

PRIMARY 6 SCIENCE
CONTINUAL ASSESSMENT 1

2017

BOOKLET A

Date : 1 March 2017
Duration : 1 h 45 min

Name : _____ ()

Class: Primary 6 ()

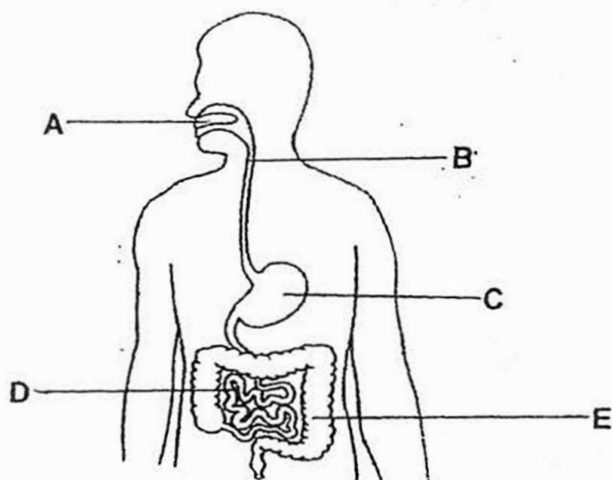
DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Booklet A consists of 23 printed pages including this cover page.

Section A (28 x 2 marks = 56 marks)

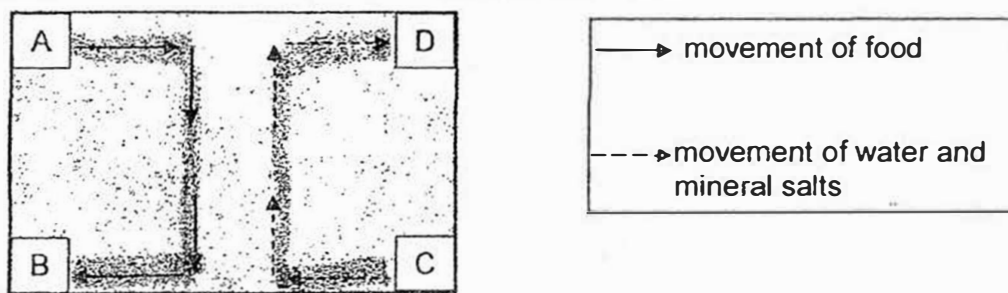
For each question from 1 to 28, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.**

1. The diagram below shows parts of the human digestive system.



In which of the following parts is digestion carried out?

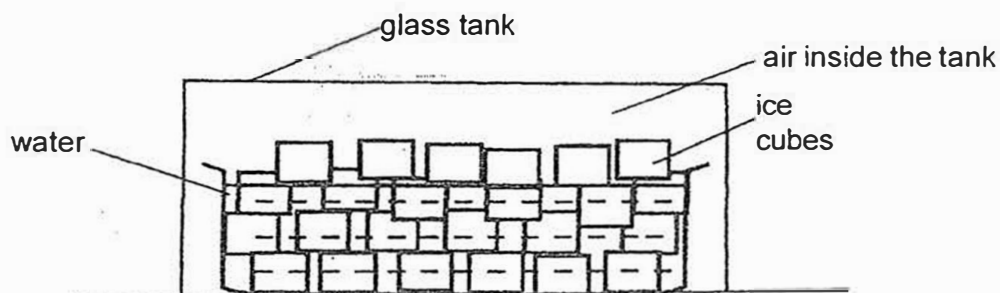
- (1) A and C only
 (2) B and E only
 (3) A, C and D only
 (4) B, C and E only
2. In the diagram below, A, B, C and D represent the parts of a plant. The arrows represent the movement of substances in the plant.



Which one of the following correctly identifies parts A, B, C and D?

	A	B	C	D
(1)	leaf	stem	leaf	roots
(2)	leaf	roots	roots	leaf
(3)	stem	leaf	stem	roots
(4)	stem	roots	leaf	stem

3. A glass tank was placed over a container of ice cubes. This was placed on a table in the kitchen with a room temperature of 30°C . The ice cubes started to melt after some time and it was observed that the air inside the glass tank was cooler than the room temperature.



Which of the following correctly explain why the temperature of the air in the glass tank was lower after some time?

- A The air inside the tank lost heat to the water.
- B The air inside the tank gained heat from the water.
- C The air inside the tank lost heat to the melting ice cubes.
- D The air inside the tank gained heat from the melting ice cubes.

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

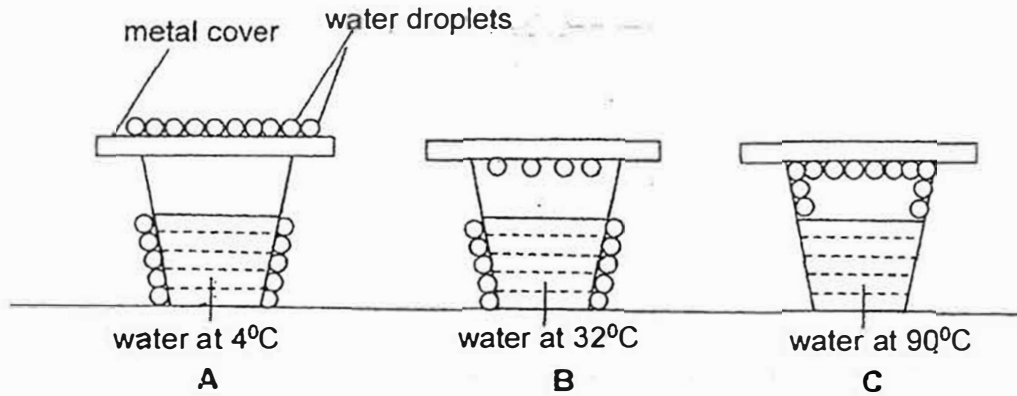
4. An experiment was conducted to study the effect of temperature on the rate of evaporation of water. The conditions were recorded in the table below.

Set-up	Exposed surface area of container (cm^2)	Temperature of water ($^{\circ}\text{C}$)	Amount of water used (ml)
A	40	80	180
B	50	60	200
C	50	80	200
D	60	50	180

Which of the two set-ups should they use to ensure a fair test?

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

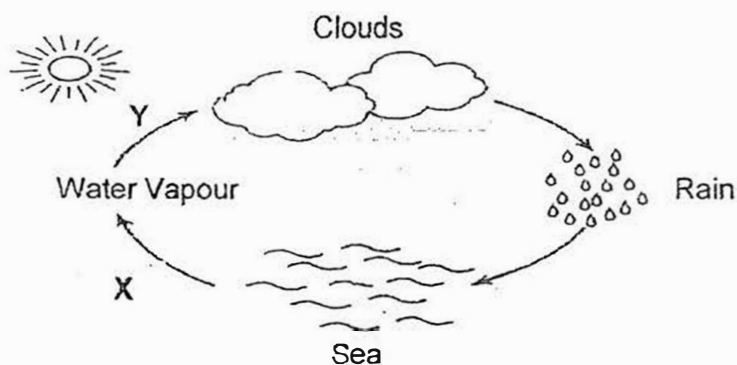
5. Hassan was given a set of drawings which showed 3 glasses of water at different temperatures, 4°C , 32°C and 90°C . The glasses were placed on a table in a room of 32°C . He was told to draw the most likely formation of water droplets on each of the glasses after some time. His drawings are shown below.



Which of the above drawings are **correct**?

- (1) A and B only
 - (2) A and C only
 - (3) B and C only
 - (4) A, B and C
6. Which of the following are actions that help to conserve water?
- A Take long showers on a hot day.
 - B Turn off the running tap while brushing your teeth.
 - C Reuse water used for washing rice to water plants.
 - D Use the washing machine only when you have a half load.
- (1) A and B only
 - (2) B and C only
 - (3) A, C and D only
 - (4) B, C and D only

7. Study the diagram of the water cycle below.
X and Y are two processes that take place in the water cycle.

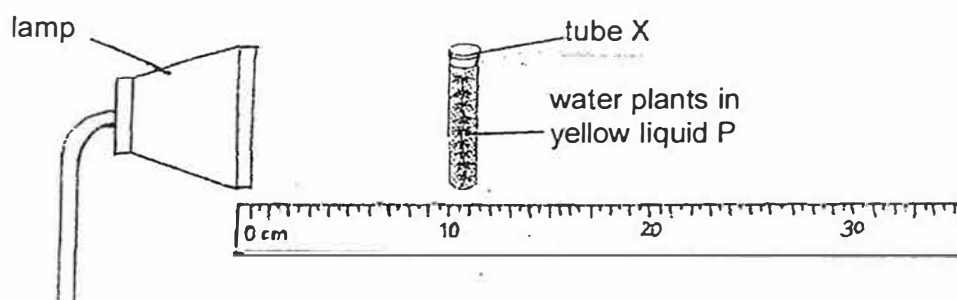


Based on the diagram above, which of the following statement(s) is/are **incorrect**?

- A Heat is gained by water vapour during process Y.
- B Process X does not take place at a fixed temperature.
- C There is a change in state of water during processes X and Y.

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

- 8 Jessica had three tubes, X, Y and Z, containing an equal amount of water plants mixed in the same amount of yellow liquid P. This yellow liquid turns green after photosynthesis has taken place. Jessica placed tube X at a distance of 10 cm from the lamp.

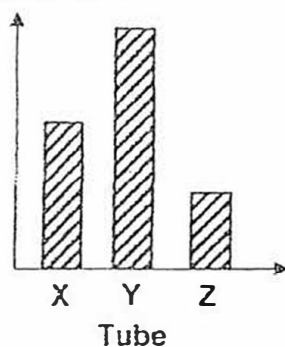


She switched on the lamp in a dark room and recorded the time taken for the mixture to turn green. She repeated the experiment with tubes Y and Z at various distances from the lamp and recorded the results as shown in the table below.

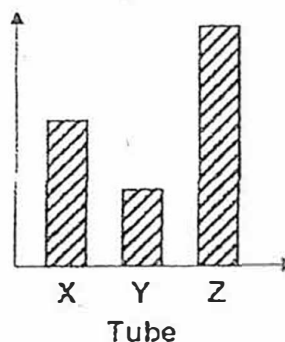
Tubes	Time taken for the liquid to turn green (min)
X	17
Y	9
Z	28

Which one of the graphs below correctly represents the distance that tubes X, Y and Z are placed from the lamp?

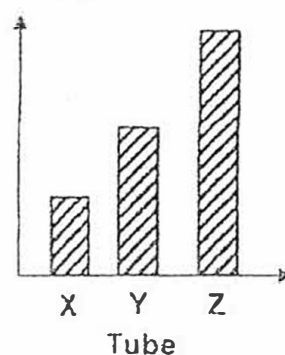
(1) Distance



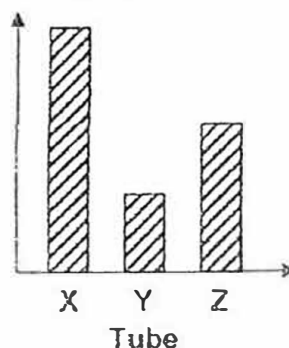
(2) Distance



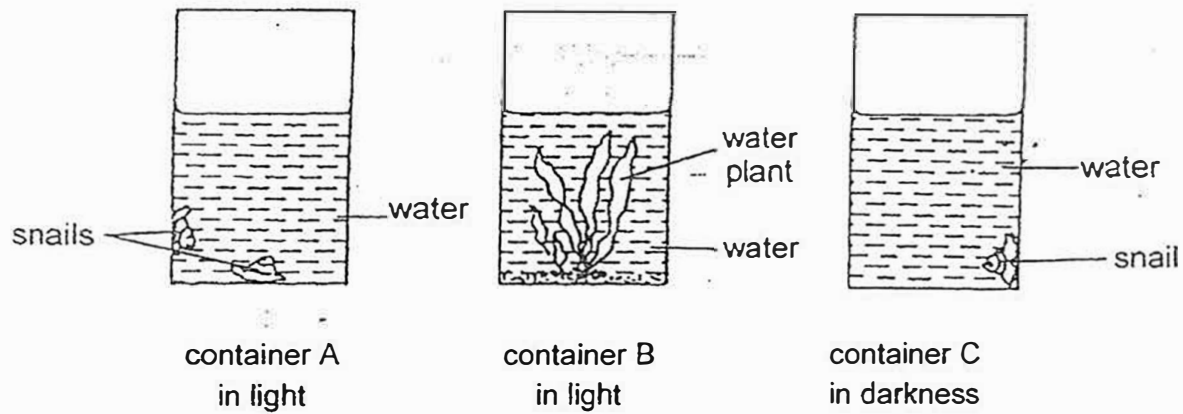
(3) Distance



(4) Distance



9. Containers, A, B and C, were set up with the same amount of carbon dioxide at the start of an experiment. For 12 hours, containers A and B were kept in the presence of light while container C was kept in darkness.

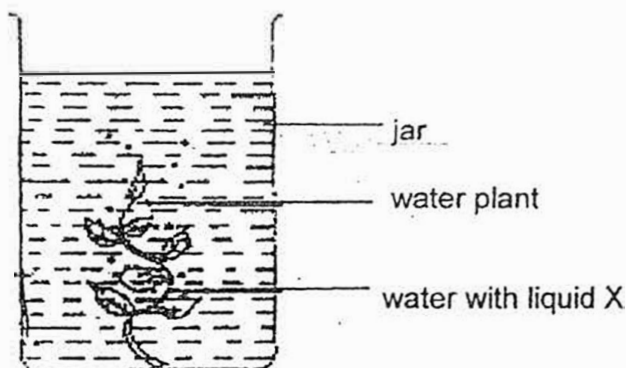


Which one of the following has correctly arranged the one containing the least amount of carbon dioxide in the water to the one with the most carbon dioxide **at the end of the experiment**?

Least carbon dioxide → most carbon dioxide

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

10. Daphne wanted to find out whether water plants affect the amount of carbon dioxide in water when exposed to different amounts of light.



She prepared two set-ups similar to the one shown above. One set-up was placed in a dark cupboard while the other was placed under a lamp. She then added a few drops of liquid X to the water in the two set-ups.

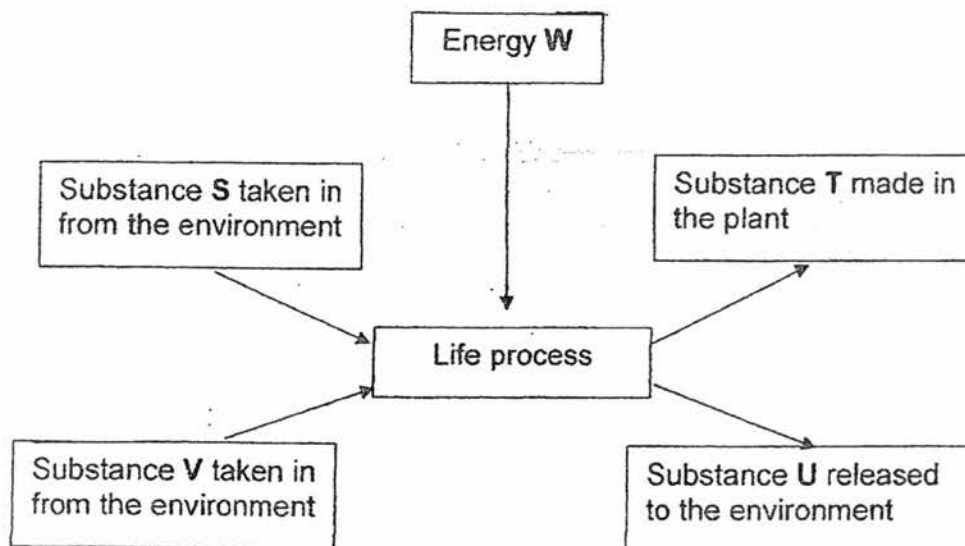
At the start of the experiment, the colour of the water with liquid X was red. Liquid X will change colour based on the amount of carbon dioxide present in the water, as shown below.

	Colour of water with liquid X
Less carbon dioxide than at the start of the experiment	blue
More carbon dioxide than at the start of the experiment	yellow

What colour would the water with liquid X be in each set-up after 2 days?

	Under a lamp	In a dark cupboard
(1)	red	yellow
(2)	blue	yellow
(3)	yellow	blue
(4)	blue	red

11. The diagram below represents a life process that takes place in green plants.

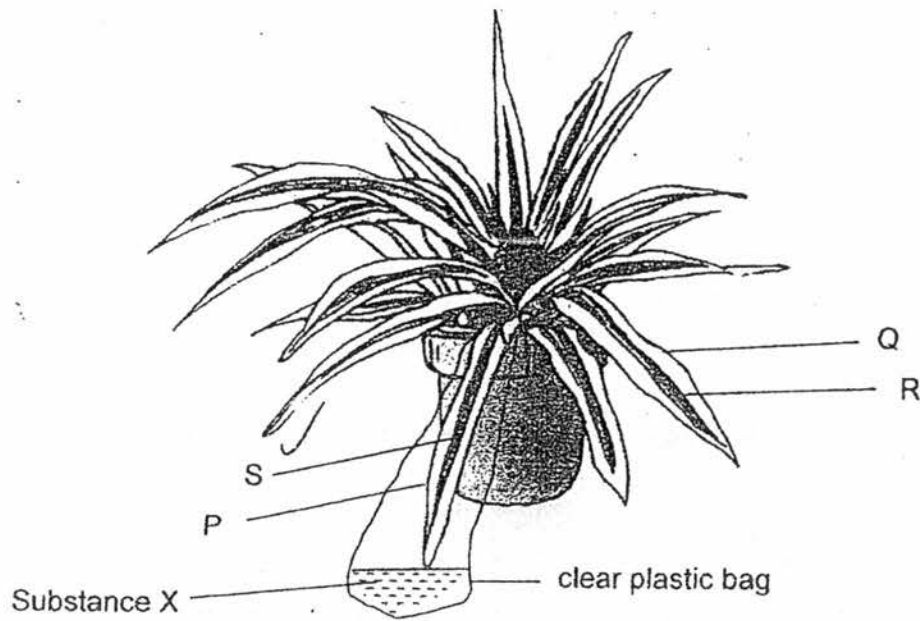


Which one of the following correctly identifies S, T, U, V and W?

	Substance				Energy W
	S	T	U	V	
(1)	food	water	oxygen	carbon dioxide	light
(2)	oxygen	sugar	carbon dioxide	water	heat
(3)	carbon dioxide	sugar	oxygen	water	light
(4)	oxygen	water	sugar	carbon dioxide	heat

12. Lynn set up an experiment to find out whether carbon dioxide is needed for photosynthesis. She used a plant which had leaves with green areas in the middle and white areas round the edges as shown below. The white areas of the leaves do not contain chloroplasts.

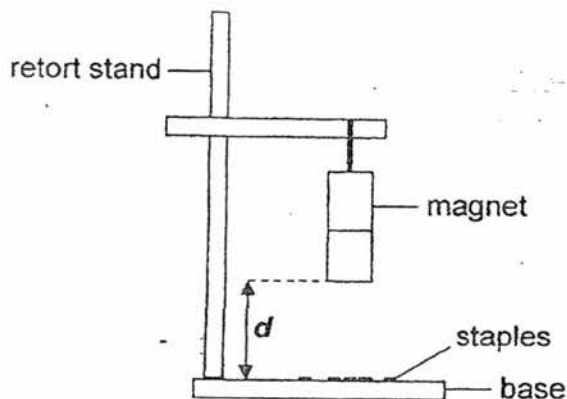
One of the leaves was wrapped in a plastic bag containing substance X which absorbs carbon dioxide. The set-up was placed in sunlight.



Which of the following two areas should Lynn compare to show that carbon dioxide is needed for photosynthesis?

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

13. Jemay clamped a magnet 10cm away from the base of a retort stand where she laid 10 staples as shown in the diagram below. The magnet attracted some of the staples and she counted the number of staples left on the base of the retort stand.



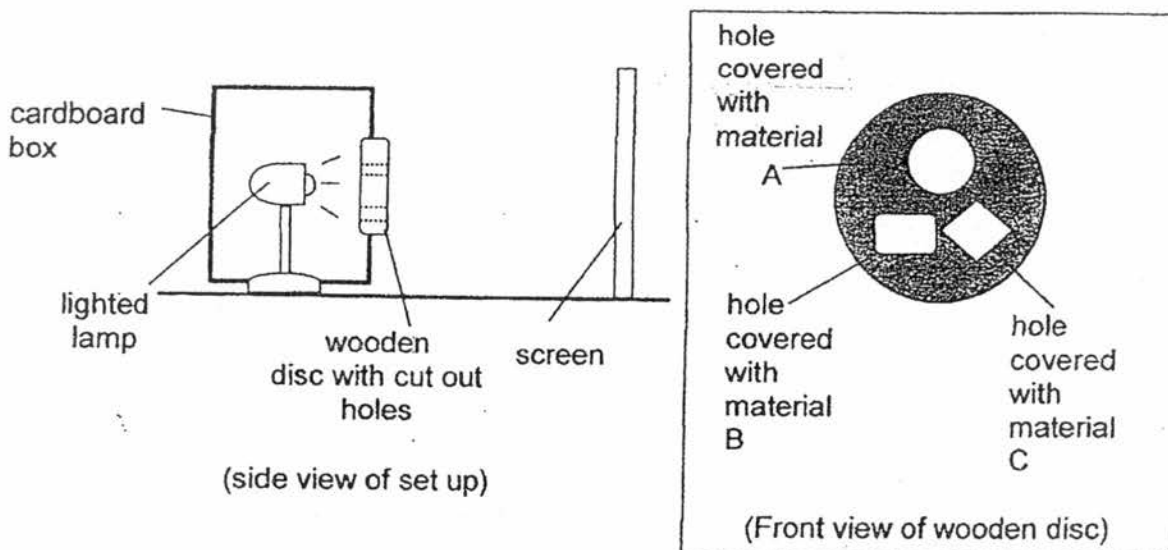
She repeated the experiment, decreasing distance d by 2cm until all the staples were attracted. She recorded her results in a table as shown below.

Distance d (cm)	Number of staples attracted by the magnet
10	2
8	3
6	5
4	8
2	10

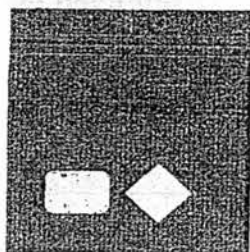
Which one of the following is a **correct** conclusion based on Jemay's experimental results?

- (1) The magnetic force of attraction is the strongest at its poles.
- (2) When d is 3 cm, all the staples will be attracted by the magnet.
- (3) The smaller the distance d , the greater the magnetic force exerted on the staples.
- (4) The greater the distance d , the more number of staples attracted by the magnet.

14. A cardboard box was set up with a lighted lamp as shown below. An opening was cut in the box such that a wooden disc could be fitted exactly. The disc had three holes which were pasted with three different types of materials.



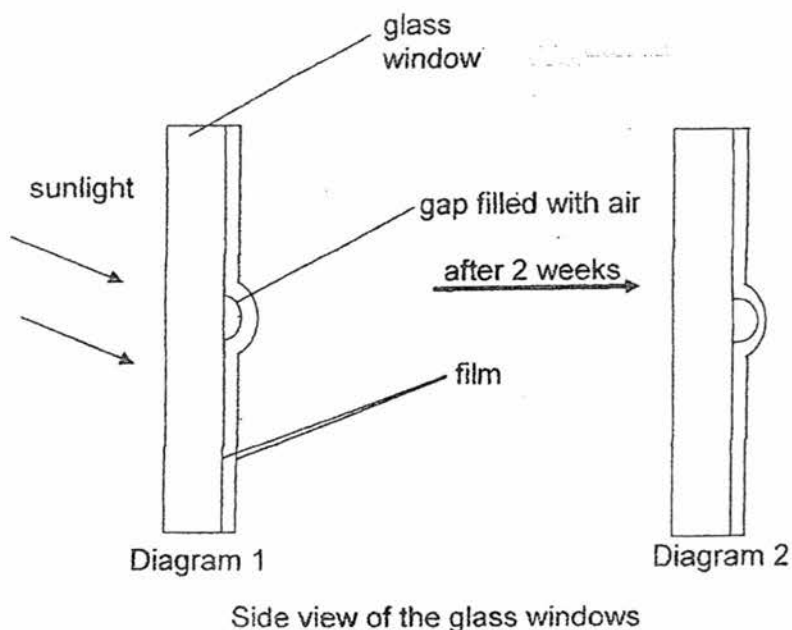
The shadows cast on the screen appeared as shown below.



Based on the results given, which one of the following correctly describes the properties of materials A, B and C?

	Allows most light to pass through	Allows some light to pass through	Allows no light to pass through
(1)	A	C	B
(2)	C	B	A
(3)	B	C	A
(4)	C	A	B

15. Tom pasted a film on a glass window to reduce the amount of sunlight coming into the classroom. He noticed that some air bubbles were trapped under the film as shown in Diagram 1. After two weeks, the air bubble became larger as shown in Diagram 2.



Which of the following reasons best explains why the gap with air became larger in Diagram 2?

- (1) The air in the gap lost heat and contracted.
- (2) The film removed heat from the air in the gap.
- (3) The air in the gap gained heat and expanded.
- (4) The glass window blocked the heat from passing through it.

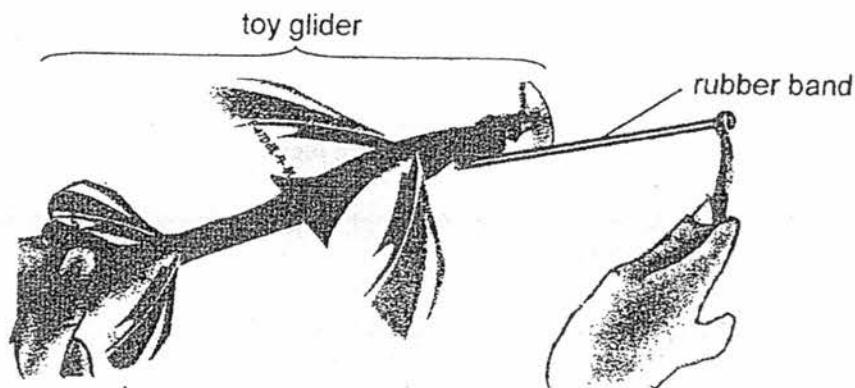
16. Geetha stood on a weighing scale and her classmates made some statements based on their observation.

Which *one* of the statements made by her classmates ^{are} ~~is~~ correct?

- A Geetha's weight is a force.
- B Geetha's weight will increase as her mass increases.
- C Geetha will weigh less on the moon as there is less gravitational force acting on her there.

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

17. Junhao hooked a rubber band to a toy glider. He then stretched the rubber band as shown in the diagram below before releasing the glider held in his hand.



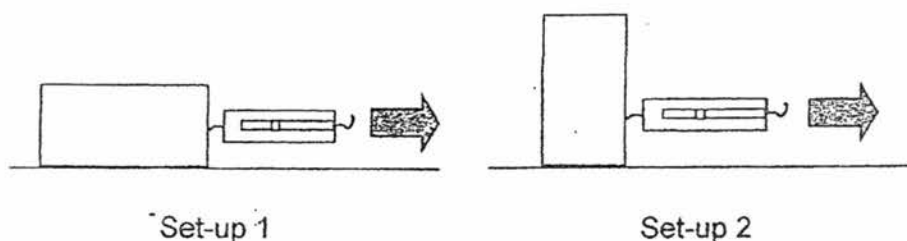
Which of the following **correctly** describe the forces acting on the glider just before it is released?

- A Gravitational force is acting on the toy glider.
- B There is frictional force between the fingers and the toy glider.
- C The stretched rubber band exerts an elastic spring force on the toy glider.

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

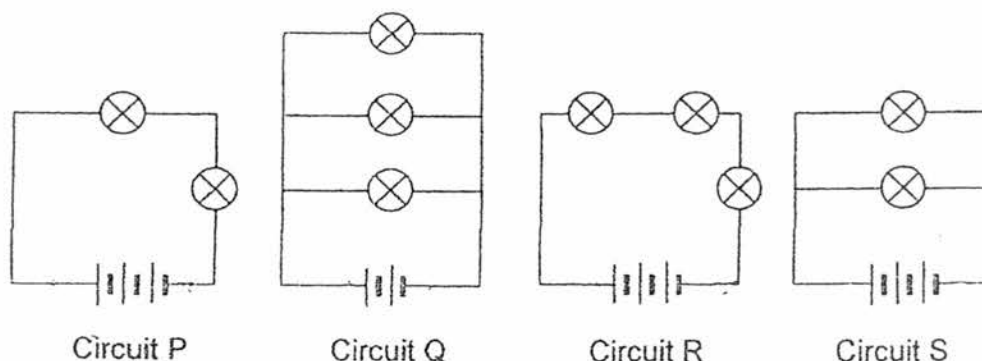
18. Rosnah carried out an experiment as shown in the diagram below. She pulled a wooden block on its larger rectangular surface on a table. She used a spring balance to measure the force needed when the block started to move at a steady speed.

Then she repeated the experiment, placing the same wooden block on its smaller square surface and measuring the force needed to move the block.



Based on the above information, what is the aim of her experiment?

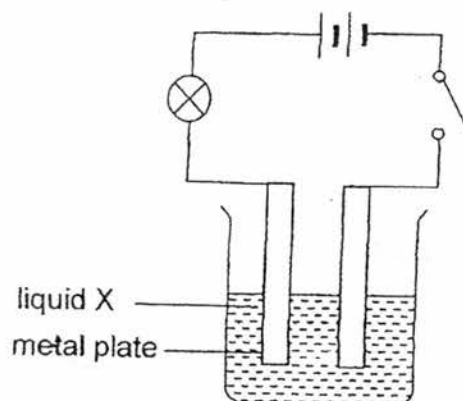
- (1) To find out if the material of the block affects the force needed to move the block.
 - (2) To find out if the mass of the block affects the speed at which the block moves.
 - (3) To find out if the surface area of the block in contact with the table affects the force needed to move it.
 - (4) To find out if the shape of the block in contact with the table affects the time taken before the block starts moving.
19. Anders wanted to find out if the arrangement of bulbs will affect the brightness of the bulbs. He set up four circuits (P, Q, R and S) as shown below.



Which two circuits should he use to conduct a fair test?

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

20. Gerald carried out an experiment to find out if liquids X, Y and Z are conductors of electricity. He inserted 2 metal plates of similar size connected to an electric circuit in Liquid X as shown in the set-up below.



He closed the switch and observed the bulb. He repeated this with the other 2 liquids, Y and Z, and recorded the results in a table as shown below.

Liquid	Observation of bulb
X	did not light up
Y	lit up brightly
Z	lit up dimly

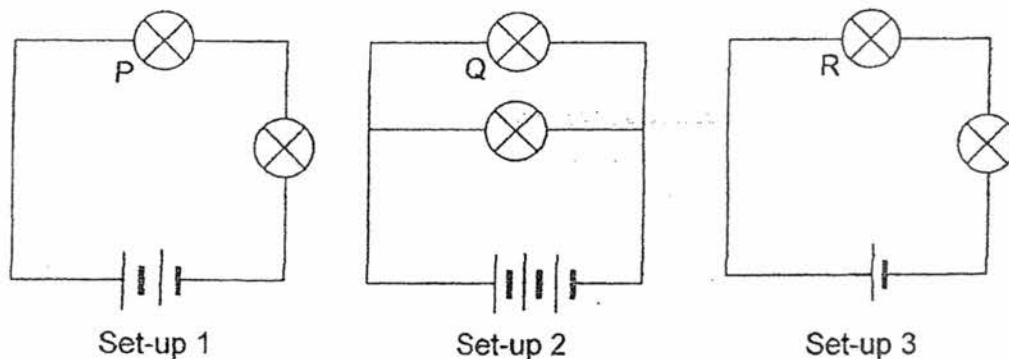
Which variables should he keep the same to ensure that he is conducting a fair test?

- A type of liquid
- B amount of liquid
- C type of metal plate
- D number of batteries

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

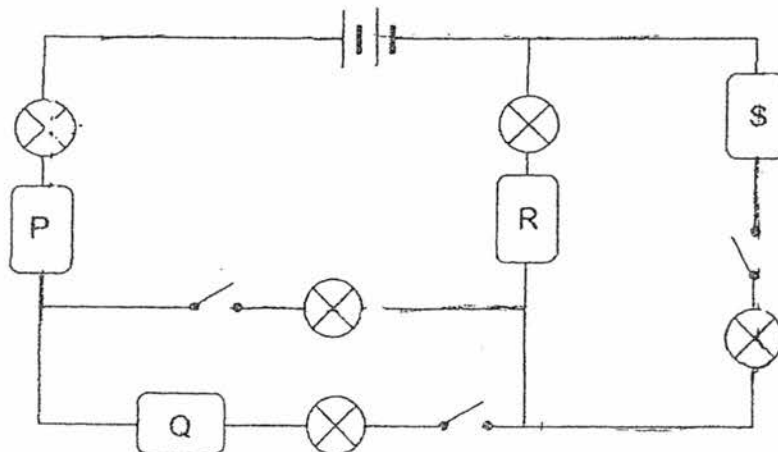
- (2) B and D only
- (4) A, B, C and D

21. Jieqi set up 3 electrical circuits with two bulbs each. Bulbs P, Q and R are labelled as shown below. All the electrical components are new and working properly.



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

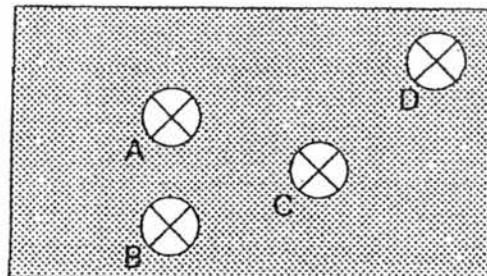
- A Bulb R lights up the brightest.
 B Bulb Q lights up brighter than Bulb P.
 C Bulbs P and Q have the same brightness.
- (1) A only
 (2) B only
 (3) C only
 (4) B and C only
22. In the electrical circuit below, **only 3 bulbs** lit up when all the switches were closed. P, Q, R and S are blocks of different materials.



Based on the results, which of the following are possible materials that P, Q, R and S could be made of?

	P	Q	R	S
(1)	aluminium	copper	glass	wood
(2)	glass	wood	steel	copper
(3)	steel	aluminium	copper	glass
(4)	copper	glass	wood	aluminium

23. Keith constructed a circuit puzzle using 2 batteries, 4 bulbs, A, B, C and D and some wire. All the electrical components were in working condition. He covered the circuit with a piece of cardboard with only the bulbs exposed as shown below.

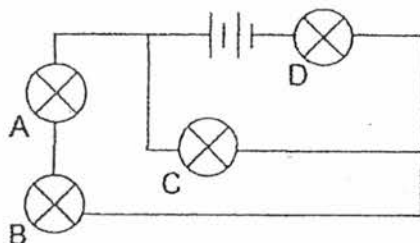


Keith removed bulbs A, B, C and D one at a time leaving a gap in the circuit. He observed the effect before re-connecting each bulb and recorded them in the table below.

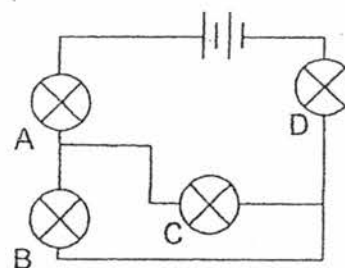
Bulb removed	Bulbs that were lit			
	A	B	C	D
A		✓		✓
B	✓		✓	✓
C		✓		✓
D				

Based on the above information, which one of the following shows the circuit diagram that Keith had constructed?

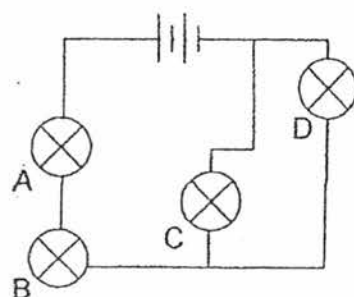
(1)



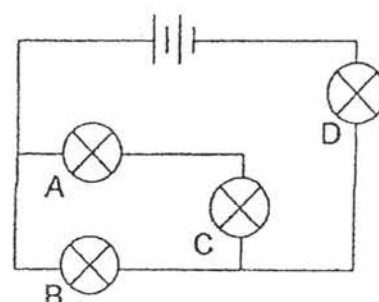
(2)



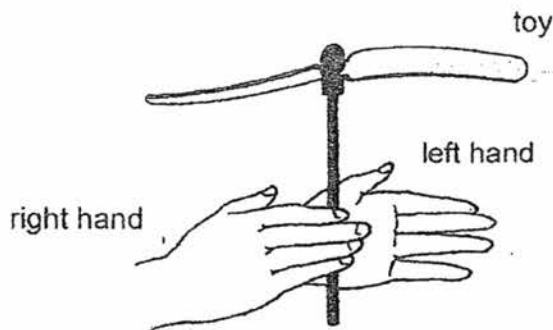
(3)



(4)



24. Ashlyn held a toy between her hands as shown below. She rotated the toy by sliding her right hand forward and her left hand backwards before releasing it. The toy flew to a certain height after it left her hands.



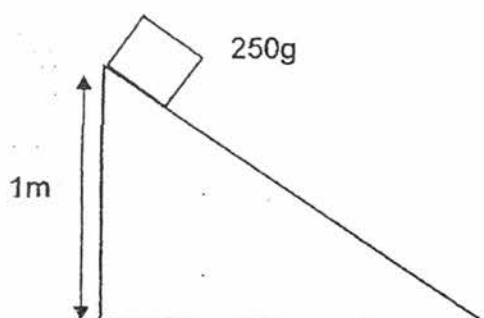
She rotated the same toy from the same starting position again. However, the toy flew to a higher height than it did before.

Which one of the following could explain why the toy flew to a **greater** height?

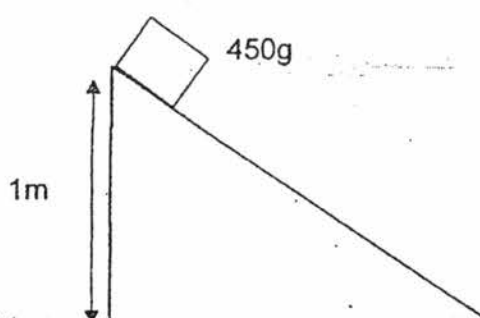
- (1) The toy had a smaller mass.
- (2) The toy used up more heat energy.
- (3) The toy had a greater kinetic energy.
- (4) The toy had less gravitational potential energy.

25. Dave conducted an experiment with four set-ups A, B, C and D. He used two metal blocks of the same size but of different masses.

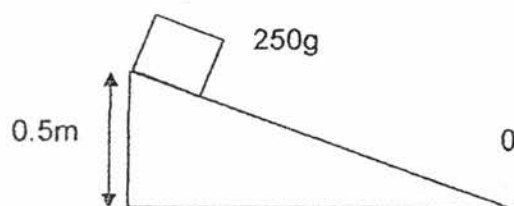
He released the blocks from different heights as shown below.



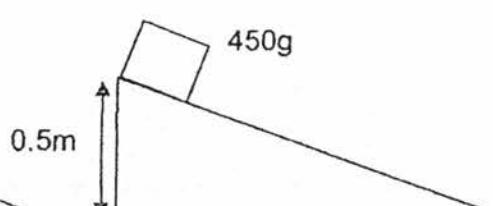
Set-up A



Set-up B



Set-up C



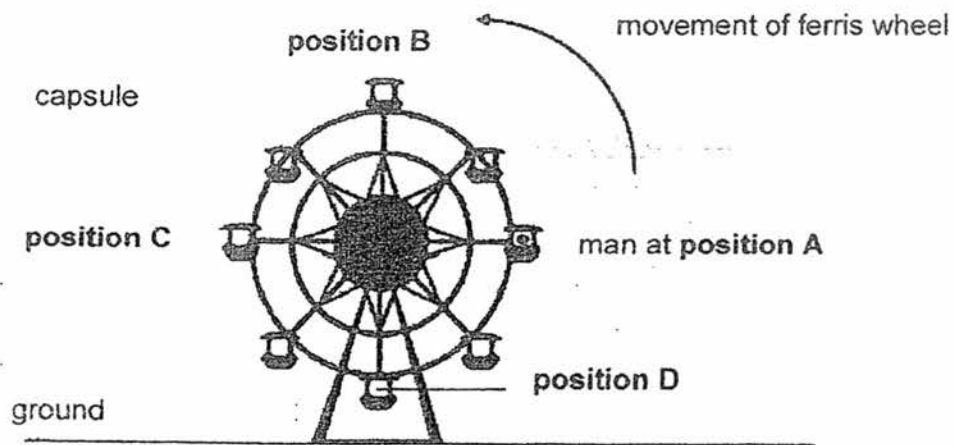
Set-up D

Dave wanted to find out how the distance travelled by the block is affected by its mass and the height from which it was released.

Which pairs of set-ups should he use in his investigation?

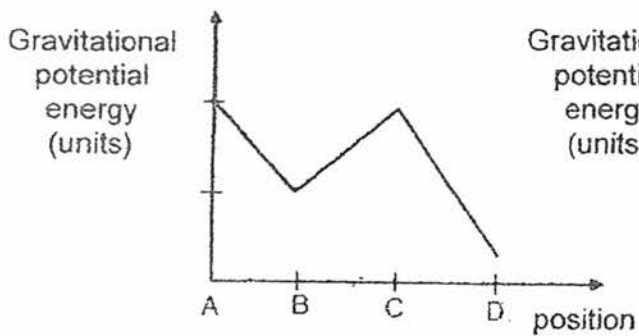
	To show how the distance travelled by the block is affected by its mass	To show how the distance travelled by the block is affected by the height from which it was released
(1)	A and B	C and D
(2)	B and D	A and C
(3)	C and D	B and D
(4)	A and C	A and B

26. The diagram below shows a man sitting in a capsule of a ferris wheel.

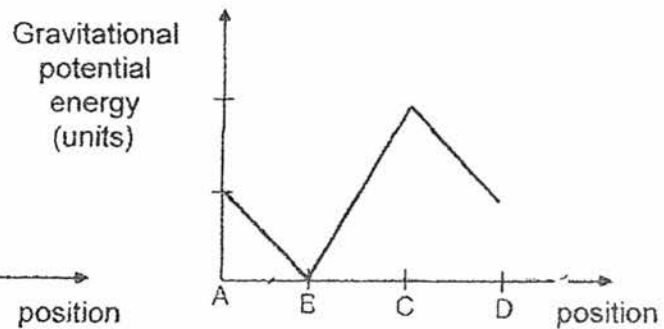


Which one of the following graphs shows the change in the amount of gravitational potential energy of the capsule as the man travelled from position A to position D?

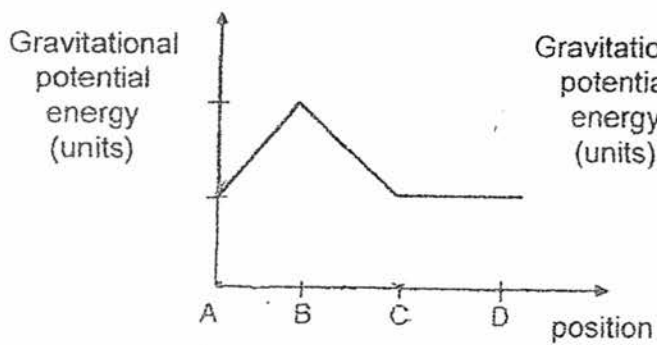
(1)



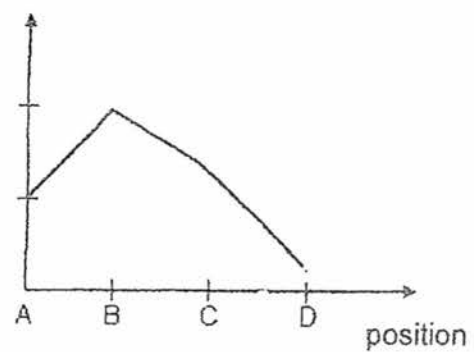
(2)



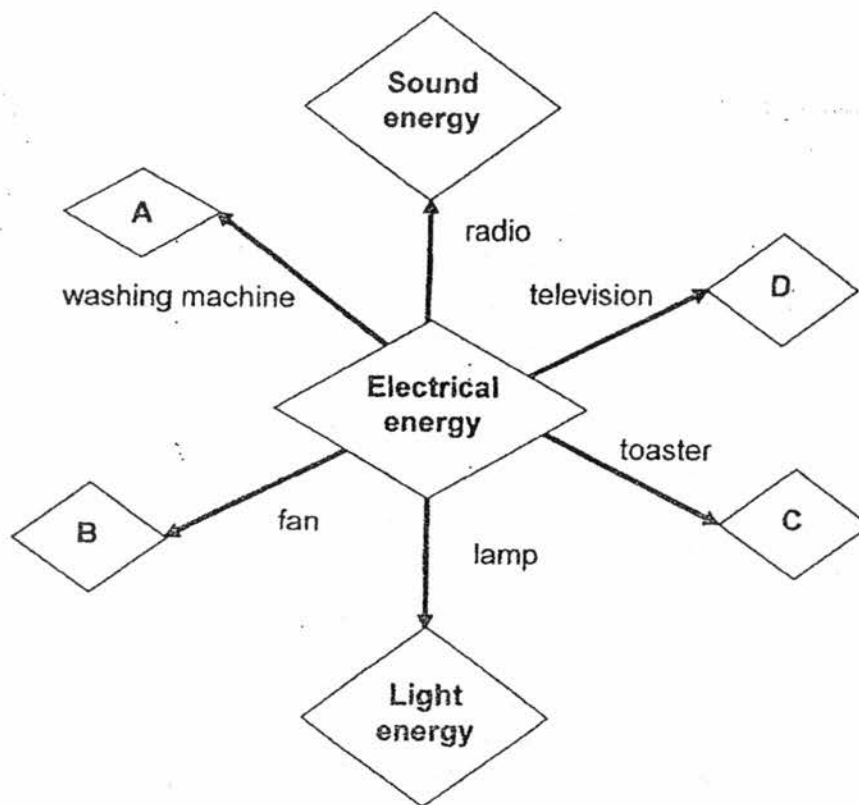
(3)



(4)



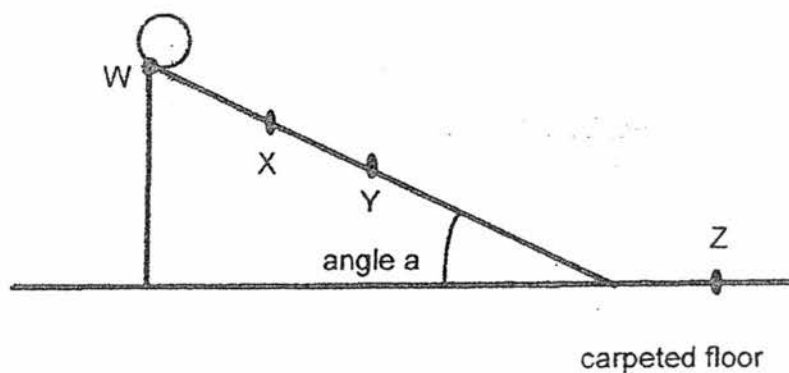
27. The diagram below shows that electrical energy can be converted to other useful forms of energy in the 6 electrical appliances.



Which **useful** forms of energy are necessary for the appliances to function as represented by A, B, C and D?

	A	B	C	D
(1)	Sound Energy	Heat Energy	Light Energy	Heat Energy
(2)	Kinetic Energy	Kinetic Energy	Heat Energy	Light and Sound Energy
(3)	Heat Energy	Kinetic Energy	Heat Energy	Kinetic Energy
(4)	Light Energy	Heat Energy	Sound Energy	Light and Sound Energy

28. Four pupils released a ball at Point W as shown in the diagram below. It rolled down the slope, moved along the floor and stopped at Point Z.



The pupils then made the following statements.

- David: At points X and Y, the ball only has kinetic energy.
 Ravi: The ball has the greatest amount of gravitational potential energy at point W.
 Sue: The ball would have rolled further if the experiment had been done on a glass floor.
 Kim: The ball would have rolled faster along the slope if angle a had been larger.

Which of the pupils had made a **correct** statement?

- (1) Ravi and Sue only
- (2) David and Ravi only
- (3) Kim, Ravi and Sue only
- (4) Kim, David and Sue only

PRIMARY 6 SCIENCE
CONTINUAL ASSESSMENT 1
2017

BOOKLET B

Date : 1 March 2017

Duration : 1 h 45 min

Name : _____ ()

Class: Primary 6 ()

Marks Scored:

Booklet A:		56
Booklet B :		44
Total :		100

Any query on marks awarded should be raised by 9 March 2017. 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:

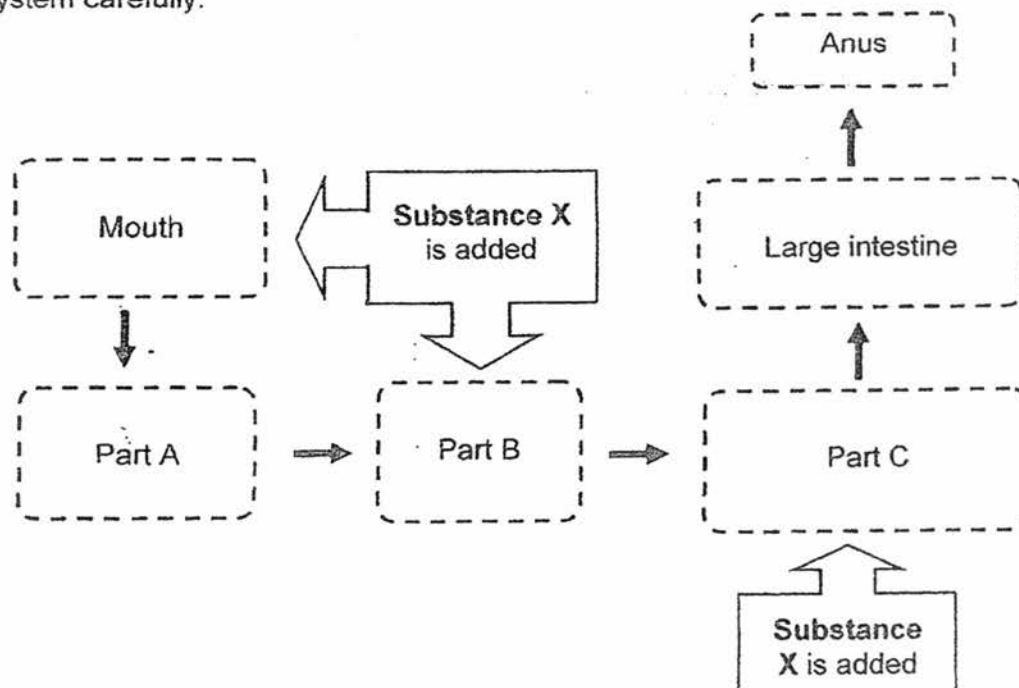
DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Booklet B consists of 19 printed pages including this cover page.

Section B (44 marks)

Write your answers to questions 29 to 41 in the spaces provided.

29. Study the following flow chart which represents the human digestive system carefully.



- (a) Identify substance X and Part C. [2]

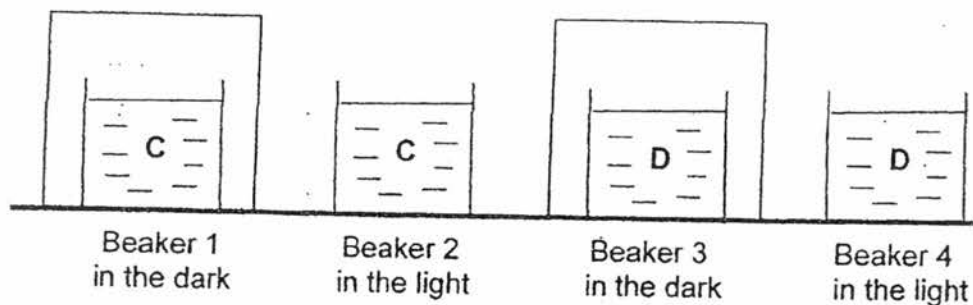
Substance X: _____

Part C : _____

- (b) State the function of part A. [1]

- (c) Describe what happens to the digested food after digestion is completed. [1]

30. Adam found two types of organisms, C and D, in a pond. He wanted to find out whether they were animals or plants. He filled four beakers, 1, 2, 3 and 4 with some pond water. He then placed some organism C in beakers 1 and 2 and some organism D in beakers 3 and 4. Beakers 1 and 3 were placed in the dark. Beakers 2 and 4 were placed in the light.



He added a drop of liquid P in each beaker. The table below shows the colour of liquid P in the presence of more oxygen or less oxygen in the beaker than in the surrounding air.

Colour of liquid P	When more oxygen is present	When less oxygen is present
	blue	yellow

At the end of two hours, the following results were obtained.

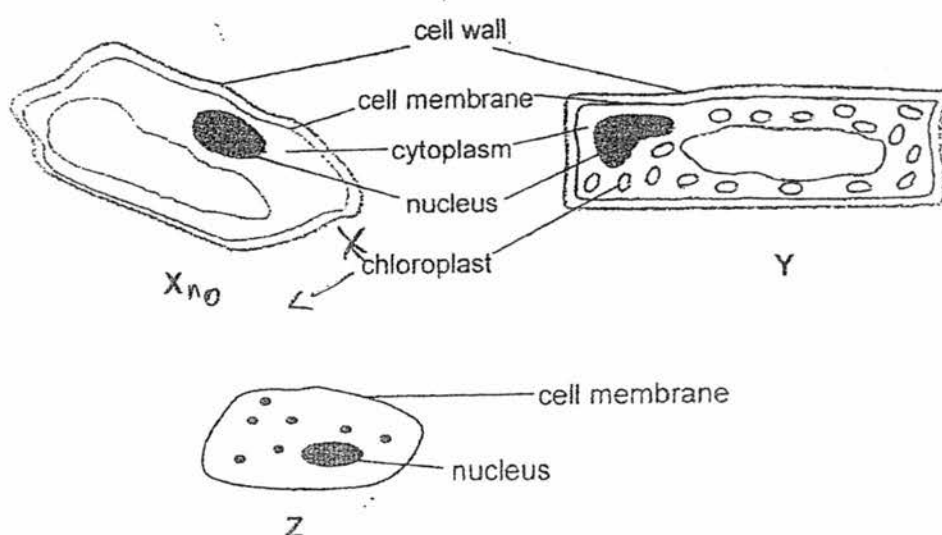
Beaker	Colour of Liquid P
1	yellow
2	yellow
3	yellow
4	blue

- (a) What process could organism D have carried out in beaker 4 to cause the indicator to turn blue in beaker 4? [1]

- (b) Explain how the process in part (a) caused the change in the colour of liquid P. [1]

- (c) Adam was able to identify that organism C was an animal. Explain how Adam arrived at this conclusion. [2]

31. The diagram below shows three cell specimens, X, Y and Z, which are examined under a microscope.

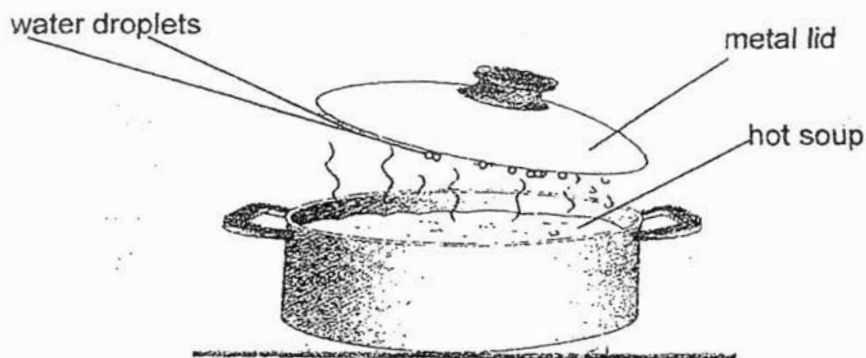


- (a) Based on the above diagram, it was concluded that 2 of the 3 cells are plant cells. Identify the 2 plant cells. [1]

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

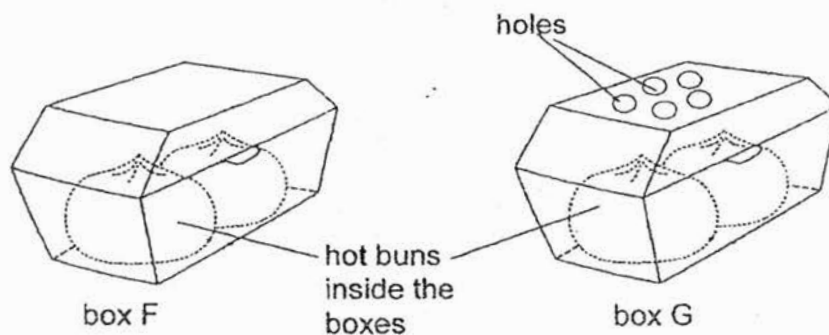
- (c) State where you could most likely find cell X. [1]

32. Peter lifted the metal lid from the pot of hot soup and observed that water droplets had formed under the metal lid.



- (a) Explain how the water droplets were formed under the metal lid. [2]

Peter put some hot buns inside two similar boxes. Box G has some holes on its cover.

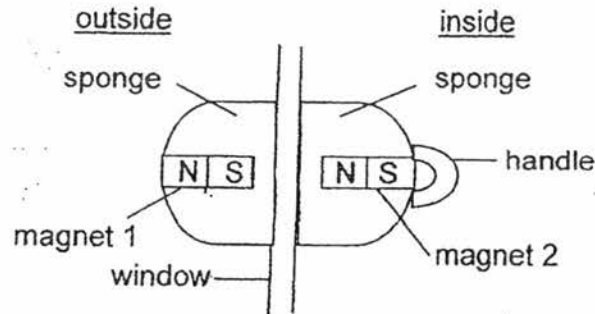


- (b) Which box would contain buns which are wetter? Explain your answer. [2]

33. A collision between 2 ships in the sea caused an oil spill which covered the seawater with a layer of black crude oil. It was observed that the water plants at the bottom of the sea died after some time.

Explain how the pollution caused the above observation. [2]

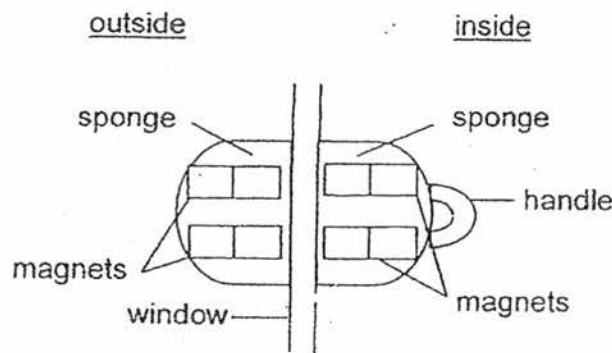
34. Mrs Tan had trouble cleaning the outside of her window. She made a device with two parts, one on the inside of a window, and the other on the outside, as shown in the diagram below. She found that she could clean the window on both sides now.



- (a) Based on the diagram, describe how the device most likely worked to help Mrs Tan clean the outside of her window from inside the safety of her house. [2]

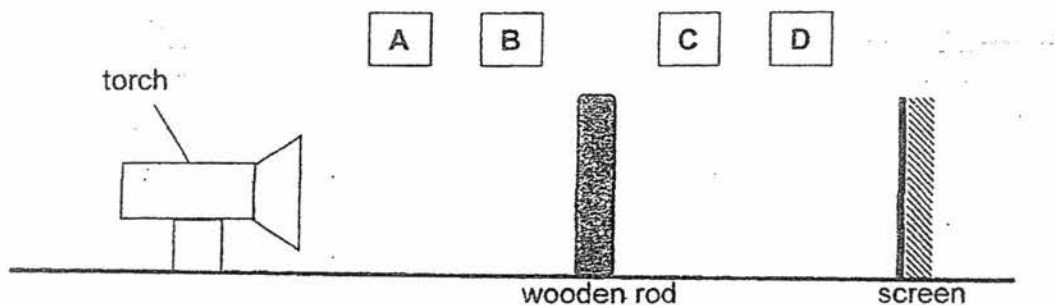
While cleaning the window, the outside part of the device could not cling on to the window and fell to the ground.

Mrs Tan changed her device as shown in the diagram below.



- (b) In the diagram above, **label the poles** of the magnets so that the device clings to each other. [1]
- (c) The part of the device outside the window clings better to the window now. Explain why. [1]

35. The diagram below shows four different positions, A, B, C and D, where a wooden rod could be placed in front of the light source. Differently-sized shadows were formed on the screen based on the different positions of the rod.

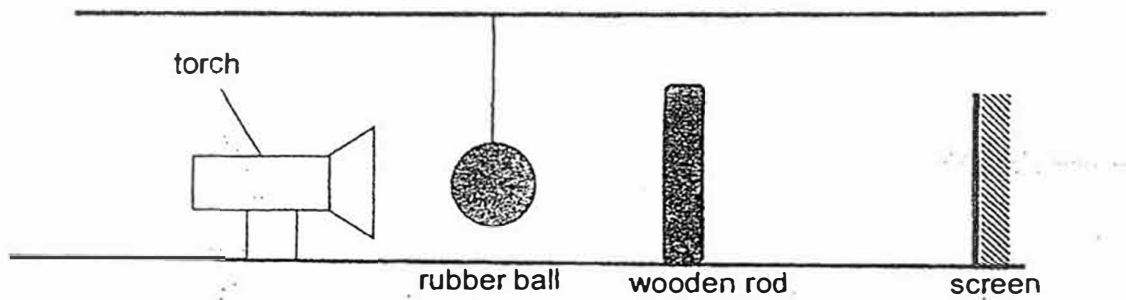


The wooden rod was placed at another position in which the shadow formed was larger than when it was placed at position C.

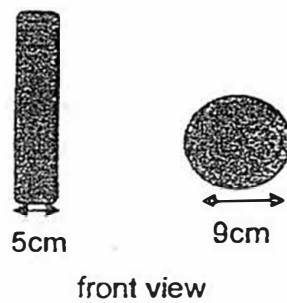
- (a) State the position (A, B, C or D) and provide a reason for your answer. [1]

- (b) State an important property of the material of the rod that enables a shadow to be formed? [1]

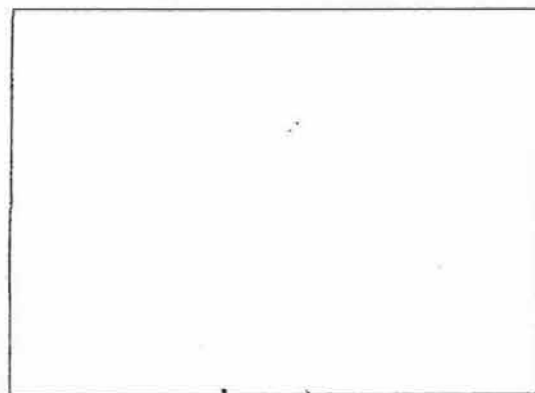
In another experiment, a rubber ball was hung directly in front of the wooden rod as shown below.



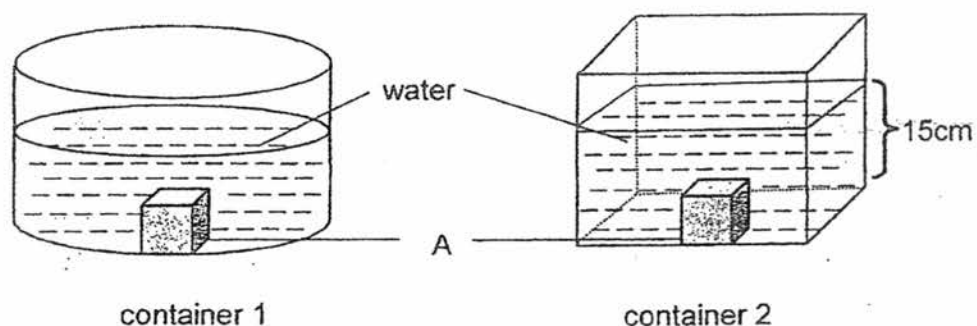
The diagrams below show the measurement of the wooden rod and the rubber ball.



- (c) Draw the possible shadow formed on the screen in the box below. [1]



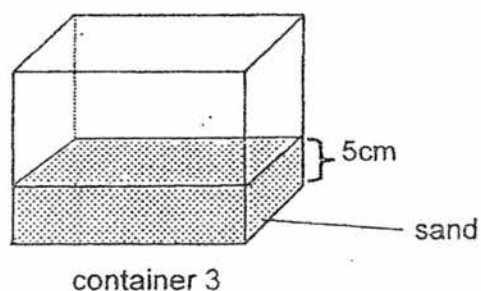
36. Sarah placed matter A into containers 1 and 2 which were filled with water as shown in the diagrams below.



Based on her observation, Sarah concluded that matter A is a solid.

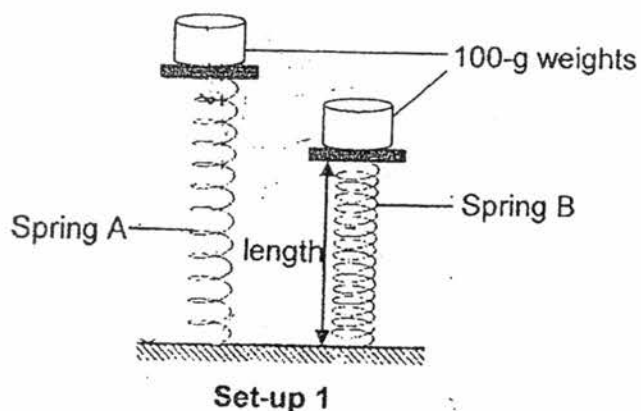
- (a) Give a reason for her conclusion. [1]

Sarah filled container 3 which is identical to container 2 with sand to a height of 5cm. She poured the contents in container 2 into container 3. She observed that the height of the water was only 19 cm.



- (b) Explain her observation. [1]

37. Weiling carried out an investigation using two springs, A and B, of equal length. She placed two 100-g weights on each spring and recorded the new lengths of the springs as shown below.



Spring	Original length (cm)	New length (cm)
A	10.0	5.0
B	10.0	3.5

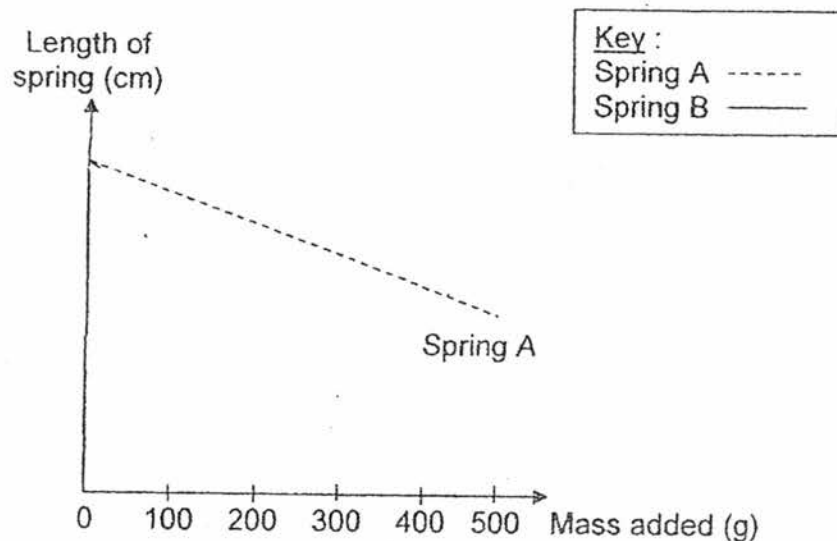
(a)

In the diagram above, **draw and name** two forces acting on **Spring A**, using arrows to indicate their direction. [2]

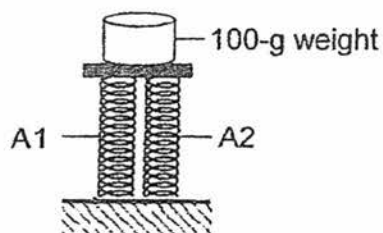
She increased the weight on each spring by 100g and recorded the new lengths of both springs. She then repeated this step up to a total mass of 500g.

The length of Spring A was plotted in the graph below.

- (b) In the graph below, **draw and label** a line for Spring B using the key provided. [1]



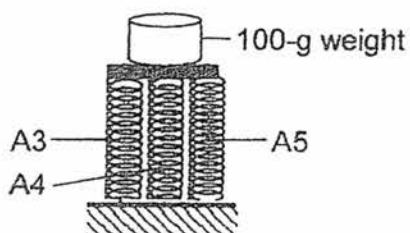
Weiling then took 2 identical Spring A (A1 and A2) and placed a 100-g weight on them as shown in the diagram below. She measured the new length of each spring and recorded them.



Set-up 2

Spring	Original length (cm)	New length (cm)
A1	10.0	7.0
A2	10.0	7.0

Weiling repeated the experiment, using three identical Spring A, A3, A4, A5, and recorded the new length of the springs in the table below.

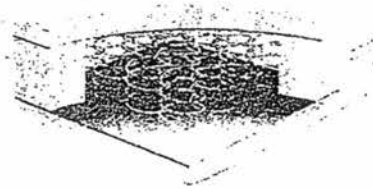


Set-up 3

Spring	Original length (cm)	New length (cm)
A3	10.0	7.4
A4	10.0	7.4
A5	10.0	7.4

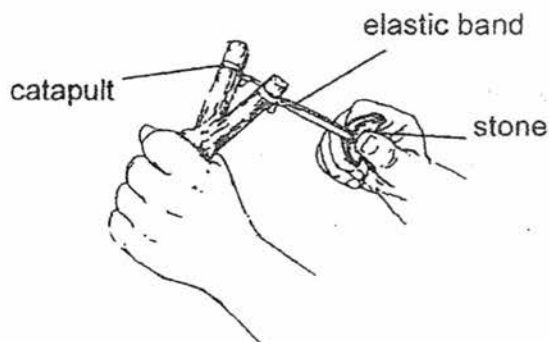
- (c) What is the relationship between the number of springs used in each set-up and the length of the spring after compression? [1]

Weiling wants to buy a spring mattress.

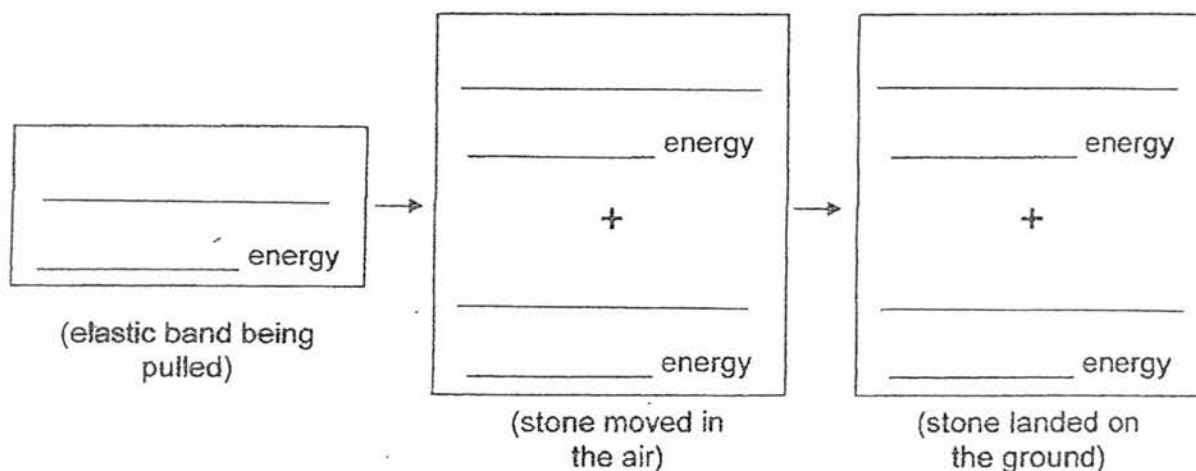


- (d) If she wants a *firmer* mattress, should she choose one with Spring A or Spring B? Give a reason for your answer. (Assume that all other materials used to make the mattress are identical) [1]

38. Luke used a catapult to shoot a stone at a target as shown below.



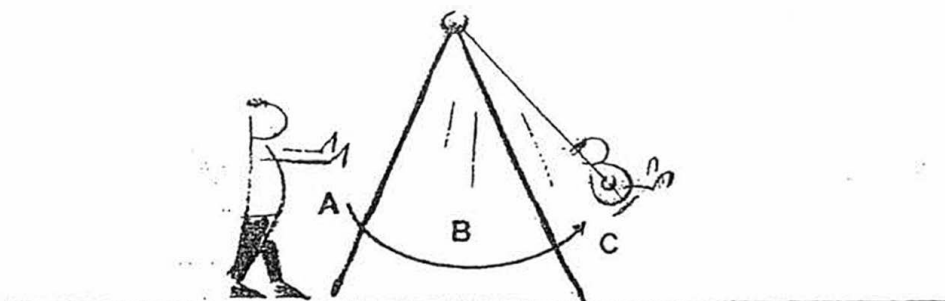
- (a) State the energy changes that occur from the moment the elastic band was pulled to the moment that the stone landed on the ground. [2]



Luke replaced the elastic band with a rope and he observed that the distance travelled by the stone is shorter.

- (b) Give an explanation for his observation. [1]

39. Maybelle's mother pushed her on the swing in the playground.



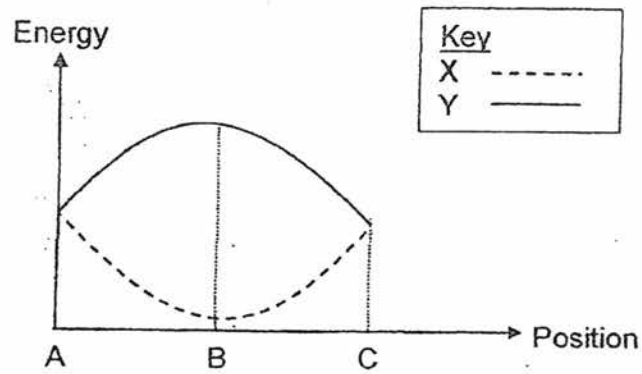
- (a) State the energy changes from the time Maybelle's mother was pushing her to when Maybelle was swinging to the highest point. [1]

_____ _____ energy	→	_____ _____ energy	→
(Mother)		(Mother pushing Maybelle)	
_____ _____ energy	→	_____ _____ energy	
(Maybelle swinging)		(Maybelle reaching highest point)	

It was observed that the swing swung lower when Maybelle's mother stopped pushing it.

- (b) Give a reason for the observation. [1]

The graph below shows the changes in energy as Maybelle swings from A to B to C.



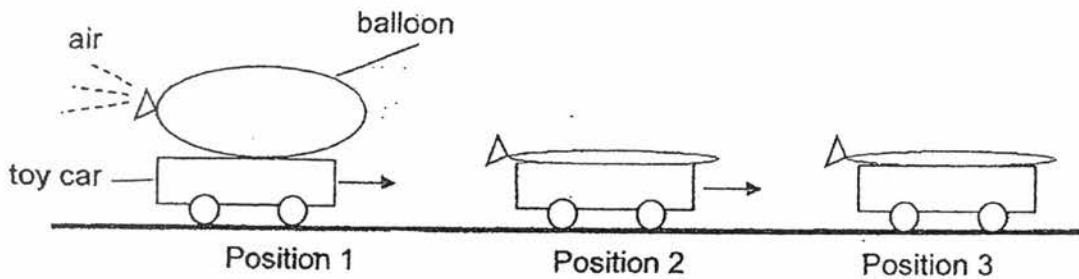
(b) What forms of energy do X and Y represent? [1]

X: _____

Y: _____

40. In an experiment, an inflated balloon was glued to a toy car.

At position 1, in the diagram below, air was released from the balloon which caused the car to move forward. At position 2, all the air had escaped but the car continued to move forward. The car came to a stop at position 3.



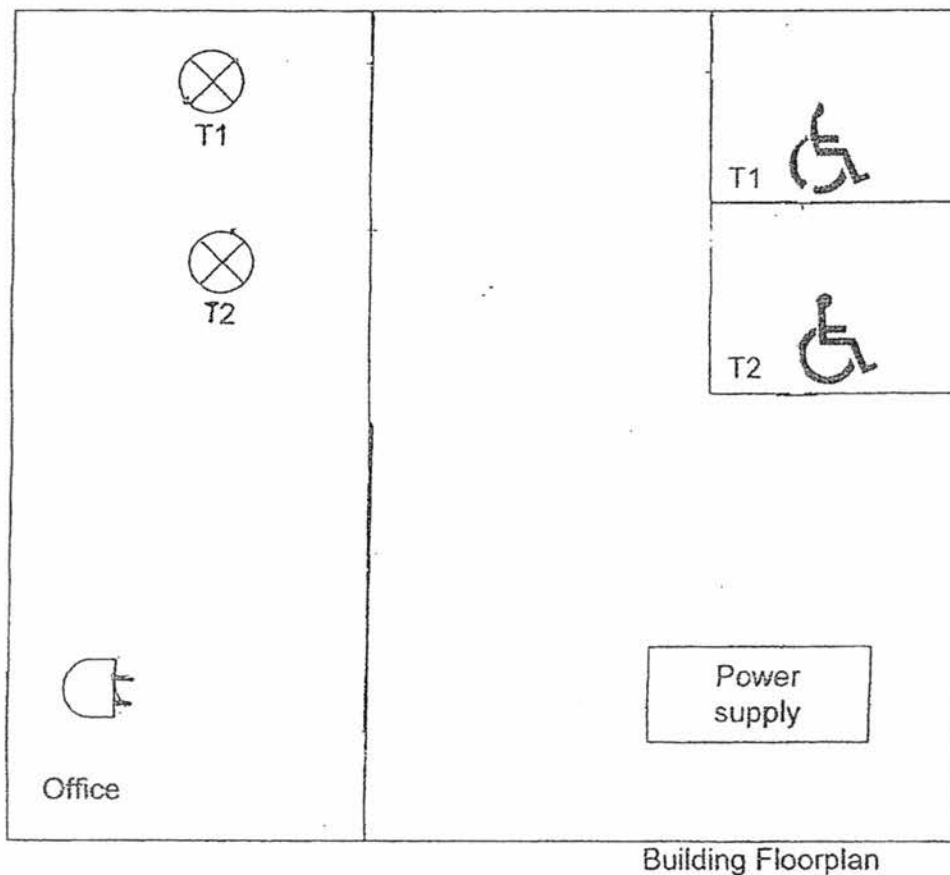
- (a) Give a reason why the toy car continued to move forward from position 2 towards position 3. [1]
- _____
- _____
- (b) Suggest two changes to the experiment to make the toy car move a longer distance in the experiment. [2]
- 1). _____
- 2). _____
- (c) In the diagrams above, **draw and label** a force that is acting on the toy car in position 1. Do **not** state frictional force. [1]

41. People with physical disability can press an **emergency switch** in the toilet for help and a bell will sound in the office of the building. At the same time, a light indicator will turn on showing the toilet (T1 or T2) where help is required.

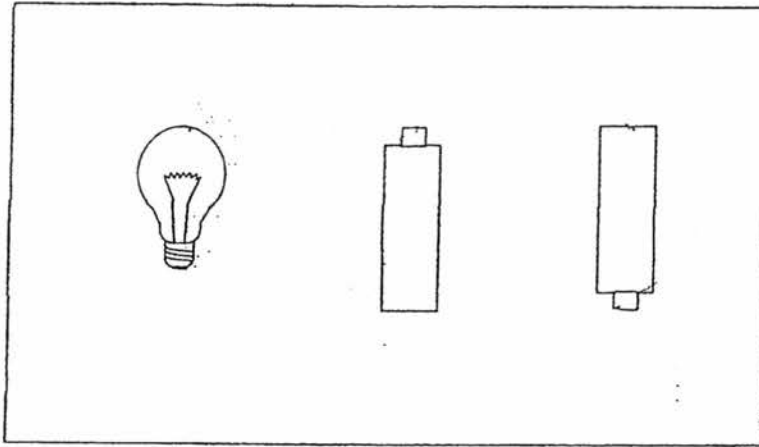
- (a) Draw the circuit diagram in the floorplan below so that the emergency switch can function as stated above.

Use the following symbols in your circuit diagram, connecting them to the power supply provided. [2]

Description	Symbol
Light indicators	 T1  T2
Bell	
Emergency switch	



- (b) In the diagram below, draw wires to connect the bulb and the batteries so that the bulb lights up the **brightest**. [1]



YEAR : 2017
 LEVEL : PRIMARY 6
 SCHOOL : NANYANG PRIMARY
 SUBJECT : SCIENCE
 TERM : CA1

Booklet A

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

Booklet B

- Q29 (a) Substance X : Digestive juices.
 Part C : Small Intestine.
- (b) It is to transport the food for further digestion in Part B.
- (c) It is absorbed into the bloodstream in Part C, the small intestine and transported to all other parts of the body.
- Q30 (a) Photosynthesis
- (b) When D photosynthesized, it took in carbon dioxide from the water and gave out oxygen, thus liquid P reacted to the increase of oxygen present, turning into blue liquid P.
- (c) Organism itself did not photosynthesise. Under light, there is less oxygen.

- Q31 (a) X and Y
- (b) Plant cells have cell walls, which X and Y have, thus they are plant cells.
- (c) In a plant's root.

- Q32 (a) Some of the hot soup evaporated into the air and made contact with the cooler surface of the metal lid, condensing into water droplets.
- (b) Box F would be wetter as the hot buns' water would evaporate and condense into water droplets, while when the hot buns' water in box G start to evaporate into water vapour, some would escape through the holes, thus box F buns are wetter.

- Q33 The black crude oil blocked sunlight and air to enter the sea water, thus when the plant tried to photosynthesize, the plants could not get light nor air, thus could not photosynthesize, not able to make food and soon died to the lack of food.

- Q34 (a) The unlike poles of Magnet 1 and 2 were facing each other. Thus the part of the device inside attracts the part of the device outside and moves it along as Mrs Tan controls the handle.

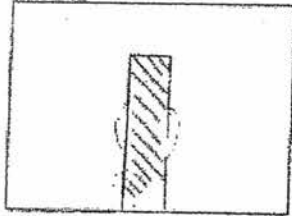
- (b)
- | outside | | inside | |
|---------|---|--------|---|
| N | S | N | S |
| N | S | N | S |

- (c) The magnets had more magnetic force to attract each other as there were more magnets added to the device.

Q35 (a) B. The further the object is to the screen, the larger the shadow that was formed.

(b) It was opaque.

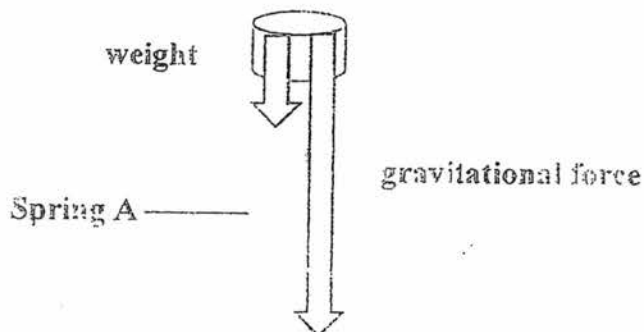
(c)



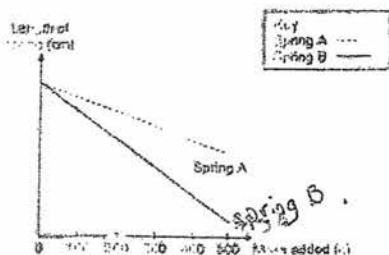
Q36 (a) A did not change in shape when it was placed into the two containers as a solid has a definite shape.

(b) In between the sand, there were tiny gaps that the air in the container occupied, thus when water was added in, the air rushed out of these spaces and the water occupied the space in the gaps.

Q37 (a)

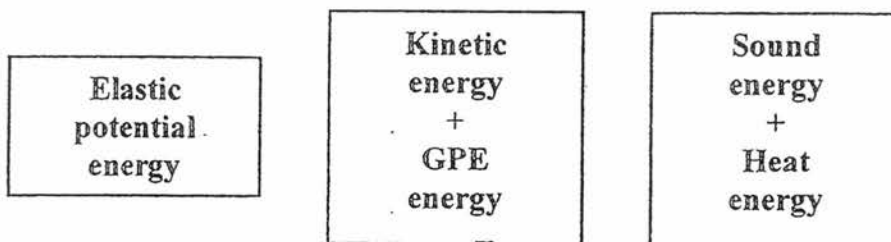


(b)



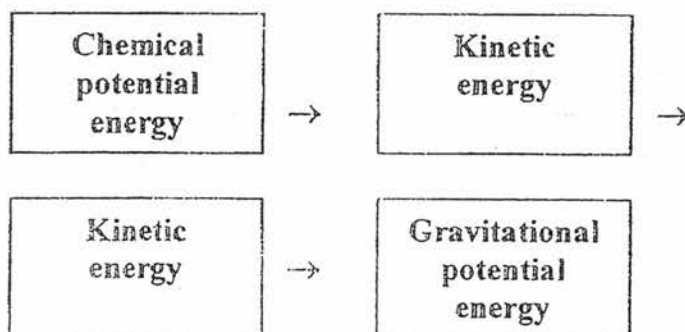
- (c) The more the number of springs used in each set-up, the longer the length of the spring after compression.
- (d) Spring A. A will not be compressed very deep and firm.

Q38 (a)



- (b) The rope was not as elastic as the elastic band, thus contained less elastic potential energy. Hence the stone could not travel as far as when using an elastic band.

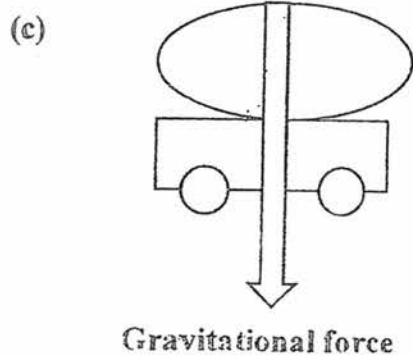
Q39 (a)



- (b) Some kinetic energy was converted to heat energy and sound energy.
- (c) X : Gravitational Potential Energy
Y : Kinetic Energy

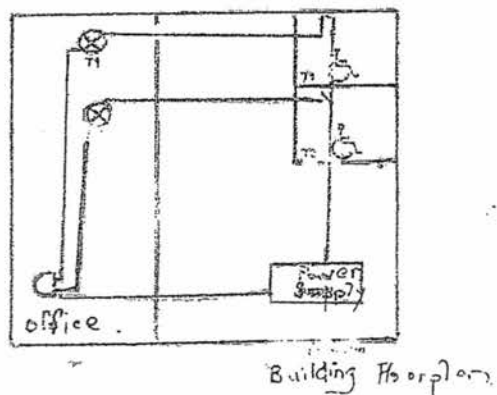
Q40 (a) There was still kinetic energy in the car.

- (b) 1) Change to a smoother surface.
2) Add more air into the balloon.

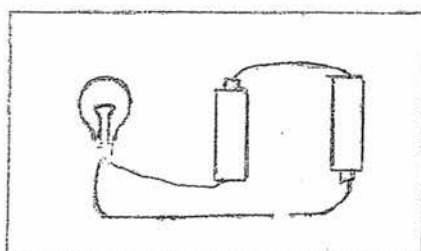


Position 1

Q41 (a)



(b)



End