Temasek Primary School

Preliminary Examination

Primary Six

2015

SCIENCE
(Booklet A)

Name: _____ ( )

Class: Primary 6 _____

Date: 27 August 2015

Parent's Signature: _____

60 Marks

Total Time for Booklet A and B: 1h 45 min

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number in the spaces provided clearly.
2. Do not open this booklet until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.

PART 1

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) and shade your answer on the Optical Answer Sheet.

(60 marks)

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1. Which one of the following is the basic unit of life for a fish and a plant respectively?

	Fish	Plant
(1)	cell	cell
(2)	nucleus	nucleus
(3)	nucleus	chloroplast
(4)	cell membrane	cell wall

2. The lungs and the heart are two organs in the human body. Which one of the following ststements on the functions of the lungs and the heart is true?

(1) The lungs remove carbon dioxide from the body.

(2) The heart removes carbon dioxide from the lungs.

(3) The lungs transport oxygen produced by the heart.

(4) The heart takes in oxygen from the surroundings directly into the body.

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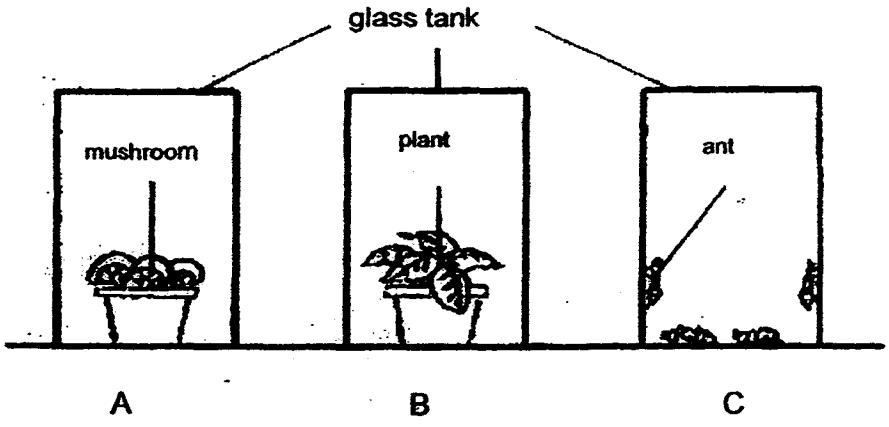
3. The diagram below shows three glass tanks, A, B and C , each containing different organisms and with the same amount of carbon dioxide in each.



The three glass tanks were sealed and kept in a well-lit room for six hours.

In which of the tanks would there be an increase in carbon dioxide after six hours?

(1) B only

(2) C only

(3) A and C only

(4) A and B only

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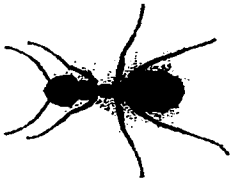
4. The diagrams below shows some insects, A, B, C, D, E, F, G and H.

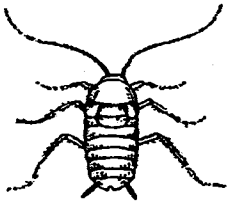

A


B


C


D

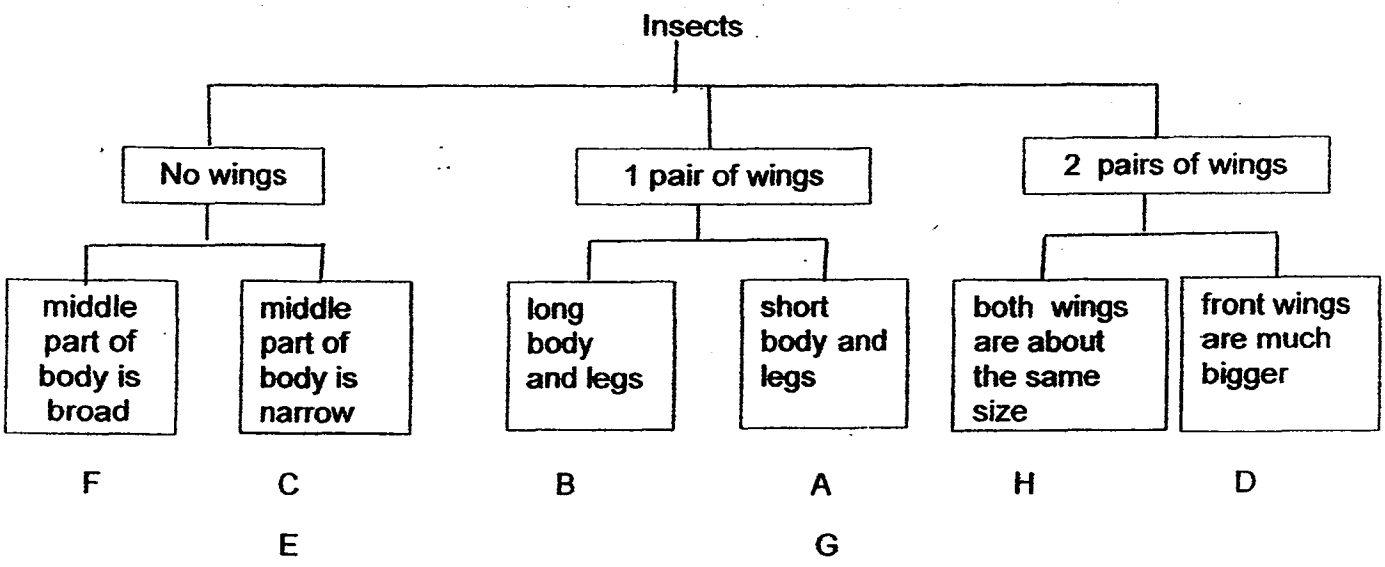

E


F


G


H

The insects can be grouped according to the classification table shown below.



Which insects in the classification table have been grouped wrongly ?

(1) A and G

(2) F and H

(3) B and E

(4) C and D

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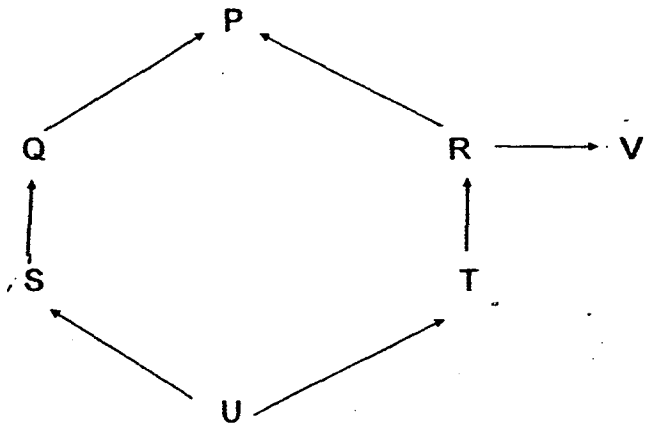
5. In the food web below, which animal populations will increase in number if there is an increase in the population of P?



(1) R and V

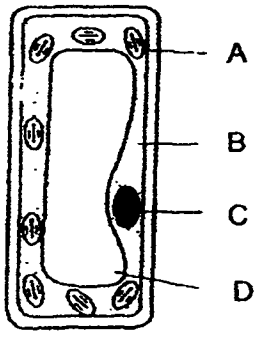
(2) Q and R

(3) S and T

(4) T and V

6. The diagram below shows a cell from the leaf of a plant.

Which part traps light energy?



(1) A

(2) B

(3) C

(4) D

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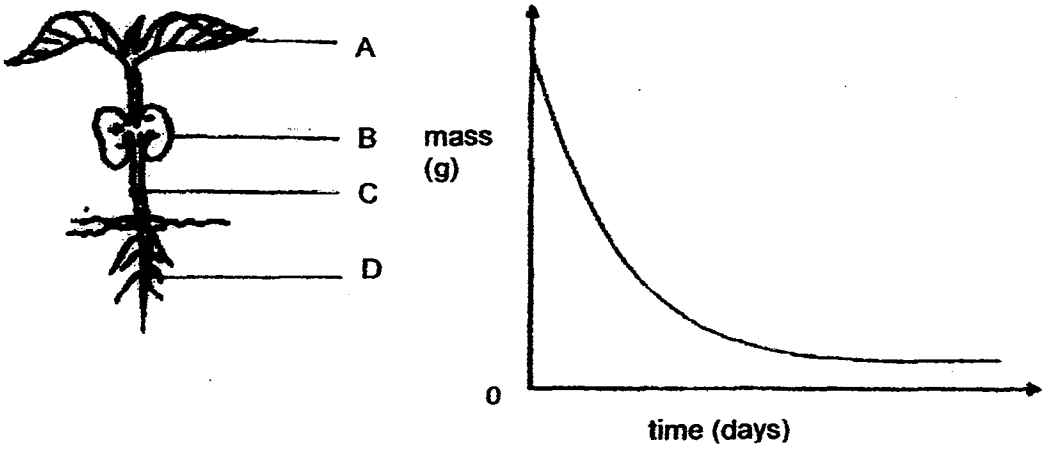
7. The graph below shows the change in one of the plant parts as the plant develops from a seedling to an adult plant



Which of the above plant parts does the graph represent?

(1) A

(2) B

(3) C

(4) D

8. Which of the following statements are true when a comparison is made between the sperm of an animal and the pollen grains of a flower?

A Both will develop into an embryo.

B Both are found in the male reproductive organs of the organisms.

C Both help to fertilise the female reproductive cell of the organisms.

D Both contain information that is passed to the next generation.

(1) A, B and C only

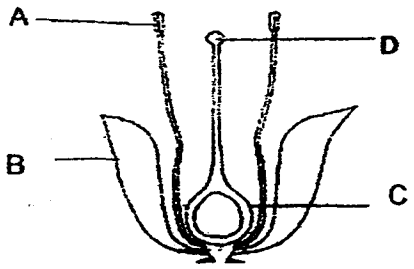
(2) A, C and D only

(3) B, C and D only

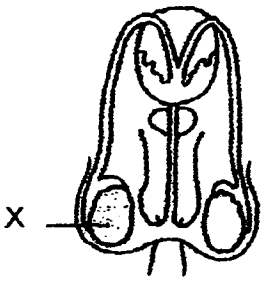
(4) A, B, C and D

(Go on to the next page)

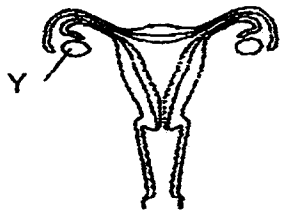
9. The diagram below shows the reproductive system of a flower, a man and a woman.



Reproductive system of a flower



Reproductive system of a man



Reproductive system of a woman

Which of the following represents the parts of the flower which have the same functions as X and Y respectively?

	Male part X	Female part Y
(1)	B	D
(2)	A	C
(3)	C	B
(4)	D	A

(Go on to the next page)

10. An experiment was conducted to find out how the rate of photosynthesis in plants is affected by the presence of carbon dioxide and sunlight.
The table below shows the conditions under which four identical plants, W, X, Y and Z, were placed at the beginning of the experiment.

Plant	Conditions
W	Presence of carbon dioxide and placed in a dark cupboard
X	Presence of carbon dioxide and placed under the Sun
Y	Absence of carbon dioxide and placed in a dark cupboard
Z	Absence of carbon dioxide and placed under the Sun

Which of the following correctly matches the pair of plants that could be used to compare the results respectively?

(1)

Condition	Plant
Carbon dioxide	W
	X
Sunlight	Y
	Z

(2)

Condition	Plant
Carbon dioxide	X
	Z
Sunlight	W
	X

(3)

Condition	Plant
Carbon dioxide	W
	Y
Sunlight	Y
	Z

(4)

Condition	Plant
Carbon dioxide	W
	Z
Sunlight	Y
	Z

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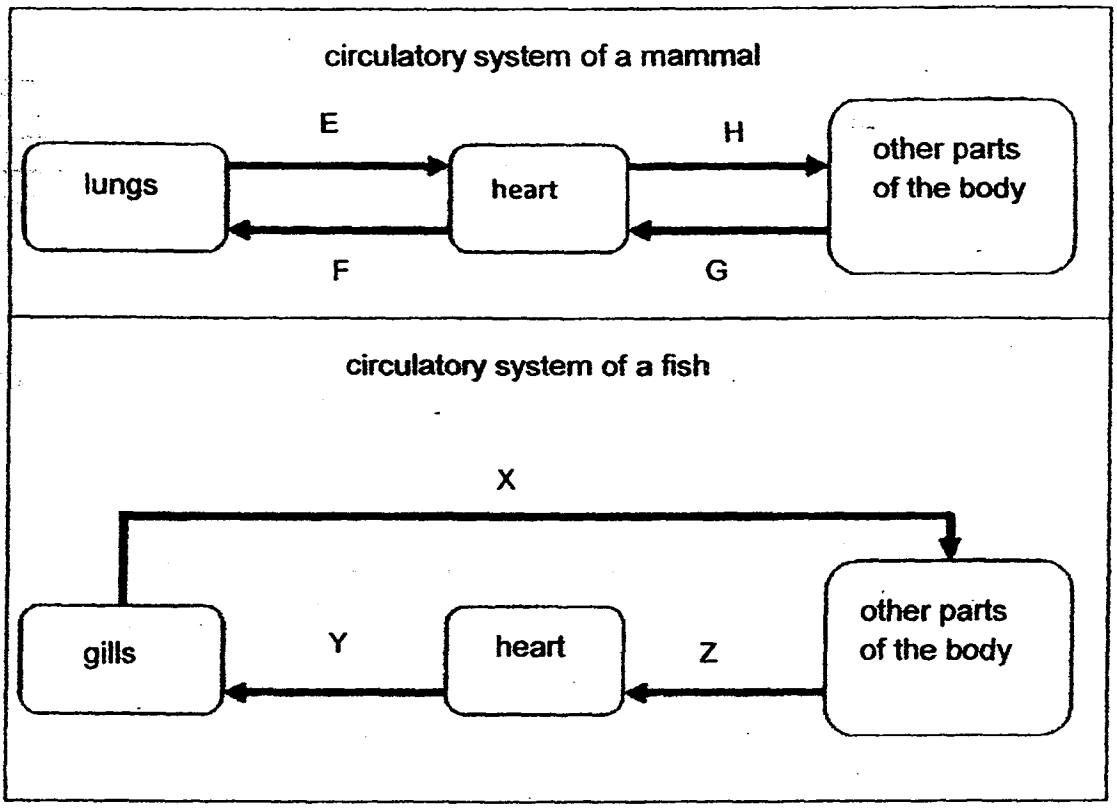
11. The diagrams below show the circulatory systems of two organisms, a mammal and a fish.

The arrows represent the blood vessels that carry blood from the lungs or the gills to the other parts of the body.



Based on the diagrams above, which of the following statements is / are correct?

A Only blood vessels F, G, Y and Z carry blood with less oxygen.

B Only blood vessels E, H and X carry blood with more oxygen.

C Oxygen-rich blood from the gills goes to the heart like the blood in blood vessel E.

(1) A and C only

(2) A and B only

(3) B and C only

(4) A, B and C

(Go on to the next page)

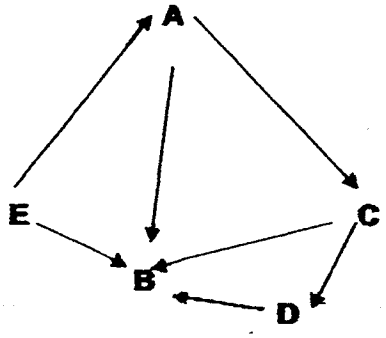
12. A, B, C , D and E are five organisms in a certain community.

The following is some information about these organisms.

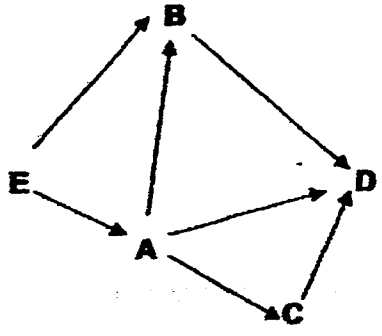
- A has 2 predators.
- B is the only omnivore.
- B and D have 2 food sources.
- E is the only food producer.

Which of the following food webs is found in this community?

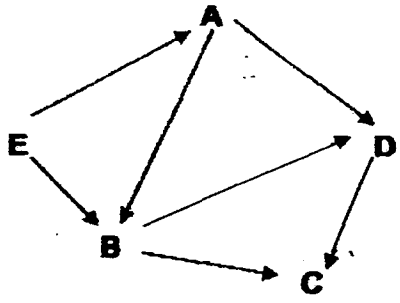
(1)



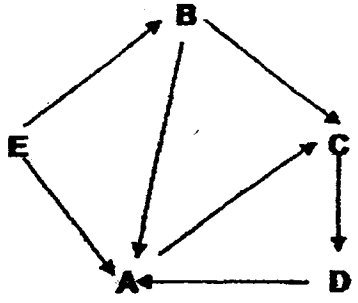
(2)



(3)



(4)



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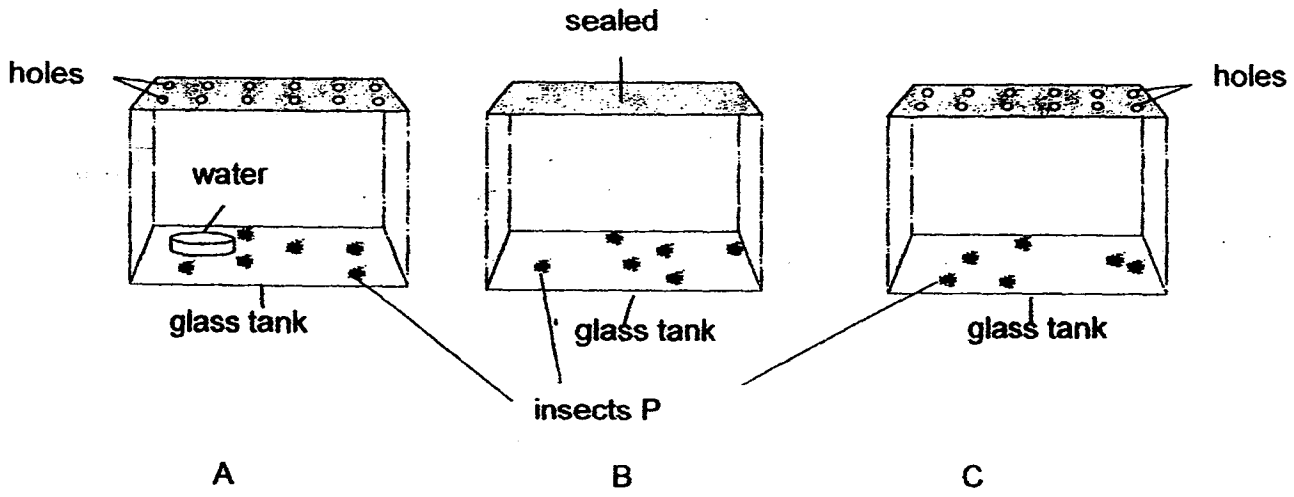
13. Guohua wanted to find out the fastest way to get rid of insect P. He thought of three possible ways A , B and C to get rid of insect P.



Which one of the following is correct?

	Most suitable way to get rid of insect P	Least suitable way to get rid of insect P
(1)	B	A
(2)	C	B
(3)	A	C
(4)	A	B

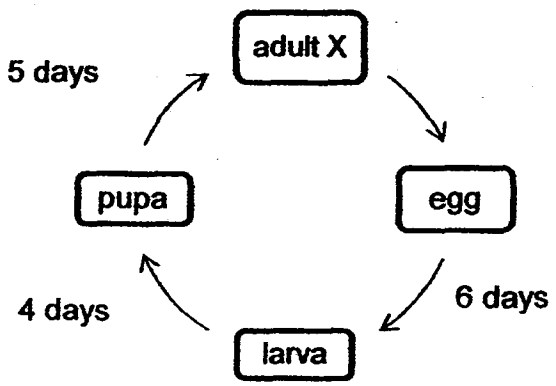
(Go on to the next page)

14. The table below shows how certain temperatures can affect organism X in the following ways.

- number of fertilised eggs laid by females each time
- length of its life cycle (from the time the eggs are laid to the end of its pupa stage)

temperature of the surroundings (° C)	number of fertilised eggs laid	length of life cycle of X (days)
18	50	25
22	110	15
26	140	13
30	225	10

At a certain time of the year, the life cycle of X is shown below.



Based on the information above, what could be possibly inferred about X during its life cycle?

A The surrounding temperature in which X lived was 22°C.

B It took 10 days for X to change from its larva to pupa stage.

C X could multiply quickly when it lived in warm surroundings of 22°C to 30°C.

(1) A and B only

(2) A and C only

(3) B and C only

(4) A, B and C

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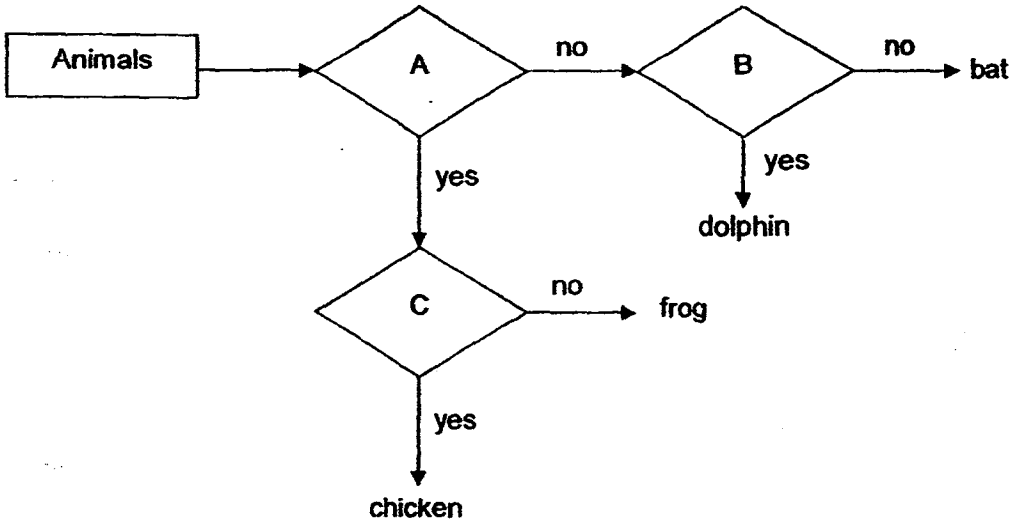
15. The flow chart below compares the characteristics of four animals.



Based on the flow chart above, which one of the following correctly represents A, B and C?

	A	B	C
(1)	Can it swim?	Does it give birth to its young alive?	Does it live on land?
(2)	Does it live on land?	Does it lay eggs?	Can it fly?
(3)	Does it lay eggs?	Does its young live in water?	Does it have wings?
(4)	Does it have hair?	Can it swim?	Does it have feathers?

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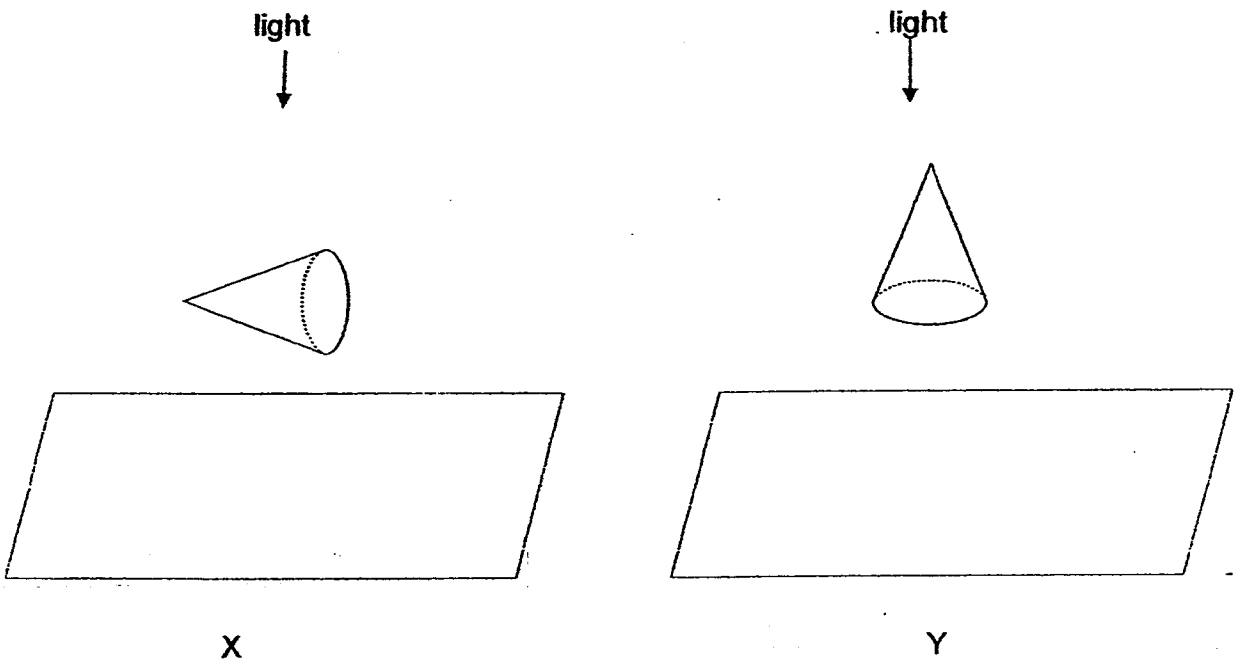
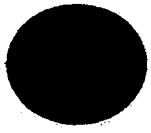
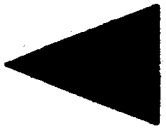
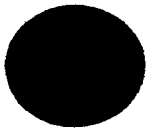
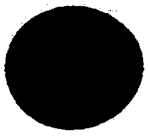
16. Alex conducted an experiment to study the shadows formed by two identical cardboard cones. The cones were placed in different positions under identical light sources in a dark room.

Shadows were formed on screens X and Y as shown below.



Which of the following shadows would be observed for each screen ?

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

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17. The table below shows the state of four substances P, Q, R and S, at different temperatures.

Substances	State of substances at		
	20°C	40°C	60°C
P	solid	solid	solid
Q	solid	liquid	liquid
R	solid	solid	liquid
S	liquid	liquid	liquid

Which of the following statements is correct?

(1) Substance P has the highest freezing point.

(2) The freezing point of substance Q is 20°C.

(3) The boiling point of substance R is 60°C.

(4) Substance S has the lowest boiling point.

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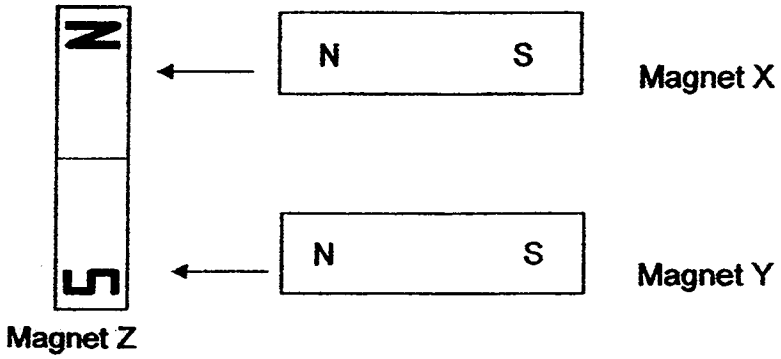
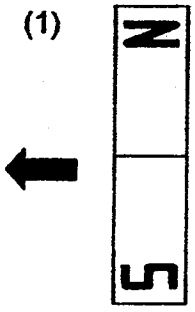
18. Max moved 2 similar magnets, X and Y, towards Magnet Z as shown below.

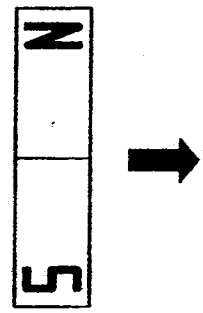


Which of the following shows the correct movement of magnet Z?

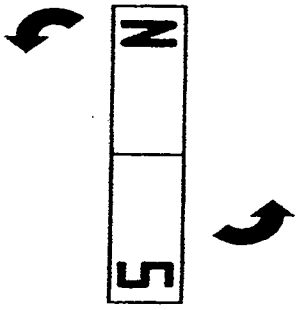
(1)



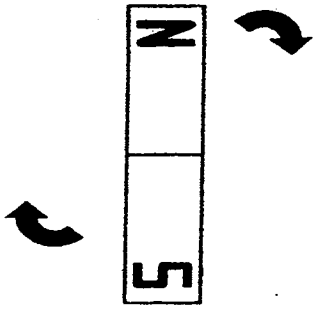
(2)



(3)



(4)



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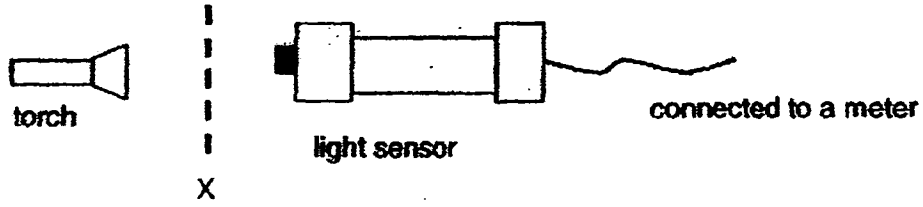
19. A model was designed to count sheets of paper of the same thickness.



The table shows the relationship between the number of sheets and the amount of light the light sensor recorded.

Number of sheets	Amount of light (units)
0	80
1	32
2	13
3	5
4	2
5	1
6	0
7	0
8	0

Which of the following statements about the experiment are not true?

A The set-up cannot be used to count more than 5 sheets of paper.

B When no paper is placed at position X, the light sensor does not allow any light to pass through.

C When the number of sheets increases, the amount of light passing through the light sensor increases.

(1) A and B only

(2) A and C only

(3) B and C only

(4) A, B and C

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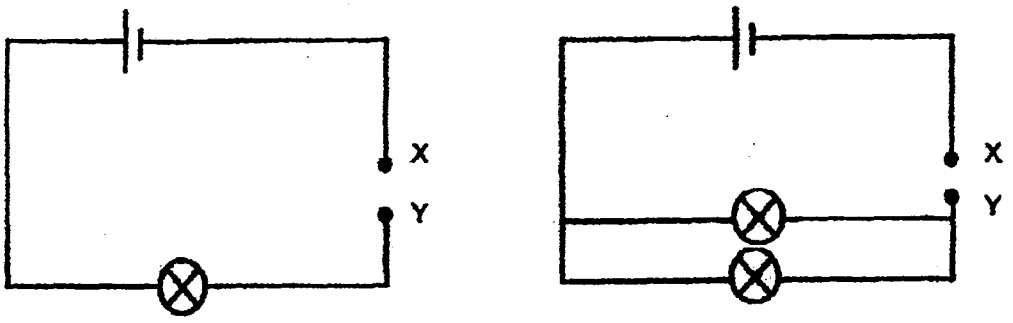
20. Alexa set up the two circuits shown below. (All bulbs and batteries used are identical and in good working condition)



Circuit P Circuit Q

If Alexa added another battery at XY in both circuits, which of the following observations would she make?

A The bulb in circuit P would be brighter than before.

B The bulbs in circuit Q would be brighter than before.

C The bulb in circuit P would not be as bright as those in circuit Q.

(1) A and B only

(2) B and C only

(3) A and C only

(4) All of the above.

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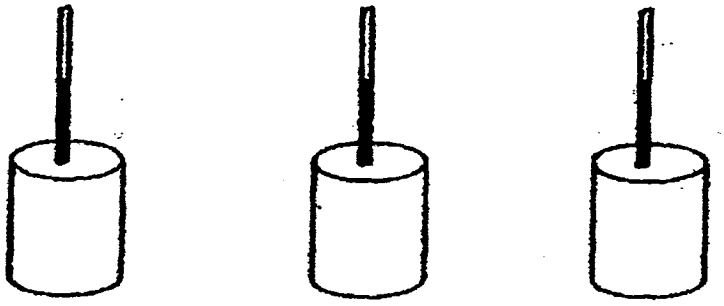
21. Nancy did an experiment to test how well different materials slow down heat loss.

She wrapped three identical empty cans in three different materials, X, Y and Z.

She then put 60 ml of water at 50°C into each can.

After ten minutes, she measured the water temperature of water and recorded it in a table.



wrapped in material X

wrapped in material Y

wrapped in material Z

If Nancy wanted to set up a control experiment to compare her results, which of the following would be the most suitable?

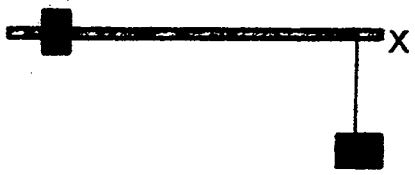
	Amount of water	Temperature of water	Material for covering
(1)	50 ml	50°C	X
(2)	50 ml	40°C	Y
(3)	60 ml	40°C	Z
(4)	60 ml	50°C	no material

(Go on to the next page)

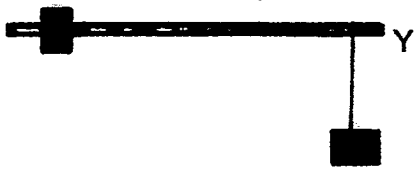
22. Ali found two types of metal rods, X and Y. She wanted to find out which rod X or Y would bend more easily when heated.

The diagrams below show four possible set-ups, A, B, C and D.

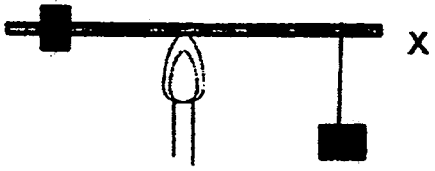
A



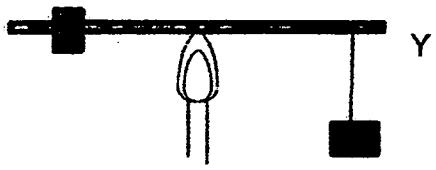
C



B



D



Which two set-ups should Ali compare so that he can make a conclusion?

(1) A and B

(2) A and C

(3) B and D

(4) C and D

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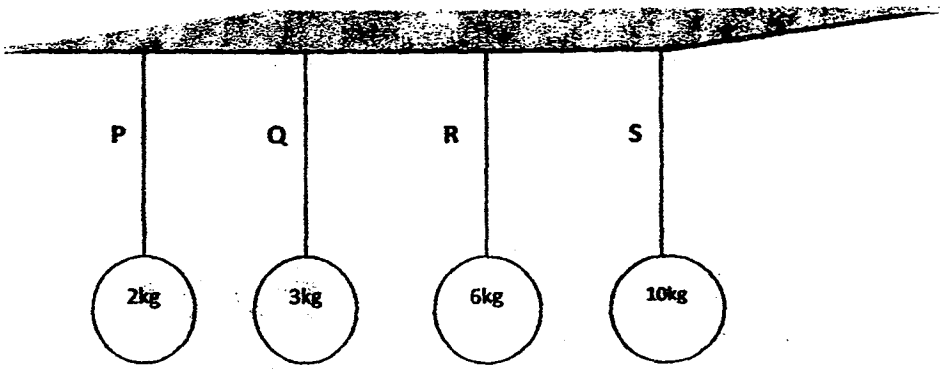
23. The diagram below shows the maximum weight each of the four types of string labelled P, Q, R and S can support without breaking.



In which diagram(s) will all strings remain unbroken?

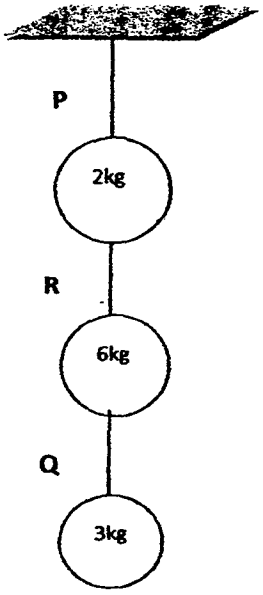


Diagram A

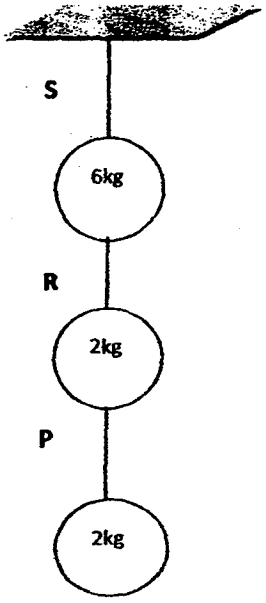


Diagram B

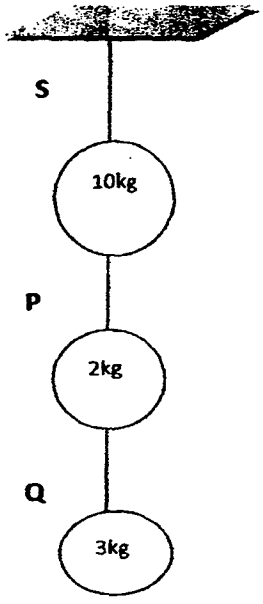


Diagram C

(1) A only

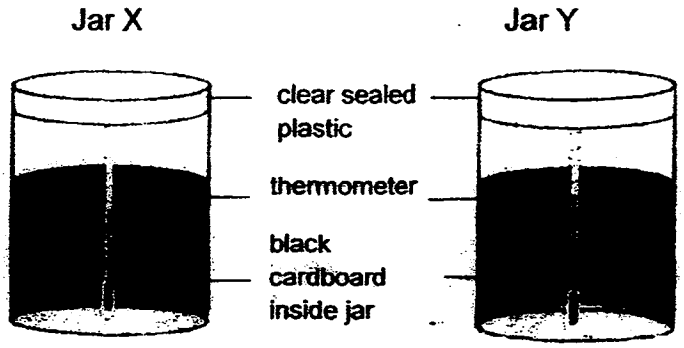
(2) B only

(3) B and C only

(4) A, B and C

(Go on to the next page)

24. Alaric set up two glass jars as shown and placed them in the Sun.



Jar X contains air

Jar Y contains carbon dioxide

He recorded the temperature in each jar in the following table.

Time Taken (min)	Temperature (°C)	
	Jar X	Jar Y
0	29	29
5	31	34
10	33	38
15	36	43
20	40	45

What can he best infer from the above experiment?

(1) Dark coloured environments gain heat faster than light coloured ones.

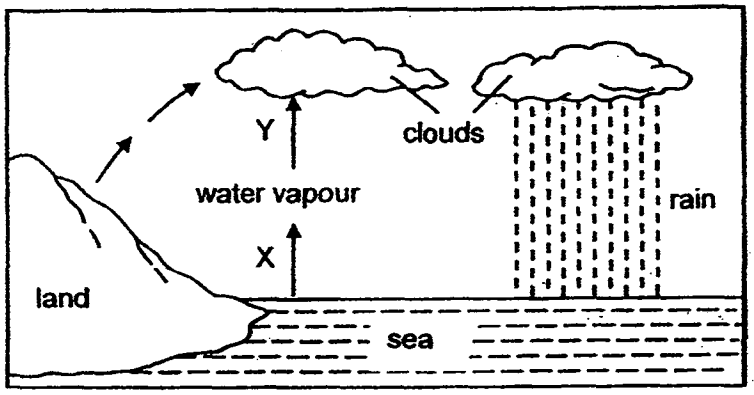
(2) Air contributes more to the greenhouse effect than carbon dioxide.

(3) The jar with carbon dioxide increases in temperature faster than the jar with air.

(4) There is no difference in heat gained or heat loss since both jars contain carbon dioxide.

(Go on to the next page)

25. The diagram below shows the water cycle.



Which of the following statements about processes X and Y are **true**?

A Process X takes place when heat is gained.

B Process Y takes place when heat is gained.

C Process Y does not take place at a fixed temperature.

(1) A and B only

(2) A and C only

(3) B and C only

(4) A, B and C

(Go on to the next page)

26 An iron bar AB was magnetised using the stroking method as shown in Diagram 1 below.

Diagram 2 shows the magnetised poles of bar AB after it was magnetised.

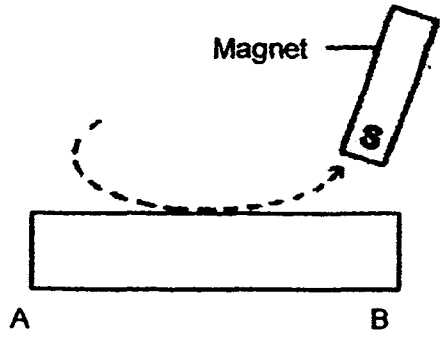


Diagram 1

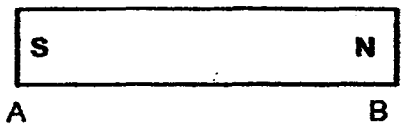


Diagram 2

Another iron bar, XY, was magnetised using two magnets as in Diagram 3.

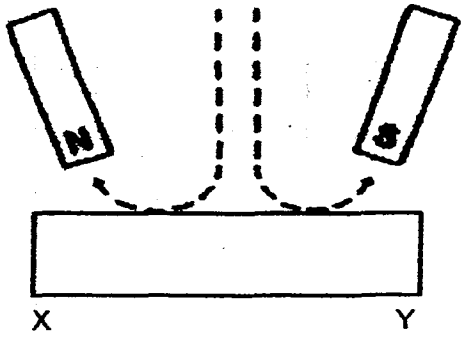
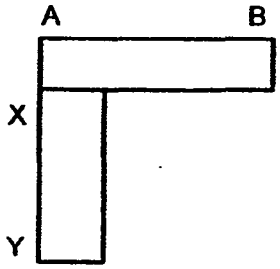


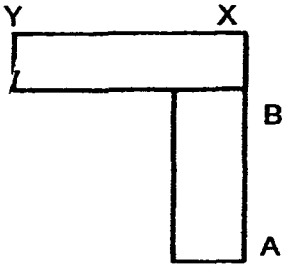
Diagram 3

Which one of the following diagrams shows a possible arrangement of the two bars after they were magnetised?

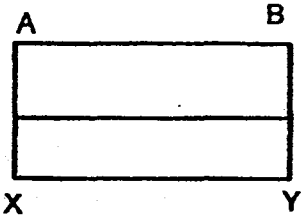
(1)



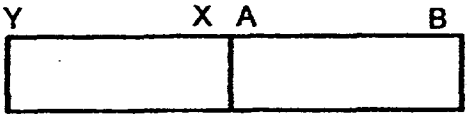
(2)



(3)



(4)



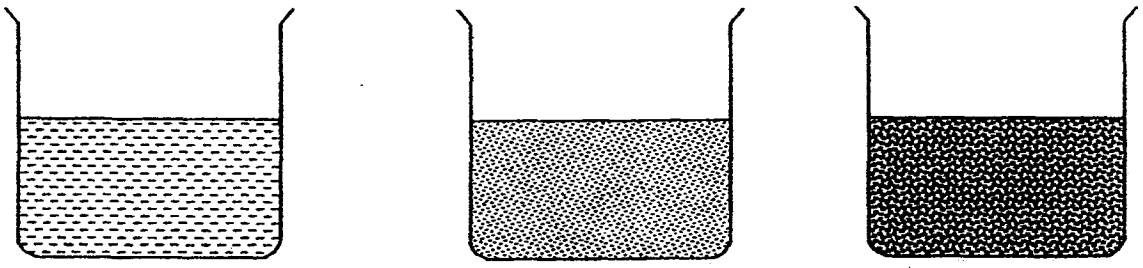
2

(Go on to the next page)

27. Jane did the following experiment on evaporation.

She fills three beakers with an equal volume of liquids X, Y and Z, as shown in the diagram.

She places the beakers side by side in the open, where it is sunny and windy.



liquid X liquid Y liquid Z

After a few hours, she records the volume of liquid remaining in each of the three beaker.

What does Jane want to find out from the experiment?

(1) Whether the liquids evaporate faster at a higher temperature.

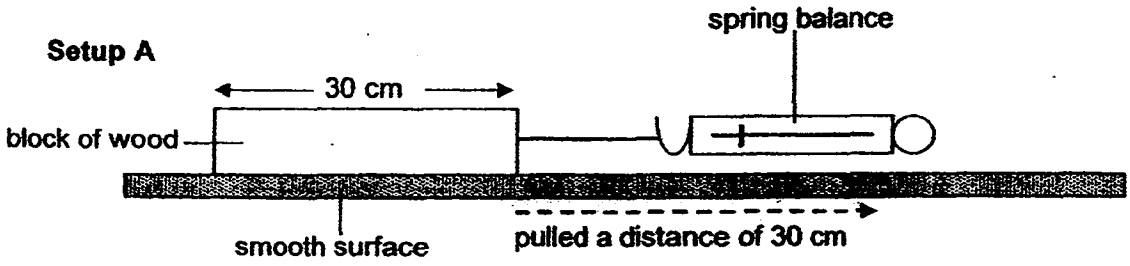
(2) Whether the liquids evaporate faster when there is wind.

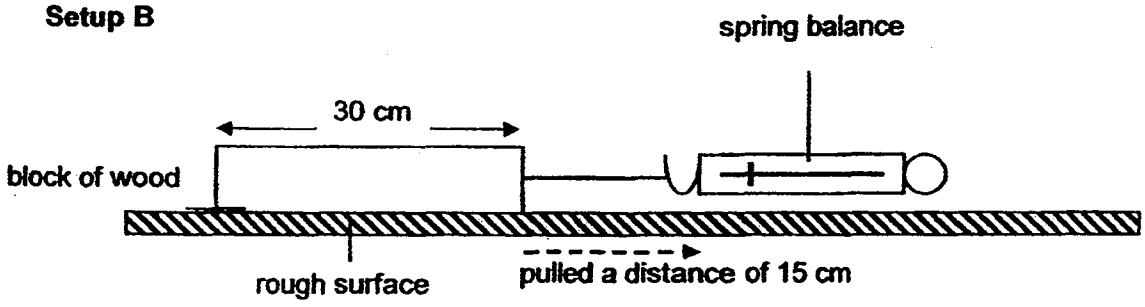
(3) Whether the liquids evaporate faster in the open.

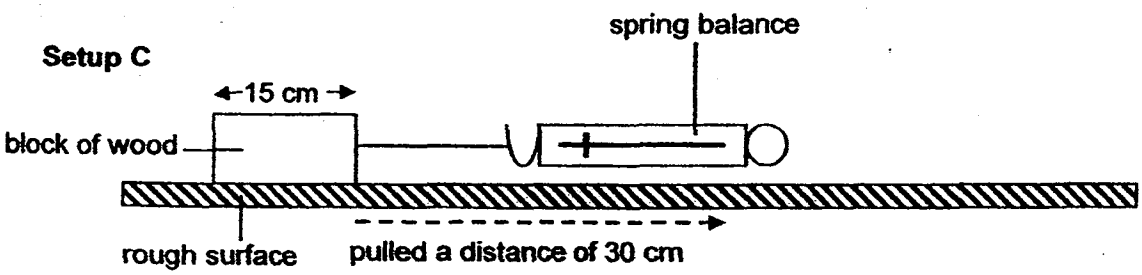
(4) Whether the liquids evaporate at different rates.

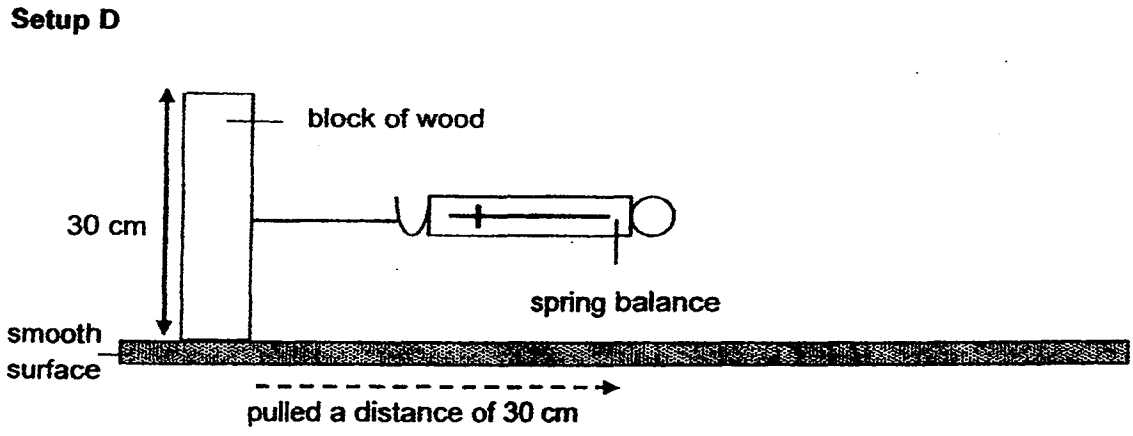
(Go on to the next page)

28. Richard wanted to find out if the size of surface area in contact with the table affects the amount of friction produced between them.







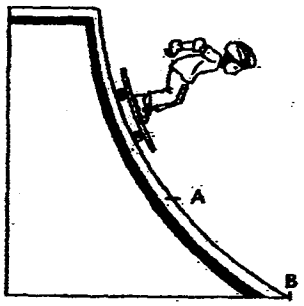


Which two setups above should Richard use to ensure a fair test?

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

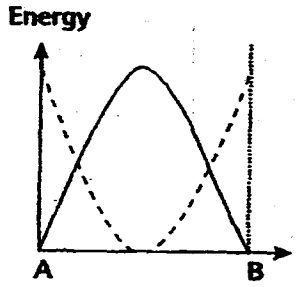
(Go on to the next page)

29. Kelvin rode on a skateboard down a ramp as shown in the diagram below.

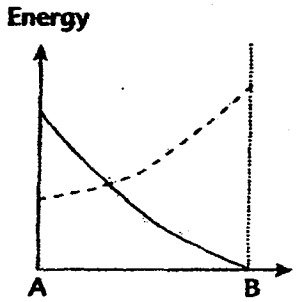


Which one of the following graphs describes the changes in potential energy (——) and kinetic energy (- - - - - - -) from A to B?

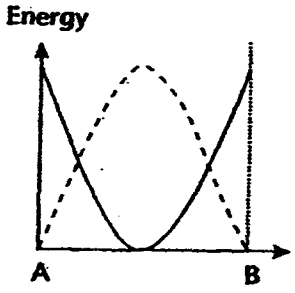
(1)



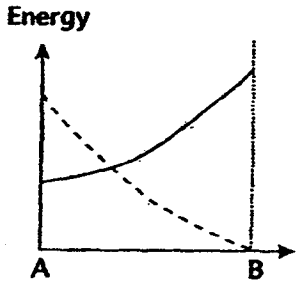
(2)



(3)



(4)



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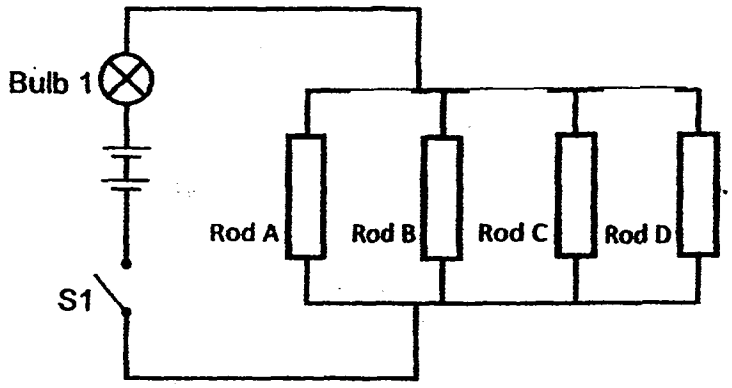
30. Jerry wanted to find out which of the following rods, A, B, C or D was/were electrical conductors.



The table below showed what happened when switch S1 was closed and some of the rods were removed.

Rod A	Rod B	Rod C	Rod D	Bulb 1 lighted up
removed	connected	connected	connected	Yes
connected	removed	removed	connected	Yes
removed	removed	removed	connected	No
removed	connected	removed	removed	No

Based on the information above, which one of the following conclusions is correct?

	Rod A	Rod B	Rod C	Rod D
(1)	electrical insulator	electrical conductor	electrical conductor	electrical conductor
(2)	electrical conductor	electrical insulator	electrical insulator	electrical insulator
(3)	electrical insulator	electrical conductor	electrical insulator	electrical conductor
(4)	electrical conductor	electrical insulator	electrical conductor	electrical insulator

(Go on to Booklet B)

Temasek Primary School

Preliminary Examination

Primary Six
2015

SCIENCE
(Booklet B)

Name: _____ ( )

Class: Primary 6 _____

Date: 27 August 2015

Parent's Signature: _____

Total Time for Booklet A and B: 1h 45 min

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number in the spaces provided clearly.
2. Do not open this booklet until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.

Paper	Marks	Scores
Booklet A	60	
Booklet B	40	
Total	100	

Part II

For questions 31 to 44, write your answer in the booklet.

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

(40 marks)

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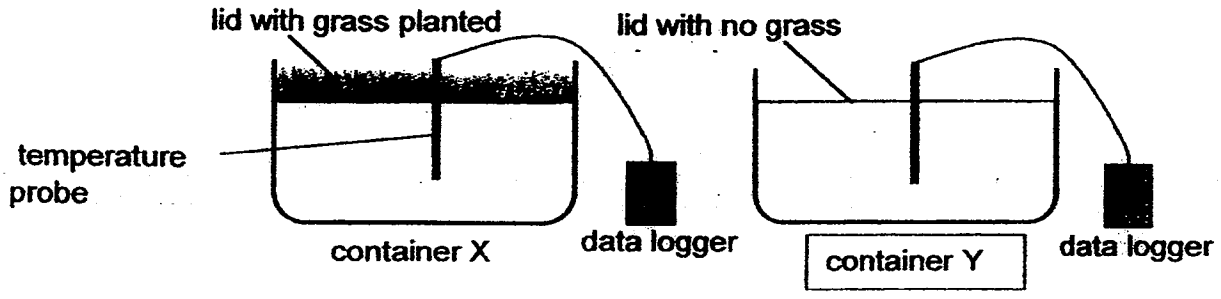
31. Tim set up an experiment as shown below. He measured the temperature of the air inside each identical container using a temperature probe attached to a data logger. The containers are left in the sun for a few hours.



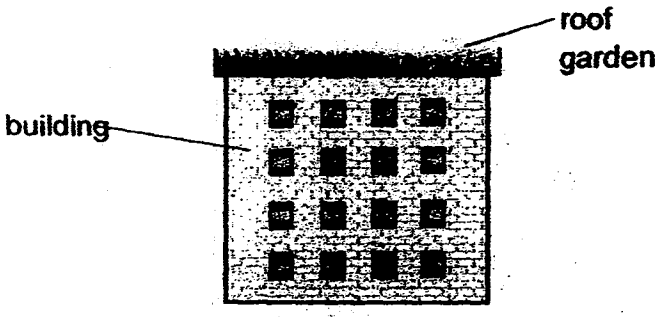
The table shows his results.

Container	Temperature (°C)
X	29
Y	35

(a) Based on the results of his experiment, in what way does the presence of grass affect the temperature of the air inside the container? [1]

(Go on to the next page)

(b) Using the results from Tim's experiment, explain how planting plants on the roof helps in the conservation of energy. [1]



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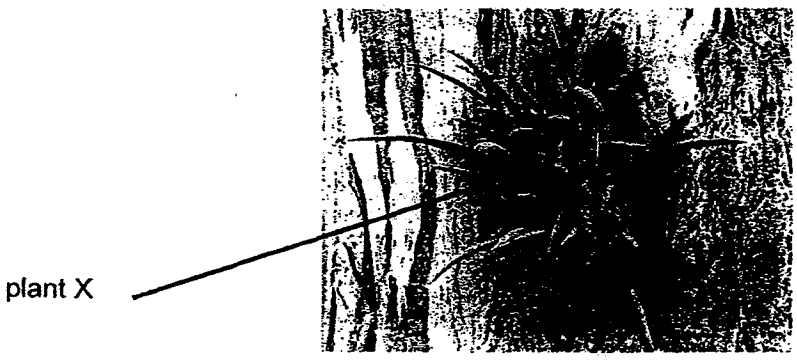
SCORE	2

32. Hayati took a walk in the park. She noticed a plant X, growing on a high branch of a tree. She did not see any of the plant X growing on the ground.



(a) State an advantage plant X will have by growing high up on the tree. [1]

_____

_____

(b) Which method of dispersal could have helped the plant to land on the high branch of the tree? [1]

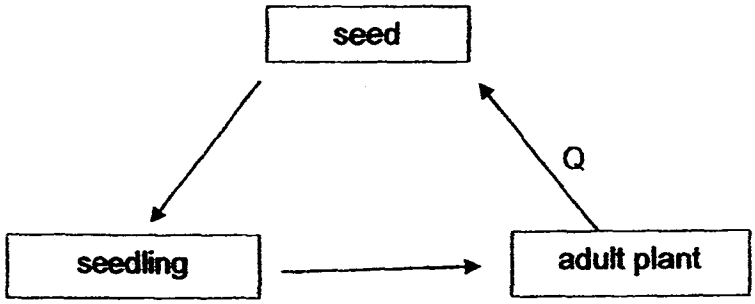
_____

_____

(Go on to the next page)

SCORE	
-	2

33. Study the life cycle of a flowering plant shown below.



(a) Besides seed dispersal, name two other processes that happen at Q. [1]

(i) _____

(ii) _____

(b) Ben wanted to find out the conditions that seeds need to grow into new plants. He prepared 4 set-ups W, X, Y and Z as shown in the table below.

Set-up	Number of seeds	Amount of water (ml)	Surrounding temperature(°C)	Presence of air	Presence of light
W	3	0	30	Yes	Yes
X	3	20	30	No	Yes
Y	3	20	8	Yes	No
Z	3	20	30	Yes	No

In which set-up would the seeds germinate after a week? Explain your answer. [1]

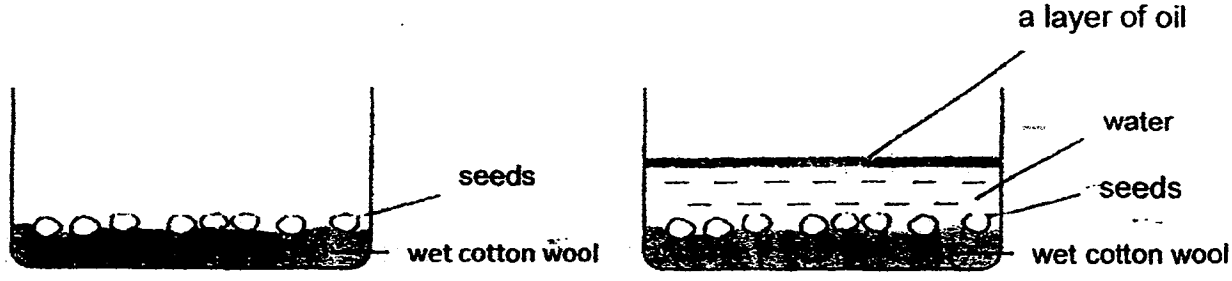
_____

_____

_____

(Go on to the next page)

Ben set up another experiment on the germination of seeds. He used two containers, X and Y as shown below.



Container X Container Y

After two days, the seeds in one of the containers germinated.

(c) Based on the experiment above, in which container did the seeds germinate? Explain your answer. [1]

_____

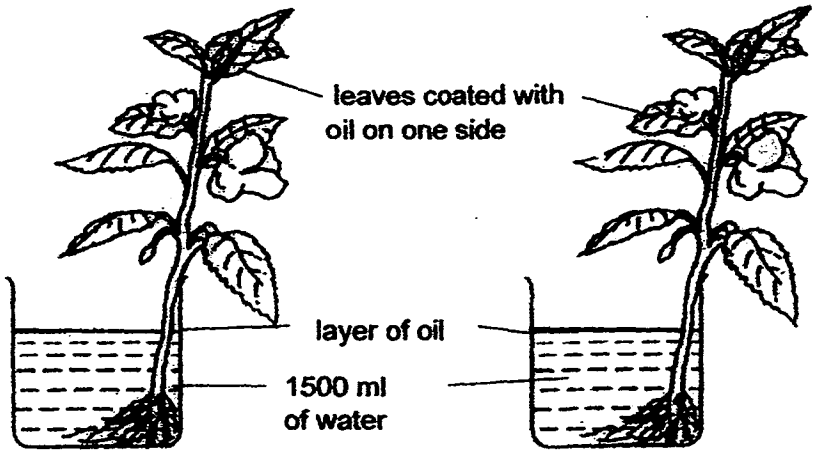
_____

_____

(Go on to the next page)

SCORE	3

34. Two similar plants were placed in two identical beakers, P and Q. The leaves of both plants were coated with oil on one side.



Beaker P Beaker Q

The table below shows the volume of water in the beakers at the beginning and at the end of the experiment after a day.

Beaker	Volume of water(ml)	
	Start of experiment	End of experiment
P	1500	1250
Q	1500	1000

(a) Based on the results above, which beaker contained the plant with the leaves that were coated with oil on the underside of the leaves?
Explain your answer. [2]

(Go on to the next page)

(b) A layer of oil is poured on top of the water in both beakers. What is the purpose of the layer of oil? [1]

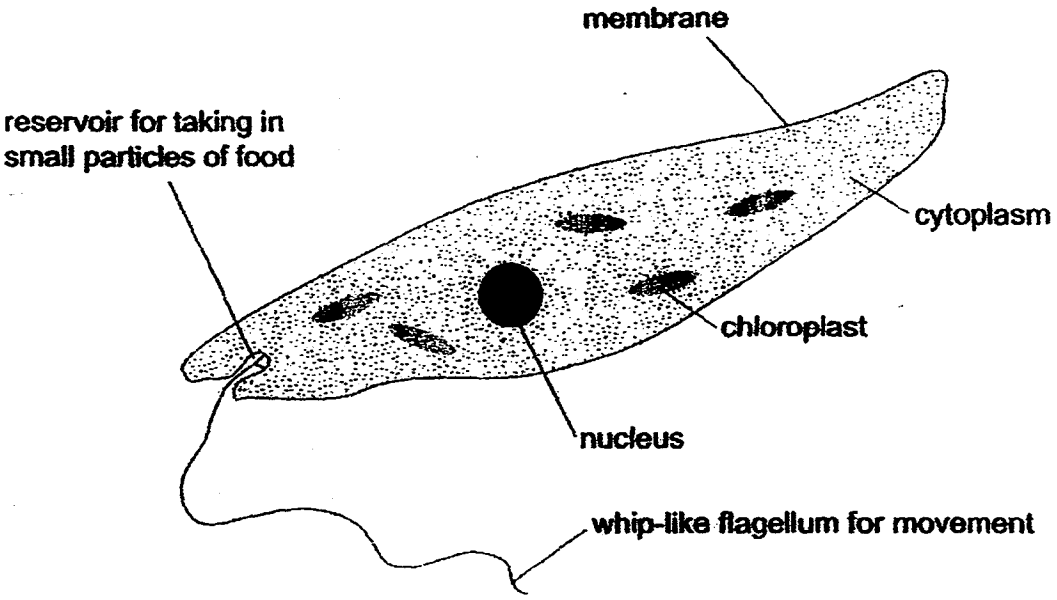
_____

_____

(Go on to the next page)

SCORE	3

35. The diagram below shows an organism that is made up of only one cell. This organism has features of both plants and animals.



(a) Based on the information shown in the diagram, list two characteristics which show that the cell above is not a plant cell. [2]

(i) _____

(ii) _____

(b) Plant cells are able to make food in the presence of sunlight. What evidence in the diagram above shows you that this organism can make its own food? [1]

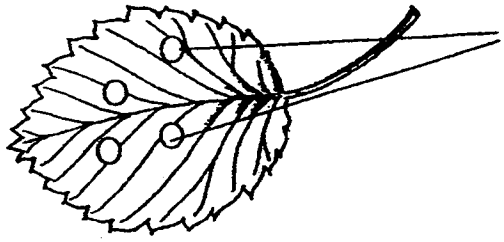
_____

_____

(Go on to the next page)

SCORE	3

36. Plant S has white spots on some of its leaves which resemble the eggs of butterfly N.

Leaf of plant S  white spots

When butterfly N sees the spots on the leaves, it will not lay its eggs on the leaves. Instead it lays eggs on leaves without the white spots.

(a) Based on the information provided above, state one reason why butterfly N does not lay her eggs on the leaves with the white spots. [1]

_____

_____

_____

(b) Flowers of plant S produces nectar that attracts a certain species of white ants. These white ants in turn attack the caterpillars of butterfly N.

How do plant S and the ants benefit each other from this relationship? [2]

(i) Benefit for plant S _____

_____

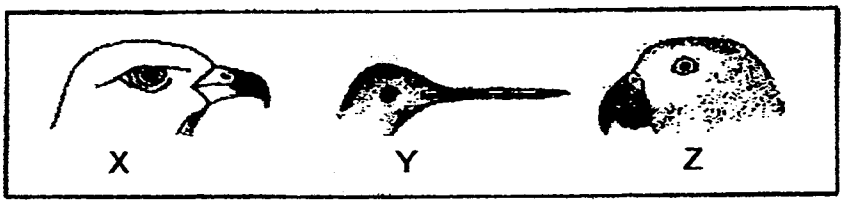
(ii) Benefit for the ants _____

_____

(Go on to the next page)

SCORE	3

37. Bird A feeds on nectar in flowers.



(a) Which one of the beaks shown above belongs to bird A? Explain your answer. [1]

(b) How does the feeding of nectar of bird A benefit the flowers? [1]

(Go on to the next page)

Bird A is also known to lay her eggs in the nest of another bird, bird Q. The eggs of the two birds are shown below.

egg of bird A

egg of bird Q

Bird Q incubates the eggs for bird A and helps to take care of the baby birds.

(c) Give a reason why bird Q hatches the eggs for bird A. [1]

The young of bird A is much larger and often pushes the young of bird Q from its nest.

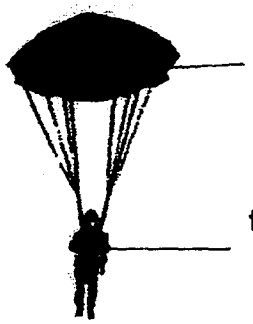
(d) Why is this an advantage to the young of bird A when there is limited food supply? [1]

(Go on to the next page)

SCORE	/4

38. Hafiz wanted to find out if the area of a plastic sheet affected the time a toy soldier took to fall vertically to the ground from a certain height.

The diagram below shows the set-up which was dropped from a certain height.



Hafiz recorded his readings in the table below.

Area of plastic sheet (cm^3)	Time taken to reach ground (s)
5	6
10	11
15	14
20	17

(a) Based on the information above, what could Hafiz conclude? [1]

(b) Describe how Hafiz would find out if the mass of the toy soldier would affect the time taken for it to reach the ground. [2]

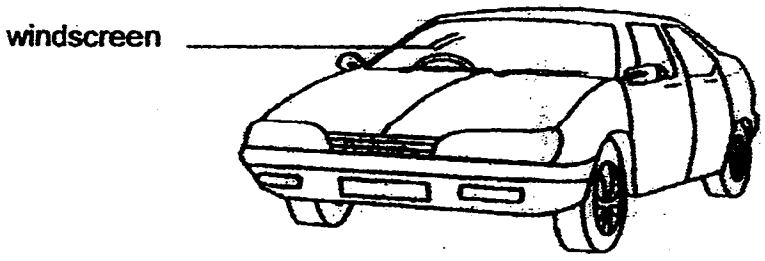
(Go on to the next page)

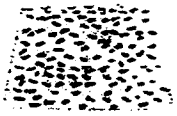
SCORE 3

39. **Jenny conducted an experiment to find out the period of the day when the air contained the most dust.**

She asked her mother to park her car in the car park. The car was left in the car park without being moved or cleaned for twenty-four hours.

Jenny recorded the appearance of the windscreen of the car at different periods of the day



Appearance of windscreen			
Period	**8 am to 4 pm**	**4 pm to 12 midnight**	**12 midnight to 8 am**

She concluded that the air contained the most dust between 12 midnight and 8 am.

Her mother told her that her experiment was not a fair one.

(a) What should Jenny do to make her experiment a fair one? [1]

_____

_____

(b) Give a reason for your answer to (a). [1]

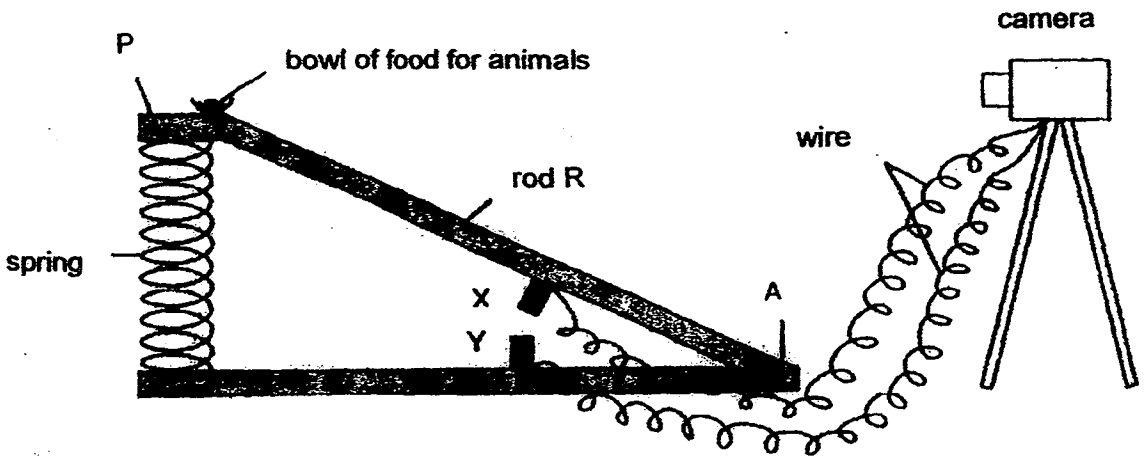
_____

_____

(Go on to the next page)

SCORE 2

40. A photographer uses the set-up shown below to take photographs of animals automatically. R is a rod that is fixed at A but it is moveable. The contacts, X and Y are connected to a special camera by wires so that when X touches Y, the camera will take a photograph of the organism at P.



(a) Explain how this set-up enables the camera to take the photograph of an animal when it lands on P.to eat the food. [2]

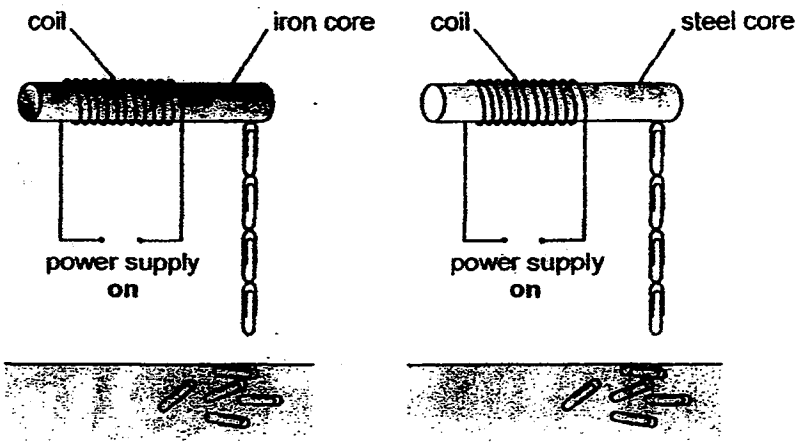
(b) The set-up was placed in the garden. He noticed that small animals have been feeding on the food at P. However no photographs of the small animals were taken by the camera although it was working properly.

Describe one change that the photographer can make to the set-up so that the camera will take photographs of small animals as well. [1]

(Go on to the next page)

SCORE	3

41. Alan made two electromagnets as shown below. He used paper clips to test the strength of each electromagnet. He switched on the power supply in both circuits.



(a) How can you tell that the strength of both electromagnets is the same ? [1]

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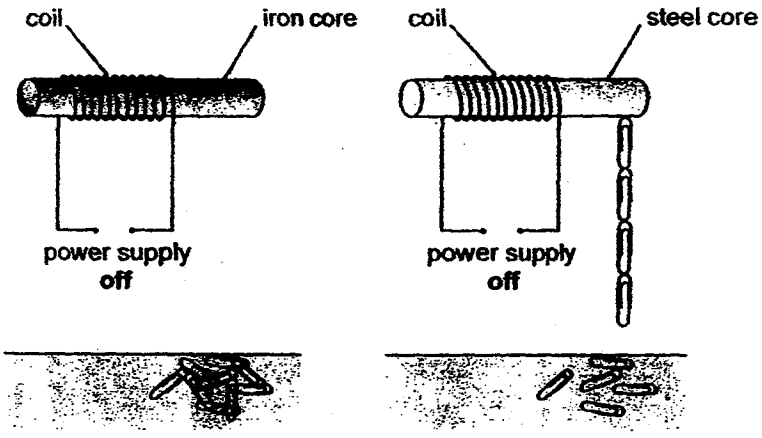
Alan switched off the power supply in both circuits. The paper-clips fell off the iron core, but **not** off the steel core.



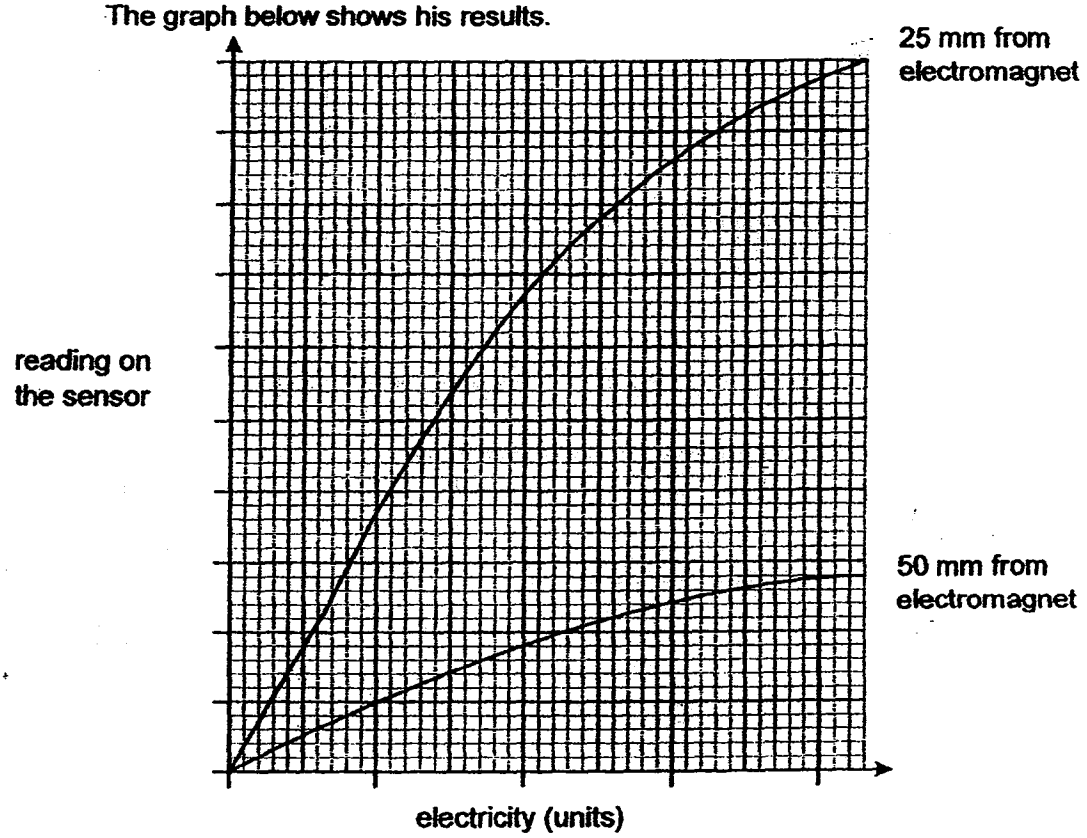
(b) Why is iron used, rather than steel, for the core of an electromagnet in a can recycling plant?
Use the information in the diagrams to help you. [1]

Alan used a sensor to measure the strength of an electromagnet.

He placed the sensor 25 mm from the electromagnet and increased the current in the coil.

He repeated the experiment with the sensor 50 mm from the electromagnet.

The graph below shows his results.



(c) How did the distance of the sensor from the electromagnet affect the reading on the sensor? [1]

(d) What can Alan do to increase the strength of the magnet? [1]

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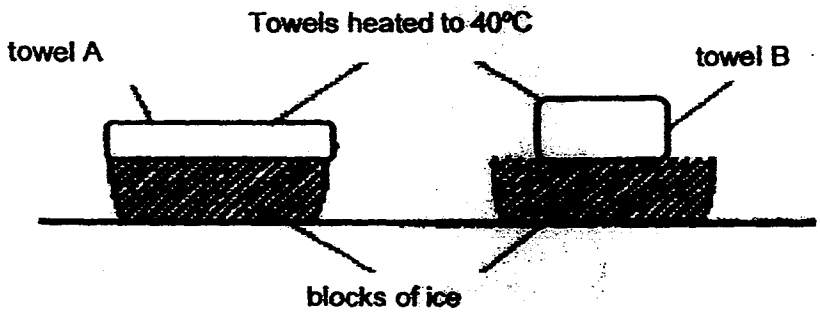
SCORE 4

42. Ben set up the experiment shown below.



Towel A and B were of the same size. Both towels were heated to 40°C and towel B was folded before they were each placed on top of the blocks of ice. The time taken for the two towels to reach a temperature of 20°C was noted.

(a) Which of the two towels took a shorter time to reach of 20°C ? Explain your answer. [1]

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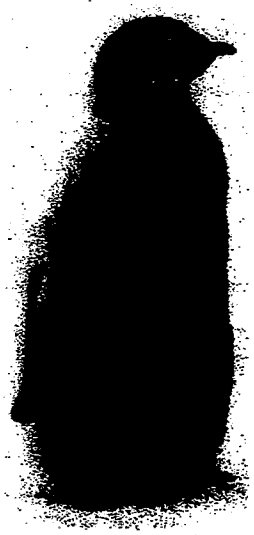
Look at the picture of the penguin below.



(b) Based on your answer in (a), explain why penguins spend more time standing on ice using the two legs rather than lying down on the stomach. [1]

_____

_____

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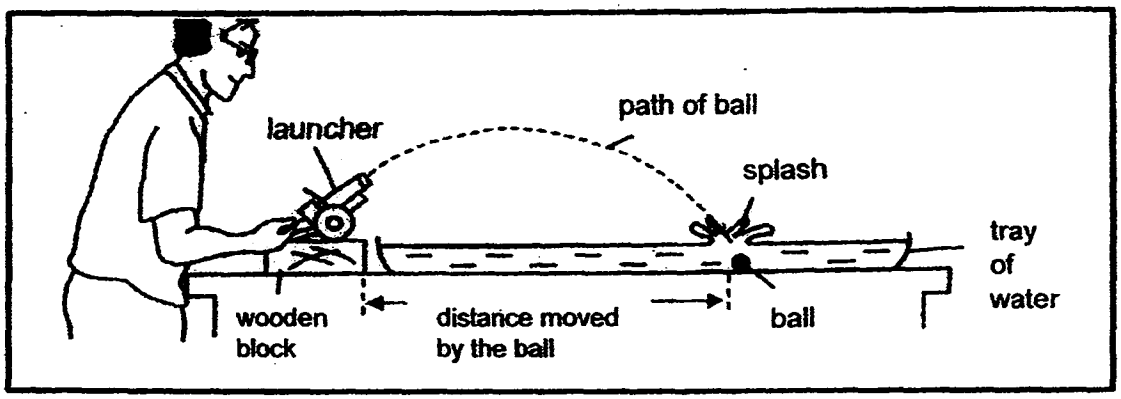
SCORE	2

43. Alan used the set-up below to find the distance moved by three different balls, X, Y and Z. He observed the splash to measure the distance moved by the ball.



His results are shown below.

	Distance moved by ball (cm)		
	Ball X (mass= 1g)	**Ball Y (mass = 2g)**	**Ball Z (mass = 3 g)**
1st try	54	48	28
2nd try	58	44	32
3rd try	60	48	30

(a) Give a reason why it is difficult to measure the distance for ball X by observing the splash. [1]

_____

_____

(b) From the results, what is observed when the mass of the ball is increased?

[1]

_____

_____

(Go on to the next page)

(c) Alan replaced the water with sand in the tray. Explain how this will give more accurate results. [1]

_____

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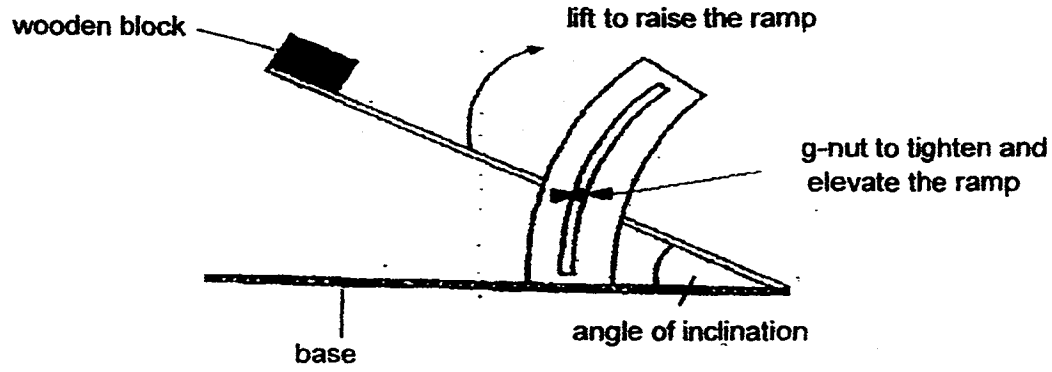
SCORE	3

44. Tom noticed that the school attendant always puts up a sign outside the toilet after she has washed and mopped it.

(a) Explain why someone could slip and fall when the floor is wet. [1]

Tom experimented with three types of anti-slips mats, S, T and U by placing them on an adjustable ramp.

He placed a wooden block on the ramp surface and raised the ramp until the wooden block started moving as shown below.



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He adjusted the angle of inclination of the ramp and recorded his results in the table below.

Anti-slip mat	Angle of inclination when wooden block starts to slide down
S	30°
T	65°
U	48°

(b) Based on Tom's results, which anti-slip mat is best at preventing people from slipping? Give a reason for your answer. [1]

_____

_____

(c) Put a tick (√) in the box for the variable that Tom should keep constant in his experiment. [1]

Variable	
Size of wooden block	
Surface of anti-slip mats	
Angle of inclination	
Starting position of wooden block	

End of Paper

SCORE	3

EXAM PAPER 2015
LEVEL : PRIMARY 6
SCHOOL : TEMASEK PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : PRELIMINARY EXAMINATION

BOOKLET A

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

BOOKLET B

Q31a. It reduces the amount of heat inside the container.
Q31b. If there is a roof garden, it might not be so hot. Hence, fewer people switch on their air -cons.
Q32a. It does not need to compete with plants on the ground for sunlight.
Q32b. Animal dispersal.
Q33a.i) Ferilisation Q33b.ii) Pollination
Q33b. Z. Seeds do not need light during germination and Z has all the necessary conditions , air, water and warmth for it to germinate.
Q33c. X. As container Y has a layer of oil on the water, there is no oxygen for the seeds to germinate.
Q34a. P. Q34b. To make sure that water does not evaporate from the beaker as it would not be a fair experiment.
Q35ai) It does not has a cell has a cell wall. Q35aii) It has a flagellum for movement when a plant does not move. Q35b. It has chloroplast that contains chlorophyll to make food.
Q36a. Butterfly N thinks that the white spots are eggs, so, to prevent competition for food, she would lay her eggs on the plants without the white spots.
Q36bi) Benefit for plant S – The ants helps them to get rid of caterpillars which eat their plants.
Q36ii) Benefit for the ants – They get nectar.
Q37a. Y. The beak is long so it can reach the nectar.
Q37b. Bird A becomes their agent of pollination.
Q37c. The two eggs are similar. Q37d. When there is limited food supply, there is not enough food to go around, so, when A pushes the younger of bird Q from its nest , it can get more food.
Q38a. The larger the area of the plastic sheet, the longer time is taken for the toy soldier to reach the ground.
Q38b. He would prepare toy soldiers of different weights, take a parachute and put the different weights on the parachute separately. Then, record the results and compare.
Q39a. After a period of time, Jenny should wipe the windscreen.
Q39b. It is because if she does not clean, the windscreen, the dust on the windscreen at the end of the 24 hours is from all the periods, not the last one.
Q40a. The bowl of food would attract animals and when they try to get the bowl of food, the spring would be compressed, X and Y would be connected and the circuit would be complete, activating the camera.
Q40b. He could use a string that is more easily compressed.
Q41a. They attracted the same number at paper clips.
Q41b. When the switch is switched off, the paper clips dropped off the iron core.
Q41c. The shorter the distance, the higher the strength of the electromagnet.
Q41d. He could increase the number of coils.
Q42a. A. Q42b. It has a larger exposed area so it will lose heat faster.
Q43a. There is less friction between the sides of the shoes and the wet floor.
Q43b. The distance moved by the ball decreased.
Q43C. The ball will make a dent in the sand and comparison.
Q44a. The friction is reduced when the floor is wet. Q41b. T. It has the largest angle.
Q44c. Size of wooden block. Q44c. Starting position of wooden block.

THE END