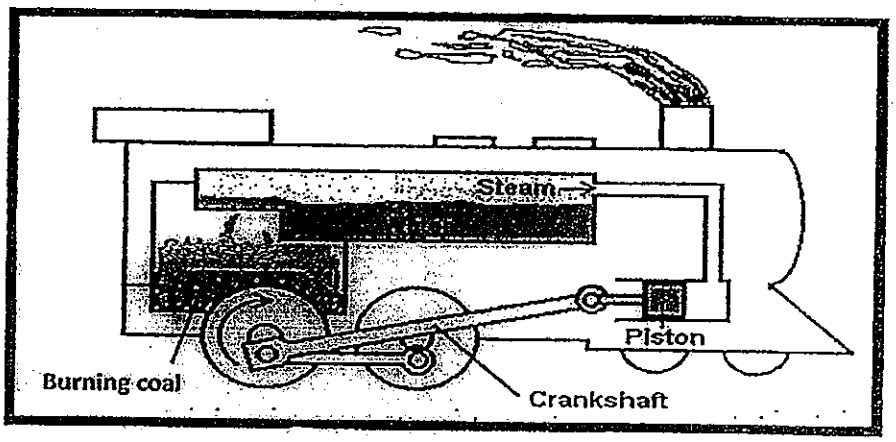


Geothermal power plant

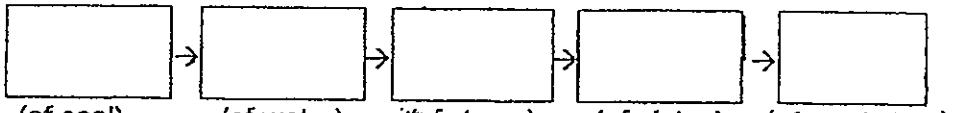
(a) Study the diagram and explain how the geothermal power station is able to generate electricity. (2m)

2

The diagram below shows a simple steam train engine which uses the burning of coal to produce energy to allow the train to move.

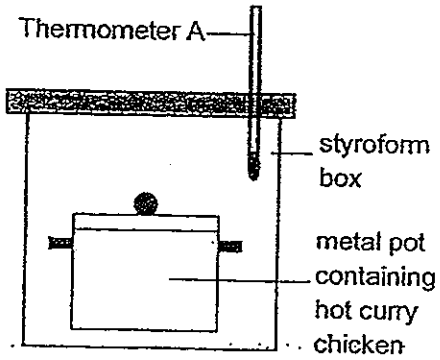


(b) Study the diagram carefully and complete the main energy conversion of the steam train engine below. (1m)

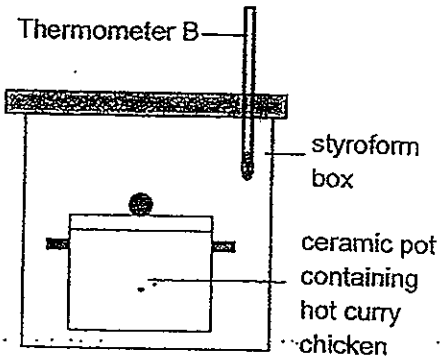


1

43. Victor cooked some curry chicken for a camping trip at East Coast Parkway. He placed half of the curry in a metal pot and the other half into a ceramic pot. Next, he placed the pots into a styroform box as shown below to keep warm.



Set-up A



Set-up B

(a) Explain which thermometer, A or B, would show a higher temperature after five minutes. (1m)

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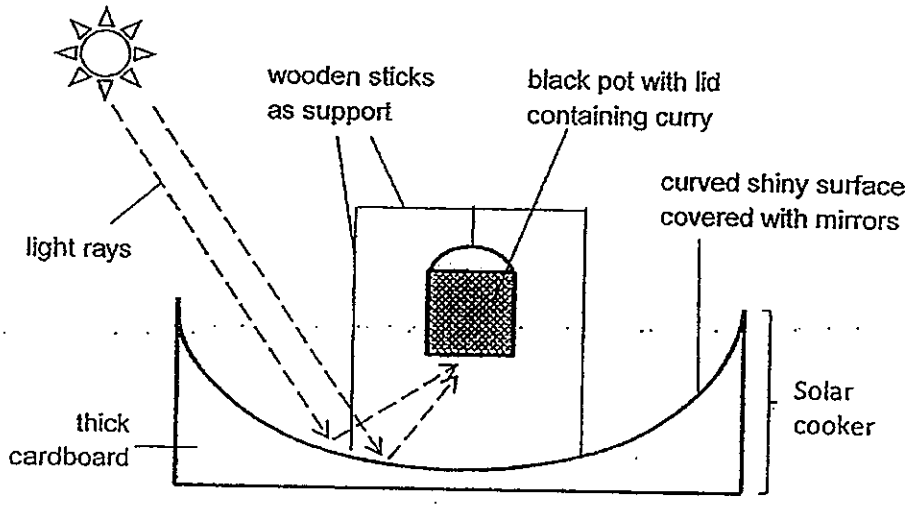
(b) Victor constructed a solar cooker as shown below to heat up the curry the next day. The solar cooker is a device that can be used to cook food using energy from the sun. He placed the cooker in an open area where there is sunlight and no wind.



After one hour, the curry was heated up. Describe how the solar cooker heated up the curry. (1m).

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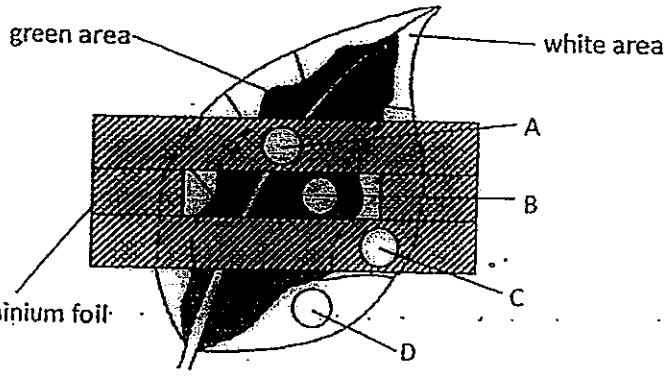
44. Ali conducted an experiment on a variegated leaf of a plant shown below. The plant was de-starched for two days before the experiment. The shaded regions of the leaf were green in colour. The middle part of the leaf was covered with an aluminium foil with a rectangular opening. The plant was then put in the sun.



After a few hours, the leaf was plucked off and the aluminium foil removed. The leaf was prepared and tested for starch using iodine solution. State whether there is any colour change in the iodine solution at parts A and D, and explain your answer. (2m)

Part A :

_____

_____

_____

Part D:

_____

_____

_____

END OF PAPER
PLEASE CHECK YOUR WORK

2

Answer Ke

EXAM PAPER 2012

SCHOOL : RED SWASTIKA
SUBJECT : PRIMARY 6 SCIENCE

TERM : SA2

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

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

31)a)Pot B is a control set-up to compare the change in height of the plants without using artificial fertilizer or dried leaves, so that Linda can conclude that the difference in the result of the experiment are due to the presence of artificial fertilisers or dried leaves and not other variable.

b)Pot A. Pried leaves produce lesser minerals nutrients., during decomposition than artificial fertilisers so the height of the plant in Pot A will be shorter than the plant with the artificial fertiliser in Pot C.

c)Liquid nutrients can flow directly to the roots faster so that the nutrients can be absorbed faster.

32)a)i)Bat, monkey.

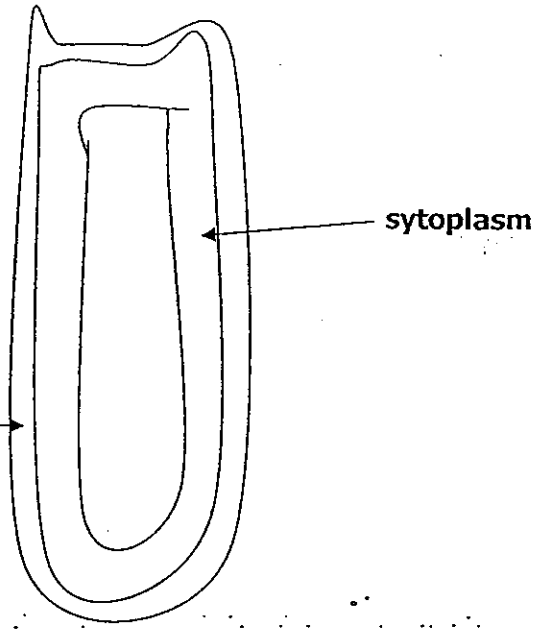
ii)These animals feed on fruits only. Without pollination the flowers will not be develop into fruits.

b)Bracket fungi are decomposers. Decomposers break down dead organisms into simple substances and return it to the soil for nutrients for the surrounding plants.

33)a)She was trying to find out if the number of roots affects the amount of water taken in by the plant.

b)Set-up B has lesser roots, so Plant B absorbed water, resulting in more water left in Set-up B.

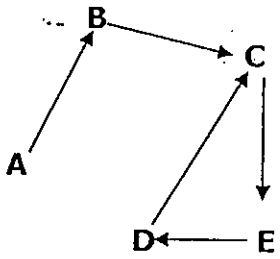
33)c)



d)Chloroplast. Chloroplast contain chlorophyll with help to trap sunlight to make food.

34)a)A: Plant A grow along the ground to cover a large area across the ground.
B: It has long weak stem which coil around the stick to reach for enough sunlight.

b)



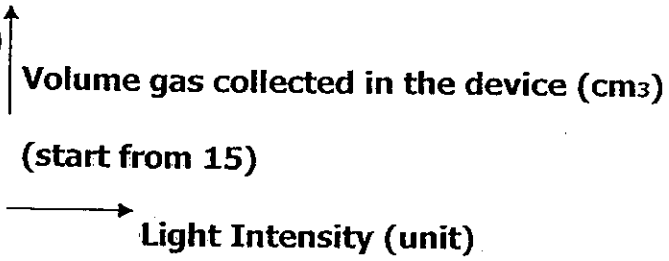
35)a)Factory R.

b)When the water further flowed from D to C pass factory R, the amount of mercury not change. This mean that Factory R did not have mercury.

c)At E, the water is least contaminated. Hence, making it the cheapest location.

d)There is more electric current in set-up B to heat up the nichrome wire. The wire heats up the air around it faster. (causing the air to rice and spin the paper spiral earlier.)

36)



37)a)Set-up B has more batteries than Set-up A. More batteries allow more electric current to flow through to the nichrome wire quickly. Hence, the paper spiral inset-up spin earlier.

b)Chemical Potential Energy→Electrical Energy→Heat Energy→Light Energy→Kinetic Energy

38)a)The towels in Figure 2 has a larger exposed surface area than the towels in Figure 1. Larger exposed surface area help the water in the towels to evaporate faster. Hence, the towels in Figure 2 would dry faster than those in Figure 1.

b)i)To heat up the water vapour in the beaker so that the rate of condensation is faster.

ii)As the hot water vapour rises, it will lose hest and condense on the cold surface of the plastic sheet as water droplets. When the water droplets become heavy, they fall back into the beaker and some are collected in the cup.

39)Air is trapped in and takes up the space. Since the air has been compressed to the maximum. The water in C cannot rise up any higher.

40)a)If one of the bulbs in circuit P fuses, all the other bulb will not light up. The circuit is shared with different bulbs. When one of bulbs fuses, the circuit is open, so the other bulb will not light up.

b)Circuit R and circuit S. All the variable were kept constant except the number of bulbs, so that it id confirmed that the results of the experiment is due to the only variable that was changed.

c)She should add a battery to circuit R and arrange the bulbs in circuit R in series.

41)>Slide the bar magnet along the side of the beaker to attract and remove the iron filings.

>Place the filter paper over the funnel. Pour the mixture of salt solution and sliver filings through it and collect the remaining solution in a basin.

>Collect the water sliver filings left behind on the filter paper.

>Allow the water in the remaining solution to evaporate and obtain salt in its solid state.

42)a)Water underground is heater up by the hot magma and turns into steam, steam rises up and passes through the turbine. The turbine will turn and its kinetic energy will be converted to electrical energy.

b)Chemical Potential→Heat Energy→Kinetic Energy→Kinetic Energy→Kinetic Energy

43)a)Thermometer A. Metal is a better conductor of heat than ceramic. The metal pot conducts heat from the hot curry chicken to the surrounding air in the Styrofoam box faster than the ceramic pot.

b)When sunlight falls on the mirror the light rays are reflected and on the black cooking pot which heats up the curry.

44)Part A: There is no change in colour to the iodine solution at part A. The area was not exposed to sunlight as it was blocked by the aluminium foil. Since there was no photosynthesis taking place, there was no excess sugar to be stored ad starch.

Part D: There is no change in colour to the iodine at starch part D. Since there is no chlorophyll present at the white part of the leaf trap light for the process of photosynthesis no sugar was produced and hence there was no starch.