



**NANYANG PRIMARY SCHOOL**

**PRIMARY 6 SCIENCE**

**Preliminary Examination  
2018**

**BOOKLET A**

**Date : 27<sup>th</sup> August 2018  
Duration : 1 h 45 min**

**Name : \_\_\_\_\_ (     )**

**Class: Primary 6 (     )**

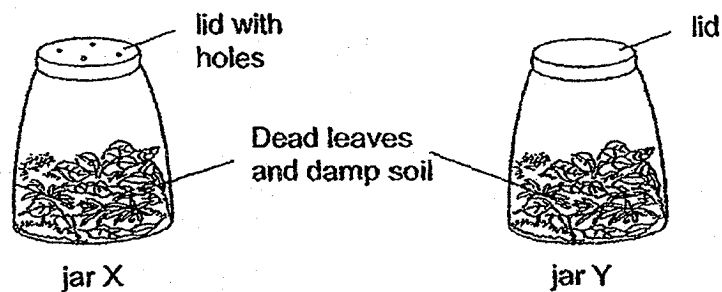
**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.  
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

**Booklet A consists of 20 printed pages including this cover page.**

**Section A (28 x 2 marks = 56 marks)**

For each question from 1 to 28, four options are given. One of them is the correct answer. Indicate your choice (1, 2, 3 or 4) and shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

1. Xin Ru wanted to decompose some dead leaves. She prepared two set-ups using two similar glass jars, X and Y, filled with an equal amount of damp soil and dead leaves as shown below. The lid of jar X had holes while the lid of jar Y was completely sealed.



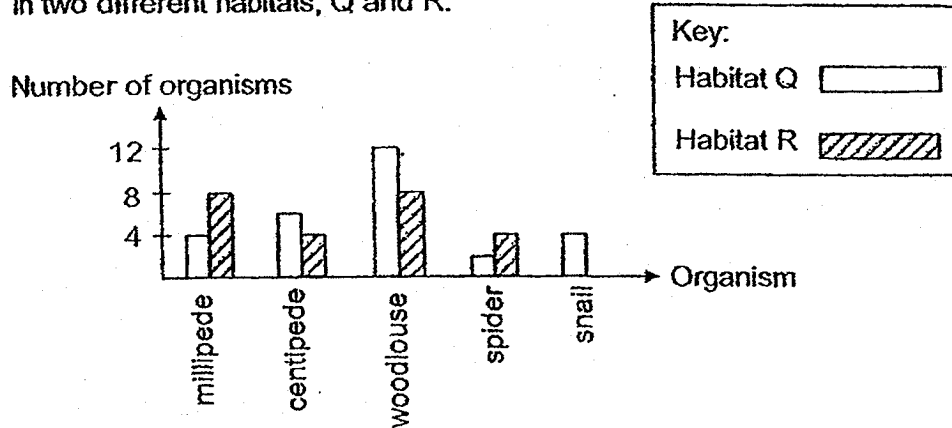
Which of the following is/are the correct observation(s) and explanation(s) after two weeks?

	Observation	Explanation
A	Dead leaves in jar X decompose faster.	More oxygen is present in jar X.
B	Dead leaves in jar Y decompose faster.	More bacteria is trapped in jar Y.
C	Dead leaves in jar Y decompose slower.	More moisture is present in jar Y.
D	Dead leaves in jar X decompose slower.	More carbon dioxide is present in jar X.

- (1) A only  
(3) B and C only

- (2) B only  
(4) C and D only

2. The bar graph below shows the numbers of different organisms living in two different habitats, Q and R.

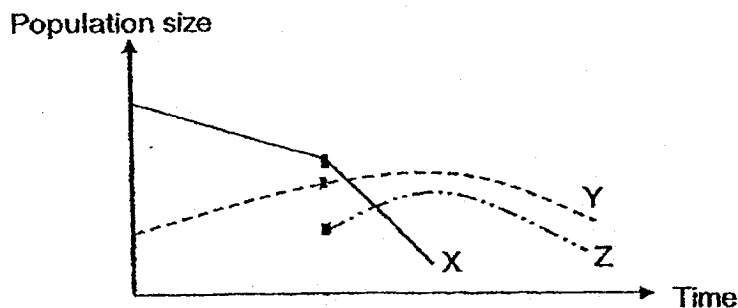


Based on the graph, which of the following statement(s) is/are correct?

- A There are five populations in habitat R.  
 B There are more populations in habitat Q than R.  
 C There are nine communities in habitats Q and R.  
 D There are twelve populations of woodlouse in habitat Q.

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

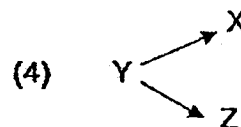
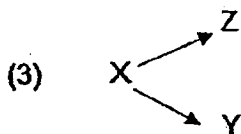
3. Organisms X and Y were the only organisms in an aquarium. The graph below shows the changes in population sizes of organisms X, Y and Z before and after organisms Z were added into the aquarium.



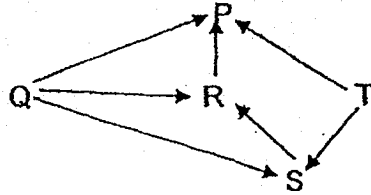
Which one of the following correctly shows the food relationship of organisms X, Y and Z?

- (1)  $X \rightarrow Z \rightarrow Y$

- (2)  $Y \rightarrow X \rightarrow Z$



Study the food web below and answer questions 4 and 5.

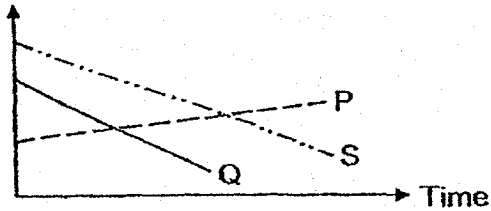


4. Which of the organisms are plant-and-animal eaters?

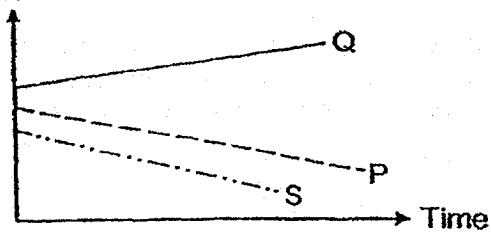
- (1) P and R only
- (2) Q and T only
- (3) S and T only
- (4) P, R and S only

5. Which one of the following graphs shows the correct changes in population sizes of P, Q and S after the population of R increased quickly?

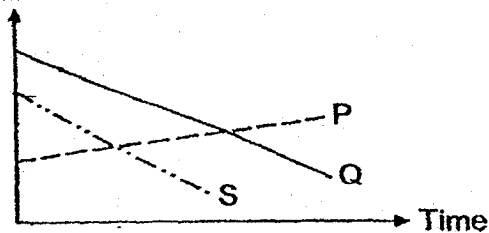
(1) Population size



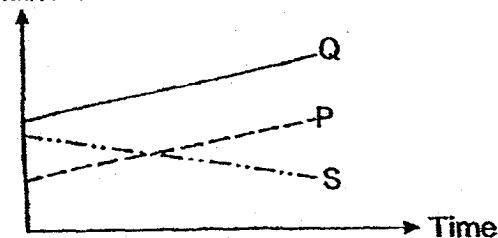
(2) Population size



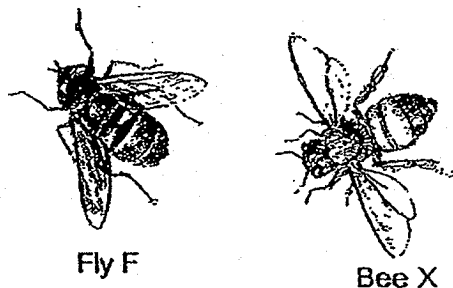
(3) Population size



(4) Population size



6. Fly F looks similar to bee X as shown below. Bee X can harm other animals by stinging them.



Which one of the following statements about this adaptation is correct?

	Benefits	Reason
(1)	Predators of fly F	They have more prey to feed on as they can also feed on bee X.
(2)	Bee X	Bee X can reproduce with fly F for more offspring.
(3)	Fly F	They are protected as their predators mistake them for bee X.
(4)	Fly F	They can have bee X's nectar as another source of food.

7. Rahman filled four identical beakers with 100 ml of water each at 80°C. Each beaker was wrapped with materials made from different animal coverings. The materials were of the same size and thickness. The beakers were left in a room at 20°C for 30 minutes.

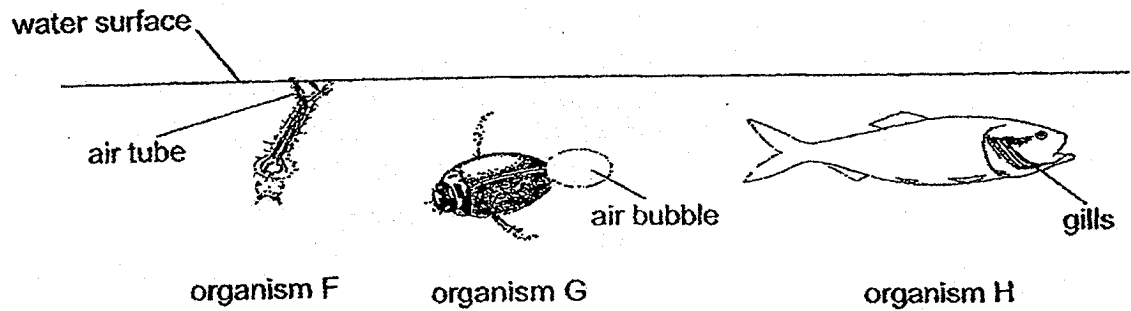
The table below shows the temperature changes of the water in each beaker for each animal covering.

Animal covering	Temperature of water (°C)			
	0 min	10 min	20 min	30 min
P	80	75	60	50
Q	80	65	50	35
R	80	75	70	65
S	80	70	55	30

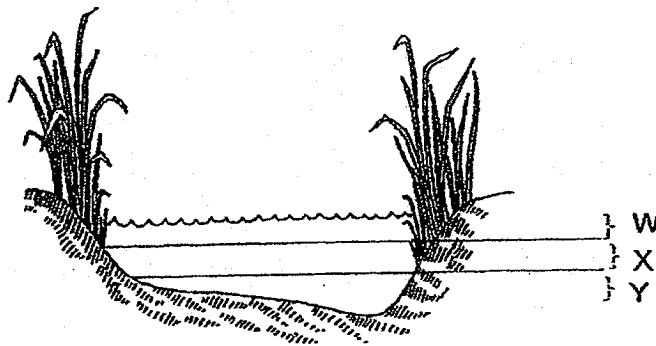
Based on the results observed for each animal covering, which animal is the best adapted to survive in a cold environment?

- (1) P (2) Q  
 (3) R (4) S

8. The diagram below shows three organisms, F, G and H, which live in the same pond habitat.



Jonah observed the movement of organisms F, G and H in three areas, W, X and Y, of the pond.



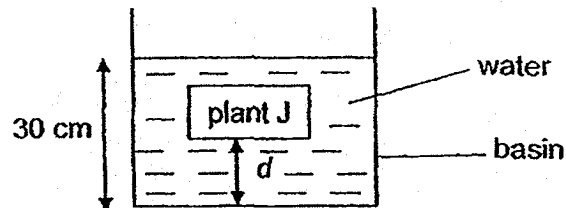
He observed the movement of the organisms for an hour and put a tick in the box below if the organisms entered an area.

Organism	Area W	Area X	Area Y
F	√		
G	√	√	
H	√	√	√

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

- (1) Organisms G and H cannot compete for the same food.
- (2) Organism F is least adapted to look for food at the bottom of the pond.
- (3) Organisms G and H do not need oxygen as they are able to go below area W.
- (4) Only organism F will survive if a layer of oil was poured on the surface of the water.

9. Xin Hui filled a basin with some water to a height of 30 cm. She placed plant J in the basin, pushed it to the bottom of the basin and released it. She then measured and recorded distance  $d$ , which was the distance of the plant from the bottom of the basin as shown in the diagram below.



She repeated the experiment with plant K of the same mass. The table below shows her results.

Plant	Distance $d$ (cm)
J	18
K	28

Which of the following are likely to be the structural adaptations of plant K that caused the results above?

- A Green stem
- B Waxy leaves
- C Needle-like leaves
- D Thick stem filled with air

- (1) A and C only
- (3) C and D only

- (2) B and D only
- (4) A, B and D only

10. Study the description of animal S below.

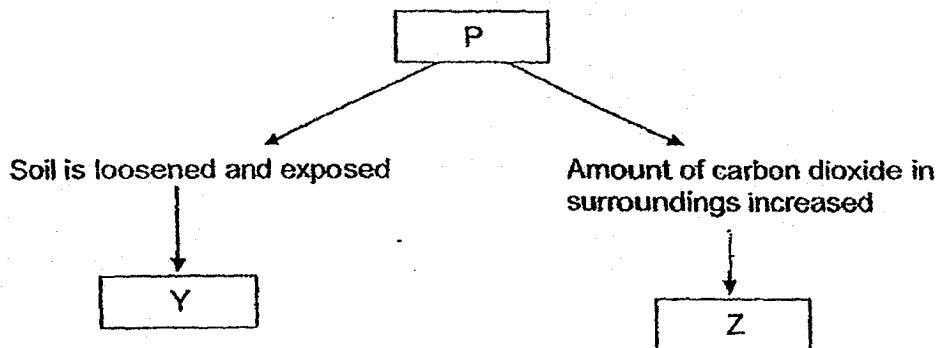
- Has webbed feet
- Has streamlined body
- Reproduce on land
- Huddle together with other animals S when cold

Which of the following about animal S is/are correct?

	Description	Type of adaptation
A	Webbed feet	Structural
B	Streamlined body	Behavioural
C	Reproduce on land	Structural
D	Huddle together	Behavioural

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

11. Study the diagram below that shows cause P and its effects Y and Z.



Which one of the following correctly represents P, Y and Z?

	P	Y	Z
(1)	Air pollution	Soil erosion	Increase in photosynthesis
(2)	Water pollution	Deforestation	Global warming
(3)	Deforestation	Soil erosion	Global warming
(4)	Acid rain	Water pollution	Melting of icebergs

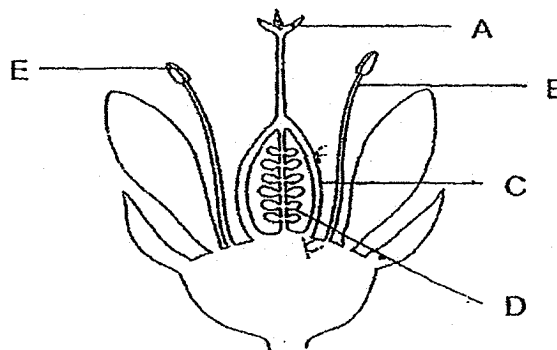


12. Which of the following could result in the formation of acid rain?

- A Throwing litter into rivers
- B Increasing number of bicycles on the roads
- C Releasing of harmful gases and smoke by factories
- D Rising number of cars which give out exhaust fumes

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

13. The diagram below shows a flower with both male and female reproductive parts.



Which of the following belong only to the female reproductive parts?

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

14. The table below shows some of the characteristics of Jack's parents.

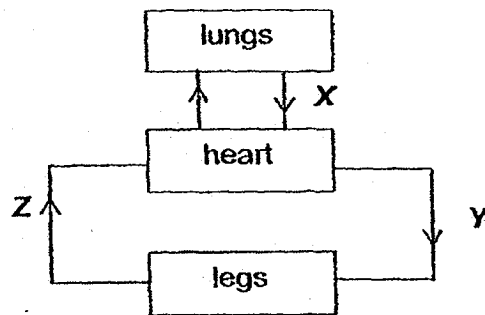
	single eyelid	attached ear lobe	long hair
father	✓		✓
mother	✓	✓	

Based only on the information in the table, which of the following traits can Jack inherit directly from his parents?

- A short hair
- B double eyelid
- C detached ear lobe

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

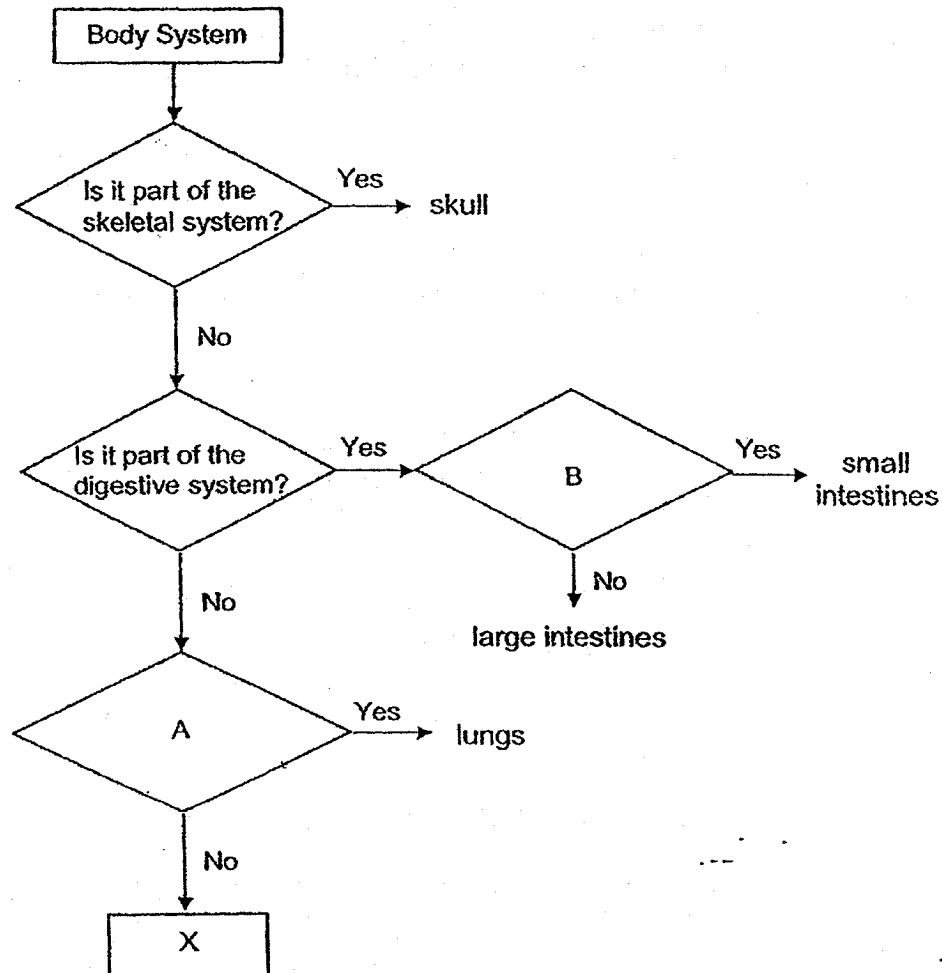
15. The diagram below represents how blood flows in certain parts of the body.



Which one of the following shows the correct arrangement of blood vessels starting from the vessel with the most oxygen to the one with the least oxygen.

	Most	→	Least
(1)	X		Y Z
(2)	X		Z Y
(3)	Y		X Z
(4)	Z		Y X

16. Study the chart below.



Which one of the following correctly represents questions A and B, and example X?

	Question A	Question B	Example X
(1)	Is it part of the muscular system?	Does it help to break down food?	Muscles
(2)	Is it part of the muscular system?	Does it absorb digested food into the bloodstream?	Spine
(3)	Is it part of the respiratory system?	Does it help to break down food?	Muscles
(4)	Is it part of the respiratory system?	Does it absorb digested food into the bloodstream?	Spine

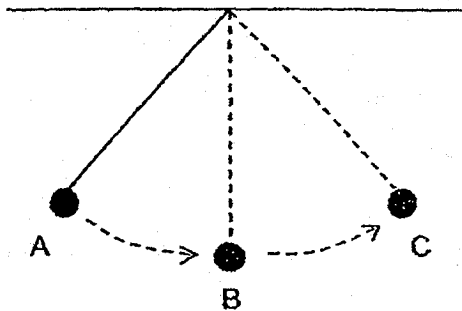
17. Which of the following examples shows kinetic energy being converted to gravitational potential energy?

- A Kicking a ball upwards
- B Walking up a flight of stairs
- C Releasing a ball from a height of two metres

- (1) A and B only
- (3) B and C only

- (2) A and C only
- (4) A, B and C

18. The diagram below shows a metal ball swinging from point A towards point C.



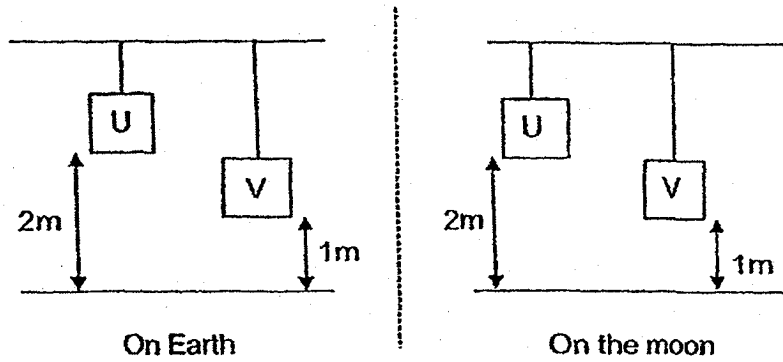
Which of the following statements are true?

- A The gravitational potential energy at B was zero.
- B The kinetic energy of the ball was the most at point B.
- C The kinetic energy increased from A to B and decreased from B to C.
- D The gravitational potential energy at points A, B and C are the same.

- (1) A and B only
- (3) B and C only

- (2) A and D only
- (4) C and D only

19. The diagram below shows two identical blocks, U and V, which are suspended on strings on Earth and the moon.



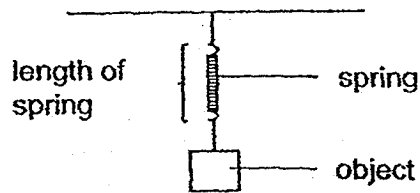
Given that the gravitational force on the moon is less than the gravitational force on Earth, which of the following statements are correct?

- A Block U has the same mass on Earth and on the moon.
- B Block V weighs more on Earth compared to block V on the moon.
- C On Earth, block U has more gravitational force acting on it than block V.
- D Block V on Earth and block V on the moon have the same amount of gravitational force acting on each of them.

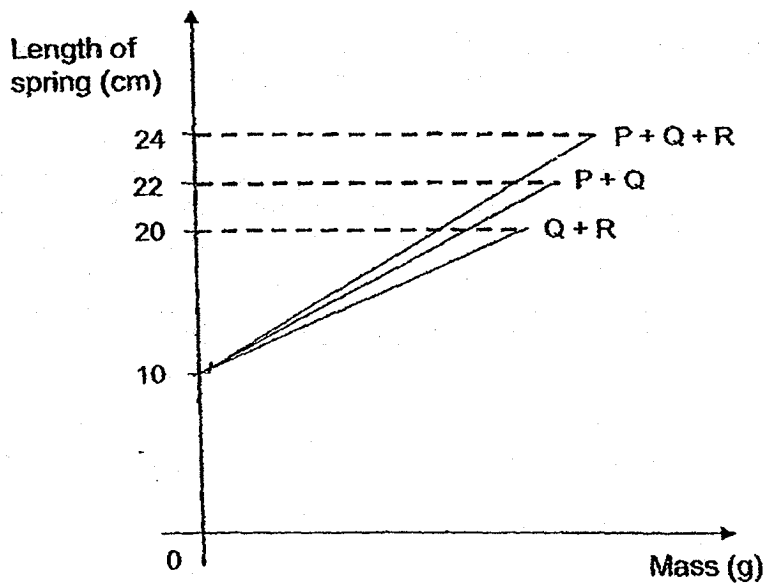
- (1) A and B only
- (3) A, C and D only

- (2) B and C only
- (4) A, B, C and D

20. Wendy conducted an experiment on the extension of a spring using the set-up below. Objects P, Q and R are of different masses.



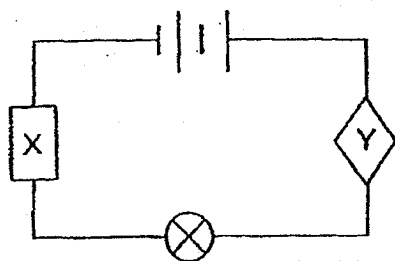
She placed different combinations of objects P, Q and R on the spring and measured the length of the spring. Her results are shown in the graph below.



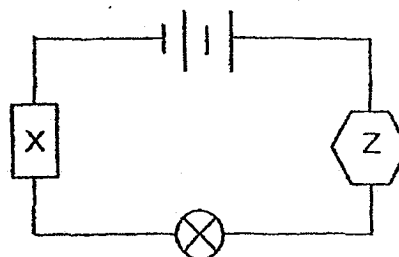
What would be the extension of the spring when only object Q was placed on the spring?

- |           |           |
|-----------|-----------|
| (1) 8 cm  | (2) 14 cm |
| (3) 18 cm | (4) 20 cm |

21. Ahmad set up the circuits shown below using a bulb, 2 batteries and objects X, Y and Z.

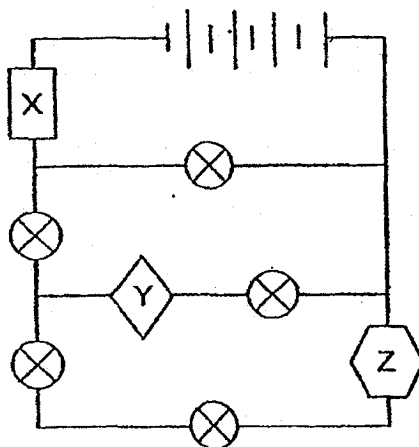


bulb did not light up



bulb lit up

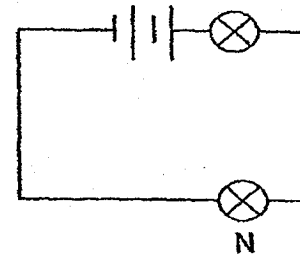
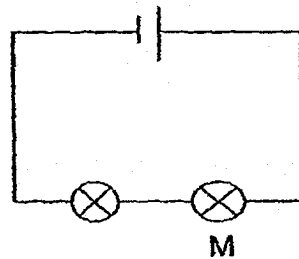
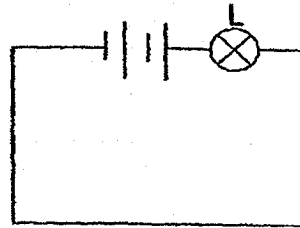
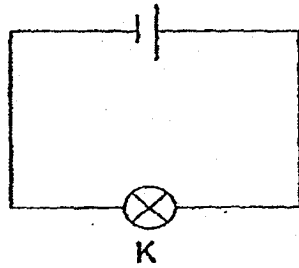
He used the objects X, Y and Z again to form a new circuit below.



How many bulb(s) would Ahmad observe lighting up in the new circuit?

- |     |         |     |         |
|-----|---------|-----|---------|
| (1) | 1 bulb  | (2) | 0 bulb  |
| (3) | 3 bulbs | (4) | 4 bulbs |

22. In the four circuits below, all the bulbs and batteries are new and identical.



Which of the following shows the correct comparison between the brightness of the bulbs?

Brightness of bulbs		
Low	Medium	High
(1) K	L	N
(2) L	M	K
(3) M	K	L
(4) K	N	L

23. An electric fan converts electrical energy to kinetic energy in order to cool down a room. The table below shows the electrical efficiency of several fans.

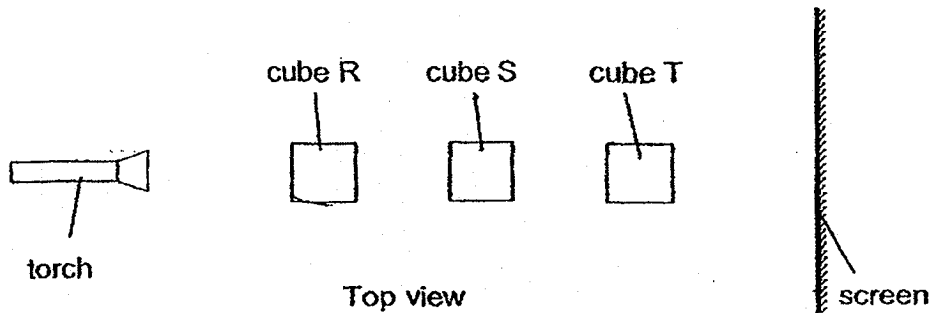
Fan	Amount of electrical energy needed (units)	Amount of kinetic energy produced (units)
A	120	90
B	120	100
C	160	90
D	160	110

Which one of the above fans, A, B, C or D, is the most energy efficient?

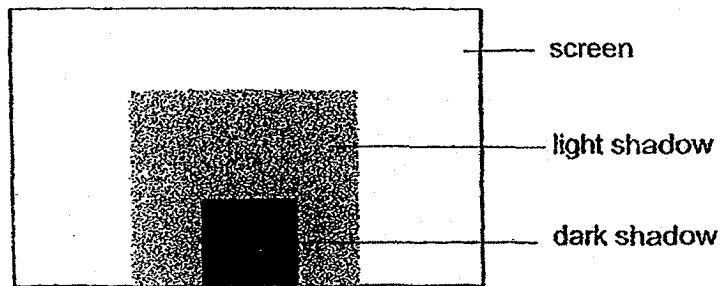
- (1) A (2) B  
(3) C (4) D



24. Three similar sized cubes, R, S and T, made of different materials, were placed in a straight line at different distances from a screen. The top view of the set-up is shown below.



A torch was shone on the cubes. The diagram below shows the shadows formed on the screen.

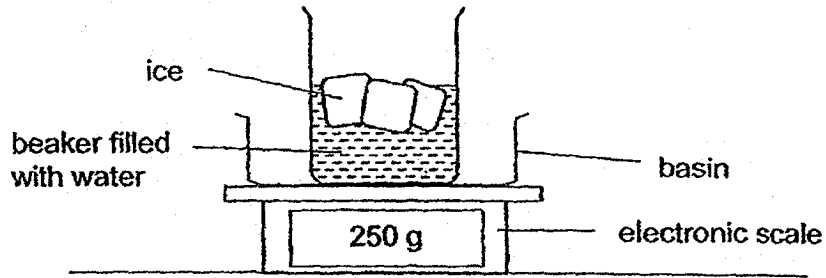


Which of the set-up(s) below correctly matches the position of the cubes with the amount of light passing through the cubes?

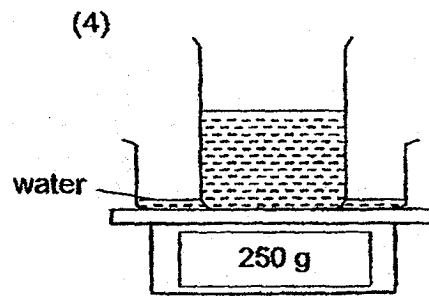
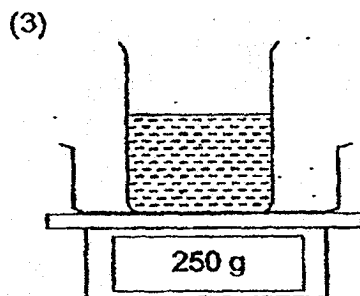
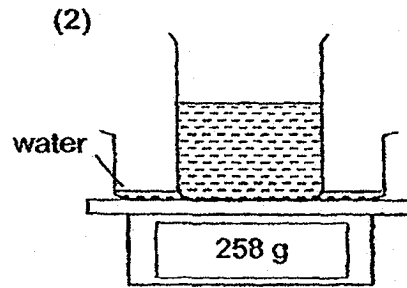
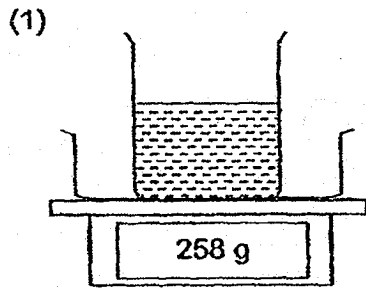
Set-up	Amount of light passing through		
	No light	Some light	Most light
A	R	S	T
B	R	T	S
C	S	T	R

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

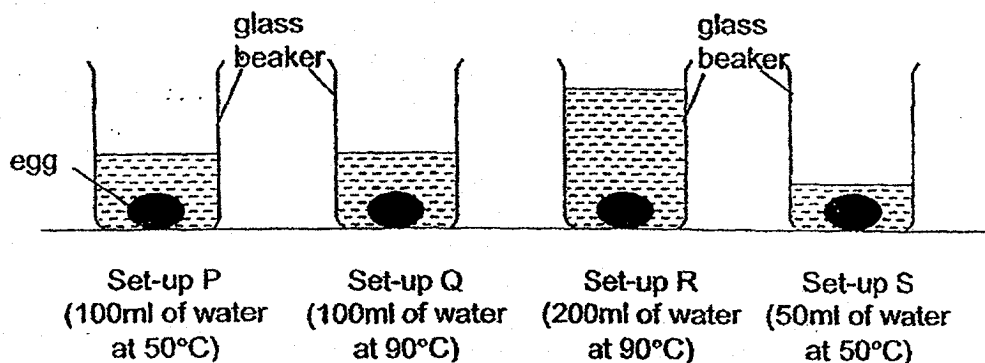
25. Joel filled a beaker with some ice and water. He placed the beaker in an empty basin that was resting on an electronic scale. He left the set-up on a table at room temperature.



Which diagram below correctly shows what Joel would observe 2 hours later when the ice in the beaker had completely melted?



26. Guo Ren placed 4 similar uncooked eggs into set-ups P, Q, R and S as shown below. The eggs were left in the water for 3 minutes each.

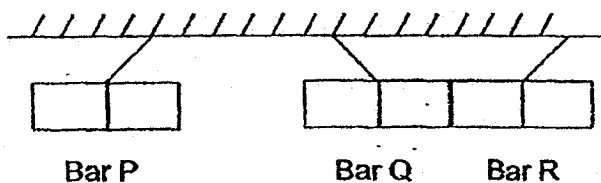


After 3 minutes, Guo Ren cracked open each egg to observe how cooked it was.

Which one of the following correctly shows the arrangement of the set-up with the most cooked egg to the set-up with the least cooked egg?

	Most Cooked	→	Least Cooked
(1)	R, P,		Q, S
(2)	R,		Q, P, S
(3)	S,		P, Q, R
(4)	S,		Q, P, R

27. Mark hung 3 metal bars with strings as shown below.



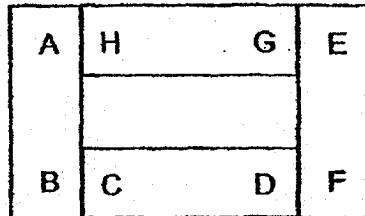
He observed their positions and made the following statements.

- A Bar P is a magnet
- B Bar R is a magnet
- C Bar R is made of a magnetic material
- D Bar Q is made of a non-magnetic material

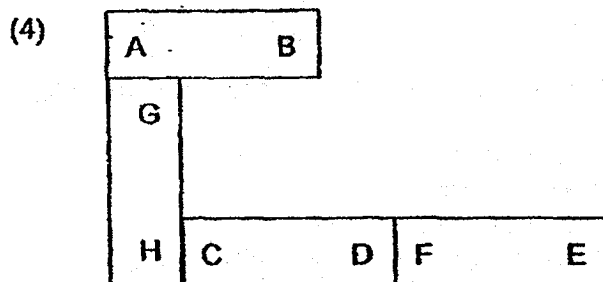
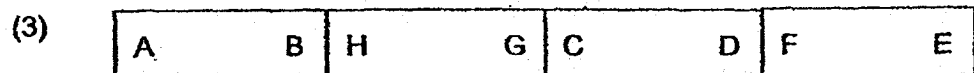
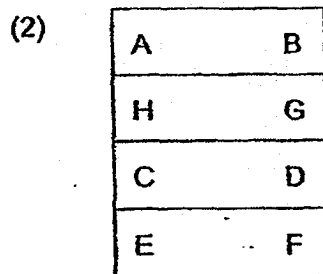
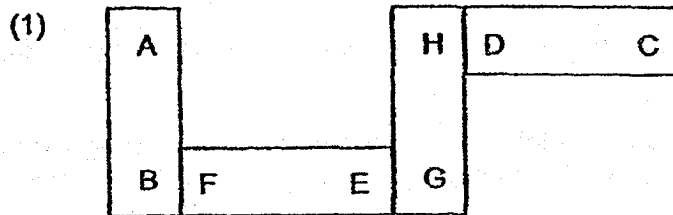
Which of the statements are definitely correct?

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

28. Kassim arranged 4 similar bar magnets as shown below. The magnets stayed in position and did not repel.



Based on his observations above, which one of the following arrangements of the magnets is possible?





**NANYANG PRIMARY SCHOOL**

**PRIMARY 6 SCIENCE**

**Preliminary Examination  
2018**

**BOOKLET B**

**Date : 27<sup>th</sup> August 2018**

**Duration : 1 h 45 min**

**Name : \_\_\_\_\_ (     )**

**Class: Primary 6 (     )**

**Marks Scored:**

<b>Booklet A:</b>		<b>56</b>
<b>Booklet B :</b>		<b>44</b>
<b>Total :</b>		<b>100</b>

**Any query on marks awarded should be raised by 17<sup>th</sup> September 2018. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.**

**Parent's signature: .....**

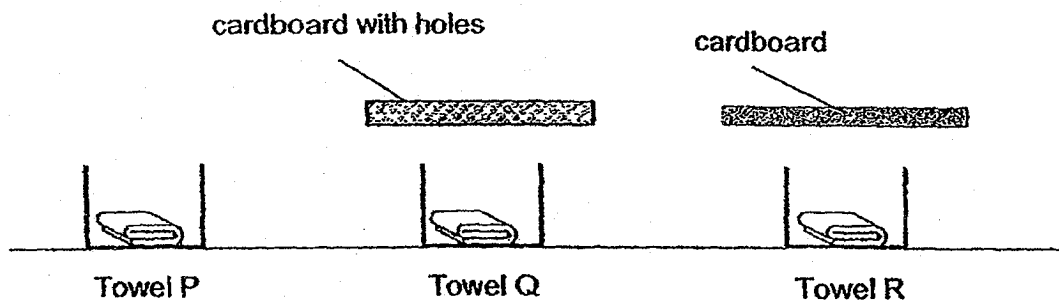
**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.  
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**Booklet B consists of 17 printed pages including this cover page.**

**Section B (4 marks)**

Write your answers to questions 29 to 40 in the spaces provided.

29. Muthu carried out an experiment as shown below to find out how the amount of sunlight affects the rate of evaporation. He soaked three identical towels, P, Q and R, in equal amount of water. The towels were then placed under the sun. A cardboard with holes was held above towel Q and a cardboard was held above towel R.



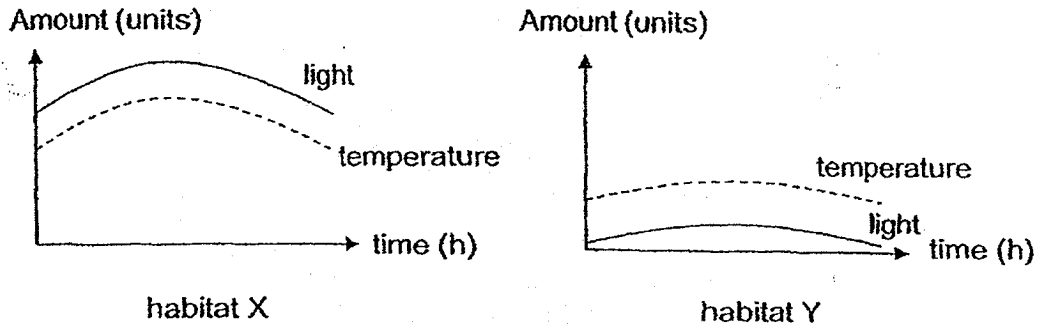
After 30 minutes, the mass of each towel was measured and recorded in the table below.

Towel	Mass of towel after soaking in water (g)	Mass of towel after 30 minutes under the sun (g)
P	100	80
Q	100	90
R	100	95

- (a) Which towel was the driest at the end of the experiment? [1]

Towel \_\_\_\_\_

Muthu went on to find out the relationship between the amount of light and temperatures in two different habitats, X and Y. He plotted the graphs as shown below.



- (b) Based on the graphs above, state the relationship between the amount of light and temperature in habitat X. [1]

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- (c) Based on the information in the table and graphs, compare the amount of moisture that is most likely found in habitats X and Y. [1]

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Some organisms found in habitat Y help to reduce the amount of dead matter by carrying out a process that is also beneficial to plants which are growing near them.

- (d) State and describe the process that benefits the plants. [2]

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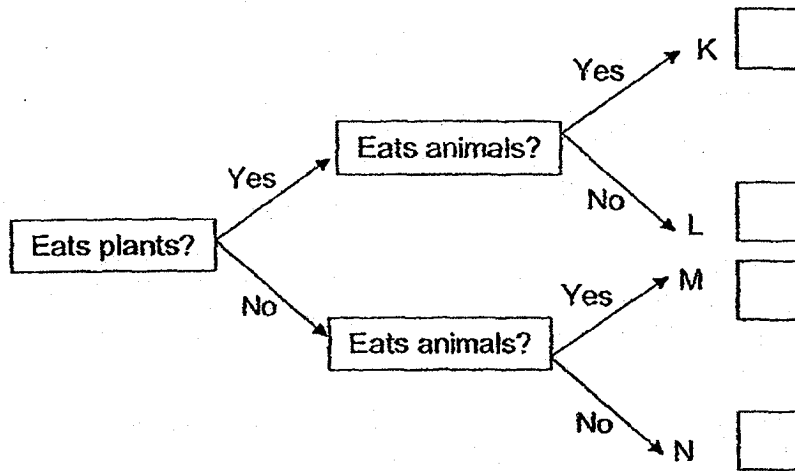


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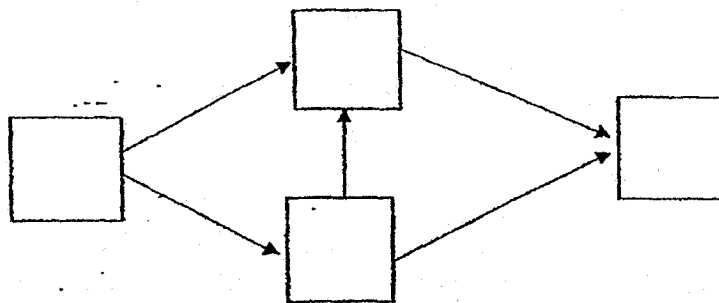


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30. In the diagram below, K, L, M and N represent organisms living in the same community which are interdependent on one another for food

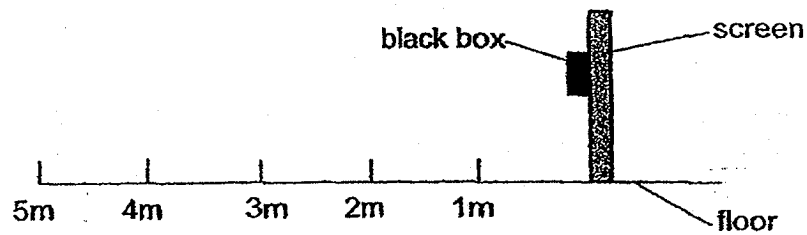


- (a) Another organism, J, is a plant-eater. In **one** of the boxes above, write the letter "J" in the correct box. [1]
- (b) Using only organisms K, L, M and N, fill in the boxes in the food web below. [2]





31. Aliya carried out an experiment as shown below. She placed a black box against a grey screen and asked her friend to stand 5m away from it. Her friend then moved towards the box, 1m at a time. Aliya recorded the distance when the box became clearly visible to her friend. The experiment was repeated with a dark blue screen and a black screen.



Aliya recorded her results in the table below.

Colour of screen	Distance which the box can be seen clearly (✓)				
	5m	4m	3m	2m	1m
Grey	✓	✓	✓	✓	✓
Dark blue			✓	✓	✓
Black					✓

- (a) What was the aim of Aliya's experiment?

[1]

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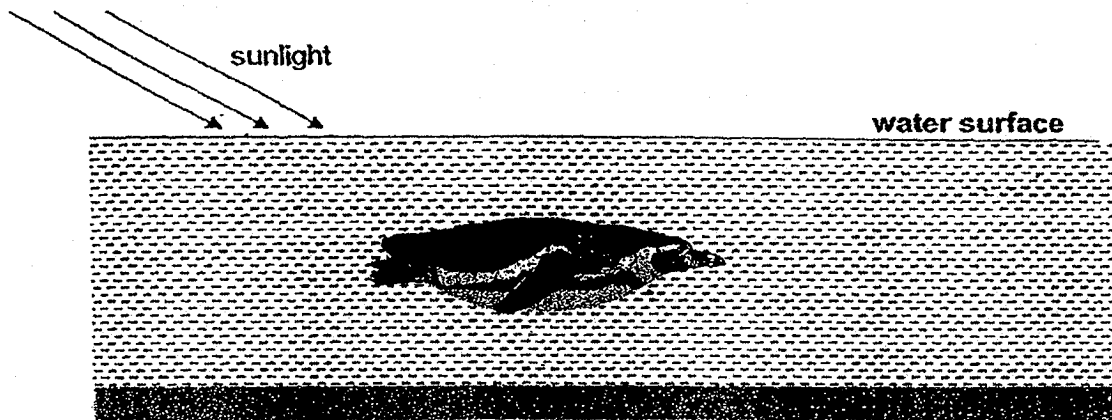


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Animal P's body is black and white as shown below.



When it swims in water, the black part of its body faces the bright sunlight and the white part faces the dark sea bed.



(b)(i) From the picture above, state one structural adaptation that allows animal P to move quickly in the water. [1]

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(b)(ii) How do the colours of animal P protect it from its predators when swimming in the water? [2]

Black: \_\_\_\_\_

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White: \_\_\_\_\_

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32. Alan spotted a bench covered with patches of bird droppings as shown in the diagram below. He noticed that each patch had several seeds in them.

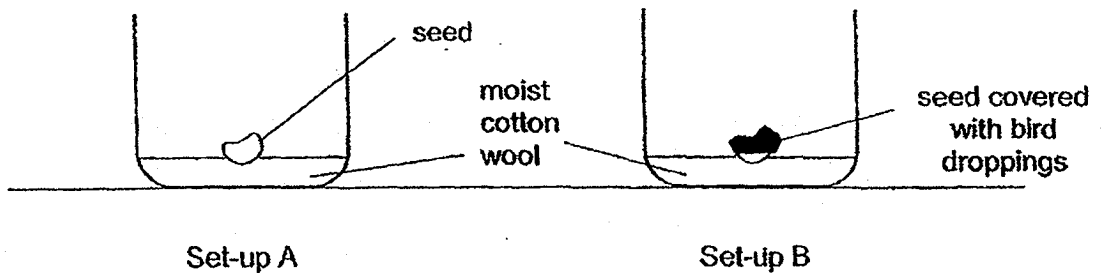


- (a) Based on his observation, state one characteristic of the fruits that enable the seeds to be dispersed by birds. [1]

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Alan placed a seed in 2 containers as shown in the set-ups below.



- (b) He noticed that the seeds in both setups could germinate. Explain why they were able to germinate. [1]

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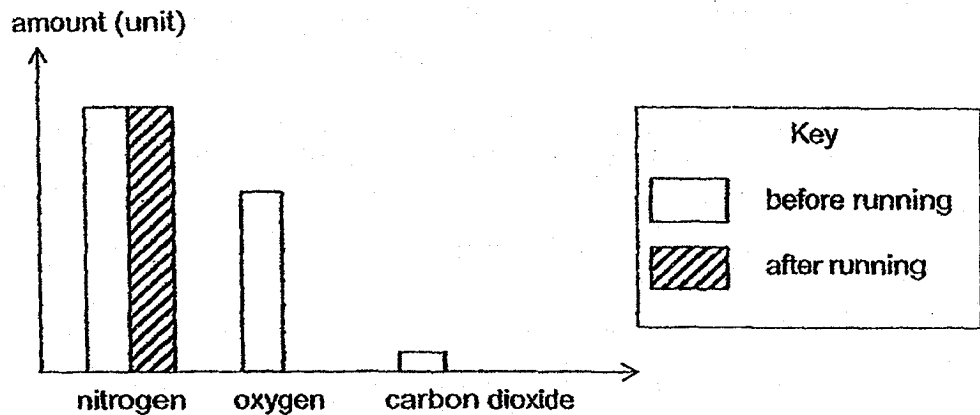
- (c) A week later, it was observed that the seedling in setup B grew better than the one in setup A. Explain why. [1]

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33. The air consists of a mixture of oxygen, carbon dioxide, nitrogen and other gases. Cheryl measured the components of these gases in the surrounding air. She then ran for five minutes, breathed out into a paper bag for two minutes and then measured the gas components in the bag immediately.

(a) Draw the bar graphs to show the amount of oxygen and carbon dioxide in the paper bag after two minutes, based on the key provided. The results for nitrogen has been drawn for you. [1]

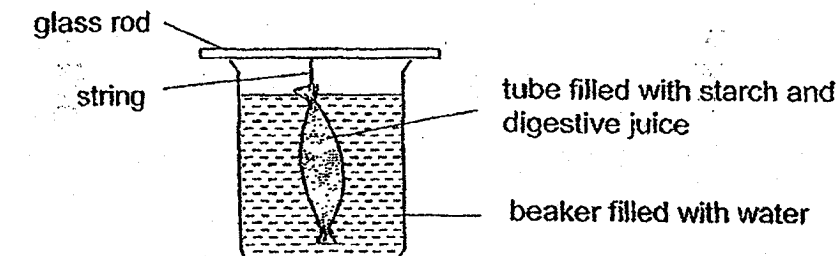


(b) Explain why her heart has to beat faster while running. [1]

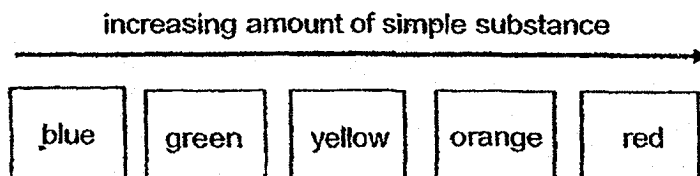
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34. Xiao Ming conducted an experiment using the set-up as shown below. The material of the tube allows simple substances to pass through, but does not allow starch to pass through.



After some time, Xiao Ming removed some water from the beaker and tested the water with liquid S. When liquid S was added, the colour of the water changed according to the amount of simple substance present.



Xiao Ming repeated the experiment using the same amount of starch, digestive juice and water but with the water at different temperatures.

His results are shown below.

Temperature of water (°C)	Colour of water with liquid S
27	Yellow
32	Orange
37	Red
43	Green

- (a) Based on Xiao Ming's results, what is the relationship between the temperature of water and the amount of simple substance present? [1]

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- (b) Describe what had happened to the starch in the tube. [1]

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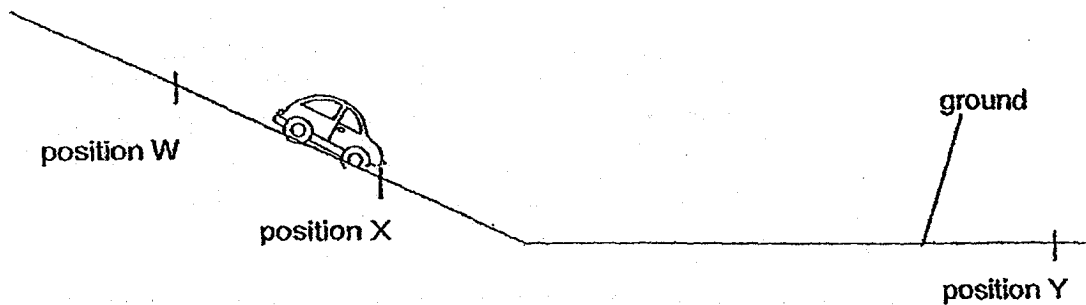
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The set-up above is a model of a part of our digestive system.

- (c) Which part of the human digestive system does the tube in the set-up represent? [1]

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35. John set up an experiment as shown below to find out how the height of a toy car above the ground affects the distance it travels on the ground.



He released the toy car from position X and the toy car stopped at position Y.

- (a) State the form of energy possessed by the toy car at position X just before it was released. [1]

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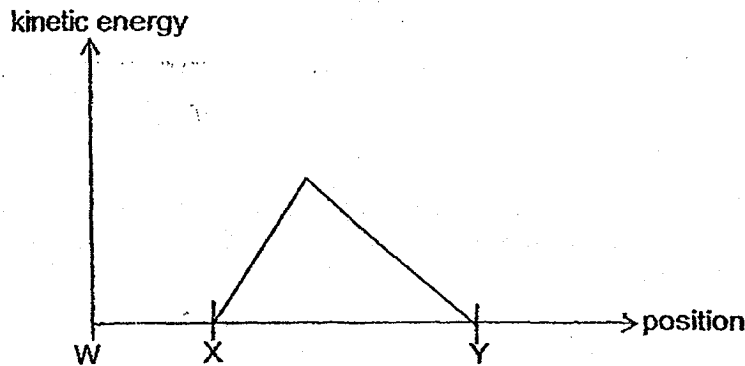
- (b) Explain the energy conversion as the car was released from position X to the moment it came to a complete stop at position Y. [2]

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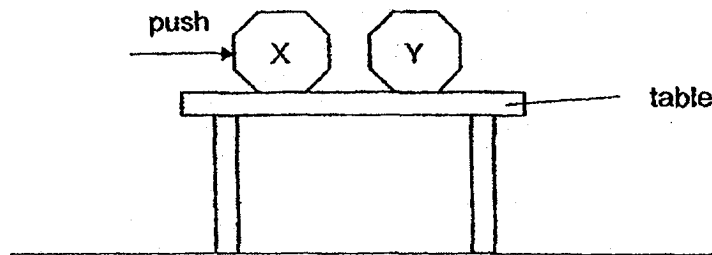
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The graph below shows how the kinetic-energy of the car changes from position X to position Y.



- (c) On the same graph above, draw a line to show how the kinetic energy changes if a similar car was released at position W. [2]

36. Lily placed objects X and Y on a table. Objects X and Y were similar but Object X had a greater mass than object Y. She gently gave object X a push but it did not move.



- (a) Based on the observation above, state all three of the forces acting on object X when Lily pushed it. [1]

(continued on page 12)

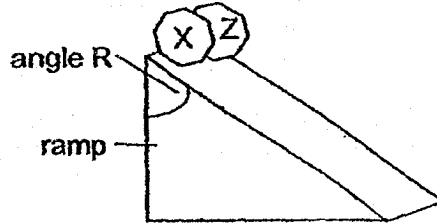
Lily dropped both objects X and Y at the same time. She observed that the objects reached the ground at the same time.

- (b) Give a reason why both objects reached the ground at the same time [1]

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Lily conducted another experiment using the set-up shown below. Objects X and Z had the same mass and shape but object X had a smooth surface and object Z had a rough surface.



Lily pushed both objects with the same amount of force. The objects started sliding down the ramp at the same time.

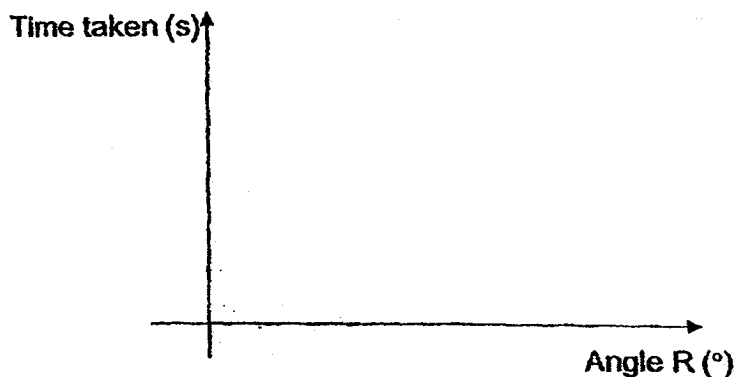
- (c) Will both objects X and Z reach the bottom of the ramp at the same time? Explain your answer. [1]

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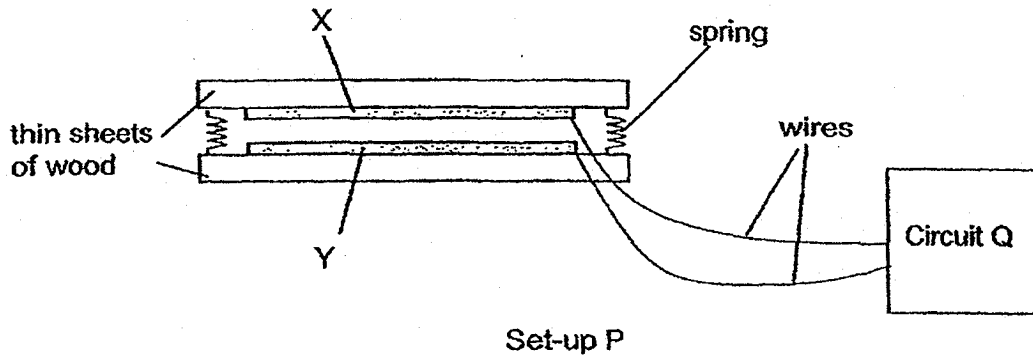
Using the set-up in (c), Lily conducted another experiment to find out how the angle R affected the time taken for object X to reach the bottom of the ramp.

- (d) Draw a line graph of the most likely result of her experiment in the space below. [1]





37. Jordan set up a haunted house for a fun fair. He used set-up P below to switch on a red light and cause a buzzer to sound in a room automatically. Set-up P was placed on the floor. The contacts, X and Y, were connected to another circuit Q so that when X touched Y, the red light would switch on and the buzzer would sound in circuit Q.



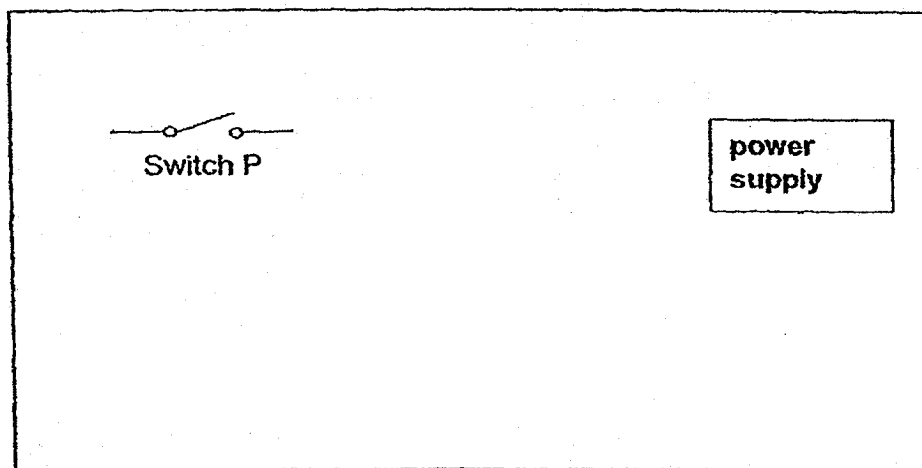
- (a) Suggest a material that contacts, X and Y, could be made of. Give a reason why this material is suitable. [1]

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- (b) Based on Jordan's set-up above, complete the circuit diagram of circuit Q. In the space below, draw a light bulb, buzzer and wires so that the light bulb will switch on and the buzzer will sound when someone steps onto set-up P.

Switch P is used to represent set-up P. Use **(B)** to represent the buzzer. [1]



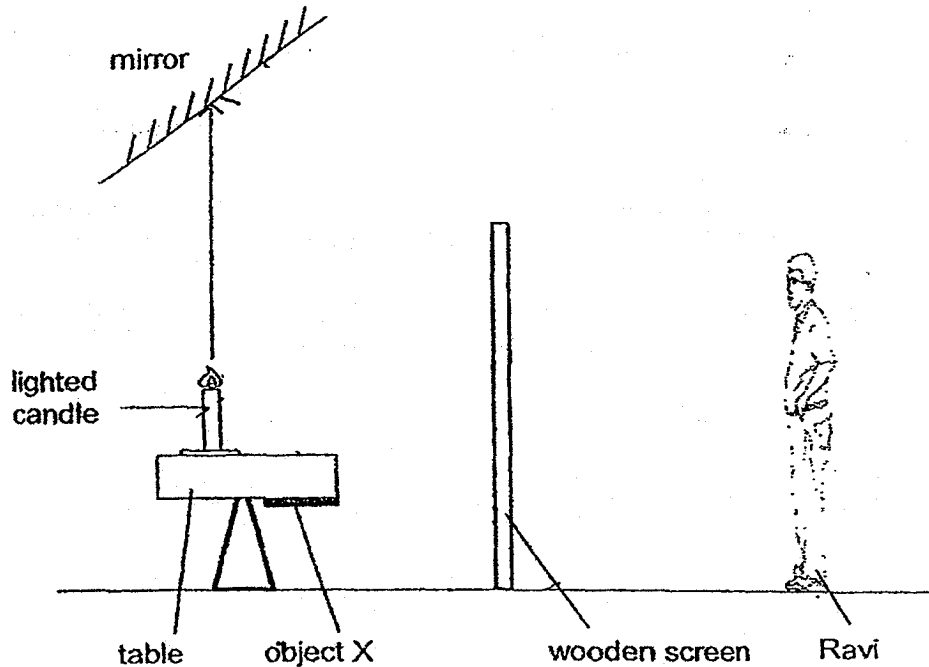
Based on Jordan's set-up, children below a certain mass were not allowed into the haunted house.

- (c) Suggest one change Jordan could make to set-up P to allow more children to experience the haunted house. [1]

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38. Ravi walked into a dark room set up as shown below. He found that even though he was blocked by the wooden screen, he could see what was behind it.



- (a) In the diagram above, draw a ray diagram to show how Ravi could see the table behind the wooden screen. [1]
- (b) Ravi could also see that there was an object X under the table. In the diagram above draw and label another mirror (M), in a position which would help Ravi to see object X under the table. [1]
- (c) Based on the above set-up, state two properties of light that enabled Ravi to see what was behind the wooden screen. [2]

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

39. Suelynn conducted an experiment to find out if the type of material affects the time taken for ice to melt. She placed two similar blocks, J and K, in an air-conditioned room at 20°C for 10 hours. Block J and block K were made of different materials.

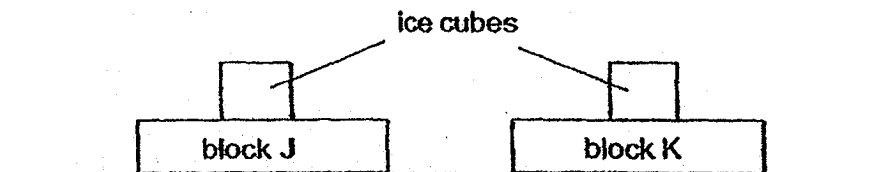


After 10 hours, she picked up both blocks J and K at the same time. She observed that block J felt colder to the touch than block K.

- (a) The temperature of block K was 20°C when Suelynn picked it up. What was the temperature of block J when she picked it up? [1]

\_\_\_\_\_ °C

Suelynn placed identical ice cubes on block J and block K.



- (b) Which block's ice cube would melt faster? Explain your answer. [2]

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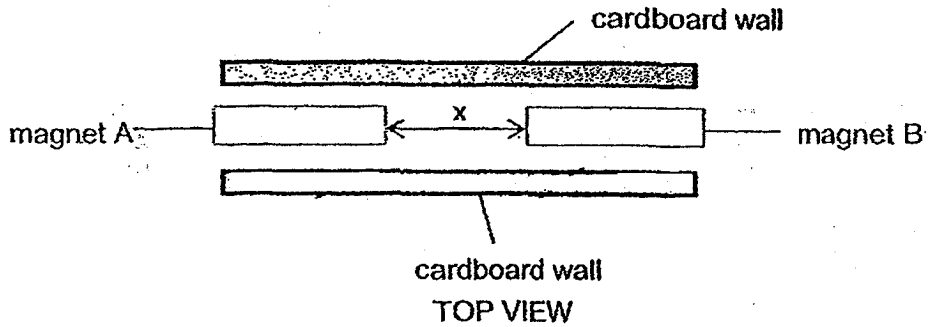
Suelynn used identical sized ice cubes in her experiment.

- (c) Give a reason how using ice cubes of the same size helps to make the experiment a fair test. [1]

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40. Jason prepared a set-up as shown below.



Jason noticed that magnet B moved away from magnet A each time he brought magnet A towards B.

(a) In the diagram above, label all the poles of magnets A and B. [1]

Jason replaced magnet B with magnet C and repeated his experiment. He noticed that the distance X had now increased.

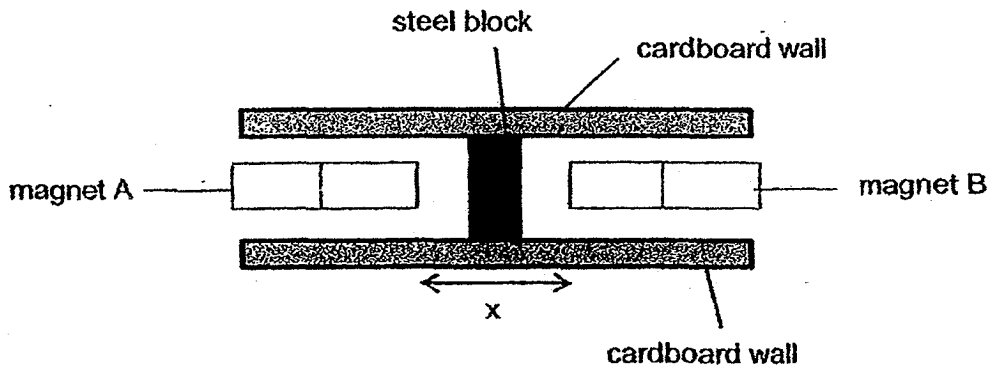
(b) Give a reason why distance X had increased. [1]

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A steel block was then added as shown in the diagram below.



(c) What would most likely happen to distance X? Explain your answer. [2]

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SCHOOL : NANYANG PRIMARY SCHOOL  
 LEVEL : PRIMARY 6  
 SUBJECT : SCIENCE  
 TERM : 2018 PRELIM

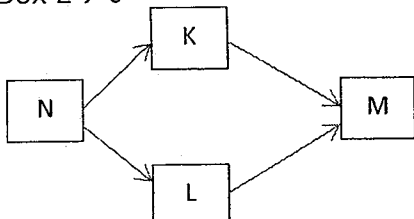
**SECTION A**

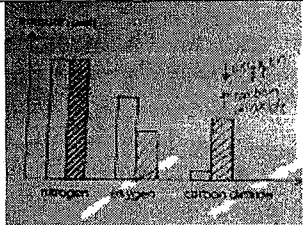
Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	1	3	1	3	3	3	1	2	2

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
3	3	3	1	1	3	1	3	1	1

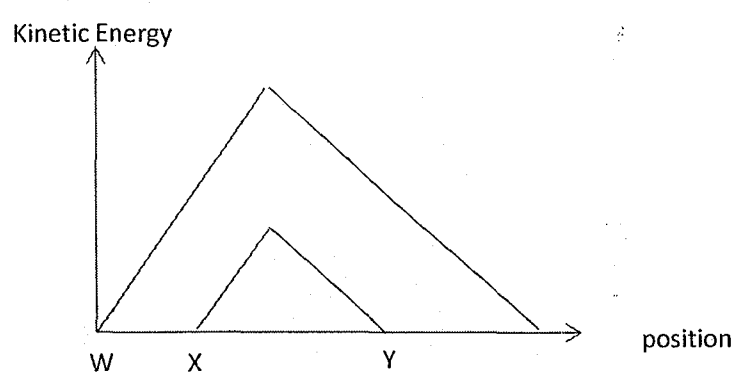
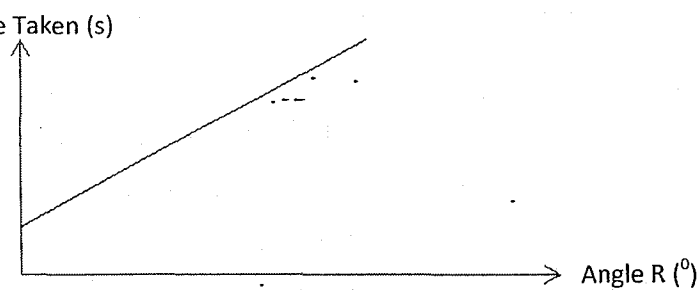
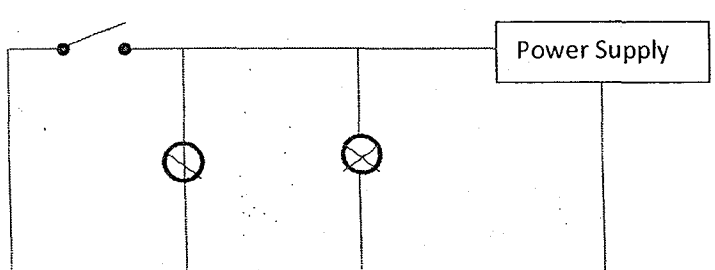
Q 21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
4	3	2	2	2	2	1	2

**SECTION B**

Q29)	<p>(a) P</p> <p>(b) The greater the amount of light, the higher the temperature in habitat X</p> <p>(c) Habitat X has lesser moisture than Habitat Y</p> <p>(d) Decomposition. Decomposition helps to break down dead matter into simpler substances such as water, mineral salts and carbon dioxide. These substances are needed for plants to photosynthesise and grow.</p>
Q30)	<p>(a) Box L → J</p> <p>(b)</p>  <pre> graph LR   N[N] --&gt; K[K]   N[N] --&gt; L[L]   K[K] --&gt; M[M]   L[L] --&gt; M[M]   </pre>

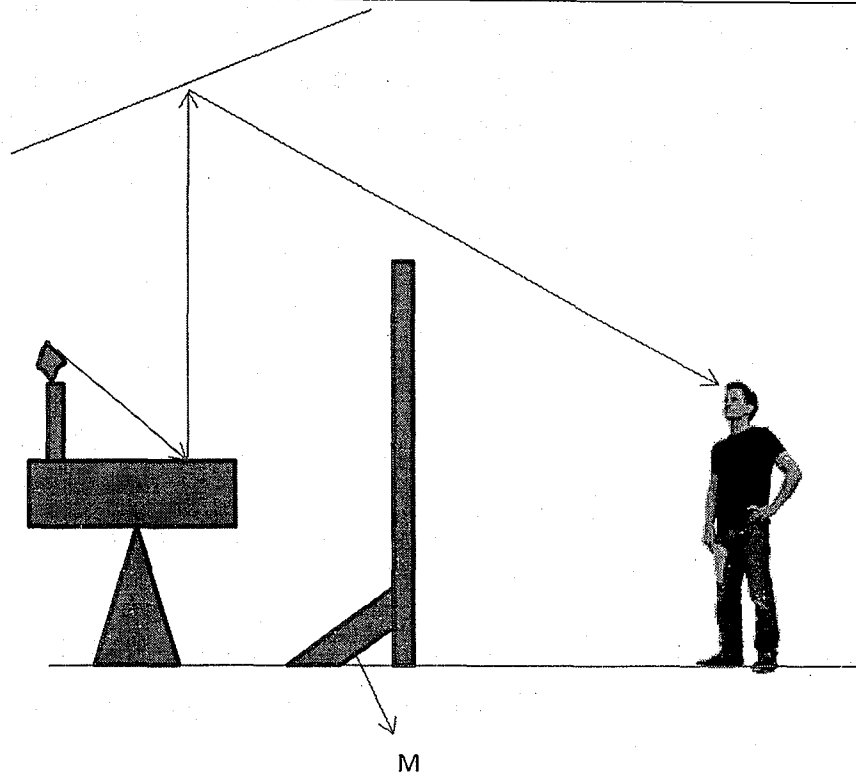
Q31)	<p>(a) To find out how the colour of the screen affects the distance at which the box can be seen clearly.</p> <p>(b) (i) streamlined body / flippers / webbed feet  (ii) Black will allow P to blend in with the sea bed to reduce chances of being seen by predators.  White will allow P to blend in with the bright sunlight so that predators below P will not spot P easily.</p>
Q32)	<p>(a) The fruits are sweet and juicy</p> <p>(b) Both seeds had suitable warmth, water and oxygen to germinate.</p> <p>(c) The bird droppings contained mineral salts and other nutrients for the seedlings in B and the droppings acted as a fertiliser for the seedlings in B to grow.</p>
Q33)	 <p>(a)</p> <p>(b) To pump more blood to supply more oxygen and more digested food to the other parts of the body.</p>
Q34)	<p>(a) The higher the temperature of water, the greater the amount of simple substance until 37°. At 37°, the higher the temperature of water, the smaller the amount of simple substance.</p> <p>(b) The starch in the tube was broken down into simpler substances by the digestive juice.</p> <p>(c) Small intestine</p>



<p>Q35)</p>	<p>(a) Gravitational potential energy</p> <p>(b) Gravitational potential energy of the car converted to kinetic energy of the car as it moved down. All the kinetic energy was then converted to heat and sound energy at position Y.</p> <p>(c)</p> 
<p>Q36)</p>	<p>(a) Gravitational force, frictional force and pushing force</p> <p>(b) The amount of gravitational force acting on both objects was the same.</p> <p>(c) No. There was more frictional force between the ramp and object Z than X. So X reached the bottom first before Z</p> <p>(d)</p> 
<p>Q37)</p>	<p>(a) Iron. This material is a conductor of electricity. So when the contracts touch each other, it will cause a closed circuit and allow electricity to pass through.</p> <p>(b) L</p>  <p>(c) Add shorter springs to set-up P/ Less stiff spring / Make X/Y thicker</p>

Q38)

(a)



- (c) (i) Light can be reflected  
(ii) Light travels in a straight line

Q39)

(a) 20

- (b) J is a better conductor of heat than K so J will transfer heat from the surroundings to melt the ice faster.
- (c) For a fair test, only the type of material used should be changed all the other variables kept constant. Keeping the size of the ice cubes keeps the surface area in contact with the block the same as it affects the time taken for the ice to melt.

Q40)

(a)



- (b) Magnetism of magnet C was stronger so magnet C repelled A further away.
- (c) Distance X will decrease. Magnetism is unable to pass through magnetic objects. So the two magnets moved towards the steel block and attracted the steel block which is a magnetic material.