METHODIST GIRLS' SCHOOL

Founded in 1887

MID – YEAR EXAMINATION 2013
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: 16 MAY 2013

This booklet consists of 10 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 oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

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1 Which of the following statements describe the similarities between the damselfly and the great diving beetle?

A Both lay eggs in water.

B Their young look like adults.

C Both are prey to fish and frogs.

D Both have four stages in their life cycles.

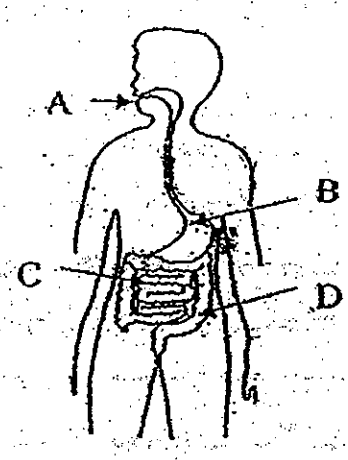
(1) A and C only

(2) B and C only

(3) A, C and D only

(4) B, C and D only

2 The diagram below shows the human digestive system. In which parts of the digestive system, A, B, C and D do digestion of meat take place?



(1) A and D only

(2) B and D only

(3) A, B and C only

(4) A, C and D only

(Go on to the next page)

3 Which of the following statements describe the circulatory system correctly?

A The circulatory system consists of lungs, heart, blood vessels and blood.

B It increases the rate of blood flow to meet the demands of exercise.

C It transports the clotting cells to help to stop the bleeding and promote healing should there be any injury.

D It transports oxygen in the form of oxyhaemoglobin and nutrients to different parts of the body

(1) B and C only

(2) A, B, and C only

(3) B, C and D only

(4) A, B, C and D

4 The relationships between the organisms, P, Q, R, S and T are described in the box below.

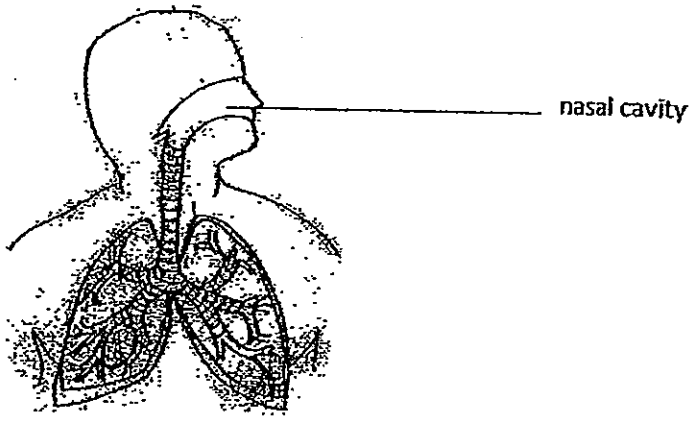
Q feeds on P.
R feeds on Q.
S feeds on Q but not on R.
T feeds on Q and S.

What are the relationships among the organisms, P, Q, R, S and T?

	Producer	Primary consumer	Prey and predator	predator
(1)	Q	P	T	S
(2)	P	Q	S	T
(3)	S	T	R	Q
(4)	P	S	S	T

(Go on to the next page)

5 The diagram below shows part of the human respiratory system.



Tiny hairs and mucus are found in the nasal cavity. What is the most likely function of the tiny hairs?

A They moisten and warm the inhaled air.

B They help the person to breathe in more air.

C They help to filter out the foreign particles from the air

D They keep the windpipe clean by preventing food or water from entering the air passage.

(1) A and C only

(2) A and B only

(3) B and C only

(4) C and D only

6 Which one of the following statements describes **correctly** what happens when blood enters the lung?

(1) Only carbon dioxide passes from the blood stream to the air sacs.

(2) Only oxygen passes from the air sacs into the blood stream.

(3) Carbon dioxide from the blood stream passes into the air sacs and oxygen from the air sac passes into the blood stream.

(4) Carbon dioxide from the lungs passes into the blood and oxygen from the blood passes into the air sacs.

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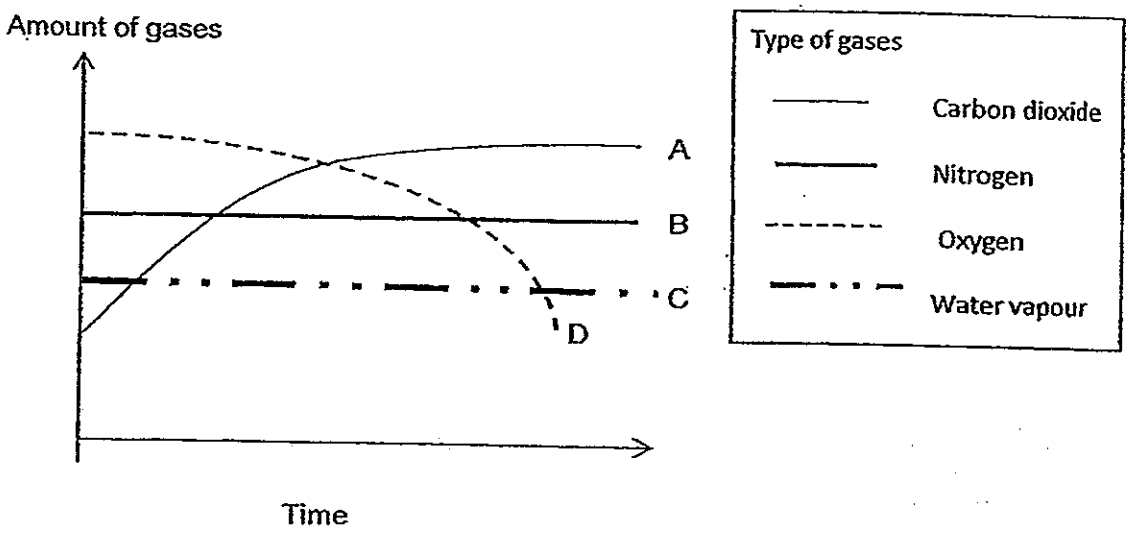
7 A group of children were trapped in a poorly ventilated room for four hours. The graph below shows the changes in the amount of gases in the room.



Which line graph is most likely to be **incorrect?**

(1) A

(2) B

(3) C

(4) D

8 Liana wanted to find out if plants need sunlight to carry out photosynthesis. She placed two similar pots of plant in a dark room for 48 hours before she carried out the experiment. The purpose of placing the plants in the dark room is to _____.

(1) de-starch the plants

(2) remove the carbon dioxide from the plants.

(3) find out if the plants can make food in the dark

(4) ensure that the plants conserve the water for making food

(Go on to the next page)

9 Which of the following controls the movement of substances passing through the cells?

(1) Nucleus

(2) Cell wall

(3) Cytoplasm

(4) Cell membrane

10 Study the classification table below.

Group R	Group S
crab	tadpole
prawn	dragonfly
mussels	fish

The organisms are grouped according to

(1) their habitats.

(2) how they move

(3) their breathing methods.

(4) the food they feed on

11 Which of the following organisms are decomposers?

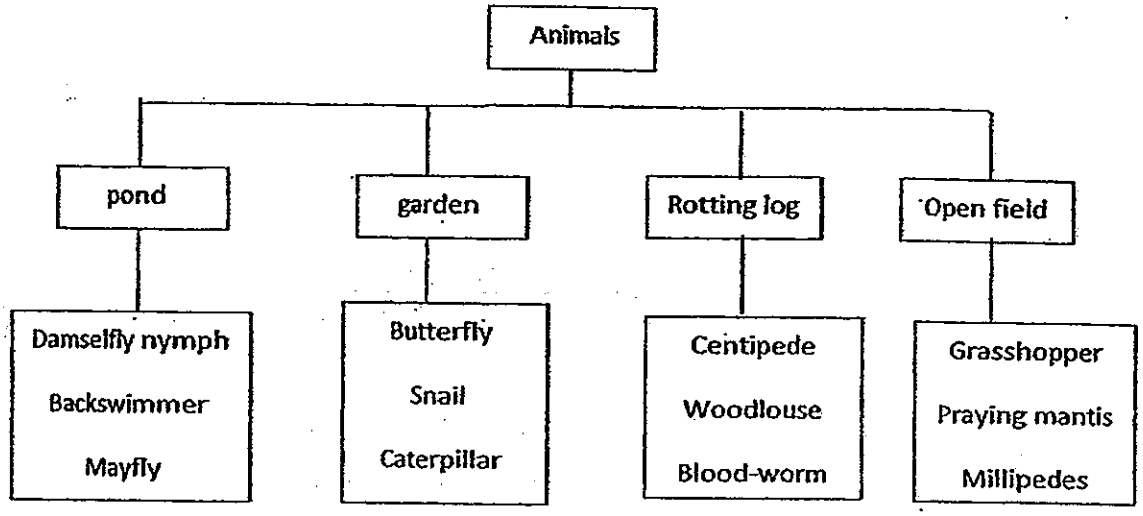
(1) Woodlouse and bacteria

(2) Mushroom and termites

(3) Mushroom and bacteria

(4) Woodlouse and termites

12 Lilian and her classmates had an outdoor Science lesson at the garden with a pond nearby. They caught some animals from different spots of the garden and took them to the Science laboratory to examine the animal specimens. The girls identified and classified the animal specimens according to the four different habitats, A, B, C, and D, where they could be found, as shown below.



Which one of the following animals were wrongly grouped by the girls?

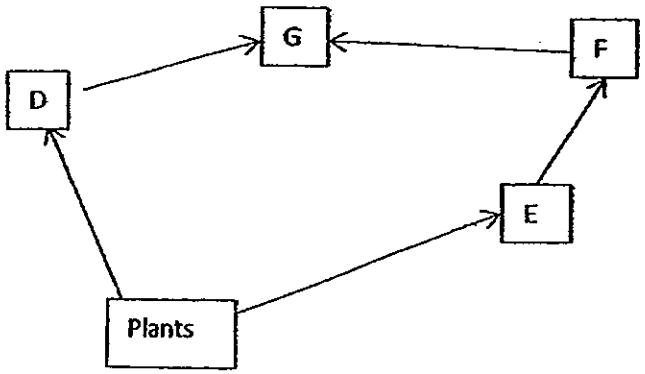
(1) Mayfly and snail

(2) Snail and woodlouse

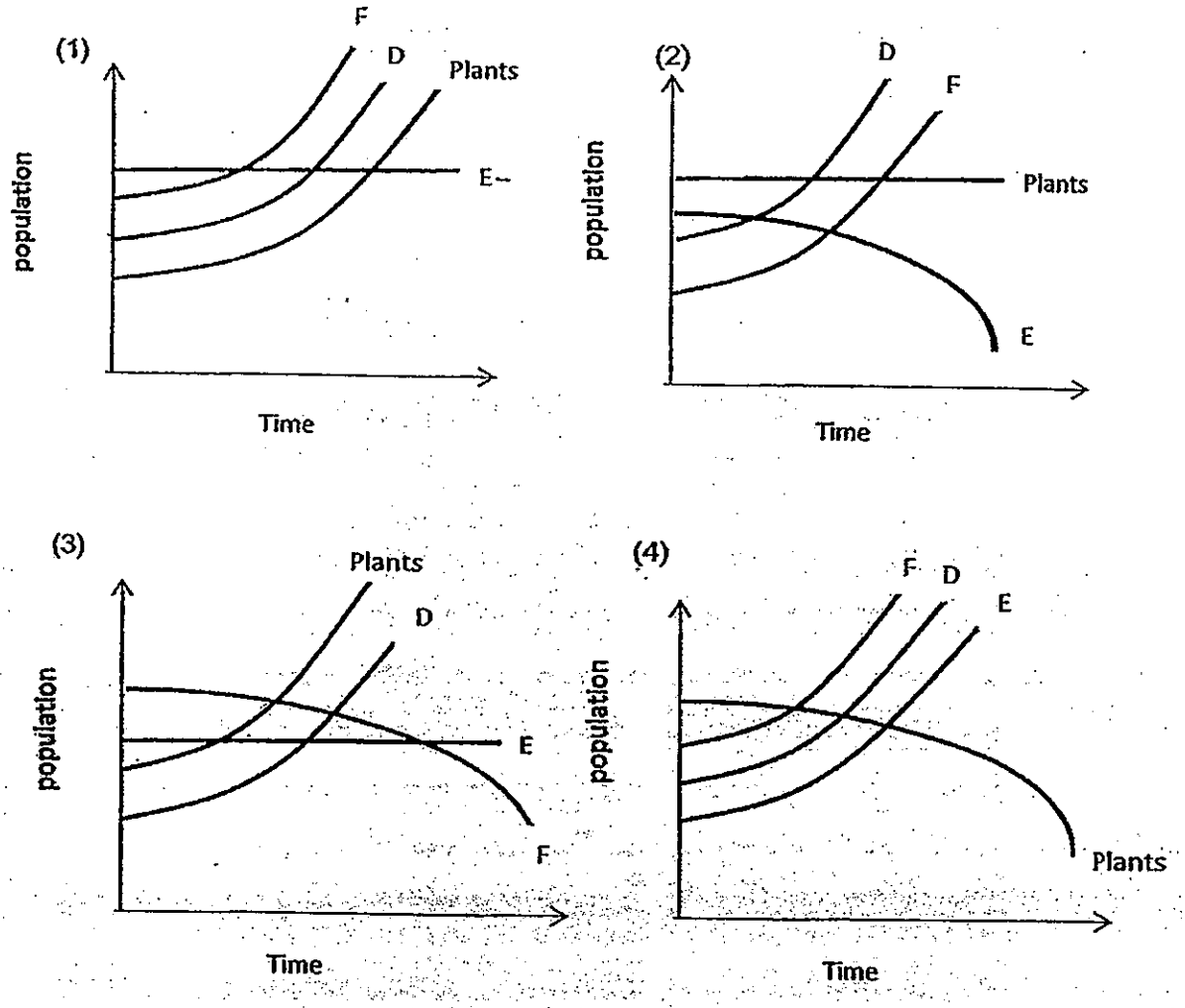
(3) Blood-worm and millipedes

(4) Damselfly nymph and grasshopper

13 The diagram below shows a food web in a community. D, E, F and G are animals



Which one of the following graphs shows how the populations of plants, D,E, and F are affected if animal G migrates to another place.



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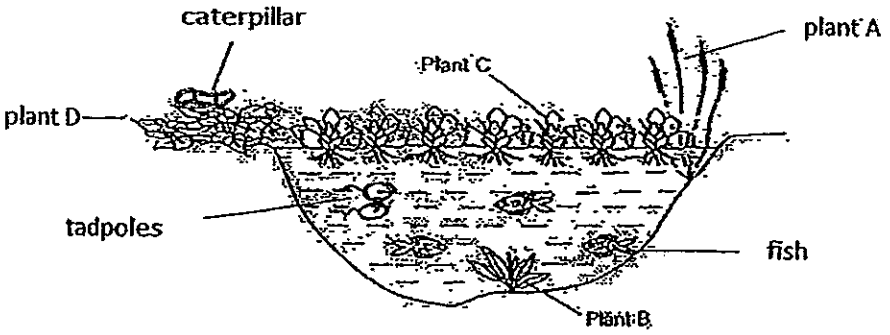
14 The diagram below shows a habitat with some plants and animals co-existing interdependently.



Which of the following statements describes the habitat **correctly**?

A The aquatic plants provide a hiding place for the aquatic animals.

B There are six populations in one community.

C The aquatic plants are a source of food for the aquatic animals.

D The submerged plants and the aquatic animals are interdependent on each other for their gaseous exchange.

(1) A and B only

(2) A and D only

(3) A, C and D only

(4) A, B, C and D

(Go on to the next page)

15 Simon wanted to find out if the oxygen level in the pond water is affected by the aquatic plants at different times of the day. He collected similar amounts of pond water from the same spot of the pond at different times of the day. For each pond sample that he collected, he added a few drops of liquid Y into the water and recorded the change in colour.

Amount of oxygen in the pond water	Below optimum level	Optimum level	Higher than optimum level
Colour of water with liquid Y	yellow	green	purple

Which of the following results show the change in the colour of liquid Y **correctly**?

	Midday (12 pm)	Evening (8 pm)
(1)	green	yellow
(2)	Purple	yellow
(3)	Yellow	Green
(4)	Purple	Green

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BOOKLET A2

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

INSTRUCTIONS TO CANDIDATES

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Name: _____ ( )

Class: Primary 6._____

Date: 16 MAY 2013

This booklet consists of 14 printed pages including this page.

16 Justin conducted several tests on four materials A, B, C and D.

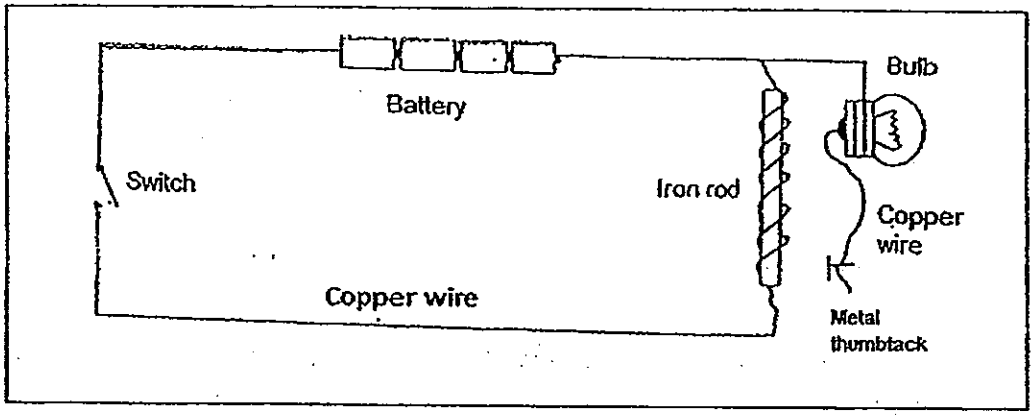
He recorded the results in the table below.

	A	B	C	D
Is it flexible?	No	Yes	Yes	Yes
Is it durable?	No	Yes	Yes	No
Does it conduct electricity?	Yes	No	No	No
Is it absorbent?	Yes	No	Yes	Yes

Which material would be most suitable for making a sleeping bag?

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

17



Ali sets up the electric circuit as shown above. What observation will he make when the switch is turned on?

(1) The iron rod becomes a strong and permanent magnet.
(2) Nothing will be observed as the circuit is an open circuit.
(3) The bulb lights up before the thumbtack moves towards the iron rod.
(4) The thumbtack moves towards the iron rod before the bulbs lights up

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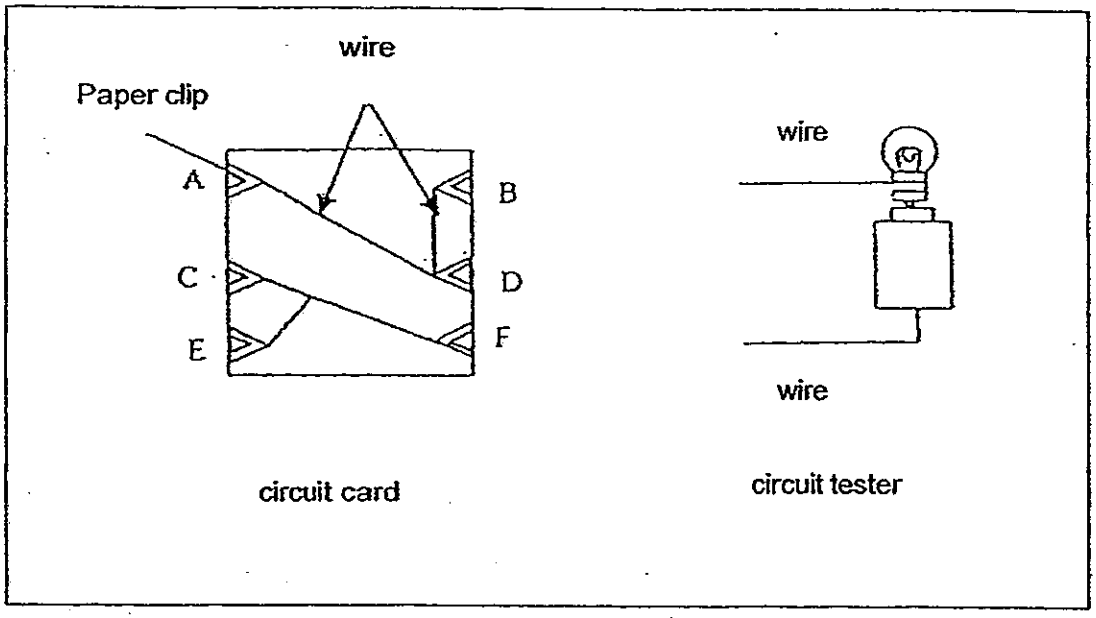
18 Mrs Tan prepared a circuit tester to test a circuit card with the connections as shown below.



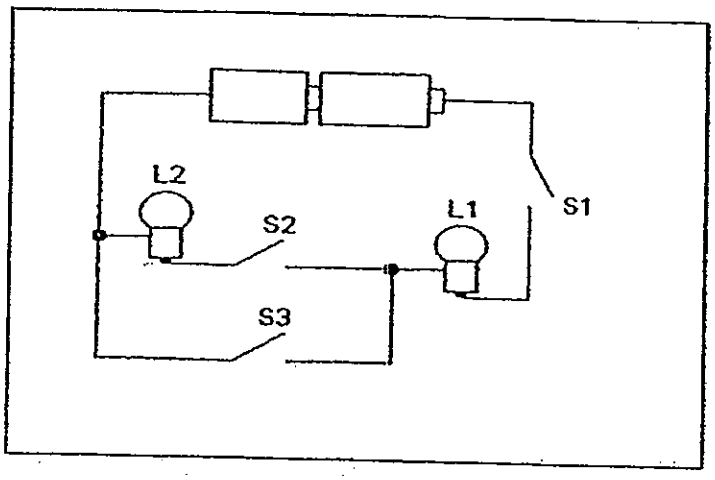
Her pupils Lynn, Ann, Min and Lydia were asked to predict whether the bulb in the circuit tester would light up when they were given the 4 combinations of contact points on the above circuit card.

Who made the correct prediction?

		Will the bulb light up at these points of contact?			
No	Name of pupil	A and D	D and F	C and E	E and F
(1)	Lynn	Yes	Yes	Yes	No
(2)	Ann	Yes	No	Yes	No
(3)	Min	Yes	No	No	Yes
(4)	Lydia	Yes	No	Yes	Yes

(Go to next page)

19 A circuit is set up using two bulbs, L1 and L2, and three switches, S1, S2 and S3.

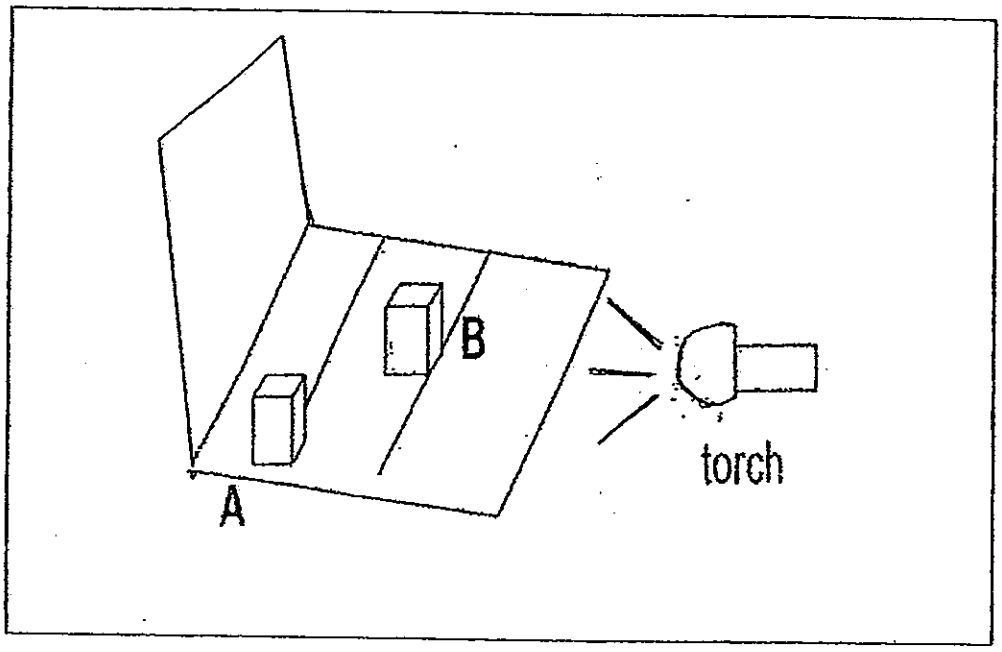


Which of the following is correct?

	S1	S2	S3	L1	L2
(1)	Open	Open	Open	Lighted up	Not lighted up
(2)	Open	Closed	Closed	Not lighted up	Lighted up
(3)	Closed	Closed	Closed	Lighted up	Not lighted up
(4)	Closed	Open	Open	Not lighted up	Lighted up

(Go to next page)

20 The diagram below shows an experimental set-up in a dark room.
A torch was then shone at two similar wooden cubes from one side of the board as shown in the diagram below.



Which one of the following statements is correct about the shadows formed on the screen?

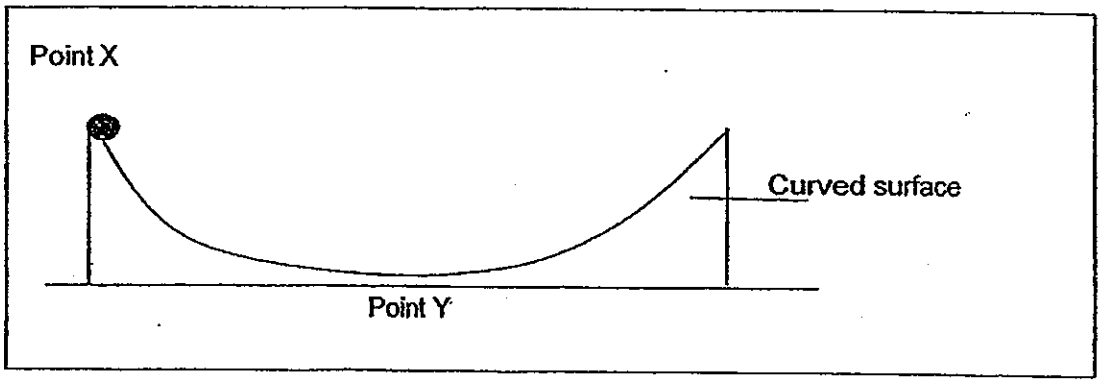
A Cube A's shadow is larger than cube B's.
B Cube A's shadow is smaller than cube B's.
C Cube A's shadow is not as sharp as cube B.
D Cube A's shadow is of the same size as cube B.

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

(Go to next page)

21 An investigation was conducted to find out which of the liquids, Q, R, S or T is the most effective lubricant.

An equal amount of each type of liquid was applied on identical curved surfaces as shown in the diagram below. An identical metal ball was then released from point X and it was allowed to roll up and down along the surface for a few times before it became stationary at Point Y. The time taken for the ball to come to rest was recorded.



Liquid	Time taken for the ball to come to rest (s)
Q	5
R	11
S	15
T	9

Based on the information given in the table above, which liquid is ranked most effective from the least to the most?

Effectiveness as a lubricant

	Least → Most			
(1)	S	R	T	Q
(2)	R	S	T	Q
(3)	T	Q	S	R
(4)	Q	T	R	S

(Go to next page)

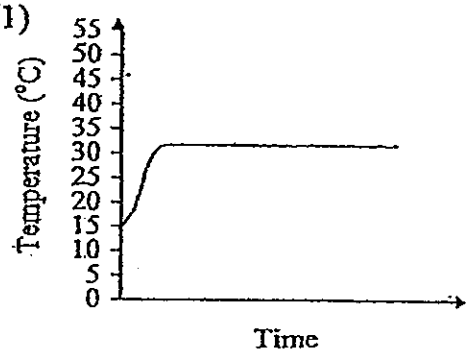
22 While using a fast moving escalator in an air-conditioned shopping mall, Alice felt that the handrail of the escalator was very warm.
Which one of the following statements is the best explanation for the warm handrail?

(1) The temperature of the day was above 30°C.
(2) As the handrail was moving fast, friction between the air and the handrail produced heat energy.
(3) The heat energy from the hands of many users who were holding on to the handrail for support was transferred to the handrail.
(4) Friction between the moving parts in the escalator produced heat which was transferred to the handrail.

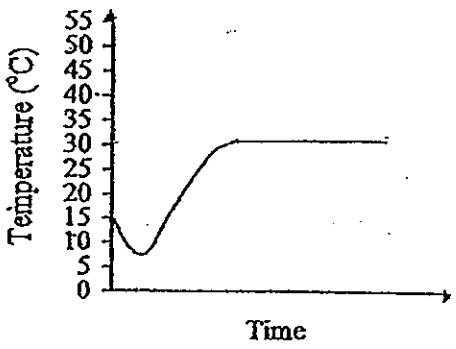
(Go to next page)

23 John took a can of cold orange juice from the refrigerator and poured it into a jug. He put some ice cubes in the jug and left the jug on the table. He then went for a jog and forgot all about the orange juice for five hours. Which one of the following graphs correctly represents the temperature changes of the orange juice on his return?

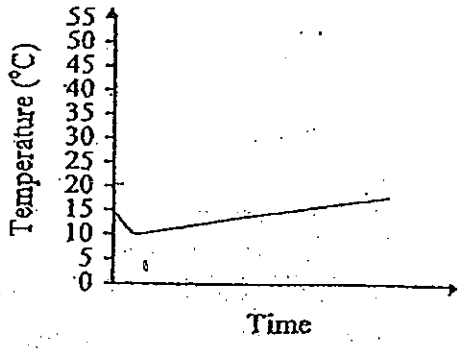
(1)



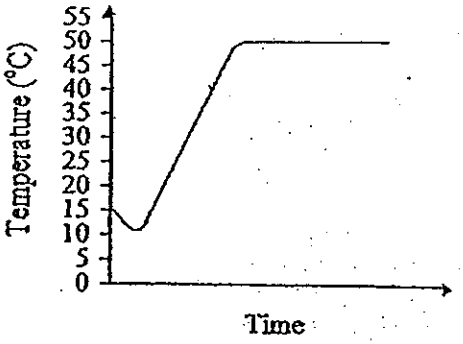
(2)



(3)



(4)



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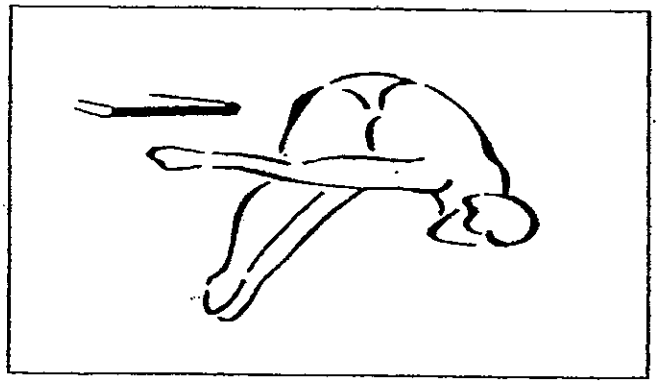
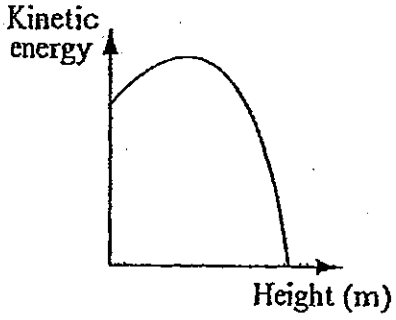
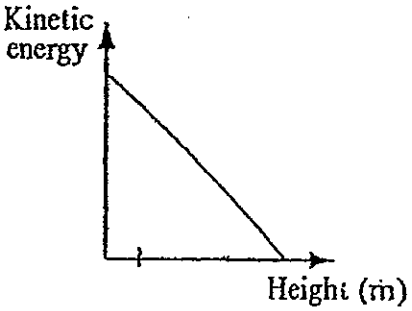
24 A swimmer jumps from a diving board as shown in the diagram below. Which graph correctly shows the change in the kinetic energy of the swimmer above the ground?



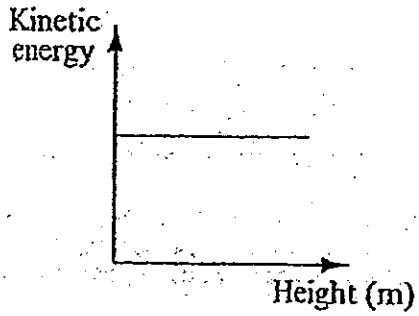
A



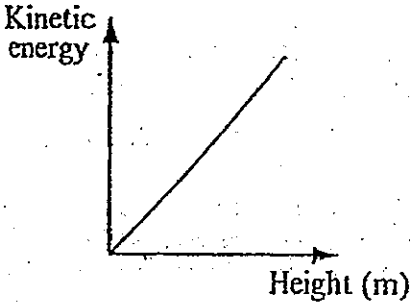
B



C



D



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

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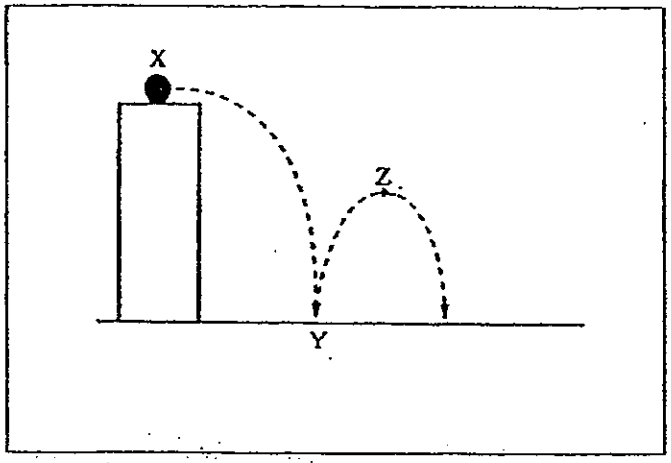
25 The diagram below shows a ball dropped from a height at Point X. It reached the ground at Point Y and then bounced to Point Z. The ball bounced a few times before it stopped.



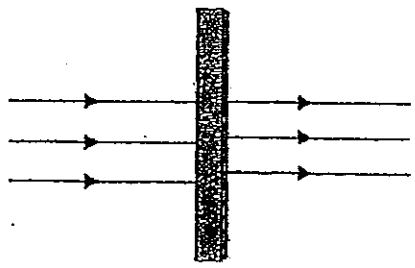
Which of the following statements are true?

A At Y, the ball possesses minimum gravitational potential energy.
B From Y to Z, the kinetic energy of the ball increases.
C From X to Y, the kinetic energy of the ball increases.
D At Z, the kinetic energy of the ball is equal to its gravitational potential energy.

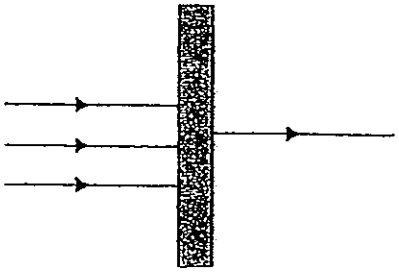
(1) A and C only
(2) B and D only
(3) A, B and D only
(4) A, C and D only

(Go to next page)

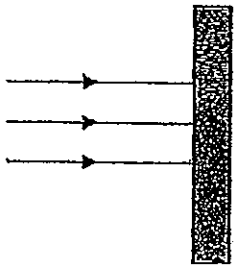
26 The diagram below shows rays of light shining on four objects, V, W, X and Y.



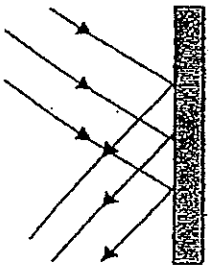
Object V



Object W



Object X



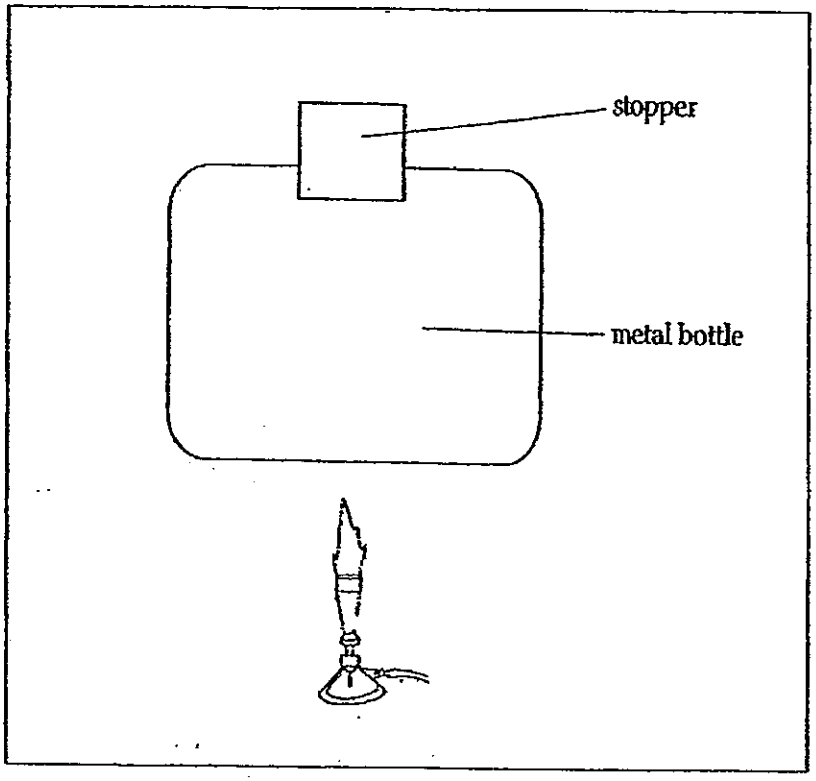
Object Y

Based on the information given in the diagrams, what do you think objects **V, W, X** and Y are?

	Object V	Object W	Object X	Object Y
(1)	Clear glass	Mirror	Wood	Frosted glass
(2)	Frosted glass	Clear glass	Wood	Mirror
(3)	Clear glass	Frosted glass	Wood	Mirror
(4)	Frosted glass	Clear glass	Mirror	Wood

(Go to next page)

27 The figure below shows a metal bottle with a wooden stopper in it. When the bottle is heated, the stopper falls inside the container. Which of the statements below explains this observation?



A The metal bottle expands, causing the opening of the bottle to also expand.
B The stopper does not expand as much as the metal container and falls into the container.
C The air around the stopper, being cooler, caused the stopper to contract, decrease in size and fall into the container.
D The metal bottle contracts and causes the opening to get bigger.

(1) C only
(2) A and B only
(3) A and C only
(4) None of the above

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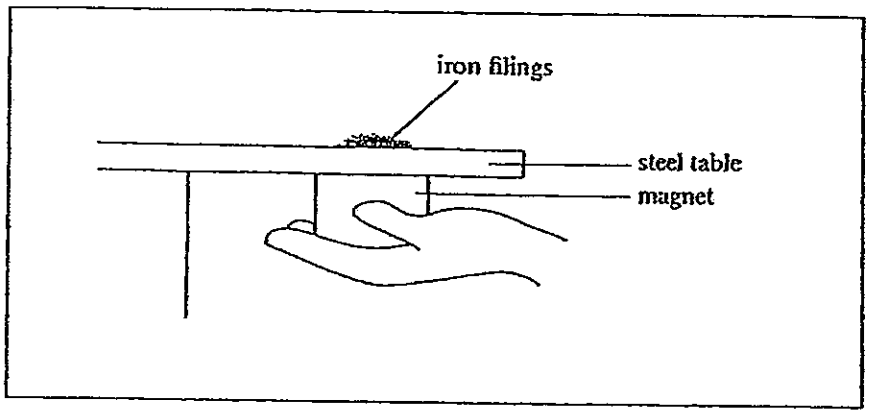
28 In the experiment shown below , Andrew placed some iron filings on a steel table and held a strong magnet under the table to make the iron filings move. However, the iron filings did not move when he moved the strong magnet under the table.



Which of the following explain(s) why the iron filings were not moving?

A The magnet is not big enough.
B The iron filings are attracted by the steel table top
C Magnetic force cannot pass through magnetic material such as steel.
D The total mass of the iron filings is too heavy for the magnet to move them about.

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

29 Karen wanted to find out if the direction of wind affects the time taken for a wet towel to dry. She used four identical towels and four identical fans. She carried out an experiment with closed windows in the same room and made sure that each towel received wind from one fan only.
Which variable should she change?

(1) Position of the fan
(2) Speed at which the fans blew
(3) Amount of moisture in the towel
(4) Distance of the fans from each towel

(Go to next page)

30 A car is travelling at a constant speed along a road and it goes over a large patch of oil. The driver decides to step on the brakes to stop the car. What will happen compared to braking on a dry road?

(1) The car slows down more quickly because of the greater friction between the tyres and the car.
(2) The car speeds up at first because of the increased friction between the tyres and the road.
(3) The car takes longer to slow down because of the reduced friction between the tyres and the road.
(4) The car takes shorter time to slow down because of the braking distance of the driver is shorter.

(Go to next page)

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SCIENCE

BOOKLET B1

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

INSTRUCTIONS TO CANDIDATES

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

Name:_____ ( )

Class: Primary 6._____

Date: 16 MAY 2013

Booklet A	**/ 60**
Booklet B	**/ 40**
TOTAL	**/ 100**

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 allocated is shown in the brackets [ ] at the end of each question.

31 Jane planted five seedlings of similar size into five similar pots which are filled with similar amounts of garden soil. She watered the seedlings with the same amount of water every day and put different amounts of fertilizer to each pot of seedling. After 2 weeks, Jane measured and recorded the increase in the height of the seedlings and the results are shown in the table below.

Pot	Amount of fertilizers given (ml)	Average increase in height of seedlings (cm)
1	0	5
2	10	15
3	20	30
4	30	38
5	40	30

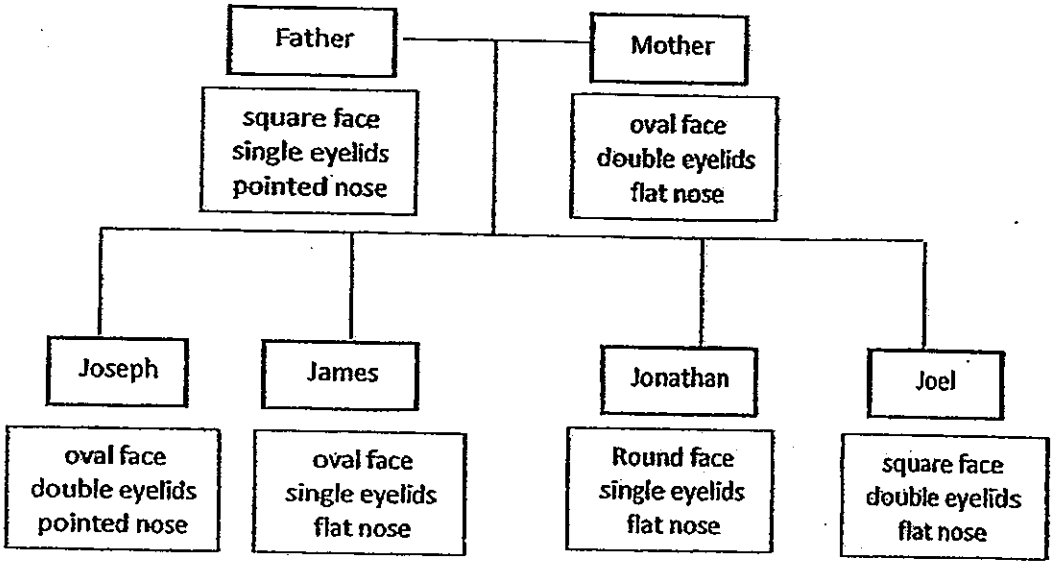
(a) State the amount of fertilizers that Jane should give in order to obtain maximum growth of the seedlings. [1 m]

(b) Write two variables which are <u>not</u> mentioned in the above experiment that must be kept constant. [1 m]

(c) Explain why there was an average increase in the height of the seedling in pot 1 even though no fertilizer was added. [1m]

(Go on to the next page)

32 Study the hereditary chart below and answer the following questions.



(a) Name two children who have inherited at least 2 characteristics from one parent? [1m]

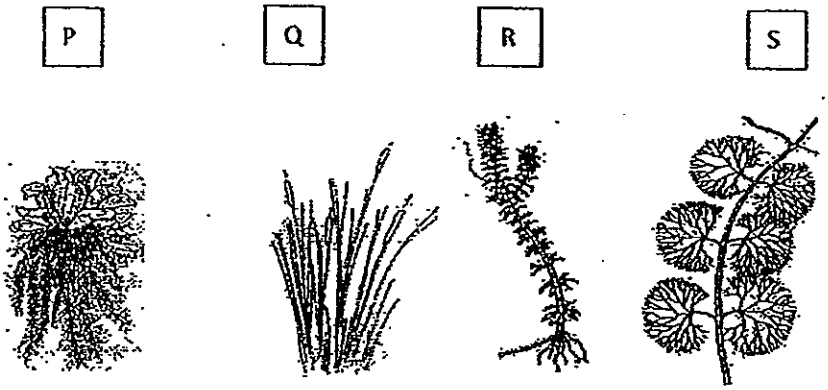
_____

(b) If Jonathan is the biological son of his parents, from whom could he have possibly inherited his round face? [1 m]

_____

(Go on to the next page)

33 The pictures below show 4 plants P,Q, R and S.



(a) In which habitat would you most likely find these plants? [1m]

_____

(b) Plant P is a floating plant. What type of plants are Plant R and S? [1 m]

_____

(c) How would plants R and S be affected in the habitat if Plant P multiplies rapidly? [2 m]

_____

_____

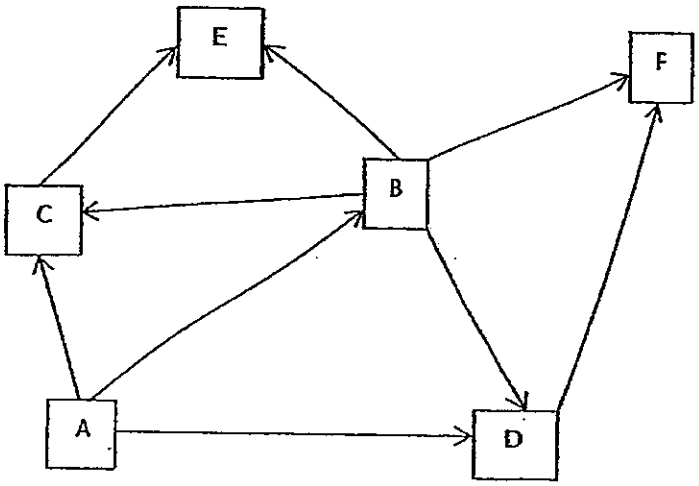
(Go on to the next page)

34a) What are the two differences in the physical characteristics between the leaf litter community and the garden community? [2m]

_____

_____

(b) The diagram below shows a food web in a community.



Based on the food web, name two omnivores found in it. [1 m]

_____

35 Jane and three of her classmates went to an open field for a picnic during the school holidays in March. While they were there, they sat under a mature tree R and played under another mature tree S. The positions of the Tree R and S were marked out. When the girls returned to the open field again in December, they noticed a number of young plants in the field and their positions are shown in the figures below.

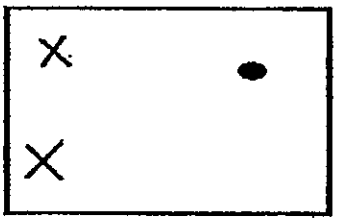


Figure 1

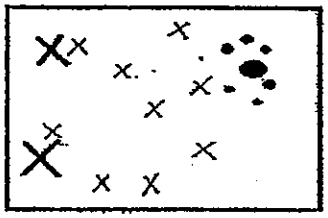
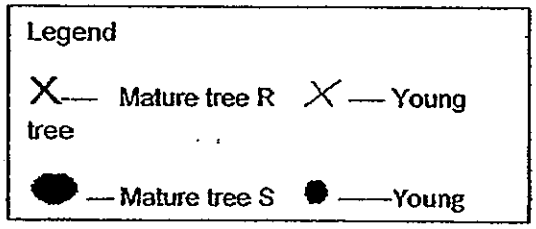


Figure 2



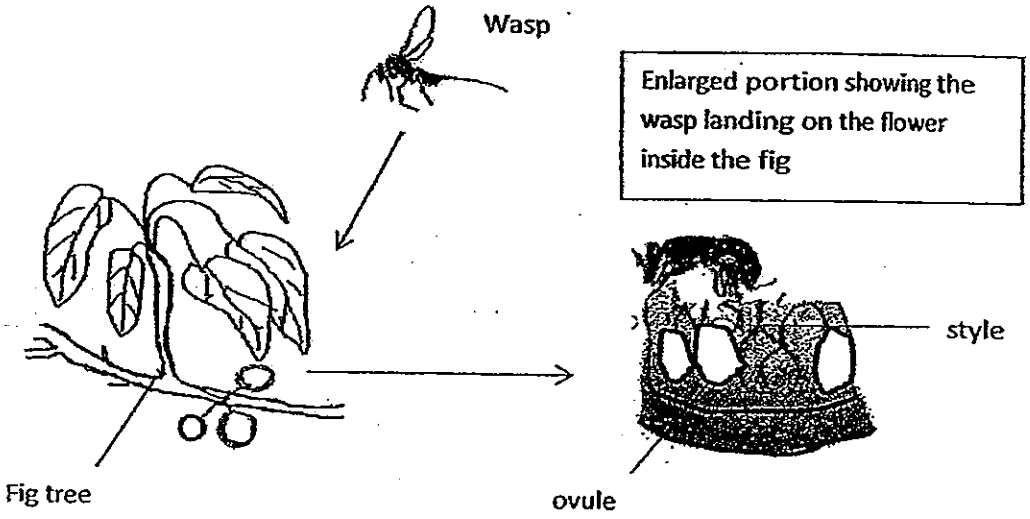
(a) State how the fruits of Tree R and Tree S dispersed. [1m]

Tree R is dispersed by _____

Tree S is dispersed by _____

(Go on to the next page)

(b) The diagram below shows the relationship between a fig tree and the wasp. The flowers are completely hidden in the figs and wasps are known to lay their eggs in the figs. A Singaporean researcher spent two years studying the relationship between the wasp and fig trees in Kent Ridge during the hot season. The results of the study show that if wasps die out due to global warming, there will be a great decrease in the population of fig species.



In what way does the fig tree and the wasp benefit from each other? [2m]

i) Fig tree

_____

_____

ii) Wasp

_____

_____

(Go on to the next page)

36 The box below provides some information about six organisms (A, B, C, D, E, F). Complete the food web in the space provided below using the information given in the box. [3 m]

1. A is a primary producer.
2. Two of the animals are herbivores
3. Animal D eats one of the herbivores.
4. Animal E eats D and one herbivore.
5. Animal F eats D and one of the herbivores.

37 A group of scientists went to a coral reef near the southern islands to search for the giant clam which was once abundant in Singapore **but now rarely seen**. Giant clams depend on the sugars and proteins produced by the algae which live on the giant clam. The objective of the search was to re-populate the coral reefs with the giant clams.

(a) Give one possible reason which had contributed to the **fall in** population of the giant clams. [1m]

_____

_____

(b) Name the food producer which supplies energy to the giant clam. [1m]

_____

METHODIST GIRLS' SCHOOL

Founded in 1887

MID – YEAR EXAMINATION 2013
PRIMARY 6
SCIENCE

BOOKLET B2

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:_____ ( )

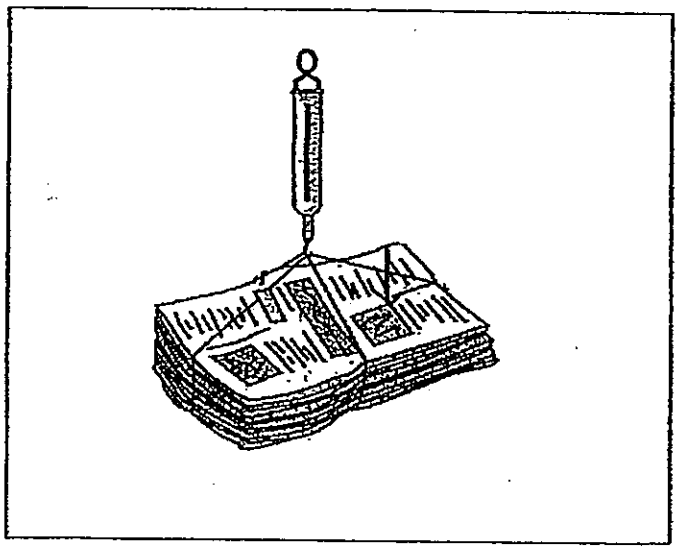
Class: Primary 6._____

Date: 16 MAY 2013

Booklet A	**/ 60**
Booklet B	**/ 40**
TOTAL	**/ 100**

This booklet consists of 9 printed pages including this page.

38 Once a month, a man who collects old newspapers drops by Jen's home to collect her old newspapers. Jen noticed that the man weighs the newspapers using a spring balance shown below.



(a) What is/are the force/s that is/are acting on the bundle of newspapers? (1m)

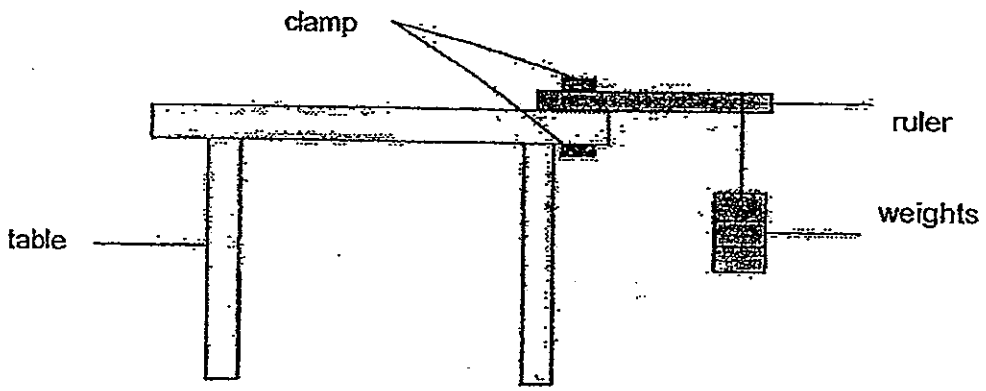
_____

(b) Draw and show in the diagram above, the direction of force acting on the newspaper. (1m)

(c) Suggest how the man can make it easier to move the bundle of newspapers by himself? (1m)

_____

39 Rina, Vani, Lulu and Lily each had a ruler made of different materials.
They conducted an experiment to test the flexibility of their rulers. The diagram below shows the set-up which is not drawn to scale.



Name	Material	Length of the ruler (cm)
Rina	Wood	15
Vani	Plastic	20
Lulu	Metal	18
Lily	Glass	30

(a) Based on the results recorded in the table above, their teacher who was observing the experiment told the girls that their experiment was not a fair one. Explain why the teacher said that. (1m)

(b) If the mistake pointed out by the teacher was corrected by the girls, how can the girls make their results more reliable? (1m)

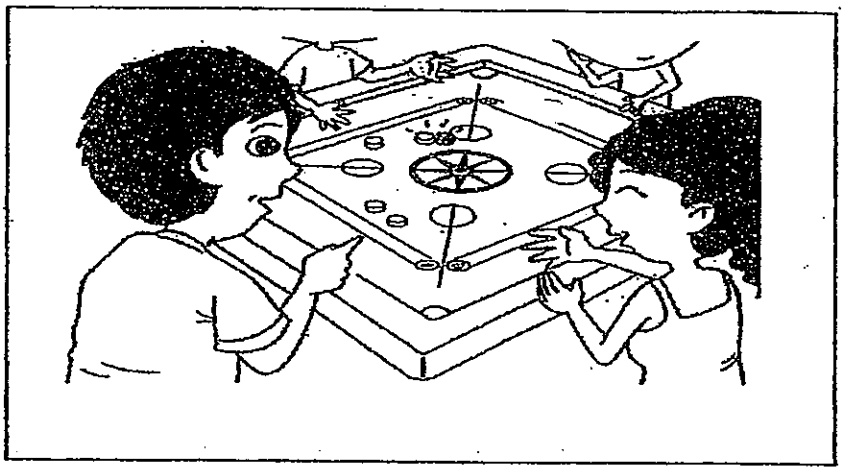
_____

(c) What measurement must be recorded by the girls in order to achieve the aim of the experiment? (1m)

_____

(Go to next page)

40 A group of children was playing a game of carom. A striker is a disc of another colour that is used to hit the other discs into the hole. When it was Peter's turn to hit, he realized that the striker stopped even before it could hit the disc.



(a) What caused the striker to stop moving? (1m)

_____

(b) Suggest what he could do to continue his game. (1m)

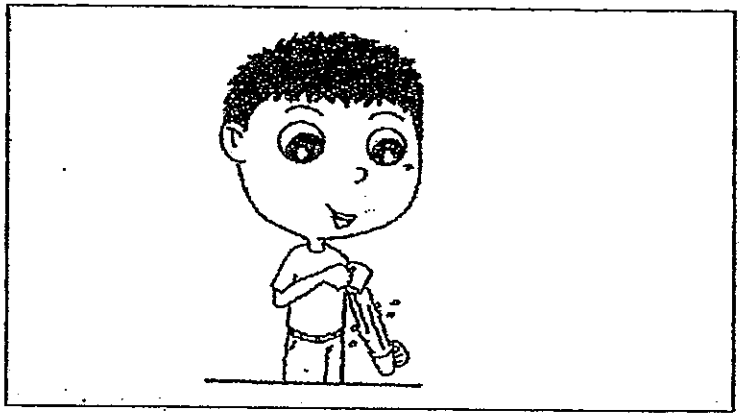
_____

(c) Give a reason for his actions. (1m)

_____

(Go to next page)

41 Muthu and Samy were having breakfast at a coffee house when they noticed the man make tea tarik by pouring and "stretching" the tea between two cups repeatedly for a few seconds. Muthu commented that by doing this, volume of tea would be increased.



(a) Do you agree with Muthu? Why? (1m)

_____

_____

(b) What would happen to the hot tea if the man continued with his action of "stretching" the hot tea for longer than a few seconds? (1m)

_____

_____

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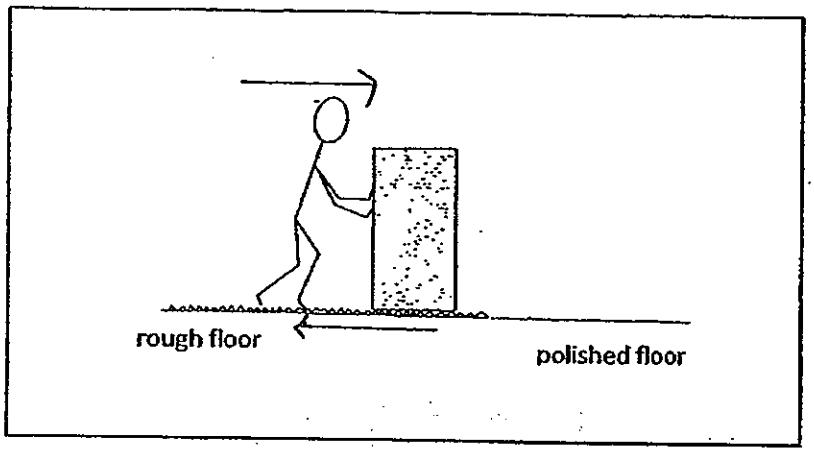
42 The figure below shows a man pushing a heavy box across a floor.
The box slides without tipping.



(a) In the diagram above,
(i) Draw and
(ii) Label

all the forces that are acting on the box by using " ⟶ " (11/2 m)

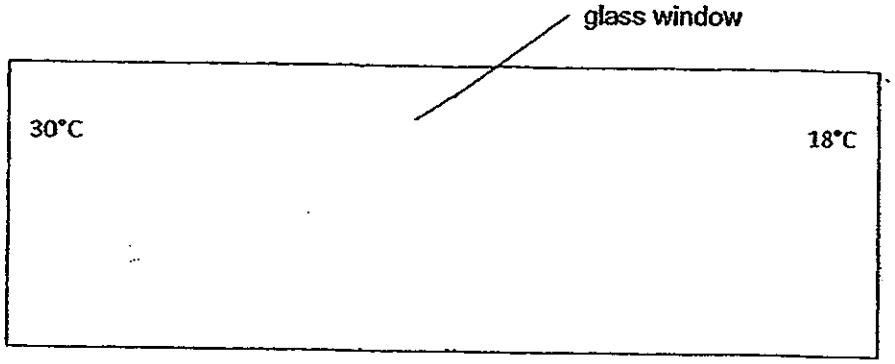
(b) On which floor will the box slide easily? Why? (1/2m)

_____

_____

(Go to next page)

43 The diagram below shows the top view of two rooms that are next to each other. These two rooms are separated by a glass window. One of these glass window becomes misty when the temperature in the two rooms are different.



(a) Draw in the diagram to show the formation of the water droplets correctly. Explain why this takes place. (1m)

(b) To solve this problem of the formation of water droplets, a fan was placed blowing directly at this window.
Explain how adding this fan would help to get rid of the water droplets. (1m)

_____

_____

_____

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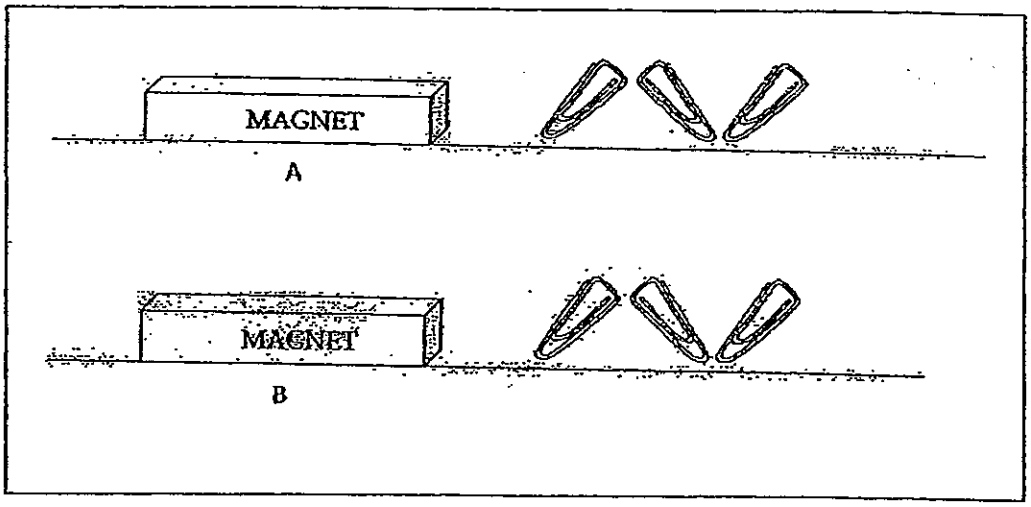
44 William conducted an experiment with magnets, A and B and some steel paper clips.



(a) Draw and indicate the force that acts on the paper clips. (1m)

The observations made during the experiment are shown in the table below.

Distance between magnet and clips (cm)	1	2	3	4
No of clips attracted to magnet A	10	7	4	2
No of clips attracted to magnet B	15	11	8	5

(b) Based on the results of his experiment, what could William conclude about magnets A and B? (1m)

_____

_____

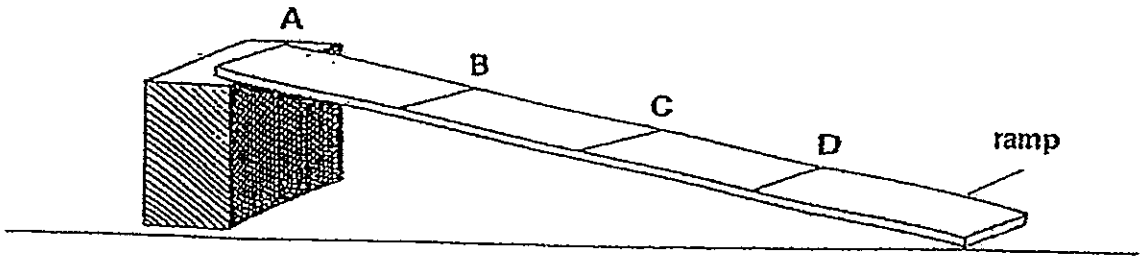
(c) Another magnet bigger than B was used and the experiment was repeated. However, the results were similar to B's. Suggest a reason for this. (1m)

_____

_____

(Go to next page)

45 Jaslin placed a toy car on top of a ramp and let it roll down from rest. Then she measured the distance the toy car travelled along the floor after leaving the ramp. She did this 3 times. She then repeated the activity several times, each time placing the toy car at a different point along the ramp. She recorded the results in the table below.



Position of the car on the ramp	Distance travelled along the floor in cm			
	1st try	2nd try	3rd try	Average
A	105	100	107	104
B	64	68	66	66
C	30	35	37	34
D	18	20	16	18

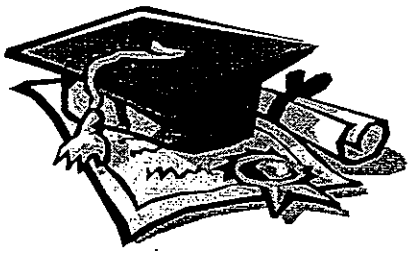
(a) Name two variables that could have affected the distance travelled by the toy car. (1m)

_____

_____

(b) Where would you place the toy car on the ramp if you wanted it to travel about 50 cm along the floor? (1m)
Mark the position with a cross (X) in the diagram.

END OF PAPER



ANSWER SHEET

EXAM PAPER 2013
SCHOOL : MGS
SUBJECT : PRIMARY 6 SCIENCE

TERM : SA1

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

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

31)a)30ml of fertilizers.
b)1)The type of fertilizers.
2)The place where the experiment is conducted.
c)The seedlings could make their own food for its own growth but not as much as when there is fertilizers.

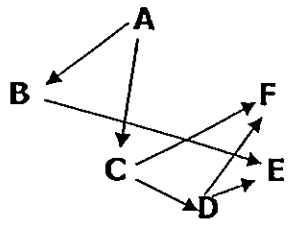
32)a)Joseph and Joel.
b)His grandmother.

33)a)The pond.
b)Plants R and S are both completely submerged plan.
c)The populations of plants R and S will decrease as plant P will block out the sunlight from reaching plants R and S. Without sunlight, plants R and S cannot photosynthesis and make food.

34)a)1)The temperature in the garden community is higher than the ieaf litter community.
2)The leaf litter community does not receive as much sunlight as the garden community.
b)Animals D and C.

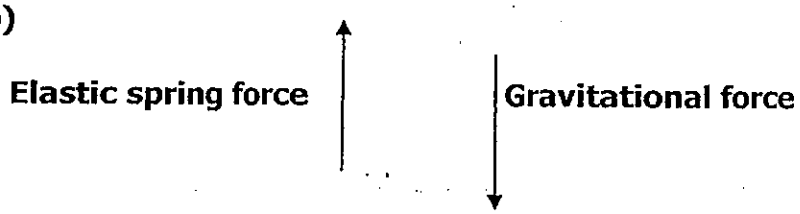
35)a)R: wind
S: explosive action
b)i)The wasps help to pollinate the flowers of the fig tree, so the flowers of the fig tree will turn into fruits and after seed dispersal, the population of the fig tree will increase.
ii)As the flowers of the fig tree are completely hidden in the figs, no predators or enemies will be able to spot the wasp's eggs after they were laid. So no predators will eat up the wasp's eggs, thus the population of wasps will also increase.

36)



37)a)The people in Singapore had caught the giant clams, cooked them and ate them.
b)The algae.

38)a)Elastic Spring Force and Gravitational Force.
b)



c)He can put the newspapers into a trolley and push the trolley to wherever he wants to go.

39)a)The length of their rules were not the same. In an experiment, only one variable can be changed, since they are testing the flexibility of the ruler, only the material of the rulers can bend changed, whereas the length of the rulers be kept the same.
b)The girls can repeat the experiment two or more times.
c)They must measure and record how far the ruler can bend.

40)a)Frictional Force.
b)He could hit the disc even harder.
c)This will reduce the friction between the striker and the board surface.

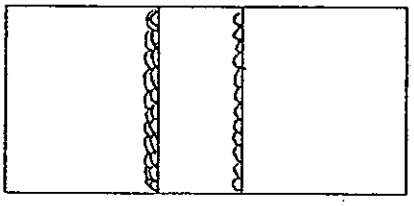
41)a)No. The tea is a liquid. Liquid has a definite volume, so the tea will not increase.

b)More heat from the hot tea would be lost the surrounding, and the temperature of the tea will be lowered.

42)a)pushing force (force of motion) ⟶ | Gravitational Force

b)The polished floor. There will be lesser surface of contact on the polished floor and since the polished floor is smooth, there will be lesser frictional force, so the box will slide easily on the polished floor.

43)a)



a) When the water vapour in the room of 30℃ touches the glass window, it loses heat and condenses into tiny droplets of water. Hence, glass window becomes misty.

b) The fan helps evaporation to take place.

44)a)Magnet B⟵

b)Magnet B is a stronger magnet compared to magnet A.

c)The size of the magnet will not affect the magnetic force of attraction in the magnet.

45)a)1)mass of the car.

2)The position of the ramp.

b)