

**CATHOLIC HIGH SCHOOL
SEMESTRAL ASSESSMENT 1
2013
PRIMARY FIVE**

SCIENCE

BOOKLET A

Name: _____ ()

Class: Primary 5 _____

Date: 22 May 2013

30 questions

60 marks

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

INSTRUCTIONS TO CANDIDATES

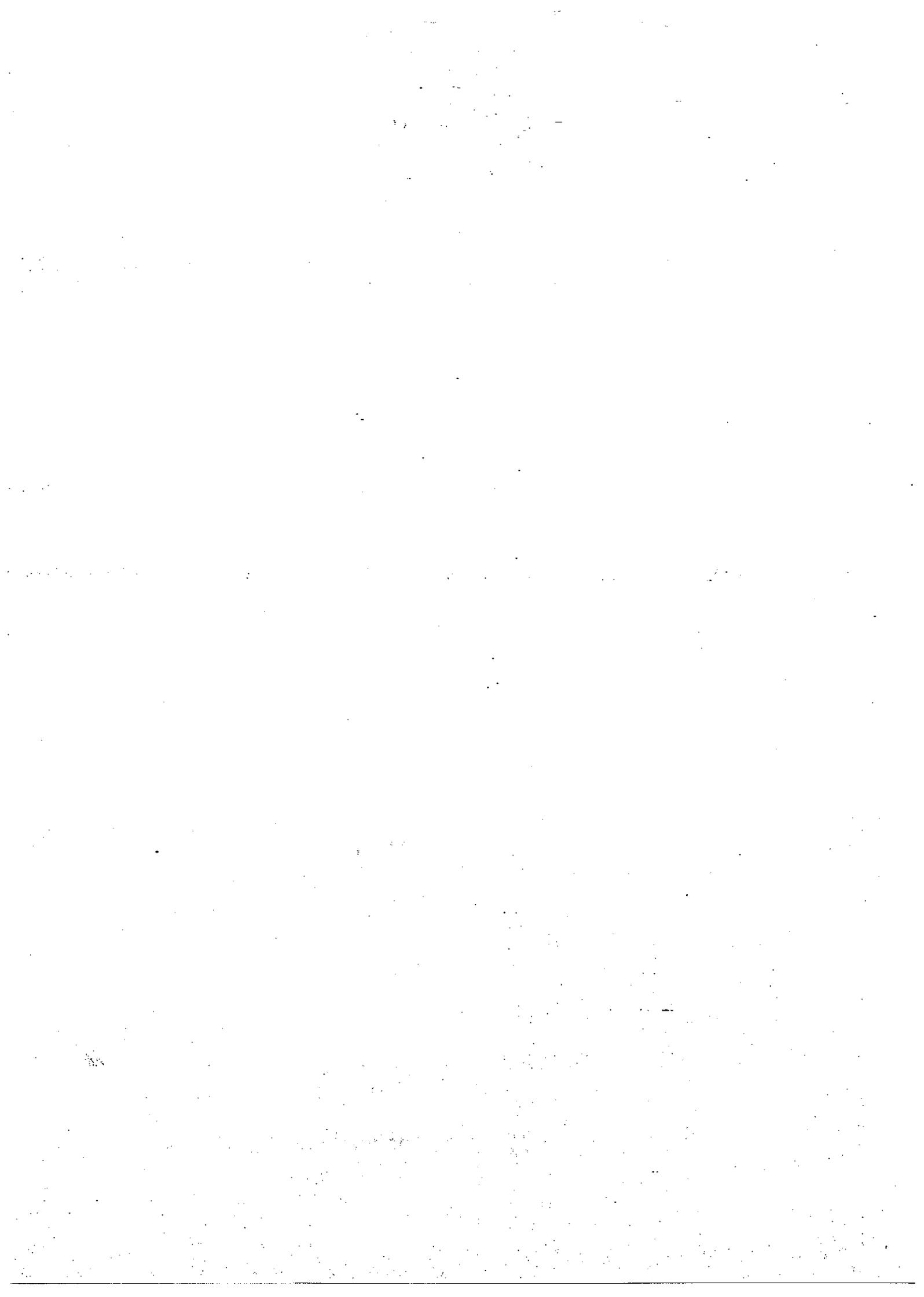
Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Shade your answers in the Optical Answer Sheet (OAS) provided.

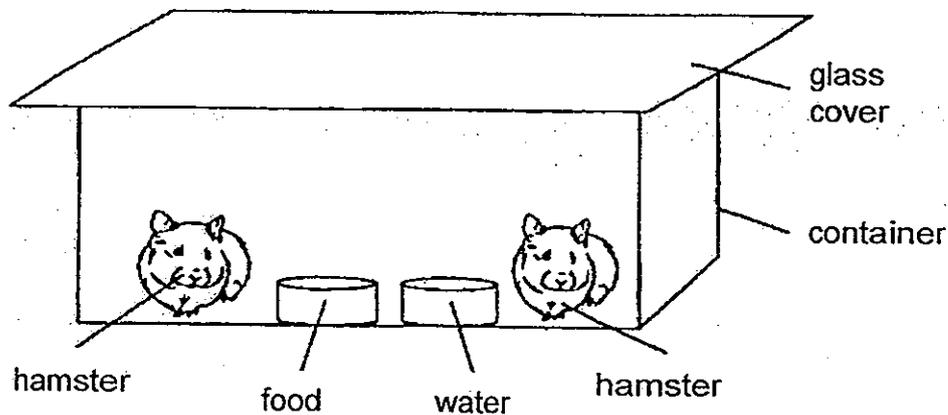
This booklet consists of 17 printed pages, excluding cover page.



Booklet A (30 × 2 marks)

For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet. (60 marks)

1. The diagram below shows two hamsters in an enclosed container.



The two hamsters were found dead twenty-four hours later. Which one of the following was the most likely cause of death for the two hamsters? There was insufficient _____

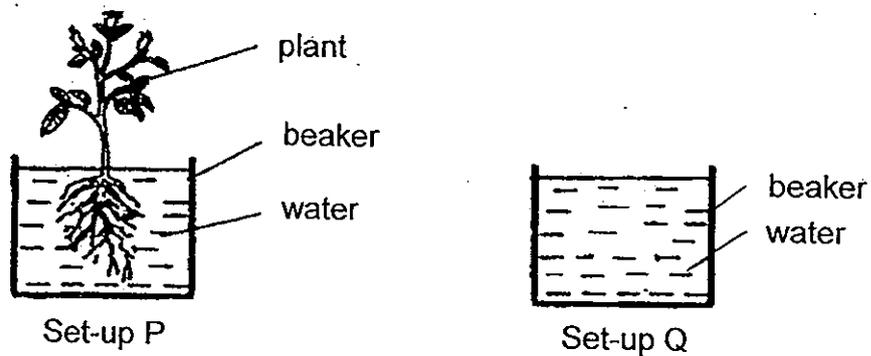
- (1) air
 - (2) food
 - (3) water
 - (4) space
2. Four children each made a statement about a shirt.

Alice The shirt is a living thing as it can become bigger.
Belany The shirt is a non-living thing as it cannot reproduce.
Cecilia The shirt is a living thing as it can respond to changes in the surroundings.
Diane The shirt is a non-living thing as it does not need air, food and water to survive.

Whose statement(s) is/are true?

- (1) Diane only
- (2) Belany and Diane only
- (3) Belany and Cecilia only
- (4) Alice, Belany and Diane only

3. Lionel wanted to investigate the volume of water taken in by a plant over a week. He placed a plant in beaker P containing water. He set up another beaker Q as a control. He left both set-ups near the window for a week.



He recorded the results in the table below.

Set-up	Volume of water (cm ³)	
	Day 1	Day 7
P	1400	1080
Q	1400	1340

From the table above, what was the volume of water taken in by the plant?

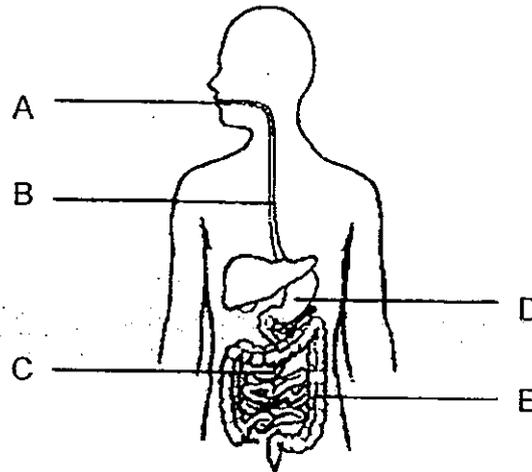
- (1) 60 cm³
 - (2) 260 cm³
 - (3) 320 cm³
 - (4) 480 cm³
4. What is/are the function(s) of the system shown below?



- A To support the body
- B To help us move our body
- C To provide us with warmth
- D To protect the internal organs

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

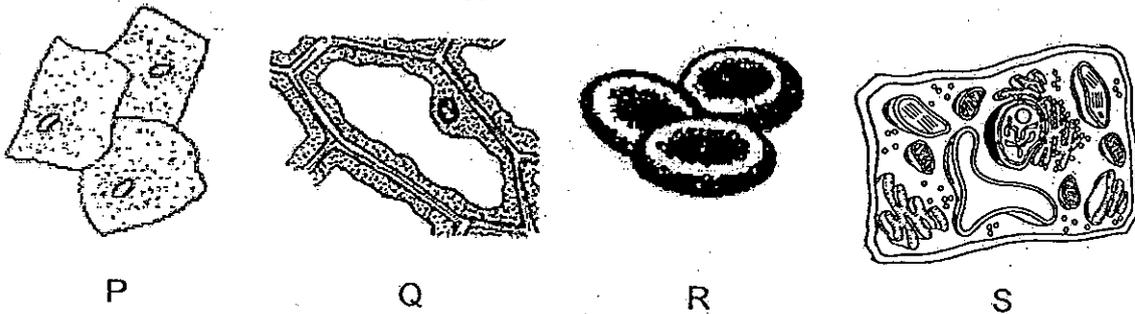
5. The diagram below shows the human digestive system.



Which are the parts that do not produce digestive juices?

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

6. The diagram below shows four types of cells.



Based on the diagrams above, which one of the following is a correct classification of the cells above?

	Plant Cell	Animal Cell(s)
(1)	Q and S	P and R
(2)	P and Q	R and S
(3)	Q and R	P and S
(4)	Q, R and S	P

7. Which of the following are found in a typical animal cell?

- A nucleus
- B cell wall
- C cytoplasm
- D chloroplast
- E cell membrane

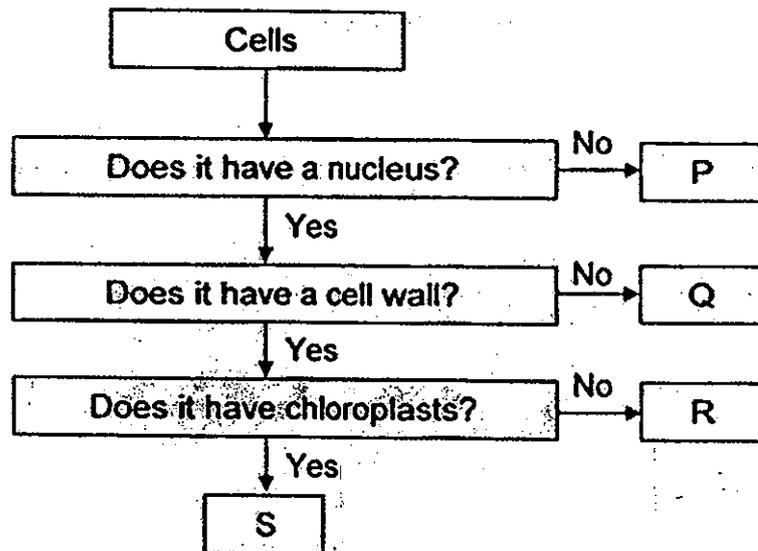
(1) A, B and C only

(2) A, C and E only

(3) B, D and E only

(4) C, D and E only

8. The flow chart below contains information on four types of cells P, Q, R and S.



Which one of the cells P, Q, R or S will produce sugar?

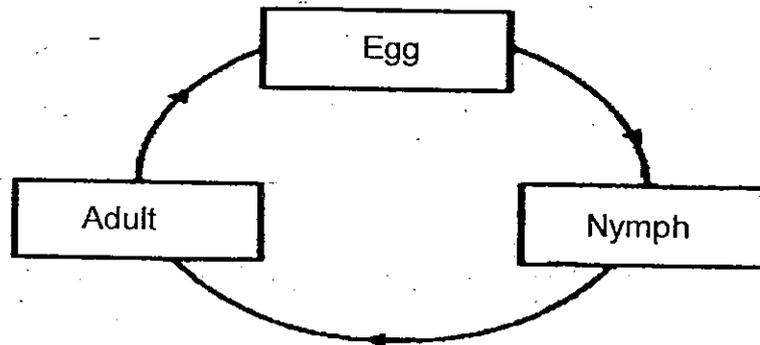
(1) P

(2) Q

(3) R

(4) S

11. The diagram below shows the life cycle of an animal:

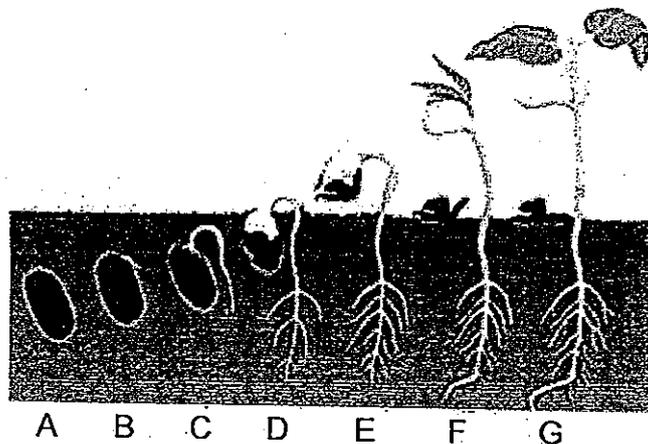


Which of the following animals has/have a similar life cycle as shown above?

- A butterfly
- B mosquito
- C cockroach
- D grasshopper

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

12. The diagram below shows the stages A to G of a seed growing into a seedling.



Which stage(s) show(s) that the process of germination has just taken place?

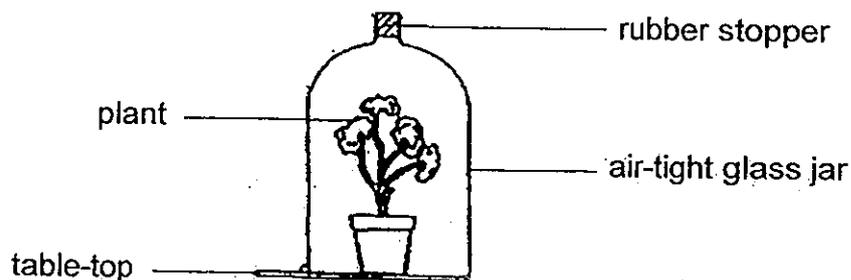
- (1) B only
- (2) G only
- (3) C and D only
- (4) E and F only

9. Which of the following is/are produced during photosynthesis?

- A water
- B sugar
- C oxygen
- D light energy
- E carbon dioxide

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

10. Nigel wants to find out if the amount of carbon dioxide changes when a plant is kept in an air-tight glass jar as shown in the diagram below. The set-up is placed in an open area.



Which of the following shows the most possible amount of carbon dioxide in the air-tight glass jar from 7 a.m. to 1.00 p.m. on a clear day?

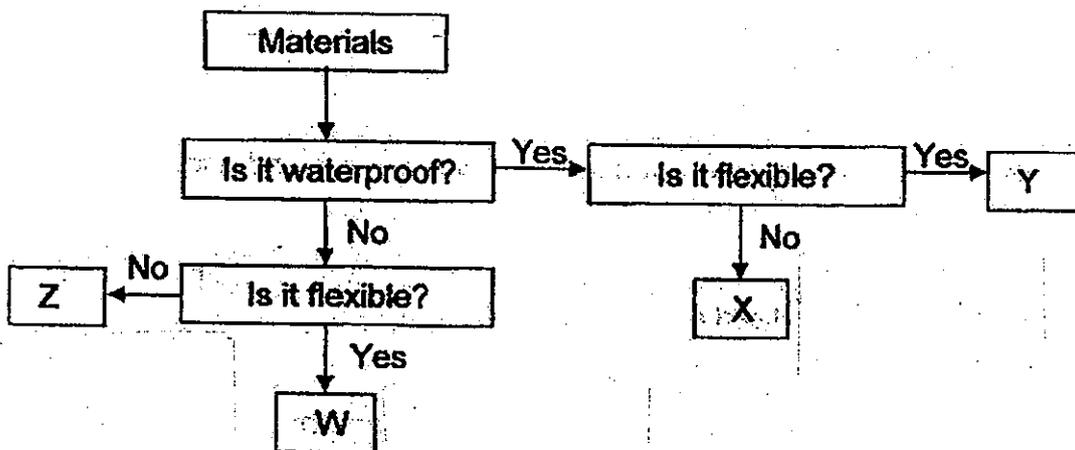
Amount of carbon dioxide in the air-tight glass jar at			
	9 a.m.	11 a.m.	1 p.m.
(1)	decrease	decrease	no change
(2)	no change	decrease	no change
(3)	decrease	decrease	decrease
(4)	increase	decrease	increase

15. Freddy collected 4 fruits, P, Q, R and S, from a plant that disperses by splitting. The 4 fruits were subjected to different temperatures. He recorded the findings in the table below.

Fruit	P	Q	R	S
Temperature (°C)	40	30	20	10
Time taken for the fruit to split (hours)	2.5	3	10	24
Distance the seeds were scattered (metres)	1.75	1.5	0.75	0.35

What could he conclude from his findings?

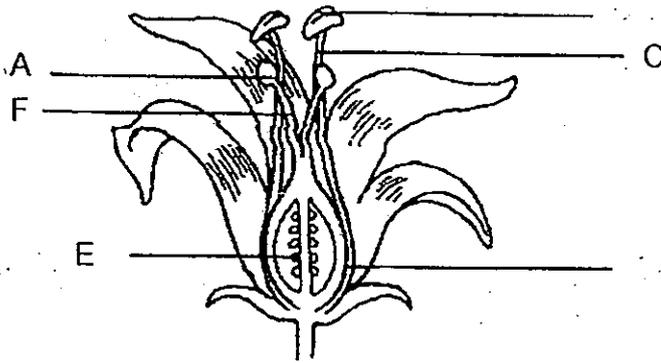
- (1) The higher the temperature, the longer the time taken for the fruit to split and the nearer the seeds were scattered.
 - (2) The higher the temperature, the shorter the time taken for the fruit to split and the further the seeds were scattered.
 - (3) The lower the temperature, the shorter the time taken for the fruit to split and the nearer the seeds were scattered.
 - (4) The lower the temperature, the longer the time taken for the fruit to split and the further the seeds were scattered.
16. The flow chart below shows the properties of some materials.



Which material W, X, Y or Z is a suitable material for a raincoat?

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

13. The diagram below shows a section of a flower. The parts of the flower are labelled as A, B, C, D, E and F.



Which of the following best matches the parts labelled A, B, C, D, E and F?

	A	B	C	D	E	F
(1)	anther	stigma	filament	ovule	ovary	style
(2)	stigma	anther	filament	ovary	ovule	style
(3)	stigma	anther	style	filament	ovule	ovary
(4)	style	stigma	anther	ovary	ovule	filament

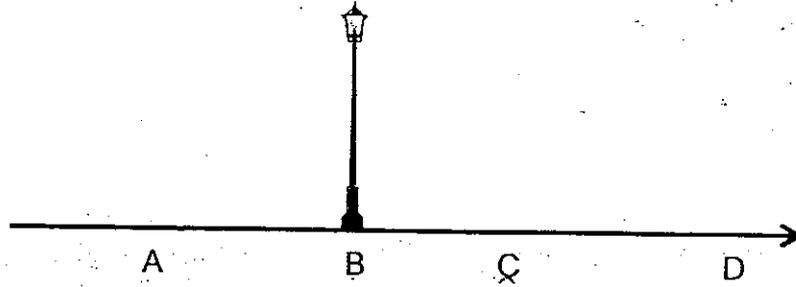
14. Five pupils were having a group discussion on the sexual reproduction in flowering plants. The following are some of the statements they made.

Adeline	Pollination is the transfer of pollen grains from the stigma to the anther.
Benny	Sexual reproduction involves a male and a female reproductive cells.
Cathy	Fertilisation is the process by which a male reproductive cell fuses with a female reproductive cell to produce a fertilised egg.
Darren	Germination is the first stage of the reproduction in flowering plants.
Edwin	The scattering of seeds away from the parent plant does not help to prevent overcrowding.

Who has/have provided an incorrect statement on the sexual reproduction in flowering plants?

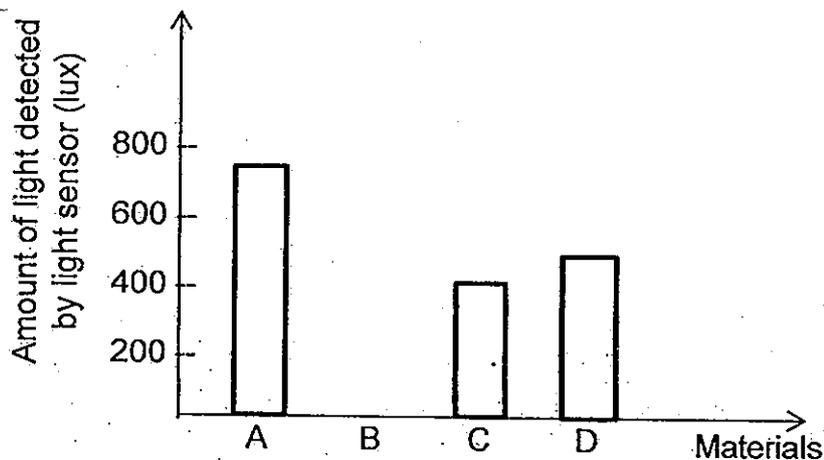
- (1) Adeline only
- (2) Benny and Darren only
- (3) Cathy, Darren and Edwin only
- (4) Adeline, Darren and Edwin only

19. One dark night, Jane wanted to find out how the position of the lighted street lamp affects the length of her shadow as she walked from position A to D.



Which of the following shows the correct order of Jane's position such that the length of her shadow is from the shortest to the longest?

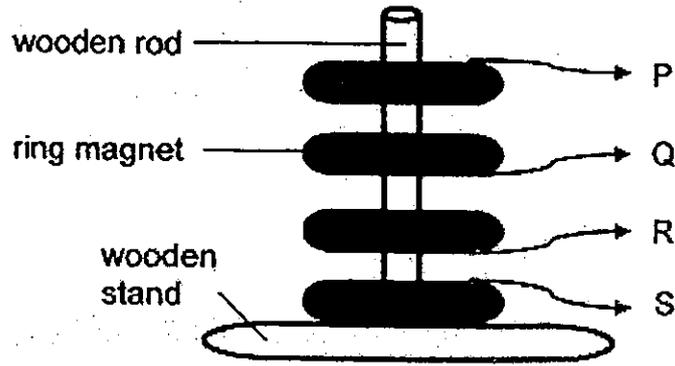
- (1) A, D, C, B
 - (2) B, C, A, D
 - (3) C, B, A, D
 - (4) D, A, C, B
20. Mrs Chua conducted an experiment to find out how much light can pass through four different materials A, B, C and D using a datalogger with a light sensor. The graph below shows the results.



Based on the graph above, which one of the following statements is true?

- (1) Material B allows minimal amount of light to pass through.
- (2) Material D allows less light to pass through as compared to Material B.
- (3) When Materials A and B are stacked together, light cannot pass through them.
- (4) The total amount of light that can pass through Materials A and C when they are stacked together is 1100 lux.

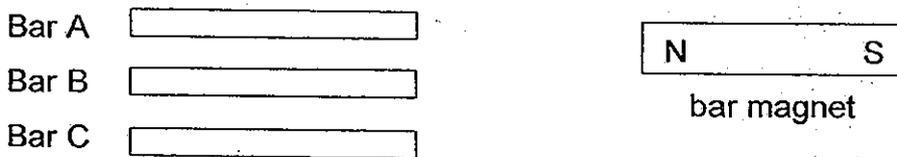
17. The diagram below shows four similar ring magnets floating above one another.



What could be the poles of the ring magnets at the positions labelled P, Q, R and S?

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

18. John carried out an experiment as shown below.



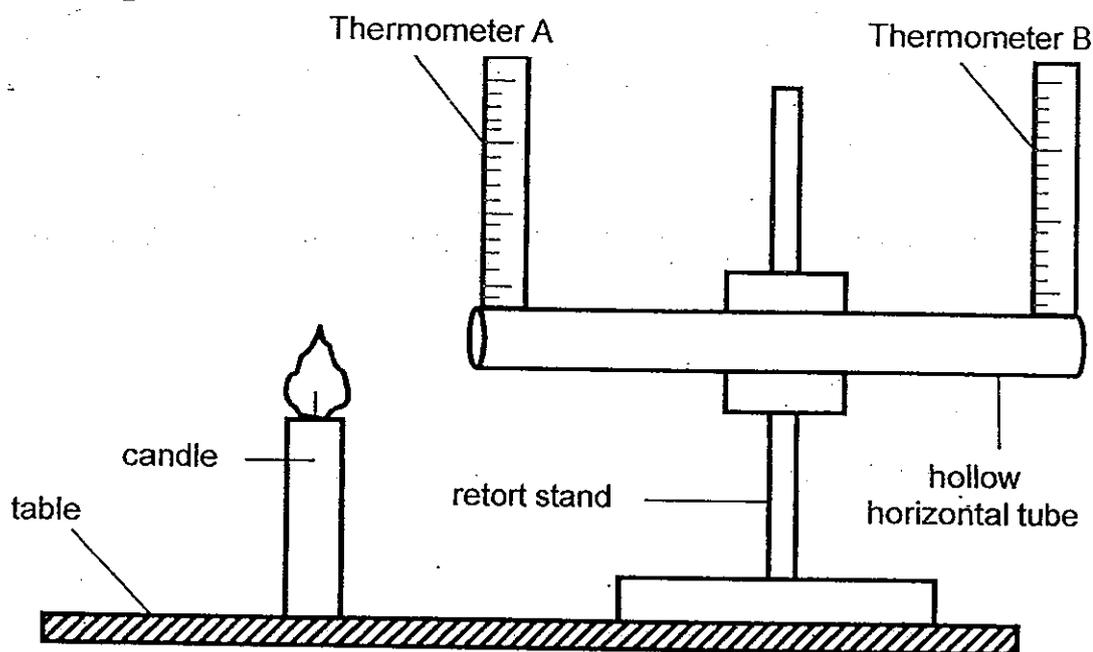
He brought a bar magnet close to each of the 3 bars, A, B and C. He then recorded his findings in the table below.

Bar	Findings
A	One end of the bar was attracted to the N-pole of the bar magnet while the other end repelled the N-pole of the magnet.
B	Both ends were attracted to N-pole and S-pole of the bar magnet.
C	Both ends were not attracted to the N-pole or S-pole of the bar magnet.

Which one of the following statements is most likely to be correct about bars A, B and C?

- (1) Bar A is a magnet.
- (2) Bar B is a temporary magnet.
- (3) Bar C is made of a magnetic material.
- (4) Bars A and B are made of non-magnetic material.

22. Fahmi set up the experiment as shown below. He secured a hollow horizontal tube to the retort stand. He placed 2 thermometers at each end of the hollow tube and lighted a candle on one side of the set-up.

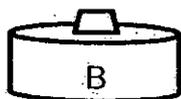


What would he notice about the readings on thermometers A and B if the candle was moved further away from the hollow horizontal tube?

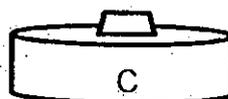
- (1) The temperature readings on both thermometers would be lower.
 - (2) The temperature readings on both thermometers would be higher.
 - (3) Only the temperature reading on thermometer B would decrease gradually.
 - (4) The temperature reading on thermometer A would be similar to the temperature reading on thermometer B.
23. Which of the following container(s) can be used to contain 400 cm^3 of air?



Capacity
 100 cm^3



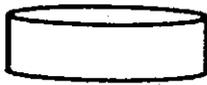
Capacity
 400 cm^3



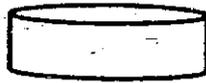
Capacity
 500 cm^3

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

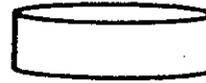
21. Samuel conducted an experiment as shown below. He filled three containers with iced water, tap water and warm water.



iced water



tap water



warm water

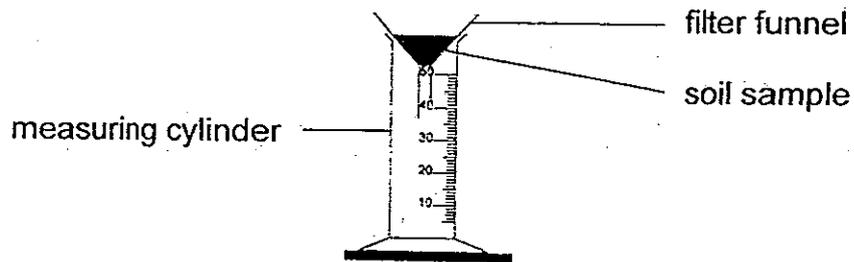
The table below shows the procedure he took when conducting the experiment.

Step	Procedure
1	Place the right hand in the warm water and the left hand in the iced water.
2	After four minutes, put both hands in the basin of tap water.

Which one of the following correctly shows how his hands would feel?

	left hand	right hand
(1)	cold	cold
(2)	cold	warm
(3)	warm	warm
(4)	warm	cold

24. Jani set up the experiment below to find out how quickly water can pass through two different types of soil, X and Y.



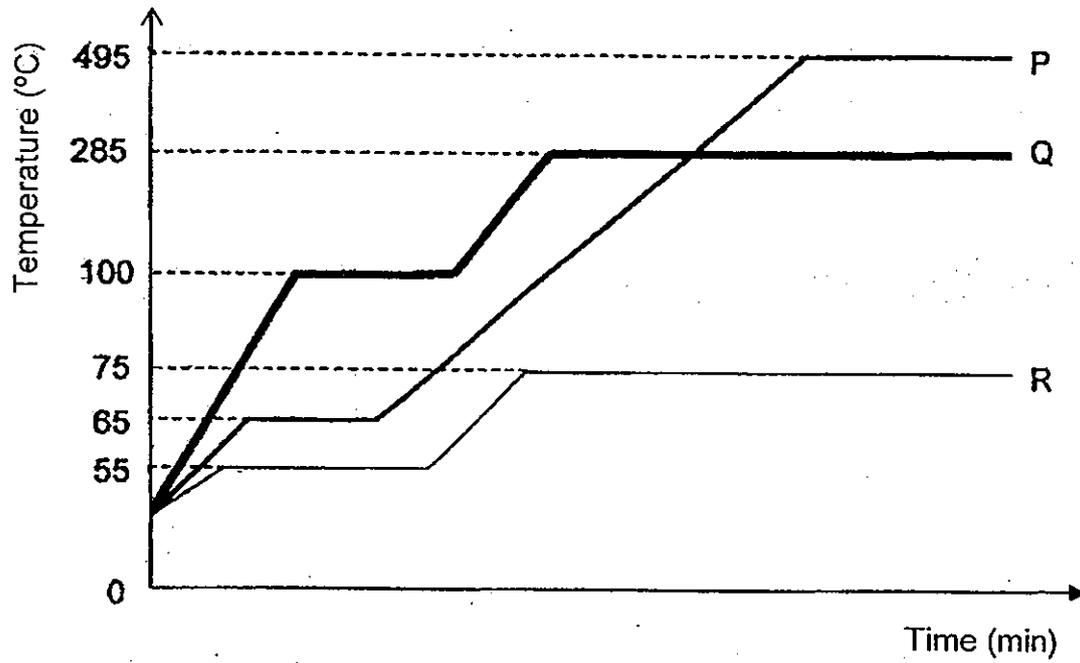
The time taken for the water to pass through each type of soil was measured and recorded in the table below:

Soil sample	Soil X	Soil Y
Time taken (seconds)	43	17

Which one of the following correctly represents the properties of Soil X and Soil Y?

	Size of soil particles	Size of air spaces
(1)	smaller in X than Y	smaller in Y than X
(2)	smaller in Y than X	larger in X than Y
(3)	larger in Y than X	smaller in X than Y
(4)	larger in X than Y	larger in Y than X

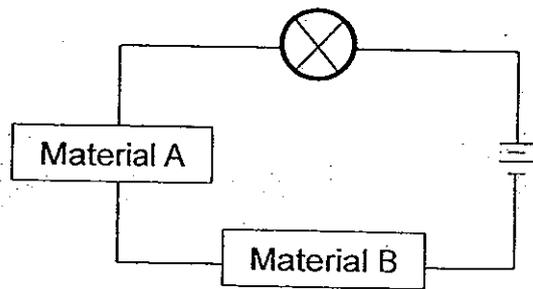
25. Mrs Lim heated 3 substances P, Q and R until they reached boiling point. The graph below shows the change in temperature.



Which of the following correctly shows the state of substances P, Q and R at 90°C?

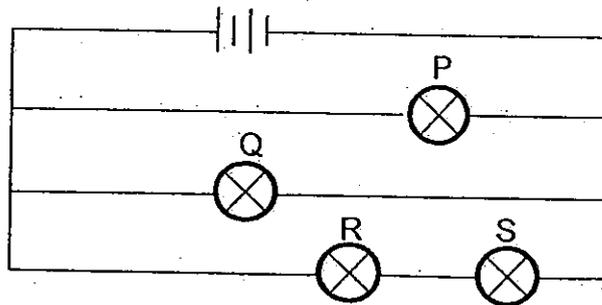
	P	Q	R
(1)	Solid	Gas	Liquid
(2)	Liquid	Solid	Gas
(3)	Liquid	Gas	Solid
(4)	Gas	Solid	Liquid

26. The circuit diagram below shows a bulb, two batteries and materials A and B connected together by wires. The bulb did not light up at all.



Which one of the following is the most possible reason for the bulb not lighting up?

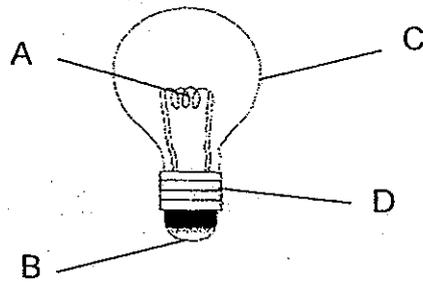
- (1) Material A is an electrical insulator.
 - (2) Material B is an electrical conductor.
 - (3) The circuit is not arranged in parallel.
 - (4) A switch was not connected to the circuit.
27. Study the circuit diagram below.



Which of the bulb(s) will remain lit even when bulb S fuses?

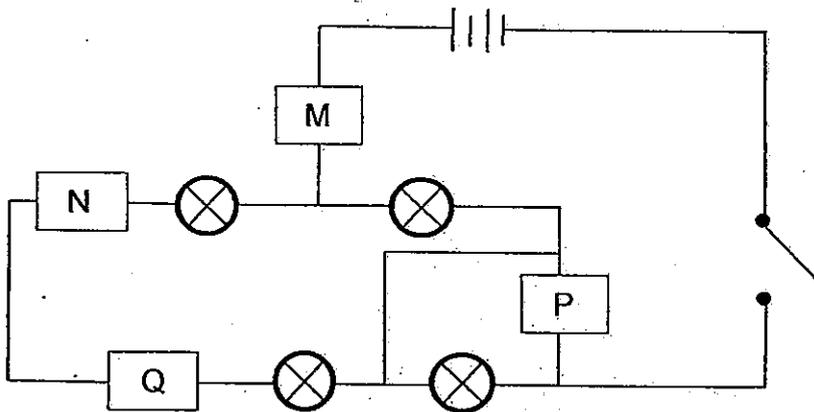
- (1) P only
- (2) R only
- (3) P and Q only
- (4) R, Q and P only

28. Study the diagram below. Which part(s) A, B, C and D is/are not conductors of electricity?



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

29. May was given four objects, a metal ring, a copper coin, a pencil lead and a plastic button. She was told to connect the objects to the circuit, at positions M, N, P or Q, such that the most number of bulbs would light up at the same time when the switch was closed.



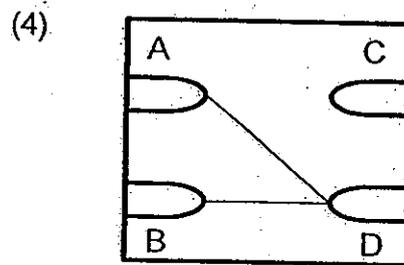
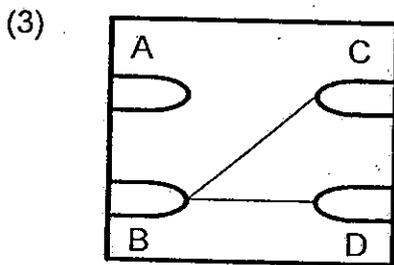
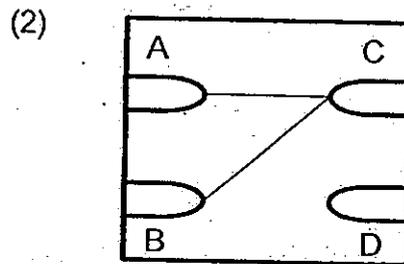
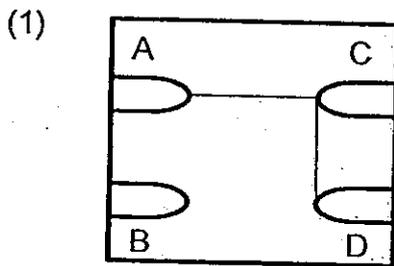
Which one of the following correctly shows the positions of the 4 objects?

	Position M	Position N	Position P	Position Q
(1)	metal ring	pencil lead	plastic button	copper coin
(2)	metal ring	plastic button	pencil lead	copper coin
(3)	pencil lead	metal ring	copper coin	plastic button
(4)	plastic button	metal ring	copper coin	pencil lead

30. John set up a circuit tester to find out how four paper clips, A, B, C and D, on a circuit card were connected using wires. When the wires of the circuit tester were connected to two paper clips at each time, the following observations were made.

Paper clips connected to circuit tester	Does the bulb in the circuit tester light up?
A and B	No
A and C	Yes
A and D	Yes
B and C	No
B and D	No

Which of the following shows a possible arrangement of the wires behind the circuit card?



End of Booklet A





**CATHOLIC HIGH SCHOOL
SEMESTRAL ASSESSMENT 1
2013
PRIMARY FIVE**

SCIENCE

BOOKLET B

Name: _____ ()

Class: Primary 5 - _____

Date: 22 May 2013

Booklet A	60
Booklet B	40
Total	100

14 questions

40 marks

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

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

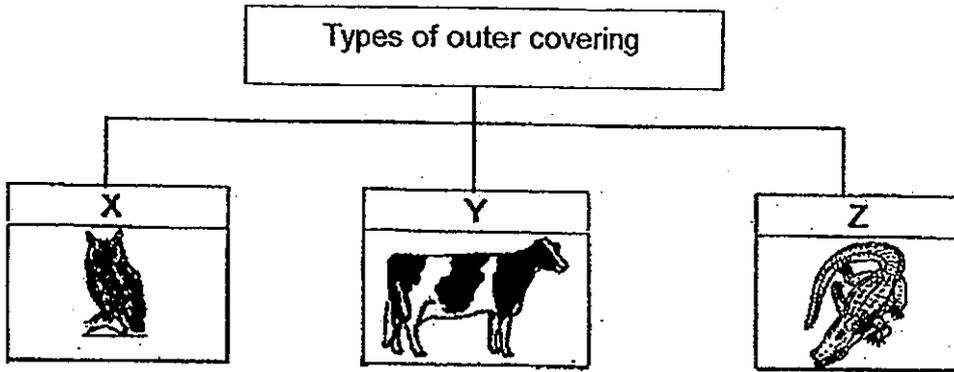
This booklet consists of 14 printed pages, excluding cover page.

Booklet B (40 marks)

For questions 31 to 44, write your answers in this booklet.

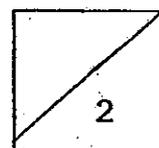
The number of marks available is shown in brackets [] at the end of each question or part question. (40 marks)

31. The classification chart below shows how some animals are classified.

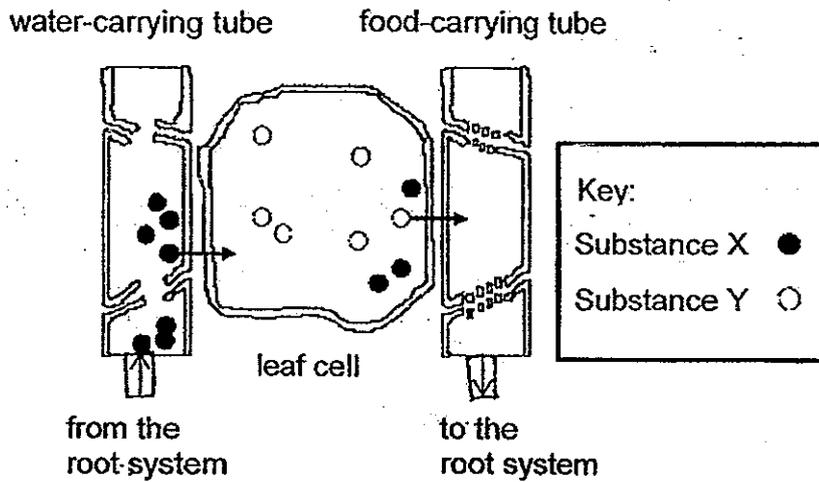


(a) Based on the classification chart, which group, X, Y or Z, should the penguin belong to? Give a reason for your answer. [1]

(b) Other than providing warmth, state another two functions of the outer covering of animals. [1]



32. The diagram below shows the side view of a leaf cell, water-carrying tube and food-carrying tube during the day.



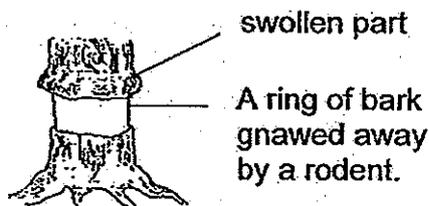
- (a) What could substances X and Y be? [1]

Substance X - _____

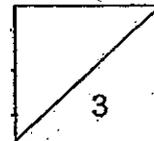
Substance Y - _____

- (b) What is the cell part that must be present in the leaf cell in order for it to produce Y? [1]

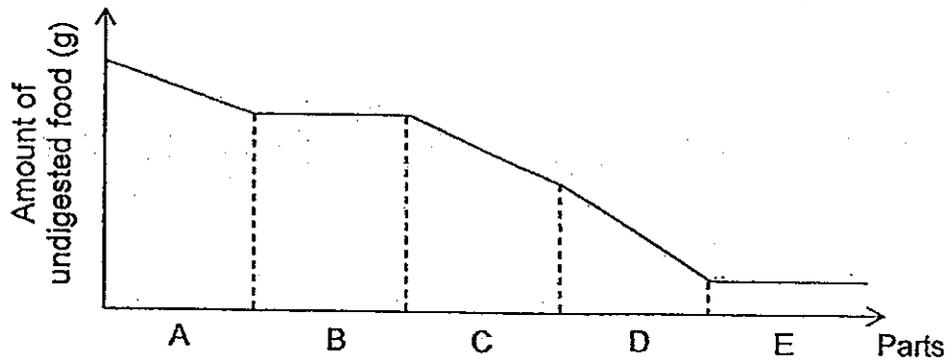
The diagram below shows part of a tree destroyed by an animal. The animal had gnawed away a ring of bark.



- (c) After a few days, the trunk just above the destroyed bark was seen to be swollen. The tree died after a few weeks. Based on the diagram above, explain why the tree died. [1]



33. The graph below shows the amount of undigested food when it passes through different parts of our digestive system.

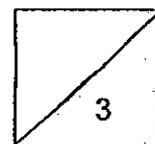


- (a) Which part of the digestive system does part B represent? [1]
Give a reason for your answer.

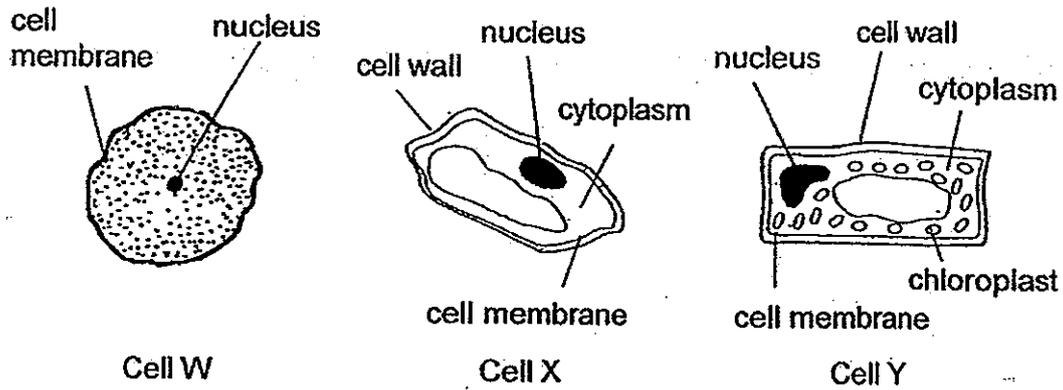
- (b) In which part(s), A, B, C, D or has/have digestion taken place? [1]
Support your answer from the information given in the graph.

Jane was given two objects, an empty box and a sponge by her teacher. Her teacher wanted her to use one of the objects to make reference to the large intestine in the human digestive system.

- (c) Which object should she use? Explain your choice. [1]



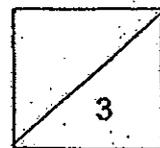
34. Tammy observed three types of cells W, X and Y under a microscope as shown in the diagram below.



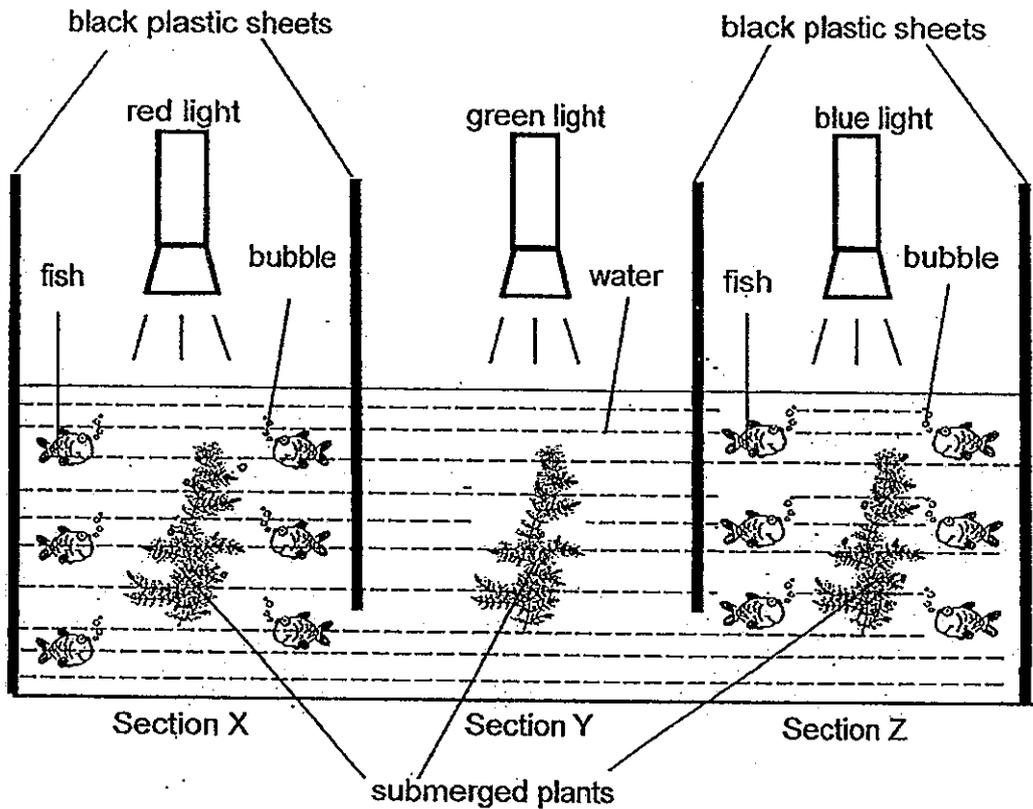
- (a) The three types of cells were tested with iodine solution. Which type(s) of cells would most likely cause the iodine solution to turn dark blue? [1]

- (b) Give reasons to support your choice(s) in (a). [1]

- (c) Based on the diagram above, which is/are plant cells? Name one characteristic that the cell(s) has/have to support your answer. [1]



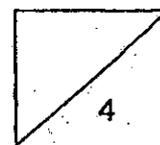
35. Judy set up an experiment in a dark room. She wanted to find out which coloured light(s), red, green or blue, could be used for photosynthesis. She divided a tank into three equal sections X, Y and Z by placing black plastic sheets as shown in the set-up below. The three coloured lights were of the same brightness. She put in same number of fish and submerged plants into each section. After some time, bubbles were observed and the fish were in sections X and Z only.



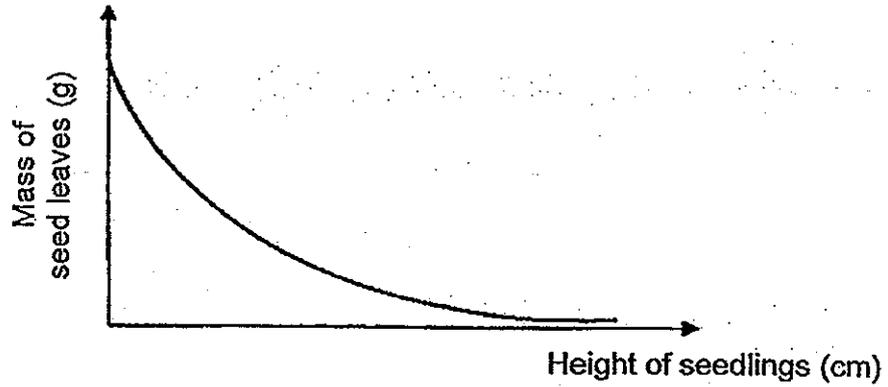
- (a) Explain why the fish were found only in Sections X and Z. [2]

- (b) What conclusion can Judy draw about the coloured lights? [1]

- (c) If Judy removed the submerged plants from her set-up, what would she observe? [1]

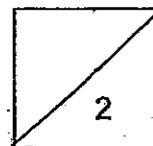


36. The graph below shows the relationship between the mass of the seed leaves and the height of the seedlings.

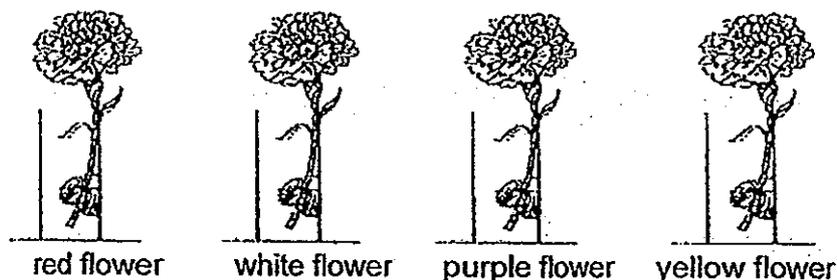


- (a) From the graph above, state the relationship between the height of the seedlings and the mass of seed leaves. [1]

- (b) Why does the mass of seed leaves decrease? [1]



37. Mary wanted to find out the colour of flowers most butterflies would prefer. She placed 4 similar stalks of artificial flowers of four different colours into a container each. She then put 10 drops of the same type of sweetened liquid in the centre of each of the 4 artificial flowers and left the 4 stalks of artificial flowers at the same spot at the eco-garden in her school.



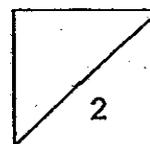
Mary then counted the number of butterflies that visited the 4 artificial flowers over a period of 3 hours. Her results are shown in the table below.

Colour of artificial flower	Number of butterflies visiting the flowers at different times of the day		
	9 a.m. to 10 a.m.	10 a.m. to 11 a.m.	11 a.m. to 12 noon
red	5	8	10
white	1	3	6
purple	4	8	11
yellow	7	10	15

- (a) Based on Mary's results, which colour of the artificial flowers did the butterflies prefer most? Explain your answer. [1]

Mary then wanted to find out the relationship between the size of the artificial flowers and the number of butterflies visiting the artificial flowers.

- (b) What changes should she make to her original experiment? [1]



38. The diagram below shows one of the shorea fruits which Vince had.

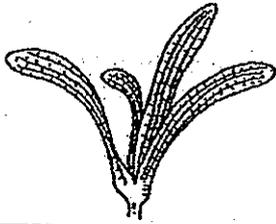
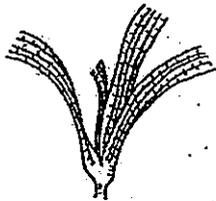


He threw the shorea fruit up in the air and observed its movement as it came down.

(a) How does part X help the shorea fruit to disperse its seed?

[1]

Vince wanted to investigate if the length of part X of the shorea fruit affects the time taken for it to reach the ground. He dropped each of the following shorea fruits from a height. The table below showed what he did to the shorea fruits B and C.

shorea fruit A	shorea fruit B	shorea fruit C
		
No change	1 cm of part X was trimmed off	2 cm of part X was trimmed off
Took 15 sec to reach the ground	Took 9 sec to reach the ground	Took 5 sec to reach the ground

(b) Based on the results above, what conclusion can he make?

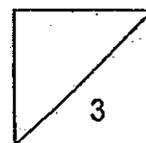
[1]

(c) Write down two variables which he should keep constant for his experiment to be a fair test.

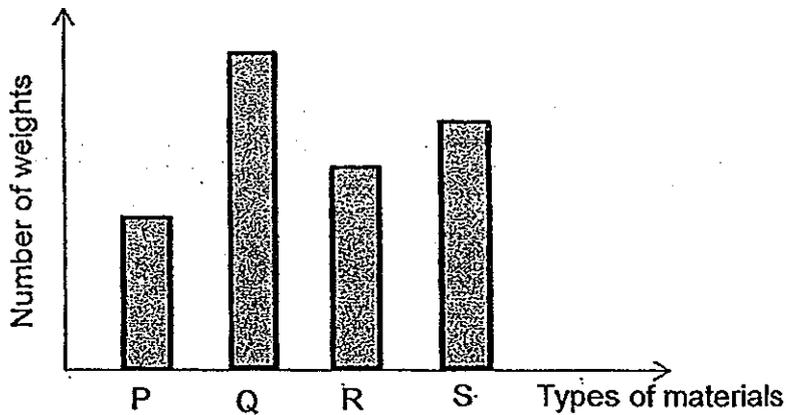
[1]

(i) _____

(ii) _____



39. Victor was provided with 4 different types of materials P, Q, R and S which were of the same thickness and length. Weights were added until the material broke. The graph below showed the results of his experiment.

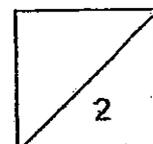


- (a) Based on the results of his experiment, what could he conclude about the 4 types of materials? [1]

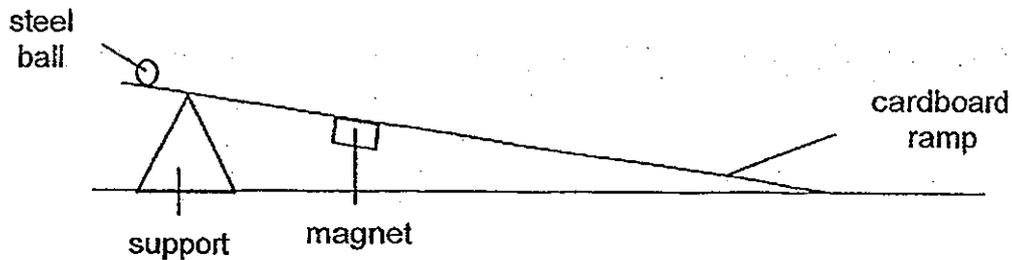
Victor decided to soak the 4 materials in 4 similar beakers, containing 100ml of water each. He recorded the amount of water left in each of the beakers after 1 minute in the table shown below.

Material	Amount of water left in the beaker (ml)
P	90
Q	100
R	30
S	70

- (b) What material could Q most likely to be? Give a reason for your answer. [1]



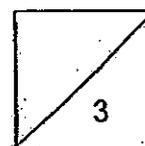
40. Halim placed a strong magnet below a cardboard ramp as shown in the diagram below.



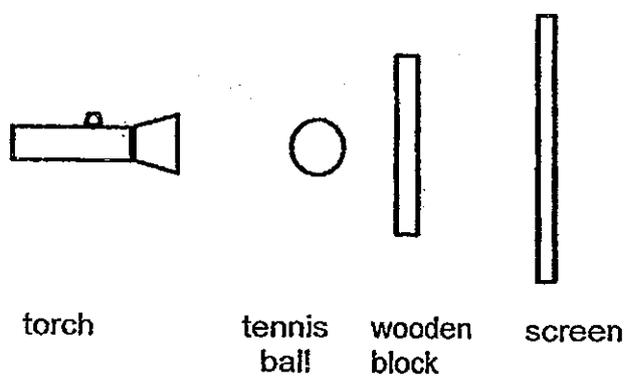
- (a) What would happen to the steel ball when it was released from the top of the cardboard ramp? [1]

Halim then replaced the cardboard ramp with an iron ramp of the same length and thickness.

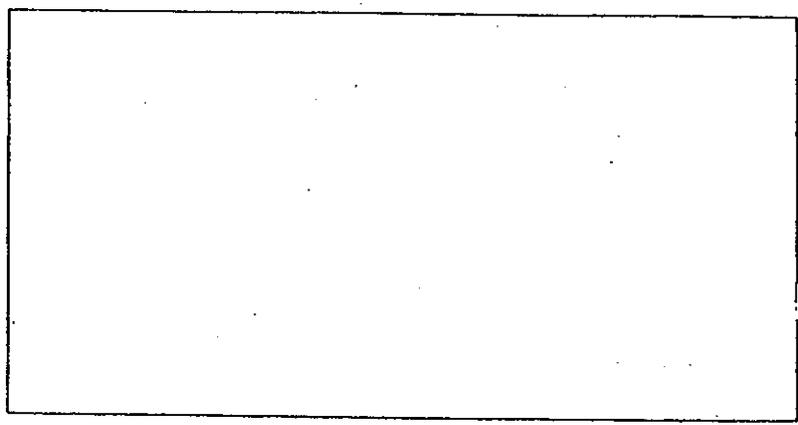
- (b) What would happen to the steel ball when it was released from the top of the iron ramp? [2]



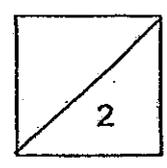
41. The diagram below shows a torch shining on a tennis ball and a rectangular piece of wooden block. The tennis ball is placed at the centre and in front of the rectangular piece of wooden block.



(a) In the space below, draw how the shadow of the tennis ball and wooden block would look like when cast on the screen. [1]



(b) What would you do to the set-up if you wanted a bigger shadow? (You are not allowed to move the tennis ball and wooden block.) [1]



42. Timothy filled a beaker with 200ml of water. He heated the beaker of water continuously for 16 minutes. He recorded the temperature of the beaker of water at intervals of two minutes in the table below.

(a) Complete the table below.

[1]

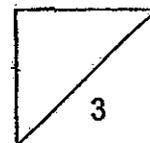
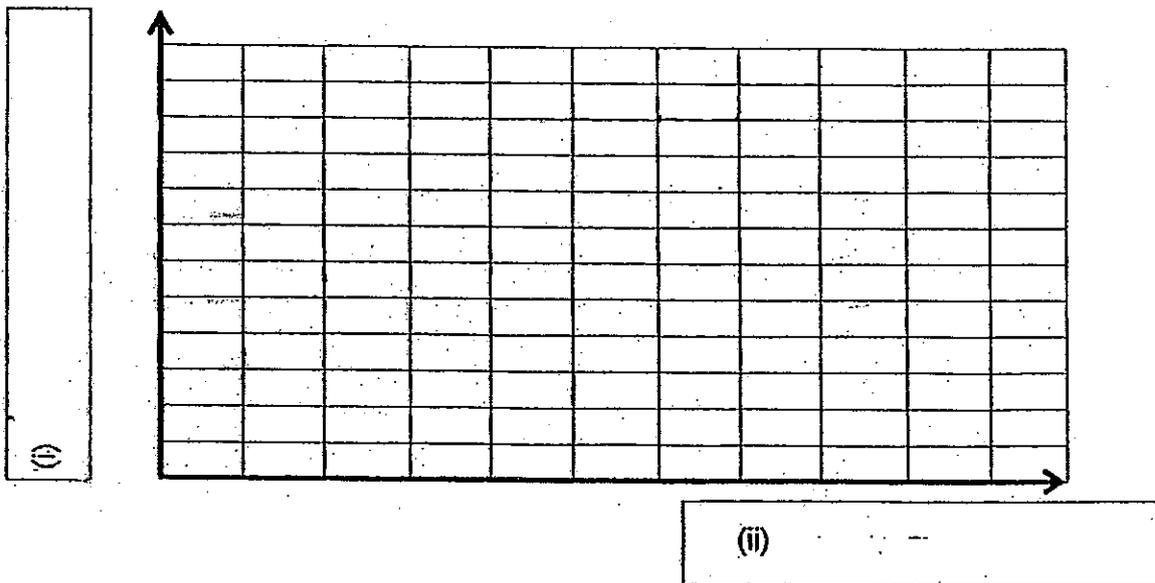
Time (min)	Temperature (°C)
0	20
2	35
4	55
6	75
8	95
10	100
12	100
14	(i)
16	(ii)

(b) Label the axes (i) and (ii) of the graph below

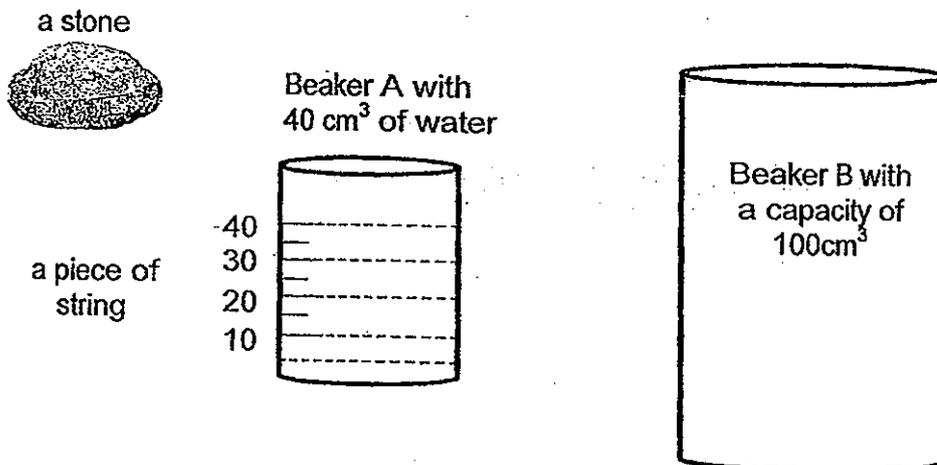
[1]

(c) Draw a line graph using the values from the table above.

[1]



43. Jenny conducted an experiment to find out the volume of a stone that she picked up from the park. She prepared the following materials:

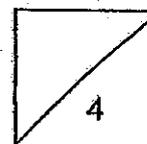


- (a) In the space provided below, write down the steps she would take to find the volume of the stone. [2]

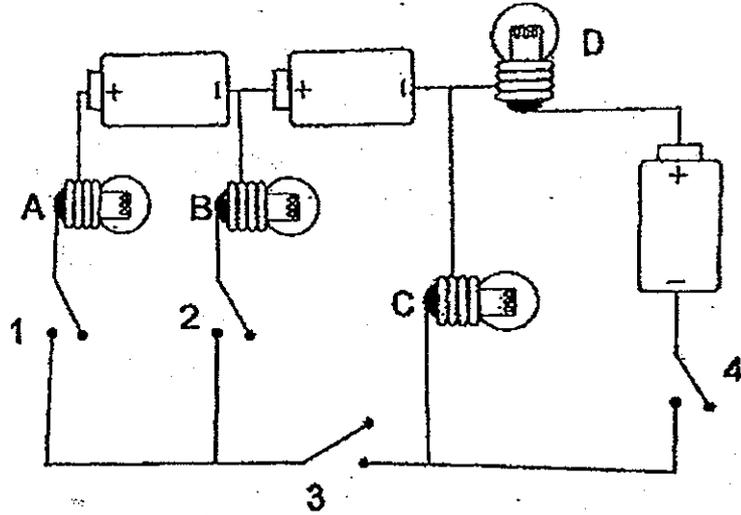
Steps	Procedure
1	
2	
3	
4	

- (b) Jenny observed that the volume of water in beaker B was now 75 cm³. Show how she would be able to calculate the volume of the stone in the space provided. [1]

- (c) Based on her experiment, what can you infer about the properties of the stone? [1]



44. Timothy set up the circuit as shown in the diagram below. He used bulbs of similar size and voltage and labelled the bulbs A, B, C and D. The switches were labelled 1, 2, 3 and 4.



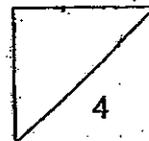
(a) Which bulb(s) would light up when only one of the switches was closed? [1]

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

(c) Which switches should be closed for bulb A to produce the brightest light? [1]

(d) State a reason for your answer in (c). [1]

End of Booklet B



ANSWER SHEET

EXAM PAPER 2013

SCHOOL : CATHOLIC HIGH

SUBJECT : PRIMARY 5 SCIENCE

TERM : SA1

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

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

31)a)Group X. A penguin has feathers like the owl thus it should be placed under Group X.

b)Helps the animals to camouflage and protects the animals from injuries.

32)a)X: water Y: sugar

b)Chloroplast

c)The food made by the leaves was not able to be transported to the roots as the food-carrying tubes carrying food were removed.

33)a)Gullet. The gullet merely pushes balls of food from the mouth into the stomach thus no digestion takes place at the gullet. Part B.

b)Part A, C and D. There was a decrease in the amount of undigested food.

c)She should use a sponge. The sponge absorbs water like the large intestine whose function is to absorb water from the undigested food.

34)a)Cell Y.

b)Cell Y has chloroplast that help the plant to make food and excess food is stored as starch thus when iodine solution is dropped on it, it turns dark blue.

c)Cell X and Y. Both cells have cell walls which is a characteristic of a plant cell.

35)a)The submerged plants in X and Z captured the coloured lights and carried out photosynthesis thereby producing dissolved oxygen and the fish which were swimming near the plants would be able to dissolved oxygen.

b)Red and blue coloured lights can be used for photosynthesis but not green coloured light.

c)All the fish would be found swimming near the surface of the water in all three section.

36)a)As the height of the seedling increases, the mass of seed leaves decreases.

b)The seedling gets its food from the seed leaves so when the seedling develops its leaves, the seed leaves will wither and drop off.

37)a)Yellow. The yellow artificial flower had the most number of butterflies visiting it over 3 hours.

b)She should use artificial flowers of the same colour but of different sizes.

38)a)The wing-like structure helps the shorea fruit to stay afloat in the air for a period of time before landing on the ground.

b)The shorter the wing-like structure, the shorter the time taken for the shorea fruit to land on the ground.

c)i)Height at which the shorea fruit was dropped.

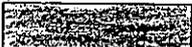
ii)Mass of each shorea fruit.

39)a)Material Q is the strongest material while material P is the weakest material.

b)Rubber/Plastic/Metal. Rubber/Plastic/Metal is waterproof as it does not absorb any water.

40)a)The steel ball will stop above the magnet as it gets attracted by the magnet.

b)The steel ball would roll all the way down as the magnetic force cannot pass through iron as iron is a magnetic material.

41)a) 

b)Move the screen further away from the wooden block/ tennis ball and wood.

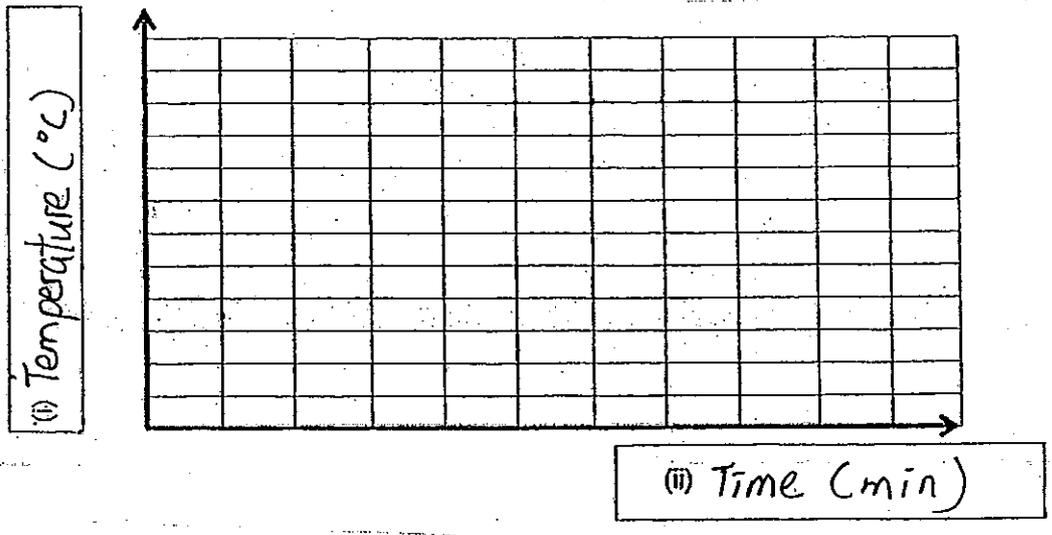
42)a)i)100

ii)100

b)i)Temperature °C

ii)Time (min)

42)c)



43)a)1) Pour water from beaker A to beaker B.

2) Tie the string around the stone and lower it in beaker B.

3) Measure Beaker B and record the new water level in Beaker B.

4) Subtract the volume of water Beaker A from the volume of water and stone in Beaker B.

b) Volume of water and stone – volume of water = $75\text{cm}^3 - 40\text{cm}^3 = 35\text{cm}^3$

c) The stone is solid. It occupies space and has a definite volume.

44)a) Bulbs C and D.

b) A closed circuit is formed when switch 4 is closed, thus bulbs C and D would light up.

c) Switches 1, 3 and 4.

d) When switches 1, 3 and 4 are closed, it forms a closed circuit with the greatest number of batteries thus it would produce the brightest light.

