METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSMENT 2015
PRIMARY 6
SCIENCE

BOOKLET A1

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.

Name: _____( )

Class: Primary 6._____

Date : 5 March 2015

This booklet consists of 13 printed pages including this page.

For each question from 1 to 15, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

[30 marks]

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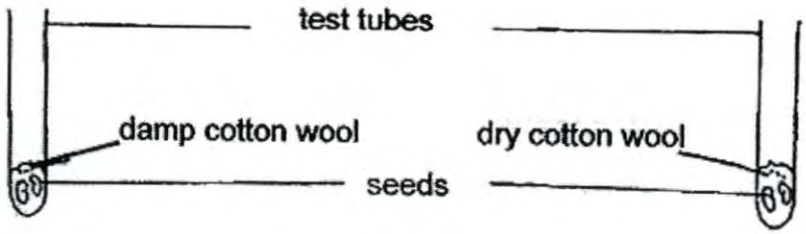
1. James set up an experiment at room temperature as shown in the diagram below. At the end of the experiment, it was observed that the seeds grew into seedlings in one test tube but not in the other.

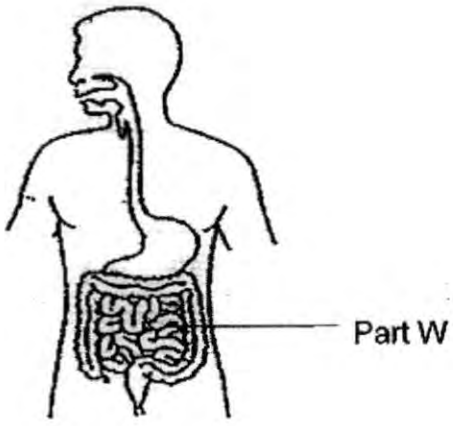


James was trying to find out if _____.

(1) seedlings need light to germinate
(2) seedlings can grow in cotton wool
(3) seeds need water to grow into seedlings
(4) seeds need water, light and cotton wool to grow into seedlings

(Go on to the next page)

2. Look at the diagram below.



Which of the following statements describe what happens in Part W?

A: Food is completely digested here.

B: Undigested food is stored here temporarily.

C: Most of the water is absorbed into the bloodstream.

D: Digestive juices are added to the partially digested food.

(1) A and B only

(2) A and D only

(3) B and C only

(4) A, B, C and D

(Go on to the next page)

3. The table below shows the different cell parts of 3 types of cells X, Y and Z.

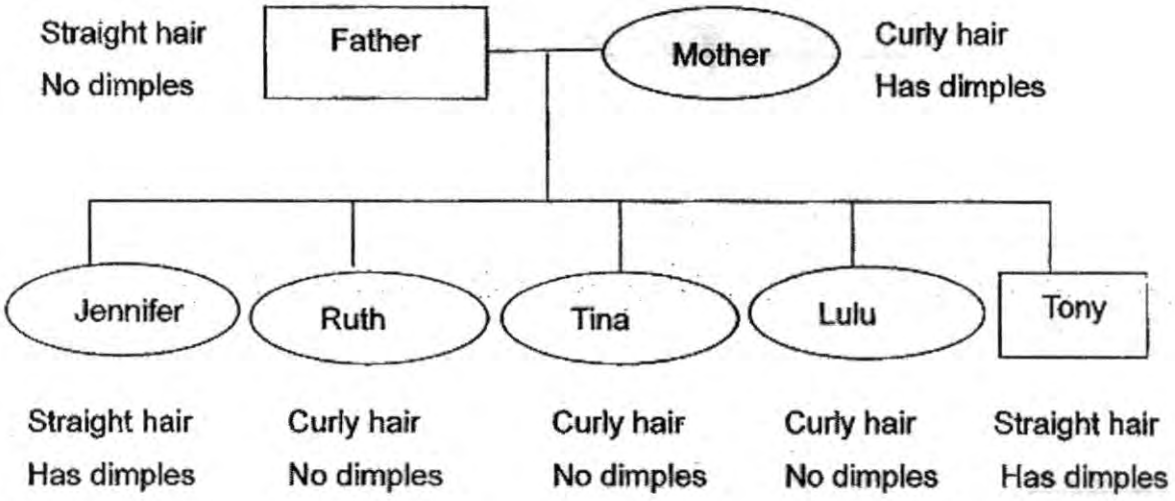
Cell parts	X	Y	Z
Cell Wall	present	present	absent
Nucleus	present	present	present
Chloroplasts	present	absent	absent

Which one of the following options best represents where the cells X, Y and Z are taken from?

	X	Y	Z
(1)	animal	root	leaf
(2)	leaf	root	animal
(3)	root	leaf	animal
(4)	leaf	animal	root

(Go on to the next page)

4. Study the family tree of Jennifer as shown below.



Which of the following statement(s) is/are definitely true?

A: Jennifer has a twin brother.

B: Jennifer has three sisters and a brother.

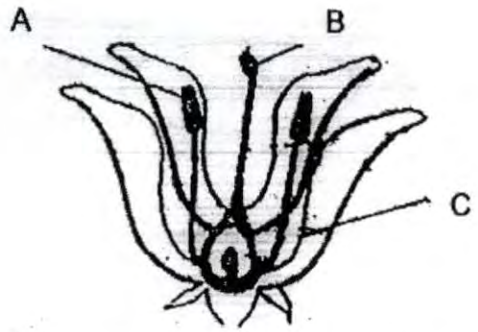
C: Jennifer inherited her dimples from her mother.

D: Jennifer inherited the genes for straight hair from Tony.

1. A only
2. A and D only
3. B and C only
4. B, C and D only

(Go on to the next page)

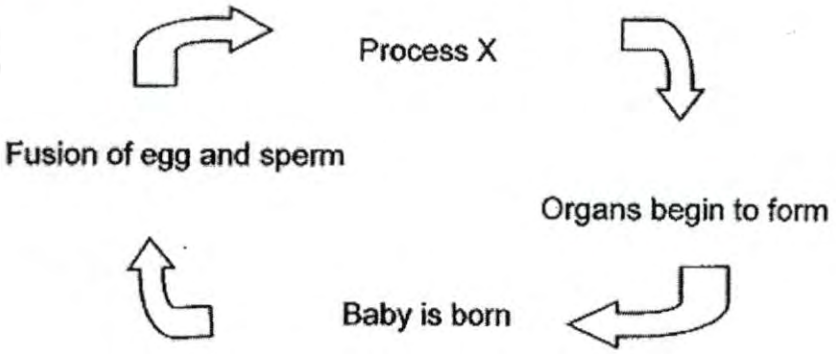
5. The diagram below shows the cross section of a flower.



Which part(s) when removed will prevent the flower from developing into a fruit?

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

6. Look at the human reproductive cycle below.



Which one of the following statements describes process X?

(1) The mating process of the male and female.
(2) The movement of fertilised egg towards the ovary.
(3) The fertilised eggs starts to divide to form more cells.
(4) The umbilical cord stops providing nutrients to the baby.

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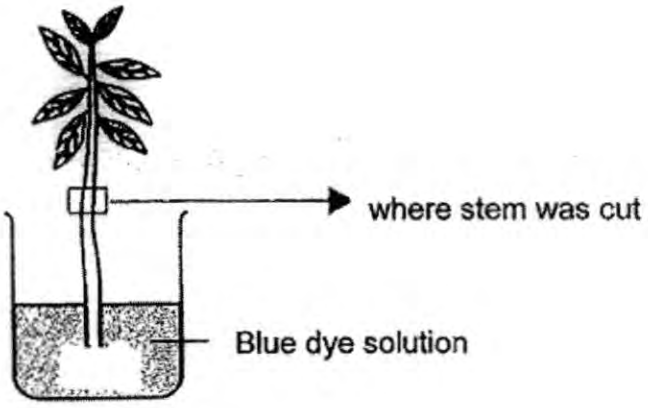
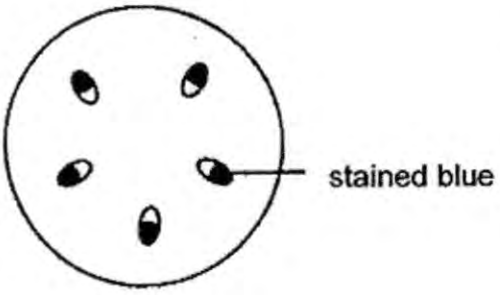
7. Devi immersed the roots of a young plant into a container of blue dye solution for one day as shown below. The next morning, she cut and examined the cross section of the stem.

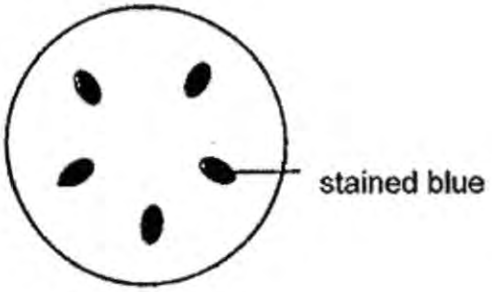


Which one of the following diagrams shows what Devi would observe?

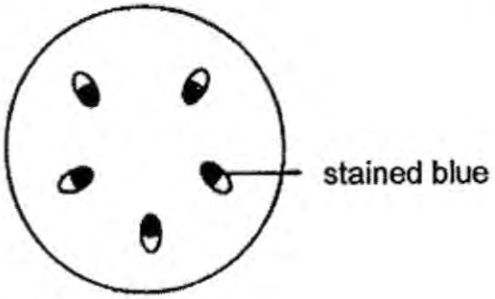
(1)



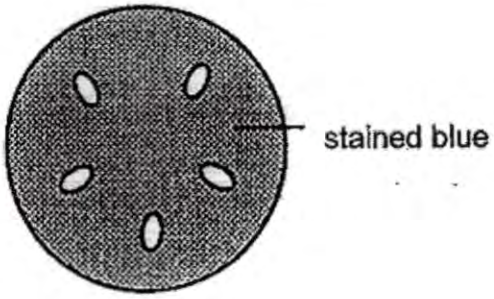
(2)



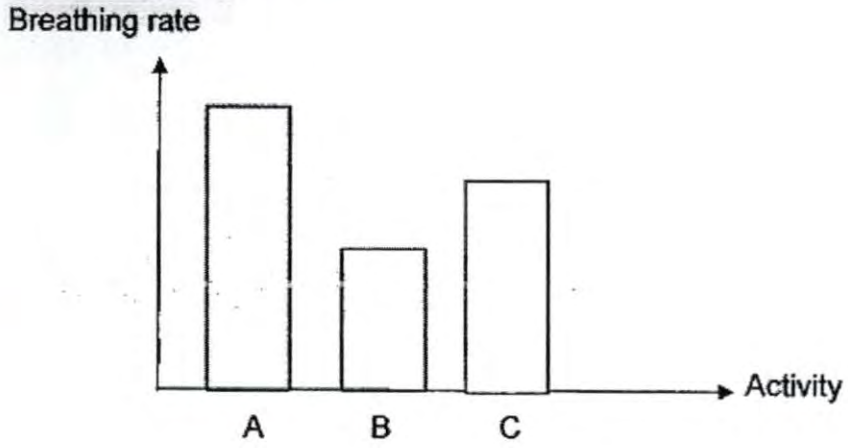
(3)



(4)



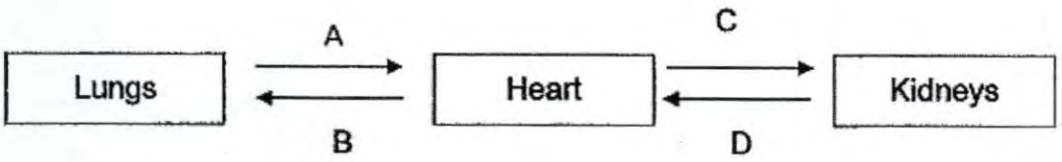
8. The bar graph below shows Ahmad's breathing rate when he was engaged in three different activities A, B and C.



Which of the following are activities A, B and C most likely to be?

	Activity A	Activity B	Activity C
(1)	jogging	reading a book	walking
(2)	jogging	walking	reading a book
(3)	skipping a rope	jogging	walking
(4)	reading a book	skipping a rope	walking

9. The diagram below shows the blood flow in some parts of the human body.



Which of the arrows show blood that contains a large amount of oxygen?

(1) A and B

(2) A and C

(3) A, C and D

(4) B, C and D

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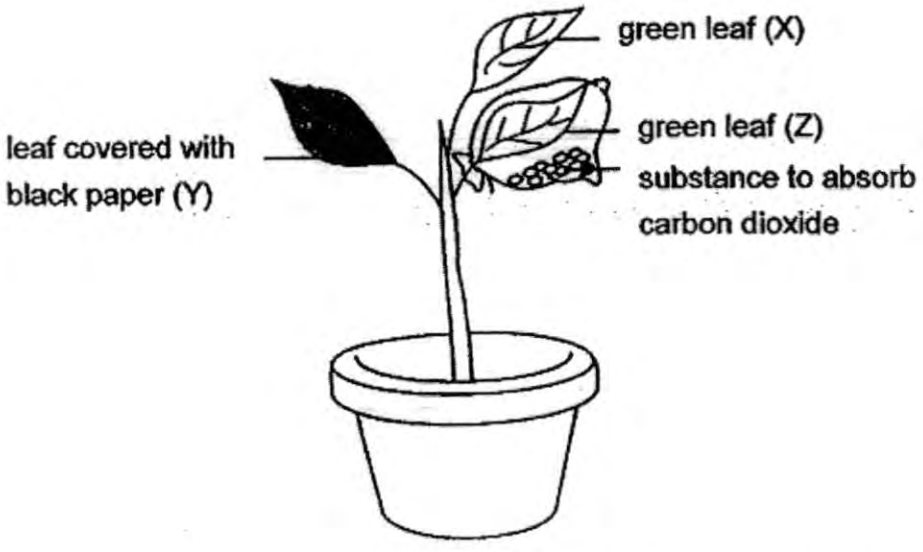
10. The diagram below shows an experiment to investigate photosynthesis. The plant was destarched for two days before it was exposed to sunlight for two hours.

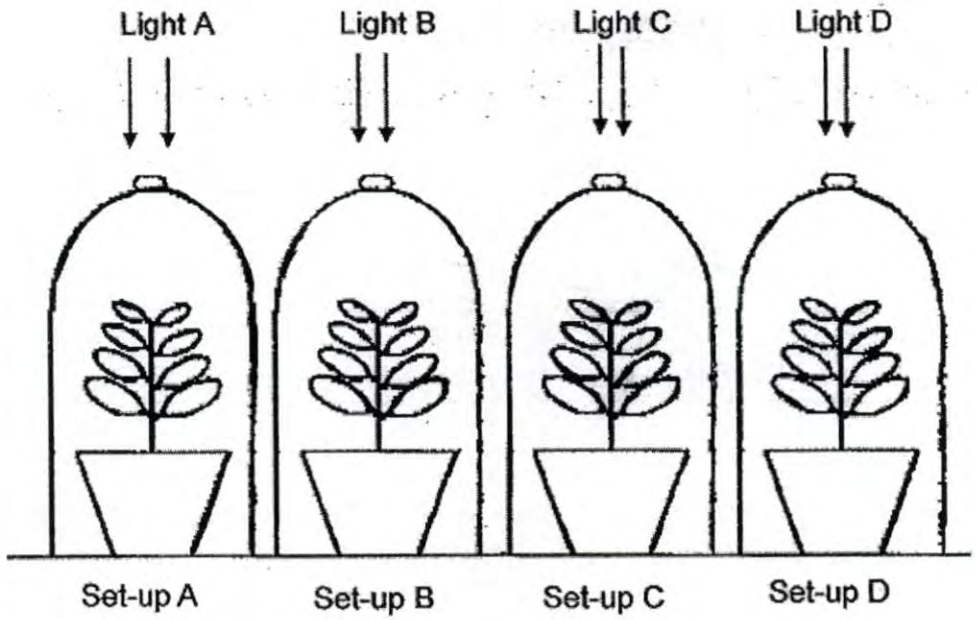


Which one of the following options shows the colour of the iodine when it was added to the leaves X, Y and Z, at the end of the experiment?

	X	Y	Z
(1)	brown	brown	dark blue
(2)	brown	dark blue	brown
(3)	dark blue	brown	brown
(4)	dark blue	brown	dark blue

(Go on to the next page)

11. Peter set up an experiment using four set-ups, A, B, C and D shown below. Four different coloured light were used in each set-up. The set-ups were left in a dark room for 24 hours with only the bulbs lit up. The percentage of carbon dioxide in the bell jar below was measured before and after the experiment. The percentage of carbon dioxide before the experiment was the same in the four set-ups.



Peter was trying to find out if _____.

(1) plants release carbon dioxide during photosynthesis.

(2) different coloured light will affect the rate of photosynthesis.

(3) the amount of coloured light will affect the rate of photosynthesis.

(4) the amount of carbon dioxide will affect the rate of photosynthesis.

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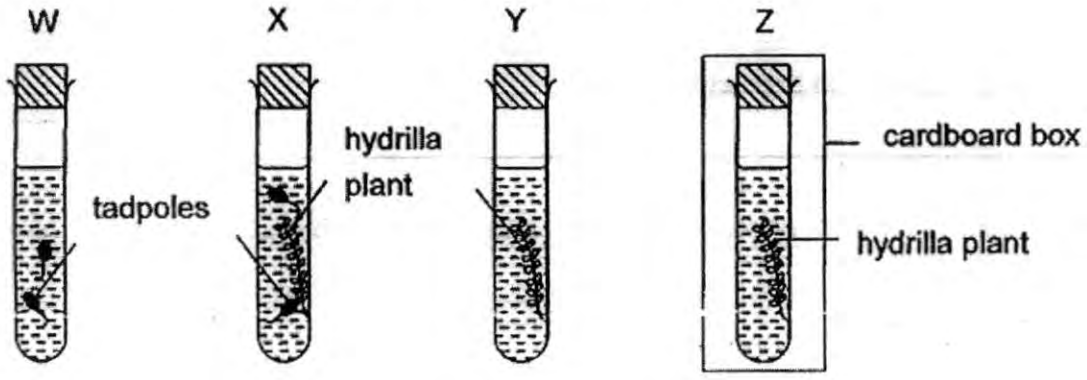
12. Four set-ups, W, X, Y and Z were left under sunlight for ten hours.



The table below shows the changes in the concentration of carbon dioxide in the set-ups after they had been exposed to light.

	Set-up W	**Set-up X**	**Set-up Y**	**Set-up Z**
Concentration of carbon dioxide	increase	no change	decrease	increase

Which of the following statements explain the results best?

A: The tadpoles in Set-up W breathe out carbon dioxide.

B: The hydrilla plant in Set-up Y carried out photosynthesis.

C: The hydrilla plant in Set-up Z did not carry out photosynthesis.

D: The tadpoles in Set-up X breathe in carbon dioxide produced by the hydrilla plant.

(1) A and D only

(2) B and C only

(3) A, B and C only

(4) A, B, C and D

(Go on to the next page)

13. Which of the following statements about photosynthesis are true?

A: It requires kinetic energy.

B: It can only take place in the presence of light.

C: Respiration and photosynthesis can occur at the same time.

D: During photosynthesis, heat energy is changed into chemical potential energy.

(1) A and B only

(2) B and C only

(3) B, C and D only

(4) A, B, C and D

14. Lee put a few drops of iodine solution on some food items and recorded his observations in the table as shown below.

Food item	Colour of iodine
cooked beef	brown
Cabbage	dark blue
fish ball	brown
cooked rice	dark blue
Potato	dark blue

Based on the results, Lee could conclude that _____.

(1) only cooked food contains starch

(2) most food from plants contain starch

(3) some food from animals contain starch

(4) only some food from plants contain starch

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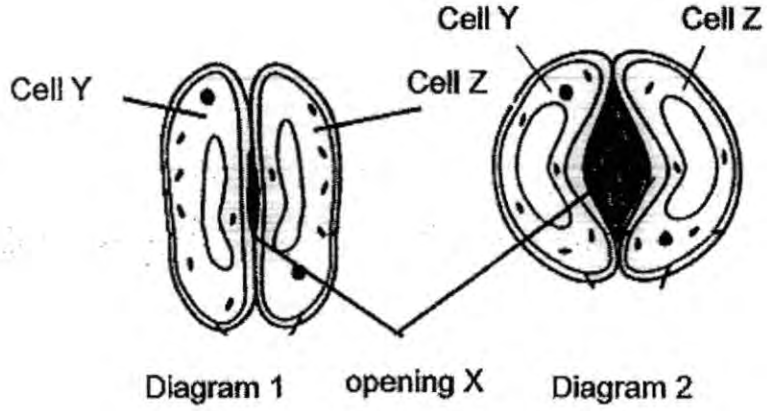
15. Cells Y and Z control the size of opening X found on a leaf. Diagram 2 shows the change in the size of opening X when Cells X and Y are exposed to more light.



Which of the statements correctly describe what will happen when opening X changes in size as shown in diagram 2?

A. The rate of photosynthesis will increase.

B. More light will be absorbed by opening X.

C. The rate of gaseous exchange will increase.

D. More water enters through opening X and is transported to other parts.

(1) A and C

(2) B and D

(3) A, B and C

(4) A, C and D

(Go on to the next page)

METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSMENT 2015
PRIMARY 6
SCIENCE

BOOKLET A2

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.

Name: _____ ( )

Class: Primary 6._____

Date : 5 March 2015

This booklet consists of 16 printed pages including this page.

For each question from 16 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 on the Optical Answer Sheet (OAS). [30 marks]

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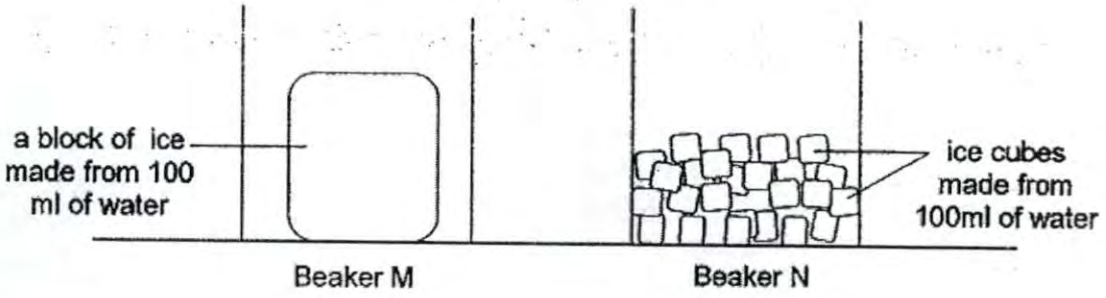
16. Samy would like to know whether the size of the ice would affect its rate of melting. He set up an experiment as shown below and left the ice to melt in the beakers in the laboratory for 30 minutes.



After 30 minutes, Samy poured out the water that was found in each beaker into a measuring cylinder.

Which one of the following observations would be made by Samy after 30 minutes?

(1) Both beakers of ice melted at the same rate because both were made from the same amount of water.

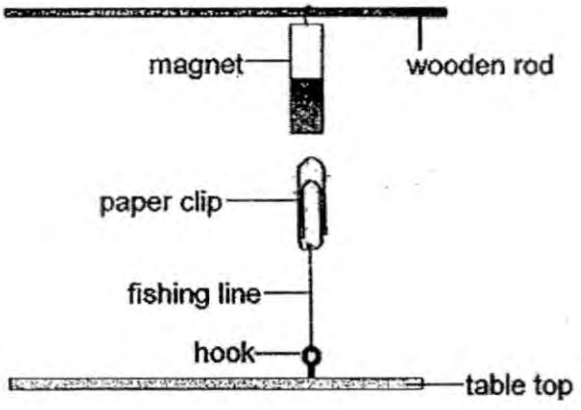
(2) The block of ice melted faster than the ice cubes because it was bigger in size compared to the ice cubes.

(3) The ice cubes melted faster than the block of ice because the ice cubes had a larger surface area compared to the block of ice.

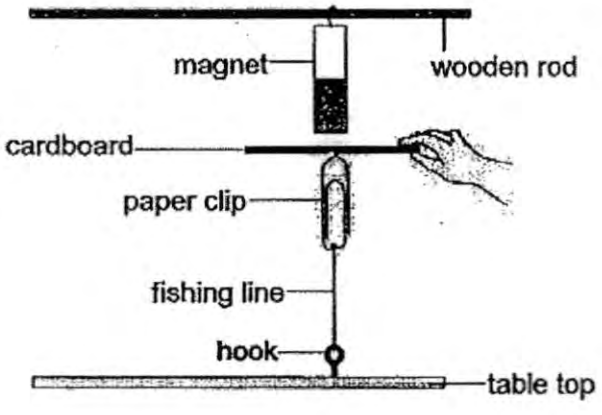
(4) Both beakers of ice melted but Samy was not able to tell which one melted faster because both beakers of ice were not of the same size.

(Go on to the next page)

17. Ah Tan fixed a hook onto a table top. He then put the set-up under a bar magnet which he fixed onto a wooden rod and he observed that the paper clip suspended as shown in the diagram below.



Ah Tan then placed a piece of cardboard between the paper clip and the magnet as shown below.



He continued to place more pieces of cardboard, one at a time, between the paper clip and the magnet and recorded his observations in the table below.

Number of pieces of cardboard	Paper clip	
	suspended	dropped
1	√	
2	√	
3	√	
4		√

Which one of the following statements explains why the paper clip dropped when four pieces of cardboard were used?

A: The magnetic force of attraction is too weak to attract the paper clip.

B: The magnetic force of repulsion is too strong so it cannot attract the paper clip.

C: The force of gravity is so strong that the paper clip is being pulled down towards the table top.

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

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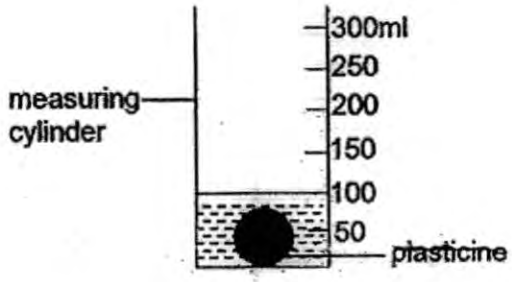
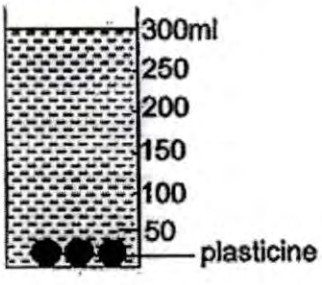
18. The diagram below shows a ball of plasticine in a measuring cylinder containing some water.



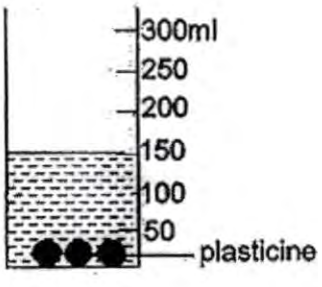
The ball of plasticine was then taken out and reshaped into three smaller balls. The three smaller balls were then put back into the measuring cylinder containing the same amount of water.

Which one of the following diagrams is correct?

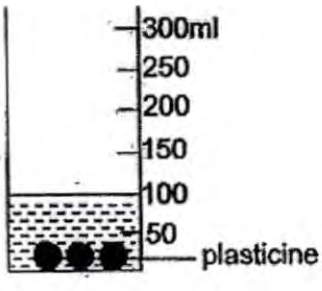
(1)



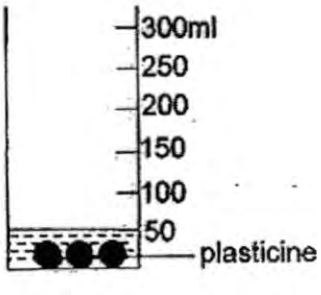
(2)



(3)



(4)



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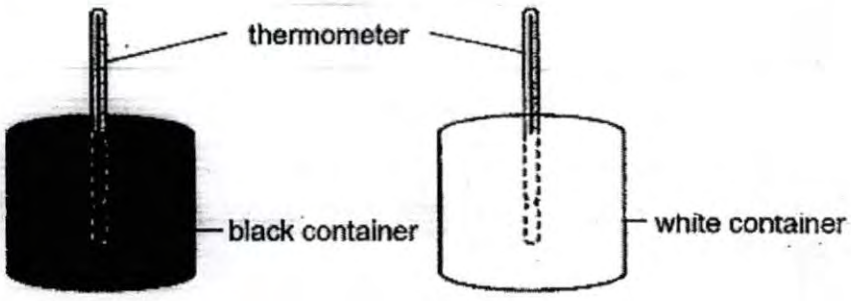
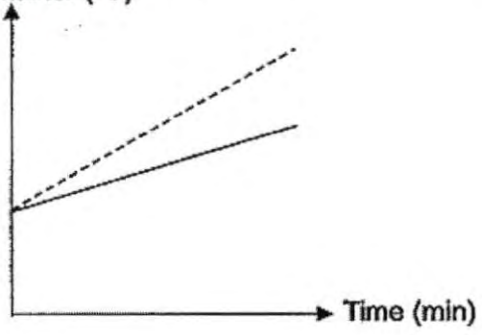
19. Johnny had two empty containers of identical size and made of the same material. He placed a thermometer in the middle of each container as shown in the diagram below.



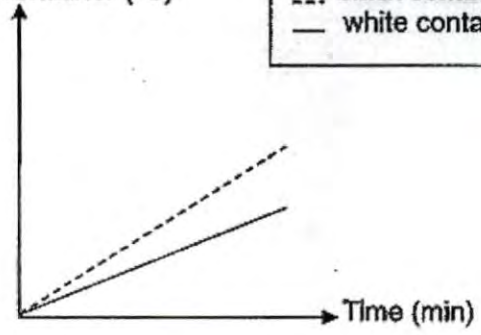
He then placed the containers in the middle of an open field on a hot day for one hour.

Which one of the graphs is likely to show the correct temperature of air in the two containers over a period of one hour?

(1)

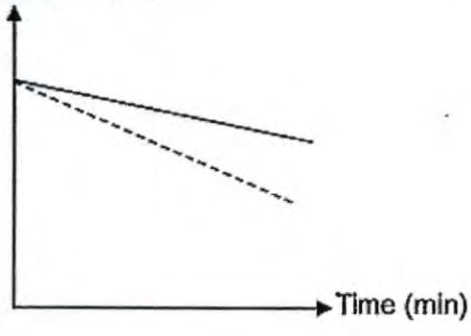


(2)

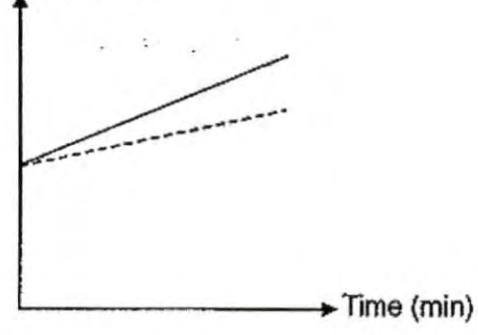


Key
--- black container
— white container

(3)



(4)



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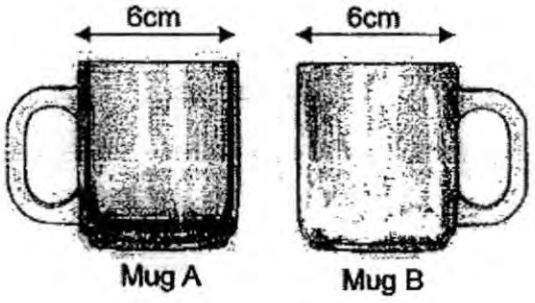
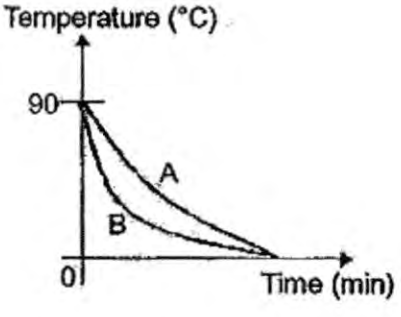
20. The diagram below shows two mugs, A and B, of the same size but made of different thickness of glass. Mug A is made of a thicker layer of glass compared to Mug B.



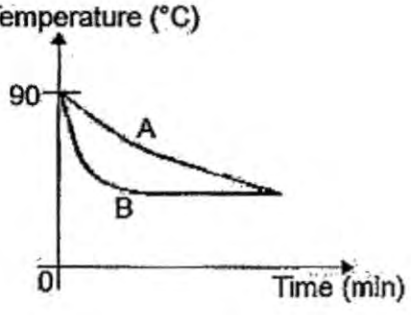
An equal amount of coffee at 90°C was poured into the two mugs and left to cool at room temperature.

Which one of the following graphs correctly shows how the temperature of the coffee changes with time in Mugs A and B?

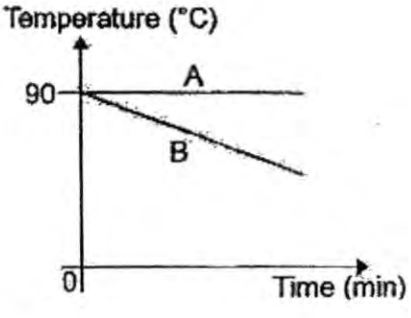
(1)



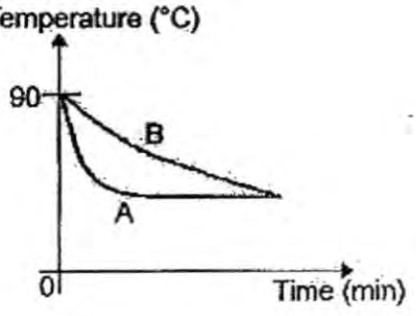
(2)



(3)



(4)



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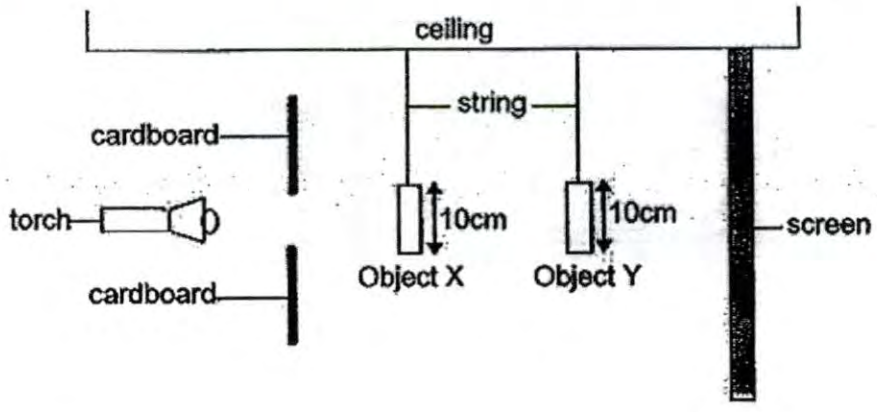
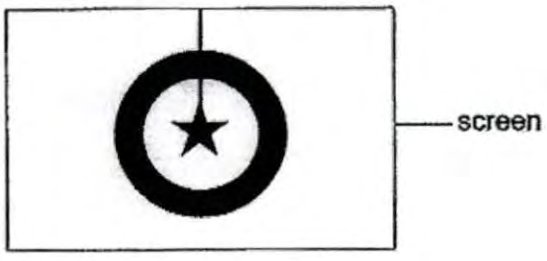
21. Rani prepared the set-up as shown in the diagram below (not drawn to scale). Two objects, X and Y are hung individually from the ceiling with a string. A cardboard with a hole in the middle was placed between the torch and object X.



The diagram below shows their shadows on the screen when the torch is switched on.



Which one of the following options correctly describes the property and shape of objects X and Y?

	X	Y
(1)	opaque ring	opaque star
(2)	opaque star	opaque ring
(3)	transparent ring	transparent star
(4)	transparent star	transparent ring

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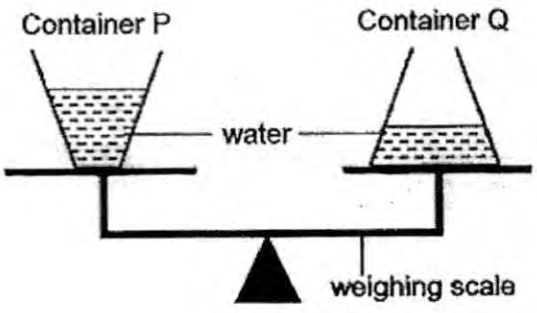
22. Two glass containers, P and Q of the same size and mass contained an equal amount of water. They were placed on a weighing scale and left in an open field under the sun for 7 hours.



Which one of the following statements correctly explains what would happen after 7 hours?

(1) The two containers of water would still balance each other as the containers were of the same size and mass and they each contained the same amount of water.

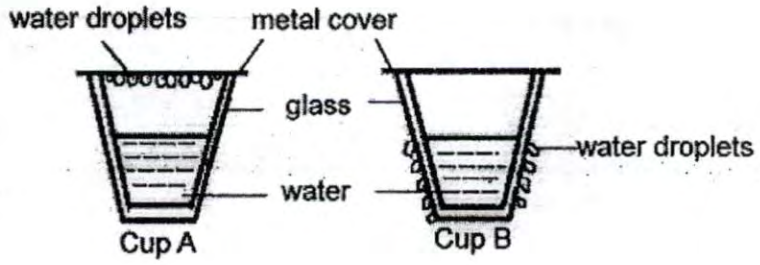
(2) The side with container Q would tilt downwards as there would be less water in container P because there would be more water evaporating from container P.

(3) The side with container P would tilt downwards as there would be less water in container Q because there would be more water evaporating from container Q.

(4) The side with container P would tilt downwards as the water level in container P was higher than that in container Q.

(Go on to the next page)

23. Chris poured an equal amount of water into two cups, A and B. The diagram below shows what Chris observed after 1 minute.

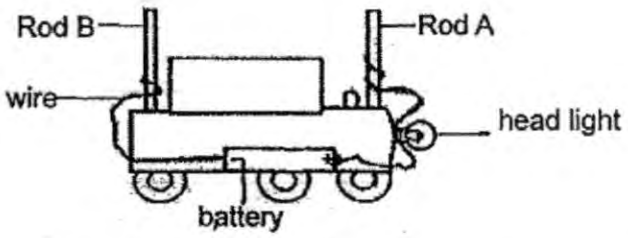


Which one of the following options shows the temperatures of water in cups A and B respectively?

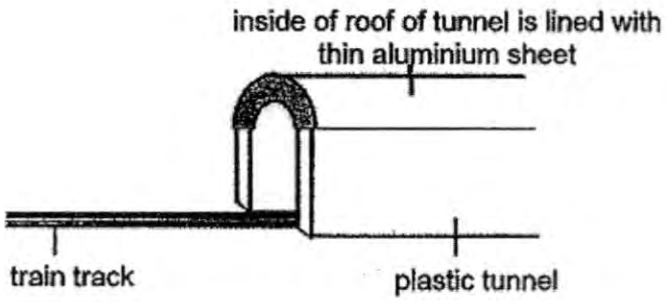
	Cup A (°C)	Cup B (°C)
(1)	30	30
(2)	10	70
(3)	70	10
(4)	70	70

(Go on to the next page)

24. Jenny built a toy train as shown in the diagram below.



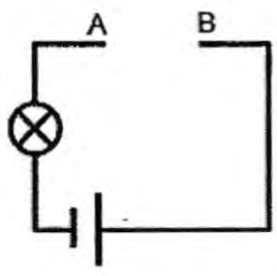
The headlight of the train is operated by a battery and it will only light up when the train enters a plastic tunnel. The plastic tunnel has a roof, which is lined with a thin aluminium sheet as shown in the diagram below.



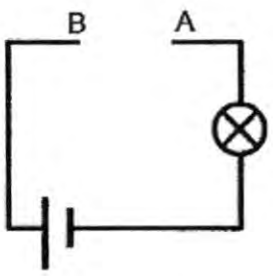
When the train enters the tunnel, Rods A and B touch the roof lined with the aluminium sheet. Thus, the contact between the train and the tunnel causes the bulb to light up.

Which one of the diagrams below shows the circuit diagram of Jenny's toy train when it is **not** travelling in the tunnel?

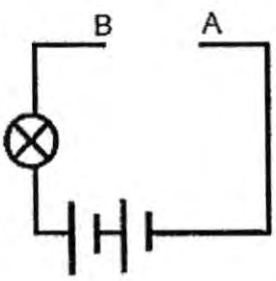
(1)



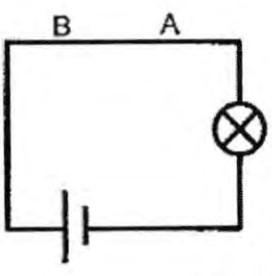
(2)



(3)



(4)



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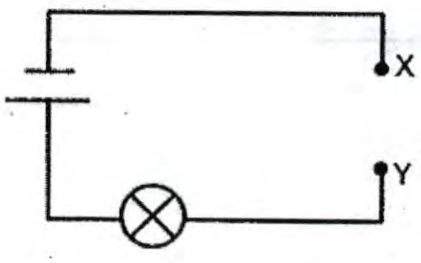
25. Jessie cut 4 pieces of wire, A, B, C and D, each of different length and thickness from the same material. She then set up a circuit as shown in the diagram below.



She used each of the wires to join end X and Y and observed the brightness of the bulb. She then recorded her observations in the table below.

Wire	Length (m)	Thickness (mm)	Brightness of bulb
A	1	0.2	Bright
B	1	0.3	Very bright
C	2	0.2	Dim
D	2	0.3	Bright

Which of the following conclusions could be made from her experiment?

A: As the length of the wire increases, the brightness of the bulb increases.

B: As the length of the wire increases, the brightness of the bulb decreases.

C: As the thickness of the wire increases, the brightness of the bulb increases.

D: As the thickness of the wire increases, the brightness of the bulb decreases.

(1) A and C only

(2) A and D only

(3) B and C only

(4) B and D only

(Go on to the next page)

26. Siti conducted an experiment using a metal block S and a flat wooden plank TU. The plank was placed horizontally as shown in Diagram 1 below.

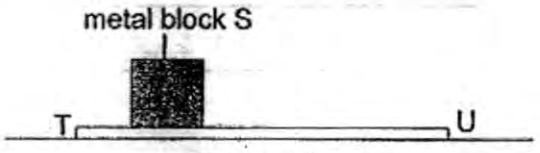


Diagram 1

Siti then raised end T of the plank slightly as shown in Diagram 2 and observed that the block did not slide down.

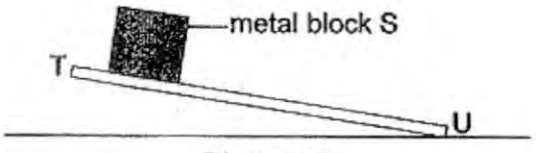


Diagram 2

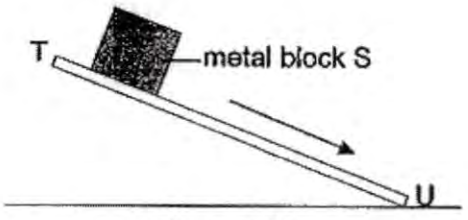


Diagram 3

When end T was raised higher, Siti observed the block sliding down in the direction of the arrow as shown in Diagram 3.

Which of the following statements explain her observations?

A: There is only gravitational force present in Diagram 1 because the metal block S did not move.

B: Metal block S did not slide down in Diagram 2 because the amount of frictional force is equal to the amount of gravitational force.

C: Metal block S slid down in Diagram 3 because the gravitational force is greater than the frictional force.

(1) A only

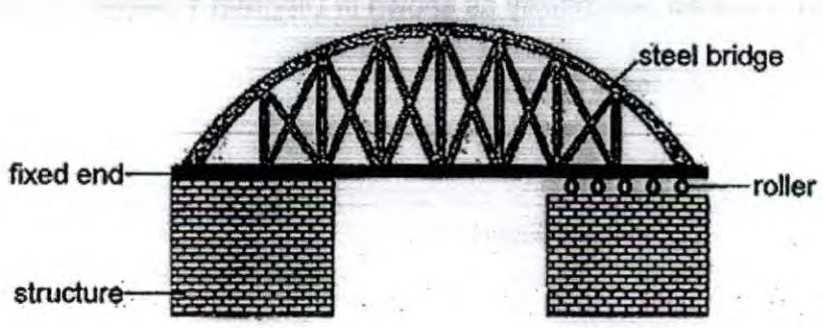
(2) B only

(3) A and C only

(4) A, B and C

(Go on to the next page)

27. The diagram below shows a steel bridge.



Raju discovered that one end of the bridge is fixed securely to the structure while the other end rested on rollers as shown above.

He then made the following statements to explain why one end of the bridge is resting on the rollers.

A: The rollers reduce friction between the structure and the bridge.

B: The rollers allow the bridge to expand on hot days without damaging the structure.

C: It allows the bridge to contract on cold days without damaging the structure.

Which of the statement/s is /are correct?

(1) B only

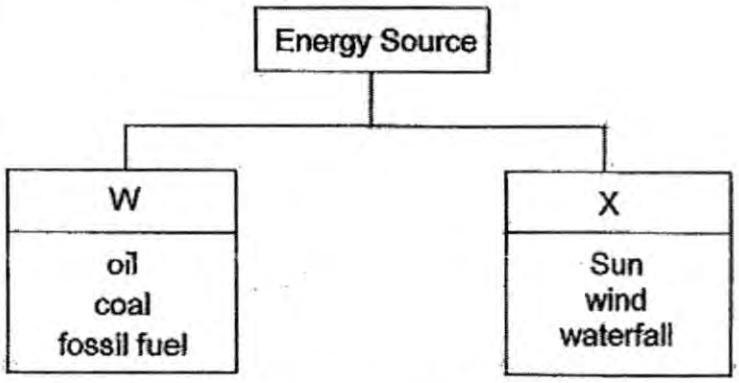
(2) A and B only

(3) A and C only

(4) A, B and C

(Go on to the next page)

28. Study the classification diagram below carefully.



What could the two sub-headings, W and X, be?

	W	X
(1)	Natural	Man-made
(2)	Potential	Kinetic
(3)	Renewable	Non-renewable
(4)	Non-renewable	Renewable

29. Teck Gee and his friends were discussing sources of energy. They made the following statements.

Teck Gee: Food made in the leaves is transported to all parts of the plants.

Umar: Excess food made by plants can be stored as starch, sugar or oil in the plants.

Victor: Excess food that plants make can be stored in different parts of the plant.

Walter: Plants make use of the food that they made for respiration to release energy.

Whose statements are correct?

(1) Umar and Victor only

(2) Teck Gee and Walter only

(3) Teck Gee, Umar and Victor only

(4) Teck Gee, Victor and Walter only

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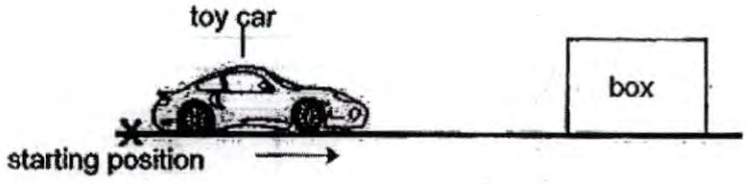
30. A wound-up toy car which was released from the starting position moved along the ground until it hit a box in its path. The toy car stopped moving while the box moved a short distance away.



Which one of the statements shows the conversion of energy that took place?

(1) Elastic potential energy of the car is converted to kinetic energy of the car and eventually is converted to kinetic energy of the box.

(2) Elastic potential energy of the car is converted to sound energy of the car and eventually is converted to potential energy of the box.

(3) Chemical potential energy of the car is converted to kinetic energy of the car and eventually is converted to potential energy of the box.

(4) Chemical potential energy of the car is converted to sound energy of the car. It is then converted to kinetic energy of the car and eventually is converted to kinetic energy of the box.

End of Booklet A2

METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSMENT 2015
PRIMARY6
SCIENCE

BOOKLET B1

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

Name : _____ ( )

Class : Primary 6._____

Date : 5 March 2015

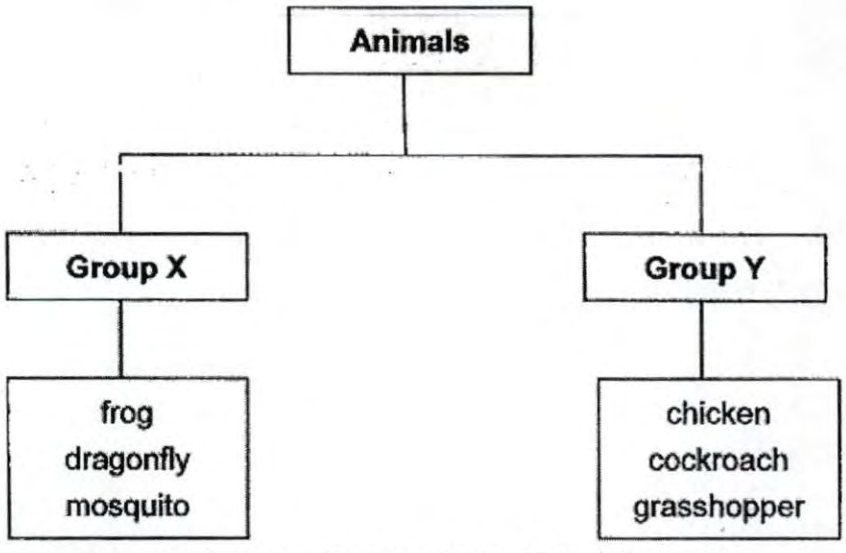
Booklet B1	20

This booklet consists of 8 printed pages including this page.

For questions 31 to 37, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[20 marks]

31. Study the classification diagram below.



(a) Suggest an appropriate heading for Group X and Group Y. [1]

Group X: _____

Group Y: _____

(b) What is the difference between the life cycle of the mosquito and the rest of the other animals? [1]

_____

_____

(c) Write down **two** differences between the young and adult stage of a cockroach. [1]

_____

_____

3

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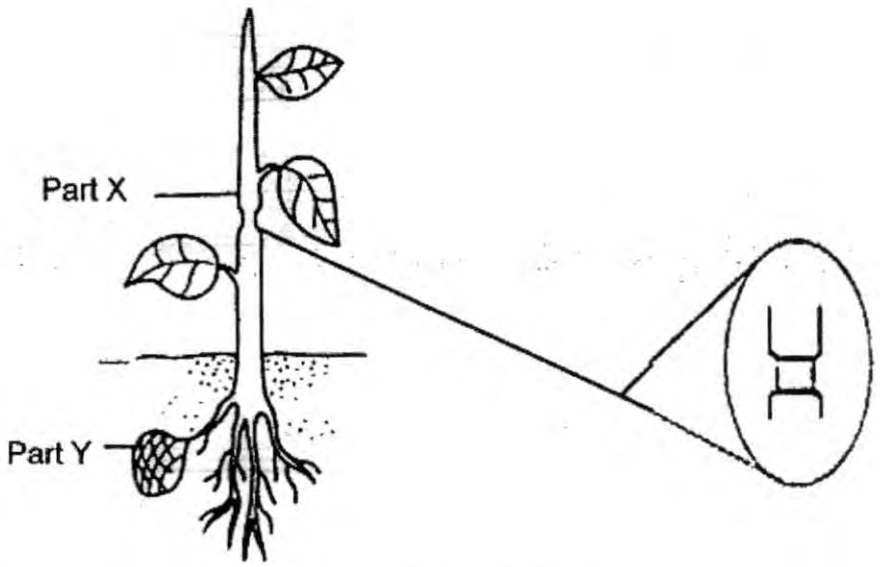
32. Audrey conducted an experiment as shown below.



She removed the outer part of the stem and placed the plant under sunlight.

(a) What substances could still be transported by the plant after the removal? [1]

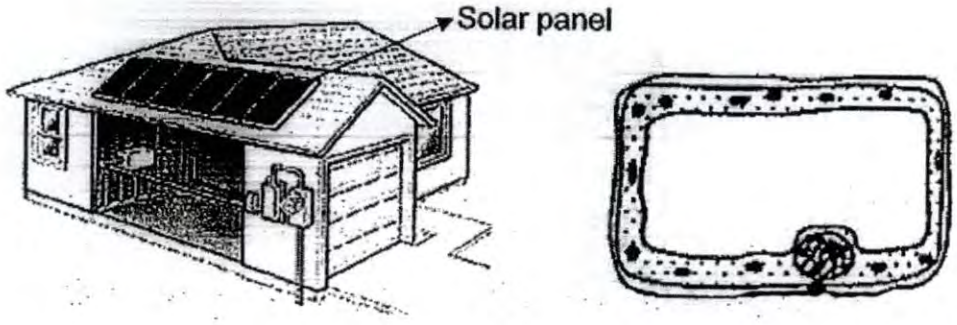
(b) After the plant was placed under sunlight for two hours, Audrey observed that the part X was swollen. Give a reason for her observation. [1]

(c) Audrey observed that Part Y of the plant grew bigger after a week.
Give a reason for ~~your answer.~~ [1]

3

(Go to the next page)

33. The diagram below shows a solar panel fixed on top of the roof of the house and a plant cell.

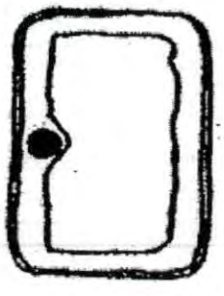


(a) Which part of the plant cell has the same function as the solar panel? Explain your answer. [1]

(b) State the energy conversion when plants make food.

energy	→	energy

(c) The cell below is taken from a plant.

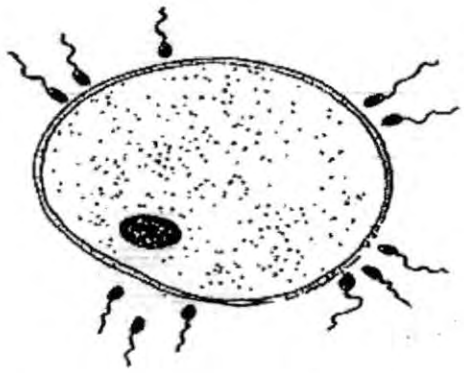


Explain why the plant cell does not have the part mentioned in (a). [1]

3

(Go to the next page)

34. The diagram below shows two types of cells.

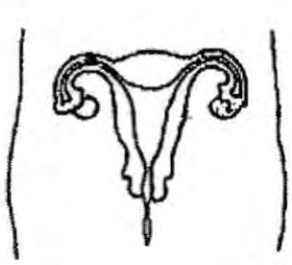


(a) Why does the male release millions of sperms while the female body releases one egg at a time? [1]

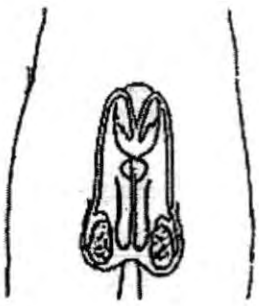
_____

_____

(b) **Draw and label** the organs that produce eggs and sperms respectively. [1]



Female reproductive system



Male reproductive system

(c) How are the characteristics from each parent passed on to their offspring? [1]

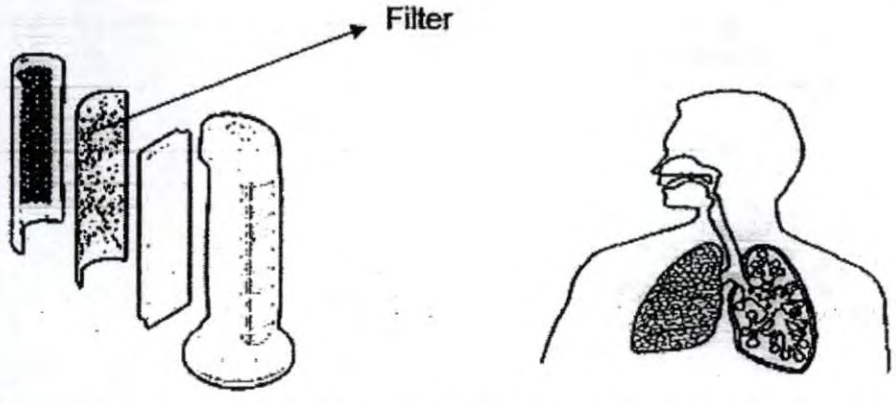
_____

_____

3

(Go to the next page)

35. The diagram below shows an air purifier system and the human respiratory system.



An air purifier makes use of a filter to remove dust particles in the air to make it cleaner for us to breathe.

(a) Which organ in the human respiratory system performs the same function as the filter in the air purifier? Describe the function of this organ. [1]

_____

_____

(b) What is the difference between the amount of oxygen in the blood leaving the lungs and the blood that is entering the lungs? [1]

_____

_____

(c) Cigarette smoke can damage the walls of the air sacs in the lungs.
Explain how the damaged air sacs reduce the amount of oxygen in the blood. [1]

_____

_____

3

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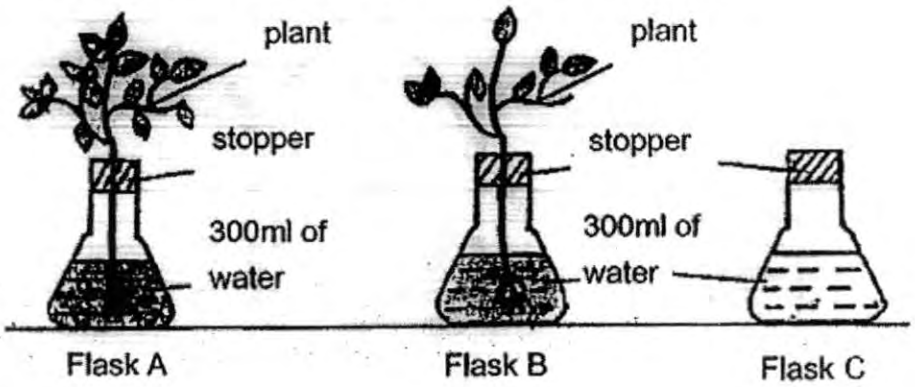
36. An experiment was set up in the same location as shown below.



The volume of water left in each flask was measured and recorded daily for 3 days, as shown in the table below.

Day	Volume of water(ml)		
	Flask A	Flask B	Flask C
1	300	300	300
2	260	280	300
3	210	250	300

(a) What is the aim of the experiment? [1]

(b) What is the purpose of Flask C? [1]

(c) Explain why there is a difference in the amount of water left in Flask A and Flask B at the end of the experiment. [1]

3

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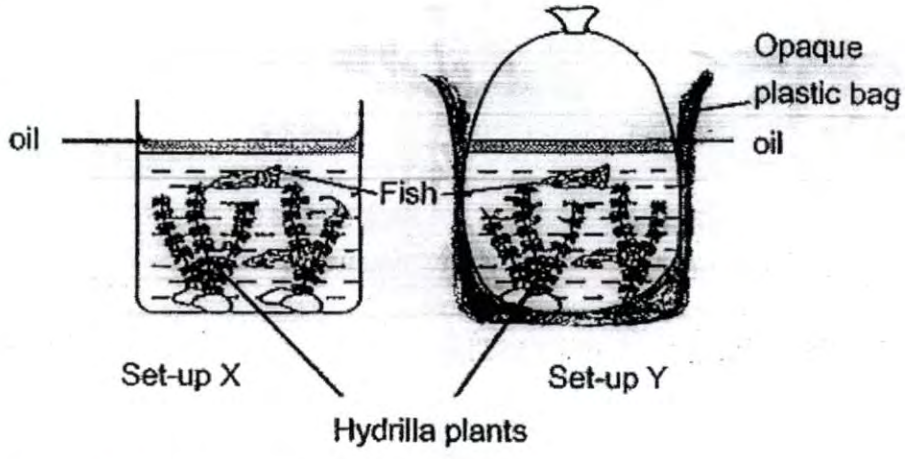
37. Jason prepared two set-ups, X and Y and placed them in a room near the window.



(a) Why did Jason add a layer of oil to the two set-ups? [1]

(b) In which set-up, X or Y, will the fish die first? Explain your answer. [1]

(c) How do the fish help the hydrilla plants in Set-up X grow healthily? [1]

3

(Go to the next page)

METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSENT 2015
PRIMARY 6
SCIENCE
BOOKLET B2

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

Name: _____ ( )

Class: Primary 6._____

Date: 5 March 2015

Booklet A1 & A2	60
Booklet B1	20
Booklet B2	20
Total	100
Parent's Signature	

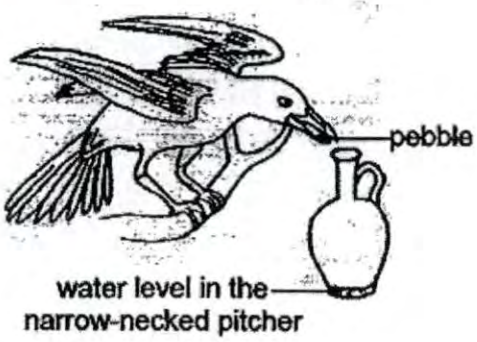
This booklet consists of 10 printed pages including this page

For questions 38 to 44, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[20 marks]

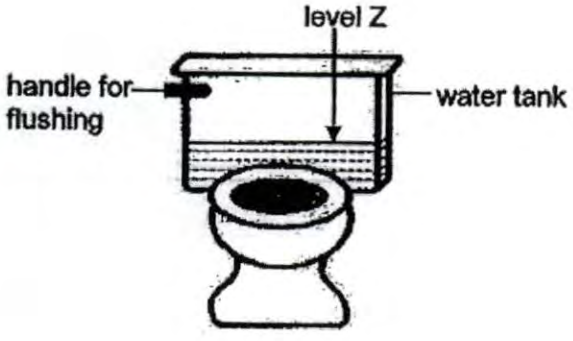
38. Lisa read a snippet of the fable "The Crow and the Pitcher" as shown below.

'One day, a weak and thirsty crow was delighted when he found a narrow-necked pitcher. However, his happiness was short lived when he realized that there was only a little water at the bottom of the pitcher. He then gathered many pebbles and one by one, dropped them into the pitcher....'



(a) Explain how dropping pebbles into the pitcher would eventually allow the crow to drink the water in the pitcher. [1]

Lisa studied the water tank used for flushing a toilet bowl. She discovered that the flushing and re-filling of the system takes place in the water tank and that after flushing, water enters and refills the tank until it reaches level Z.



1

(Go on to the next page)

(b) What could Lisa add to the water tank to help reduce the amount of water used to refill the water tank? [1]

_____

_____

(c) What are the two important properties of material must the object that Lisa is adding in (b) have? [1]

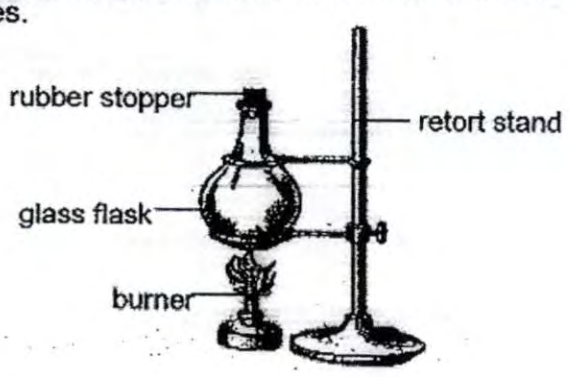
Property 1: _____

Property 2: _____

2

(Go on to the next page)

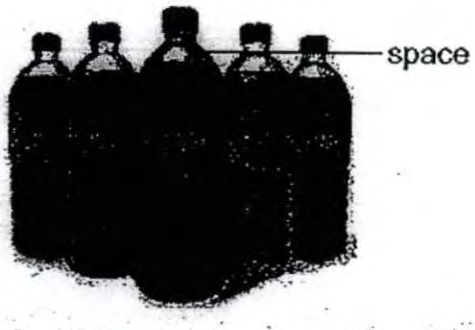
39. Shakeera heated an empty glass flask over a burner as shown in the diagram below for 30 minutes.



(a) What would happen to the rubber stopper after 30 minutes of heating? [1]

(b) Explain your answer in (a) [1]

The diagram below shows some bottles of carbonated drinks.



(c) Give a reason why the bottled drinks are often not filled to the brim in the bottles during packaging. [1]

3

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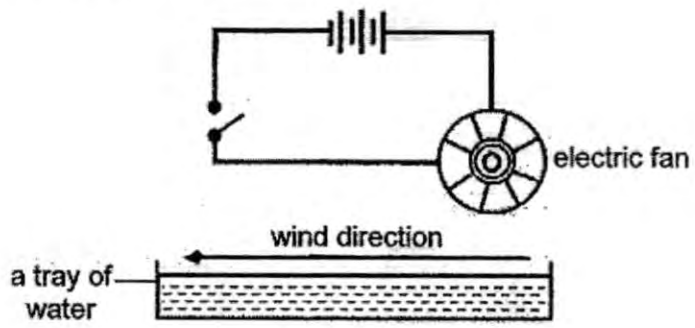
40. Ah Seng wanted to determine if wind has an effect over a 500 ml tray of water. He connected an electric fan to the electric circuit and set up the apparatus as shown in the diagram below.



(a) What would happen to the water level in the tray an hour later when the switch was closed? Explain your answer. [1]

(b) What is the relationship between the speed of the wind created by the electric fan and the rate of evaporation of water in the tray. [1]

(c) How would his results change if he were to add ice to the tray of water? Give a reason for your answer. [1]

3

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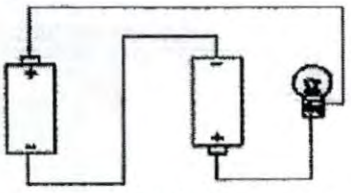
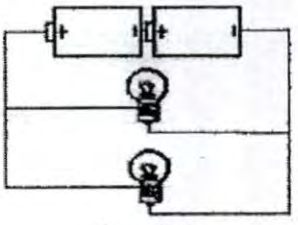
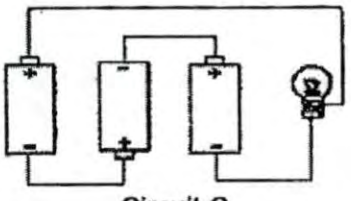
41. Study the following Circuits A, B, C and D as shown below. The batteries and bulbs used in all the circuits are similar and new.



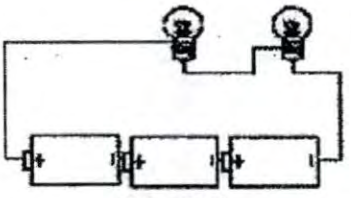
Circuit A



Circuit B



Circuit C



Circuit D

(a) The statements about the bulbs in each circuit are given below. Indicate whether each of the statements is **true** or **false** by writing the letter '**T**' or '**F**' in the boxes provided. [2]

	Statement	T or F
(i)	Bulb in Circuit A will light up.	
(ii)	Bulbs in Circuit B will be equally bright.	
(iii)	Bulb in Circuit C is the brightest compared to bulbs in the other circuits.	
(iv)	Bulbs in Circuit C is as bright as both bulbs in Circuit D.	

(b) When another battery was added to Circuit C, the bulb lit up very brightly for a short while and then it went off. Explain why the bulb only lit up for a short while. [1]

_____

_____

3

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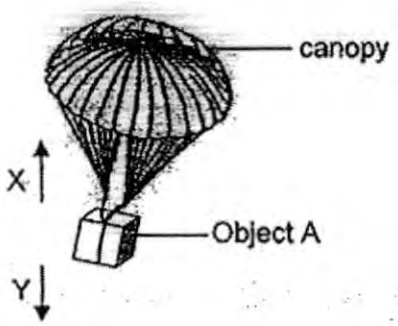
42. The diagram below shows Object A attached to a toy parachute.



(a) Two forces, X and Y, were acting on Object A. The arrows show the direction of the two forces. Name the forces, X and Y. [1]

X: _____

Y: _____

(b) Suggest two changes to the parachute which would increase Force X? [1]

(i) _____

(ii) _____

(c) Would Object A reach the ground faster if the canopy was removed? Explain your answer. [1]

_____

_____

3

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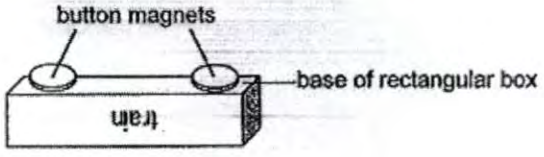
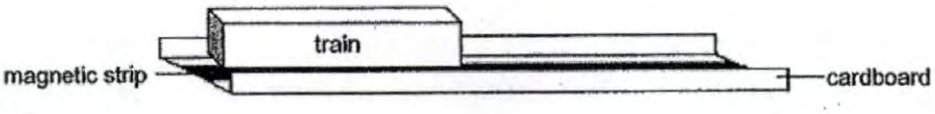
43. Rani wanted to make a model of a Maglev train. She stuck two button magnets at the base of a rectangular box as shown in the diagram below.



Next, she stuck a long magnetic strip onto a cardboard to make a track for the train as shown in the diagram below.

When Rani placed the train above the track as shown in the diagram below, the train could 'float' above the track.



(a) Why was the train able to 'float' above the track? [1]

(b) Why is the Maglev train able to move faster compared to a train that runs on a track? [1]

2

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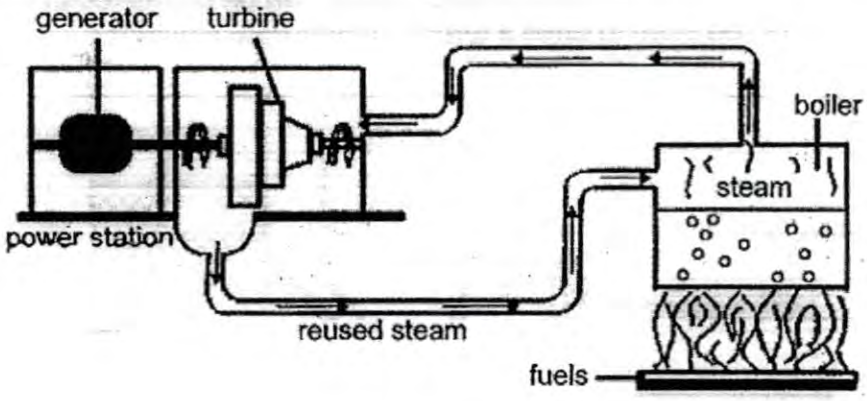
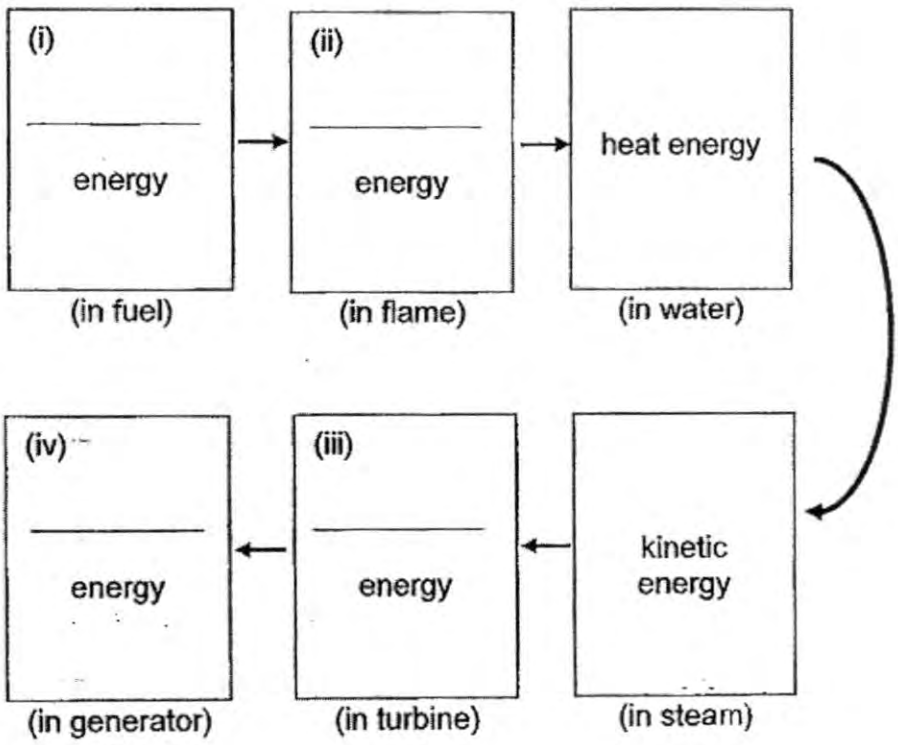
44. The diagram below shows how electrical energy is generated. Fuels are burnt to boil water and produce steam which then drives a turbine to generate electricity.



(a) Fill in the blanks with the main forms of energy to show the energy conversion that takes place in the power station. [1m]



1

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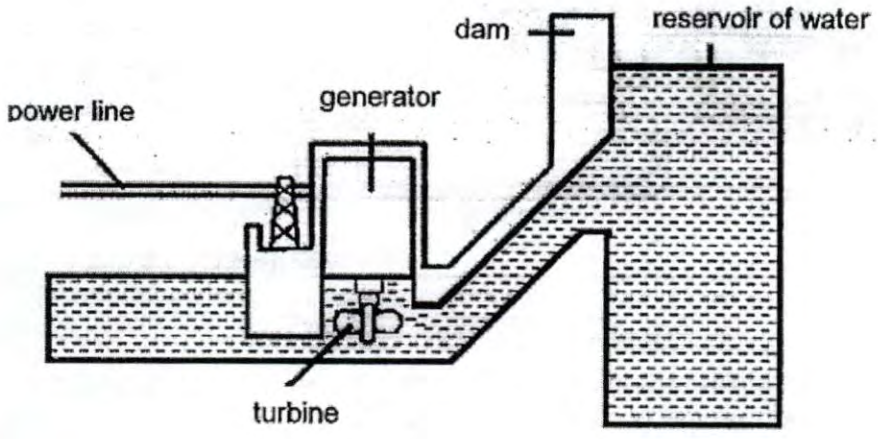
The diagram below shows how electrical energy is produced in a hydroelectric power station. When water is released from a great height from the reservoir, it will possess gravitational potential energy which can be converted to kinetic energy. This can be used to drive a turbine to generate electricity.



(b) State two advantages of using this method to generate electricity. [2]

(i) _____

_____

(ii) _____

_____

2

End of Booklet B2

EXAM PAPER 2015

SCHOOL : MGS

SUBJECT : P6 SCINECE

TERM : CA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	2	3	2	3	3	1	2	3
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
2	3	2	2	1	3	1	3	1	2
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
1	2	3	2	3	4	4	4	4	1

31)a)X: Lays eggs in water. Y: Lays eggs on land.

b)The mosquito has four stage life cycle while the others has three.

c)The young of cockroach cannot fly while the adult stage of a cockroach can. The adult stage of the cockroach is able to reproduce but the young cannot.

32)a)Water and mineral salts.

b)The rood made by the leaves could not travel down the part that had been removed as the phloem tube that it travels down had been cut off.

c)The leaf under the cut was able to make food and transport the food to be stored in part.

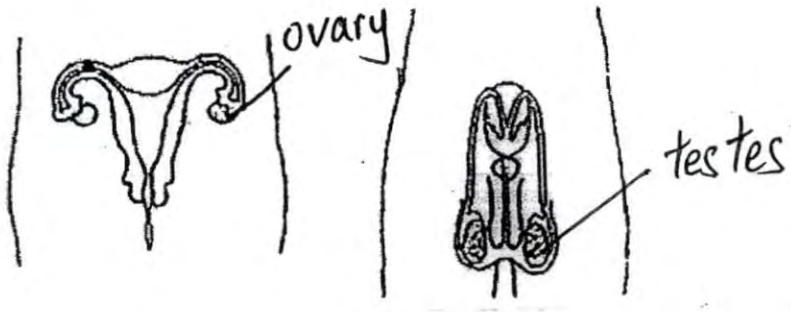
33)a)The chloroplast. The chloroplast absorbs sunlight needed for photosynthesis whereas the solar panel absorbs sunlight to be converted into electrical energy.

b)Light energy→Chemical potential energy

c)The plant cell might be taken from the stem or the leaves where is not needed as they do not need to absorb sunlight.

34)a)To increase the chances of fertilization.

b)



c)The egg that carries the genes from the female fuses with the sperm that carries the genes from the male.

35)a)The nose. The nostrils in the nose has hair in it to trap dust particles that passes through it.

b)The amount of oxygen is more in the blood that leaves the lungs that the blood that is netering the lungs.

c)Damaged air sacs will greatly reduce the surface area. Hence, less air das exchange takes place in the lungs, which will then reduce the amount of oxygen in the blood.

36)a)To find out if the number of leaves affects the amount of water the plant takes in.

b)Flask C acts as a control for to show that the plant is the factor that affect water loss in the Falsk.

36)c)More water is taken in by the plant with more leaves in Flask A as water is needed for photosynthesis.

37)a)To ensure that no water evaporates.

b)Set up Y. The plants were not able to photosynthesis as the set up was covered as in opaque plastic bag so there was insufficient oxygen for the fish to be alive.

c)The fish would be able to give out carbon dioxide needed for the hydrilla plant to make food for photosynthesis.

38)a)The pebbles will take up inside the pitcher. The water level in the pitcher will be higher and eventually reach the top. Hence, the crow will be able to drink the water.

b)Place some plasticine /pebbles/rocks/stores/brinks

c)1)It must be able to sink.

2)It must be waterproof.

39)a)The rubber stopper will pop out.

b)The hot air inside the flask would gain heat and expand and push the stopper out.

c)This is to allow space inside the bottle for expansion of the liquid so that the bottle will not burst.

40)a)The water level will decrease. The electric fan would increase the rate of evaporation.

b)The faster the rate of the wind speed, the faster the rate of evaporation.

c)There would be more water left in the because evaporation rate would be slower.

41)a)i)F ii)T iii)T iv)F

b)The bulb fused after too much electric current flowing in it.

42)a)X: Frictional force/ Air resistance

Y: Gravitational force /pull

b)i)Increase the size of the canopy

ii)Use a rougher material

c)Yes, without the canopy, the frictional force/ air resistance is reduced.

43)a)The like poles of the button magnets on the train and the magnets on the track face each other so that they repel.

b)There is no direct contact between the train wheels and the tracks so friction reduced and the maglev train can go faster.

44)a)i)Chemical potential energy ii)Heat energy

iii)Kinetic energy iv)Electrical energy

b)i)It does not cause pollution.

ii)It is renewable.