NAME : _____( )

CLASS: PRIMARY 4_____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Second Continual Assessment

2010

Primary 4 SCIENCE

(BOOKLET A)

26 August 2010

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

30 questions
60 marks

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

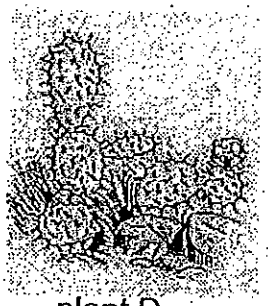
Answer all questions.

This paper consists of 18 printed pages.

Section A (30 X 2 marks)

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

1. Mandy compared the plants, D and E, as shown below.



plant D

plant E

She made the following observations:

A Plant D has no leaves.
B Plant D has no stem.
C Plant E has flowers.
D Plant E has weak stem.

Which of her observations are correct?

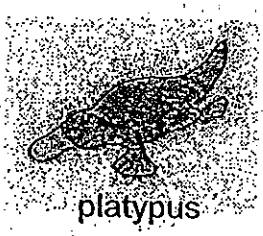
(1) A and B
(2) A and D
(3) B and C
(4) C and D

2. Study the animals below.

cat

spiny anteater

rabbit



platypus

Which of the following describes the common characteristics of all the above animals?

A Covered with hair
B Has 4 legs
C Give birth alive
D Produce milk for their babies

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

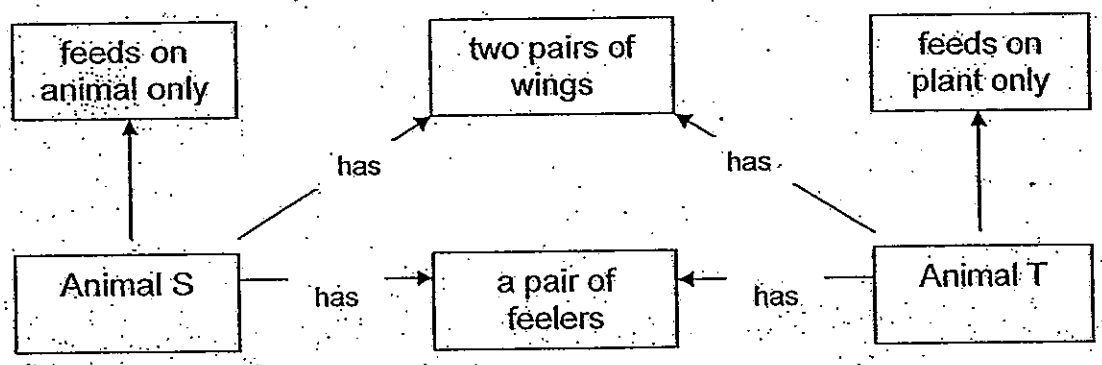
3. Sally conducted an experiment by putting animal X, some dried leaves and a piece of meat into a box. She recorded the mass of the leaves and the meat for a period of time as shown in the table below.

	The mass of	
	dried leaves	meat
Day 1	50 g	50 g
Day 3	35 g	50 g
Day 5	20 g	50 g
Day 8	5 g	50 g

Animal x is most likely to be a _____.

(1) ladybird
(2) millipede
(3) grasshopper
(4) praying mantis

4. Study the concept map below carefully.



Which of the following animals represents animal S and T correctly?

	Animal S	Animal T
(1)	Grasshopper	Praying Mantis
(2)	Dragonfly	Butterfly
(3)	Grasshopper	Bee
(4)	Butterfly	Grasshopper

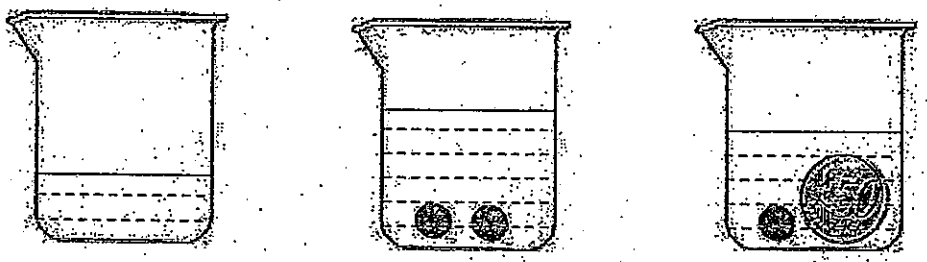
5. Xavier watered a potted plant with water mixed with blue ink for 2 days. On the second day, he observed that some parts of the flowers and leaves had turned blue.

Which of the following statements are the correct reasons for Xavier's observation?

A Water is transported to the leaves.
B Water is transported to the flowers.
C Water is absorbed by the roots hairs.
D Water is transported through the tiny tubes in the stem.

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

6. Janice wanted to find out the volume of some marbles and a coin. She carried out an experiment using the set up shown below. First, she filled up a beaker with 50 cm^3 of water. She then added two marbles and recorded the reading of the new water level. Lastly, she removed one marble and added a coin and recorded the water level as shown below.

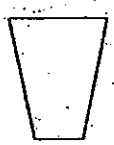


50 cm^3 100 cm^3 90 cm^3

Based on the results of ~~his~~ her experiment above, what is the volume of two coins and one marble?

	Volume of	
	two coins	one marble
(1)	25 cm^3	30 cm^3
(2)	30 cm^3	25 cm^3
(3)	40 cm^3	50 cm^3
(4)	100 cm^3	90 cm^3

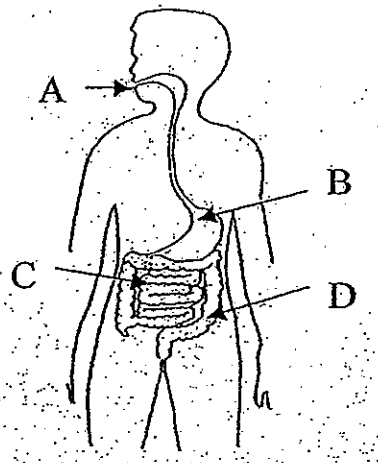
7. Fann classified four objects into two groups as shown below.

Group S	Group T
 newspaper	 drinking glass
 styrofoam cup	 cooking pot

The objects are grouped according to the property of _____.

(1) hardness
(2) ability to sink or float
(3) ability to absorb water
(4) degree of transparency

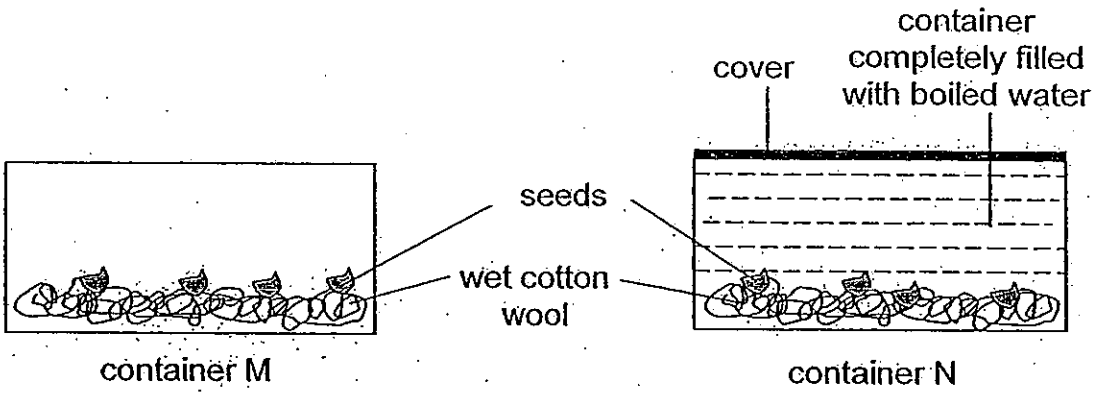
8. The diagram below shows a human digestive system.



Which part of the digestive system absorbs the most amount of the water into the circulatory system?

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

9. Felicia carried out an experiment on the growing of seeds using two containers, M and N as shown in the diagram below.



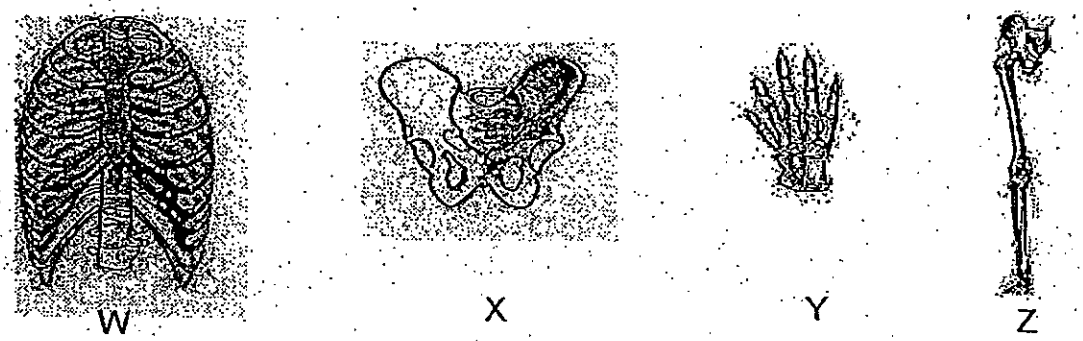
After 2 days, the seeds in container M grow into seedlings but not the seeds in container N.

Based on the experiment above, which one of the following conditions allows the seeds in container M to grow into seedlings but not the seeds in container N?

(1) amount of air
(2) amount of light
(3) amount of water
(4) conducive temperature

10. The diagram below shows a human skull.

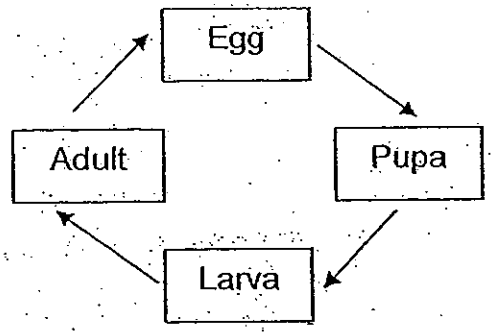
Which of the following structure(s) has/have the same function as the one shown above?



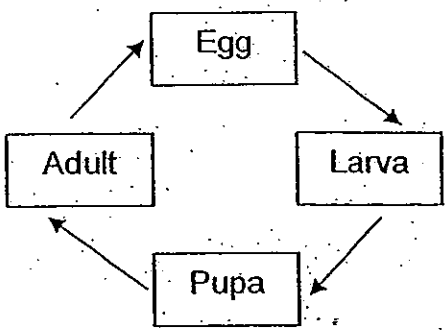
(1) W only
(2) X only
(3) Y and Z only
(4) W and X only

11. Joann spotted a cocoon on a leaf in her garden. Which one of the following diagrams shows the correct life cycle of the insect?

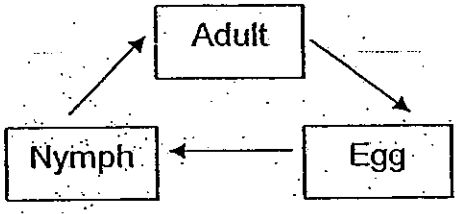
(1)



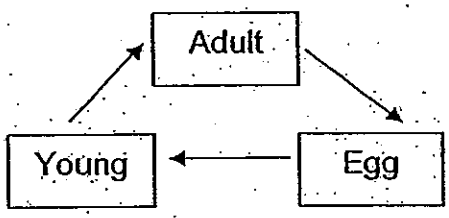
(2)



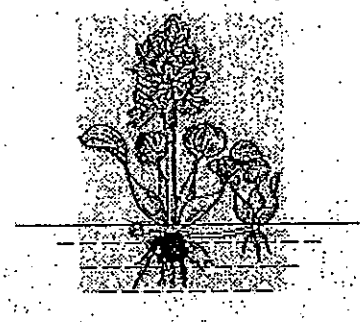
(3)



(4)



12. The diagram below shows a water hyacinth plant.



Which statement(s) below describe(s) how useful are the roots of the water hyacinth to the plant?

A The roots store food for the plants.
B The roots help to make food for the plant.
C The roots transport water and food throughout the plant.
D The roots absorb water and mineral salts from the water.

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

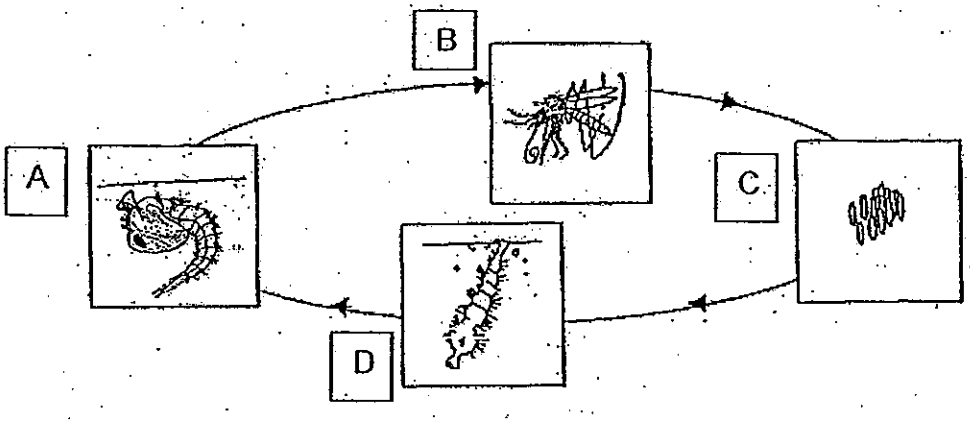
13. Faridah did a study on two animals, X and Y. She drew a checklist and placed a tick (✓) in the box when she made the observation. At the end of her study, the completed checklist is as follows:

Observation	Animal X	Animal Y
It has six legs.	✓	✓
Eggs are laid in water.	✓	
There are three stages in the life cycle.		✓

Which one of the following represents animal X and Y correctly?

	Animal X	Animal Y
(1)	frog	butterfly
(2)	butterfly	cockroach
(3)	mosquito	frog
(4)	mosquito	cockroach

14. The diagram below shows the life cycle of a mosquito.



At which stage of its life cycle is the mosquito most harmful to Man and why?

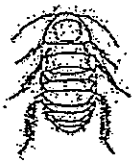
	Stage	Reason
(1)	A	It can swim and spread mosquito-borne diseases.
(2)	B	It can fly and spread mosquito-borne diseases.
(3)	C	It cannot be seen easily and it is poisonous.
(4)	D	It has spikes that can cause swelling when stung.

15. Which of the following organism(s) has/have a similar life cycle of a Lady's Finger plant?

A cucumber plant
B ladder fern
C brown mushroom
D balsam plant

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

16. The pictures below show a cockroach nymph and a butterfly.



cockroach nymph

butterfly

Based on your observation, which of the following statements is/are true about the cockroach nymph and the butterfly?

A Both have wings.
B Both have 6 legs.
C Both feed on plants.
D Both have a pair of feelers.

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

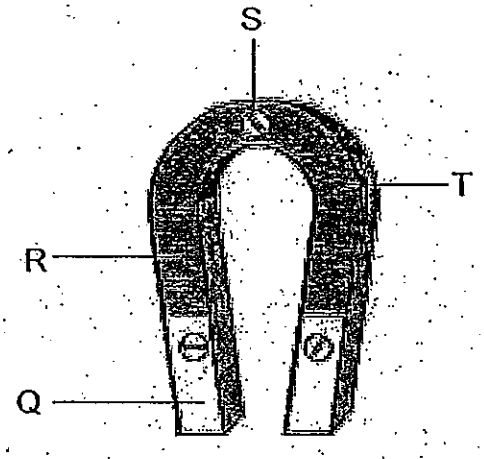
17. Gregory conducted an experiment to test the strength of different magnets. He recorded his observations in the table below.

Magnet	Distance between the magnet and nails (cm)	Number of nails attracted
U	5	3
V	5	6
W	8	5
X	10	6

Which one of the magnets is the strongest?

(1) Magnet U
(2) Magnet V
(3) Magnet W
(4) Magnet X

18. Simon used the magnet below to attract some paper clips.



Which one of the following shows the most likely number of paper clips attracted to parts Q, R, S and T of the magnet?

	Number of paper clips attracted at part			
	Q	R	S	T
(1)	6	2	6	4
(2)	4	6	2	6
(3)	6	4	4	6
(4)	6	4	2	3

19. A group of boys were describing the property of magnets.

Bernard	All metals are magnetic materials. ✗
Colin	All magnets are made of metal. ✗
David	Magnet can attract and repel all metals.
Elvin	All magnets have two poles. ✓

Whose statement(s) is/are correct?

(1) Colin only
(2) Elvin only
(3) David and Elvin only
(4) Bernard and Colin only

20. Diagram 1 shows a magnet held near rod A which is tied to a string. A lit candle is then placed near to one end of rod A as shown in diagram 2. After some time, rod A started to move towards the magnet.

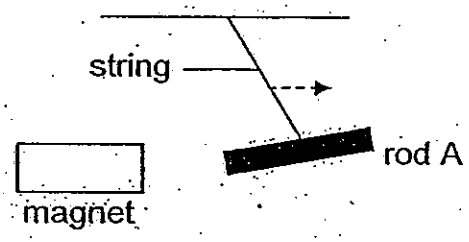


diagram 1

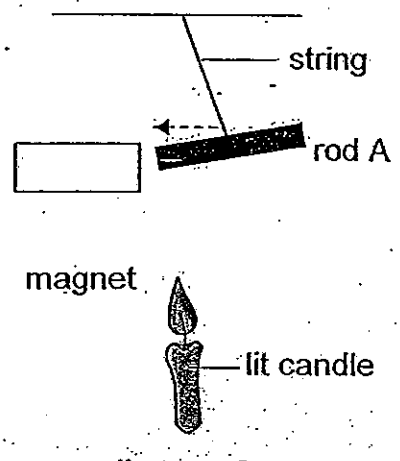


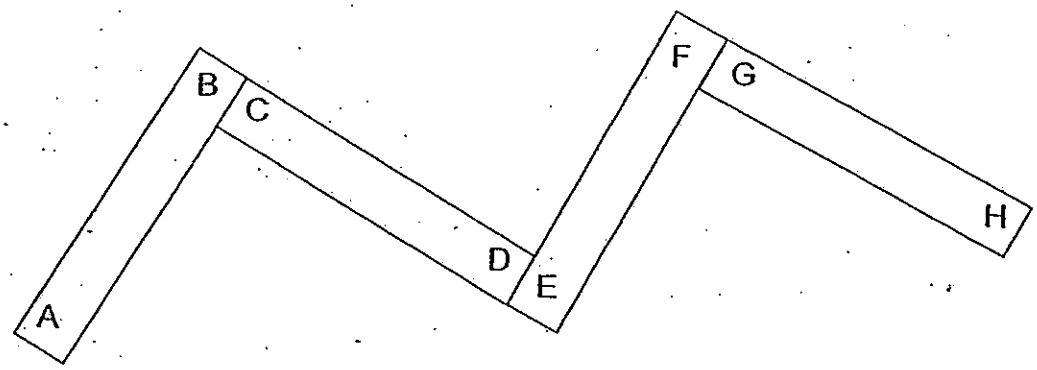
diagram 2

Which of the following caused rod A to move towards the magnet?

A Rod A expanded when heated.
B Rod A was attracted by the magnet.
C Rod A lost some of its magnetic force.
D Rod A gained magnetic force from the lit candle.

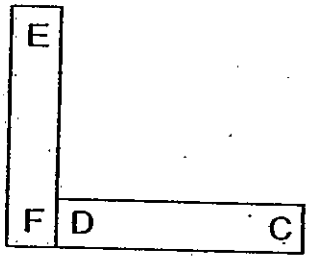
(1) A only
(2) C only
(3) B and D only
(4) C and D only

21. The diagram below shows a number of magnets attracted to each other.

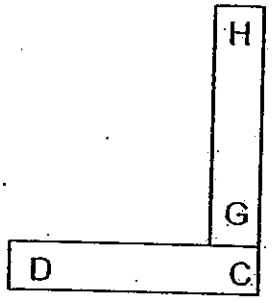


Which of the following diagrams shows a possible arrangement of two of the magnets?

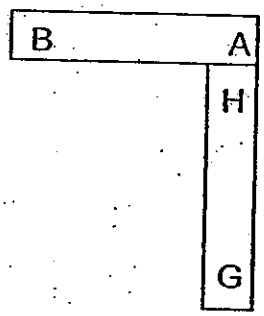
(1)



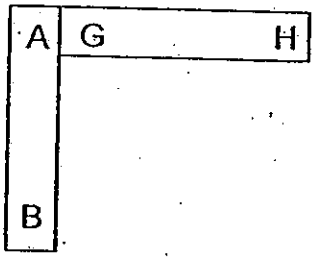
(2)



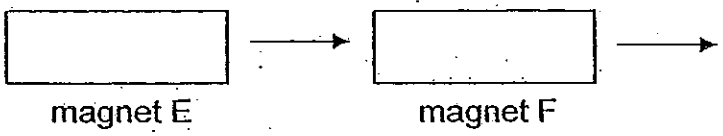
(3)



(4)



22. When magnet E was brought near magnet F, magnet F moved away from magnet E.



What conclusion can be made from the above observation?

(1) Magnet F is stronger than magnet E
(2) Magnet E is attracting while magnet F is repelling.
(3) The like poles of magnet E and magnet F are facing each other.
(4) The unlike poles of magnet E and magnet F are facing each other.

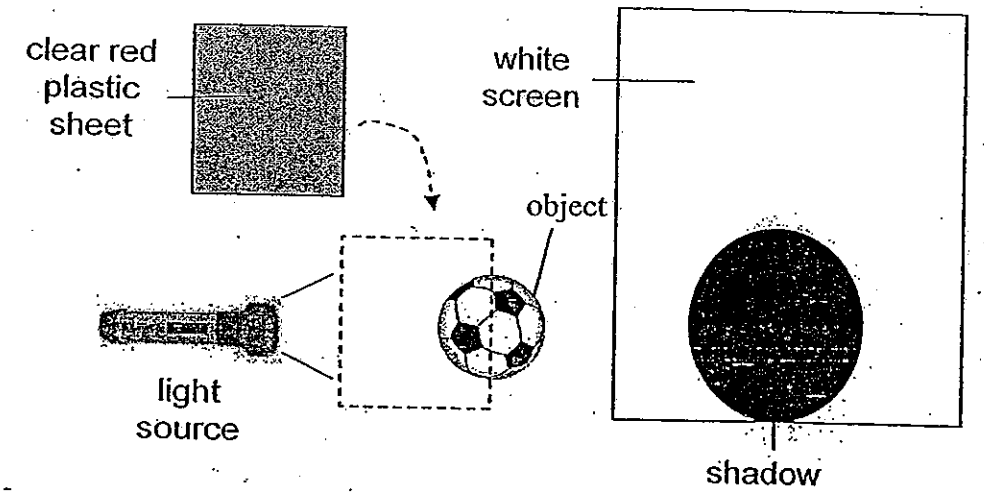
23. Miss Tan asked four children how is a shadow of an object formed. The children gave their responses as follow.

Elise	
~~Elaine~~	The object is opaque.
Dennis	The path of light is blocked.
Gladys	The light travels in a straight line.
Kelly	The light can be reflected by an object.

Whose statements explain how the shadow of the object is formed?

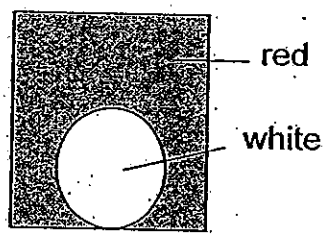
(1) Elise and Gladys
(2) Dennis and Gladys
(3) Elise, Dennis and Gladys
(4) Elise, Dennis, Gladys and Kelly

24. When an object was put between the light source and the white screen, a shadow was formed on it as shown below.

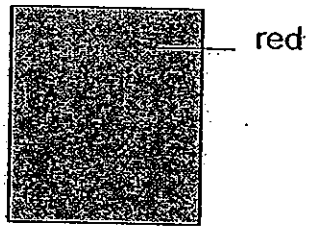


Which one of the following could be observed on the white screen when a clear red plastic sheet was put between the light source and the object?

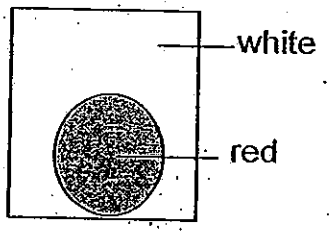
(1)



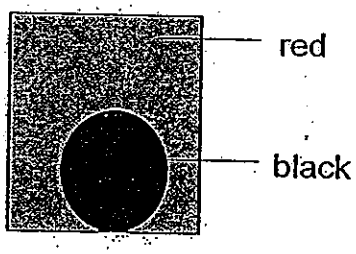
(2)



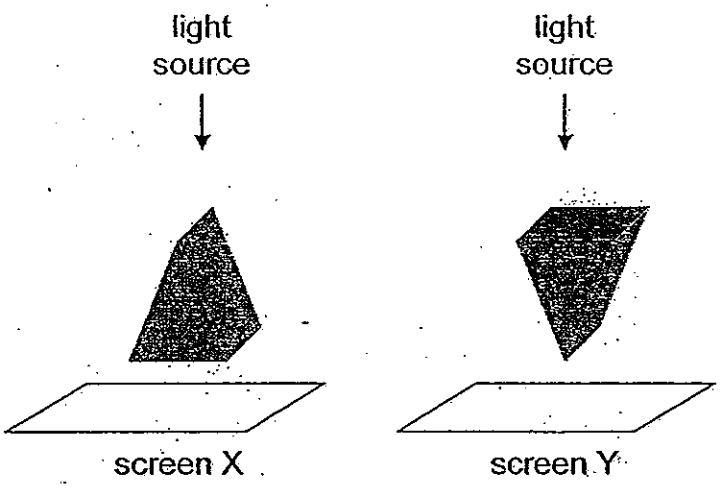
(3)



(4)



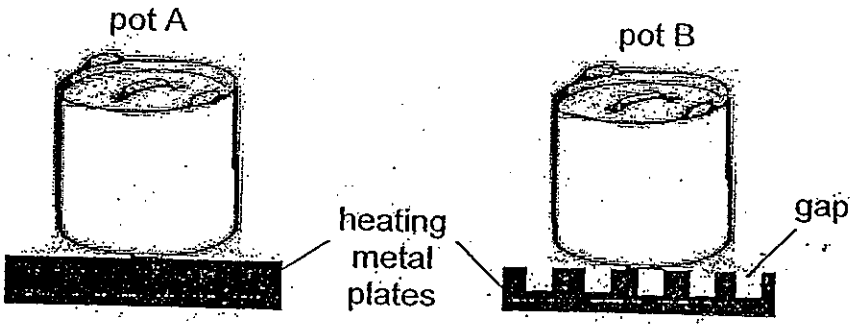
25. Jack conducted an experiment with an object under the same light source in a dark room. Shadows were formed on screen X and Y as shown below.



Which of the following shadows would be observed on screen X and Y?

	Screen X	Screen Y
(1)		
(2)		
(3)		
(4)		

26. Two identical pots were filled with the same amount of water to be given the same amount of heat to boil. Both pots were placed on two different type of heating metal plates. Which pot of water will boil first and why?



	Pot	Reason
(1)	A	Pot A has more heat than pot B.
(2)	A	Pot A has a greater contact surface with the heating metal plate than pot B.
(3)	B	Pot B has more heat than pot A.
(4)	B	Pot B receives more direct heat through the gaps than pot A.

27. Four students were each given a piece of ice to hold. After some time, they were asked to explain why the piece of ice melted in their hands. The table records their explanations.

Student	Explanation
Alice	The ice loses its cool and so it melts.
Bernice	The hand takes the cold from the ice causing it melt.
Catherine	Heat from the hand melts the ice.
Dazerbella	The ice loses its heat to the hand and melts.

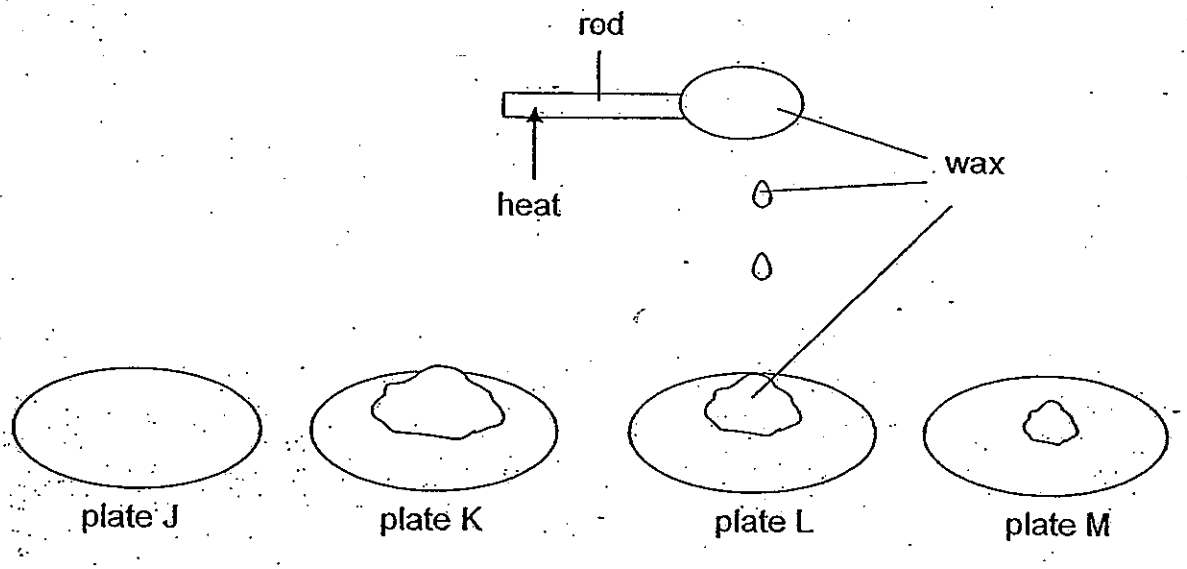
Whose explanation is correct?

(1) Alice
(2) Bernice
(3) Catherine
(4) Dazerbella

28. Mother gave Mavis a sweater to put on when she felt cold. How does the sweater help Mavis to keep warm?

(1) The sweater has heat energy that keeps Mavis warm.
(2) The sweater traps Mavis' body heat and warms her body.
(3) The sweater prevents the cold air from cooling her body further.
(4) The sweater absorbs heat from its surrounding to keep Mavis warm.

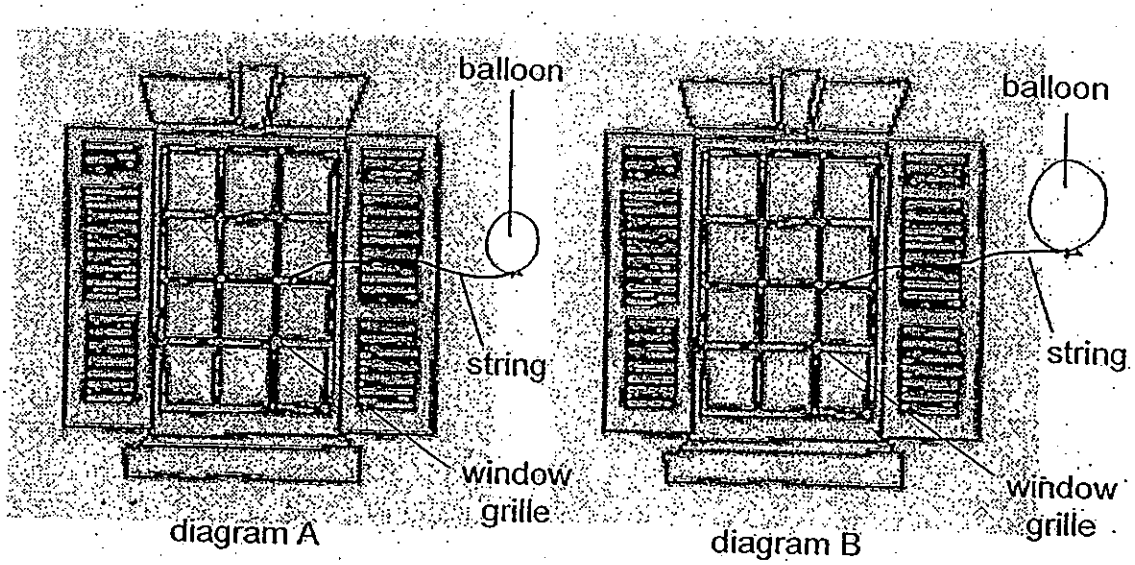
29. Megan has four similar rods made up of different materials, iron, wood, plastic and glass. One end of each rod had a layer of wax of the same size. She heated each rod for one minute and collected the melted wax on four separate plates, J, K, L and M, as shown below.



Based on the amount of solidified wax collected on the plates, which plate, J, K, L or M, is most likely to have collected the wax from the rod that is made of iron?

(1) Plate J only
(2) Plate K only
(3) Plate L only
(4) Plate M only

30. Mary was given a small balloon. She put the balloon through her window grille without having to squeeze through it and tie it so that it would not fly away as shown in diagram A below.



After 3 hours in the sun, she decided to bring the balloon in. She found it difficult to pull the balloon through the same window grille as shown in diagram B. What had happened to the balloon that caused it unable to go through the window grille?

(1) The air in the balloon has expanded.
(2) The rubber of the balloon has expanded.
(3) The wind blew in more air into the balloon.
(4) The balloon has absorbed more air outside the window.

- End of section A -

NAME : _____( )

CLASS: Primary 4 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Second Continual Assessment

2010

Primary 4 SCIENCE

(BOOKLET B)

26 August 2010

Booklet A	60
Booklet B	40
Total	100

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

14 questions
40 marks

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Answer all questions.

_____
Parent's Signature/Date

This paper consists of 14 printed pages.

Section B (40 marks)

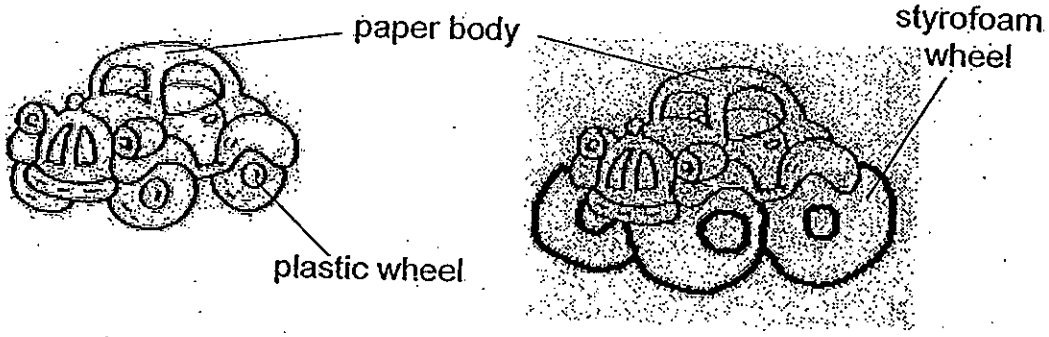
For questions 31 to 44, write your answers in this booklet.

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

---

31. James wanted to conduct an experiment to find out whether the material he used to make a toy car would affect the distance it travels. He made two cars, A and B, with two different materials as shown below.

His teacher told him that his test was not a fair one.

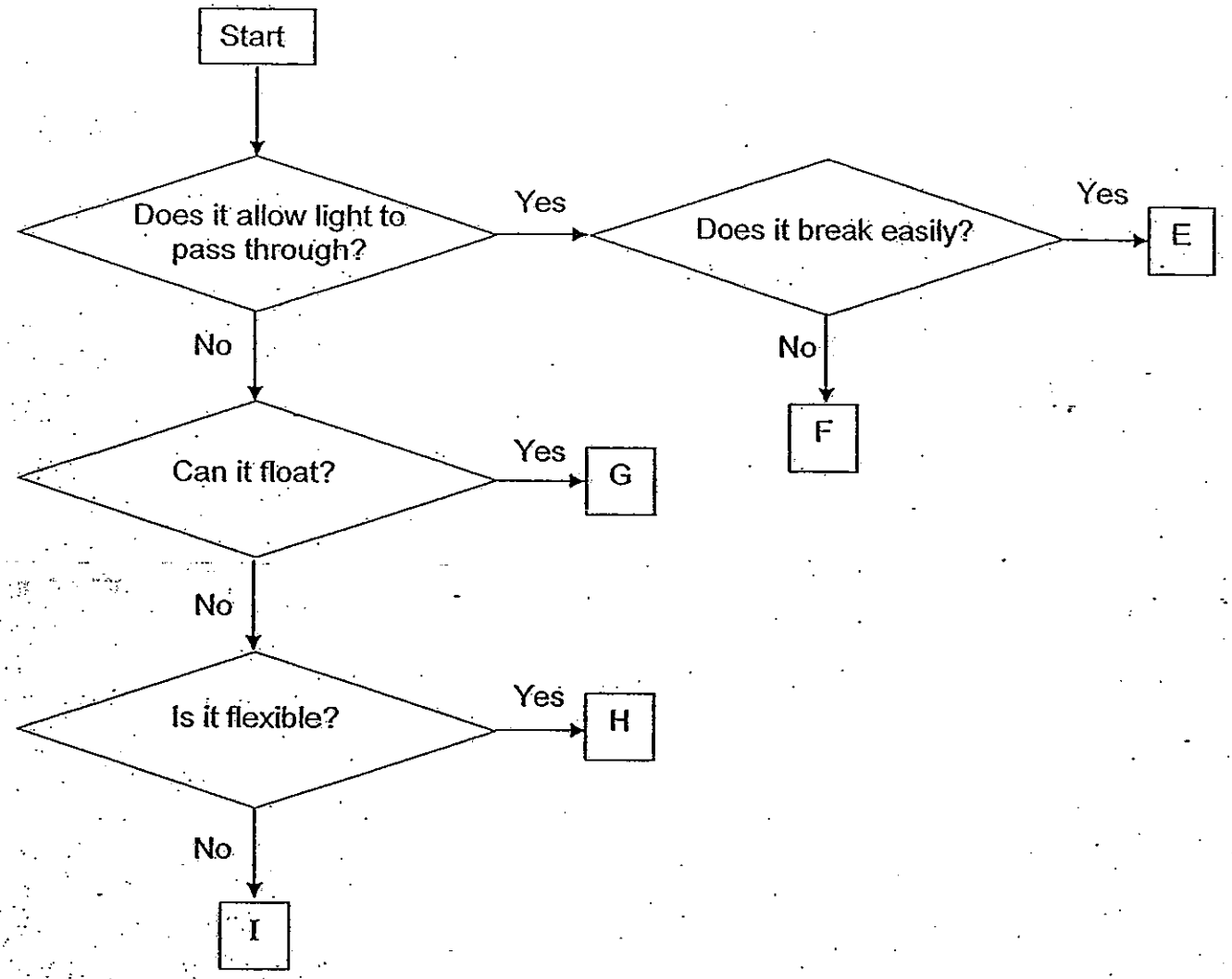


car A car B

(a) Based on the diagram, what should he do to make his experiment a fair one? [1]

(b) James was told to use plastic instead of paper to make the body of the toy car. State one advantage of using plastic over paper. [1]

32. Study the flow chart below carefully.

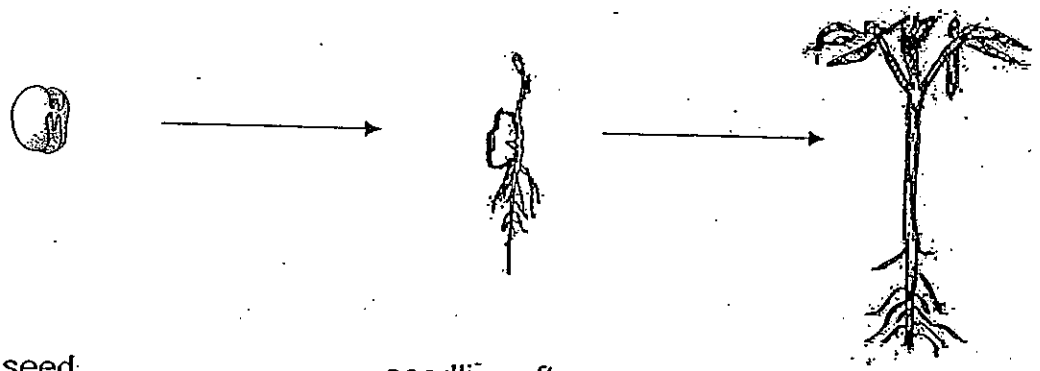


(a) State two similarities between H and I. [2]

(b) Which letter in the flow chart best represents a clay vase? [½]

(c) State one difference between G and E. [1]

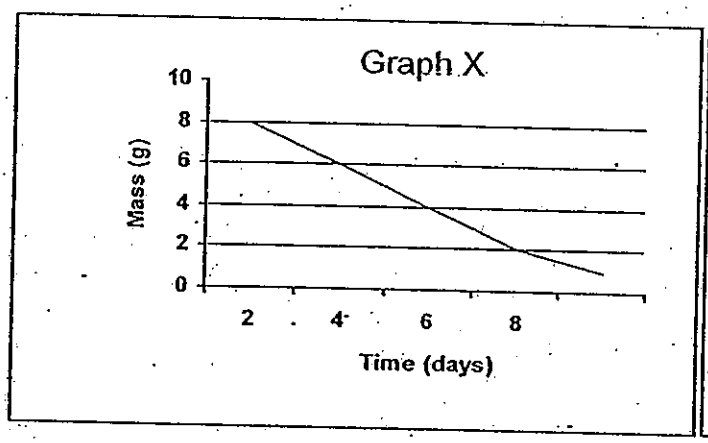
33. Phyllis conducted an experiment on a seed by tracking its growth and recorded her observation in two graphs X and Y as shown below.

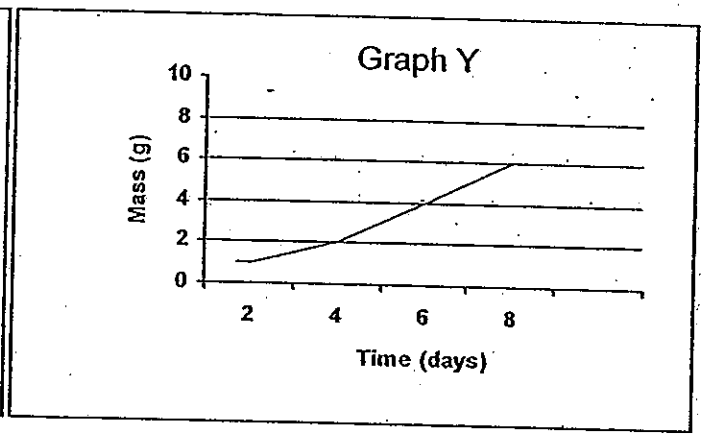


seed

seedling after 3 days

seedling after 8 days





(a) Which graph, X or Y, correctly shows the changes of the mass of the seedling over time? [1]

_____

(b) Explain how the seedling obtains its food after 8 days. [2]

_____

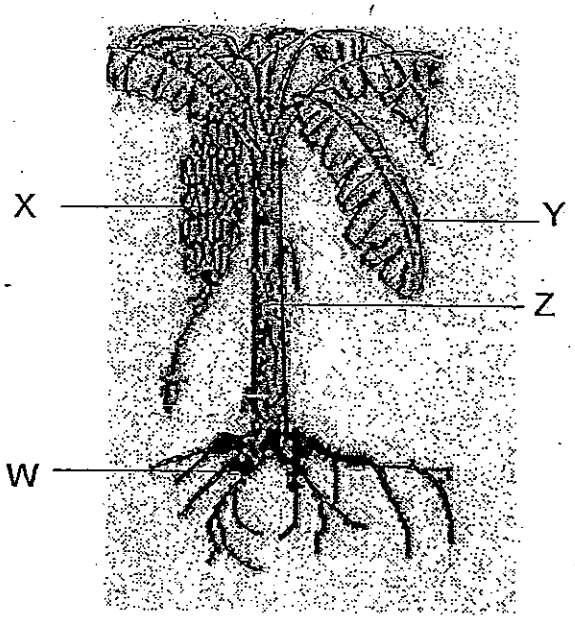
_____

(c) What are the conditions required for the seed to grow into a seedling? [1]

_____

_____

34. The diagram below shows different parts of a banana plant, W, X, Y and Z.



(a) What is the function of part W? [1]

_____

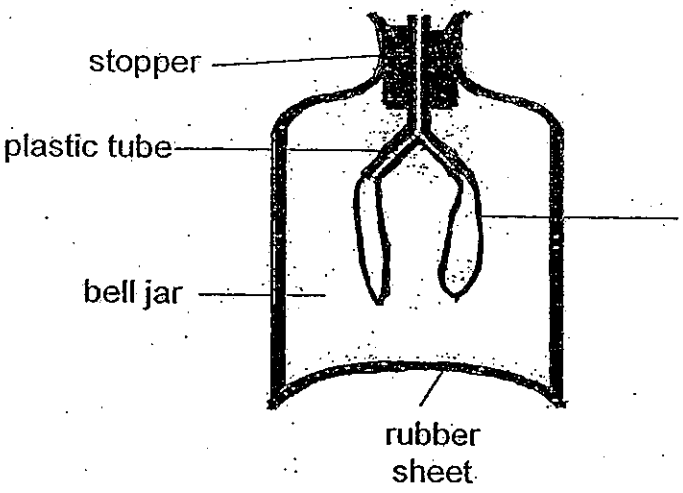
(b) Refer to the diagram above, name the part, W, X, Y or Z, of the plant that transport water and food to all parts of the plant. [1]

_____

(c) What happen if part Y of the plant is removed? [1]

_____

35. The diagram below shows a model of a human system.



(a) Based on the diagram above, draw lines to match the objects on the right to the correct organs on the right as shown in the list below.

[1½]

Object	Organs
plastic tube	lungs
balloon	diaphragm
rubber sheet	windpipe

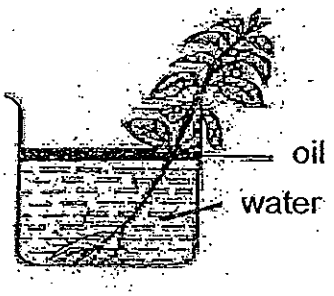
(b) What happens when the rubber sheet is pulled downward. Explain your answer

[2]

(c) Name the human system that it represents as shown in the diagram above.

[½]

36. Mavis set-up an experiment with a plant in a beaker of water as shown in the diagram below. She poured a thin layer of oil in the water and placed the set-up ~~tear~~ near a window.



(a) After two days, what can Mavis observe about the water level in the beaker? [1]

_____

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

_____

_____

_____

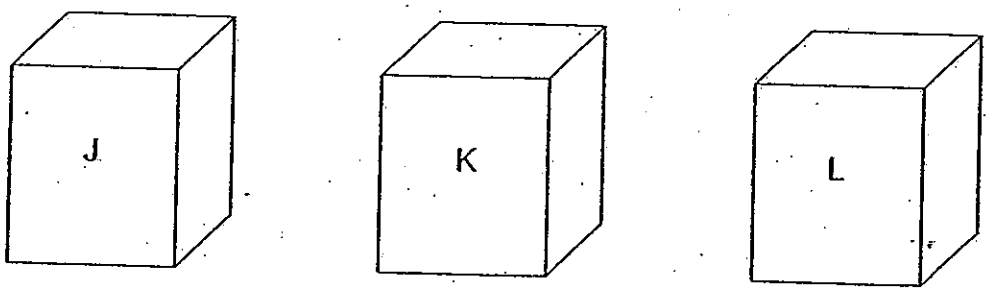
_____

37. Classify the following objects in the box below under the correct heading. [2]

Flour	Mist
Steam	Cotton wool

Solid	Liquid	Gas

38. Mdm Tan has three solid cubes, J, K and L as shown in the diagram below.



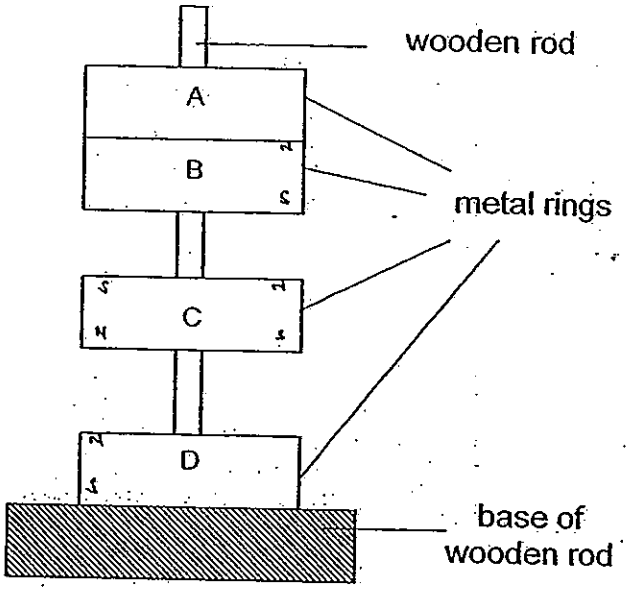
She measured and recorded the weight and volume of the three cubes as shown in a table below.

Cube	J	K	L
material	iron	plasticine	styrofoam
volume	800cm³	800cm³	800cm³
weight	800g	500g	150g

(a) Based on the table above, what do the three cubes have in common? [1]

(b) Explain why the 3 cubes have different weights. [1]

39. Four metal rings, A, B, C and D, of the same size were slotted into a wooden rod in the order as shown in the diagram below. All the rings were exerting some forms of force on one another that had caused rings B, C and D to stay a distance away from one another.



(a) What object could rings B, C and D be so that they do not touch one another? [1]

_____

(b) Explain how ring B and C maintain their position as shown in the set-up above. [1]

_____

_____

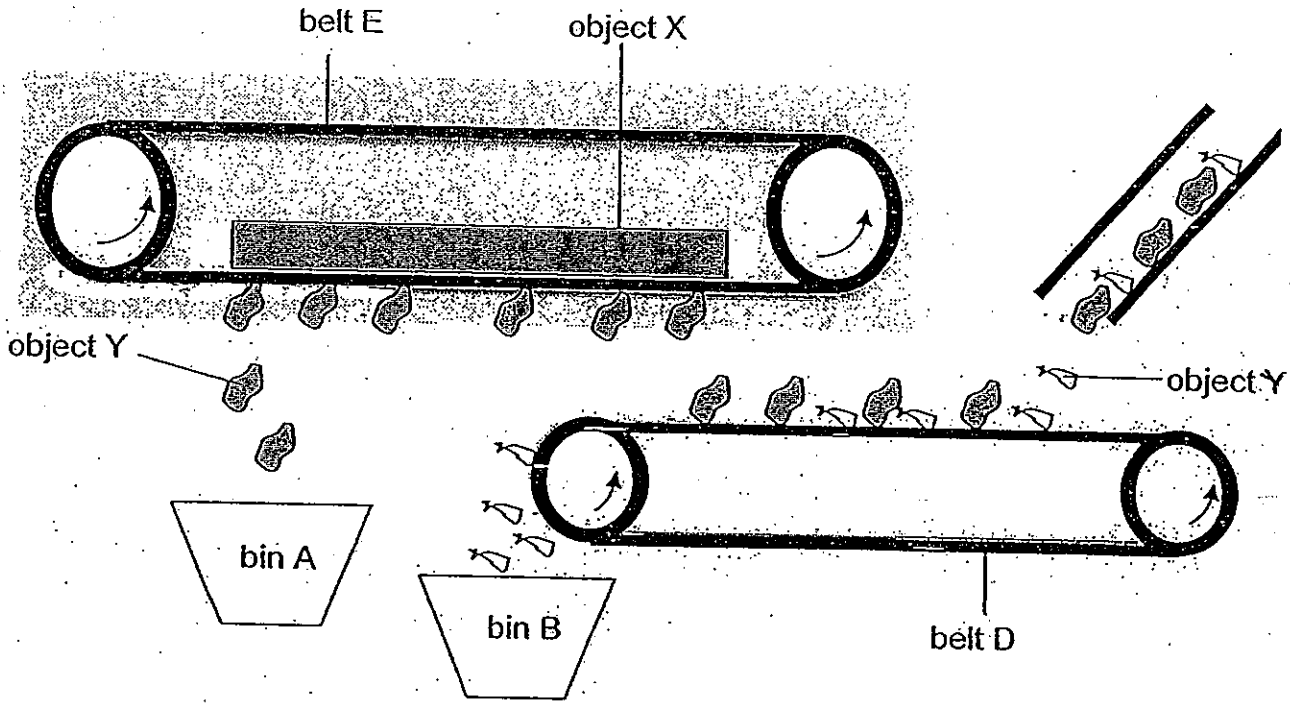
(c) What would happen to the rings B, C and D if the position of ring C is reversed? Explain your answer. [2]

_____

_____

_____

40. The diagram below shows different types of objects Y and Z are being separated from each other when poured onto a moving belt D.



(a) From the diagram above, what could object X be? [1½]

_____

(b) What types of materials could objects Y and Z be made of?

Object Y: _____

Object Z: _____

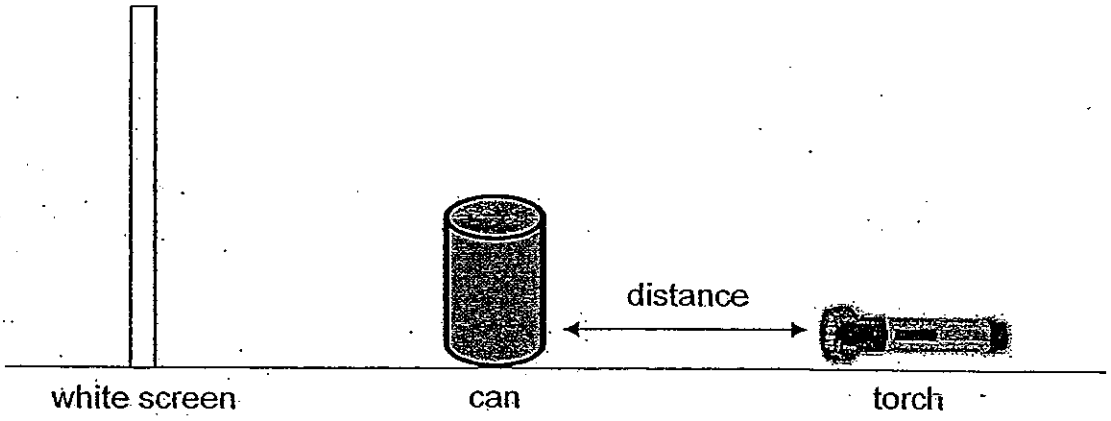
(c) Based on the diagram above, explain how objects Y and Z were separated. [2]

_____

_____

_____

41. Johnny conducted an experiment with a torch, a can and a white screen as shown below.



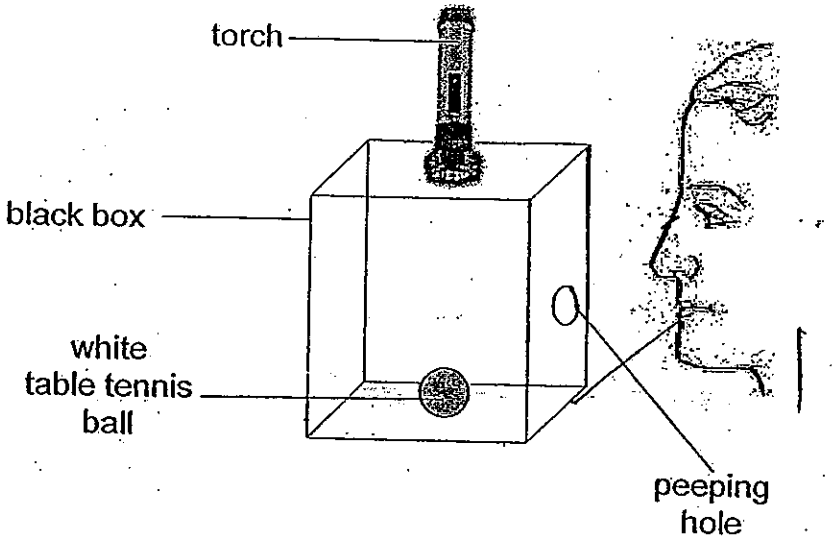
He changed the distance between the torch and the can by moving the torch light to see the effects on the shadow formed on the white screen. He recorded his findings in a table as shown below.

Distance between the torch and the can (cm)	Height of shadow formed on the white screen (cm)
50	10
40	12
30	14
20	16

(a) Based on the table above, what is the relationship between the distance of the torch light and the can, and the height of the shadow formed on the white screen? [1]

(b) Estimate the distance between the torch and the can when the height of the shadow formed on the white screen is 11cm. [1]

42. Melaine conducted an experiment using a black box and a white table tennis ball as shown below. The black box has a peeping hole and is fitted with a torch light on the top of the box which can be turned on to brighten the box within.

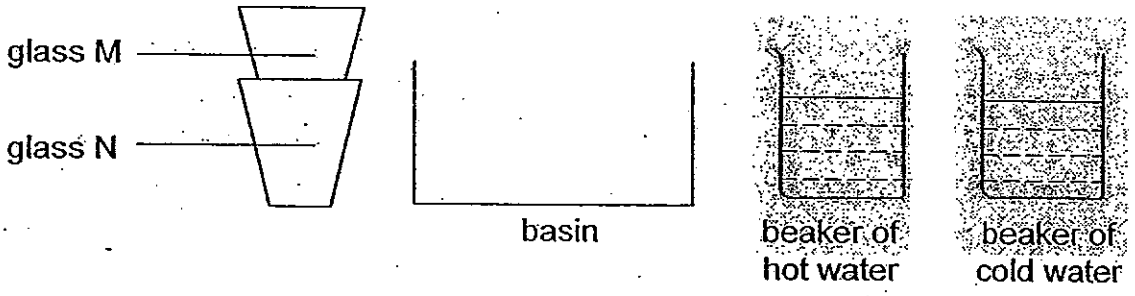


(a) At first, Melaine could not see the white table tennis ball in the black box through the peeping hole. Without opening the black box, describe what Melaine has to do in order for her to see the white table tennis ball through the peeping hole. [½]

(b) Explain how the action describe in your answer in (a) will enable Melaine to see the white table tennis ball in the black box. [2]

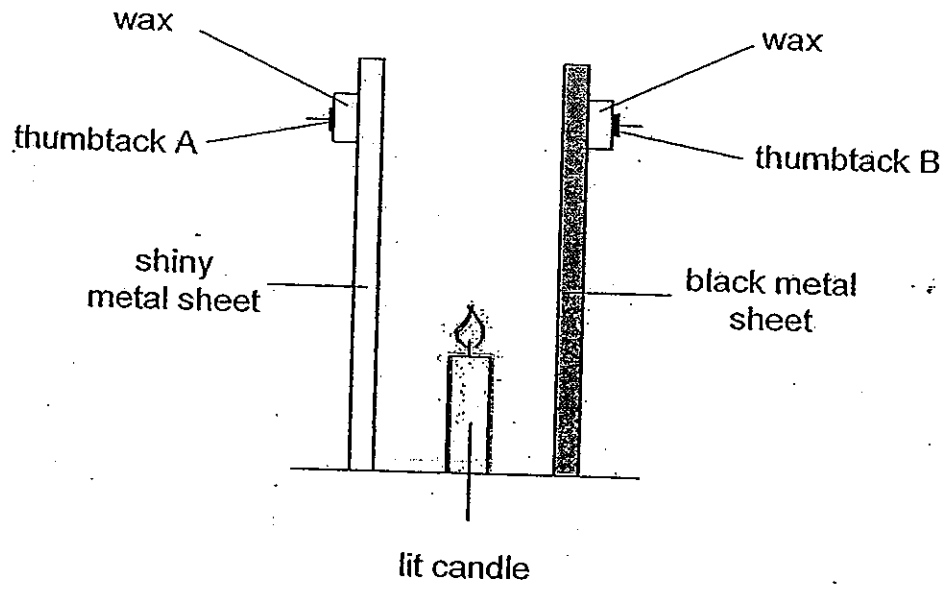
(c) In the diagram above, draw two arrows to show how a light source allows Melaine to see the white table tennis ball in the black box through the peeping hole. [1]

43. Two glasses, M and N, were stuck together and they were not easily separated. Mother has a basin, a beaker of hot water and a beaker of cold water as shown in the diagram below.



Suggest how mother can use the things as shown in the diagram above to separate the two glasses. [2]

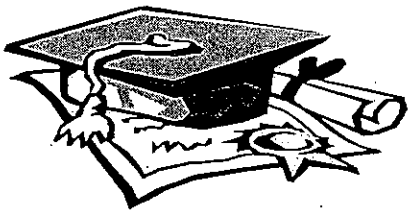
44. Simon conducted an experiment with two similar metal sheets, two thumbtacks and a candle. One metal sheet has a shiny surface while the other one is painted black. One thumbtack is stuck on each metal sheet using wax. He then placed a lit candle between the two metal sheets as shown in the diagram below.



(a) Based on the diagram, which thumbtack, A or B, will drop first? [½]

(b) Explain your answer in (a). [2]

- End of section B -

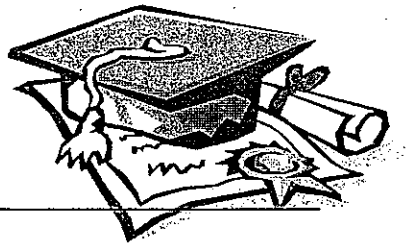


ANSWER SHEET

EXAM PAPER 2010

SCHOOL : CHIJ ST NICHOLAS GIRLS' SCHOOL
SUBJECT : PRIMARY 4 SCIENCE

TERM : CONTINUAL ASSESSMENT 2



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

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

Q31a)James should use only tires of the same size to make his experiment a fair one.

b)Plastic is more durable compared to paper.

Q32a)Both of them cannot float and it does not allow light to pass through.

b)I

c)G does not allow light to pass through while E allows light to pass through.

Q33a)Graph Y.

b)The leaf of the seedling produces its own food by using light energy, water and carbon dioxide.

c)The seed will need air, water and warmth to grow into a seedling.

Q34a)The function of part W is to absorb water and mineral salts from the soil.

b)Part Z.

c)The plant will not be able to make food.

Q35a)plastic tube—windpipe
Balloon—lungs
Rubber sheet—diaphragm

b)When the rubber sheet is pulled down, air from the surrounding the draw through the plastic tubes and inflate the balloons.

c)Respiratory system

Q36a)The water level will decrease.

b)The roots of the plant absorb water for the plant.

Q37)

Solid	Liquid	Gas
Cotton Wool	Mist	Steam
Flour		

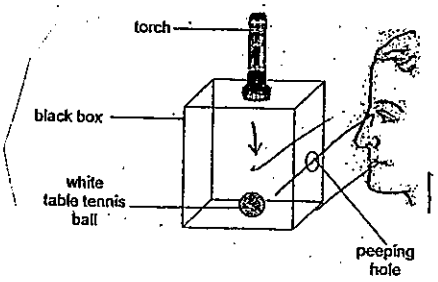
Q38a)The three cubes have volume in common.
b)The cubes have different amount of mass.

Q39a)Rings B, C and D are magnets.
b)The underside of ring B and the upperside of ring C are like poles.
c)Rings B, C and D will attract. As ring C had the south-pole on top and now its below, so they will attract. Therefore, unlike poles attract.

Q40a)A magnet.
b)Object Y:Magnetic material
Object Z:non-magnetic material
c)The magnetism in object X will attract object Y to separate object Y from object Z and object Z will be attracted and will fall to bin B.

Q41a)The nearer the torch is to the can, the larger the shadow is formed, the further the torch is to the can, the smaller the shadow is formed.
b)45cm.

Q42a)She can switch the torch on.
b)Light travels in a straight line. The torch reflect the light to the white table tennis ball and into our eyes.
c)



Q43)Mother can pour the beaker of cold water in glass M. And put both glasses into the basin and pour some hot water to the level of glass N only.

Q44a)Thumbtack B.
b)Black surfaces absorb hear better than shiny surfaces. Thus, the black metal sheet will be hotter and cause the wax on it to melt faster.