

RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT (2) 2015

Name : _____ Index No: _____ Class: P4 _____

27 October 2015

SCIENCE

Att: 1 h 30 min

Section A	50
Section B	40
Your score out of 90	
Parent's signature	

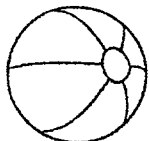
SECTION A (25 x 2 marks)

For each question from 1 to 25, four options are given.

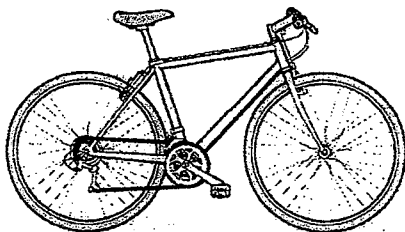
One of them is the correct answer. Make your choice (1, 2, 3 or 4).

Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

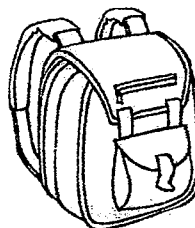
1. Which one of the following is a living thing?



(1)



(2)



(3)

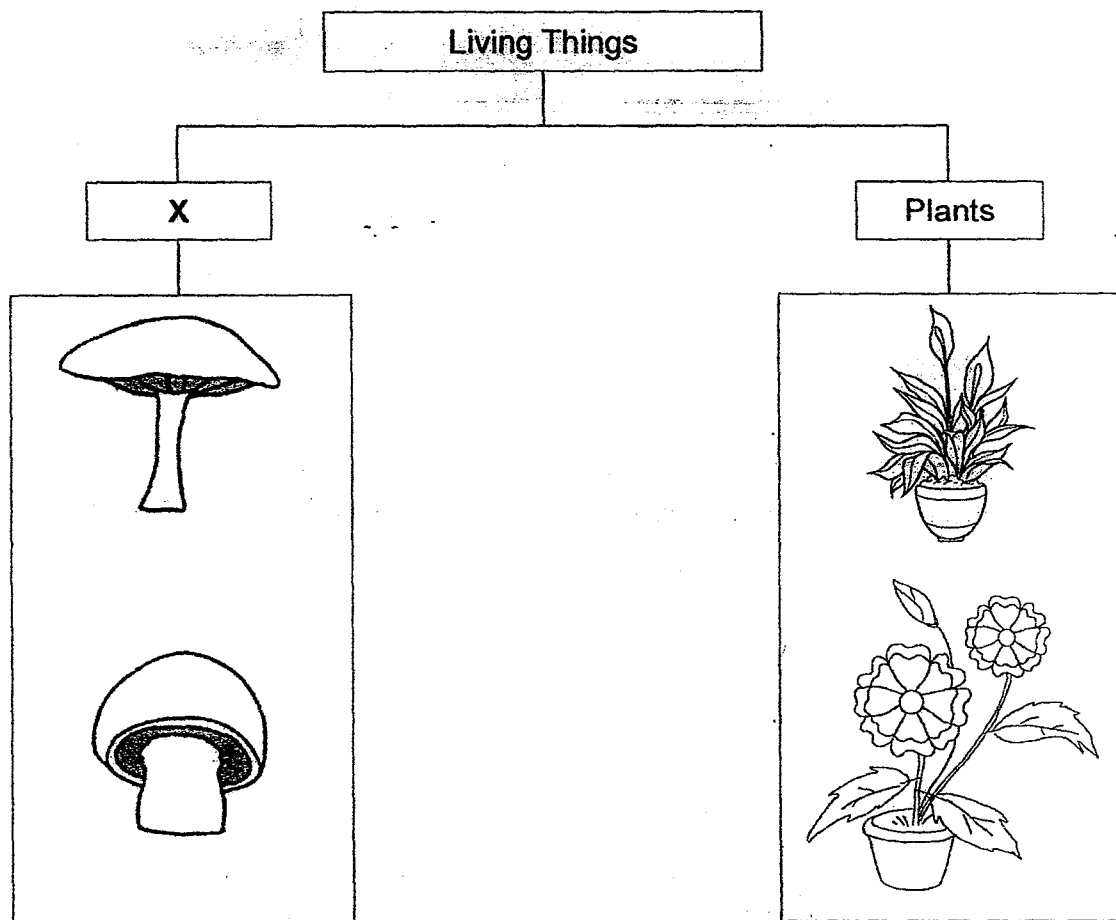


(4)

2. Which statement is true about most mammals?

- (1) They can swim.
- (2) They have wings.
- (3) They produce milk.
- (4) They have four legs.

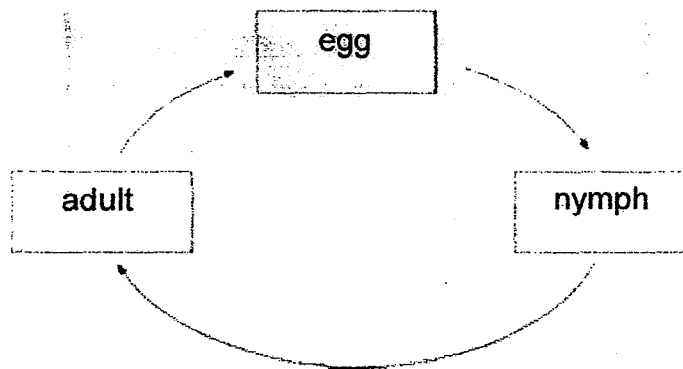
3. The table below shows how some living things can be grouped.



Which one of the following is the most suitable heading for group X?

- (1) fish
- (2) fungi
- (3) insects
- (4) bacteria

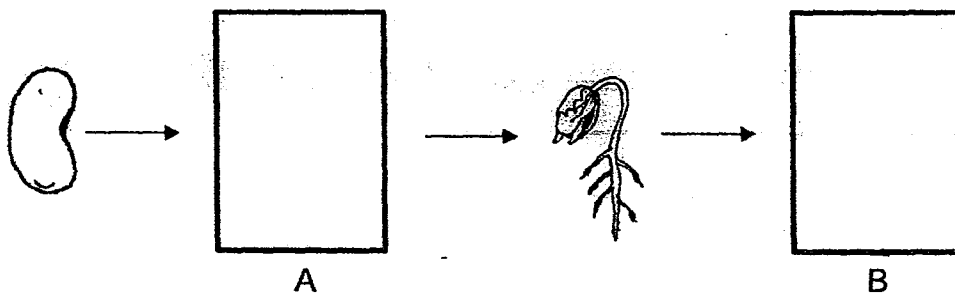
4. The diagram below shows the life cycle of an animal.



Which animal is likely to have the life cycle as shown above?

- (1) chicken
 - (2) butterfly
 - (3) mosquito
 - (4) cockroach
5. In which part of the digestive system is food completely digested?
- (1) gullet
 - (2) stomach
 - (3) small intestine
 - (4) large intestine

6. The diagram below shows the growth of a young plant with two missing stages A and B.

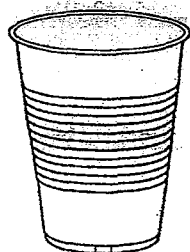


Which one of the following shows the correct stages for A and B?

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

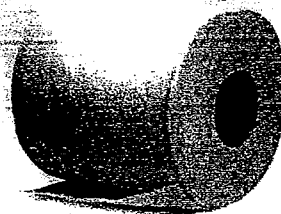
7. Which of the following objects is **not** made of waterproof material?

(1)



plastic cup

(2)



toilet paper

(3)



metal spoon

(4)

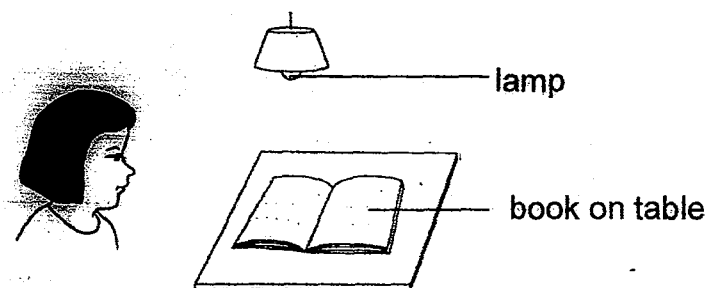


rubber boots

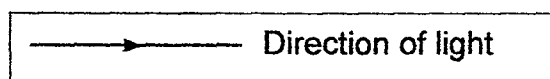
8. Which one of the following properties is true for both oxygen and a ruler?

- (1) They can be seen.
- (2) They take up space.
- (3) They have fixed shapes.
- (4) They have fixed volumes

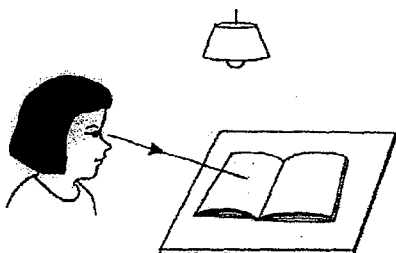
9. Look at the picture below.



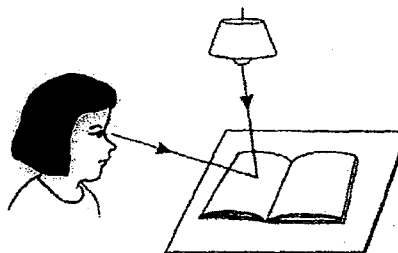
Which one of the following explains why Sue can see the book on the table?



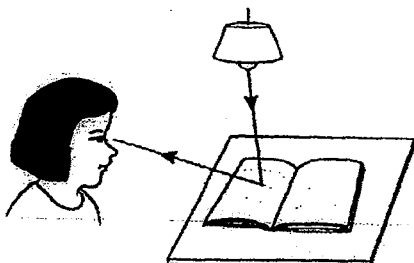
(1)



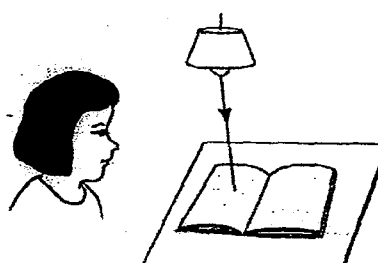
(2)



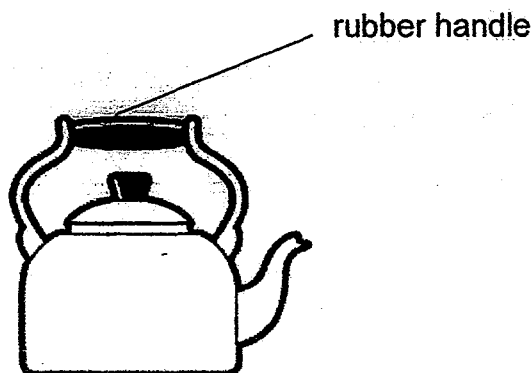
(3)



(4)



10. Hashim boiled some water in the pot shown below.



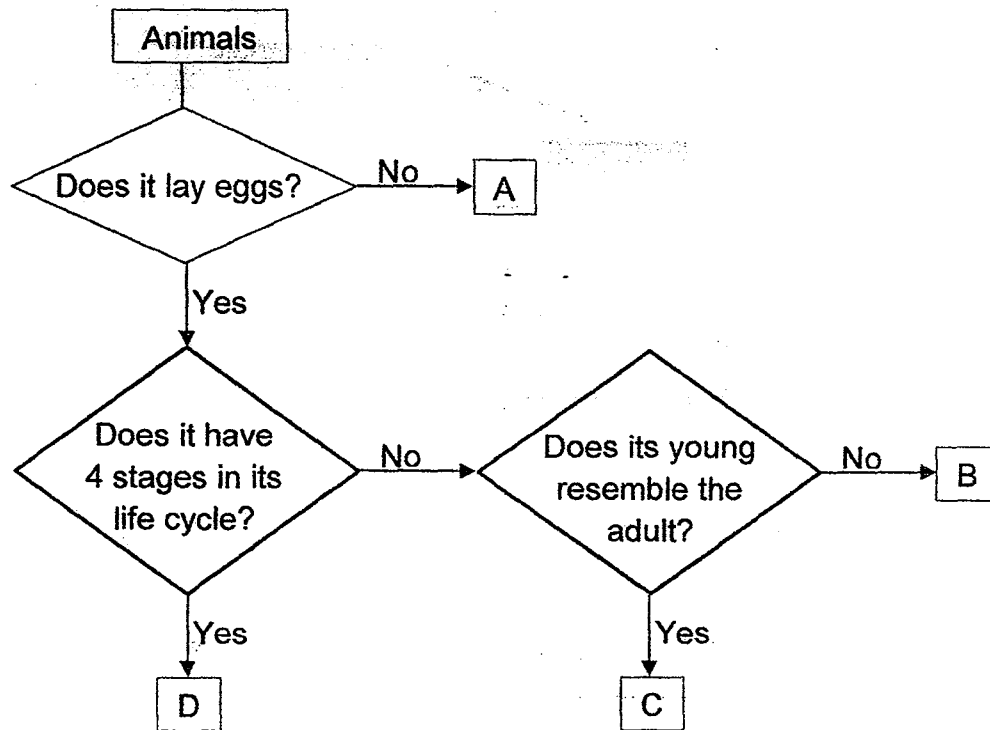
He is able to hold the pot of boiling water using the rubber handle. This is because rubber is a _____.

- (1) light material
- (2) flexible material
- (3) good conductor of heat
- (4) poor conductor of heat

11. Which one of the following statements about seeds is true?

- (1) Seeds can germinate without air.
- (2) Seeds need fertiliser to germinate.
- (3) Seeds need moisture to germinate.
- (4) Seeds which are exposed to sunlight will not germinate.

12. The flow chart below shows how animals A, B, C and D are grouped.



Based on the information above, which one of these animals will represent a frog?

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

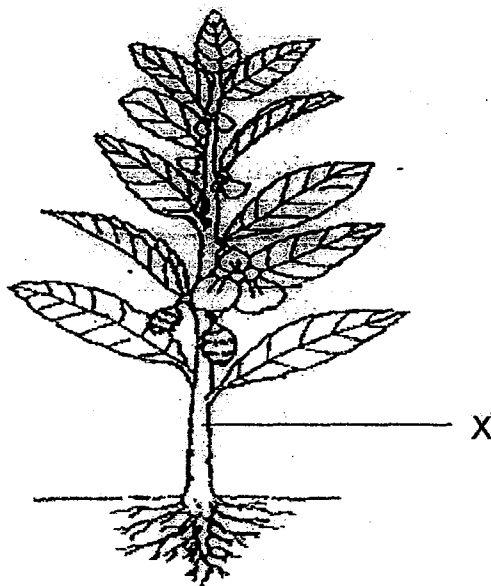
13. Kai Jin wanted to conduct an experiment to find out if the change in the amount of digestive juice would affect the digestion of cooked rice. He prepared the following set-ups for this experiment.

Dish	Amount of digestive juice (ml)	Amount of cooked rice (g)	Temperature of cooked rice (°C)	Duration of experiment (min)
A	5	20	28	20
B	5	40	28	20
C	10	20	28	20
D	10	40	25	30

Which of these set-ups should Kai Jin use to conduct a fair test for his experiment?

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

14. The diagram below shows a plant.

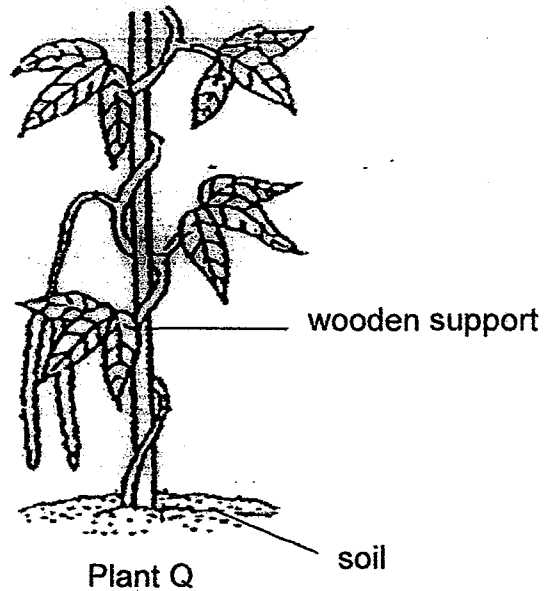


Which of the following statements state the function(s) of the part labelled X?

A	It makes food for the plant.
B	It supports the leaves and branches.
C	It takes in water and mineral salts from the soil.

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

15. The diagram below shows Plant Q

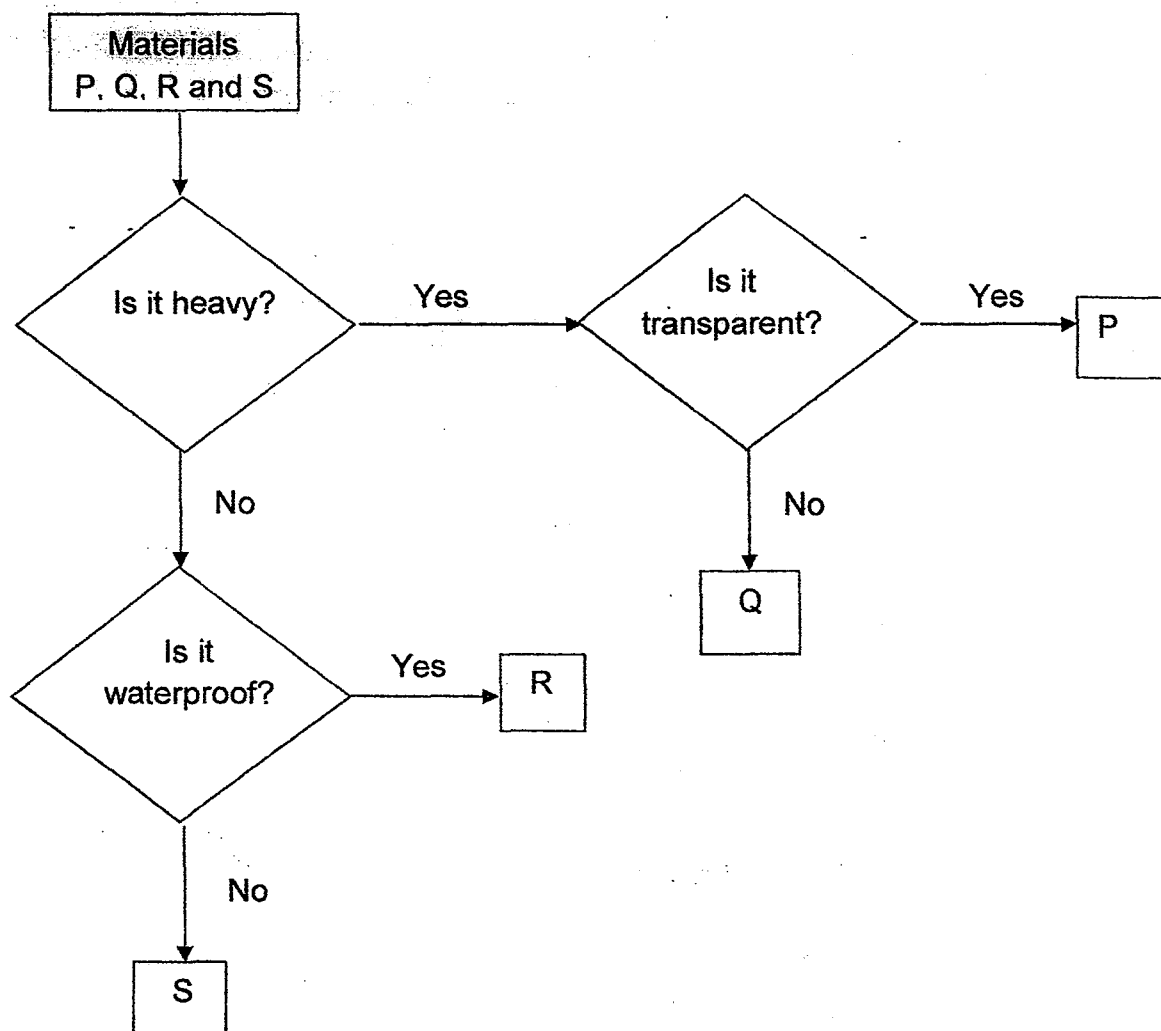


Based on the above observation, which of the following statement(s) about Plant Q is/are correct?

A	Plant Q has a weak stem.
B	Plant Q is a non-flowering plant.
C	Plant Q uses its leaves to cling onto the wooden support to reach for sunlight.

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

16. The flow chart below shows how 4 materials, P, Q, R and S, are being grouped.

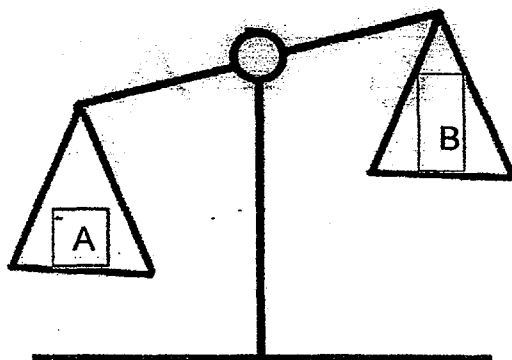


Roy is going for a hike. He wants to wear a pair of boots which is light and keeps his feet dry on rainy days.

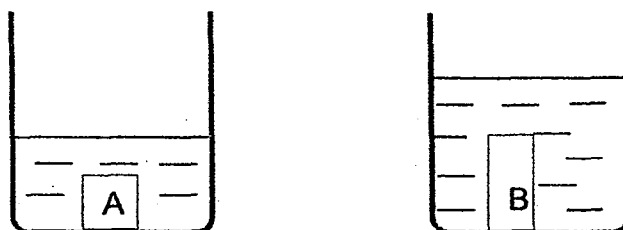
Which material is best suited to make his boots?

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

17. Two cubes A and B were placed on a balance as shown below.



Next, the cubes were put into two beakers containing the same amount of water as shown below.



Based on the observations above, which boys made the correct observations.

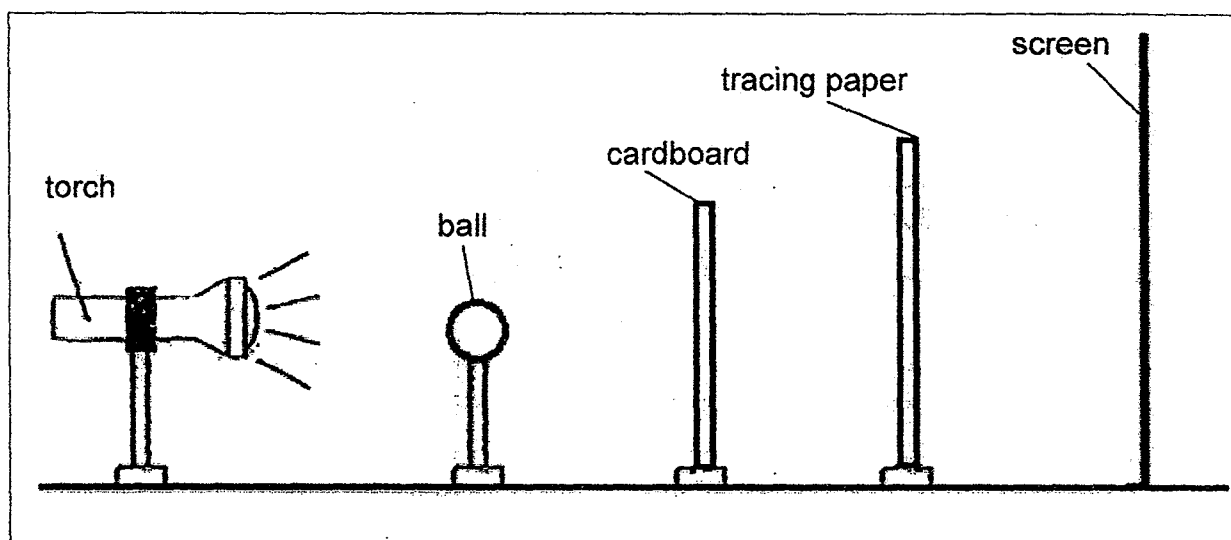
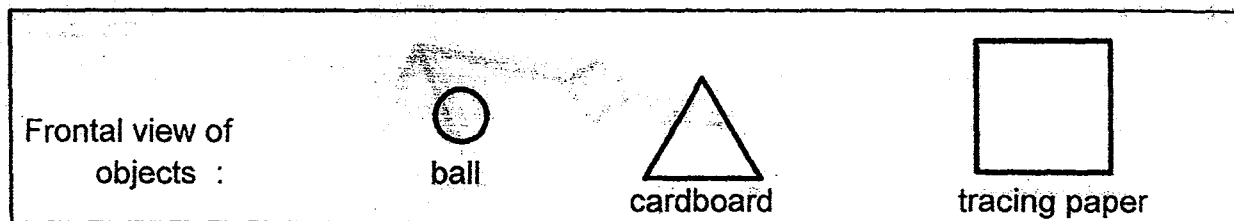
Andy : Cube A has greater mass than Cube B

Bob : Cube B occupied more space than Cube A




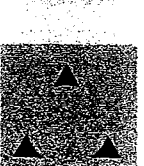
Calvin : The greater the mass of the cube, the greater the amount of space it occupies.

- (1) Andy and Bob only
- (2) Bob and Calvin only
- (3) Andy and Calvin only
- (4) Andy, Bob and Calvin

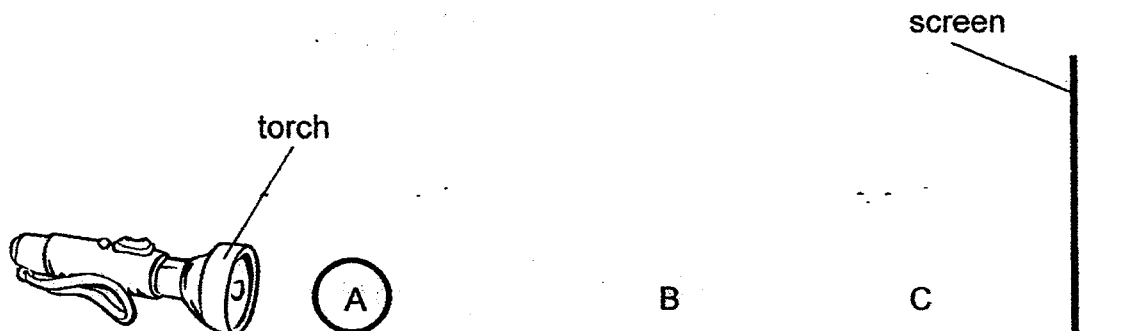
- 18 Jamie placed a rubber ball, a triangle cardboard and a square tracing paper as shown below between a lighted torch and a screen as shown below.



Which one of the following most likely shows the shadow cast on the screen?

- (1) 
- (2) 
- (3) 
- (4) 

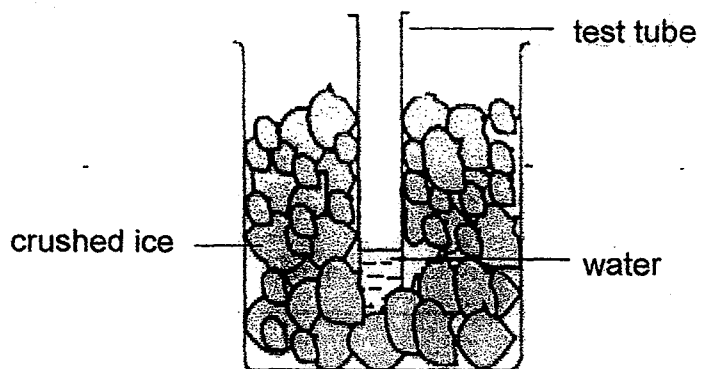
19. A ball was placed on position A as shown below. The torch was then turned on and a shadow was cast on the screen. The ball was then moved to positions B and C.



Which one of the following shows the shadow cast by the ball at the different positions?

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

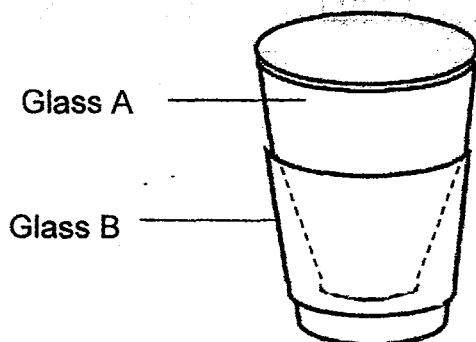
20. Minah put a test tube of water with a temperature of 60°C in a beaker of crushed ice in the living room as shown below.



Which one of the following did Minah identify correctly?

	water in test tube	crushed ice
(1)	lost heat	lost heat
(2)	lost heat	gained heat
(3)	gained heat	lost heat
(4)	gained heat	gained heat

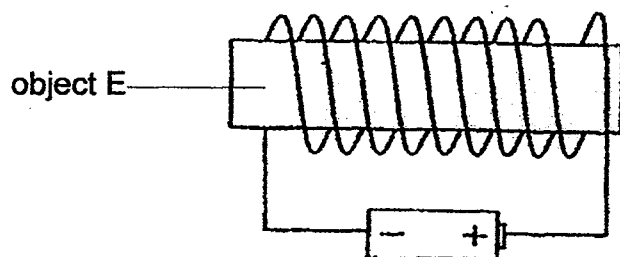
21. The diagram below shows two glasses, A and B, which are stuck together.



Bill tries to separate the two glasses but finds it difficult to do so.
What should Bill do in order to separate the two glasses?

- (1) Pour iced water into Glass A and put Glass B in iced water.
- (2) Pour iced water into Glass A and put Glass B in warm water.
- (3) Pour warm water into Glass A and put Glass B in iced water.
- (4) Pour warm water into Glass A and put Glass B in warm water.

22. The diagram below shows an electromagnet.



Which of these object could replace object E to make into an electromagnet?

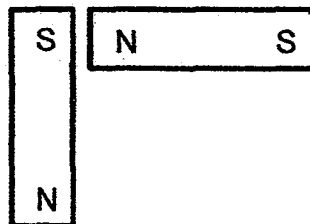
- (1) nickel rod
- (2) plastic ruler
- (3) rubber eraser
- (4) wooden chopstick

23. In which one of the following will the two magnets push each other away?

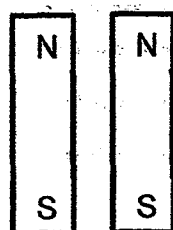
(1)



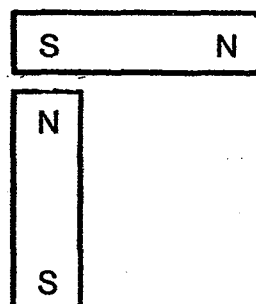
(2)



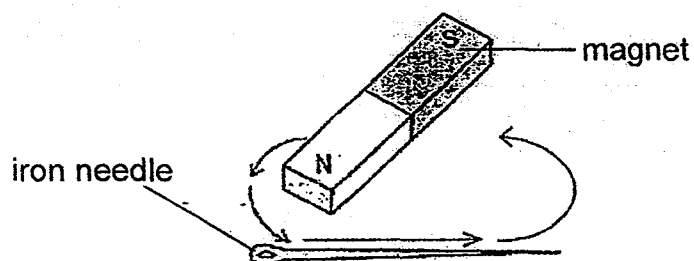
(3)



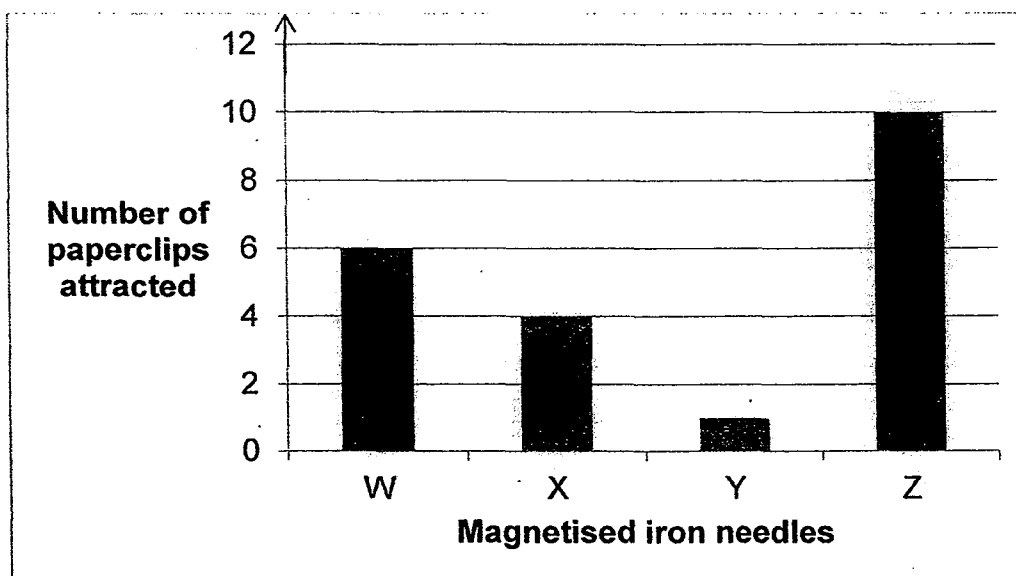
(4)



24. Four identical iron needles, W, X, Y and Z, were made into temporary magnets using the stroke method as shown below.



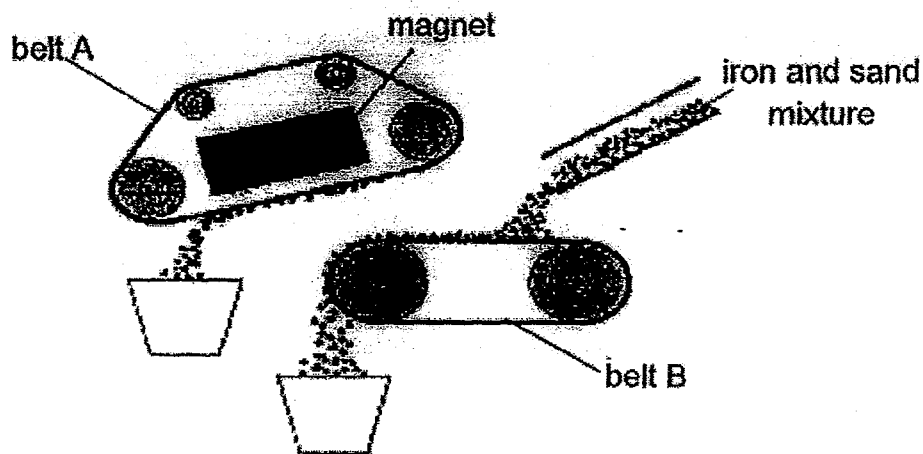
The graph below shows the number of paper clips attracted by each of the magnet.



Which one of the following magnetised iron needles would have been stroked the most number of times?

- (1) W
- (2) X
- (3) Y
- (4) Z

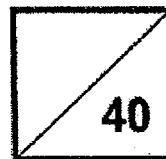
25. The diagram below shows a machine used to separate iron from sand.



Mr Tan bought the machine above to separate iron from sand.
He wanted to separate more mixture in a shorter period of time.
What can Mr Tan do to separate the mixture in a shorter period of time?

- (1) Use a bigger magnet.
- (2) Move belt A nearer to belt B.
- (3) Pour the mixture nearer to belt B.
- (4) Move belt B further away from belt A.

Name: _____ Index No: _____ Class : P4 _____

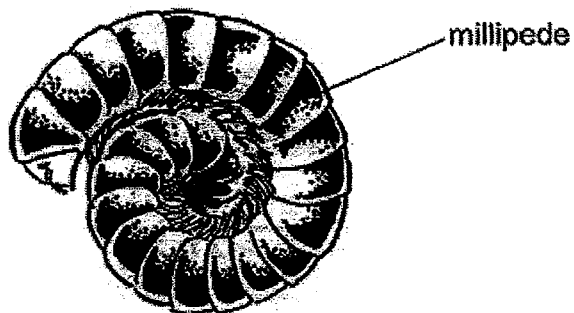


SECTION B (40 marks)

For questions 26 to 39, write your answers clearly in the spaces provided.

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

26.



(a) The millipede needs food, air and _____ to stay alive. [1]

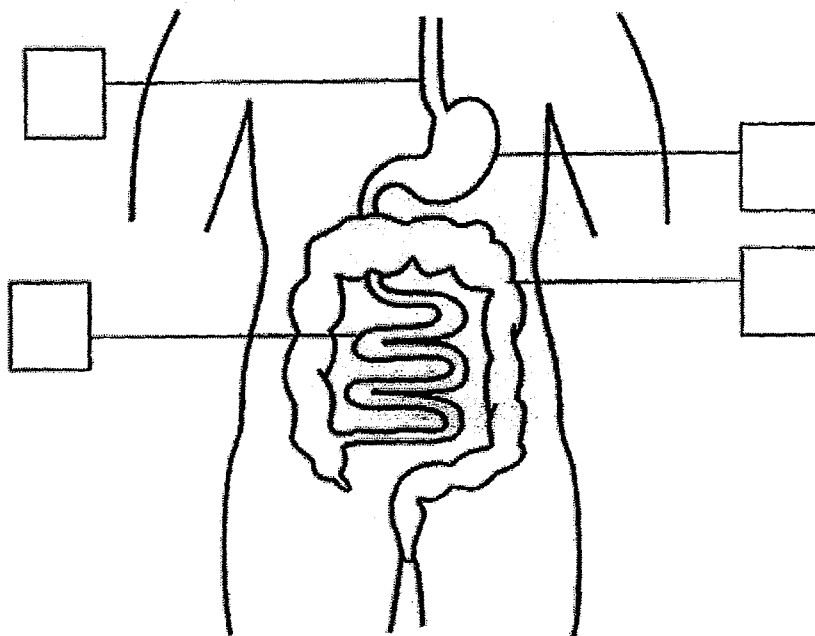
(b) The millipede rolls its body as shown above when touched. [1]

This shows that it can _____

Score	2
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27. (a) The diagram shows part of the human digestive system.
Tick (✓) one box to show where the stomach is.

[1]



[1]

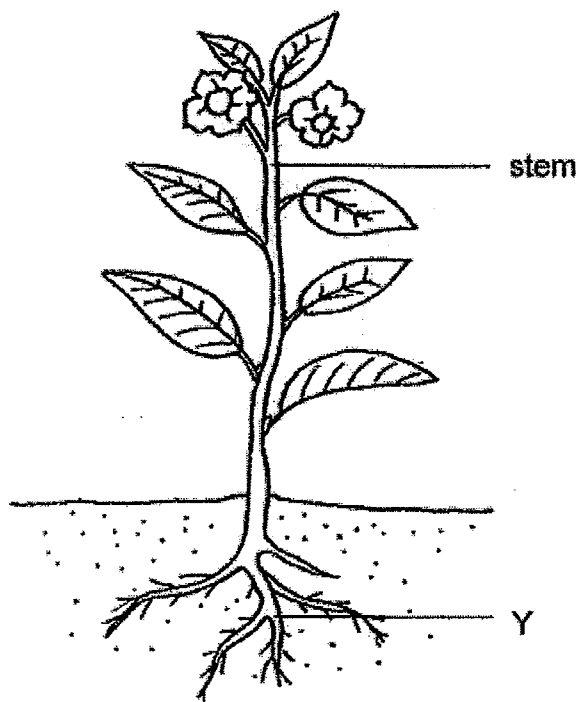
- (b) Fill in the blank using the following helping words.

large intestine	gullet	small intestine	mouth
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Food from the stomach is next passed on to the _____.

Score	2
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28. The diagram below shows a plant.



- (a) (i) Name plant part Y.

[1]

Y : _____

- (ii) One substance that the stem of plant transports from the leaves to the other parts of the plant is _____.

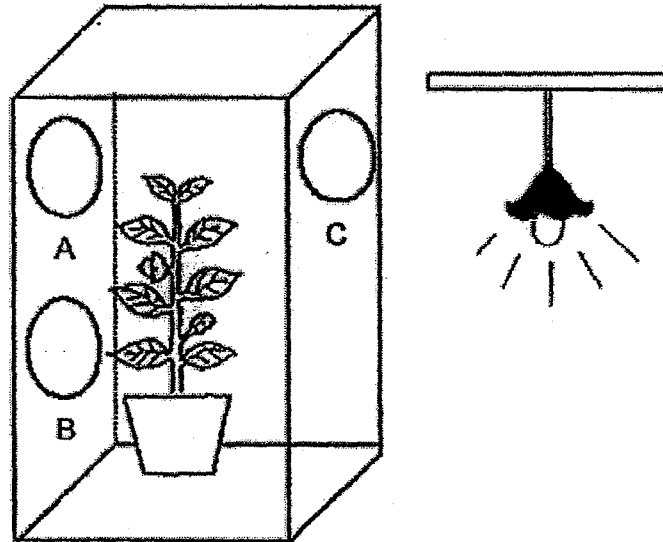
[1]

Continue on Pg 24

Score	2
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Continue from Pg 23

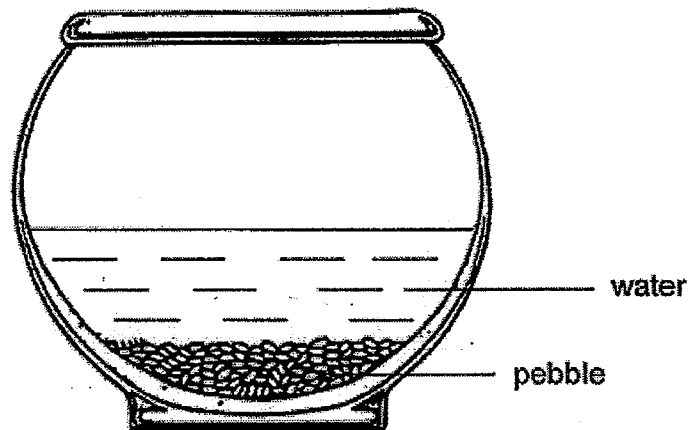
28. (b) Three holes were cut out from a thick cardboard box and a potted plant was placed in it. The box was placed in a dark room. A lamp was lit as shown in the diagram below.



- (i) The plant was watered every day. After one week, which one of the holes, A, B or C, would the plant most likely grow towards? Explain your answer clearly. [1]

Score	1
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29. The diagram below shows a tank with some water and pebbles.

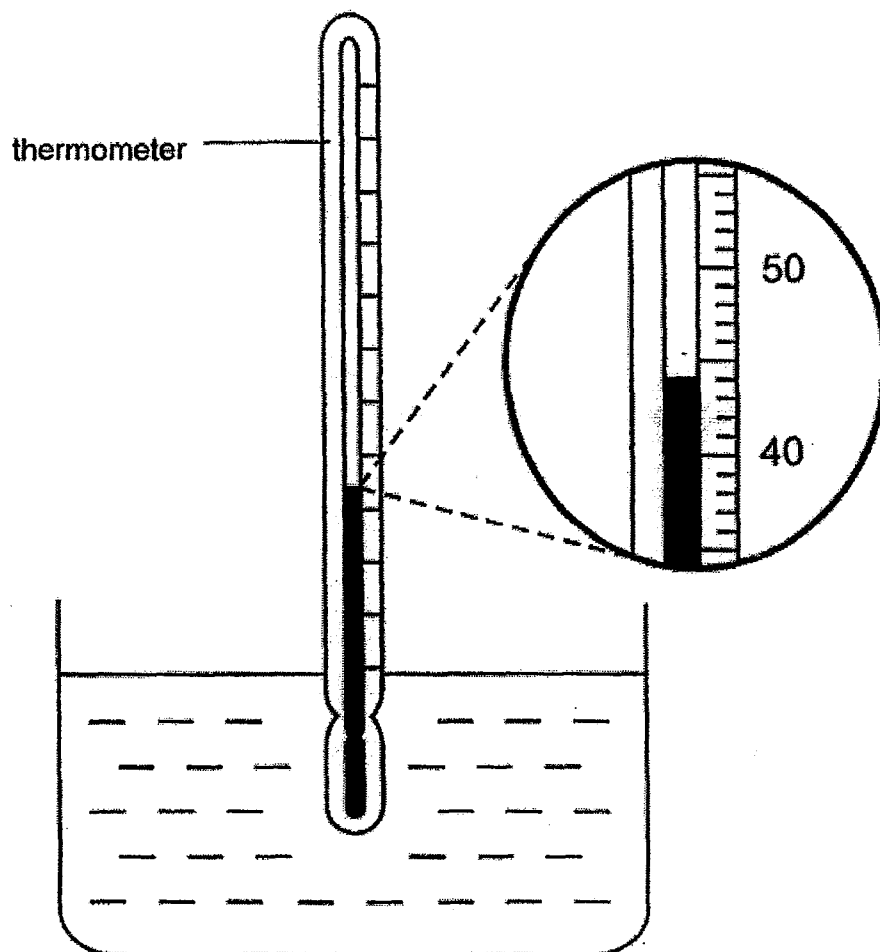


Complete the sentences to state if the parts are solid, liquid or gas.

- (a) The pebble is a _____. [1]
- (b) Water is a _____. [1]

Score	2
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30. Jane placed a thermometer in a beaker of water.



(a) The thermometer is used to measure the _____ of water. [1]

(b) What is the temperature of the water in the glass? [1]

_____ °C

Score	<div></div>
	2

31. Ann planted a seed and measured the mass of the seed leaf over a period of 8 days. She recorded her findings in the table below.

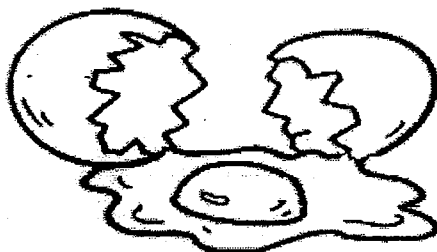
Day	Mass of seed leaf (g)	Height of seedling (cm)
0	2	0
2	1.7	1
3	1.4	1.5
6		4
8	0.5	5.8

- (a) Name all the conditions needed for a seed to germinate. [1]

- (b) In the table above, write the mass of the seed leaf likely to be observed on Day 6. [1]

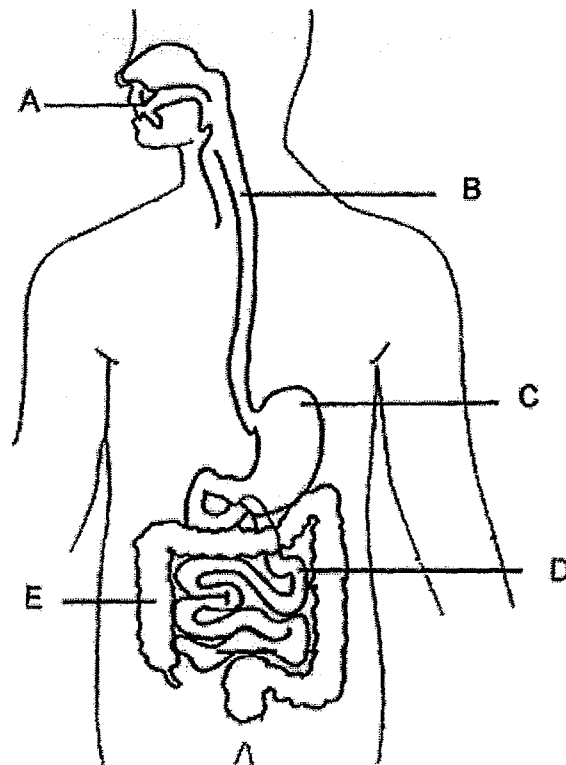
- (c) Based on the Amy's findings, what can she conclude about the mass of the seed leaf in relation to the height of the seedling? [1]

- (d) The diagram below shows an egg. Name and label the part of the egg that has a similar function to the seed leaf. [1]



Score	4
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32. The diagram below shows the digestive system of a human body.

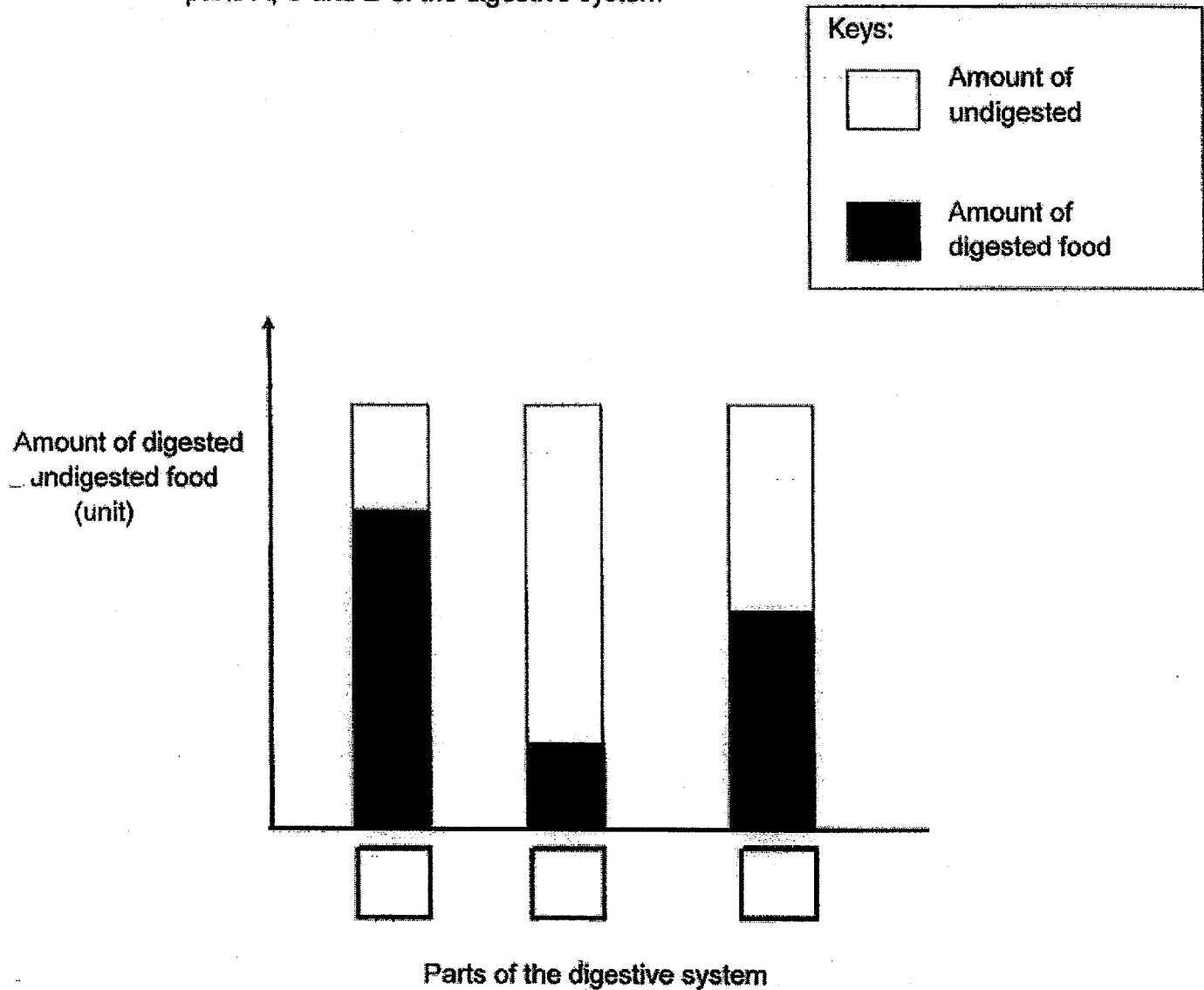


- (a) In which part, A, B, C, D or E of the digestive system does digestion first begin? [1]

- (b) What is the substance found in the part mentioned in (a) that helps to break down the food in the first stage of digestion? [1]

Continue from Pg 28

- (c) The graph below shows the amount of digested and undigested food in the parts A, C and D of the digestive system

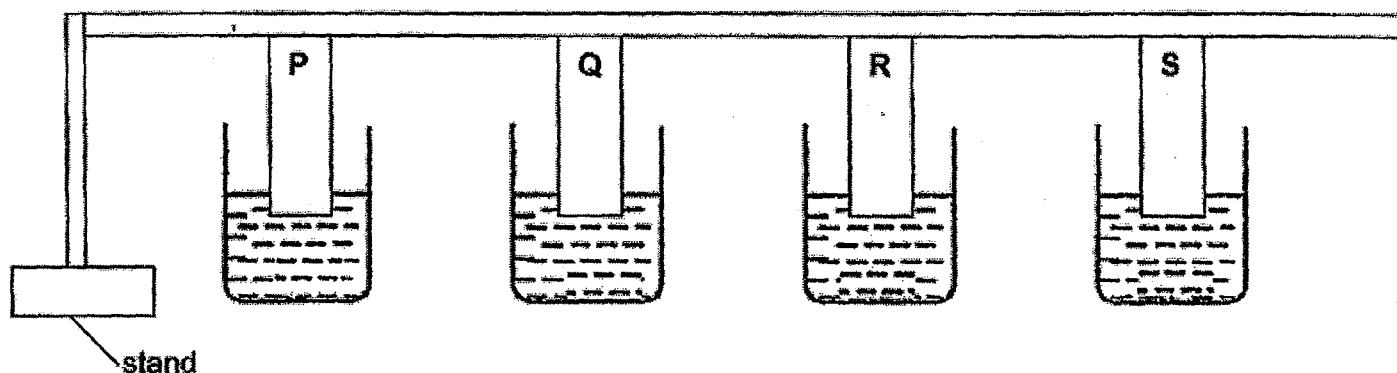


Write the letters, A, C and D in the respective boxes above.

[1]

Score	1
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33. Linda wanted to find out how absorbent the four different strips of material, P, Q, R and S, were. She dipped the strips into four beakers each containing 300ml of water as shown below.



Linda left the beakers on the table in the living room. After half an hour, Linda removed the strips and the amount of water left in each beaker was recorded in the table below.

Materials	P	Q	R	S
Amount of water left in the container (ml)	230	125	280	170

- (a) Based on the readings above, arrange the strips in order, starting with the strip which is the most absorbent. [1]

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most absorbent

least absorbent

- (b) Which material is most suited to make a bath towel? Explain your answer clearly. [1]

Continue from Pg 30

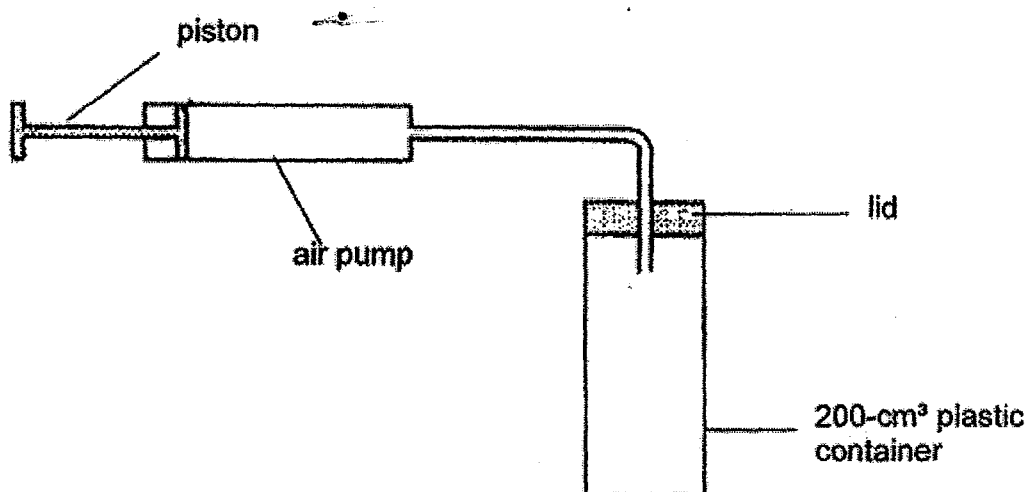
- (c) Tick (✓) the variable(s) which must be kept the same to ensure that the experiment conducted is a fair test.

[2]

	Variables	Tick (✓)
(i)	Amount of water in each beaker	
(ii)	Location where the beakers are placed	
(iii)	Materials used to make the four strips of material	
(iv)	Duration for the water to be absorbed by each strip of material	

Score	
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Gary attached an air pump into a 200-cm³ plastic container as shown below.

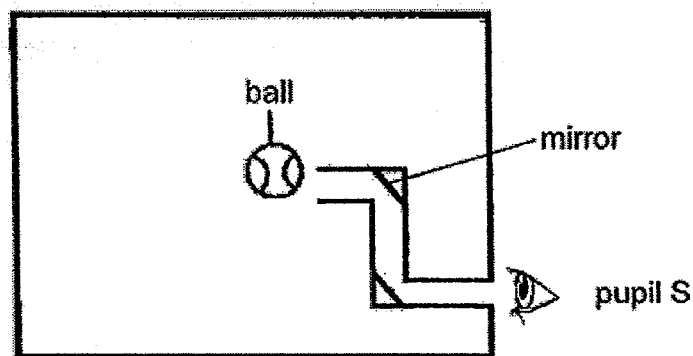


- (a) Gary pumped in another 100 cm³ of air into the plastic container. What is the volume of air in the container now? Explain your answer clearly. [2]

- (b) Gary filled the plastic container with 200cm³ of water. Then he tried to pump in 100 cm³ of air into the plastic container. Would he be able to do so? Explain your answer clearly. [1]

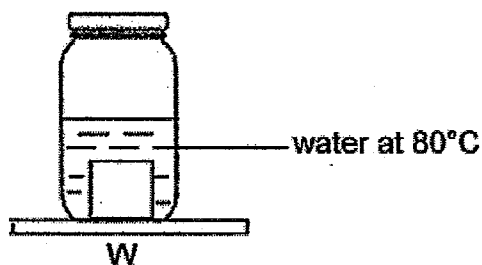
Score	<div style="border: 1px solid black; width: 100px; height: 100px; position: relative;"><div style="position: absolute; top: 0; right: 0; bottom: 0; left: 0; border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; transform: rotate(45deg); transform-origin: center;"></div></div>
	3

35. A ball was placed in the middle of a metal box with tubes. Two mirrors were also placed at the corners of the tube as shown below.



- (a) In the diagram above, draw the direction of the path of light with lines and arrows to show how pupil S is able to see the ball. [1]
- (b) Explain how the mirrors helped pupil S to see the ball. [2]

36. Ali filled a jar with some water with a temperature of 80°C and placed an ice cube into it as shown in the diagram below.



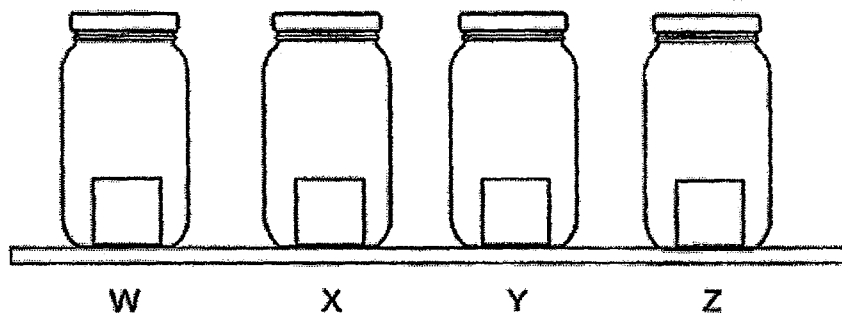
- (a) What will be the temperature of the water after 2 minutes? Tick (\checkmark) the correct box. [1]

Temperature of water	Tick(\checkmark)
more than 80°C	
80°C	
less than 80°C	

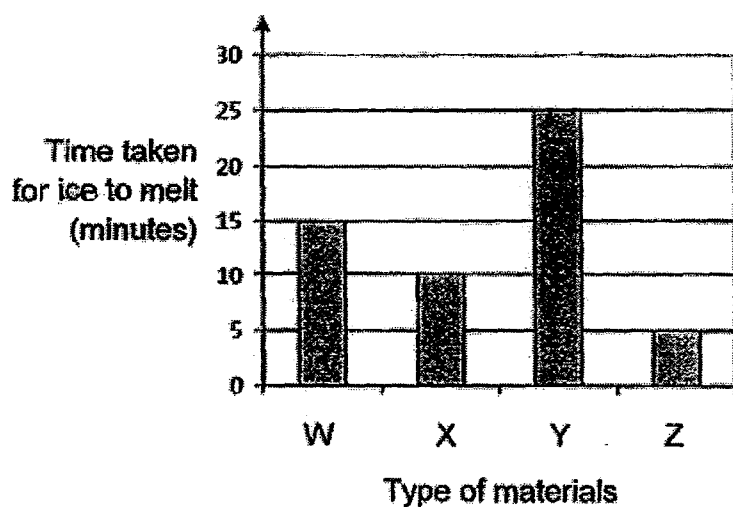
Score	4
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Continue from Pg 33

All placed 4 similar ice cubes in four jars, W, X, Y and Z. The jars are of similar thickness and size but made of different materials. He left the jars on a table in a living room with a constant room temperature as shown below.



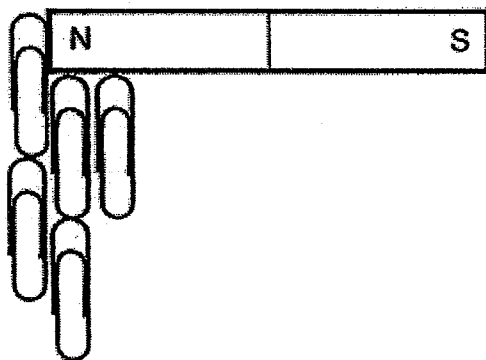
All recorded the time taken for the ice to melt completely and plotted the readings in the graph below.



- (b) Which material is most suitable to make into an ice cream container so that the ice cream will not melt so quickly? Explain your answer clearly. [2]

Score	2
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37. John placed a magnet 30cm above a tray of paper clips and it was observed that 5 paper clips were attracted to the magnet as shown in the diagram below.










He repeated the experiment by heating the N-pole of the same magnet for 5 minutes and then placed it 30 cm above a tray of paper clips. After that, he observed the number of paper clips attracted to magnet P.

Would John observe more than 5, less than 5 or same number of paper clips attracted to magnet P? Explain your answer clearly.

[2]

Score	2
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38. Four bars, A, B, C and D were brought close to each other to see how they interacted with one another. The table below shows the interactions between the rods.

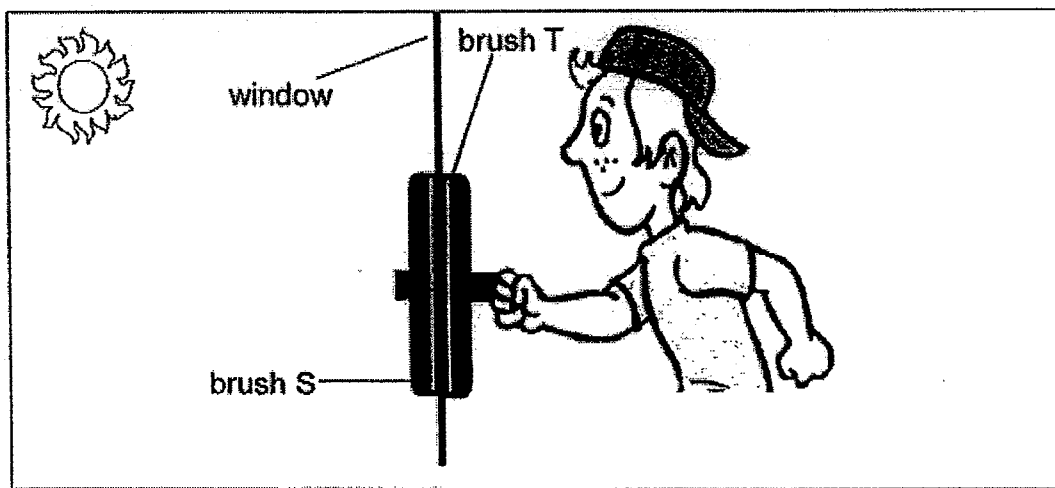
Rods		Observation
		Move towards each other
		Move away from each other
		No reaction
		No reaction

- (a) Which of the rod(s) is/are definitely magnet(s)? Explain your answer clearly. [2]

- (b) If rod C was made of silver, what would you observe when A and C are brought near each other? [1]

Score	
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- 39 The diagram below shows a magnetic window cleaner.



The magnetic window cleaner consists of two brushes, S and T, with a magnet attached to each of them, which can be used to clean both sides of a window at the same time. When brush T is moved, brush S would move in the same direction as brush T.

- (a) Explain clearly why was brush S able to stay on the window instead of falling off? [2]

- (b) Jack tried to clean his steel cupboard door using the cleaner above. He placed brush T on the outside of the steel cupboard and brush S on the inside. When Jack moved brush T, he noticed that brush S did not move.

Explain why brush S did not move with brush T.

[2]

EXAM PAPER 2015

SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL

SUBJECT : P4 SCIENCE

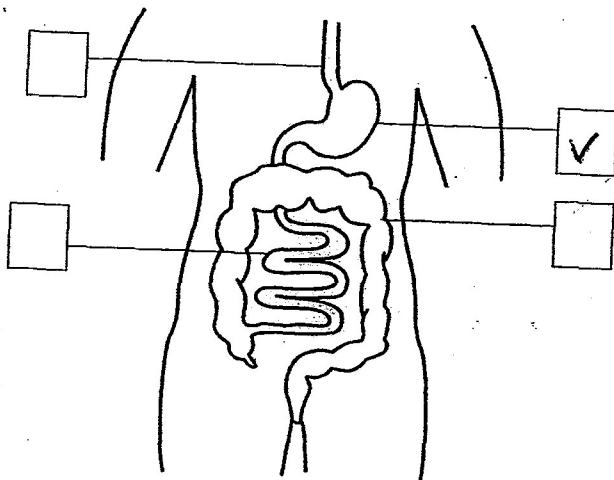
TERM : SA2

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

26)a)water

b)respond to the changes

27)



28)a)small intestine 28)i)roots ii)food

b) hole C. The light came from hole C, the plant needed the light to make food. Hence the plant grew towards hold C.

29)a) solid b)liquid 30)a) temperature b)44

31) a)There has to be water,oxygen ans warmth. b)0.9

c)The taller the seeding grows, the mass of the seeds leafs decrease.

d) egg yolk. 32)a)A b) digestive juices

32)c) D , A , C 33)a) Q , S , P , R

33)b) Q . It absorbed the most water since a bath towel is supposed to dry the user, Q is the most suitable to make the bath towel.

c) i, ii ,iv 34)a) 200cm³. Air cannot be compressed.

b) No. Water cannot be compressed.

35)a)

b) The mirror in the box reflects the light from the ball into pupils's eyes.

36)a) less than 80^{oc}.

36)b) Y is the poorest conductor of heat and will reduce most heat gain by the ice cream.

37) Magnet P attracted less than 5 paper clips as heating weakens the magnetism of the magnet.

38)a) A and D. Only magnets repel when their like poles are facing each other .

b) There would be no reaction as silver is not a magnetic material.

39)a) Magnetic force can pass through the window as the window is made of a non-magnetic material.

b) steel is a magnetic material the magnetism cannot pass through the steel cupboard, the magnet attached to brush T attracted the steel cupboard.

