



SMILETutor
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2022

PRIMARY 3 SCIENCE

TEST PAPERS

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ANGLO-CHINESE SCHOOL (JUNIOR) BA3 PAPER

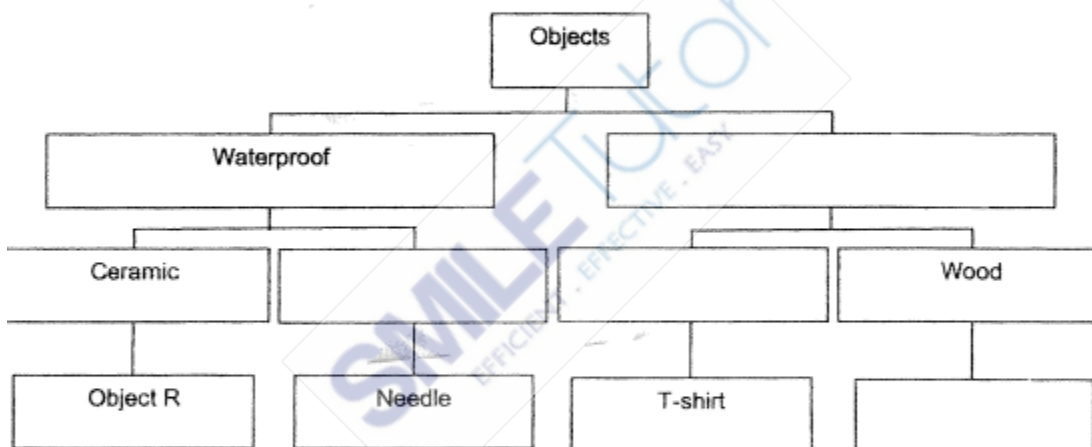
Answer questions 1 to 11. The number of marks available is shown in the brackets [] at the end of each question.

1. The diagram shows some objects grouped according to the materials they are made from and their properties.

(a) Complete the diagram by using the words in the table.

[2]

Fabric	Clay	Not flexible	Paper
Rubber	Metal	Not waterproof	Scarf



(b) Circle the object which is most likely to be object R.

[½]

Vase

Nail

Socks

(c) Which one of the following objects is waterproof? Tick (✓) the correct object.

[½]

☐

Silk shirt

☐

Plastic hat

☐

Cotton handkerchief

2. Unscramble the letters to solve the riddles.

[2]

LOWO

I come from animals and I can be used to make clothes.

ODGL

Ladies love me because I can be made into beautiful jewellery. I come from the ground.

ESAGS

We move in and out of the tiny openings in leaves.

RWTEA

Roots absorb me. Together with mineral salts, I help plants survive and grow well.

3. The picture shows Meimei in a swimming costume in the water with a swimming board.



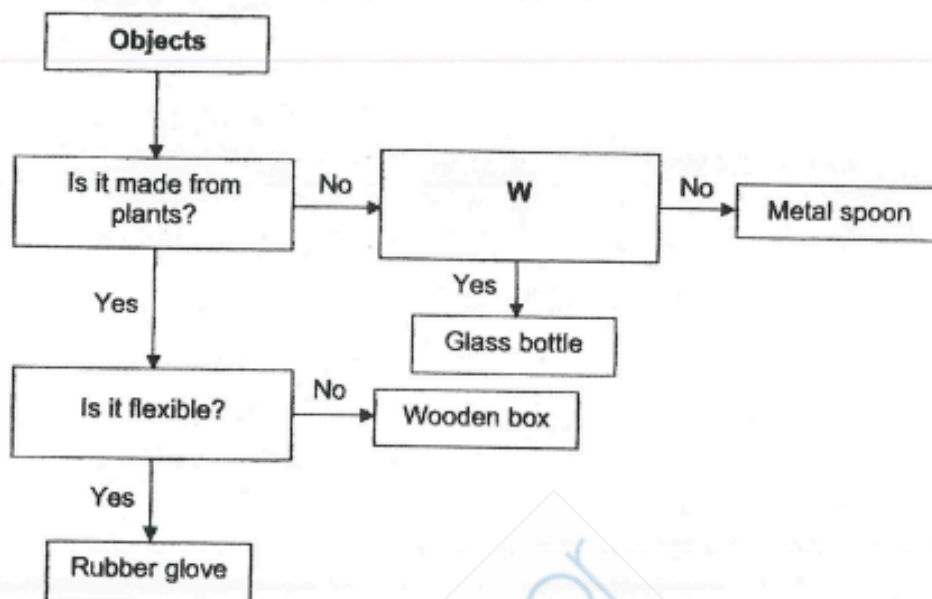
Which properties are important in the materials used for making the swimming board and the swimming costume?

Write "Yes" or "No" for the following statements.

[2]

	Statement	Write "Yes" or "No"
(i)	The material for the swimming costume must be flexible.	
(ii)	The material for the swimming costume must have the ability to float on water.	
(iii)	The material for the swimming board must be transparent.	
(iv)	The material for the swimming board must have the ability to float on water.	

4. The flowchart shows how four objects are classified.



For parts (a) to (d), answer based on the flowchart.

(a) State the similarity between the metal spoon and the glass bottle.

[1]

(b) State the difference between the wooden box and the rubber glove.

[1]

(c) The letter "W" represents a question that is used to classify the objects. Tick (✓) the question.

[1]

Question	Tick (✓) the question that represents "W"
Is it strong?	
Does it break when dropped?	
Does it come from the ground?	

(d) Name a material that can be used to make all four objects, spoon, bottle, box and glove.

[1]

5. Draw lines to match each test correctly to the property.

[2]

TEST

Put weights on it until it breaks.

Place it in a basin of water.

Bend it until it breaks.

Shine a light through it.

PROPERTY

ABILITY TO FLOAT
ON WATER

TRANSPARENCY

STRENGTH

FLEXIBILITY

6. (a) The pictures show six objects. Tick (✓) the objects which are made of only one material. [1]



Coin

☐


Frosted glass jug

☐


Pencil

☐


Spectacles

☐


Tyre

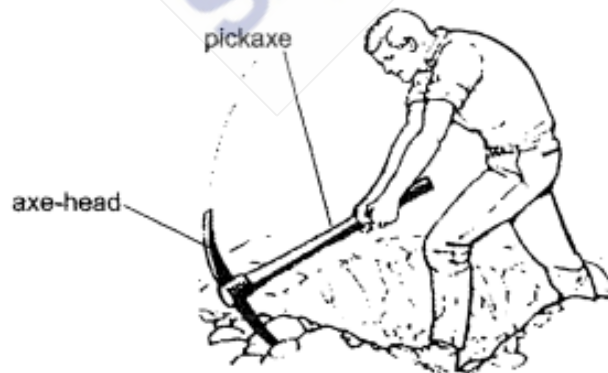
☐


School shoes

☐

- (b) Which object in (a) allows some light to pass through? [1]

- (c) A workman uses a pickaxe to break rocks.

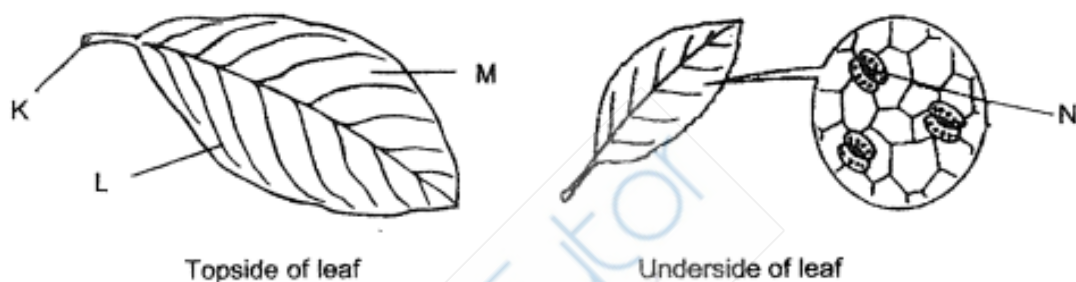


The axe-head is waterproof, sharp and made of very hard material. What is another important property the axe-head must have? [1]

7. Sam saw a plant in his garden.



He plucked out one of the leaves and observed it.



- (a) Fill in the table with the letters K, L, M and N to match the names to the parts of the leaf. [2]

NAME	PART (Fill in K, L, M and N)
Vein	
Leaf stalk	
Leaf blade	
Tiny openings	

- (b) Sam painted the underside of all the leaves of the plant with black paint and continued to water the plant daily. After two weeks, Sam observed that the plant had died. Explain why it died. [1]

8. Write the answers to the cloze passage in the crossword puzzle below.

[2]

Cloze Passage

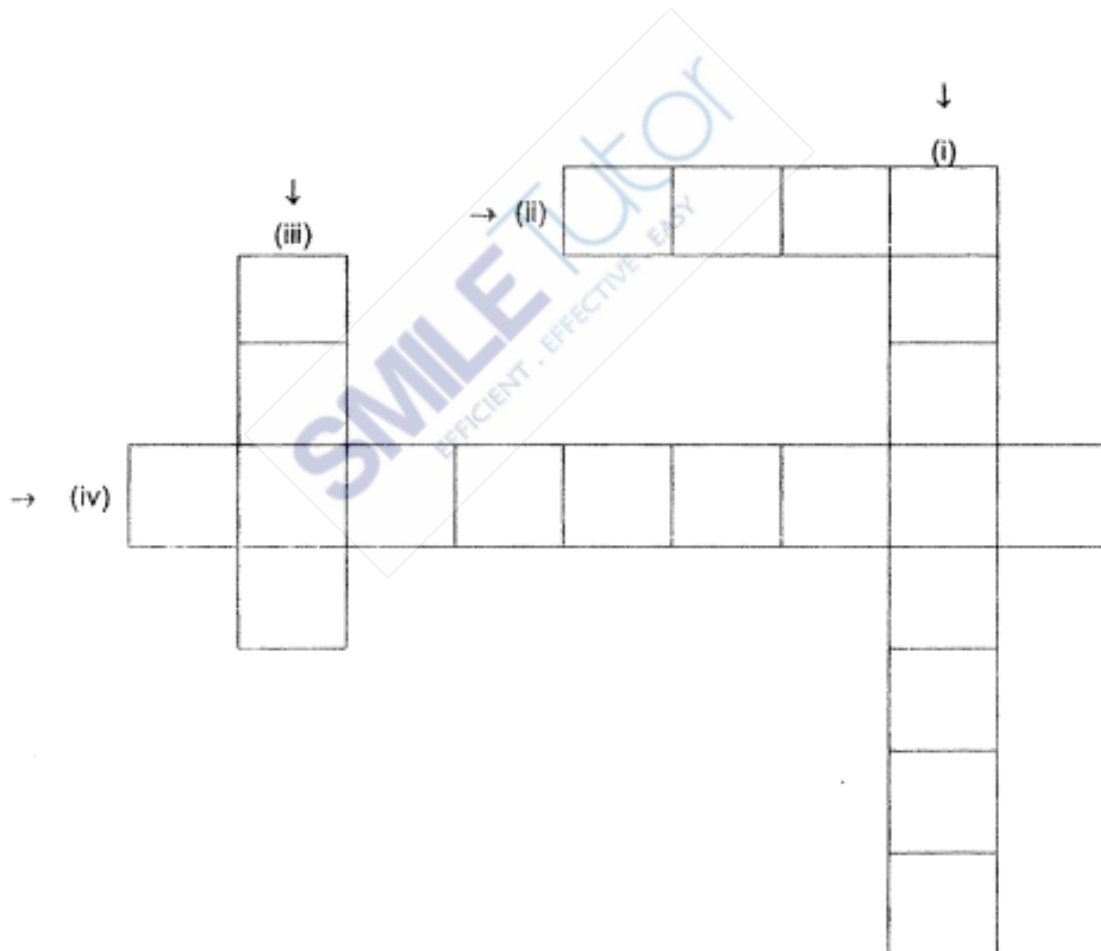
A plant is made up of different parts. Every plant part has a different (i)_____.

For example, when there is light, the (ii)_____ makes food for the plant. The

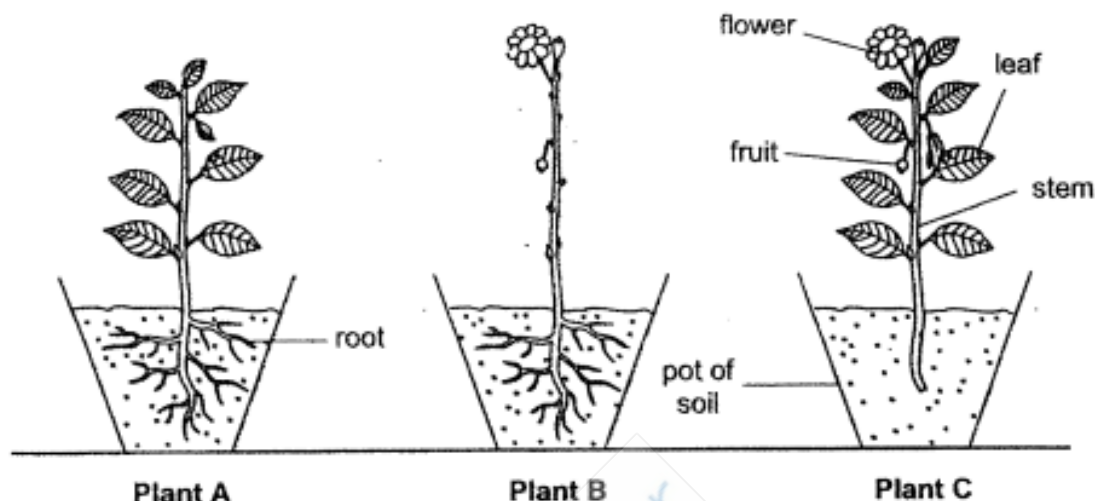
part that supports the plant is the (iii)_____. Together with the roots and

flowers, all these parts help the plant to make food, grow and (iv)_____.

Crossword Puzzle



9. Siti potted three similar plants, each in a pot of soil. A different part from each plant had been removed. She watered the plants daily and placed them in the Science laboratory.



- (a) After one week, she observed that one of the plants survived but the other two died. Which plant, A, B or C, is the one that survived? [1]

- (b) Explain why the plant survived. [1]

- (c) Siti moved the plant to the eco-garden and it continued to survive. Explain why. [1]

10. The diagrams show three plants, A, B and C.



- (a) Based on your observation of the diagrams, which of the following statement(s) about the plants is/are true? Write the letter "T" for true and "F" for false.

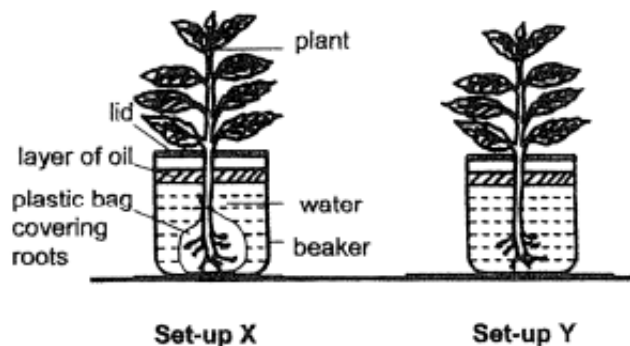
[2]

	Statement	T or F
(i)	Plant C creeps along the ground.	
(ii)	The pole holds plant A firmly in the soil.	
(iii)	The roots of plant C trap sunlight to make food.	
(iv)	Plant B is different from the other two plants because it has leaves.	

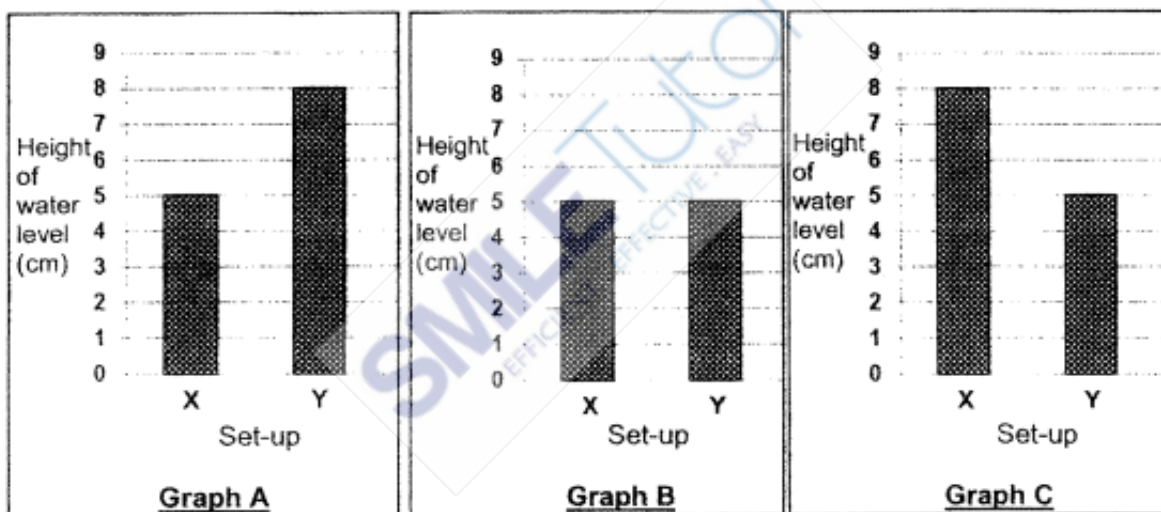
- (b) Observe plants A and C in the diagrams. How are their stems similar?

[1]

11. Tammy carried out an experiment with two similar plants. She placed set-ups X and Y in the classroom for three days.



She observed the water level in the beakers at the end of the three days and recorded the results in a graph.



- (a) Which graph, A, B or C, is correct?

[1]

- (b) State the aim of the experiment.

[1]

- (c) Tammy wanted to conduct another experiment to find out if the number of leaves will affect the amount of water taken in by the plant. Which two changes must she make to set-up X?

[1]

Change 1: _____

Change 2: _____

END OF PAPER

ANSWER SHEET

BOOKLET A

Q1a)	Waterproof: Metal Not waterproof, fabric, paper	
Q1b)	Vase	
Q1c)	Plastic hat	
Q2)	Wool, Gold Gases, Water	
Q3)	i) Yes ii) No iii) No iv) Yes	
Q4a)	They are not made from plants	
Q4b)	The rubber glove is flexible while the wooden box is not flexible.	
Q4c)	Question	Tick (✓) the question that represents "W"
	Is it strong?	
	Does it break when drop?	✓
	Does it come from the ground?	
Q4d)	Plastic	
Q9a)	Plant A	
Q9b)	It still had both its roots and leaves so it can continue to make food and absorb water.	
Q9c)	The roots and leaves were still intact and the soil had both water and mineral salts. It also got enough sunlight to make food.	
Q10a)	i) T ii) F iii) F iv) F	
Q10b)	Their stems are weak thus they need to either creep along the ground or climb onto something to support itself.	
Q11a)	Graph C	
Q11b)	The aim of the experiment is to find out whether the roots absorb water.	

Q11c) Change 1: She must remove the plastic bag from the roots.
Change 2: She must pluck out all the leaves on set-up X.

Q5. Put weights on it until it breaks — strength
Place it in a basin of water — ability to float on water
Bend it until it breaks — Flexibility
Shine a light through it — transparency.

Q6 (a) coin, Frosted glass jug, tyre.

(b) The frosted glass jug.

(c) It must be strong.

Q7(a) L

K
M
N

Q7(b) The plant could not release or take in gases as the tiny openings were covered thus it cannot make food.

Q8 (i) Function

(ii) leaf

(iii) stem

(iv) reproduce

ANGLO-CHINESE SCHOOL (JUNIOR) SA2 PAPER

Booklet A

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 your answer on the Optical Answer Sheet.

(56 marks)

1. Candy was given a bag of cookies as shown.



She grouped them in the classification table.

Cookies		

Candy grouped the cookies according to their _____.

- (1) sizes
- (2) shapes
- (3) colours
- (4) patterns

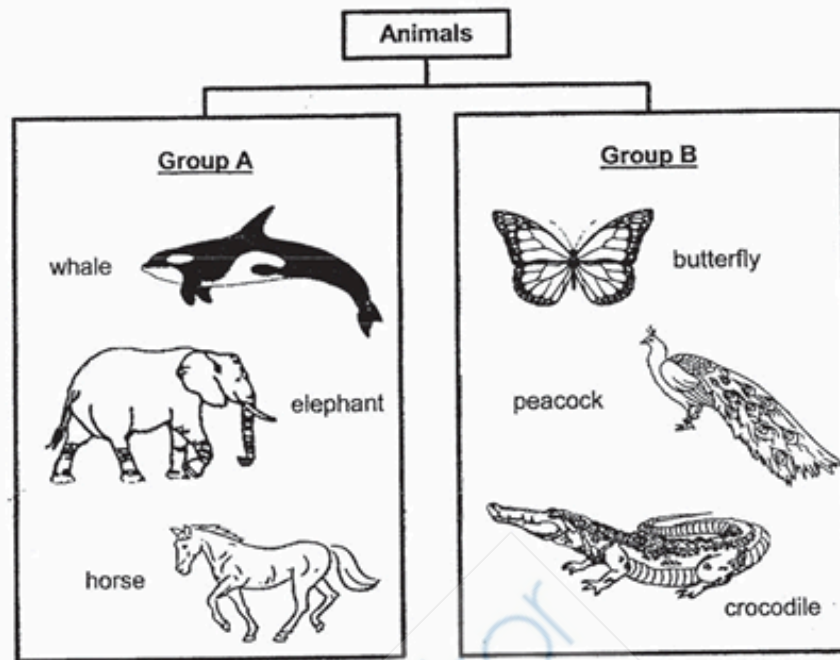
2. Bob grouped some things into the classification table.

Living things	Non-living things
ants	table
fern	mould
cactus	curtain
mushroom	chair

Which thing has been classified **wrongly**?

- (1) fern
- (2) mould
- (3) cactus
- (4) mushroom

3. Study the classification chart.



The animals are grouped according to _____.

- (1) how they move
- (2) where they live
- (3) their number of legs
- (4) how they reproduce

4. Study the classification table.

Group W	Group X	Group Y	Group Z
rose	cup	duck	mould
papaya	kettle	seal	yeast
lady's finger	newspaper	goldfish	mushroom

Which group, W, X, Y or Z, does a lizard belong to?

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

5. The diagram shows parts A, B, and C of a plant.



Which of the following is correct?

	A	B	C
(1)	root	leaf	fruit
(2)	leaf	root	fruit
(3)	fruit	leaf	root
(4)	leaf	fruit	root

6. The characteristics of two living things are shown in the table.

Characteristics	Living things	
	D	E
Reproduces by spores	No	Yes
Makes its own food	Yes	Yes

What are living things, D and E?

	D	E
(1)	sunflower plant	moss
(2)	moss	sunflower plant
(3)	sunflower plant	mushroom
(4)	mushroom	moss

7. The diagram shows two plants growing in the ecogarden.



Bird's nest fern




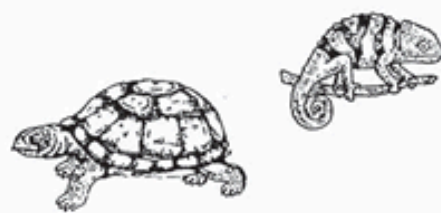
Brinjal plant

Which of the following two statements are correct?

- A Both plants have roots.
- B Both plants are non-flowering.
- C Both plants reproduce by seeds.
- D Both plants can make their own food.

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

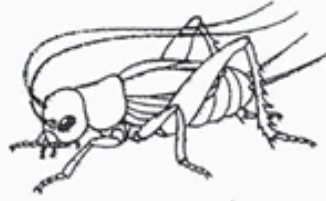
8. Study the two groups of living things, W and X.

Group W	Group X
	

Which of the following correctly identifies groups W and X?

	Covered with hair	Covered with scales	Lay eggs	Give birth to their young
(1)	W	X	W	X
(2)	W	X	X	W
(3)	X	W	W	X
(4)	X	W	X	W

9. The picture shows an animal.

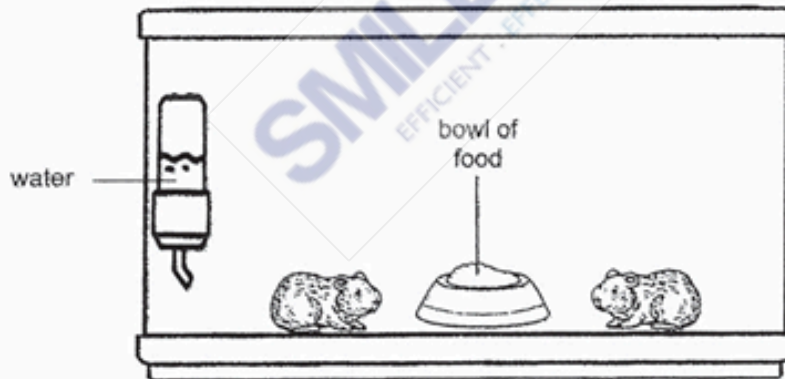


It belongs to a particular animal group. Which of the following characteristic(s) is/are special to its animal group, but not to others?

- A They lay eggs.
- B They have six legs.
- C They have three body parts.

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

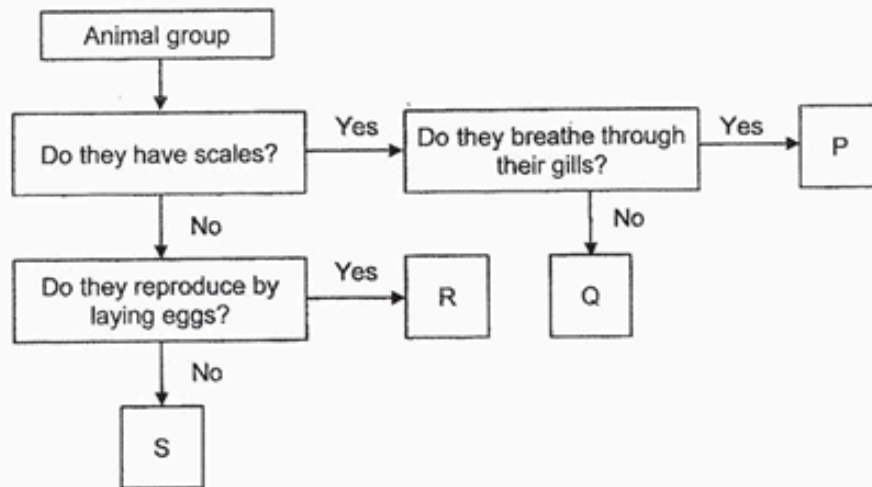
10. Harry placed two hamsters in a sealed glass container as shown in the diagram.



Both hamsters died after a day because the container did not have enough

- (1) air
- (2) food
- (3) water
- (4) space

11. Study the flowchart.



Which of the following best represents P, Q, R and S?

	P	Q	R	S
(1)	reptile	bird	fish	mammal
(2)	bird	fish	reptile	insect
(3)	reptile	insect	bird	mammal
(4)	fish	reptile	insect	mammal

12. Two identical slices of bread were left on a dining table for five days. One of the slices of bread was toasted.



toasted slice of bread



untoasted slice of bread

Why were there no black patches on the toasted slice of bread?

- (1) It was exposed to the air.
- (2) It did not receive any light.
- (3) It did not have enough moisture.
- (4) It was warmer than the untoasted slice of bread.

13. The diagram shows bacteria as seen under a microscope.



Which of the following statements describes bacteria **wrongly**?

- (1) Bacteria are fungi.
- (2) Bacteria are microorganisms.
- (3) Bacteria come in different shapes and sizes.
- (4) Bacteria can be useful or harmful to living things.

14. Which of the following **two** statements describe how some fungi or bacteria can be useful to human beings?

- A They are used to make bread.
- B They grow in the corners of buildings.
- C They grow on food like fruits and vegetables.
- D They are added to milk to make cheese and yoghurt.

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

15. Study the diagrams of the two living things.



mushroom



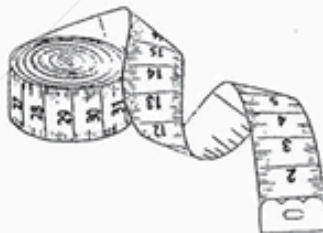
fern

What are their similar characteristics?

- A They reproduce from spores.
- B They each have a stalk and gills.
- C They respond to changes around them.
- D They feed on living things that may be dead or alive.

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

16. The diagram shows a measuring tape used by tailors.



Which property makes it suitable for measuring your waist?

- (1) It is strong.
- (2) It is flexible.
- (3) It is opaque.
- (4) It is waterproof.

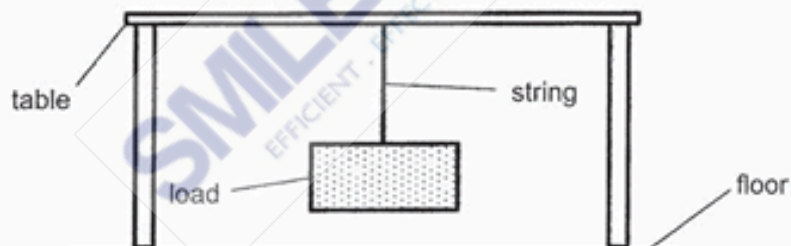
17. Old car tyres are tied together to form a wall along a racing track. This helps to protect spectators and drivers when accidents happen.



Which properties of the old car tyres help to ensure the safety of the spectators and drivers?

- (1) They are strong and flexible.
- (2) They are waterproof and flexible.
- (3) They are transparent and waterproof.
- (4) They are strong and able to float on water.

18. Riley carried out an experiment using the set-up shown.

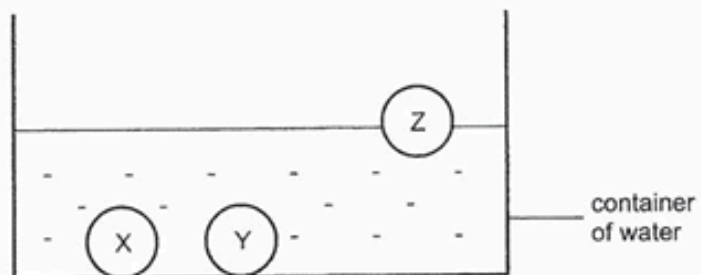


She increased the weight of the load until the string broke.

Riley wanted to find out how _____.

- (1) stiff the string was
- (2) heavy the load was
- (3) strong the string was
- (4) flexible the table was

19. Ruby placed three objects, X, Y and Z, made of different materials, into a container of water.

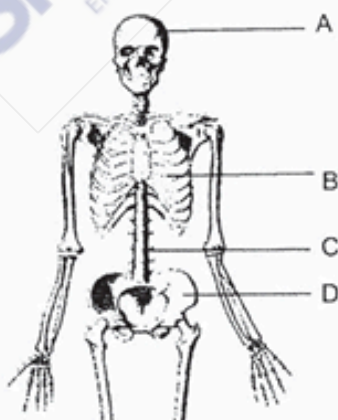


Based on the diagram only, which statement(s) is/are correct?

- A Object Z must be made of plastic.
- B Only objects X and Y sink in water.
- C Object Y must be heavier than object Z.

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

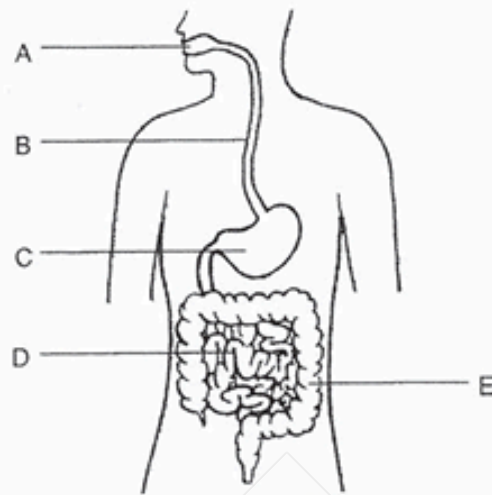
20. The diagram shows parts of the human skeletal system.



Which part, A, B, C or D, protects our brain?

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

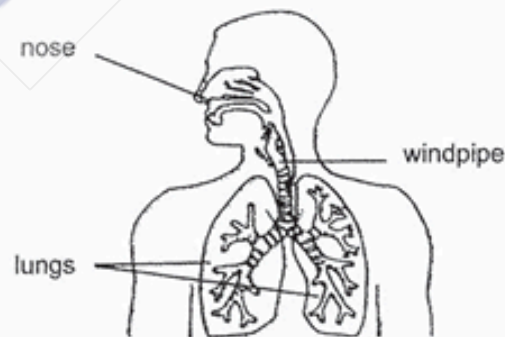
21. The diagram shows the human digestive system.



Which parts, A, B, C, D and E, do not produce digestive juices?

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

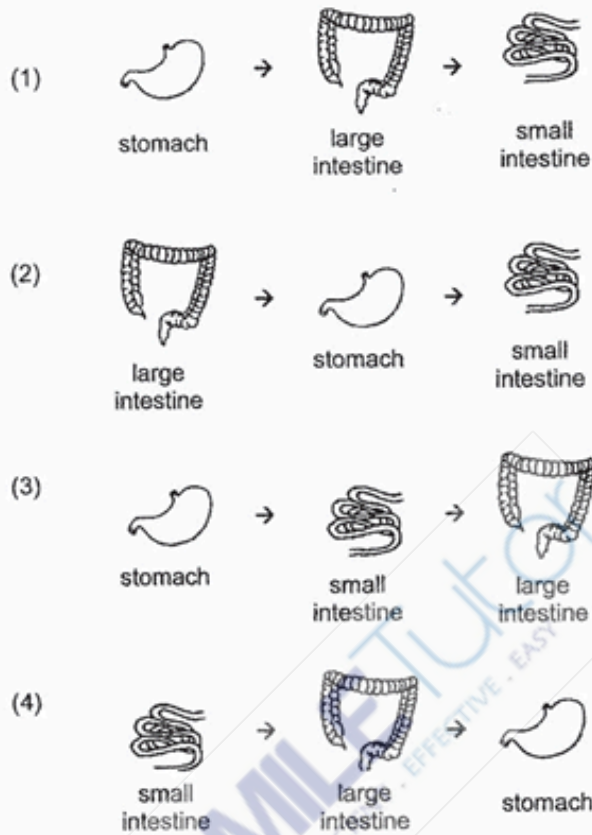
22. The diagram shows the human respiratory system.



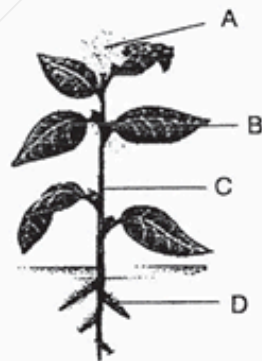
Which of the following is the function of the system?

- (1) Protects the organs in the body
- (2) Carries oxygen in the blood to all parts of the body
- (3) Absorbs simple substances to be used by the body
- (4) Takes air into the body and remove air from the body

23. Which of the following shows the correct order of how food moves through some parts of the human digestive system?



24. The diagram shows a plant.



Which part of the plant, A, B, C or D, helps support the plant?

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

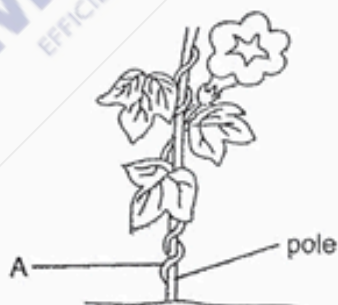
25. The table shows statements made by three students, A, B and C, on what happens to food in the small intestine and the large intestine when food passes through them.

Student	What happens to food in the	
	Small intestine	Large intestine
A	Food is chewed into smaller pieces	Food is completely digested
B	Food is completely digested	Water is removed from the undigested food
C	It passes digested food to the large intestine for further digestion	Undigested food is removed from the body

Which student(s) is/are correct?

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

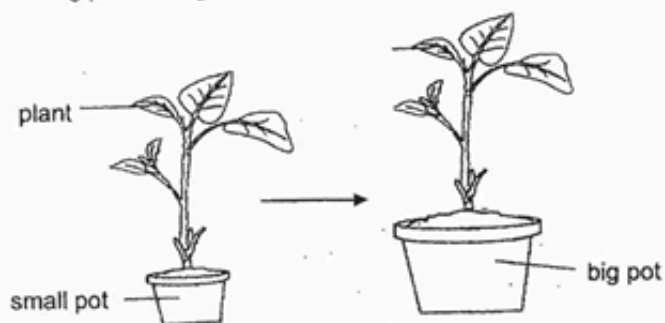
26. The diagram shows a plant growing around a pole.



What is the function of part A?

- (1) It anchors the plant firmly to the soil.
- (2) It traps light to make food for the plant.
- (3) It supports the leaves to receive more light.
- (4) It absorbs water and mineral salts from the soil.

27. Mrs Lim pulled out a healthy plant from a small pot and transferred it to a big pot. She placed the big pot in the garden and watered it daily.



Which of the following explains why the plant died after a few days?

- (1) The plant has too few leaves.
- (2) The roots have been damaged.
- (3) The bigger pot has too much soil.
- (4) The plant had no flowers to reproduce.

28. The diagram shows a plant.



Which of the following two statements are true about part Y?

- A It has veins.
- B It has a stalk to support the plant.
- C It absorbs water and mineral salts from the soil.
- D It has tiny openings that take in and give out gases.

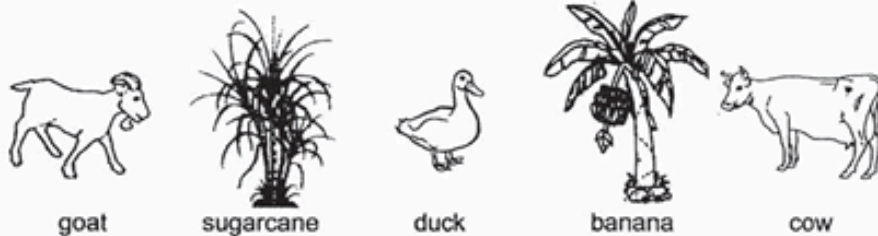
- (1) A and B
- (2) A and D
- (3) B and C
- (4) C and D

For questions 29 to 41, write your answers in this booklet.

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

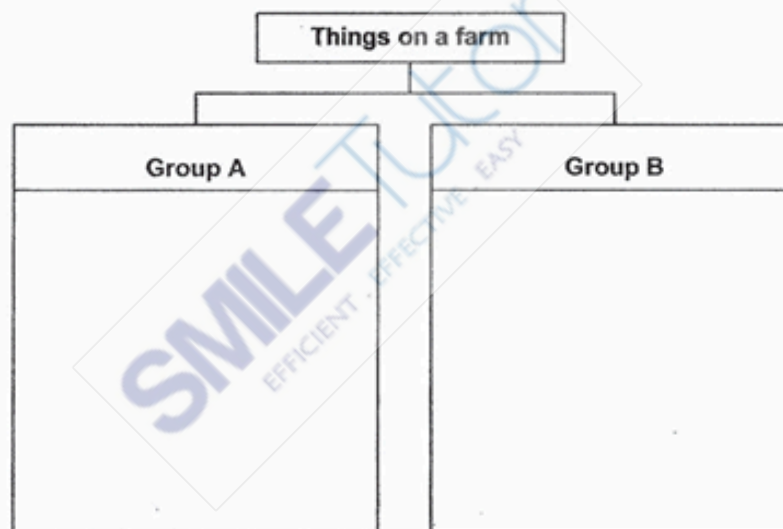
(44 marks)

29. The following things can be found on a farm.



(a) Classify the things in the classification chart.

[1]



(b) Based on your classification, give a suitable sub-heading for each group.

[1]

Group A: _____

Group B: _____

(c) Which group, A or B, can apple tree be in?

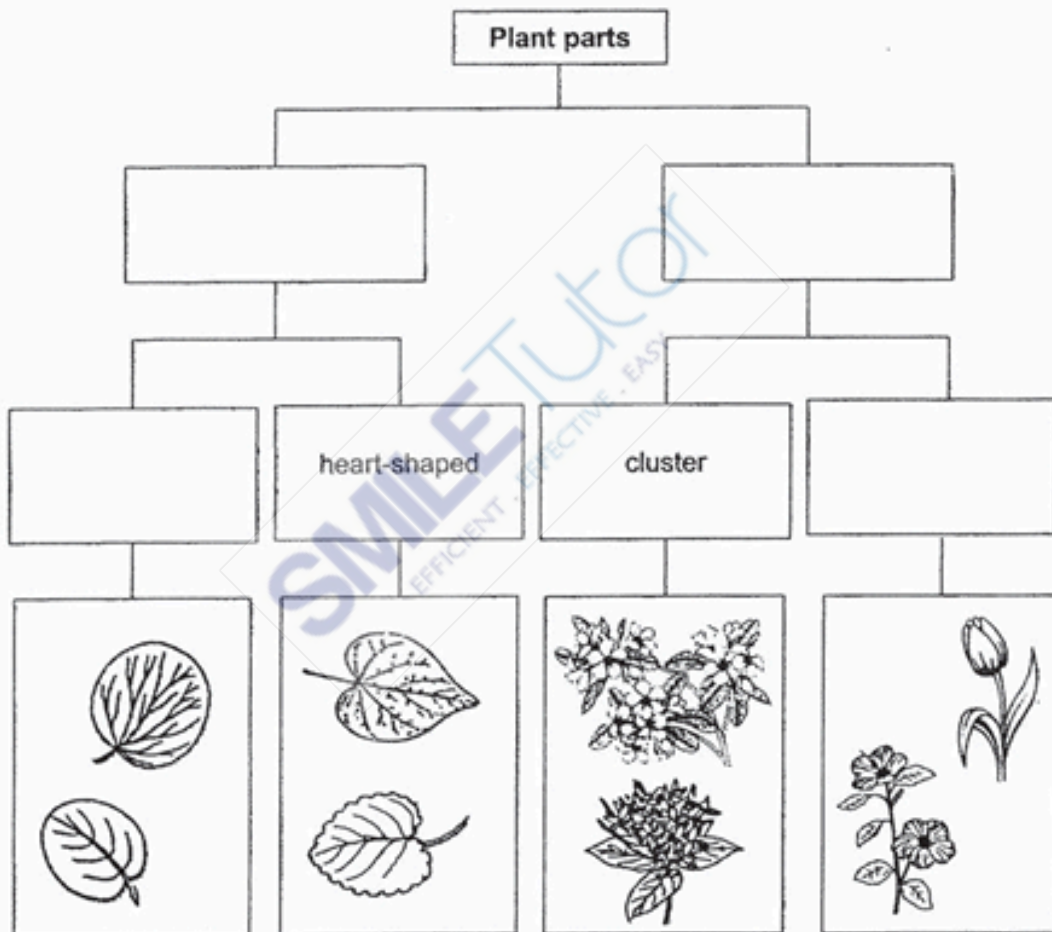
[1]

30. There are many kinds of plants in the ecogarden.

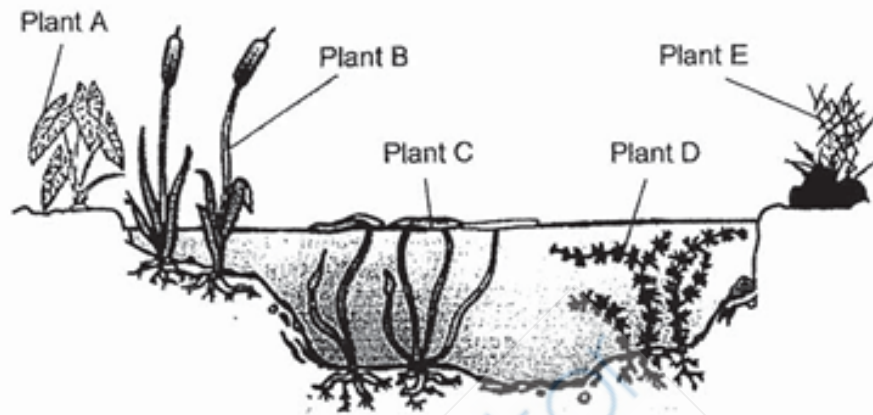
(a) Complete the classification chart by filling in the boxes with suitable words from the table.

[2]

singly	flowers	veins	palm-shaped
round	round-shaped	leaves	long



(b) The diagram shows different types of plants growing at the pond in the ecogarden.



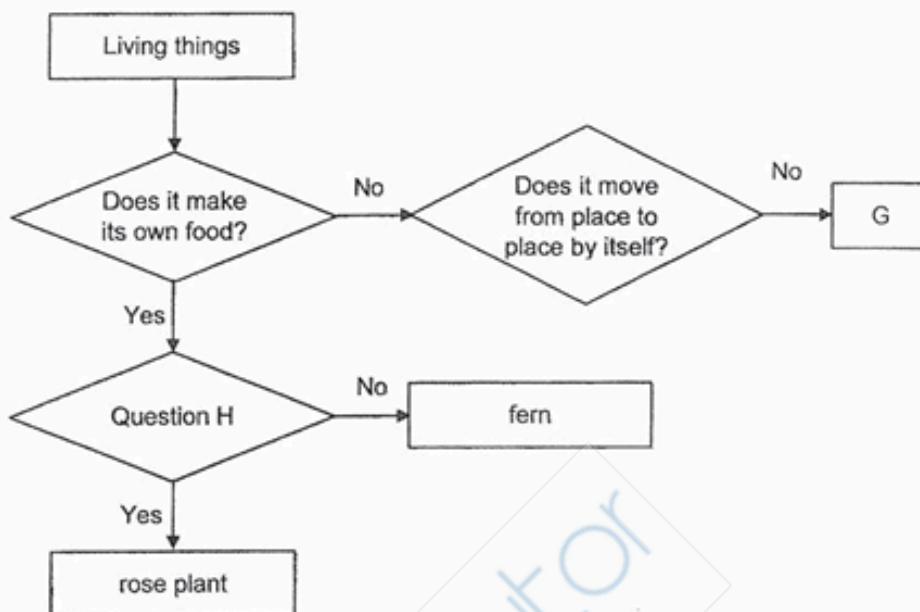
Suggest one way the plants can be classified into two groups.
Write the **sub-headings**.

[1]

Sub-heading 1: _____

Sub-heading 2: _____

31. Study the flowchart.



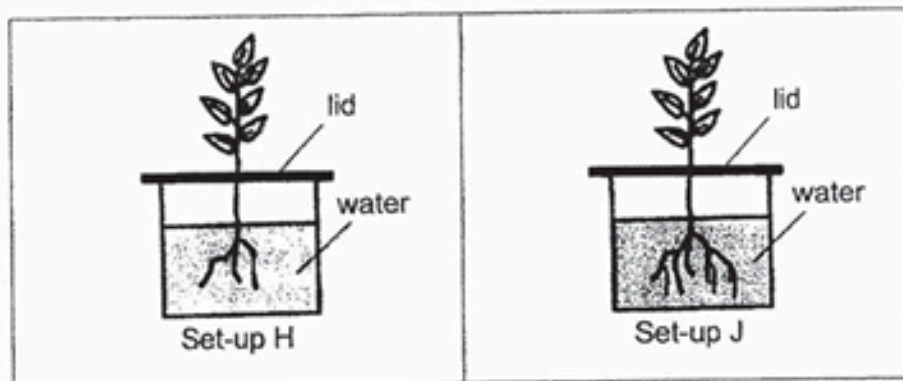
(a) Give an example of G. [1]

(b) What can Question H be? Tick (✓) the correct question in the table. [1]

Question	Tick (✓)
Does it have roots?	
Does it grow towards light?	
Does it reproduce by seeds?	

(c) Give a reason why some plants produce flowers only at certain times of the year. [1]

32. Donald placed two plants in identical beakers with equal amount of water as shown.



He measured the amount of water left in each beaker after a week.

- (a) State the aim of the experiment.

[1]

- (b) Which set-up, H or J, will have less amount of water left in the beaker after a week?

[1]

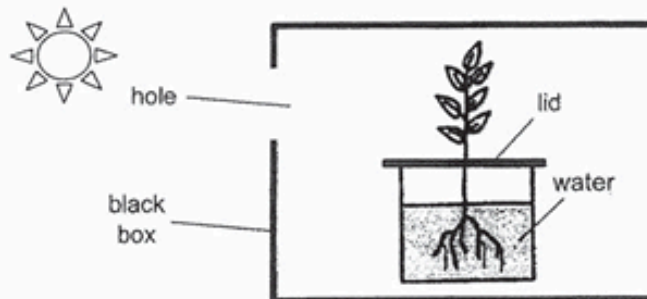
Set-up: _____

- (c) Donald carried out another experiment to find out if the number of leaves on a plant affects the amount of water that the roots take in. Tick (✓) the variable(s) that has/have to be kept the same for a fair test.

[1]

Variables	Tick (✓)
Type of beaker	
Amount of water	
Number of leaves on each plant	

- (d) Donald decided to put one of the set-ups in a black box with a hole as shown. He made sure the plant had enough water.



After a week, the plant grew towards the hole. Which characteristic of living thing does the plant show?

[1]

33. The diagram shows a bat and a chicken.



- (a) State the outer covering of the bat and the chicken.

[1]

Bat: _____

Chicken: _____

- (b) How are the bat and chicken similar? Tick (✓) the correct statement(s).

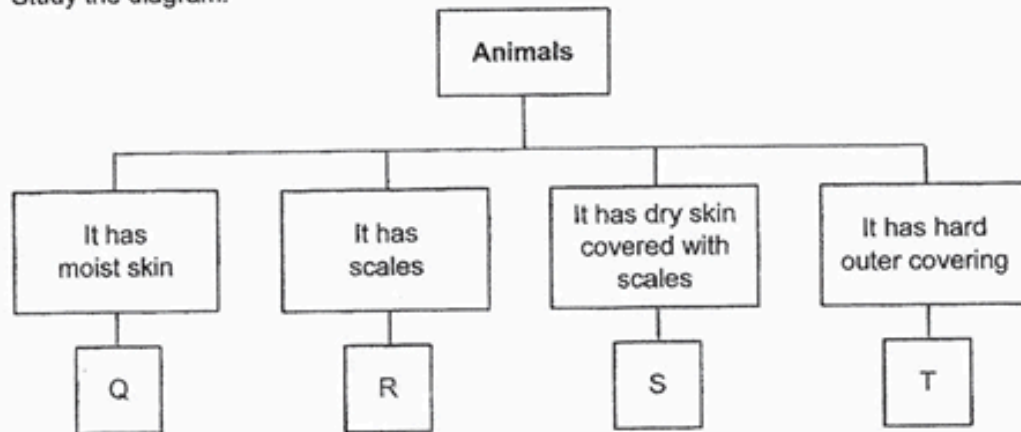
[1]

Statements	Tick (✓)
They have wings.	
They use their beaks to feed.	
Their outer coverings keep them warm.	

- (c) Name an animal that is in the same animal group as the bat.

[1]

34. Study the diagram.



- (a) Write letters, Q, R, S and T, in the boxes to match the outer covering to their animal groups. [2]

Fish

Insect

Reptile

Amphibian

- (b) Other than body covering, state a similarity and a difference between reptiles and amphibians. [2]

Similarity : _____

Difference : _____

35. Aliyah observed some white patches of substance W on her leather bag. Her father told her that substance W are living things.

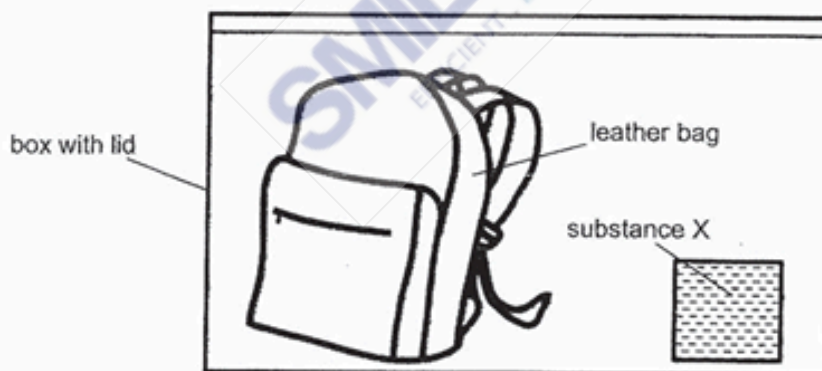


- (a) State the group of living things that the white patches of substance W belong to. [1]

(i) Group of living things: _____

- (b) Where do the white patches of substance W get their food from to survive? [1]

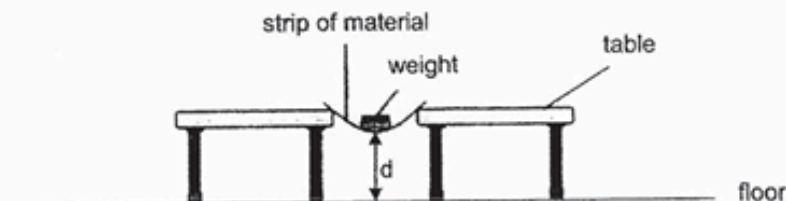
- (c) After cleaning the white patches on her bag, she placed the bag in a box together with substance X as shown. Substance X keeps the air in the box dry.



Give a reason why the white patches of substance W did not grow on the leather bag.

[1]

36. Umar placed a strip of material A across two tables as shown. He added a weight on the strip and measured the distance, d , from the floor to the bottom of the strip. He repeated the experiment with three identical strips that are made of different materials, B, C and D.



Umar recorded his results in the table as shown.

Material	Distance d (cm)
A	1
B	3
C	6
D	8

- (a) Name the property of the materials that Umar is testing.

[1]

A child car seat protects a child from injury during an accident. The seat belt prevents the child from falling out of the seat.



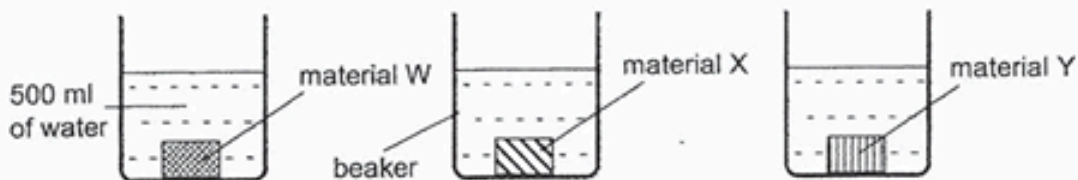
- (b) Which material, A, B, C or D, is most suitable to make the seat belt so that it is comfortable for the child to wear? Explain your answer based on the results using distance d .

[1]

- (c) The base of the car seat supports the weight of a child. State an important property of the base of the car seat.

[1]

37. Cameron wanted to find out which material is the most suitable to make the roof of his house. Three different materials, W, X and Y, of identical size, were placed into beakers, each containing 500 ml of water, as shown.



After 15 minutes, the materials were removed from the beakers at the same time and the amount of water left in each beaker was recorded in the table.

Material	Amount of water left in beaker (ml)
W	200
X	340
Y	140

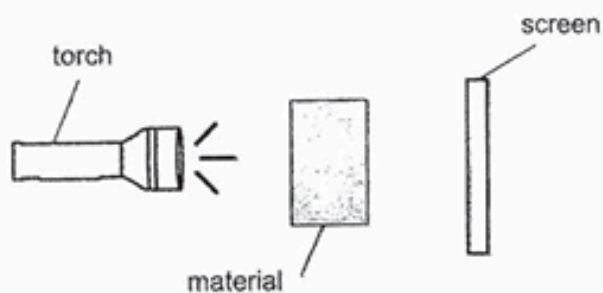
- (a) Based on the results, are any of the materials, W, X or Y, suitable to make a roof? Give a reason. [1]

- (b) Cameron repeated the experiment with another material, Z, of identical size. He found out that material Z is suitable to make a roof.

What should be the amount of water left in the beaker for him to make this conclusion? [1]

_____ ml

After the materials have completely dried, Cameron shone light using a torch on each material as shown.



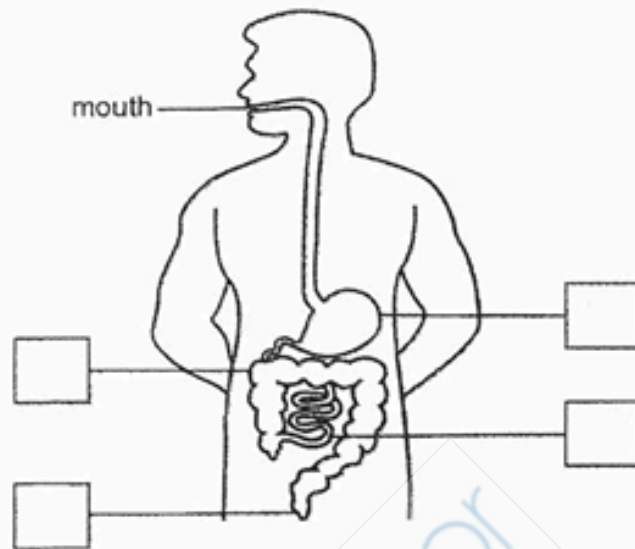
The table shows how much light can pass through the materials.

Material	How much light can pass through
W	Some light
X	Most light
Y	Some light
Z	No light

- (c) State the aim of his new experiment. [1]

- (d) Based on all the information in the question, give an example of material Z. [1]

38. The diagram shows an organ system.

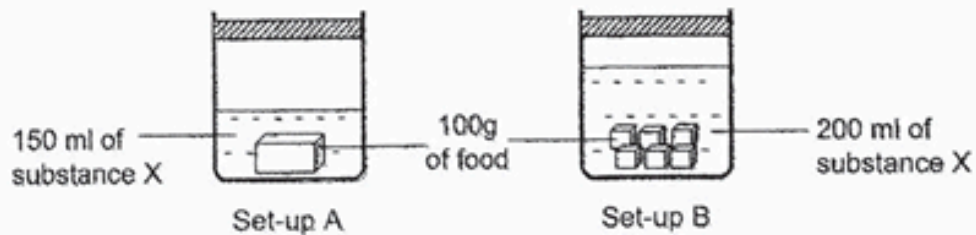


(a) Tick (✓) the correct box, in the diagram above, the part where undigested food is removed from the body as waste. [1]

(b) How does saliva help in the digestion of food? [1]

(c) Name the organ system that works with the above system to carry digested food to all parts of the body. [1]

39. Ayra wanted to find out how the size of food affects how fast the food is digested. She prepared set-ups A and B as shown. Each set-up contains the same amount of food that are of different sizes. Substance X helps in the digestion of food.



Ayra's teacher said that her experiment is not a fair test.

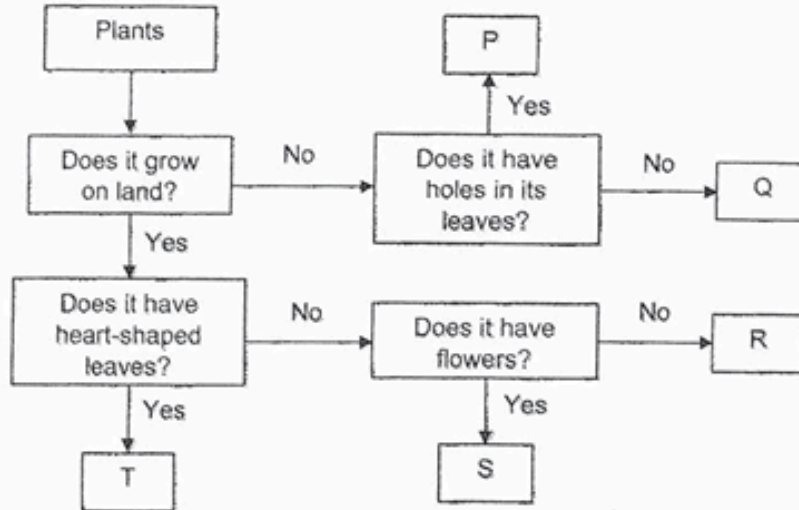
- (a) Give a reason why Ayra's experiment is not a fair test. [1]

- (b) Ayra made a change to her experiment to make it a fair test that tests her aim. What change did she make? [1]

- (c) In which set-up, A or B, will the food be completely digested first? Give a reason. [1]

- (d) What happens to the completely digested food in the small intestine? [1]



40. Study the flowchart carefully.



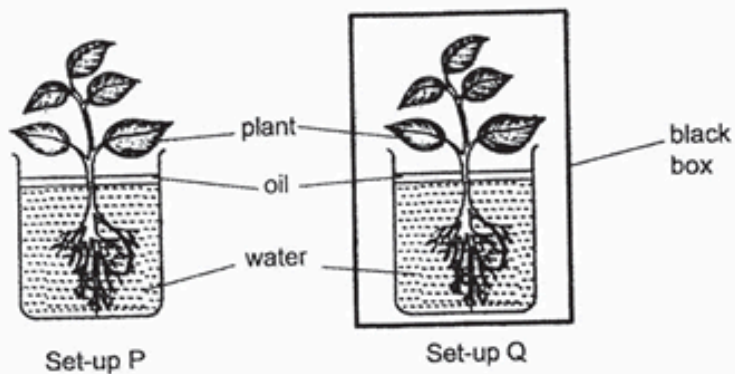
(a) Based on the flowchart, state the difference between plant Q and plant T. [1]

(b) State all the characteristics of plant P. [1]

(c) Based on the flowchart, which plants, P, Q, R, S or T, represent the plants in the table? [1]

	
Plant _____	Plant _____

41. Brayen conducted an experiment using set-ups P and Q as shown. He placed the same amount of water and an identical plant into each of the beakers. The plant in set-up Q is placed in a black box. The set-ups were left in the ecogarden for three days.



- (a) Explain why the plant in set-up Q died after three days. [1]
- _____
- _____
- (b) The plant in set-up P became taller and had more leaves. State the characteristic of living things shown by the plant. [1]
- _____
- (c) Brayen wanted to conduct another experiment to find out if the presence of water affects the growth of a plant. Which two changes must he make to set-up Q to test his new aim? [1]
- Change 1: _____
- Change 2: _____
- (d) State the part of the plant that has a similar function as the human skeletal system. [1]
- _____

ANSWER SHEET

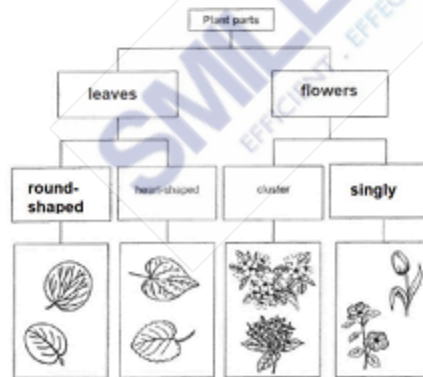
SECTION A

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

BOOKLET B

- Q29. (a) Group A: Goat, Duck, Cow
 Group B: Sugarcane, Banana
- (b) Group A: Animals
 Group B: Plants
- (c) Group B

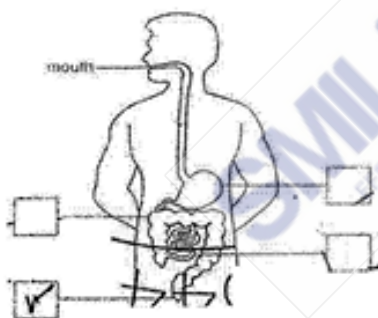
Q30. (a)



- (b) Sub-heading 1: Lives in water
Sub-heading 2: Lives on land
- Q31. (a) Mushroom
- (b) Does it reproduce by seeds? ✓
- (c) Some plants need the right conditions to produce flowers.
- Q32. (a) The aim of the experiment is to find whether the number of roots affect the amount of water absorbed by the plant.
- (b) Set-up: J
- (c) Type of beaker ✓
Amount of water ✓
- (d) This shows that living things respond to changes around them.
- Q33. (a) Bat: Hair
Chicken: Feathers
- (b) They have wings. ✓
The outer coverings keep them warm. ✓
- (c) Elephant (or any other mammal)
- Q34. (a) Fish → R
Insect → T
Reptile → S
Amphibian → Q
- (b) Similarity: Both reptiles and amphibians lay eggs.
Difference: Reptiles breathe through their lungs while amphibians breathe through their skin and lungs.
- Q35. (a) (i) Fungi
- (b) From the leather bag

(c) Substance W requires moisture to grow and since substance X keeps the air in the box dry, white patches of substance W did not grow on the leather bag.

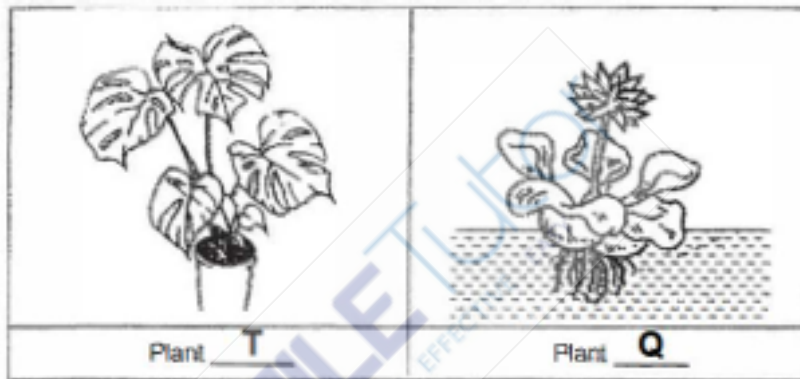
- Q36. (a) Flexibility
(b) Material A. The distance d is the shortest, thus material A is the most flexible, allowing it to be adjusted to a more comfortable position.
(c) It must be strong.
- Q37. (a) None of the materials are suitable to make a roof as they absorb water and hence not waterproof.
(b) 500 ml
(c) The aim of the new experiment is to find out which material is transparent and allows all light to pass through.
(d) Metal
- Q38. (a)



- (b) Saliva contains digestive juices.
(c) Circulatory system.
- Q39. (a) There is more substance X in set-up B than in set-up A.
(b) Increase the amount of substance X in set-up A to 200ml / Decrease the amount of substance X in set-up B to 150ml to make it a fair test.
(c) Set-up B. There is more exposed surface area in the food than in set-up A.

(d) The completely digested food passes through the small intestine and get absorbed into the circulatory system, which is then transported to other parts of the body.

- Q40. (a) Plant T grows in land while plant Q grows in water.
(b) Plant P does not grow on land but has holes in its leaves.
(c)

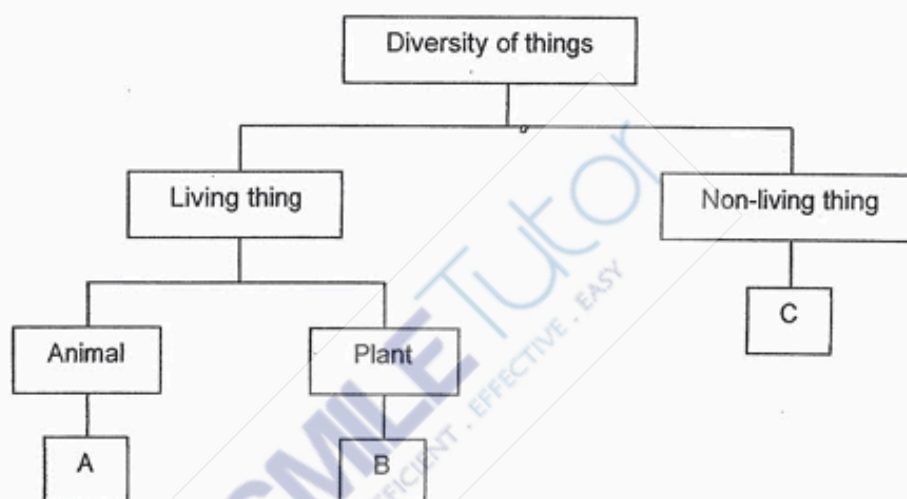


- Q41. (a) There was not enough air for the plant to make food.
(b) Living things grow.
(c) Change 1: Remove the box
Change 2: Remove water
(d) Stem

ANGLO-CHINESE SCHOOL (PRIMARY) SA2 PAPER

For each question from 1 to 22, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet. (44 marks)

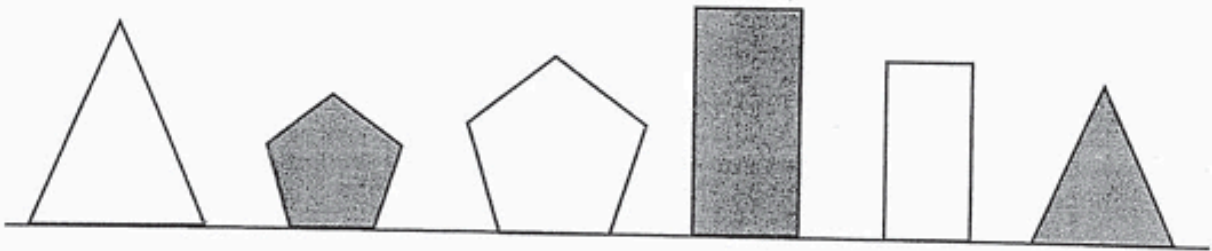
- 1 The classification chart shows how three things are grouped.



Which of the following is correct?

	A	B	C
(1)	Fish	Mushroom	Clock
(2)	Snail	Fan	Magnet
(3)	Moss	Rose	Spoon
(4)	Snake	Fern	Cup

2 Study the six objects carefully.



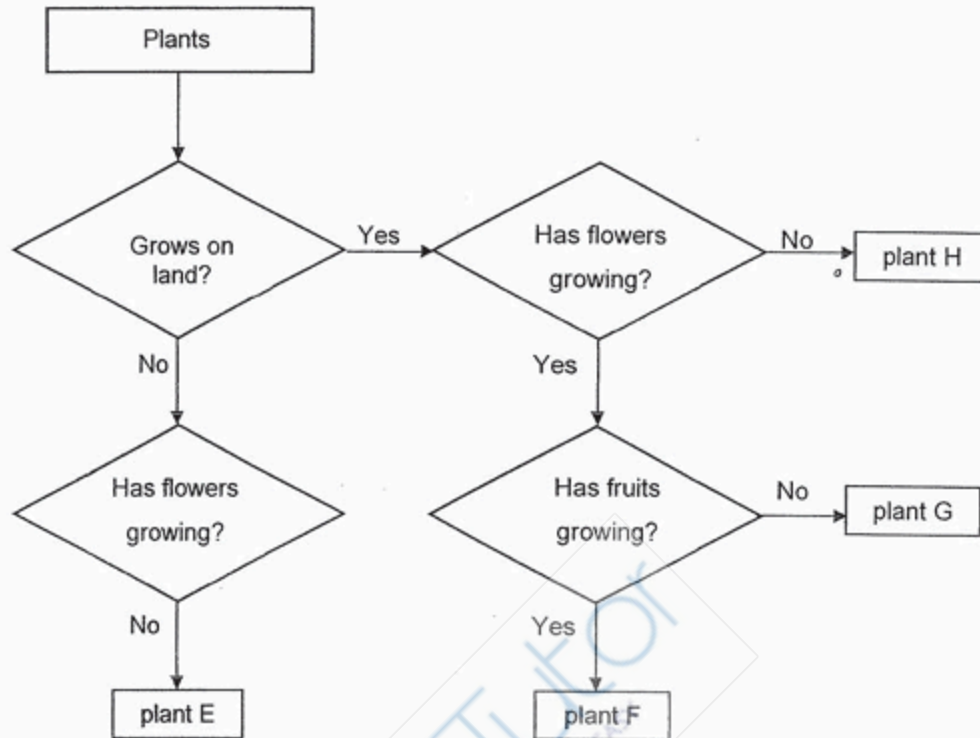
Tom can classify them based on the following characteristics:

- A Shape
- B Colour
- C Number of sides

Which of the following characteristic(s) should he use if he wants to classify the objects into two groups only?

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

3 The chart shows the characteristics of plants E, F, G and H.

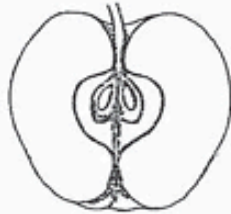


Based on the chart above, which plant, E, F, G or H, correctly identifies the plant shown below?



- (1) Plant E
- (2) Plant F
- (3) Plant G
- (4) Plant H

- 4 The diagram shows two types of fruits that are cut into half.



Based on the diagrams above, how are the fruits similar?

- (1) They are sweet.
 - (2) They contain seeds.
 - (3) They come from ferns.
 - (4) They develop from leaves.
- 5 The table shows some characteristics of two animals A and B.

Animal	Characteristics
A	Has three body parts
B	Has feathers as body covering

Based on the information given in the table above, which of the following is correct?

	A	B
(1)	mammal	bird
(2)	insect	mammal
(3)	insect	bird
(4)	mammal	insect

6 Which of the following group of animal gives birth to their young?

- (1) Bird
- (2) Reptile
- (3) Mammal
- (4) Amphibian

7 Which of the following statements about bacteria is correct?

- (1) All bacteria are harmful.
- (2) Bacteria come in different shapes.
- (3) All bacteria can be seen without a microscope.
- (4) Bacteria do not need air, food and water to survive.

8 The diagrams show a slice of fish meat placed in a warm, dark and moist place over a month.



What could the dark spots possibly be?

- (1) soil
- (2) mould
- (3) flowers
- (4) mushroom

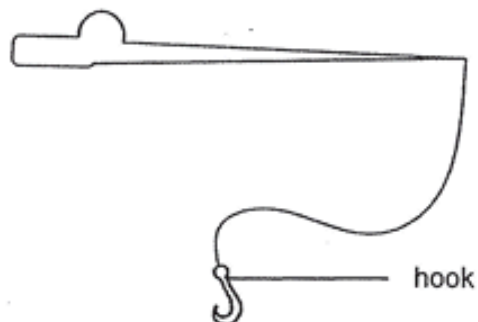
- 9 A person puts on a raincoat to keep himself dry in the rain.



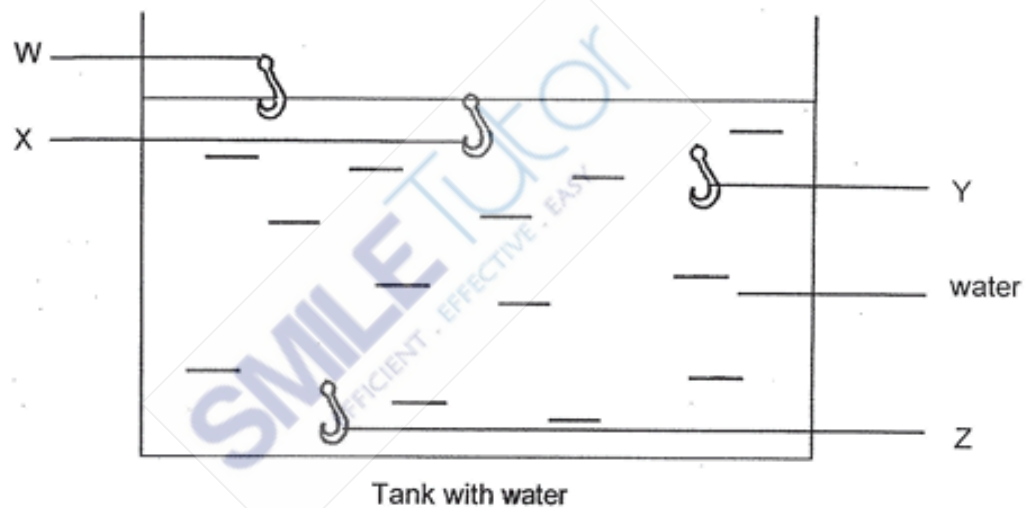
Based on the properties shown in the table, which material is most suitable for making a raincoat?

		Property	
	Material	Flexible	Waterproof
(1)	A	Yes	No
(2)	B	No	Yes
(3)	C	No	No
(4)	D	Yes	Yes

10 The diagram shows a fishing rod used to catch fishes.



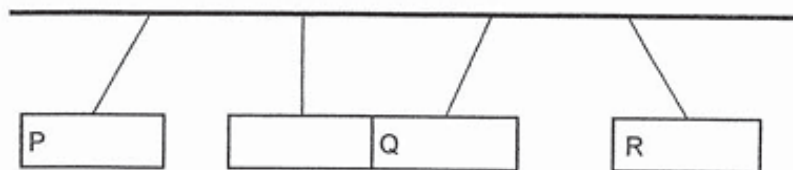
Oshen tested hooks made of different materials, W, X, Y and Z, in a tank of water.



Which material, W, X, Y or Z, is the most suitable to catch fishes found at the bottom of the sea?

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

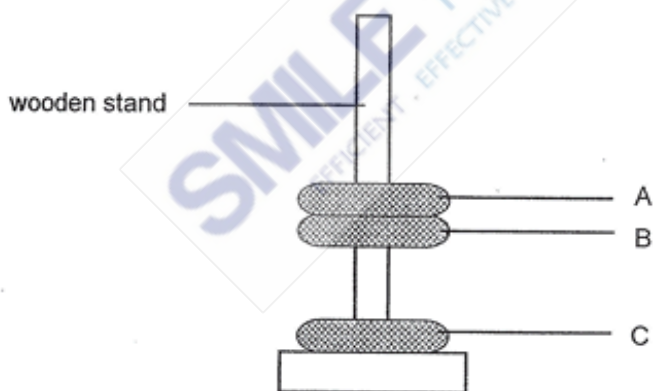
- 11 The diagram below shows three bar magnets suspended on strings. P, Q and R are poles of the magnets.



Which of the following are the poles P, Q and R?

	P	Q	R
(1)	South	North	South
(2)	South	South	North
(3)	North	South	South
(4)	North	North	North

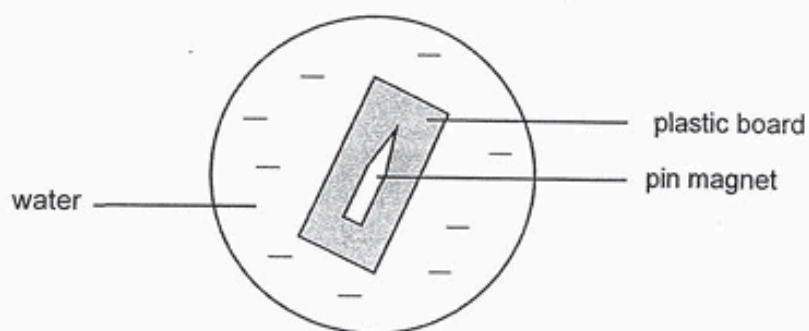
- 12 Lola has three discs made of different materials, A, B, and C as shown.















When the three discs are slotted through the wooden stand, which of the following conclusion can be made?

- (1) Object A is magnetic.
- (2) Both A and B are magnets.
- (3) Both B and C are magnets.
- (4) Object C can repel object A.

- 13 Sandeep placed a pin magnet on a plastic board and left them in water as shown. She repeated the experiment using pins (E, F, G and H). They are made of different materials.



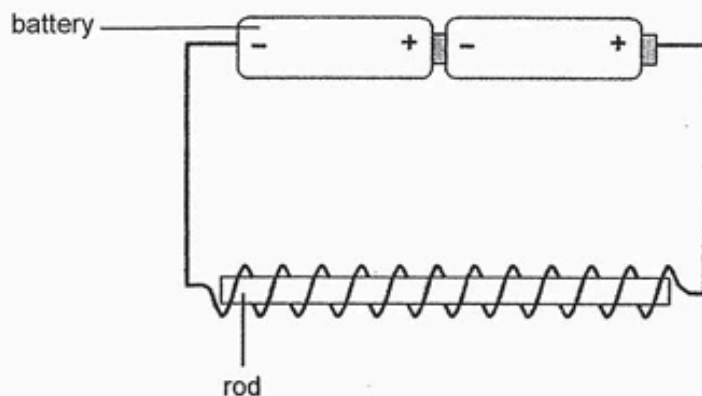
The following table shows the results of the final resting positions of the pin magnets for each trial.

Pin	E	F	G	H
Trial 1				
Trial 2				
Trial 3				

Based on the results, which pin(s) would most likely be found in compasses?

- (1) E only
- (2) F only
- (3) E and H only
- (4) F and G only

14 Shazam made a temporary magnet as shown.



He repeated the set-up with rods made of different materials, W, X, Y and Z. The number of iron nails they could attract is shown in the table below.

Rod	W	X	Y	Z
Number of iron nails attracted	10	5	0	7

Which rod would most likely be made of ceramic?

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

15 Which of the following methods would demagnetise a temporary magnet?

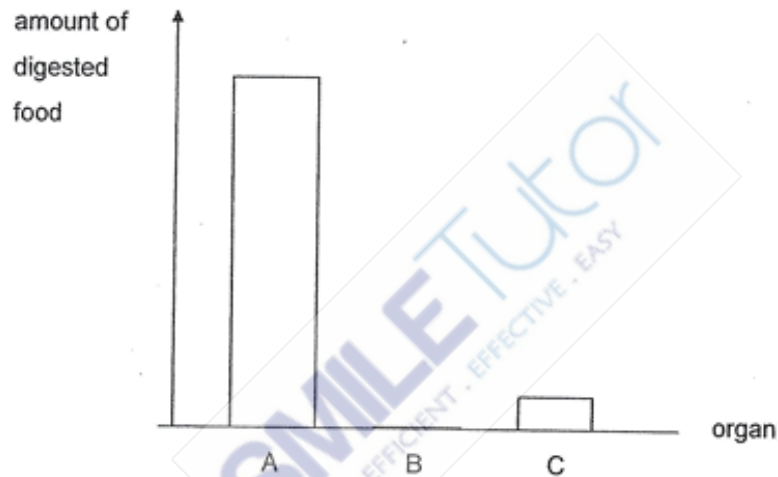
- A Drop it many times.
- B Put it on a ceramic plate.
- C Hit it many times with a hammer.
- D Stroke it many times in the same direction using a wooden spoon.

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

16 · Which object can be used to make into an electromagnet?

- (1) gloves
- (2) steel rod
- (3) silver coin
- (4) rubber band

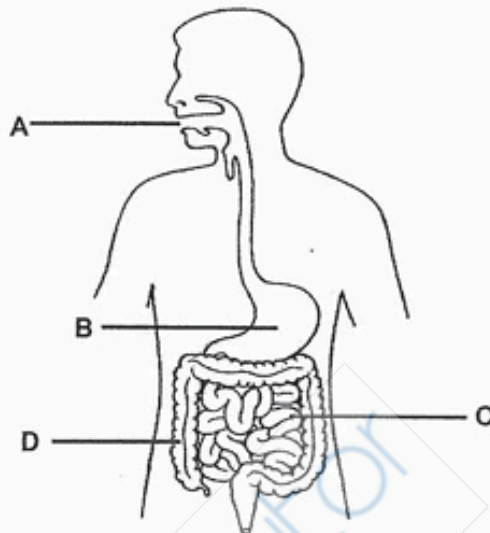
17 The graph shows the amount of digested food found in organs A, B and C, of the human digestive system.



Based on the information, which organs in the digestive system best represents A, B and C?

	A	B	C
(1)	small intestine	stomach	large intestine
(2)	small intestine	large intestine	mouth
(3)	stomach	small intestine	large intestine
(4)	stomach	small intestine	mouth

For questions 18 and 19, study the diagram of the human organ system.



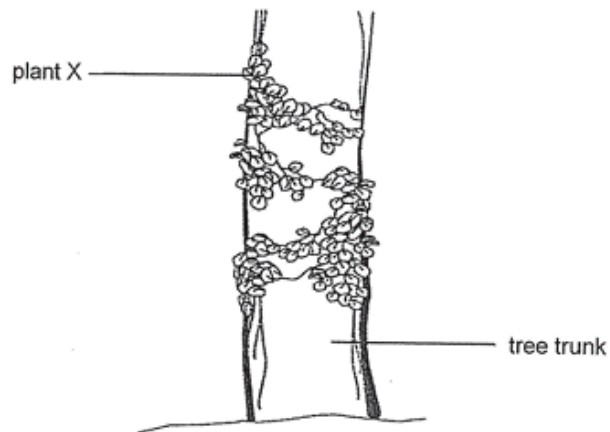
18 In which part of the human organ system is water absorbed from undigested food?

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

19 In which part of the human organ system does digestion of food start?

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

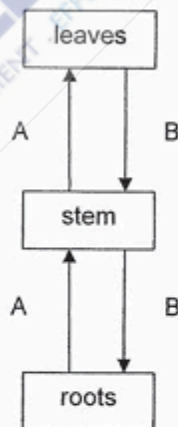
20 The diagram shows plant X growing on a tree trunk.



Based on the diagram only, which of the following can be concluded about plant X?

- (1) Plant X has a weak stem.
- (2) Plant X is a flowering plant.
- (3) Plant X is found in forests only.
- (4) Plant X does not need water to survive.

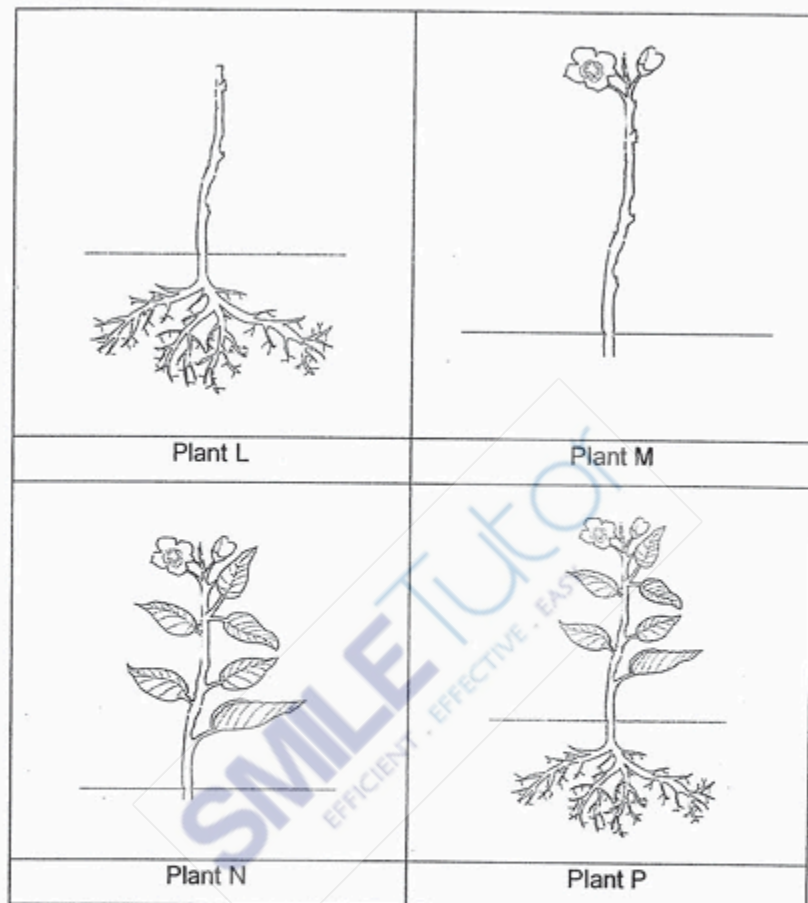
21 The diagram shows the transport of substances in a plant system.



Based on the diagram, what do A and B represent?

	A	B
(1)	water	minerals
(2)	food	water
(3)	minerals	food
(4)	water	sunlight

22 The diagrams show hibiscus plants with some of their parts removed.



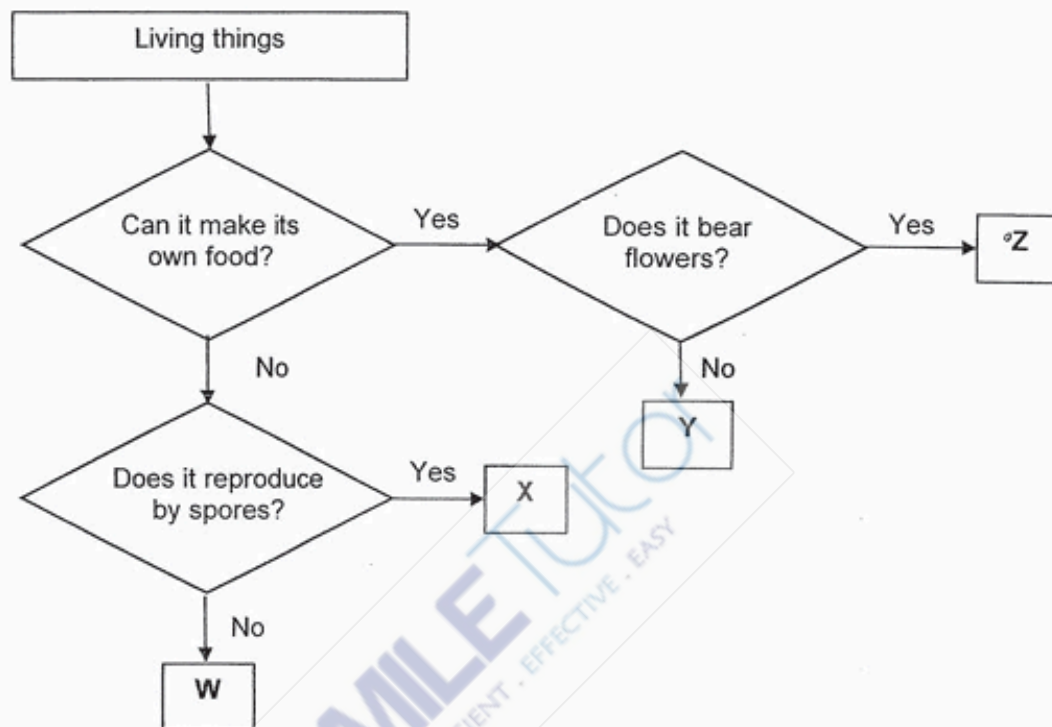
Three of the plants died after two weeks. Which plant is most likely to be healthy after two weeks?

- (1) Plant L
- (2) Plant M
- (3) Plant N
- (4) Plant P

For questions 23 to 32, write your answers in this booklet.

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

23 Study the flow chart as shown.



(a) Write the letter, W, X, Y or Z, that best represents the living things listed below. [3]

(i) Bird's nest fern: _____

(ii) Mushroom: _____

(iii) Durian tree: _____

(b) Based only on the flow chart above, state one difference between W and X. [1]

- 24 The characteristics of three animals are shown in the table.

Animal	Has feathers?	Gives birth to young?	Number of legs
Q	Yes	No	2
R	No	No	6
S	No	Yes	4

- (a) Based only on the table, state one similarity between animals Q and R. [1]

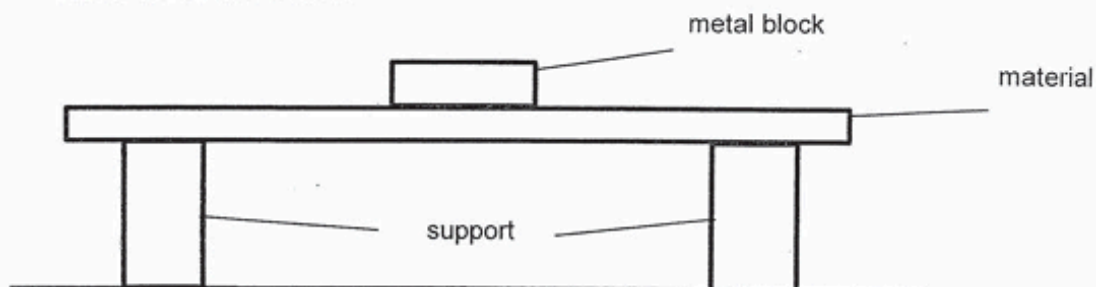
- (b) State the group of animals that animal R most likely belongs to. [1]

Study the picture of a living thing below.



- (c) Based only on observations from the picture, can this living thing be animal S? Give a reason. [2]

- 25 Ali tested three different materials, P, Q and R, by placing identical metal blocks, one by one, on the material as shown.



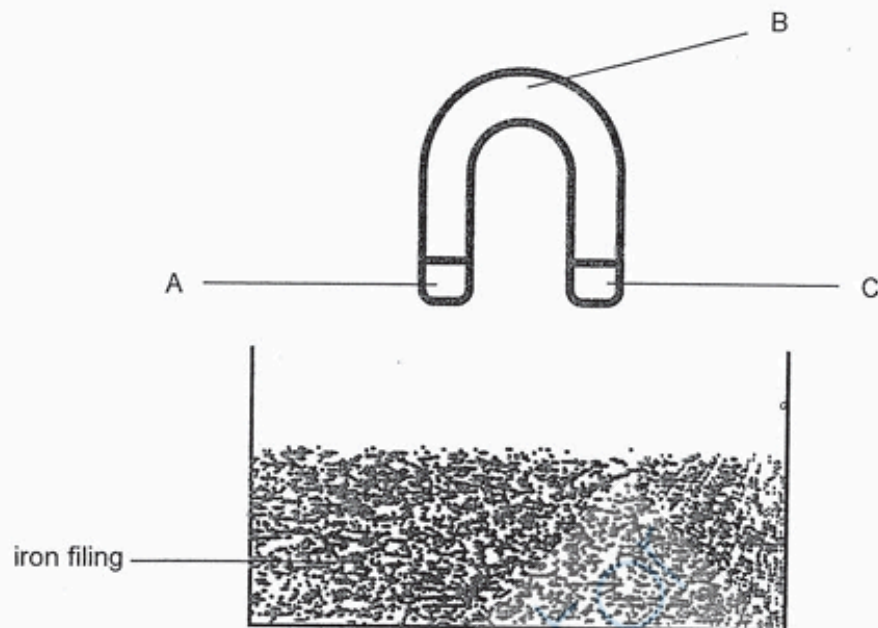
He recorded the number of metal blocks added to break each material below.

Material	Number of metal blocks added when material broke
P	2
Q	10
R	5

- (a) State the property of material that Ali was testing. [1]
- _____
- (b) Ali is as heavy as four metal blocks. Which material(s), P, Q or R, can he use to make a chair to sit on safely? [2]
- _____
- (c) Put a tick (✓) to show which variable(s) he needs to keep the same to ensure a fair test. [1]

Variable	To keep the same [tick (✓)]
Number of metal blocks	
Type of material	
Thickness of material	

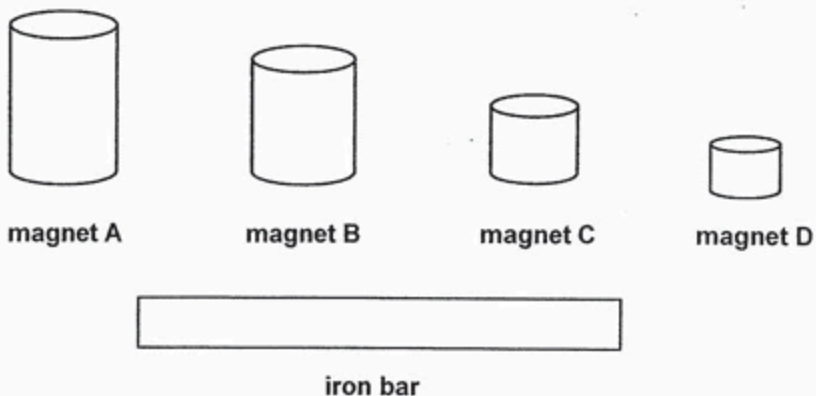
26 The magnet is immersed fully in a container of iron filing.



(a) Which part(s), A, B and/ or C, of the magnet will most iron filing be attracted to? [1]

(b) Which characteristic of magnets explains your answer in part (a)? [1]

- 27 Nicky has four magnets, A, B, C and D. She used them to stroke four identical iron bars for 30 times.



She recorded the number of pins each iron bar attracted in the table below.

Iron bar that was stroked with magnet	A	B	C	D
Number of pins attracted	16	12	10	15

- (a) Arrange the strength of magnets from strongest to weakest. [1]



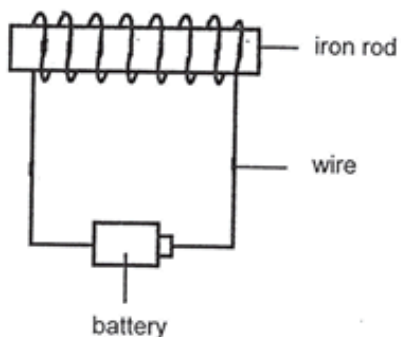
strongest
→
 weakest

- (b) Based on the results, what can you conclude about the size of magnets and their magnetic strength? [1]

- (c) Besides using a stronger magnet, suggest another way to increase the strength of a temporary magnet using the stroke method. [1]

- (d) Nicky replaced the iron bar with an aluminium one. Will the aluminium bar attract any pins after it is stroked by magnet A? Explain. [1]

- 28 Suresh wanted to make the iron rod into a temporary magnet as shown.



After each test, Suresh increased the number of coils of wire around the iron rod. He then tested his temporary magnet and recorded his observations in the table below.

Number of coils	Number of staples attracted
5	2
10	5
20	9
30	14

- (a) Name the method used to make the temporary magnet. [1]
- _____
- (b) Based on his results, state the number of staples attracted when there are 20 coils of wire around the iron rod. [1]
- _____
- (c) Based on his results, what is the relationship between the number of coils around the iron rod and the number of staples attracted? [1]
- _____
- _____
- (d) Suggest another way to increase the number of staples attracted to the temporary magnet. [1]
- _____

29 Study the diagrams of organ systems of the human body.



T



U

- (a) Name organ systems T and U. [2]

T : _____

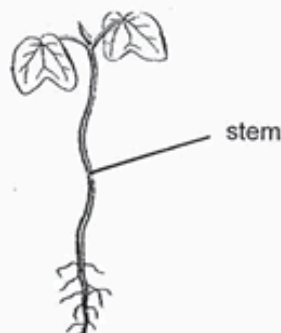
U : _____

- (b) Using a pencil and ruler, label the part in system U that protects the heart. [1]

- (c) Tick (✓) the correct statement that shows the similarity in functions between system U and the stem of a plant. [1]

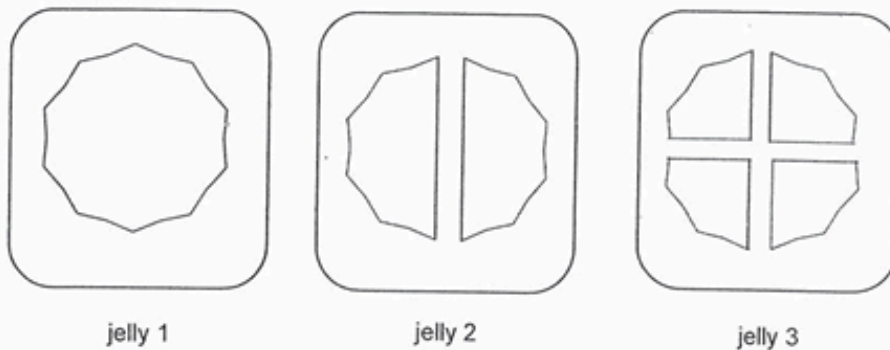


U



Function	Correct statement [tick (✓)]
Both work together with the muscular system.	
Both support and keep the living thing upright.	
Both absorb water to keep the living thing alive.	

- 30 Quinn prepared three trays of jellies of the same size. She cut each of the jellies differently as shown.



She added the same amount of digestive juices to each tray. After 24 hours, the jellies turned into watery substances. She measured the amount of watery substance formed and recorded the results.

Jelly	Amount of watery substance formed (ml)
1	1
2	3
3	6

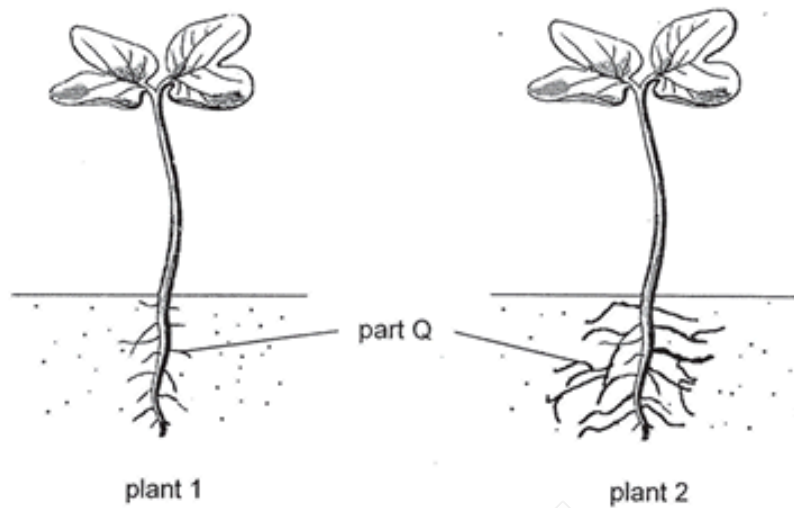
- (a) Tick (✓) the correct statement that shows the aim of this experiment. [1]

Aim of experiment	Correct statement [tick (✓)]
To find out the time taken for jellies to melt.	
To find out how breaking jellies into smaller pieces affects the speed of digestion.	
To find out how different brands of jellies affects the speed of digestion.	

- (b) Quinn repeated the experiment three times. Give a reason. [1]

- (c) Which part of the digestive system breaks food up into smaller pieces? [1]

31 The diagrams show two plants of the same kind.

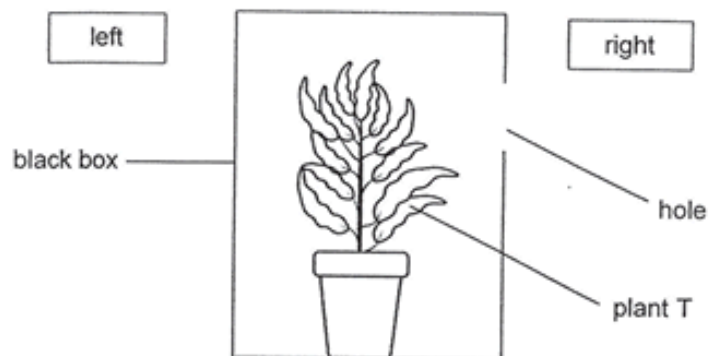


(a) Name part Q. [1]

(b) State a function of part Q. [1]

(c) Which plant will be more easily removed from the soil completely? Explain. [2]

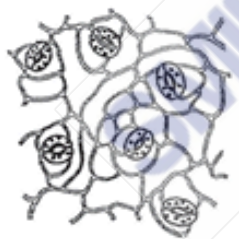
- 32 Frankie placed a potted plant T in a black box with a hole.



- (a) Predict which direction, left or right, the leaves of plant T will grow towards. [1]

- (b) Give a reason why the leaves grow in that direction. [1]

The diagrams show tiny openings of leaves under the microscope and an organ system of a human body.



tiny openings of leaves
under the microscope



organ system of a
human body

- (c) How are the tiny openings of leaves similar to the organ system of a human body? [1]

ANSWER SHEET


Booklet A

1	2	3	4	5	6	7	8	9	10	11
4	2	2	2	3	3	2	2	4	4	1
12	13	14	15	16	17	18	19	20	21	22
3	4	3	1	2	2	4	1	1	3	4

Booklet B

Qn/ Part Qn	Acceptable Answers
23 (a)	(i) Bird's nest fern: Y (ii) Mushroom: X (iii) Durian tree: Z
(b)	X reproduces by spores but W does not (reproduce by spores).
24 (a)	Both do not give birth to young.
(b)	Insect
(c)	No. The animal has 2 legs but animals S has 4 legs.

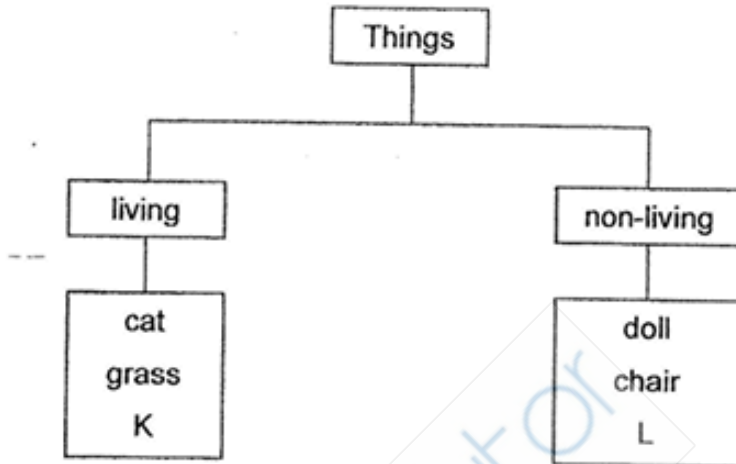
25 (a)	Strength								
(b)	Q and R.								
(c)	<table border="1"> <thead> <tr> <th data-bbox="326 432 634 506">Variable</th><th data-bbox="634 432 1360 506">Tick (✓) the variable(s) that should be kept the same</th></tr> </thead> <tbody> <tr> <td data-bbox="326 506 634 600">Number of metal blocks</td><td data-bbox="634 506 1360 600"></td></tr> <tr> <td data-bbox="326 600 634 695">Type of material</td><td data-bbox="634 600 1360 695"></td></tr> <tr> <td data-bbox="326 695 634 789">Thickness of material</td><td data-bbox="634 695 1360 789">✓</td></tr> </tbody> </table>	Variable	Tick (✓) the variable(s) that should be kept the same	Number of metal blocks		Type of material		Thickness of material	✓
Variable	Tick (✓) the variable(s) that should be kept the same								
Number of metal blocks									
Type of material									
Thickness of material	✓								
26 (a)	A and C								
(b)	Magnets are strongest at its poles.								
27 (a)	A, D, B, C								
(b)	The size of magnets has no relationship to the strength of their magnetism.								
(c)	<u>Stroke</u> the iron bar <u>more</u> times using a magnet.								
(d)	No. Aluminium is a <u>non-magnetic</u> material.								

28 (a)	Electrical method
(b)	9 / nine
(c)	As the number of coils (around the iron rod) increases, the number of staples attracted increases.
(d)	Increase the number of batteries.
29 (a)	T: muscular system U: skeletal system
(b)	 <p>Ribcage / rib</p>
(c)	<p>U</p> <p>Tick: Both support and keep the living thing upright.</p>

<p>30</p> <p>(a)</p> <p>(b)</p> <p>(c)</p>	<p>Tick: To find out whether breaking jellies into smaller pieces can affect digestion.</p> <p>To obtain <u>reliable</u> results.</p> <p>Teeth/ Mouth.</p>
<p>31</p> <p>(a)</p> <p>(b)</p> <p>(c)</p>	<p>Roots</p> <p>Hold / Anchor the plant (firmly) in the ground / soil.</p> <p>Plant 1. Plant 1 has less roots than Plant 2 to hold the plant in the ground.</p>
<p>32</p> <p>(a)</p> <p>(b)</p> <p>(c)</p>	<p>Right.</p> <p>Leaves need (sun)light to make food so the plant grew towards the light.</p> <p>Both functions to exchange gases / air.</p> <p>Both take in and give out air / gases.</p> <p>Both functions to respire.</p> <p>Both breathes.</p>

CATHOLIC HIGH SCHOOL EOY PAPER

1 Study the diagram.

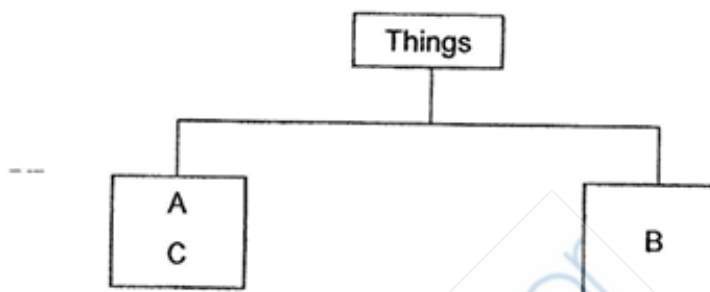


Which of the following best represents K and L?

	K	L
(1)	bird	nail
(2)	balloon	table
(3)	butterfly	fish
(4)	aeroplane	tree

- 2 The table shows the characteristics of three things, A, B and C. A tick (✓) in the box shows the characteristic the thing has.

Thing	Can make its own food	Needs air to survive	Responds when touched
A		✓	✓
B			✓
C	✓	✓	✓



Which of the following is correct?

	A	B	C
(1)	toy	ant	plant
(2)	ant	plant	toy
(3)	ant	toy	plant
(4)	plant	ant	toy

- 3 Three children made the following statements about ferns.

Ann Ferns reproduce from spores.

Bob Ferns are not plants as they do not reproduce from seeds.

Cain Ferns obtain their food from the living or non-living things that they grow on.

Who made the correct statement(s)?

Ann only

Bob only

Ann and Cain only

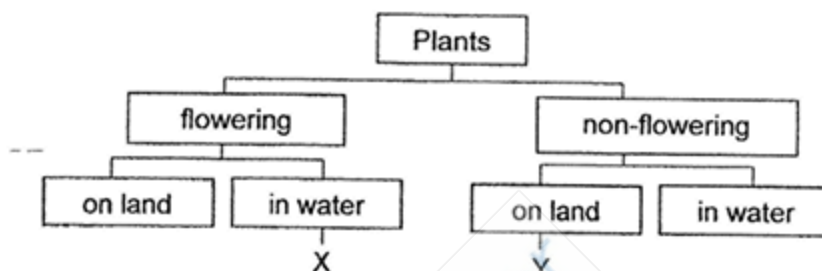
Bob and Cain only

- 4 The table shows the characteristics of two plants, X and Y. A tick (✓) in the box shows the characteristic the plant has.

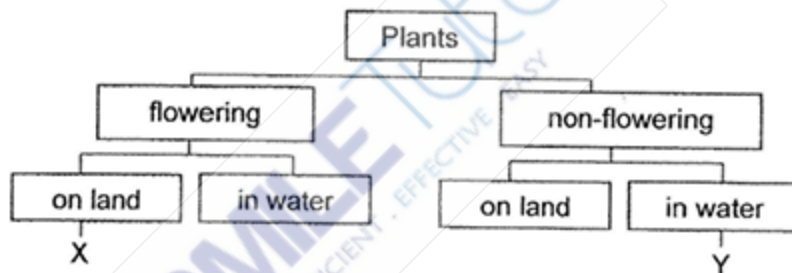
Characteristics	Plant X	Plant Y
bears flowers and fruits	✓	✓
grows on land		✓

Based on the information above, which diagram shows the correct classification of plants X and Y?

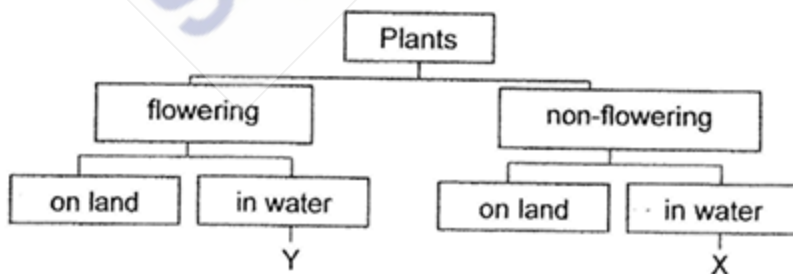
(1)



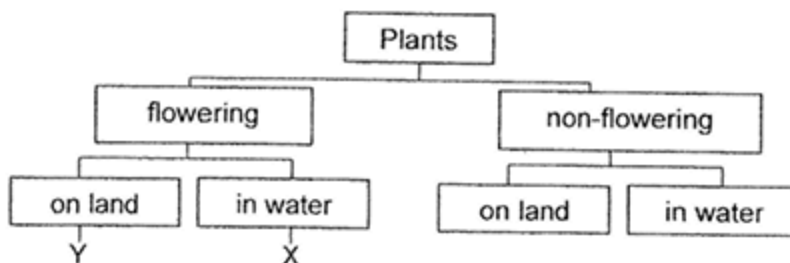
(2)



(3)



(4)



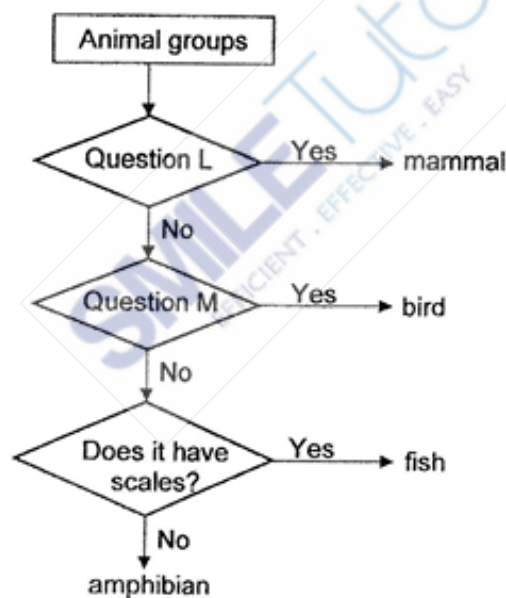
5 Study the animals, A, B, C and D.



Which animal is an insect?

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

6 The diagram shows the characteristics of four groups of animals.



Which of the following represents questions L and M?

	L	M
(1)	Does it grow?	Does it reproduce?
(2)	Does it have hair?	Does it have feathers?
(3)	Does it have wings?	Does it lay eggs?
(4)	Does it have lungs?	Does it have legs?

7 Which statements about bacteria is/are correct?

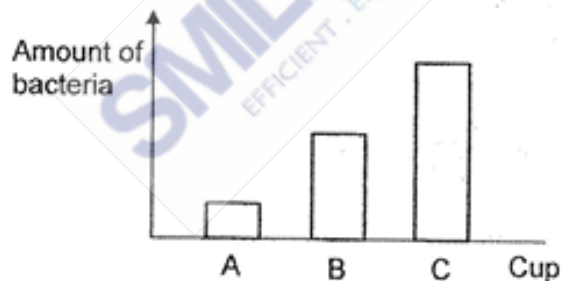
- A Bacteria can reproduce.
- B Bacteria are microorganisms.
- C Bacteria cannot grow in water.
- D Bacteria in our bodies are harmful.

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

8 Ali had three similar cups of milk placed in different places for two days.



The amount of bacteria in each cup was recorded as shown.

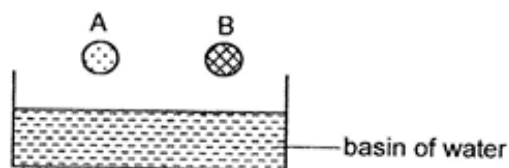


Based on the results, what can Ali conclude about the bacteria?

Bacteria grow well _____.

- (1) in milk
- (2) without air
- (3) in warm places
- (4) without sunlight

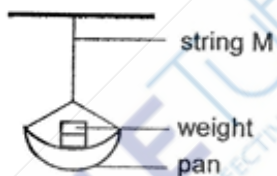
- 9 Meiling had two balls, A and B, made of different materials. She dropped both balls into a basin of water.



Which property of the material was Meiling testing?

- (1) strength
 - (2) flexibility
 - (3) ability to float or sink
 - (4) ability to allow light to pass through
- (3)

- 10 Rani wanted to find out the strength of four strings, M, N, P and Q, made of different materials. She tied a pan at the end of string M.



She placed some weights, one at a time, onto the pan until string M broke. She repeated the experiment with strings, N, P and Q, and recorded the results in the table.

String	Number of weights the string could hold until it broke
M	4
N	10
P	6
Q	12

Based on the results, which statement is correct?

- (1) String P is stronger than string M.
- (2) String N is stronger than string Q.
- (3) String P is stronger than string N.
- (4) String M is stronger than string Q.

- 11 Fishmongers normally wear boots when they are working in wet markets.



Why is rubber usually used to make these boots?

- A It can float.
- B It is flexible.
- C It is waterproof.
- D It allows light to pass through.

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

- 12 Four children made the following statements about what a system is.

- Ali All systems are man-made.
- Ben A system is made up of several parts.
- Carl A ruler is a system as it can measure length.
- Dan A system cannot carry out its function well if one of its parts is missing.

Who made the correct statements?

- (1) Ali and Ben
- (2) Ali and Carl
- (3) Ben and Dan
- (4) Carl and Dan

- 13 Which body parts are **not** correctly matched to the body system?

	Body part	Body system
A	ribs	muscular system
B	heart	circulatory system
C	gullet	skeletal system
D	windpipe	digestive system
E	backbone	skeletal system

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

- 14 Which statement about the human digestive system is **not** correct?

- (1) Solid waste is passed out from the anus.
- (2) The large intestine absorbs water from the digested food.
- (3) Some digestive juices are added to the food in the stomach.
- (4) Digested food is absorbed into the blood in the small intestine.

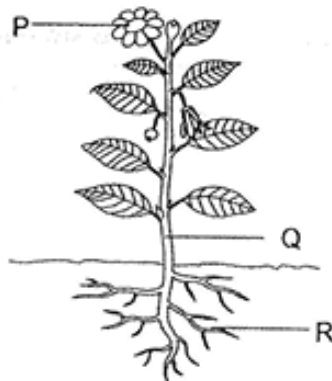
- 15 Ken ran in a 100 m race.

Which body system(s) did he use when he was running?

- A skeletal system
- B muscular system
- C circulatory system
- D respiratory system

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

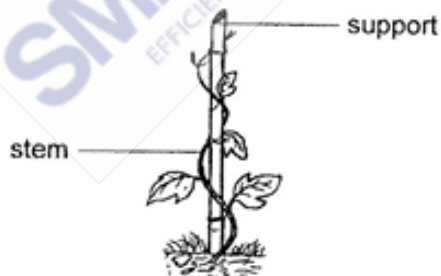
16 Study the diagram.



Which of the following correctly represents parts, P, Q and R?

	P	Q	R
(1)	fruit	stem	root
(2)	fruit	leaf	stem
(3)	flower	leaf	stem
(4)	flower	stem	root

17 Study the diagram.



The plant climbs up a support to get _____.

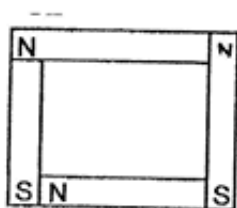
- (1) air
- (2) food
- (3) water
- (4) sunlight

- 18 Rahim wanted to find out if plants take in water through the roots.

Which variable should Rahim change in his experiment?

- (1) amount of water
- (2) presence of roots
- (3) amount of sunlight
- (4) presence of leaves

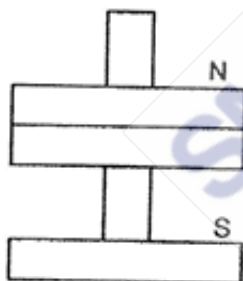
- 19 Susan was given some magnets. She arranged them into four different set-ups, W, X, Y and Z.



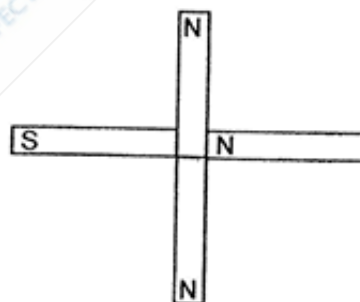
W



X



Y

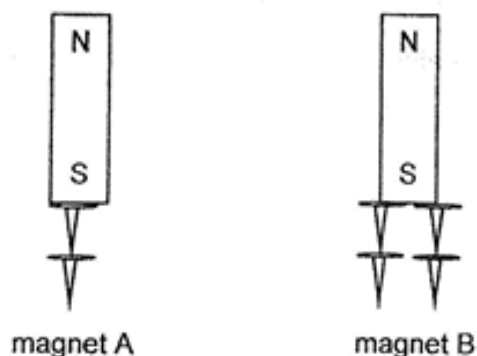


Z

Which arrangement(s) is/are **not** possible?

- (1) W only
- (2) X and Y only
- (3) W and Z only
- (4) W, Y and Z only

- 20 Rosa conducted an experiment using two similar magnets. She counted the number of pins attracted to each magnet.



She wanted to find out if _____.

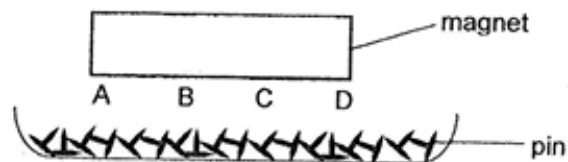
- (1) magnet A attracts the pins
 - (2) the pins are made of steel
 - (3) a magnet is strongest at its poles
 - (4) magnet B is stronger than magnet A
- 21 Indra placed a magnet near three objects, J, K and L. He observed what happened to the three objects and recorded his observations.

Object	Attract	Repel
J	yes	no
K	no	no
L	yes	yes

Based on Indra's observation, what could J, K and L be?

	J	K	L
(1)	iron bar	copper bar	bar magnet
(2)	copper bar	iron bar	bar magnet
(3)	iron bar	bar magnet	copper bar
(4)	bar magnet	copper bar	iron bar

- 22 Tania placed a magnet above a bowl of pins.



She recorded the number of pins attracted to parts, A, B, C and D, of the magnet and recorded it in the table below.

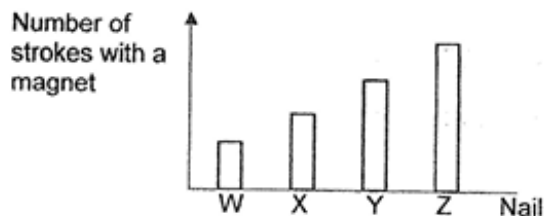
Try	Number of pins attracted			
	A	B	C	D
1 st	4	2	3	6
2 nd	2	4	7	3
3 rd	7	3	2	5
4 th	9	4	3	8

Her teacher said that one set of results was not right.

Which set of results was **not** correct?

- (1) 1st
- (2) 2nd
- (3) 3rd
- (4) 4th

- 23 Salleh had four nails. He stroked each nail a different number of times with a magnet and recorded the results.



Each nail was brought near some pins.

Which nail would be able to pick up the greatest number of pins?

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

- 24 Arif wanted to find out if the number of batteries would affect the strength of an electromagnet made from a rod.

Which set-up should he use for the experiment?

(1)

Variable	Kept constant	Changed
type of batteries	✓	
number of batteries	✓	
material of rod		✓
thickness of rod	✓	

(2)

Variable	Kept constant	Changed
type of batteries	✓	
number of batteries		✓
material of rod	✓	
thickness of rod	✓	

(3)

Variable	Kept constant	Changed
type of batteries		✓
number of batteries	✓	
material of rod		✓
thickness of rod		✓

(4)

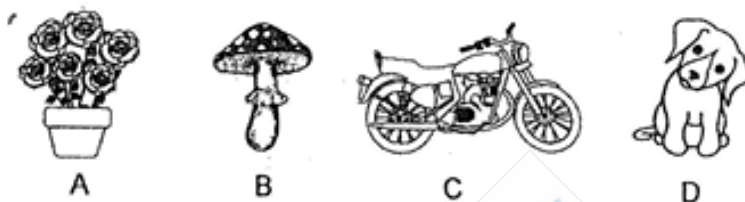
Variable	Kept constant	Changed
type of batteries		✓
number of batteries		✓
material of rod	✓	
thickness of rod	✓	

Booklet B (32 marks)

For questions 25 to 34, write your answers in this booklet.

The number of marks available is shown in brackets [] at the end of each question or part question. (32 marks)

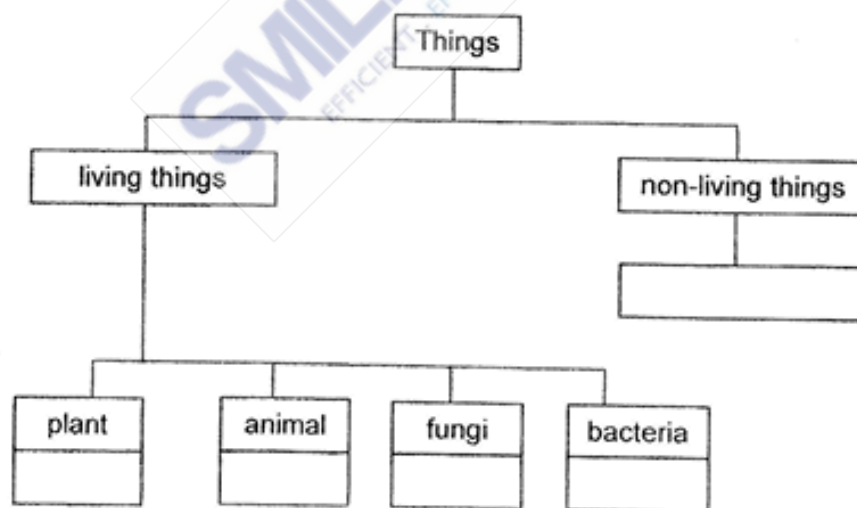
25 Study the things.



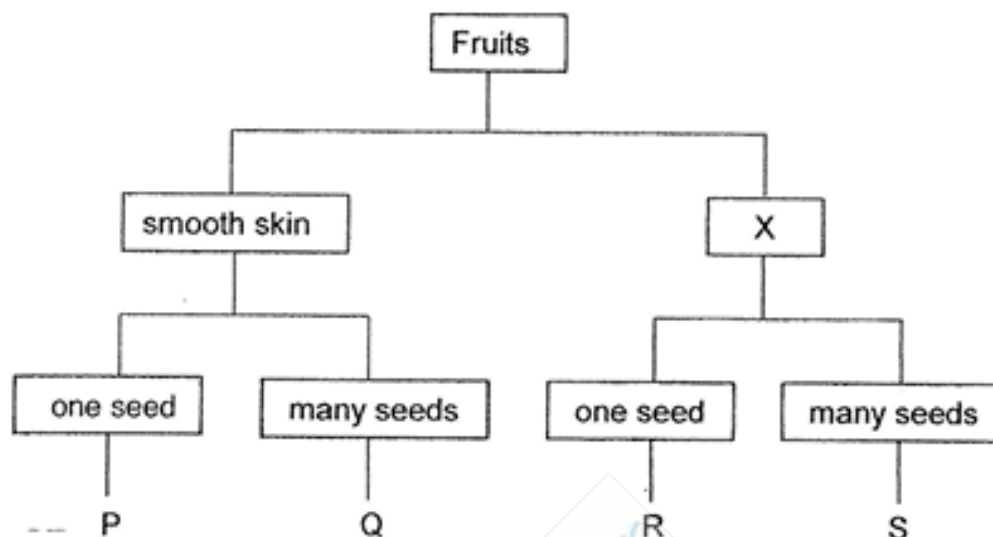
(a) State one similar characteristic between A and D.

[1]

(b) Classify, A, B, C and D, in the diagram. Write the letters, A, B, C and D, once only in the correct boxes. Not all the boxes need to be filled. [2]



26 The diagram shows how some fruits, P, Q, R and S, are grouped.



(a) Give a suitable heading for X. [1]

(b) Based on the diagram, state the characteristics of fruit Q. [1]

(c) Based on the diagram, state one similarity between fruit Q and fruit S. [1]

- 27 Ming went to the zoo and saw four animals. He grouped them according to a common characteristic.



eagle



penguin



bat



pigeon

- (a) Based on the diagrams, what was the common characteristic used to group the animals?

[1]

The four animals are then regrouped into Groups J and K.

Group J	Group K
bat	eagle penguin pigeon

- (b) Give suitable headings for Groups J and K.

[1]

Group J : _____

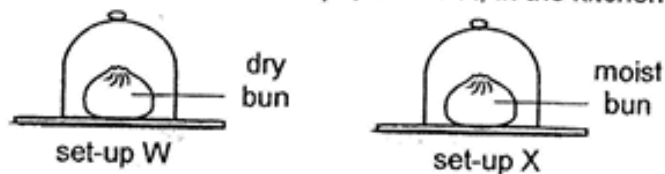
Group K: _____

Ming then saw a dolphin.



- (c) Ming classified the dolphin in Group J. Do you agree? Give a reason. [1]

28. Aini placed two similar buns in set-ups, W and X, in the kitchen.



After one week, she observed patches of mould growing on the bun in set-up X.

- (a) Based on the experiment, state the condition that caused the growth of mould.

[1]

Aini had two cupboards, Y and Z, to put her shoes. She placed a tub of moisture absorber in cupboard Y to remove the moisture inside it.



Six months later, Aini observed white patches of mould on a pair of shoes.



- (b) In which cupboard, Y or Z, was this pair of shoes placed? Explain.

[2]

29. John set up an experiment to compare the flexibility of three different materials, X, Y and Z, of similar length and thickness.

Continue from Question 29

- (b) Put a tick (✓) in the box(es) below to indicate the changed variable based on John's experiment.

[1]

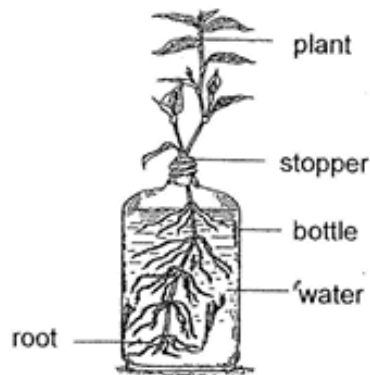
Variable	Changed
type of material	
number of weights used	
distance the material bent	

- (c) Based on John's experiment, which material, X, Y or Z, is the most suitable for making a food tray? Give a reason.

[2]



30 Study the set-up.

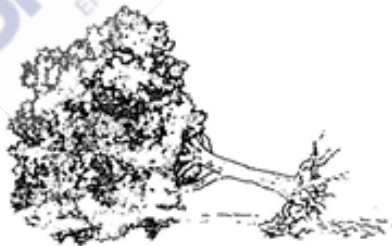


The amount of water in the bottle was observed at the end of five days.

- (a) Would the amount of water in the bottle increase, decrease or remain the same after five days? [1]

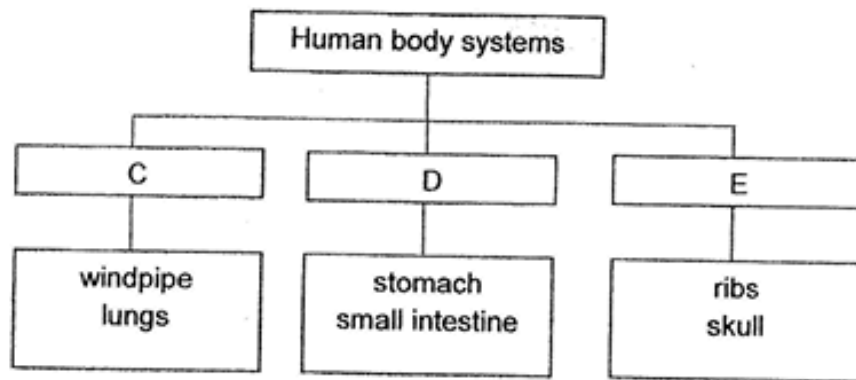
- (b) Give a reason for your answer in (a). [1]

During a thunderstorm, the roots of a tree were pulled out of the ground.



- (c) Based on the diagram, state another function of the roots. [1]

31 Zann grouped the various human body systems.



(a) What are systems C and D?

[1]

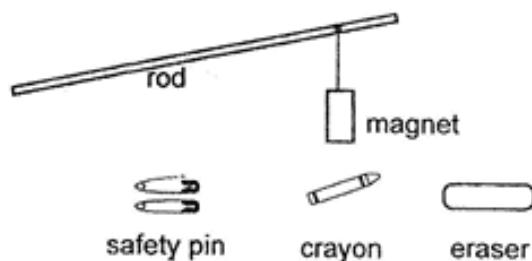
C: _____

D: _____

(b) What is the function of system E?

[1]

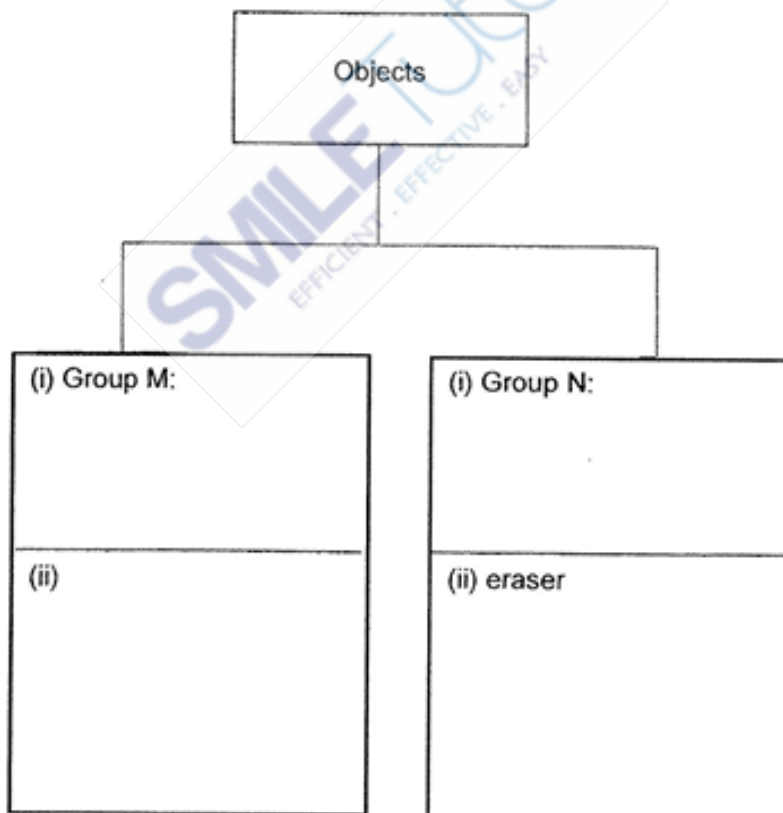
- 32 Lily made a toy with a rod and a magnet. Then she moved the rod over several objects.



- (a) Lily observed what would happen to the objects when the magnet was brought near them.

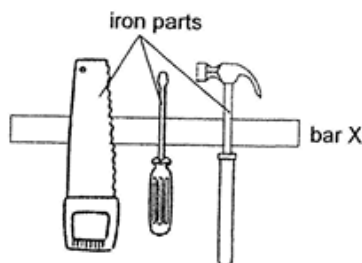
(i) Give a suitable heading for Groups M and N in the diagram. [1]

(ii) Based on Lily's observation, classify the safety pin and the crayon. [1]



Continue from Question 32

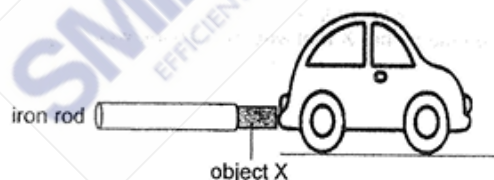
Lily was at a car workshop and noticed that the iron parts of some tools were being held by bar X that was fixed to the wall.



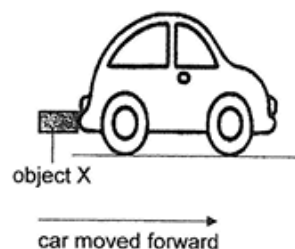
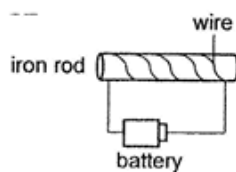
(b) What is bar X? [1]

(c) Explain how the iron parts of the tools were held to bar X. [1]

- 33 Kassim attached object X to a plastic toy car. When he placed an iron rod beside the toy car, his observation was as shown.



Then he coiled a wire around the iron rod and added a battery to make an electromagnet. He placed the toy car next to the electromagnet and observed that it moved forward.



(a) Explain what caused the car to move forward. [1]

Continue from Question 33

Kassim wanted his car to move faster.

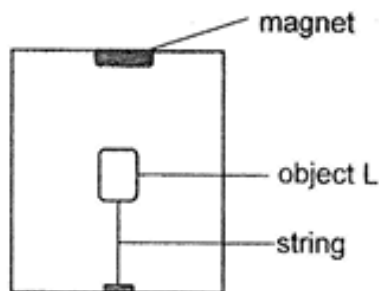
- (b) Suggest two changes that he could make to the electromagnet to make his car move faster. [2]

(i) _____

(ii) _____

- (c) When Kassim used a wooden rod to make an electromagnet, he observed that the toy car did not move forward. Give a reason. [1]

- 34 Bala tied a string to object L. He attached a magnet at the top of the box and observed that object L was able to 'float' in the air.

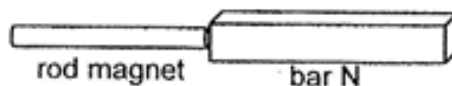


- (a) State the property of object L that allowed it to 'float' in the air. [1]

Bala removed the magnet and dropped it several times. When he placed the magnet back again, he noticed that object L was no longer able to 'float' in the air.

- (b) Based on Bala's observation, what had happened to the magnet after being dropped several times? [1]

Bala had a bar labelled N and a rod magnet. When bar N was brought close to the rod magnet, bar N was attracted to the rod magnet.



- (c) Based on this observation, can Bala conclude that bar N is a magnet? Explain why. [1]

ANSWER SHEET

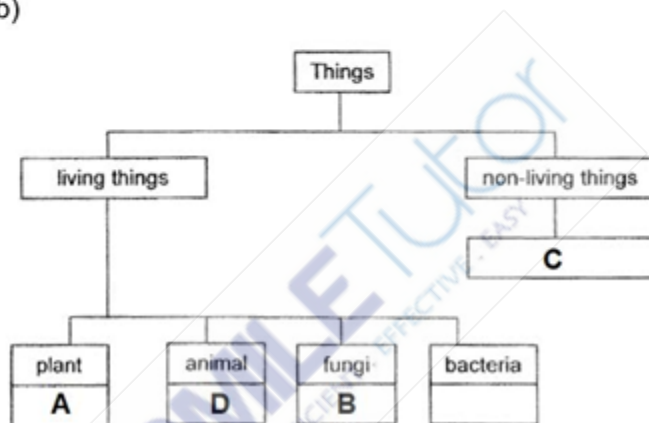
BOOKLET A

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

BOOKLET B

Q25. a) A and D can respond to changes.

b)



Q26. a) Rough

b) It has many seeds and smooth skin.

c) They both have many seeds.

Q27. a) Whether or not they had wings.

b) Group J: Mammals

Group K: Birds

c) I agree, because dolphins are mammals.

Q28. a) Moisture

b) Cupboard Z. There is no moisture present for mould to grow.

Q29. a) Y, Z, X

b) Type of material

c) Y, because it is the least flexible.

- Q30. a) It will decrease.
b) The roots take in water.
c) To hold the plant firmly to the ground.
- Q31. a) C: Respiratory system
D: Digestive system
b) To give the body its shape and to protect the organs in the body.
- Q32. a) (i) **Group M: Magnetic material**
Group N: Non-magnetic material
(ii) **Group M: Safety pin**
Group N: Crayon
b) **It is a magnet.**
c) **The iron part of the tools are a magnetic material and are attracted to bar X.**
- Q33. a) **Like poles of the electromagnet and X were facing each other, hence they repel.**
b) (i) **Add more batteries**
(ii) **Increase the number of coils around the iron rod.**
c) **The wooden rod is not made of a magnetic material.**
- Q34. a) **L is made of a magnetic material.**
b) **The magnet had lost its magnetism.**
c) **No. Bala must turn bar N to the other side to see if they repel each other.**

CATHOLIC HIGH SCHOOL (PRIMARY) WA2 PAPER

Section A (6 × 2 marks)

For each question from 1 to 6, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Write your answer in the brackets provided.

- 1 Which observation correctly matches the characteristic of living things?

	Observation	Characteristic
(1)	A frog lays eggs.	Living things can grow.
(2)	A caterpillar changes into a butterfly.	Living things need air, food and water.
(3)	A boy moves his foot away from a sharp object he had stepped on.	Living things can reproduce.
(4)	A monkey swings from tree to tree.	Living things can move on its own.

()

2 The diagrams below show two animals.



fish



insect

Which is a common characteristic of a fish and an insect?

- (1) Both lay eggs.
- (2) Both have six legs.
- (3) Both live on land only.
- (4) Both have scales on their body.

()

3 The table below shows the characteristics of two groups of animals.
A tick (✓) represents that the animal has the characteristic.

Characteristics	Group S	Group T
lives in water only		✓
has dry skin	✓	
reproduces by laying eggs	✓	✓
has scales	✓	✓

Which of the following best represents Groups S and T?

	Group S	Group T
(1)	bat	whale
(2)	crocodile	goldfish
(3)	whale	crocodile
(4)	crocodile	bat

()

- 4 The diagram below shows a plant found in a pond.



Which set of characteristics below best represents the above plant?

Characteristics			
	has flower	makes its own food	grows on land
(1)	✓	✓	✓
(2)		✓	
(3)	✓	✓	
(4)			✓

()

- 5 Study the diagrams.

toadstool



bird's nest fern

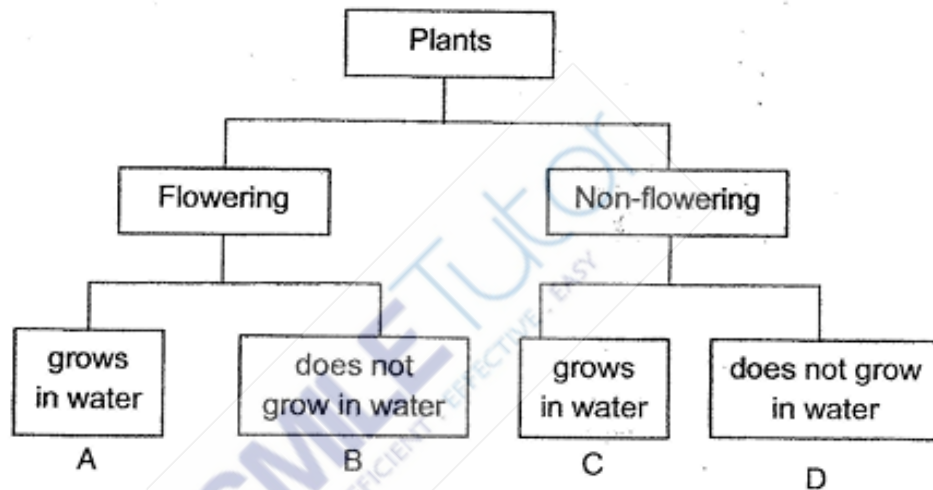
Which statement(s) about the living things is/are **not** correct?

- A Both have flowers.
- B Both reproduce from spores.
- C Both cannot make their own food.

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

- 6 The table below contains some information on two plants X and Y.

Characteristics	Plant X	Plant Y
bears flowers	✓	
grows on land		✓



From the information given in the table above, where would you classify plants X and Y in the diagram?

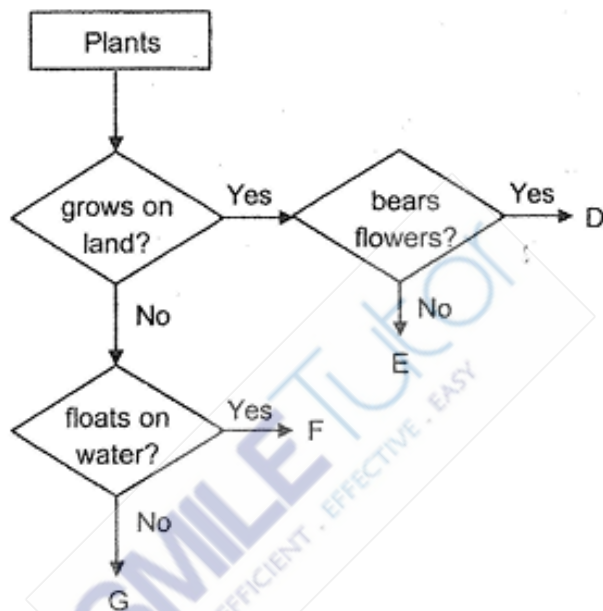
	Plant X	Plant Y	
(1)	A	C	
(2)	A	D	
(3)	B	C	
(4)	B	D	()

Section B (8 marks)

For questions 7 to 9, write your answers in this space provided.

The number of marks available is shown in brackets [] at the end of each question or part question. (8 marks)

7 Study the diagram.



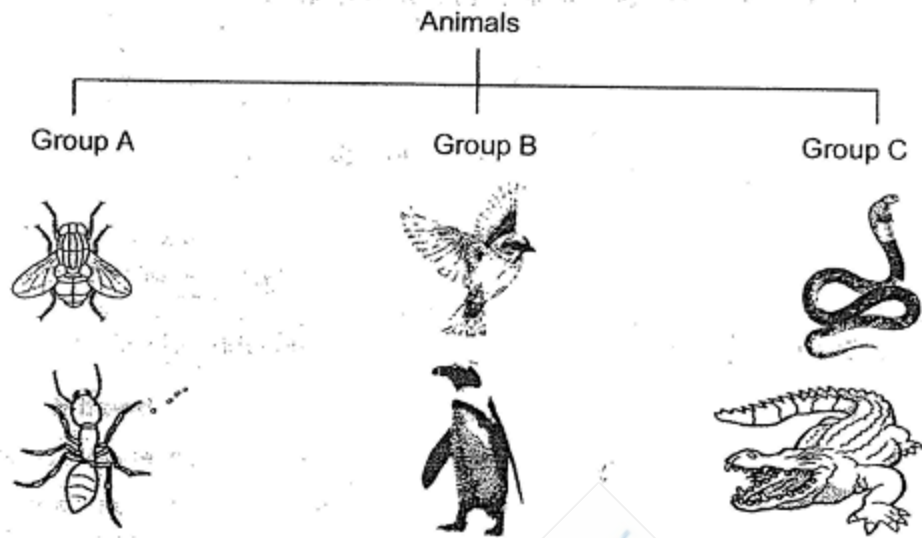
(a) State a similarity between plants F and G.

[1]

(b) State a difference between plants D and E.

[1]

8 Study the groups of animals.



(a) Name the group of animals for Group A and Group B.

[1]

Group A: _____

Group B: _____

(b) Based on the diagram, state one main characteristic of the animals in Group C that is **not** a characteristic of animals in Groups A and B.

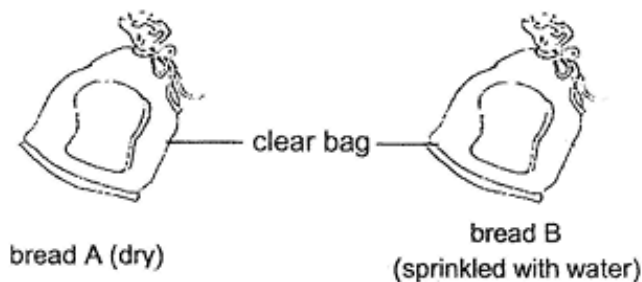
[1]

(c) Write "T" for true and "F" for false in the boxes.

[2]

i.	Birds are the only animals with feathers.	
ii.	Amphibians live on land.	
iii.	Mammals produce milk for their young.	
iv.	Only insects lay eggs.	

- 9 Amanda carried out an experiment using two pieces of bread A and B. They were placed on a table in the same room.



She recorded her observations for 7 days in the table below.

Day	bread A	bread B
2	no observable change	no observable change
4	no observable change	a few dark spots
7	no observable change	more dark spots

She observed that the dark spots on bread B were mould.

- (a) Which group of living things does mould belong to?

[1]

- (b) What should Amanda keep the same in this experiment?
Put a tick (✓) in the correct box.

[1]

	Tick (✓)
type of bread	
presence of water	
type of clear bag	

ANSWER SHEET

Q1	4	Q2	1	Q3	2	Q4	3	Q5	4
Q6	2								

Q7	a) They both do not grow on land.
	b) Plant D bears flowers while Plant E does not bear flowers.
Q8	a) Group A: Insects Group B: Birds
	b) Group C has dry skin with scales.
	c) i) T ii) F iii) T iv) F
Q9	a) Fungi
	b) Type of bread ✓ Presence of water Type of clear bag ✓

CATHOLIC HIGH SCHOOL (PRIMARY) WA3 PAPER

- 1 A container truck is used to transport heavy objects.

What are the properties of the material used to make part A of the container?



Key

✓ : yes

✗ : no

Property			
	flexible	strong	
(1)	✓	✗	()
(2)	✗	✓	
(3)	✗	✗	
(4)	✓	✓	

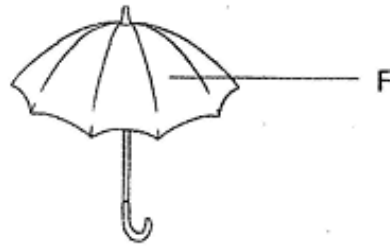
- 2 Which is **not** a function of the skeletal system?

- (1) to take in oxygen
- (2) to protect the brain
- (3) to support the body
- (4) to protect the lungs

()

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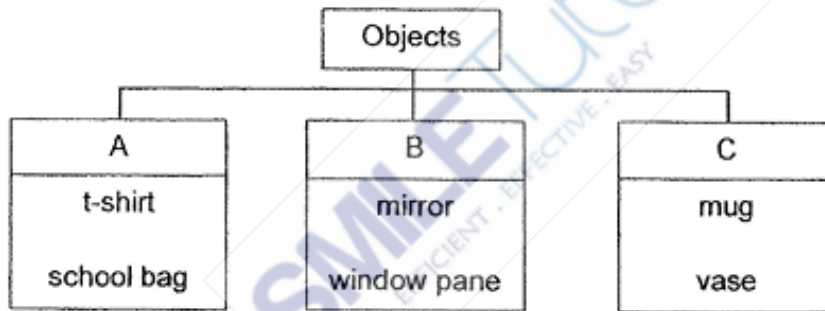
- 3 What material is part F of the umbrella most likely made of?



- (1) wood
- (2) glass
- (3) metal
- (4) plastic

()

- 4 The objects are grouped according to the type of materials they are made of.

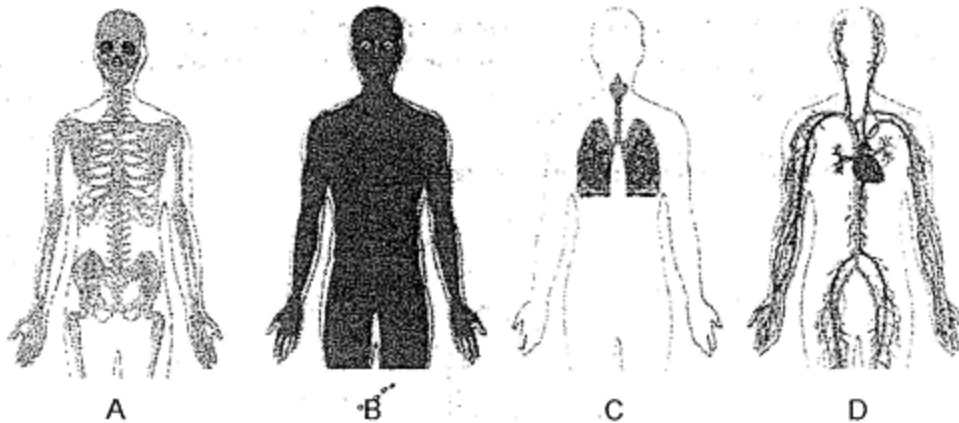


Which of the following correctly shows A, B and C?

	A	B	C
(1)	rubber	metal	glass
(2)	fabric	glass	ceramic
(3)	rubber	glass	metal
(4)	fabric	ceramic	rubber

()

5 Study the four organ systems.

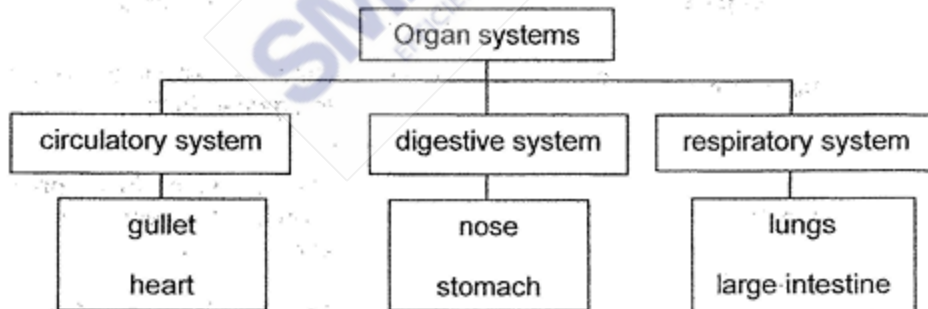


Which organ systems help Brandon to breathe faster and his heart to beat faster during a swim?

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

()

6 Study the diagram.



Which organs are **not** grouped correctly?

- (1) lungs, gullet, nose
- (2) lungs, stomach, heart
- (3) gullet, nose, large intestine
- (4) heart, stomach, large intestine

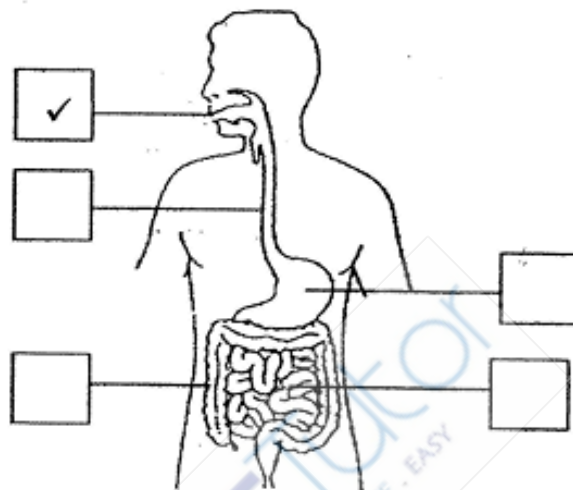
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Section B (8 marks)

For questions 7 to 9, write your answers in this space provided.

The number of marks available is shown in brackets [] at the end of each question or part question. (8 marks)

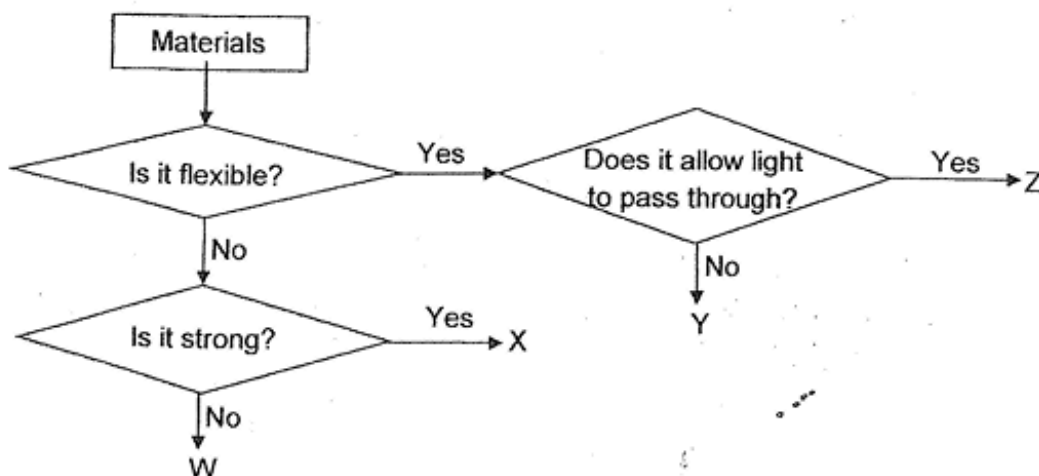
7 The diagram shows the human digestive system.



- (a) Put a tick (✓) in the box(es) where digestive juices are added. The first one has been done for you. [1]
- (b) Draw a line to match each organ to its function. [1]

Organ	Function
large intestine	Water is removed from the undigested food.
mouth	The digested food passes through the walls into the blood.
small intestine	Digestion starts. Food is chewed and mixed with saliva.

8 The diagram shows the properties of materials W, X, Y and Z.



(a) State one similarity between materials Y and Z. [1]

(b) State the properties of material W. [1]

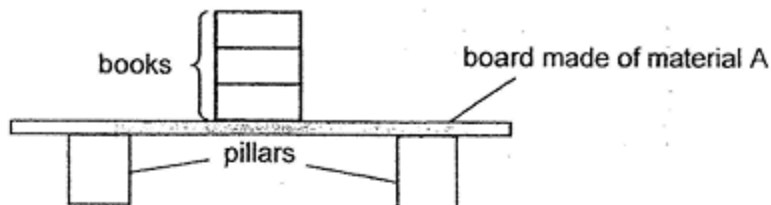
The diagram shows an outdoor tent.



(c) Write "T" for true and "F" for false in the boxes. [1]

i.	Material X can be used to make the nail.	
ii.	Material Z can be used to make the window.	

- 9 Paul placed a board made of material A over two pillars. Next, he stacked similar books, one at a time, on the board until it broke. He repeated the experiment using boards made of materials B and C.



His results are shown in the table.

Material of board	Number of books the board could hold before it broke
A	3
B	10
C	16

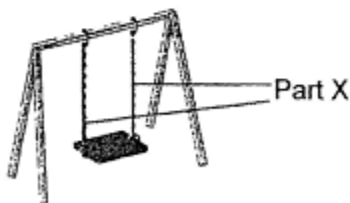
- (a) Which property of the materials was Paul trying to find out?
Put a tick (✓) in the correct box.

[1]

	Tick (✓)
flexibility	
strength	
transparency	

- (b) Which material A, B or C is most suitable to make part X of a swing?
Explain why.

[2]



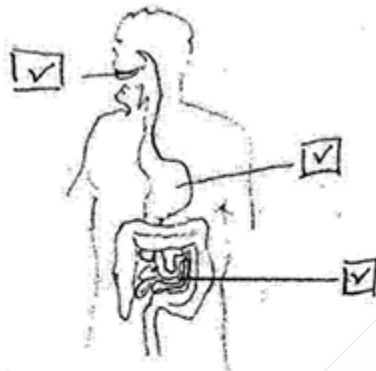
End of Paper

ANSWER SHEET

Weighted Assessment 3

a1. 2 a2. 1 a3. 4 a4. 2 a5. 4 a6. 3

a7(a)



- a7, b. large intestine — water is removed from the undigested food.
- mouth — Digestion starts. Food is chewed and mixed with saliva.
- small intestine — The digested food passes through the walls into the blood.

a8(a) Y and Z are flexible.

(b). W is not strong and not flexible.

(c) i. T

(c) ii. T.

a9. (a) strength

(b). C.

material C because C could hold the most number of books so C is the strongest.

CHIJ PRIMARY (TOA PAYOH) SA2 PAPER

Section A: Multiple Choice Questions (48 marks)

For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade on the Optical Answer Sheet.

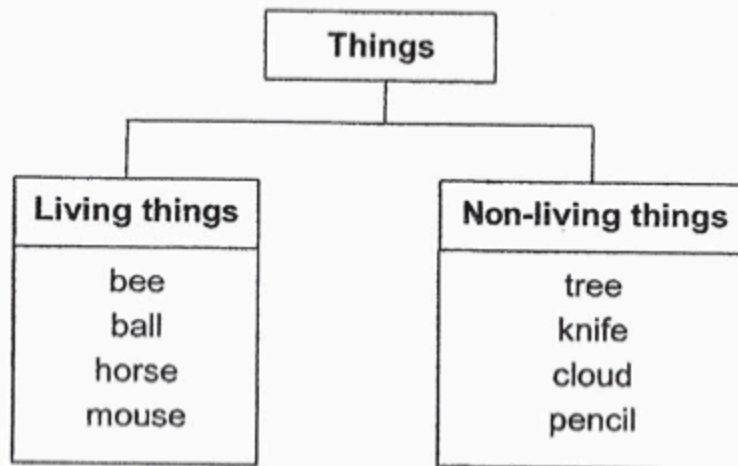
1. The table below shows the characteristics of four things, A, B, C and D. A tick (✓) means the characteristic is present.

Thing	Has four legs	Make its own food	Needs air, food and water
A	✓		✓
B	✓		
C			✓
D		✓	✓

Which of the following correctly represents A, B, C and D?

	A	B	C	D
(1)	butterfly	chair	tiger	hibiscus plant
(2)	chair	butterfly	hibiscus plant	tiger
(3)	tiger	chair	butterfly	hibiscus plant
(4)	hibiscus plant	tiger	chair	butterfly

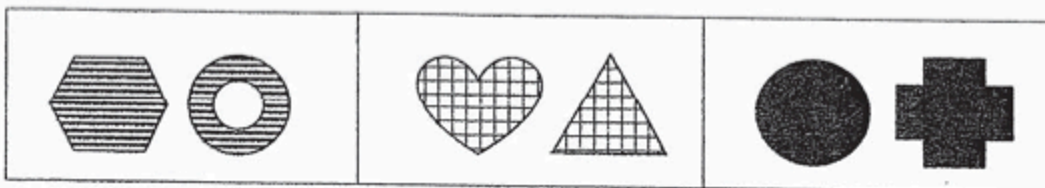
2. Study the chart.



Which of the following things have been classified wrongly in the groups?

	Living things	Non-living things
(1)	ball	tree
(2)	bee	tree
(3)	ball	cloud
(4)	bee	cloud

3. The following objects are grouped according to their _____



- (1) size
- (2) shape
- (3) pattern
- (4) number of sides

4. The pictures show a mushroom and a fern.



mushroom



fern

How are the mushroom and fern similar?

- A Both make its own food.
- B Both reproduce by spores.
- C Both respond to changes.

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

5. Jenny found an animal as shown.

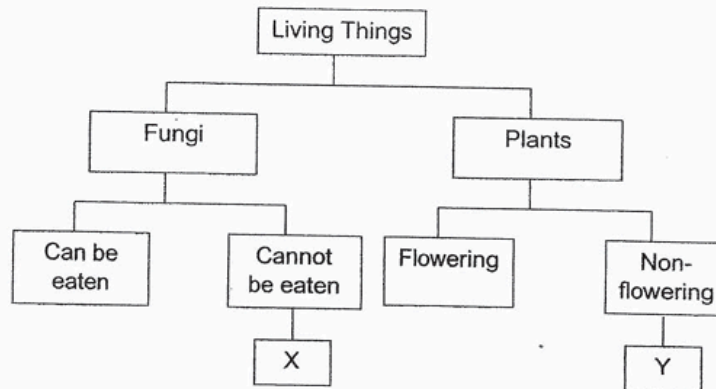


animal C

Which of the following characteristics about animal C tells Jenny that it is **not** an insect?

- (1) It has no wings.
- (2) It has a pair of feelers.
- (3) It has three body parts.
- (4) It has more than six legs.

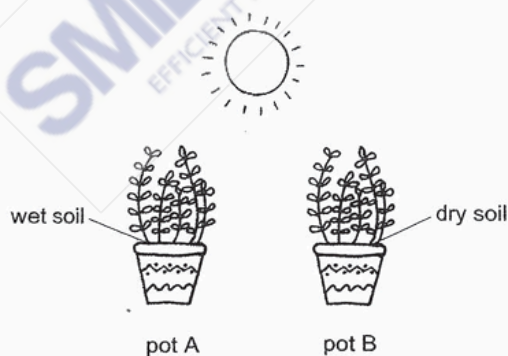
6. Study the chart below.



Based on the above information, which of the following about X and Y is correct?

- (1) Both are plants.
- (2) Both have flowers.
- (3) Both cannot be eaten.
- (4) Both are living things.

7. Nancy planted two identical plants in pots A and B. Pot A had wet soil and pot B had dry soil. Both pots were placed in the same location in the garden.



A few days later, Nancy noticed that the plant in pot A survived but the plant in pot B died.

Based on Nancy's observations, plants need _____ to survive.

- (1) air
- (2) food
- (3) water
- (4) sunlight

8. David wanted to find out if animal Z is a mammal.



animal Z

Which of the following characteristics will help David identify if animal Z is a mammal?

- (1) It lives on land.
- (2) It has four legs.
- (3) It suckles its young.
- (4) It has stripes on its body.

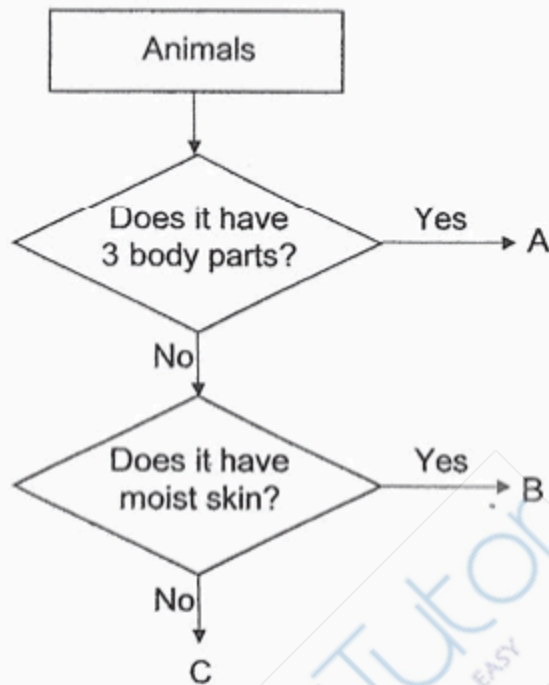
9. Study the table. A tick (✓) means the characteristic is present.

Animal	Lays eggs	Has dry skin with scales	Has legs
R			✓
S	✓	✓	✓
T	✓	✓	

Based on the information in the table, which animal(s) is/are reptiles?

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

10. Study the chart.



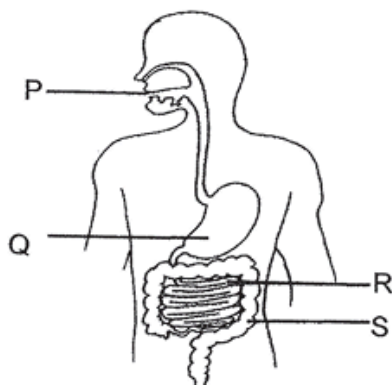
Based on the chart, which of the following is **not** correct?

- (1) Both A and B have three body parts.
- (2) B has moist skin but C does not have.
- (3) Both B and C do not have three body parts.
- (4) A has three body parts but B does not have.

11. The _____ system of the human body works together with the digestive system to transport digested food to different parts of the body.

- (1) skeletal
- (2) muscular
- (3) circulatory
- (4) respiratory

12. The diagram shows the human digestive system.



Which part(s) of the human digestive system produce(s) digestive juices?

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

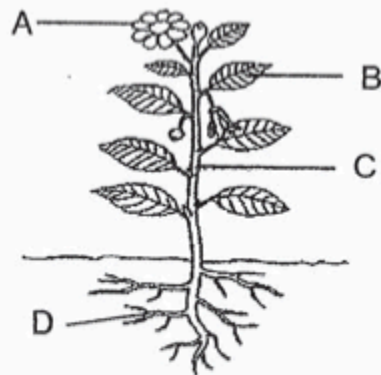
13. Sarah wanted to find out if plants need water to grow. She placed two similar plants, P and Q, in the field and observed them for some time.

Plant	Amount of water given at the start (ml)	Number of hours in the sun each day
P	100	5
Q	?	?

Some information about plant Q was missing from the table. To achieve the aim of her experiment, which of the following about plant Q is correct?

	Amount of water given at the start (ml)	Number of hours in the sun each day
(1)	100	5
(2)	100	3
(3)	0	5
(4)	0	3

14. Study the diagram of a plant.



Which part enables the plant to make food in the presence of sunlight?

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

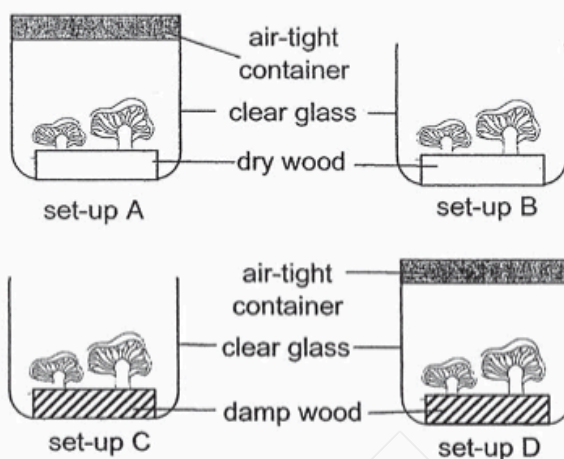
15. The diagram shows a picture of plant X which grew on a pole.



What will happen to plant X if the pole is removed?

- (1) It will not take in water.
- (2) It will not be able to grow upright.
- (3) It will not be able to develop flowers.
- (4) It will grow a thicker stem to support itself.

16. Emma grew some mushrooms in four set-ups, A, B, C and D. They were placed in the classroom over a period of 2 weeks.



In which of the following set-ups, will the mushrooms grow best in?

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

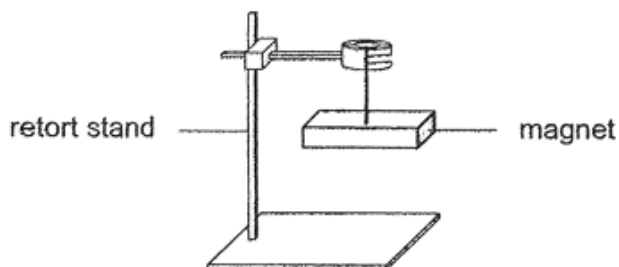
17. The table shows the characteristics, Y and Z, of bacteria and mould. A tick (✓) means the characteristic is present.

Characteristic	Bacteria	Mould
Y	✓	
Z		✓

Which of the following characteristics of Y and Z are correct?

	Y	Z
(1)	Reproduce by spores	Can make its own food
(2)	Reproduce by spores	Can only be seen under a microscope
(3)	Can only be seen under a microscope	Reproduce by spores
(4)	Can only be seen under a microscope	Can make its own food

18. Lionel hung a magnet as shown. He gave the magnet a gentle spin. The magnet turned and eventually stopped.



In which direction, will the magnet come to a rest?

- (1) east-west
- (2) north-east
- (3) south-west
- (4) north-south

19. Study the arrangement of the two magnets with ends, A, B, C and D as shown.



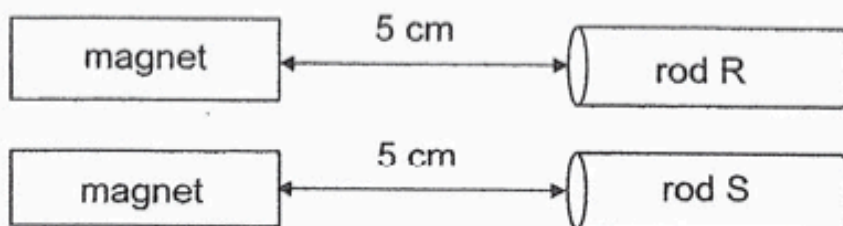
Based on the arrangement, three pupils made the following statements.

Andy: A will repel C.
 Betty : A will attract D.
 Charles: B will attract D.

Which of the pupils is/are correct?

- (1) Charles only
- (2) Andy and Betty only
- (3) Andy and Charles only
- (4) Andy, Betty and Charles

20. Tara placed two identical magnets at an equal distance from two metal rods, R and S, as shown.

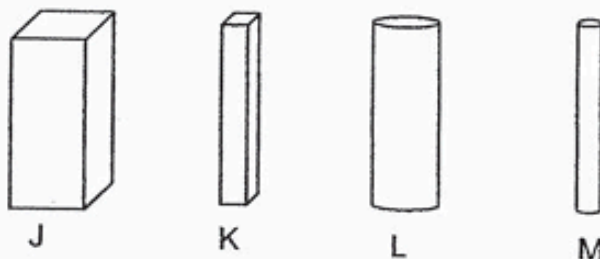


She observed that rod R moved towards the magnet but rod S did not move at all.

Based on Tara's observation, which statement is correct?

- (1) Rod R is non-magnetic.
- (2) Rod S is non-magnetic.
- (3) Rod R is definitely a magnet.
- (4) Rod S is definitely made of iron.

21. Weiling conducted an experiment using magnets of different sizes. She wanted to find out the strength of each magnet.



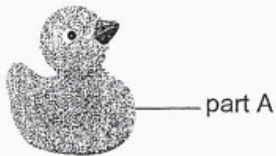
She brought each magnet near a pile of iron pins. The table shows the number of iron pins attracted by the magnets, J, K, L and M, from different distances.

Magnet	Distance between magnet and pins (cm)	Number of iron pins attracted
J	7	8
K	2	13
L	8	11
M	4	13

Based on the table, which of the following statements is correct?

- (1) J is the weakest magnet.
- (2) L is a weaker magnet than K.
- (3) K is as strong a magnet as M.
- (4) Weiling cannot tell which magnet is the strongest.

22. Mei Ling played with a toy while bathing.



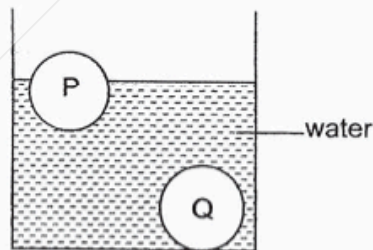
The toy was able to do the following:

- It can float.
- It can be squeezed.

Which of the following most correctly states the properties of part A?

	Flexibility	Sink in Water
(1)	Yes	Yes
(2)	Yes	No
(3)	No	Yes
(4)	No	No

23. Siti dropped two balls, P and Q, made of different materials into a beaker of water. She observed them after some time and the results are as shown.



Which of the following materials are balls, P and Q, likely made of?

	P	Q
(1)	ceramic	metal
(2)	plastic	glass
(3)	metal	ceramic
(4)	glass	plastic

24. Aminah conducted an experiment to find out which material, R, S, T and U, is most suitable for making part M of the umbrella as shown.



She soaked four materials, R, S, T and U, into four similar beakers containing 250 ml of water each. After some time, she removed the materials and recorded the amount of water left in each beaker as shown in the table.

Material	Amount of water left in the beaker (ml)
R	248
S	140
T	100
U	0

Based on the results in the table, which material is most suitable for making part M of the umbrella?

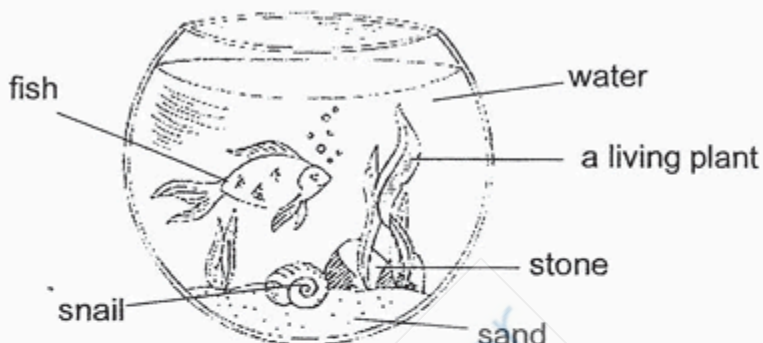
- (1) R
- (2) S
- (3) T
- (4) U

Section B: Open Ended Questions (32 marks)

16

For each question from 25 to 34, write your answers in the spaces provided. The number of marks allotted for each question is shown in brackets.

25. Study the diagram.



Peter classified the following things into two groups, L and M.

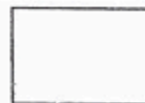
Group L	Group M
Respond to changes	?
fish plant snail	stone sand

(a) Give a suitable heading for Group M. [1]

Group M: _____

(b) Peter added a plastic plant into the fish bowl. He classified the plastic plant under Group M. Other than your answer in (a), give another characteristic of the plastic plant in Group M. [1]

Question 25c continues on the next page.



- (c) Peter added another fish into the fish bowl. After a few weeks, he observed that some fish eggs were found. What characteristic of living things does this show? [1]

26. The table shows the characteristics of four living things. A tick (✓) shows that it has the characteristic.

Characteristic	Living things			
	A	B	C	D
Make its own food	✓			✓
Reproduce from spores	✓	✓		
Give birth			✓	

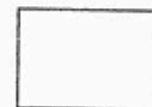
- (a) Based on the table, state one similarity and one difference between living things A and B. [2]

(i) Similarity: _____

(ii) Difference: _____

- (b) Based on the information in the table, which living things, A, B, C or D, best represents the following? [1]

- (i) bird's nest fern : _____
- (ii) monkey : _____



27. Bala observed a plant over 5 weeks. He measured and recorded its height as shown.

Number of weeks	Height of plant (cm)
1	4
2	7
3	11
4	?
5	16

- (a) What is the change in height of the plant over the 5 weeks?
Circle the correct answer in the brackets. [1]

As the number of weeks (*increases, decreases, remains the same*),
the height of the plant also (*increases, decreases, remains the same*).

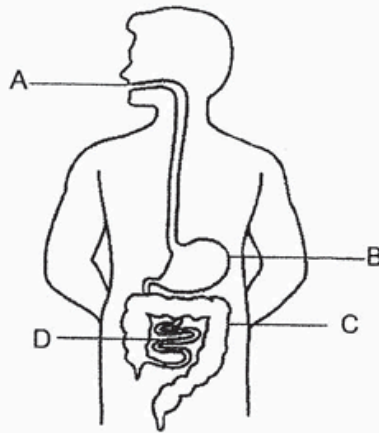
- (b) What would most likely be the height of the plant in week 4? [1]

_____ cm.

- (c) Based on the changes in the height of the plant, what is the
characteristic of living things shown? [1]

Living things can _____.

28. Lina studied the human digestive system as shown.



- (a) What is the main function of part C? [1]

- (b) Name part D and state its main function. [1]

- (c) Lina ate an apple. The diagrams show some samples of the apple, X, and Y, taken from two different parts of her digestive system. [1]

sample X



sample Y

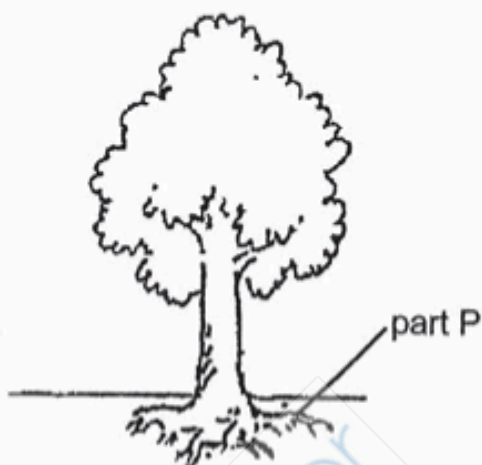


From which parts of the digestive system, B or D, could samples X and Y be taken from?

Sample X: _____

Sample Y: _____

29. The diagram shows a tree.



- (a) Name part P of the tree. [1]

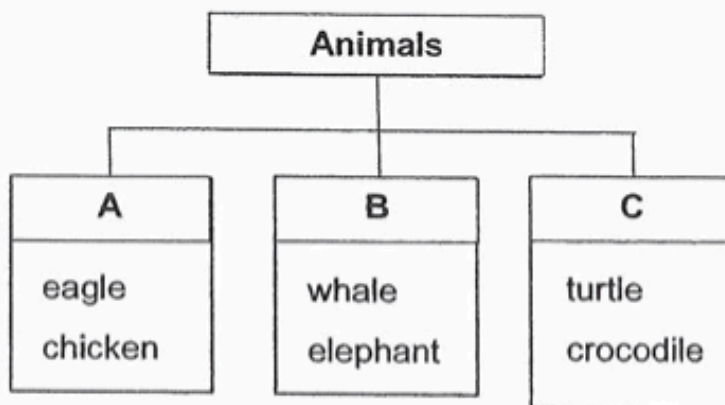
Part P : _____

- (b) Besides water, part P also absorbs another substance from the soil which enable the tree to grow well. Name the substance. [1]

Substance: _____

- (c) The tree fell easily during a heavy storm because of part P. Based on the diagram, explain why. [2]

30. Latifah grouped some animals into a chart as shown.



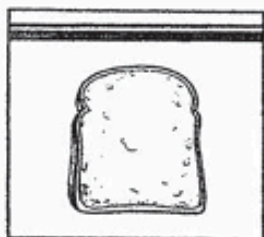
(a) What characteristic did Latifah use to group the animals? [1]

(b) In which group, A or B, would a bat be correctly classified in? [1]

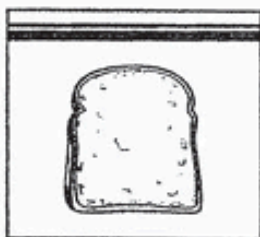
(c) Latifah decided to regroup the animals based on their way of reproduction. Write down suitable headings in the boxes below. [1]

_____	_____
whale elephant	eagle chicken turtle crocodile

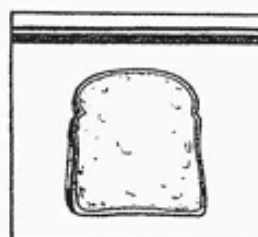
31. Raju carried out an experiment using three identical slices of bread, X, Y and Z. The three slices of bread were placed into sealed bags and left on the table in a room.



bread X
(10 ml of water
was added)



bread Y
(toasted)



bread Z
(no water was
added)

A week later, Raju observed greenish-black patches growing on all three slices of bread.

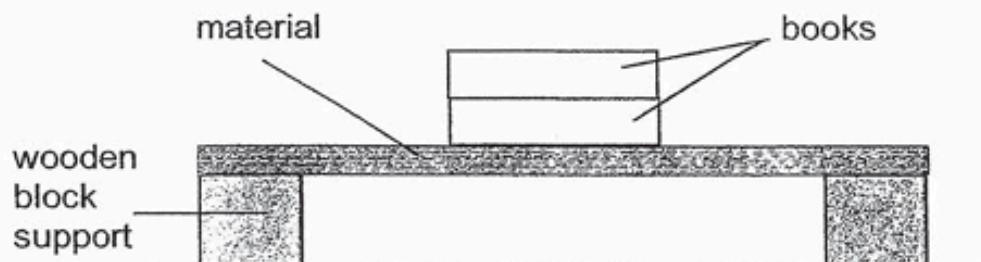
- (a) What are the greenish-black patches? [1]

- (b) Which slice of bread will the greenish-black patches grow first? [1]

- (c) What is the purpose of adding water onto bread X before putting it into the sealed bag? [1]

- (d) Name the group of living things which the greenish-black patches belong to. [1]

32. Janice conducted an experiment using different types of materials, A, B, C and D. She placed some books on each material to find out how much it can hold before breaking.



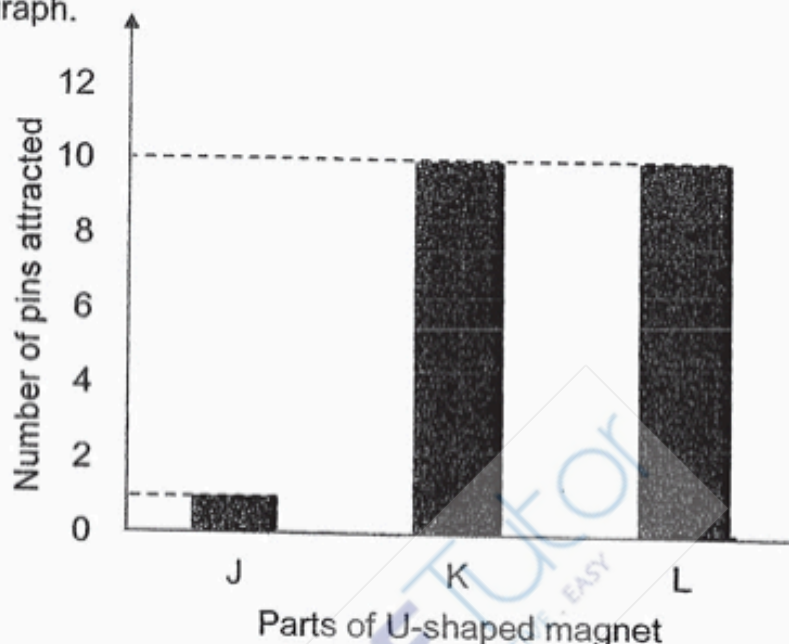
The table shows the results of her experiment.

Material	Number of books it can hold before breaking
A	21
B	9
C	27
D	15

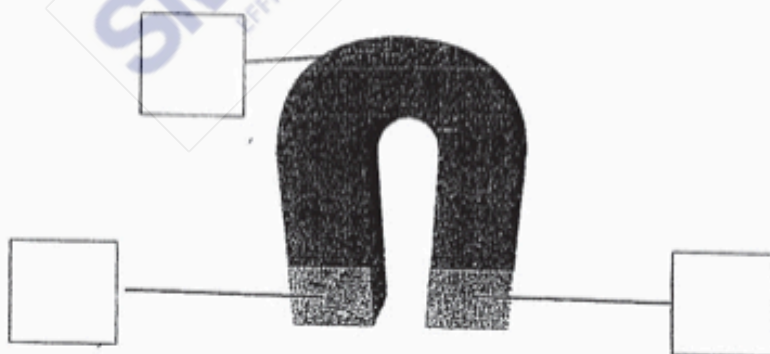
- (a) What property of material was Janice testing? [1]

- (b) Janice wanted to make a bag to carry 26 books. Which material is best suitable for her to use? Explain your answer. [2]

33. Fiona labelled three parts of a U-shaped magnet, J, K and L. She placed the U-shaped magnet into a box of pins and noticed that the pins were attracted to the magnet. She recorded her observation in a graph.



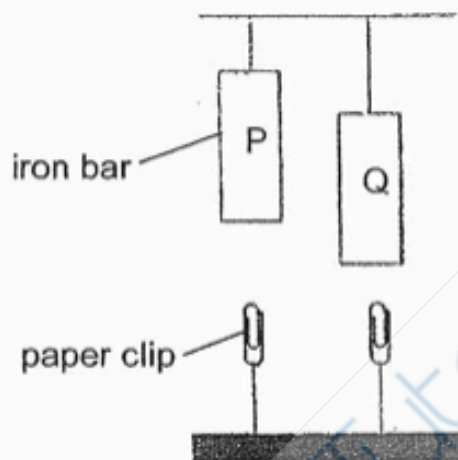
- (a) Based on the graph, label the positions, J, K and L, in the boxes below. [1]



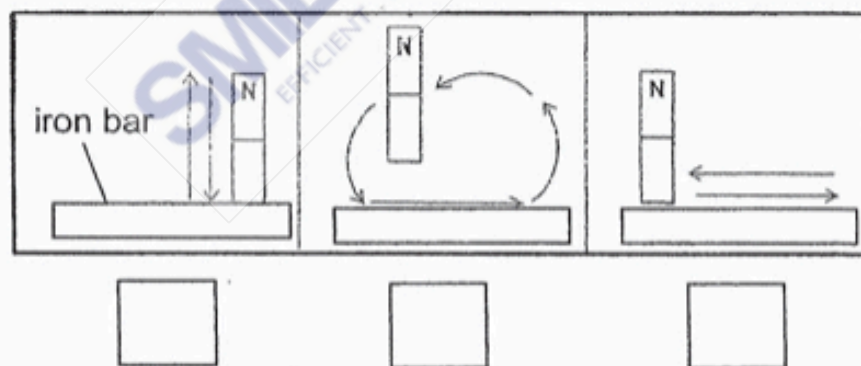
- (b) What can Fiona conclude about the characteristic of magnet from this experiment? [1]

34. Laura conducted an experiment using two similar iron bars, P and Q. Each bar was stroked with different number of times by a magnet.

She hung the two iron bars above two similar paper clips to test their magnetic strength. The diagram shows the furthest distance each iron bar, P and Q, can attract the paper clips from.



- (a) Put a tick (✓) in the box which shows the correct stroking method. [1]



- (b) Based on Laura's observation, explain why iron bar P is a stronger magnet. [1]

- (c) Give a reason how iron bar P has become a stronger magnet than iron bar Q. [1]

- (d) Beside the stroking method, name another method that Laura could use to make the two iron bars into temporary magnets. [1]

-End of Paper-

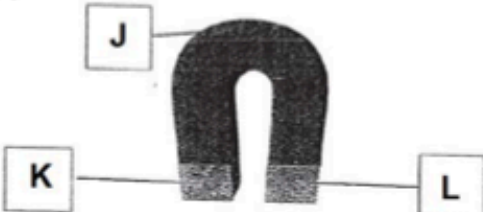
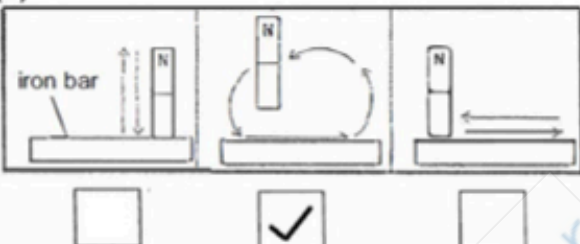
ANSWER SHEET

SECTION A

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

SECTION B

Q25	(a)	Group M: Does not respond to changes		
	(b)	Does not grow		
	(c)	Living things reproduce		
Q26	(a)	i. Similarity: Both reproduce from spores. ii. Difference: Living things A makes its own food while living thing B does not.		
	(b)	i. A ii. C		
Q27	(a)	(increases),...(increases).		
	(b)	13 cm		
	(c)	grow		
Q28	(a)	To absorb water from undigested food.		
	(b)	Small intestine to break down food into simple substances.		
	(c)	Sample X: D Sample Y: B		
Q29	(a)	Roots		
	(b)	Nutrients		
	(c)	The tree fell easily as the roots of the tree were not spread out to hold the tree firmly to the ground.		
Q30	(a)	Outer covering		
	(b)	Group B		
	(c)	Give birth to young	Lays eggs	
Q31	(a)	Mould		
	(b)	Bread X		
	(c)	To see whether mould needs water to grow.		
	(d)	Fungi		
Q32	(a)	Janice was testing the strength of the materials.		
	(b)	Material C. It is the most suitable as it can hold the most number of books before breaking. Therefore, it is the strongest bag.		







Q33	<p>(a)</p> 
	<p>(b) The magnetic force is strongest at its poles.</p>
Q34	<p>(a)</p> 
	<p>(b) Iron bar P is a stronger magnet as it can attract the paper clip from a further distance than iron bar Q.</p>
	<p>(c) Laura stroked iron bar P more times than Q.</p>
	<p>(d) Laura could use the electrical method.</p>

CHIJ TOA PAYOH (PRIMARY) WA1 PAPER

Section A: Multiple Choice Questions (10 marks)

For each question from 1 to 5, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write the answer in the bracket provided.

1. Study the three groups of objects.

Objects		
		
		

The objects shown are grouped according to their _____.

- (1) size
- (2) colour
- (3) shape
- (4) pattern

()

2. Sam saw animal T on a tree branch. He tried to touch it with his finger and it flew away.

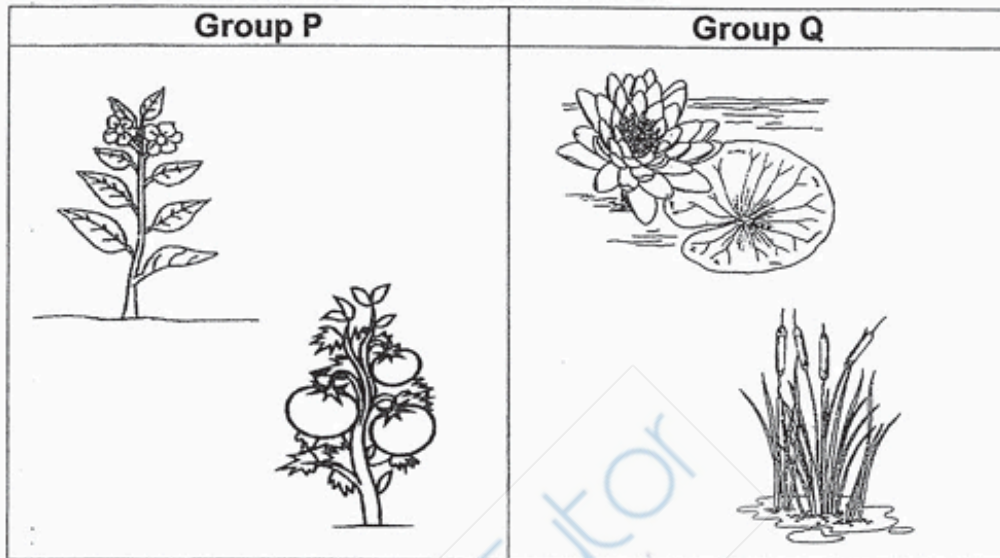


Which characteristic of living things explains Sam's observation?

- (1) Living things can grow.
- (2) Living things reproduce.
- (3) Living things respond to changes around them.
- (4) Living things need air, food and water to survive.

()

3. Samy classified some plants into two groups as shown below.



Which of the following shows how Samy has grouped the plants?

	Group P	Group Q
(1)	Live on land	Live in water
(2)	Flowering plants	Non-flowering plants
(3)	Reproduce by spores	Reproduce by seeds
(4)	Need air, food and water	Does not need air, food and water

()

4. The classification diagram classifies three animals R, S and T into two groups.



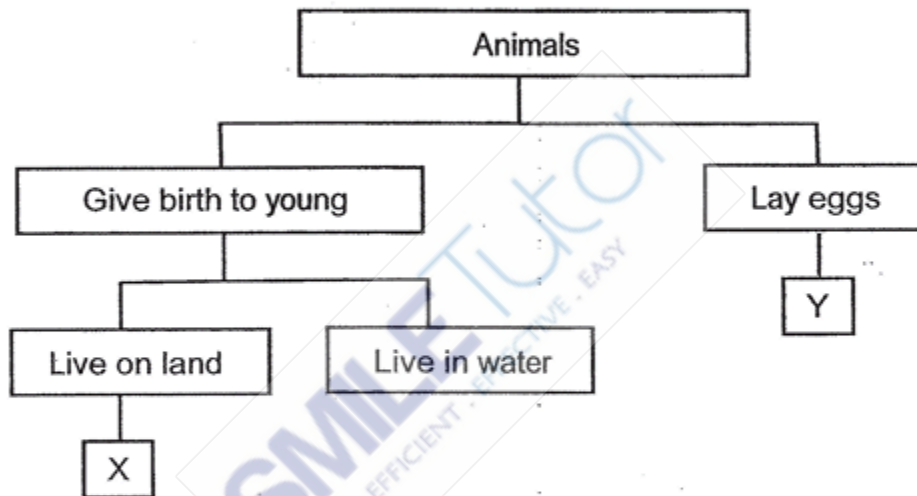
R



S



T



Which of the following best represents X and Y?

	X	Y
(1)	R	S
(2)	R	T
(3)	S	T
(4)	T	R

()

5. Mala observed an animal and wrote down the following statements.

- A It lays eggs.
- B It has wings.
- C It has six legs.
- D It has three body parts.

Which of the following statements helped her identify that the animal is definitely an insect?

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

()

Section B: Open-Ended Questions (10 marks)

Write your answers for questions 6 to 8 in the spaces provided. The mark is shown in the bracket [] at the end of each question.

6. Tim found three things W, X and Y in a garden. He observed them for 2 weeks and recorded their characteristics in the table.

Characteristic	W	X	Y
• Able to reproduce.	Yes	No	Yes
• Able to make its own food.	Yes	No	No
• Needs air, food and water to survive.	Yes	No	Yes
• Able to respond to changes around it.	Yes	No	Yes

- (a) Based on Tim's observations, which thing W, X or Y best represents the following: [2]

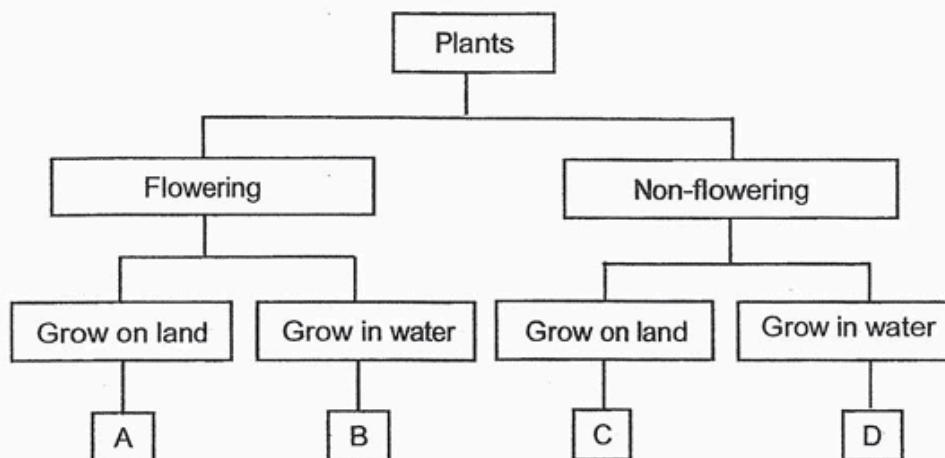
(i) Cat :

(ii) Chair :

- (b) State one difference between things X and Y. [1]

- (c) Tim said that W is a plant. Do you agree with him? Give a reason for your answer. [1]

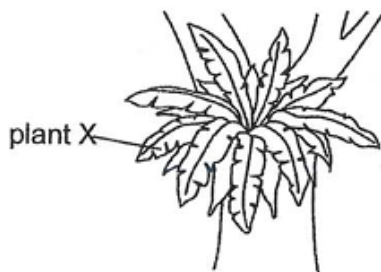
7. Study the classification diagram.



(a) State the characteristics of plant D. [1]

(b) What is the similarity between plant A and plant B? [1]

The picture shows plant X.



(c) Based on the chart, which letter A, B, C or D best represents plant X? Explain your answer. [1]

8. Study the animals shown.



animal E



animal F



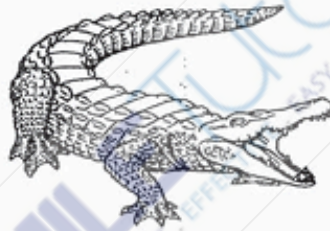
animal G

(a) Circle the correct answer.

[1]

Animal F is a/an (insect / reptile / amphibian).

The diagram shows a picture of a crocodile.



(b) Which animal (E, F or G) has the same outer body covering as the crocodile? [1]

(c) How do animal E and F reproduce?

[1]

ANSWER SHEET

Q1	4	Q2	3	Q3	1	Q4	2	Q5	4
----	---	----	---	----	---	----	---	----	---

Q6	a)
	i) Cat: Y
	ii) Chair: X
	b) Y needs air, food and water to survive but X does not.
Q7	c) Yes. W is able to make its own food.
	a) Plant D is a non-flowering plant and grows in water.
	b) Plant A and Plant B are both flowering plants
	c) C. Plant C represents plant X because plant C grows on land and is a non-flowering plant.
Q8	a) * circle * amphibian
	b) Animal G
	c) They lay eggs

CHIJ TOA PAYOH (PRIMARY) WA2 PAPER

Section A: Multiple Choice Questions (10 marks)

For each question from 1 to 5, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write the answer in the bracket provided.

1. The pictures show some animals.



Which characteristic of living things is shown in the pictures?

- (1) Living things reproduce.
- (2) Living things respond to changes.
- (3) Living things need air, food and water.
- (4) Living things move from place to place by themselves.

()

2. The table shows Minah's answers to some questions about ferns.

Question		Answer
A	Can it reproduce?	Yes
B	Does it have seeds?	Yes
C	Does it have flowers?	No
D	Does it make its own food?	No

Which questions were answered correctly?

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

()

3. Which statement is true about bacteria?

- (1) They are fungi.
- (2) They can grow.
- (3) They can make their own food.
- (4) They can be seen without using the microscope.

()

4. Bob saw organisms X and Z in the garden. He wanted to find out if both organisms are insects.



organism X



organism Z

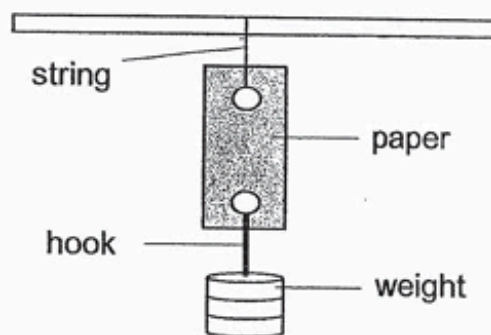
Which of the following would help him to conclude whether the organisms are insects?

A	Count the number of legs.
B	Look for wings on the bodies.
C	Count the number of body parts.
D	Observe the type of food they eat.

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

()

5. Mary wanted to find out the strength of three different types of papers, P, Q and R. The papers are of the same size.



She added one weight at a time to the hook until each paper started to tear. The results are as shown.

Type of paper	Number of weights
P	7
Q	4
R	6

Based on the results, arrange the three types of paper from the strongest to the weakest.

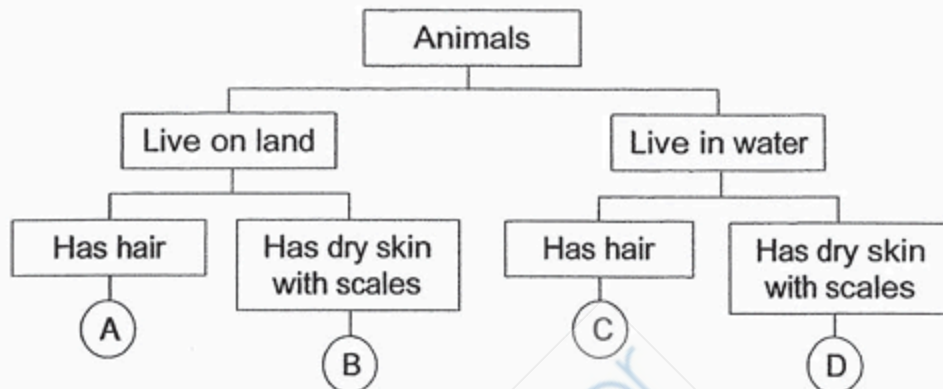
- (1) Q, R, P
- (2) Q, P, R
- (3) P, R, Q
- (4) P, Q, R

()

Section B: Open-Ended Questions (10 marks)

Write your answers for questions 6 to 8 in the spaces provided. The mark is shown in the bracket [] at the end of each question.

6. The diagram shows the classification of some animals based on their characteristics.



- (a) Based on the diagram, state one similar characteristic between animals A and B. [1]

- (b) Based on the diagram, state two different characteristics between animals B and C. [2]

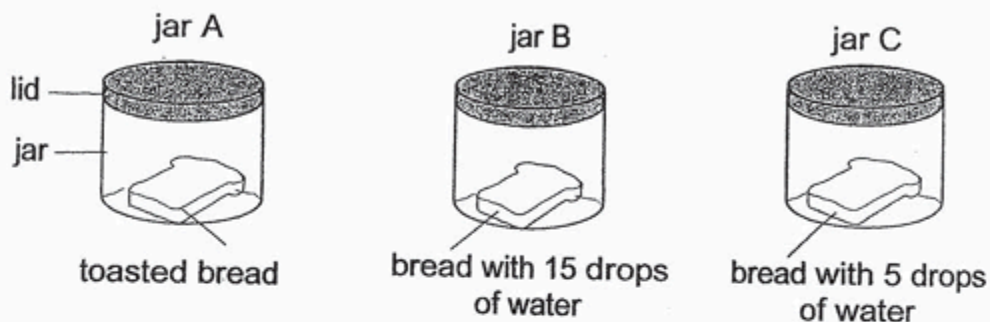
Difference 1: _____

Difference 2: _____

- (c) Circle the correct answer. [1]

Animals B and D are (amphibians / mammals / reptiles).

7. Ken cut a loaf of bread into three pieces of the same size. He placed each piece into a jar with lid. The three identical jars were placed in the Science room.



After a few days, Ken made the following observations.

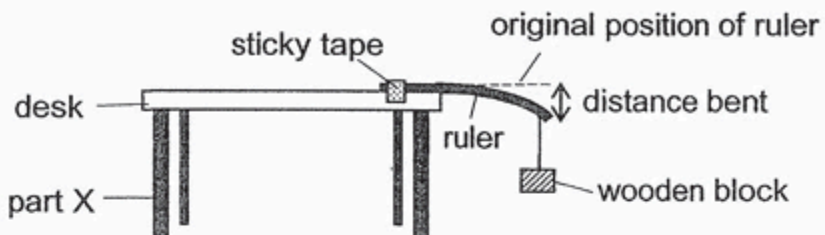
Jar	Presence of mould on the bread
A	No
B	Yes
C	Yes

- (a) Give a reason why there was no mould growing on the bread in jar A. [1]

- (b) In which jar, B or C, was the bread likely to have more mould growing on it? Give a reason for your answer. [1]

- (c) Mould reproduces the same way as mushroom. How do both of them reproduce? [1]

8. Abby taped a ruler made of material A on the edge of a desk. When a wooden block was hung at one end of the ruler, the ruler bent as shown.



Abby repeated the experiment with two other rulers made of different materials B and C. She measured the distance bent by each ruler with the block hanging to it. The results are as shown.

Material	Distance the material bent (cm)
A	12
B	0
C	5

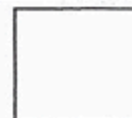
- (a) Circle the correct answer. [1]

Material A is (less / more) flexible than material C.

- (b) Which of the materials, A, B or C, should Abby use to make part X of the desk? Give a reason for your answer. [1]

- (c) Besides the property mentioned in (b), name another property of material that part X should have so that Abby could place a pile of heavy books on the desk. [1]

- End of Paper -



ANSWER SHEET

Q1	1	Q2	2	Q3	2	Q4	2	Q5	3
----	---	----	---	----	---	----	---	----	---

Q6	a) Both animals A and B live on land.
	b) Difference 1: Animal C lives in water but Animal B lives on land. Difference 2: Animal B has dry skin with scales but animal C has hair.
	c) *Circle* reptiles.
Q7	a) There was no mould growing in the bread in jar A as there was no water for the mould to grow.
	b) B. There is more water for the mould to grow.
	c) They both reproduce by spores.
Q8	a) *Circle* more
	b) Material B. It cannot bend.
	c) Strength

HENRY PARK PRIMARY SCHOOL SA1 PRACTICE PAPER

Section A Multiple-Choice Questions (30 marks)

For each question from 1 to 15, 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.

1. The diagram below shows Organism X.

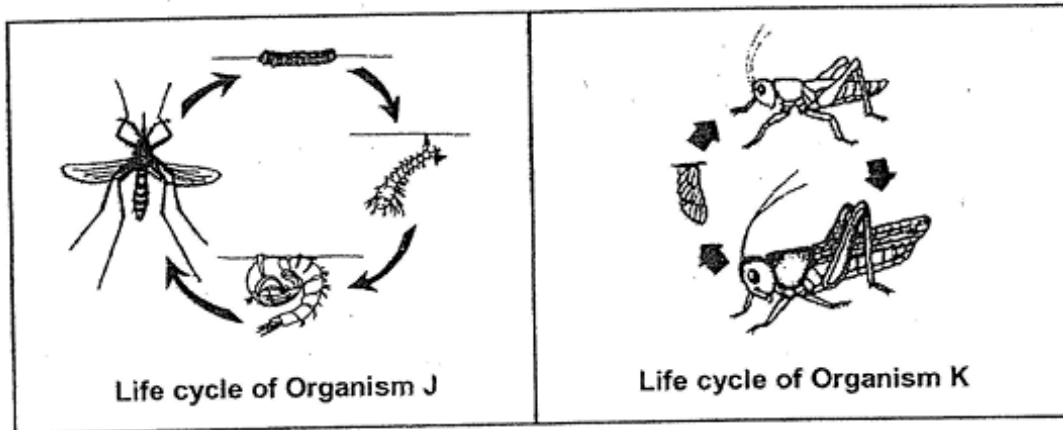


Which of the following statements is **correct** about Organism X?

- (1) It has leaves.
- (2) It hunts for food.
- (3) It makes its own food.
- (4) It feeds on dead organisms.

()

2. Bob compared the life cycles of organisms J and K as shown below.

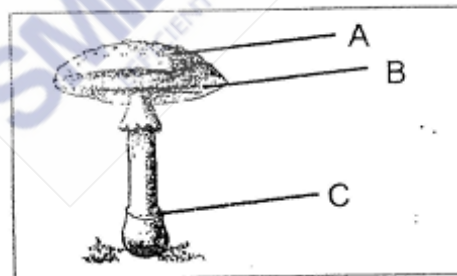


Which one of the following comparisons is correct?

	Organism J	Organism K
(1)	Eggs are laid in water.	Eggs are laid on land.
(2)	The young has wings.	The young does not have wings.
(3)	The young undergoes moulting.	The young does not undergo moulting.
(4)	The young looks like the adult.	The young does not look like the adult.

()

3. The fungi shown below, has three parts.



Which of the following part(s) can spores be found?

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

()

4. Look at the pictures below.



In what way are the above animals similar?

- (1) They have wings
- (2) They have 2 legs
- (3) They have feelers
- (4) They have feathers

()

5. Which one of the following differences between animals and fungi is correct?

	Animals	Fungi
(1)	Cannot make their own food	Can make their own food
(2)	Need water	Do not need water
(3)	Is not a plant	Is a plant
(4)	Do not reproduce using spores	Reproduce using spores

()

6. A scientist found a new animal and named it **Kihansi**.

He observed **Kihansi** and recorded its characteristics below.

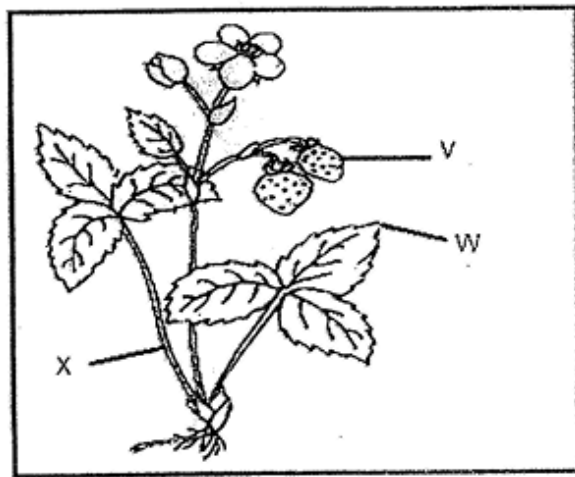
<u>Characteristics of Kihansi</u>	
•	It hatches from eggs.
•	It has moist skin.
•	It can live on land and in water.

Which group of animals do you think the **Kihansi** is likely to belong to?

- (1) Insects
- (2) Reptiles
- (3) Mammals
- (4) Amphibians

()

7. The diagram below shows a strawberry plant.

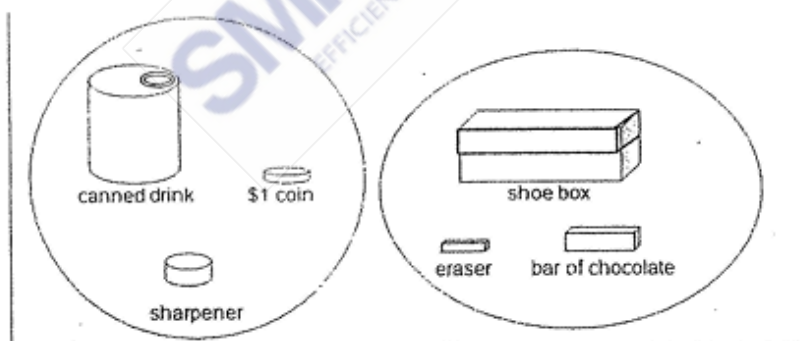


Which of the following is correct?

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

V	W	X
flower	root	leaf
fruit	leaf	root
flower	fruit	leaf
fruit	leaf	stem

8. Look at the classification of some objects below.







Choose the **correct description** on how the objects are classified.

- (1) The objects are classified according to their shapes.
 (2) The objects in each group do not have any similarity at all.
 (3) The objects are placed in the two groups based on their sizes.
 (4) The objects are placed in the two groups based on their uses.

9. Some observations about living thing X are stated below.

Observations
It produces spores
It does not make its own food
It needs air, water and food to survive

Living thing X is likely to be _____.

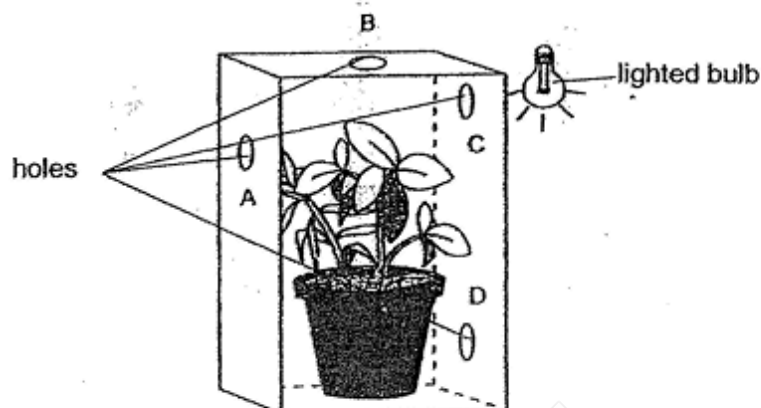
(1)	Bread Mould 	(2)	Fern 
(3)	Ixora 	(4)	Insect 

10. Which of the following is **NOT** a purpose of classification?

- A To mix things up so that there is diversity.
- B To make it easy to find the things we want.
- C To help us put things in an orderly manner.
- D To find similarities and differences in the diversity of living things.

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

11. A young plant was placed in a thick cardboard box in a dark room as shown below. Four holes A, B, C and D, were made on the sides of the box to allow light to enter.



Which one of the holes would the plant **most likely** grow towards?

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

()

12. The table below describes the stages of the life cycles of four animals, P, Q, R and S.

	Animal P	Animal Q	Animal R	Animal S
The young moults.	✓	×	×	×
The eggs are laid in water.	✓	✓	✓	×
The young looks like the adult.	×	✓	×	✓

A tick (✓) indicates that the description is correct and a cross (×) indicates that the description is wrong.

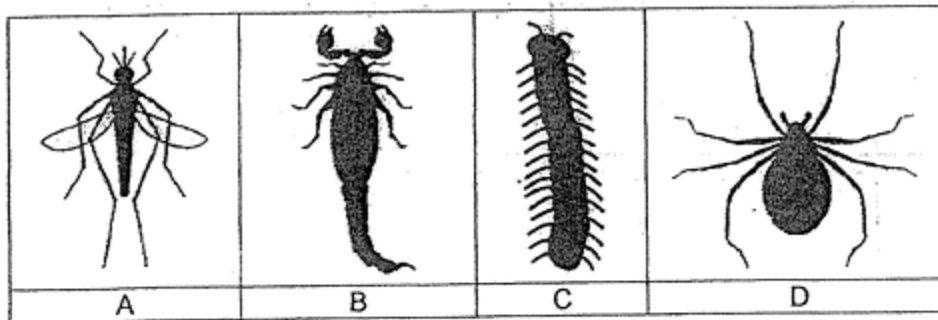


Which of the following animal is likely to be a frog?

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

()

13. The picture below shows the shadows of various types of living things.



Which of the following is an insect?

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

()

14. David planted four balsam plants in 4 similar pots.

He placed the pots under different conditions as shown in the table below.

Plant	Conditions			
	Air	Sunlight	Water	Fertiliser
A	✓	✓	✓	X
B	X	✓	✓	✓
C	✓	X	X	✓
D	X	✓	X	✓

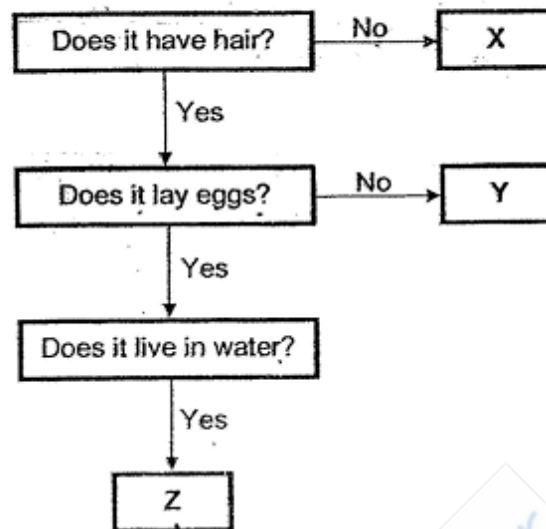
Legend
✓ – present
X – not present

Which of the following plants is likely to live the longest?

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

()

15. Sam observed three animals and drew the following chart.



Which of the following is **NOT** likely to be a mammal?

- (1) X only
- (2) Y only
- (3) X and Y only
- (4) Y and Z only

()

Section B: Structured Questions (4 x 2 = 8 marks)

For each question from 16 to 19, write your answers in the spaces given.

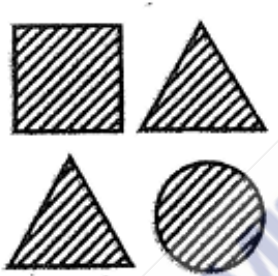

16. Look at the table below.

Tick (✓) in the respective 'True' or 'False' columns for the following statements.

[2m]

	Statement	True	False
a)	Mould is a non-flowering plant.		
b)	Some fungi can be eaten.		

17. Observe the shapes below.

Group J	Group K
	

The shapes shown above are classified into 2 groups.

[2m]

How are they classified?

(a) Group J : Shapes that are _____

(b) Group K : Shapes that are _____

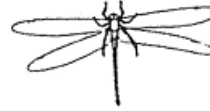
18. Observe the six animals below carefully.



Mynah



Ostrich



Dragonfly



Bed bug



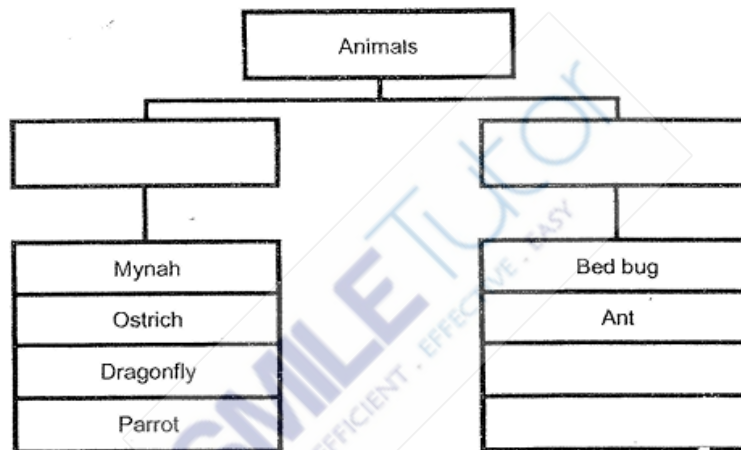
Parrot



Ant

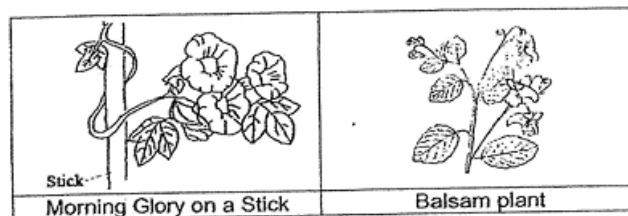
Write suitable headings for the two groups in the boxes below.

[2m]



19. Study the pictures below and fill in the blanks with suitable words from the box provided.

[2m]



weak	support	shade	strong
------	---------	-------	--------

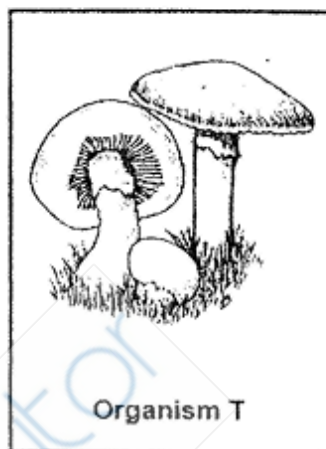
The morning glory plant climbs on the stick so that it can grow towards the sunlight.

The function of the stick is to provide (a) _____ to the plant as it has a (b) _____ stem.

Section C: Open-Ended Questions (12 marks)

For each question from 20 to 24, write your answers in the spaces given.

20. Observe the two types of organisms below.



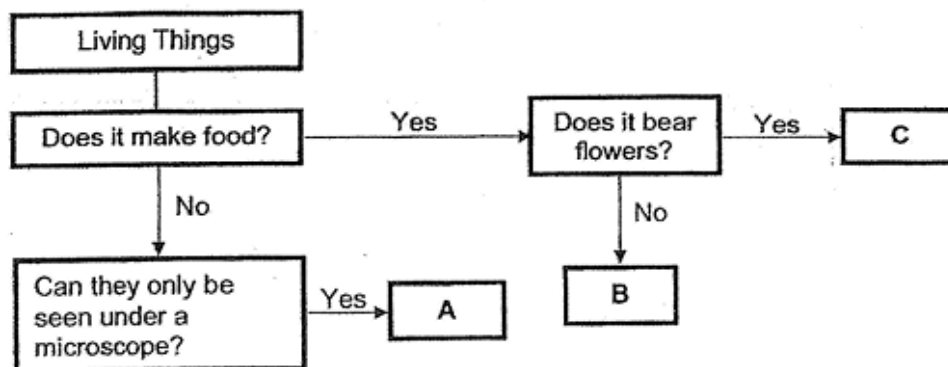
a) State **one similar characteristic** between the Organisms S and T.

[1m]

b) John classified Organisms S and T as plants. Is John correct? Explain why.

[1m]

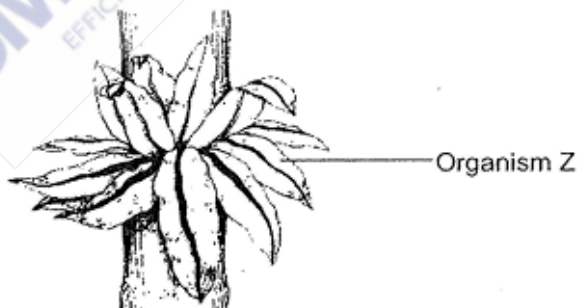
21. Study the flow chart about some living things.



a) From the chart above, describe two characteristics of living thing C. [1m]

b) Which of the living things, A, B or C, is a bacteria? [1m]

c) Look at Organism Z shown below.



Which living thing, A, B or C is Organism Z likely to be?

[1m]

22. Professor Albert conducted an experiment to find out how different conditions affect the growth of bacteria.

The results of the experiment are shown in the table below.

Condition	Growth of Bacteria		
	Day 1	Day 3	Day 5
A	•	••	•••
B	-	-	•
C	•	•	•

Legend

- none • very little growth •• some growth ••• a lot of growth

Using the results from the table, answer the following questions.

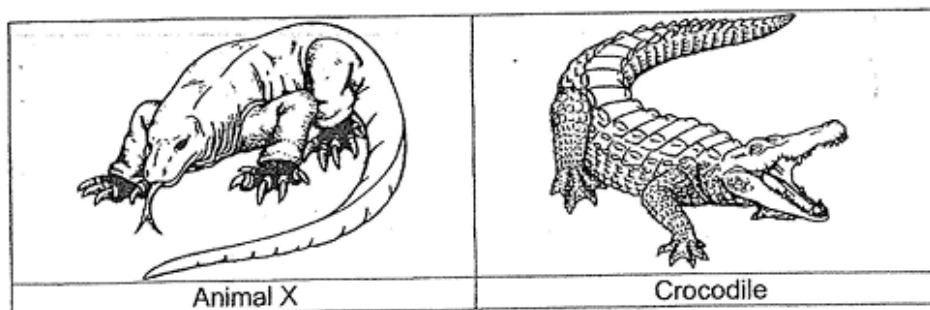
- a) Which type of condition, A, B or C, best supports the growth of bacteria? [1m]

- b(i) Professor Albert cannot observe the growth of bacteria with his eyes. Explain why he cannot observe the bacteria with his naked eyes. [1m]

- b(ii) Name the instrument he needs to use to observe the bacteria. [1m]

23. Jayden went to the zoo and saw Animal X, shown below, moving on the ground.

He noticed that the body covering of the animal looked very similar to the crocodile that he saw earlier.



a) Name the body covering of Animal X.

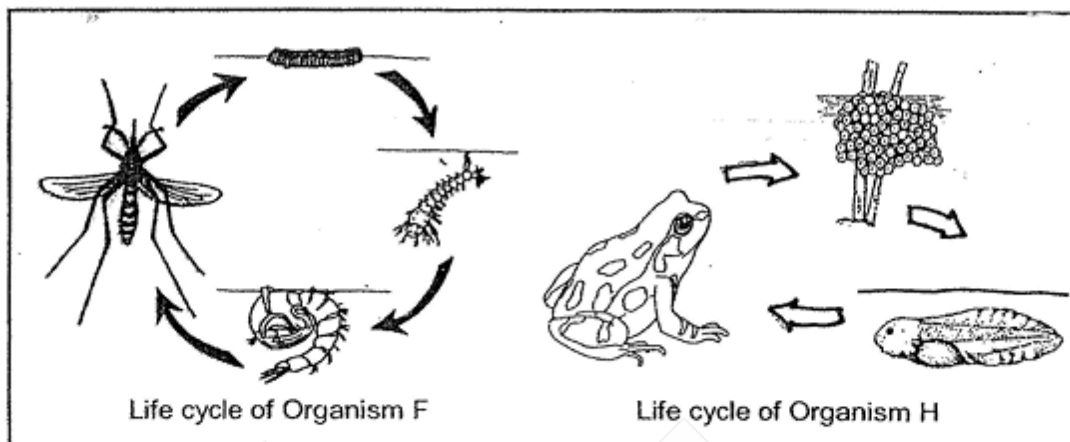
[1m]

b) Jayden was then asked to classify Animal X in his school worksheet.

Which animal group would he classify Animal X?

[1m]

24. The diagrams below show the life cycles of organisms F and H.

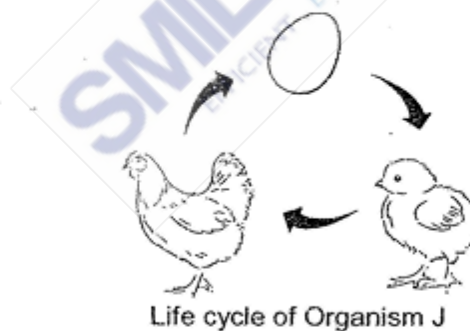


- a) Based on your observation, state one similarity between the two life cycles shown above.

[1]

Similarity 1: _____

The diagram below shows the life cycle of Organism J.



- b) Based on your observation, state one difference between the life cycles of organisms H and J.

[1]

ANSWER SHEET

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

- 16) (a) False
(b) True

- 17) (a) Group J: Shapes that are shaded.
(b) Group K: Shapes that are not shaded.

- 18) Animals
Have Wings No wings

- 19) (a) support
(b) weak

- 20) (a) They need air, food and water to stay alive.
(b) No. John is not correct. Organism T is not a plant as it cannot make food.

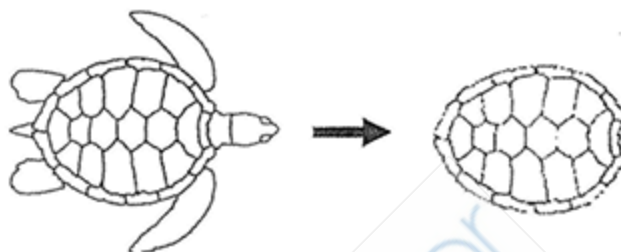
- 21) (a) **Living thing C bears flower and can make food.**
(b) **A is a bacteria.**
(c) **B**
- 22) (a) **A**
(b) (i) **The bacteria is microorganism which cannot be seen with naked eyes.**
(ii) **A microscope**
- 23) (a) **Dry and scaly**
(b) **Reptile**
- 24) (a) **Similarity 1 : Both have egg stage**
(b) **Organism J's young looks like the adult but for organism H, the young does not look like the adult.**

HENRY PARK PRIMARY SCHOOL SA2 PAPER

Section A: (20 x 2 marks = 40 marks)

For each question from 1 to 20, 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.

1. When John touched a turtle, it felt threatened and retreated into its shell, as shown in the diagram below.



Which one of the following characteristics of living things does the turtle show?

- (1) Living things grow.
- (2) Living things reproduce.
- (3) Living things respond to changes.
- (4) Living things need air, food and water.

()

2. Look at the classification table below.





Group 1	Group 2
shorts	knife
skirt	shirt
towel	fork
pants	scissors

Which one of the following is classified wrongly?

- (1) fork
- (2) shirt
- (3) knife
- (4) scissors

()

3. Study the classification table shown below.

Group X	Group Y
 rose plant	 bird's nest
 hibiscus	 rabbit's foot

How have the plants been classified?

	Group X	Group Y
(1)	land plants	water plants
(2)	flowering	non-flowering
(3)	strong stem	weak stem
(4)	reproduce by spores	reproduce by seeds

()

4. Look at the two groups of animals.



Which one of the following characteristics is used to group the animals?

- (1) size of body
- (2) types of food
- (3) body covering
- (4) where they live

()

5. Three students made the following statements on fungi.

Xin Yan : Yeast is a type of fungi.
 Yasman : Fungi reproduce from spores.
 Zachary : Fungi make their own food.

Which of the following statements about fungi are correct?

- (1) Zachary and Yasman only
- (2) Xin Yan and Yasman only
- (3) Xin Yan and Zachary only
- (4) Yasman, Xin Yan and Zachary only

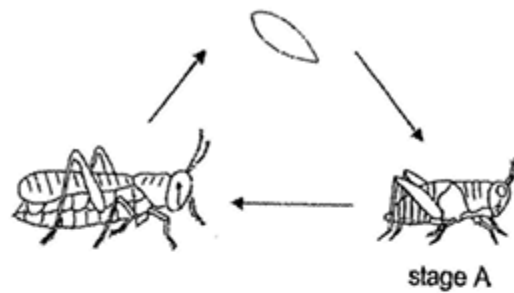
()

6. Which of the following organisms can only be seen through a microscope?

- (1) Bacteria and yeast
- (2) Moss and yeast
- (3) Mould and ferns
- (4) Mushroom and bacteria

()

7. The diagram below shows the life cycle of animal X.

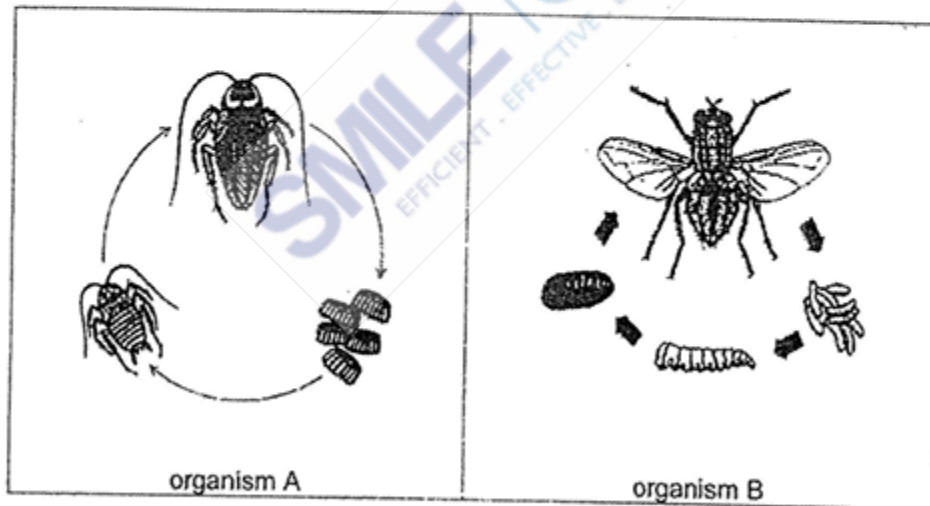


Which one of the following correctly describes animal X at stage A?

- (1) Animal X does not eat at all.
- (2) Animal X does not have wings.
- (3) Animal X does not move around.
- (4) Animal X does not respond to changes.

()

8. The diagram below shows the life cycle of organism A and organism B.

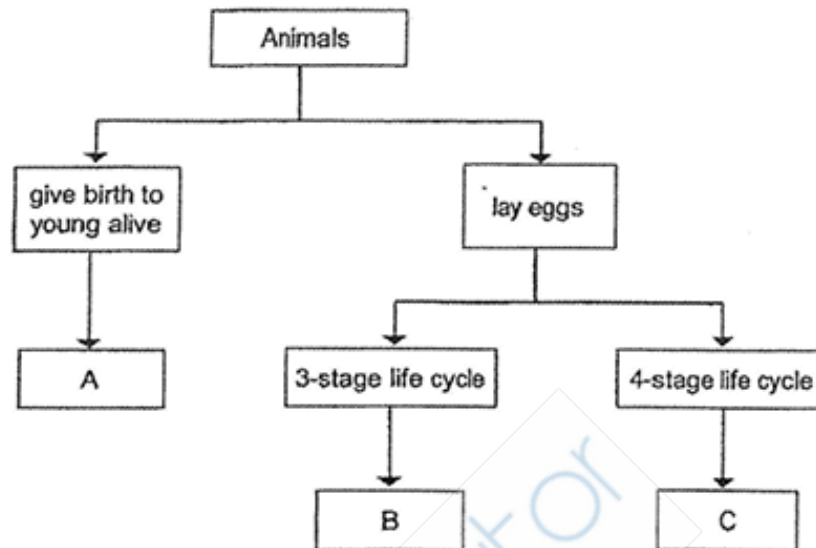


Which statement is **not** correct?

- (1) Organism A has three stages in its life cycle.
- (2) Organism B has four stages in its life cycle.
- (3) The young of organism A resembles the adult.
- (4) The young of organism B resembles the adult.

()

9. Study the classification table below.

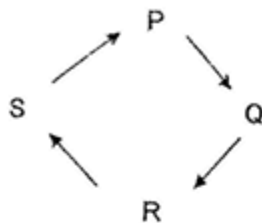


Which one of the following correctly identifies A, B and C?

	A	B	C
(1)	frog	cockroach	beetle
(2)	cat	mosquito	frog
(3)	horse	chicken	beetle
(4)	chicken	frog	cockroach

()

10. The diagram below shows the life cycle of a butterfly.



Jenny observed and recorded the number of leaves eaten by a butterfly at the different stages, P, Q, R and S, in the table below.

Stage	Number of leaves eaten in a day
P	0
Q	0
R	0
S	8

Which stage is most likely the adult stage?

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

()

11. Michael has four objects K, L, M and N made of different materials. He measured the mass of each object before putting it in water. He recorded his observations in the table below.

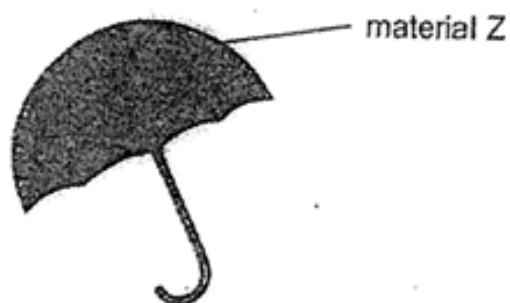
Object	Material	Mass (g)	Floats in water
K	metal	6	×
L	plastic	6	✓
M	wood	15	✓
N	plastic	18	×

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

- (1) Object N has the biggest mass.
- (2) All objects made of plastic float.
- (3) All objects with a small mass float.
- (4) Object K has a bigger mass than object L.

()

12. An umbrella protects the user from the Sun and rain.



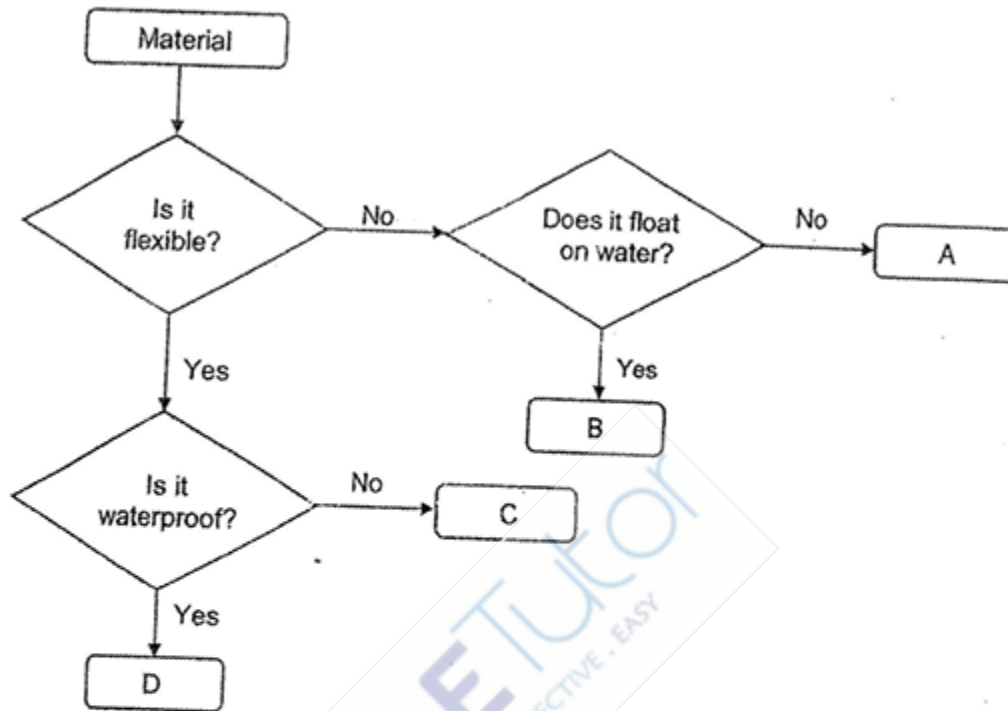
The table below shows some properties of materials.

	Properties
A	strong
B	waterproof
C	allows most light to pass through

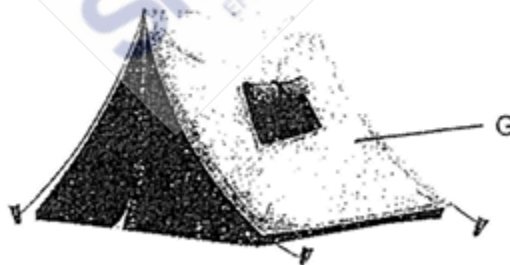
Which of the following properties should material Z have?

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

13. Study the flowchart below.



Based on the flowchart given, which material, A, B, C or D, is suitable for making part G of the camping tent shown below?

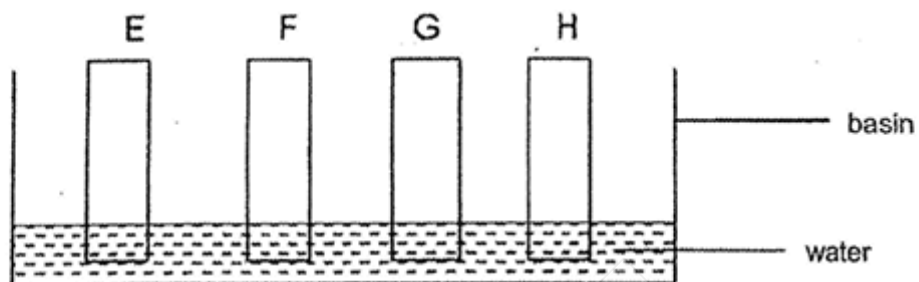


- (1) A
- (2) B
- (3) C
- (4) D

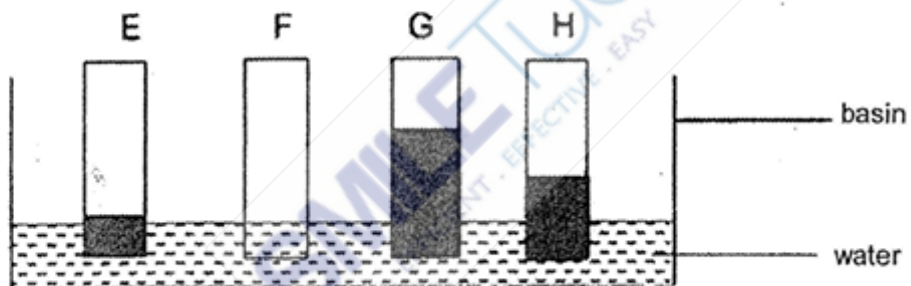
()

14. Ahmad set up an experiment to find out which material, E, F, G or H absorbed the most amount of water.

He placed four similar strips of materials E, F, G and H into a basin of water as shown below.



The diagram below shows the strips of materials after 30 minutes. The black patches represent the water absorbed by the materials.

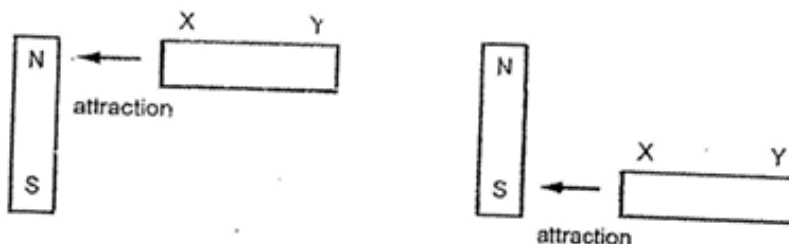


Which material is **most** suitable to make a bath towel?

- (1) E
- (2) F
- (3) G
- (4) H

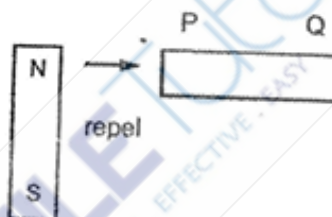
15. A metal rod XY is placed near a bar magnet.

End X is **attracted** when it is placed near to the North Pole (N) of the magnet, and also when it is placed near to the South Pole (S) as shown below.



Another metal rod PQ is also placed near the same bar magnet.

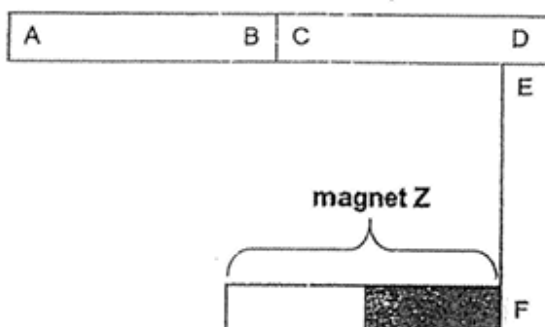
End P **repelled** when it is placed near to the North Pole (N) of the magnet as shown below.



Which of the following will be observed when end Y and end P are placed near to the South Pole (S) of the bar magnet?

	end Y near South Pole (S)	end P near South Pole (S)
(1)	attract	attract
(2)	attract	repel
(3)	repel	attract
(4)	repel	repel

16. Three similar bar magnets with their poles labelled A, B, C, D, E and F are arranged with the bar magnet Z as shown in the diagram below.



Which one of the following arrangements is possible?

- (1)

A	B	D	C
---	---	---	---
- (2)

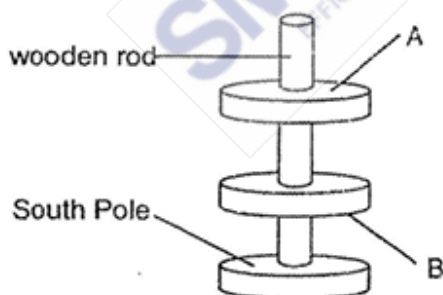
C	D	F	E
---	---	---	---
- (3)

F	E	A	B
---	---	---	---
- (4)

C	D	A	B
---	---	---	---

()

17. The diagram shows the positions of 3 ring magnets when they are put through a wooden rod.

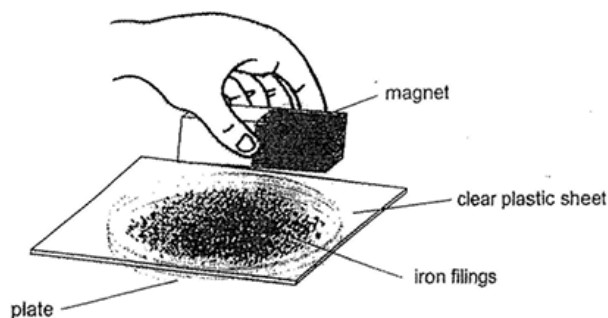


Which one of the following shows correctly the poles marked A and B?

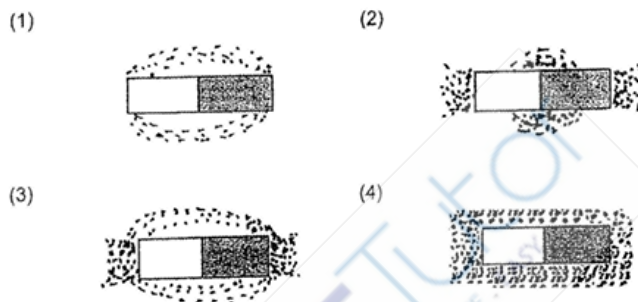
	A	B
(1)	north	north
(2)	north	south
(3)	south	south
(4)	south	north

()

18. Susan poured some iron filings into a plate and placed a clear plastic sheet over the plate as shown below. She then placed a bar magnet on the clear plastic sheet and observed that the iron filings were attracted to the magnet.



Which one of the following diagrams best shows what Susan would observe after some time?



19. James conducted an experiment with magnets, S, T and U.

He brought each magnet 3 cm away from a container of paper clips and recorded the number of paper clips attracted to each magnet in the table below.

He then heated each magnet over a candle flame for 10 minutes and repeated the experiment.

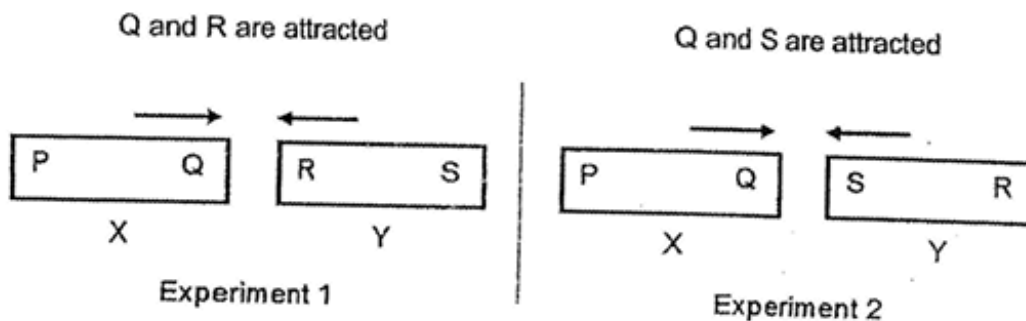
Magnet	Number of paper clips attracted	
	Before heating	After heating
S	7	0
T	13	0
U	5	0

Based on the results shown in the table above, what could James conclude?

- A Magnet S is the weakest magnet before heating.
- B Magnet T is the strongest magnet before heating.
- C Magnet U is the strongest magnet after heating.
- D All magnets lost their magnetism after being heated.

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

20. Two objects, X and Y, are placed side by side as shown in the diagrams below.



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

- A : One of the objects (X or Y) is a magnet.
 B : Q and R are **definitely** unlike poles.
 C : Both objects, X and Y, are made of magnetic materials.

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

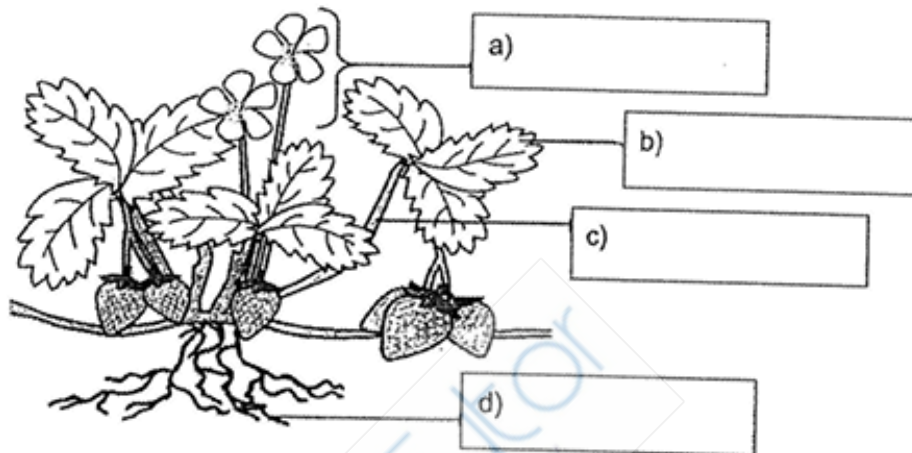
()

End of Section A

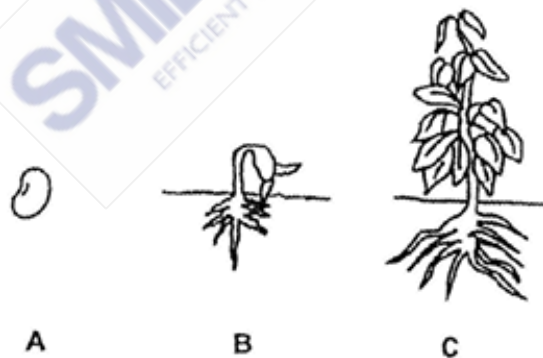
Section B : (8 x 2 marks = 16 marks)

Write your answers to questions 21 to 28 in the spaces given. Each question is 2 marks.

21. Identify and label correctly the parts of the plant shown in the diagram below. [2]



22. The diagram below shows the 3 stages in the life cycle of a bean plant.



Name the stages A and B in the life cycle of the bean plant.





[2]

A : _____ B : _____

23. A description of animal A is given below.

"I am a small animal. My body, which has a hard outer covering, is divided into three parts. I reproduce by laying eggs. What am I?"

a) Study the diagrams given below and put a tick (✓) in the box that represents animal A. [1]

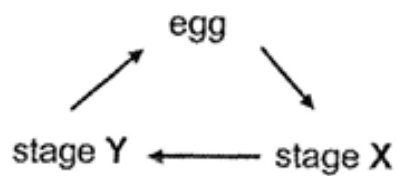
	
	
	
	

b) Put a tick (✓) beside the animal group that animal A belongs to.

[1]

Animal group	Put a tick (✓) in the correct box
fish	
bird	
insect	
mammal	

24. The diagram below shows the life cycle of a frog.

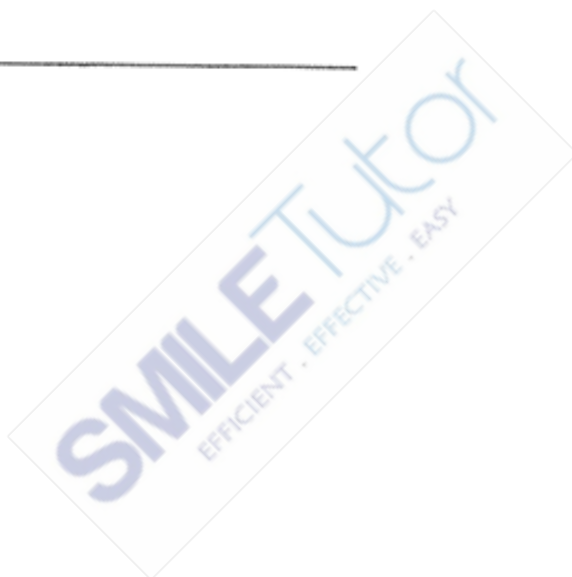


Name stages X and Y.

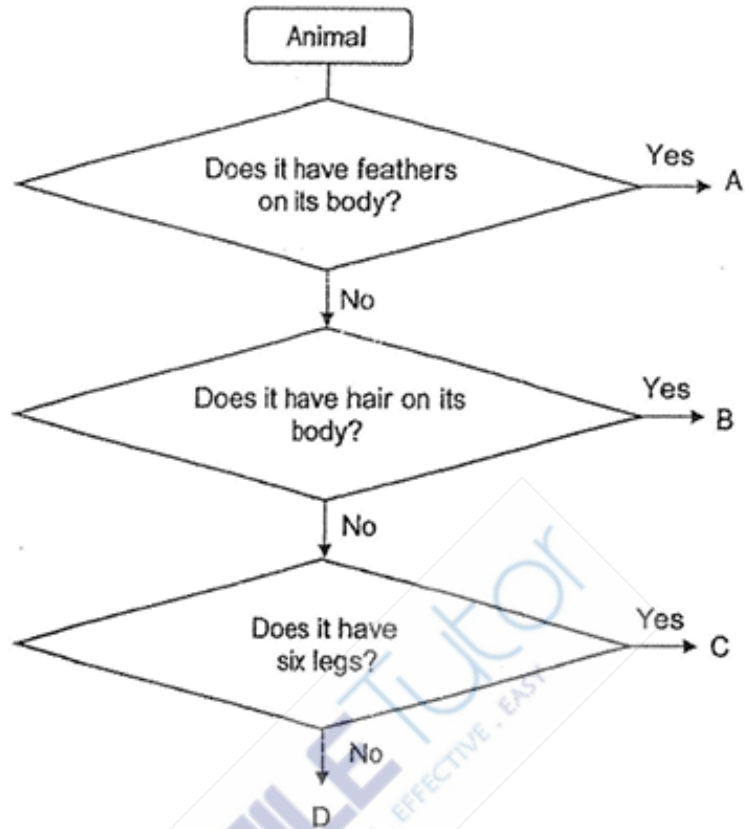
[2]

Stage X : _____

Stage Y : _____



25. Study the flowchart below carefully.

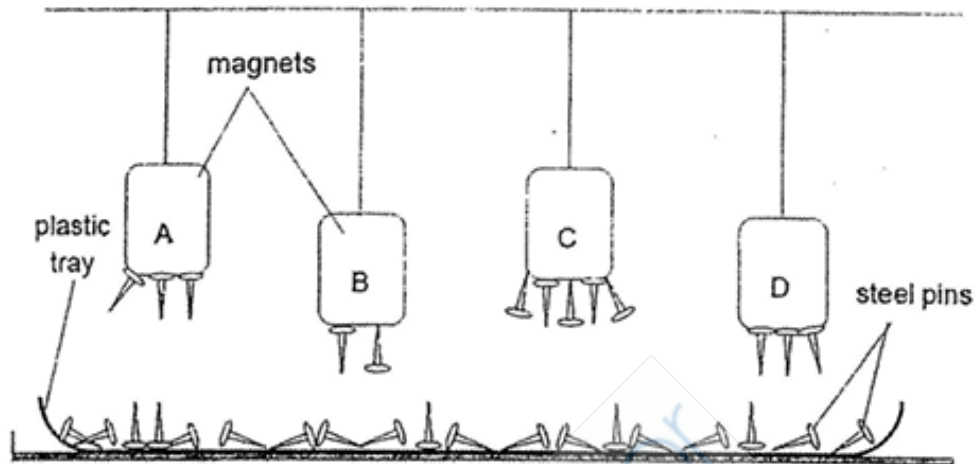


Using the information in the flowchart, group the animals by writing the A, B, C or D in the correct boxes below.

[2]

Animal	Letters
Cockroach	
Chicken	
Giraffe	
Frog	

26. Magnets A, B, C and D are hanging from strings of two different lengths as shown in the diagram below. A plastic tray of steel pins is placed below the magnets. Each magnet attracts different number of steel pins.



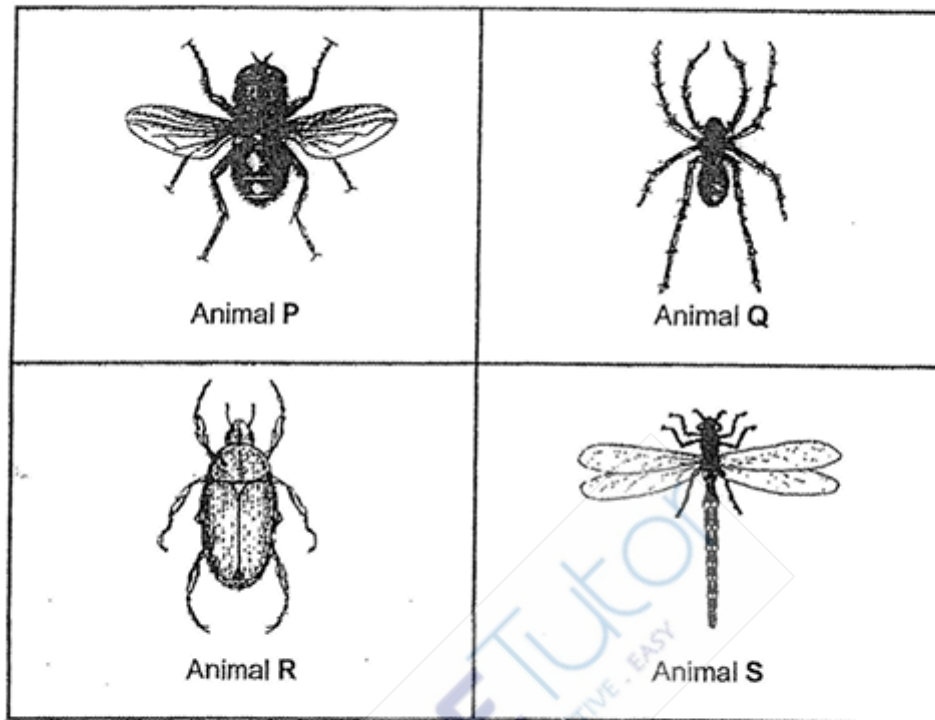
Based on the diagram above, arrange the magnets according to their magnetic force, from the magnet with the strongest magnetic force to the magnet with the weakest magnetic force.

Write A, B, C and D in the correct boxes provided below.

[2]

Strongest Magnetic Force		Weakest Magnetic Force
<div style="border: 1px solid black; width: 80px; height: 80px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 80px; height: 80px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 80px; height: 80px; margin: 0 auto;"></div>

27. Jane and Mary found four small animals (P, Q, R and S) as shown in diagram below.



The girls observed these animals and made a table about their observations.

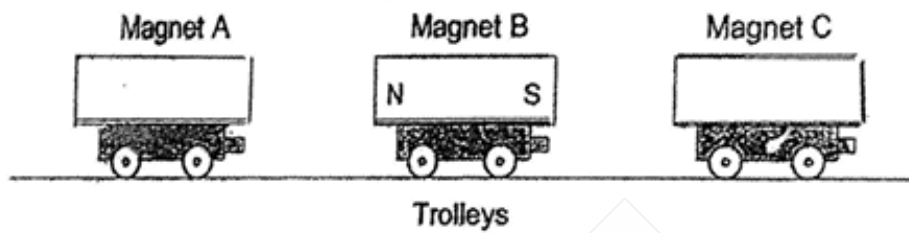
Complete the table below by adding the letters (P, Q, R and S) of the four animals in the correct boxes. [2]

Animal (Write P, Q, R or S)			Number of wings	Number of legs	Number of feelers
(a)			0	6	2
(b)			4	6	2
(c)			0	8	0
(d)			2	6	2

28. The diagram below shows three trolleys.

Paul put a bar magnet on each trolley. He pushed the trolleys together.

- Magnet B **attracted** magnet A.
- Magnet B **repelled** magnet C.



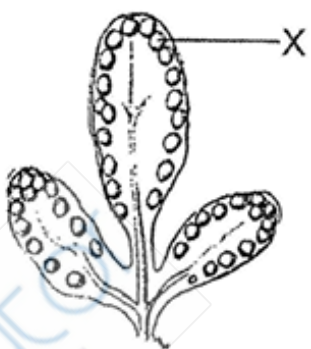
On the diagrams above, **write** the North and South poles of magnets A and C [2]
using the letters **N** and **S**.

End of Section B

Section C: (24 marks)

Write your answers to questions 29 to 35 in the spaces given. Each question carries 2 to 4 marks.

29. Tiffany found plant P in her garden. She observed the plant and recorded the following observations.

Observations of plant P	
<ul style="list-style-type: none"> • It is green in colour. • It has part X on the underside of its leaves which contains some brown powder. • It does not bear flowers. 	

a) Name part X. _____ [1]

b) Can plant P produce fruit? Explain your answer. [2]

30. Alex observed animals, D and E, over a period of time.



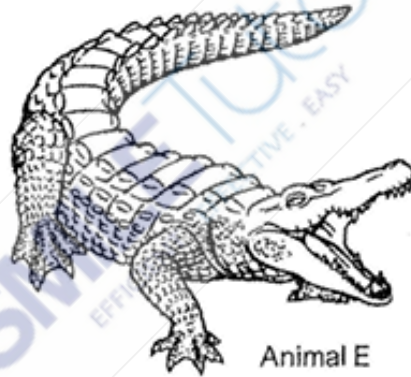
A young of animal D

Animal D has moist skin as outer covering. The adult lives on land and lays eggs on the surface of a pond.

A few weeks later, some of the eggs hatched and its young lived in the pond until they grow into adults.

- a) Name the animal group that animal D belongs to.

[1]



Animal E

Animal E has scales and dry skin and lives on land. It lays eggs and its young were found near the water after they hatched from the eggs.

Alex concluded that animals D and E have many similar characteristics so they belong to the same animal group.

- b) Do you agree with Alex's conclusion? Explain why.

[2]

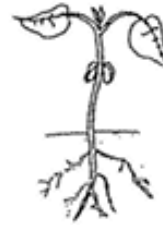
31. The diagrams below show the stages in the life cycle of a plant. They are not arranged in order.



P



Q



R

Use the diagrams shown above to answer the following questions.

Observe the **parts** of the plant at stages P and R.

- a) Based on your observation, state one **similarity** between the plant at stages P and R. [1]

- b) Based on your observation, state one **difference** between the plant at stages P and R. [1]

32. The table below shows the properties of three materials E, F and G.

Material	Property			
	Waterproof	Flexible	Strong	Allow light to pass through
E	✓	✓		
F	✓		✓	✓
G		✓	✓	

a) Based on the information given in the table above, state two properties of material G. [2]

Property 1 : _____

Property 2 : _____

b) The diagram below shows a pair of reading glasses.



Which material, E, F or G, is most suitable for making part X?

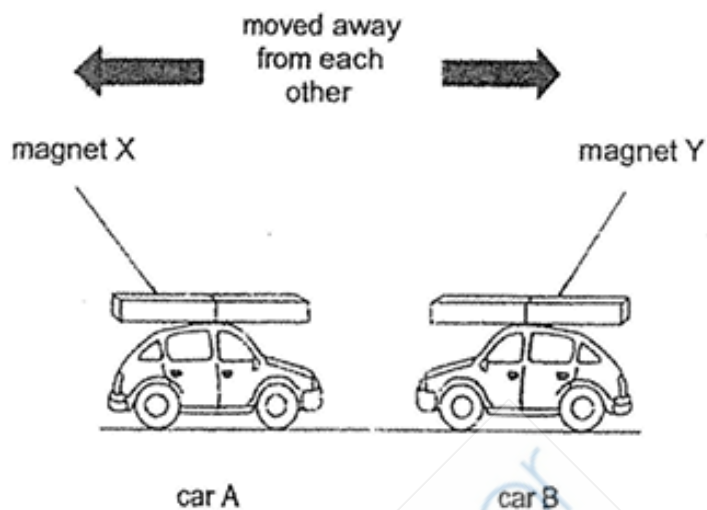
Explain your answer.

[2]

Material: _____

Explain: _____

33. Jett tied two similar magnets X and Y on two plastic toy cars, A and B.



- a) When the two plastic toy cars with the magnets were brought close to each other, they moved away from each other as shown in the diagram above.

Explain why this happened.

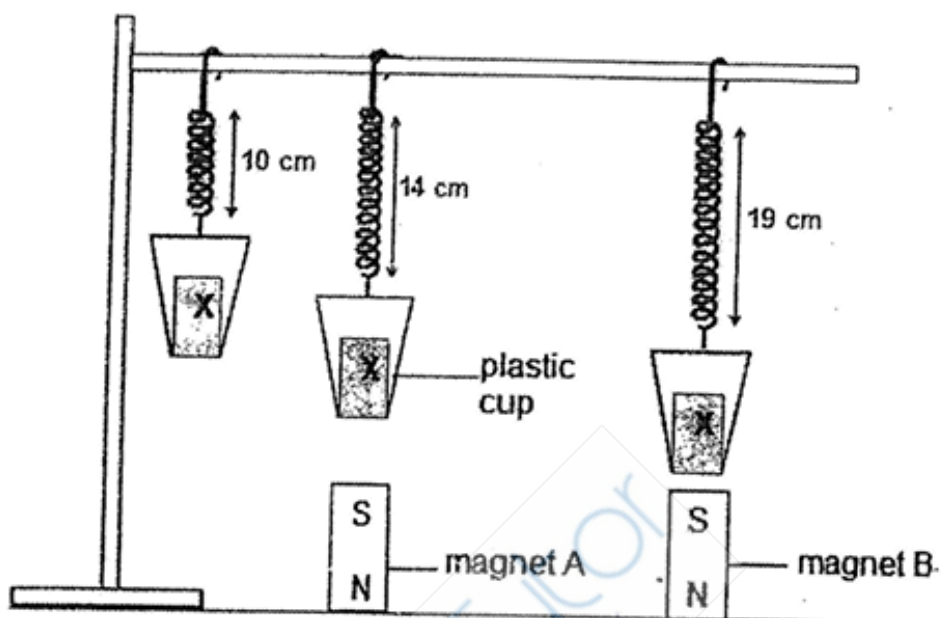
[2]

- b) What can Jett do to magnet X to make the two toy cars move towards each other?

[2]

Explain your answer.

34. The diagram below shows three identical plastic cups with object X in each one of them. The cups are attached to three identical springs. Object X is made of iron.



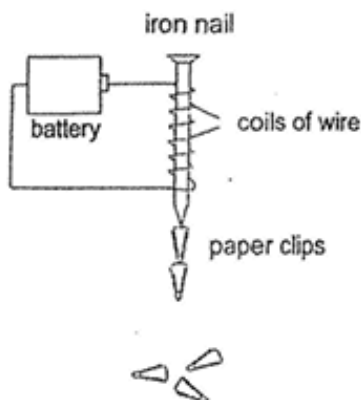
When magnets A and B were placed below the plastic cups, it was observed that the springs stretched longer.

- a) Explain why the springs stretched longer. [2]

- b) i) Which magnet, A or B, is stronger? [1]

- ii) Based on the diagrams shown above, explain your answer in (bi). [1]

35. Mary prepared an experiment as shown in the diagram below.



a) Explain why the iron nail was able to attract the paper clips. [1]

b) Suggest **two** ways Mary can increase number of paper clips attracted by the iron nail above. [2]

i)

ii)

An iron nail was used in the above experiment.

c) Besides iron, **name** another suitable material the nail can be made of. [1]

End of Section C

ANSWER SHEET

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

- 21) (a) Flower
 (b) Leaf
 (c) Stem
 (d) Roots

- 22) A : Seed
 B : Young plant

23) (a)



(b) Insect ✓

- 24) Stage X : Young
 Stage Y : Adult

25)

Animal	Letters
Cockroach	C
Chicken	A
Giraffe	B
Frog	D

26)



27) (a) R

(b) S

(c) Q

(d) P

28) Magnet A

N S

Magnet B

N S

Magnet C

S N

29) (a) Spores

(b) Plant P cannot produce fruit as it is a non-flowering plant.

30) (a) Amphibians

(b) I do not agree with Alex's conclusion as animal D can live in land and water while animal E can only live on land.

31) (a) The plant in both stages of the life cycle have leaves.

(b) The plant in stage P has flowers and fruits while the plant in stage R does not.

32) (a) Property 1: It is flexible.

Property 2: It is strong.

(b) Material: E

Explain: Material F allows light to pass through as it allows the user to see clearly through the lens.

33) (a) The two like poles of magnet X and Y are facing each other and they would attract. The cars will then move towards each other.

(b) Turn magnet X around so that the unlike poles will face each other and they would attract. The cars will then move towards each other.

34) (a) Object X is a magnetic material so the magnet would attract object X and the spring will stretch longer.

(b) (i) Magnet B

(ii) The spring stretch longer.

35) (a) The iron nail became an electromagnet.

(b) (i) She can increase the number of coils.

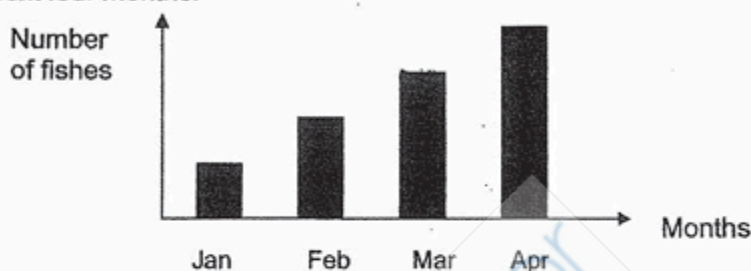
(ii) She can increase the number of batteries.

(c) Steel

METHODIST GIRLS' SCHOOL EOY PAPER

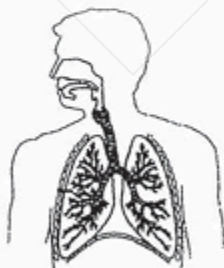
For each question from 1 to 23, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).
[46 marks]

- 1 Sam puts five fishes in a tank in January and feeds them every day. He did not add in new fishes into the tank. He recorded his observations of the fishes over the next four months.



Which characteristic of living things did Sam observe about the fishes based on the graph above?

- (1) They grow bigger.
 - (2) They move by themselves.
 - (3) They respond to their surrounding.
 - (4) They reproduce and increase in number.
- 2 Study the human system X below.



- It takes in air into the body.
- One of its organs is protected by the ribcage.

Which one of the following is also a function of human system X?

- (1) It gives the body a shape.
- (2) It removes air from the body.
- (3) It removes undigested food from the body.
- (4) It transports water to all parts of the body.

3 Three plants are classified in the flowchart as shown below.



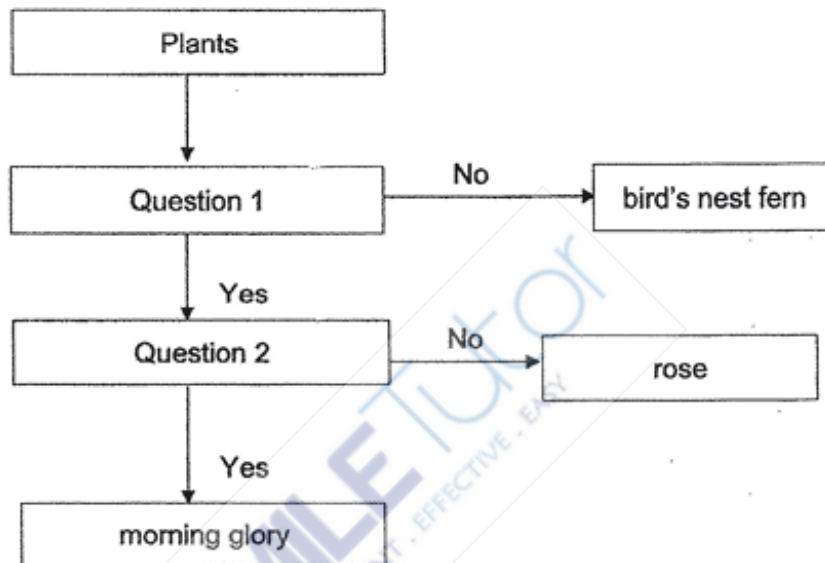
morning glory



bird's nest fern



rose



What are questions 1 and 2?

	Question 1	Question 2
(1)	Does it have a weak stem?	Does it reproduce by seeds?
(2)	Does it reproduce by seeds?	Does it have a weak stem?
(3)	Does it have a weak stem?	Does it reproduce by spores?
(4)	Does it reproduce by spores?	Does it have a weak stem?

- 4 Four students, each made a statement about the living things as shown below.



banana plant



squirrel



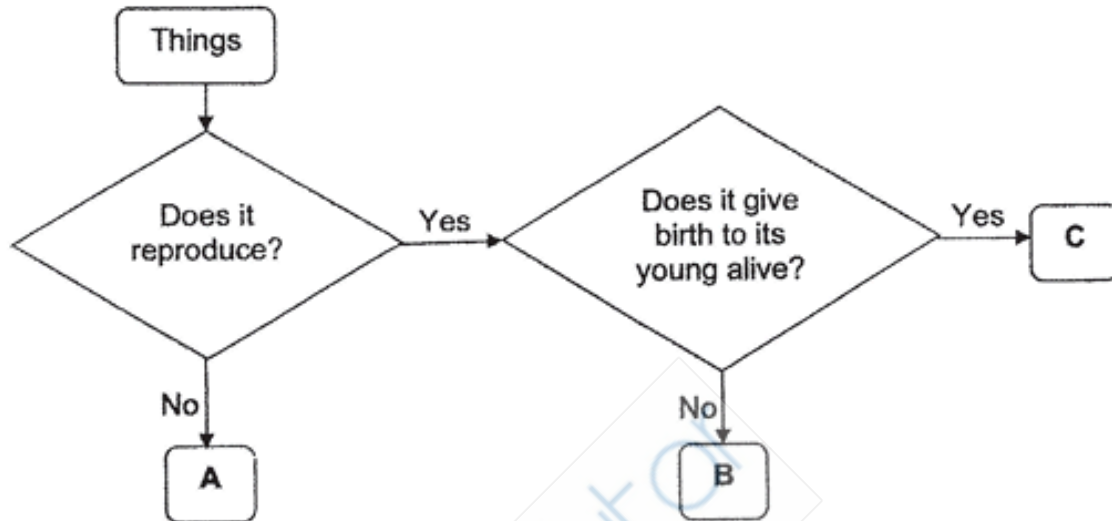
bread mould

Amy:	The banana plant bears fruits so it is a flowering plant.
Betty:	The banana plant and bread mould are fungi but the squirrel is an animal.
Candice:	The bread mould is a type of non-flowering plant.
Dennis:	The banana plant can make its own food but the squirrel and bread mould cannot make its own food.

Who made the statements that are correct?

- (1) Amy and Betty only
- (2) Amy and Dennis only
- (3) Betty and Candice only
- (4) Candice and Dennis only

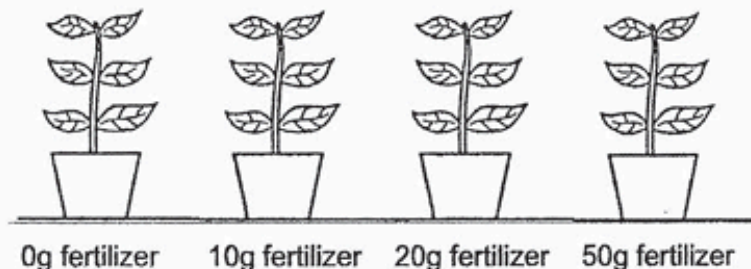
5 Study the flowchart below carefully.



Which of the following could be A, B and C?

	A	B	C
(1)	ruler	crocodile	brick
(2)	brick	frog	bat
(3)	ruler	crocodile	parrot
(4)	cat	brick	bat

- 6 Siti wanted to find out whether the amount of fertilizer affects the growth of a plant. She used four identical potted plants and gave each of them the same amount of water as shown below.



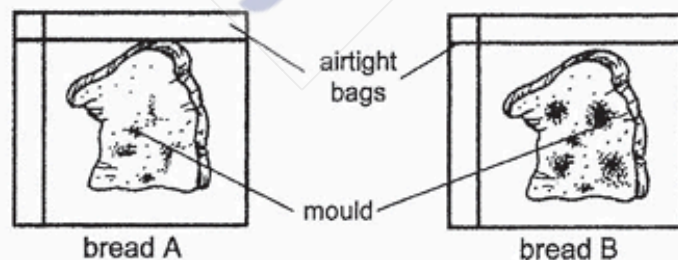
To ensure a fair test, which variables should Siti keep the same?

- A Type of potted plant
- B Type of fertilizer used
- C Amount of fertilizer used
- D Amount of sunlight each plant received

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

- 7 Johnny did an experiment with two similar slices of bread, A and B. He placed them into airtight bags. Then, he placed bread A in the refrigerator and bread B on the table.

After three weeks, he observed the following on each slice of bread as shown below.



Based on Johnny's experiment, what could he conclude about the growth of mould on the bread?

- (1) Mould does not need food to grow.
- (2) Mould does not need water to grow.
- (3) Mould grows faster when there is more water.
- (4) Mould grows faster when the surroundings are warm.

- 8 The diagram below shows a strawberry plant with parts labelled R, S, T and U.



The plant will not be able to absorb water and mineral salts if Part _____ is removed.

- (1) R
- (2) S
- (3) T
- (4) U

- 9 Janet had two similar plants, R and S, as shown in the diagram below. She cut off all the roots of plant S but not the roots of plant R. She then put both pots of plants in the garden.

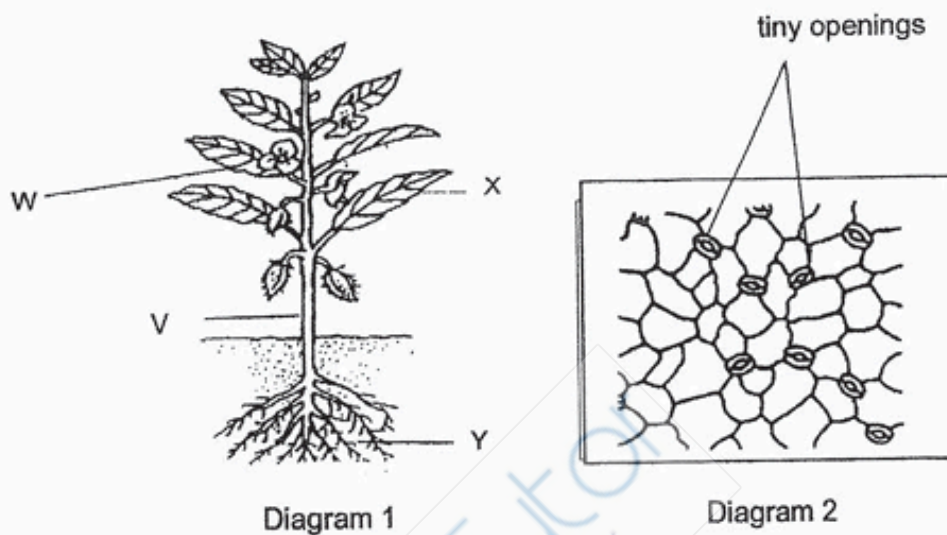


After a thunderstorm, one of the two plants fell out of the pot. Which plant fell out and why?

	Plant	Reason
(1)	R	The roots of the plant took in too much water.
(2)	R	The roots of the plant were unable to hold the plant firmly to the soil.
(3)	S	The plant had no roots to take in enough water.
(4)	S	The plant had no roots to hold the plant firmly to the soil.

10

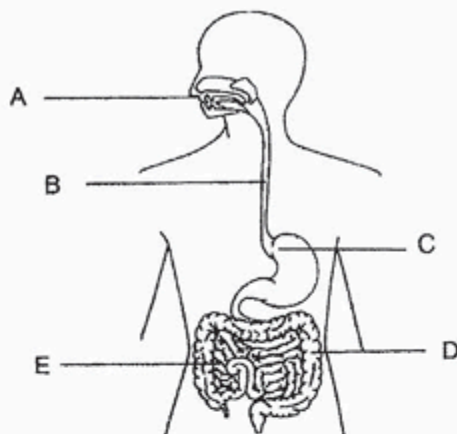
Diagram 1 shows a plant with parts labelled V, W, X and Y.
 Diagram 2 shows tiny openings that can be found on one part of the plant.



Which part of the plant can these tiny openings be found and what is its function?

	Part of the plant	Function
(1)	V	To take in food
(2)	W	To absorb sunlight
(3)	X	To take in and give out air
(4)	Y	To absorb water and mineral salts

- 11 The diagram below shows the human digestive system.



Which of the following shows how food travels through the digestive system?

- (1) $A \rightarrow B \rightarrow C \rightarrow E$
- (2) $A \rightarrow C \rightarrow B \rightarrow E$
- (3) $A \rightarrow C \rightarrow B \rightarrow D$
- (4) $A \rightarrow B \rightarrow C \rightarrow D$

- 12 David wanted to find out if the amount of water affected the growth of mushrooms on tree logs, A, B and C as shown below.



log A – open field
5 ml of water



log B – garden
10 ml of water



log C – science lab
15 ml of water

David's teacher told him that he did not conduct a fair experiment. What should he do to conduct a fair test?

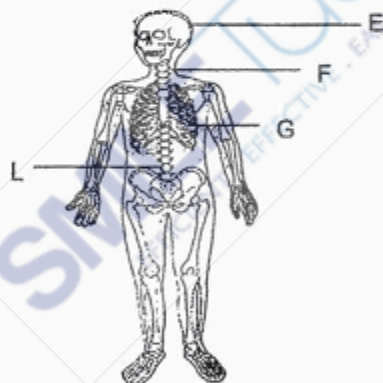
- (1) Increase the length of log A.
- (2) Add more mushrooms to log B.
- (3) Reduce the amount of water for log C.
- (4) Put all the three logs in the same place.

- 13 Lily wants to find out the type of food that insect Q prefers to eat. She prepares four set-ups using similar containers for her experiment.

Set-up	Number of insect Q	Type of food	Amount of food (g)
A	10	oats	30
B	20	oats	50
C	10	bread	30
D	15	bread	50

Which two set-ups should she compare to ensure that it is a fair test?

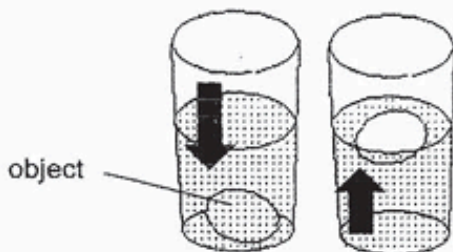
- (1) A and B
 - (2) A and C
 - (3) B and C
 - (4) B and D
- 14 Study the diagram of the skeletal system.



Which parts of the skeletal system protects the brain, heart and lungs respectively?

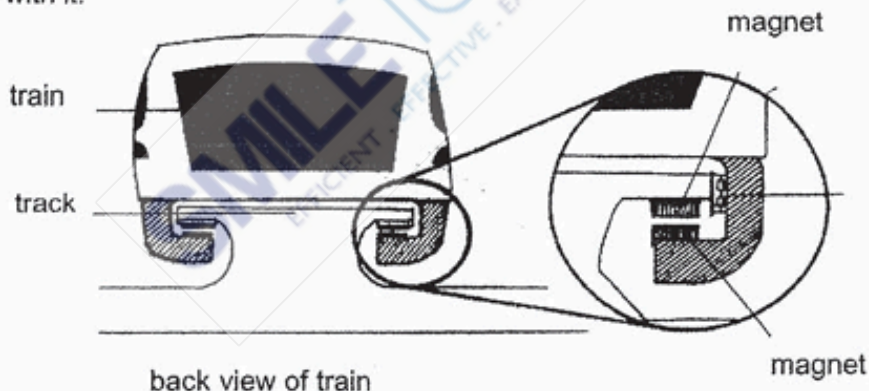
	Brain	Heart	Lungs
(1)	E	G	G
(2)	E	F	G
(3)	F	G	L
(4)	F	L	G

- 15 Boon Teck pushed an object to the bottom of a container of water as shown below.



When Boon Teck took away his hand, he observed that the object moved back up to the surface of the water. The arrow signs show the direction of the movement of the object. Which property of material did he test?

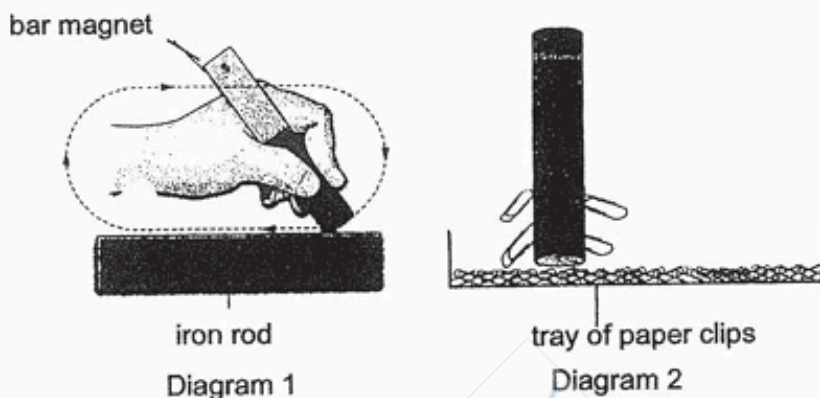
- (1) Strength
 - (2) Flexibility
 - (3) Waterproof
 - (4) Ability to float or sink
- 16 A "Maglev" train is a special train that is able to move above the track without any contact with it.



Which one of the following statements explains how the magnets are able to keep the "Maglev" train above the track?

- (1) Like poles of the magnets repel
- (2) Like poles of the magnets attract
- (3) Unlike poles of the magnets repel
- (4) Unlike poles of the magnets attract

- 17 Ahmad used the stroke method to magnetise an iron rod as shown in diagram 1 below. After stroking it 10 times, he brought the iron rod near a tray of paper clips and saw that it attracted four of them as shown in diagram 2 below.



What should Ahmad do if he wants to attract more paper clips?

- (1) Use a rod magnet
 - (2) Change the iron rod to a copper rod
 - (3) Stroke the rod 20 more times in the same direction
 - (4) Use the south pole of the magnet to stroke the iron rod 20 times
- 18 Meena wears a raincoat to keep out the rain as shown below.



What properties of the material make it suitable for making the raincoat?

- A Strong
 - B Flexible
 - C Waterproof
 - D Transparent
- (1) A and B only
 - (2) B and D only
 - (3) A, B and C only
 - (4) A, C and D only

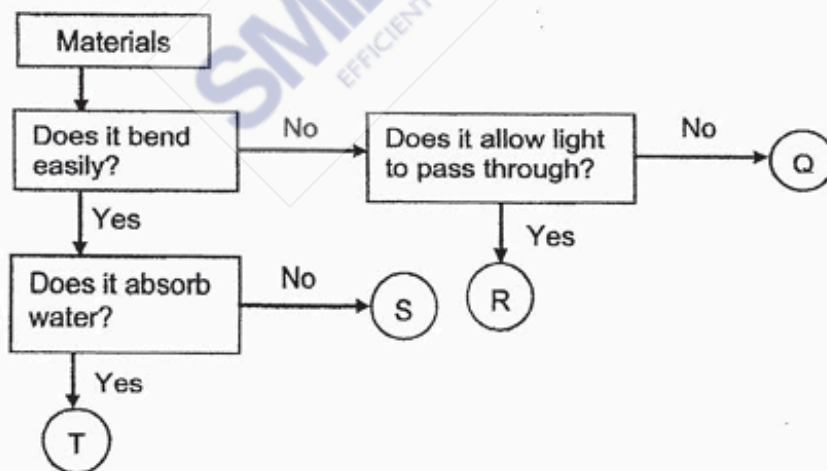
- 19 Bryan wears a helmet whenever he rides a bicycle to protect his head.



What can material X be and what is the reason that makes it suitable to make the helmet?

	Material	Reason
(1)	Metal	It is strong and flexible.
(2)	Metal	It is strong and transparent.
(3)	Plastic	It is strong and waterproof.
(4)	Plastic	It is transparent and waterproof.

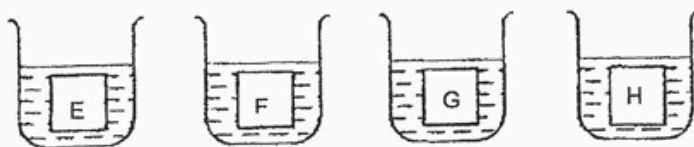
- 20 Study the flowchart as shown below.



Which material is suitable to be used to make a floor tile?

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

- 21 Four pieces of different materials, E, F, G and H, of the same size were each weighed before they were put into the beakers of water as shown below.



After 15 minutes, each piece was weighed again. Their masses were recorded in the table below.

Material	Mass at the beginning (g)	Mass after 15 minutes (g)
E	10	15
F	15	15
G	10	20
H	15	20

Which material is most suitable for making a bath towel?

- (1) E
- (2) F
- (3) G
- (4) H

- 22 Diagram 1 below shows a ring magnet lowered onto a tray of steel pins. Diagram 2 shows the bottom view of the ring magnet labelled parts X, Y and Z.

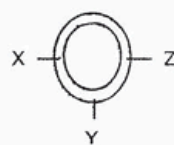
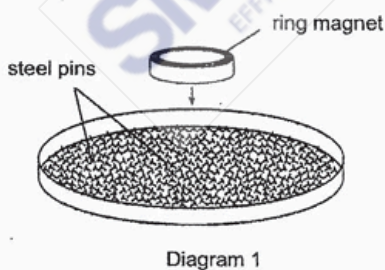
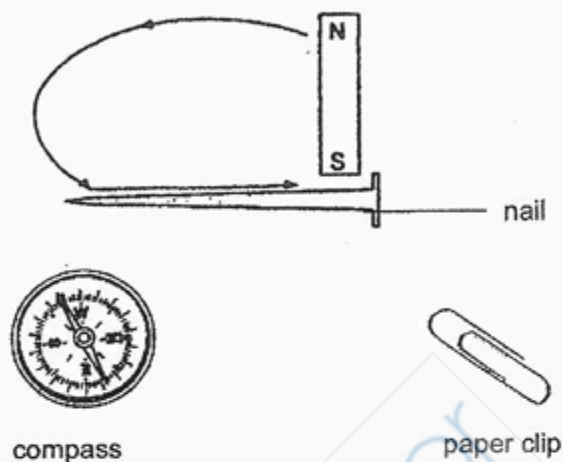


Diagram 2
Bottom view of magnet

What would be the most likely observation?

- (1) Parts X, Y and Z will not attract any steel pins because the ring magnet has no poles.
- (2) Part Y will attract the least number of steel pins as the centre of the magnet has the weakest magnetic force.
- (3) Parts X, Y and Z will attract the same number of steel pins as the magnetic strength is the same at different positions.
- (4) Parts X and Z will attract the greatest number of steel pins as the poles of the magnet have the strongest magnetic force.

- 23 Raju wanted to find out whether a nail was magnetized by the stroke method. He placed the nail near a compass and a paper clip.



He recorded his observations below.

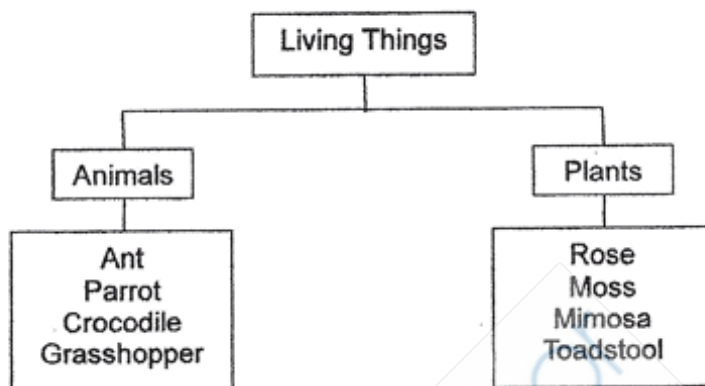
- A The nail attracted the paper clip.
- B When the nail was brought near to the compass, the compass needle moved.
- C When suspended freely, the nail stopped moving and points in the East-West direction.

Which of the observations help Raju to conclude that the nail was magnetised?

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

For questions 24 to 30, write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part question. [24 marks]

24 Study the classification chart below carefully.



- (a) Based on the classification chart above, which living thing is wrongly classified? Give a reason for your answer. [1]

- (b) Give an example of an organism that belongs to the same group of living things as your answer in (a). [1]

- (c) How do plants and animals get their food? [1]

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25 Study the picture of the bird's nest fern below.



- (a) What is Part X that is found on the underside of the leaves of the bird's nest fern? [1]

- (b) What is the function of Part X? [1]

- (c) Which group of living things does the bird's nest fern belong to? [1]

26 The picture below shows animal E.



Animal E

Which animal group does E belongs to? State one characteristic to explain your answer. [1]

(a) _____

Study animals F and G as shown below.



Animal F

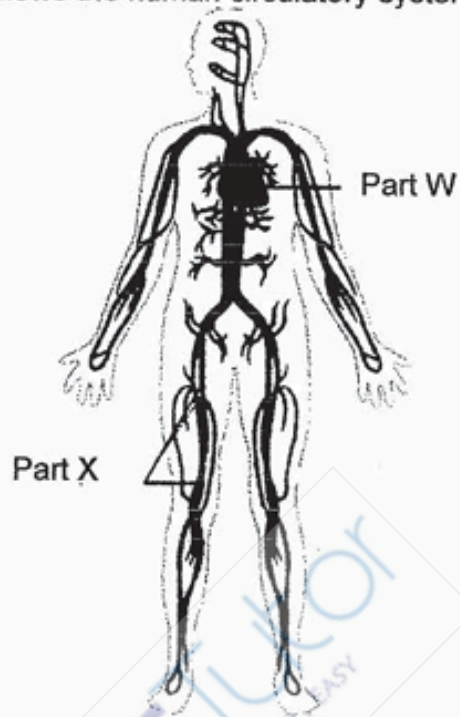


Animal G

(b) How do both animals F and G move with their body parts, R and S? [1]

(c) How do animals E, F and G reproduce? [1]

- 27 The diagram below shows the human circulatory system.

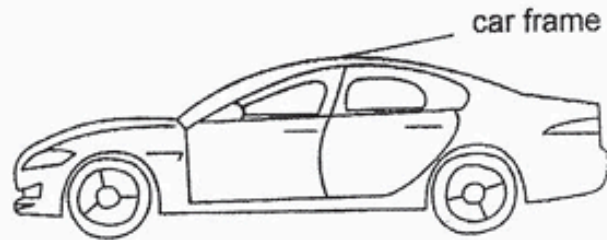


- (a) Name Parts W and X of the human circulatory system. [1]

Part W: _____ Part X: _____

- (b) Blood found in the human system above carries substances around the body. Name all the substances that are carried by the blood to all parts of the body. [1]

Study the car frame as shown in the diagram below.

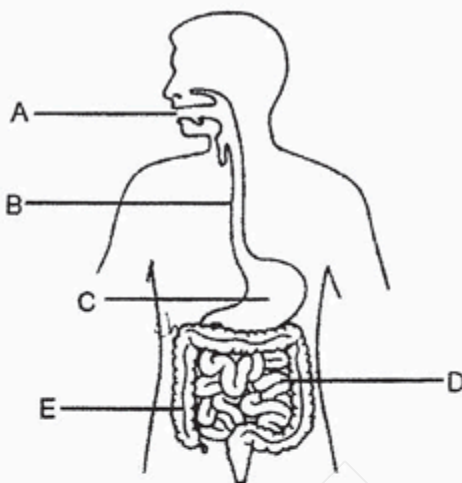


- (c) Name the human body system that serves the same function as the car frame. [1]

- (d) How is the function of the car frame similar to the human body system you have identified in (c)? [1]

- (e) What does the system identified in (c), together with the muscular system enable us to do? [1]

28 The diagram below shows parts A, B, C, D and E of the human digestive system.



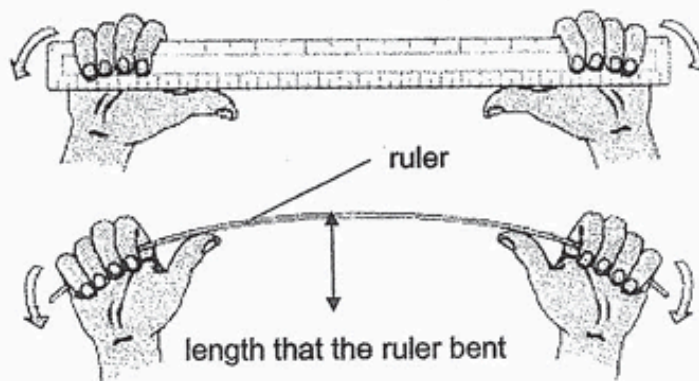
- (a) Which part(s) A, B, C, D and/or E, of the human digestive system produce(s) digestive juices? [1]

- (b) Name the part of the digestive system which absorbs water from undigested food. [1]

- (c) Put a tick (✓) in the correct boxes for the statements below. [1]

Statement	True	False
Food is fully digested in part C.		
Digested food passes through the walls of part E.		

- 29 Lynn had three rulers made of different materials, X, Y and Z. She then measured the length each ruler could bend.



She recorded the results as shown in the table below.

Material	Length that the ruler bent (cm)
X	10
Y	1
Z	5

- (a) Based on the results, which material X, Y or Z is the least flexible? Explain why.

[1]

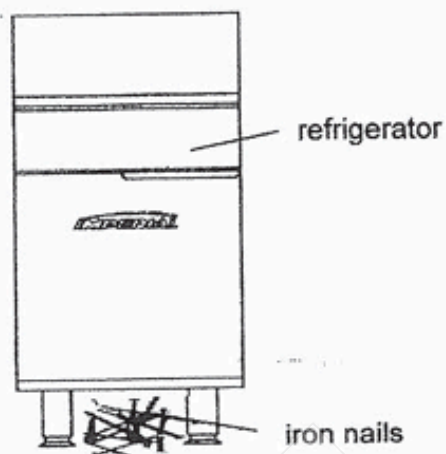
Lynn's brother wore a life vest during his canoeing practice.



- (b) Based on the results, which material X, Y or Z is most suitable for a life vest? Explain why. [1]

- (c) State a property of material that makes the canoe safe for its use. [1]

- 30** Su Mei accidentally dropped a box of iron nails onto the floor and about 10 iron nails rolled under the refrigerator as shown below.

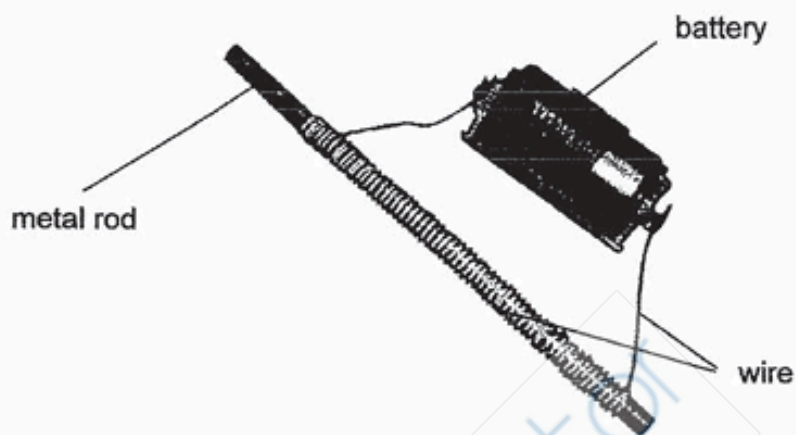


She tried to use a small magnet to retrieve the iron nails under the refrigerator.

- (a) Su Mei observed that 5 iron nails moved towards the magnet. Explain why the iron nails moved. [1]

- (b) State one reason why the remaining iron nails did not move towards the magnet. [1]

She thought of an idea to retrieve her remaining iron nails using the set-up as shown below. She pushed it under the refrigerator and managed to get back 3 iron nails this time.



- (c) Explain how Su Mei managed to get back the 3 iron nails using the set-up above.

[1]

- (d) State one change Su Mei could make to her setup mentioned in (c) to retrieve the remaining 2 iron nails without changing the metal rod.

[1]

ANSWER SHEET

SECTION A

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

SECTION B

Q24	(a)	Toadstool, because it is a type of fungi, not a plant as it does not make its own food and instead feeds on other organism, dead or alive.		
	(b)	Mould.		
	(c)	Plants make their own food by trapping sunlight, and animals eat other organisms, such as plants and even other animals.		
Q25	(a)	Spores.		
	(b)	Part X helps the bird's nest fern to reproduce, so it will not go extinct.		
	(c)	Plants.		
Q26	(a)	Insects. Animal E has three body parts, and all insects have three body parts.		
	(b)	Parts R and S help animals F and G to fly when the two part move back and forth.		
	(c)	They lay eggs.		
Q27	(a)	Part W: Heart Part X: Blood vessels		
	(b)	Digested food, oxygen, water and minerals.		
	(c)	Skeletal system.		
	(d)	It protects the things inside, support and gives the car shape, like how the skeletal system protects some of the organs inside it, gives the body shape and support it.		
	(e)	They enable us to move.		







Q28	(a)	A, C, and D		
	(b)	Large intestine		
	(c)	Statement	True	False
		Food is fully digested in part C.		✓
Q29	(a)	Y, because it bent the least out of the three materials, so it is the least flexible.		
	(b)	X. It is the most flexible as it bent 10cm. Thus, it is the most comfortable for the user to wear the life vest.		

Q30	(c)	It is able to float on water, so it will not sink.		
	(a)	They are made of magnetic materials, so they were attracted to the magnet.		
	(b)	The magnet's magnetic force is not strong enough to attract all the iron nails.		
	(c)	She turned the metal rod into an electromagnet by using the electrical method, and the magnetic force was stronger.		
	(d)	She can increase the number of batteries.		

NANYANG PRIMARY SCHOOL EOY PAPER

Section A: Multiple Choice Questions [44 marks]

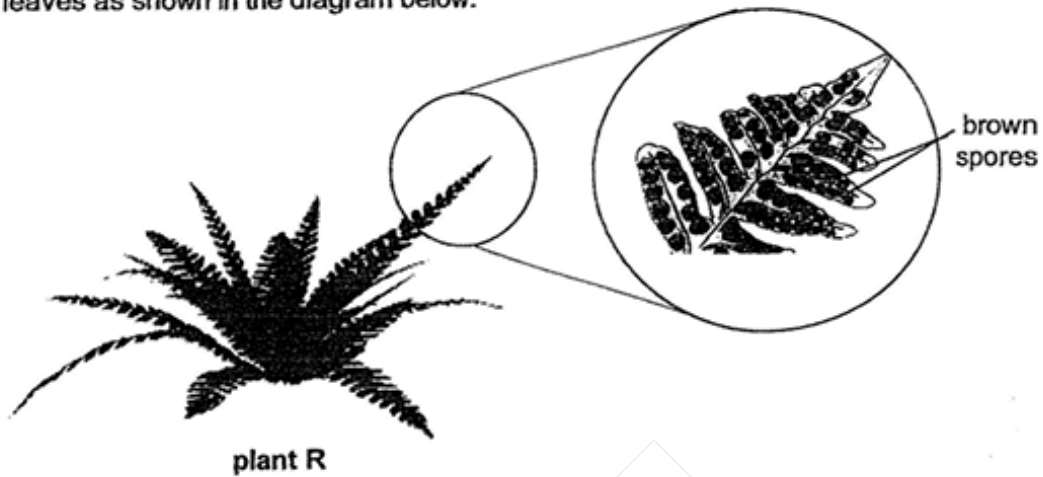
1. Study the classification table below.

Group P	Group Q
 dragonfly	 robot dog
 mushroom	 cake
 cactus	 alarm clock

Which of the following **cannot** be used as headings for Group P and Group Q?

	Group P	Group Q
(1)	Can grow	Cannot grow
(2)	Can reproduce their own kind	Cannot reproduce their own kind
(3)	Cannot respond to changes around them	Can respond to changes around them
(4)	Need air, food and water to stay alive	Does not need air, food and water to stay alive

2. Edmund found plant R in his garden. Plant R has brown spores on the underside of the leaves as shown in the diagram below.



From his observation, which of the following statements about plant R are correct?

- A It is an adult plant.
- B It is a young plant.
- C It is a flowering plant.
- D It is a non-flowering plant.

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

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

3. Yi Xin was given pictures of 4 animals as shown below.



cat



lizard



ant



goldfish

She had to classify the 4 animals into only 2 groups.

Which one of the following headings will **not** group the 4 animals into 2 groups?

	Group P	Group Q
(1)	Give birth to young alive	Lay eggs
(2)	Have feelers	Do not have feelers
(3)	Have scales	Have hair
(4)	Live on land	Live in water

4. The diagrams below show 4 animals, A, B, C and D.



A



B



C

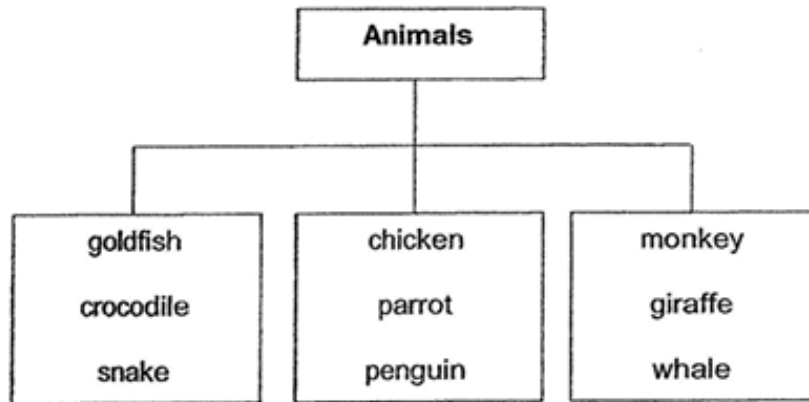


D

Based only on what can be seen from the diagrams above, which one of the following statements is correct?

- (1) All of them have 3 pair of legs.
- (2) All of them have a pair of wings.
- (3) All of them have only two body parts.
- (4) All of them have scales as their outer body coverings.

5. Study the classification diagram below.



How are the animals above classified?

- (1) By the way they move
- (2) By the way they reproduce
- (3) By their outer body coverings
- (4) By the number of legs they have

6. Study the pictures below.

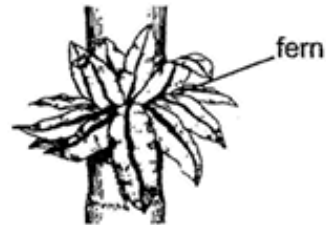
Which one of the following is not a fungi?

(1)

toadstool

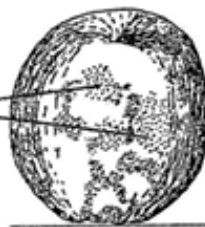


(2)



(3)

mould





(4)



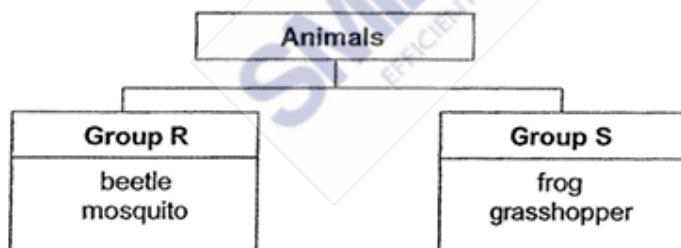
7. Jing Hao set up an experiment on bacteria Z that was growing on half-cut apples. The apples are sweet and juicy. They were placed in different locations with different temperatures.

The diagram below shows how bacteria Z has grown on the half-cut apples after three days.

Half-cut apples	 A	 B
Location	Freezer	Classroom
Temperature	0°C	30°C
Presence of air	Yes	Yes

Based on the above setups, what did Jing Hao want to find out in his experiment?

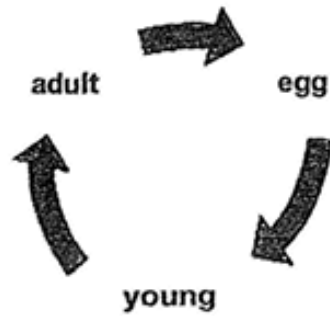
- (1) He wanted to find out if bacteria Z can be seen under a microscope.
 - (2) He wanted to find out if bacteria Z needs air, food and water to grow.
 - (3) He wanted to find out if bacteria Z grows better when there is warmth.
 - (4) He wanted to find out if bacteria Z appears in different shapes and sizes.
8. Study the classification diagram below.



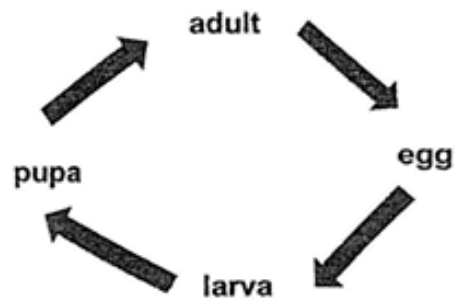
Which one of the following describes the life cycles of animals in groups R and S?

	Group R	Group S
(1)	Have an egg stage	Do not have an egg stage
(2)	4-stage life cycle	3-stage life cycle
(3)	Entire life cycle is on land	Part of the life cycle is in water
(4)	Have young that do not resemble their parents	Have young that resemble their parents

9. Study the 2 life cycles, A and B, below.



Life cycle A

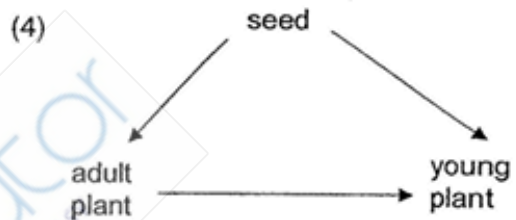
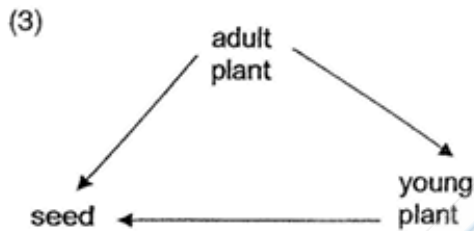
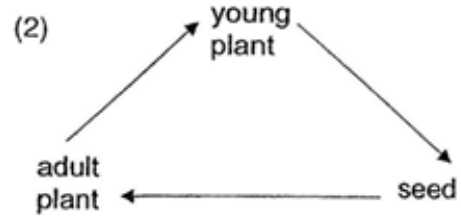
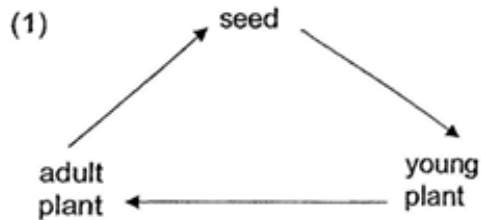


Life cycle B

Which of the following living things have the same life cycle as the above?

	Life cycle A	Life cycle B
(1)	chicken	mosquito
(2)	mango tree	fern
(3)	beetle	butterfly
(4)	cockroach	frog

10. Which one of the following shows the life cycle of a mango tree?



11. Study the table below.

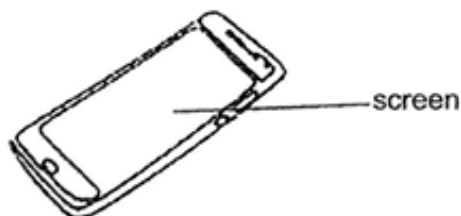
Break easily	Absorb water	Flexible
ceramic pot glass vase ceramic bowl	cotton cloth woollen jacket rubber gloves	cotton shirt paper bag wooden ruler

Which of the object(s) above is/are classified **wrongly**?

- (1) cotton shirt only
- (2) glass vase only
- (3) woollen jacket and paper bag only
- (4) rubber gloves and wooden ruler only

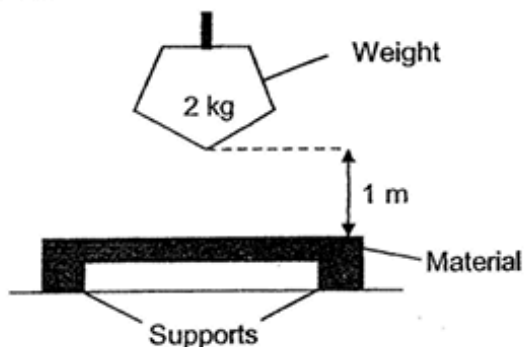
Study the diagram below and answer Questions 12 and 13.

The diagram below shows a mobile phone.



12. Which one of the following materials is most suitable for making the screen?
- (1) wood
 - (2) metal
 - (3) fabric
 - (4) glass
13. Which property of material is needed so that the user can see the display on the screen?
- (1) It is flexible.
 - (2) It can float on water.
 - (3) It does not absorb water.
 - (4) It allows most light to pass through.

14. Study the diagram below.



Daryl wanted to find out how many times materials Q, R, S and T can be hit before it breaks. He dropped a 2 kg-weight from a height of 1 metre onto material Q. He then repeated the experiment on materials R, S and T.

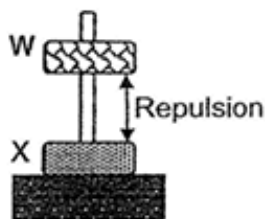
The table below shows the number of times the weight was dropped before the material breaks.

Material	Number of hits
Q	37
R	51
S	68
T	51

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

- (1) R is stronger than T.
- (2) T is stronger than Q.
- (3) Q is less flexible than S.
- (4) S is less flexible than R.

15. Study the diagram below.



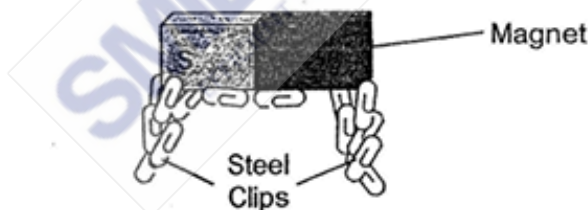
Jane observed the behaviour of 2 objects, W and X, and made the following statements:

- A object W and object X are both magnets.
- B object W is a magnet while object X is a non-magnetic metal.
- C object W and object X have their unlike poles facing each other.

Which of the above statements about objects W and X are correct?

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

16. The diagram below shows what happens when a magnet was brought near some steel paper clips.



Which property of magnets does the above diagram show?

- (1) The centre of a magnet has no magnetic pull.
- (2) The poles of a magnet have the strongest magnetic pull.
- (3) When like poles of magnets are facing each other, they repel.
- (4) A magnet always comes to a rest in the North-South direction.

17. Hui Jun has a bar magnet. She dropped it accidentally and it broke into two smaller pieces as shown in the diagram below.



Which one of the following shows the poles of the broken magnets?

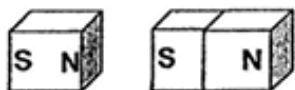
(1)



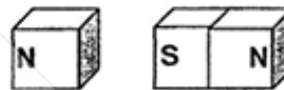
(2)



(3)



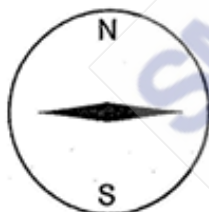
(4)



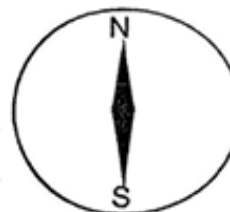
18. The needle of a compass is a magnet.

Which one of the following shows the position of a freely-suspended magnet?

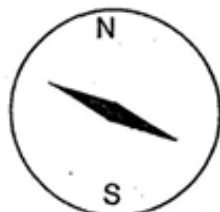
(1)



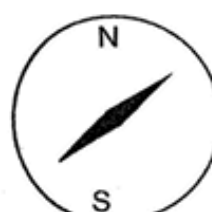
(2)



(3)



(4)



19. The examples below use the property of magnets to work.

Like poles of magnets facing each other will repel.

Which one of the following uses the above property of magnets to work?

(1)



Maglev train floating above track

(2)



chess pieces on a chess board

(3)



closing door of the fridge tightly

(4)

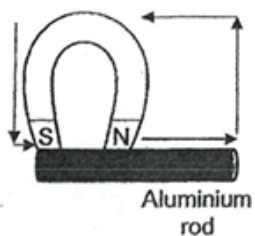


door stopper keeping door open

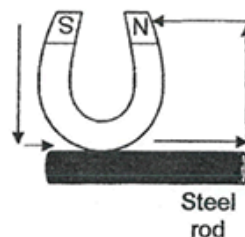
20. Jennifer wanted to make a temporary magnet by using the stroke method. She has a horseshoe magnet. The arrows in the diagrams below show the direction of the stroking.

Which one of the following shows how she could make a temporary magnet?

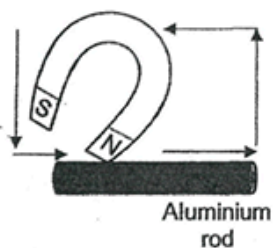
(1)



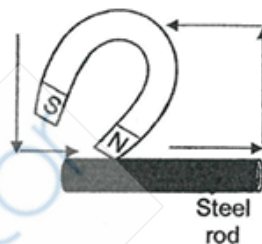
(2)



(3)



(4)

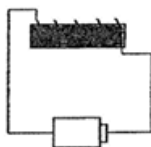


21. Study the diagram below.

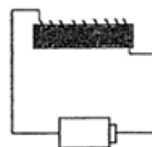


In which one of the following setups will the rod attract the most number of steel paper clips?

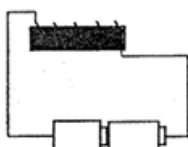
(1)



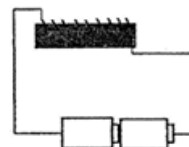
(2)



(3)

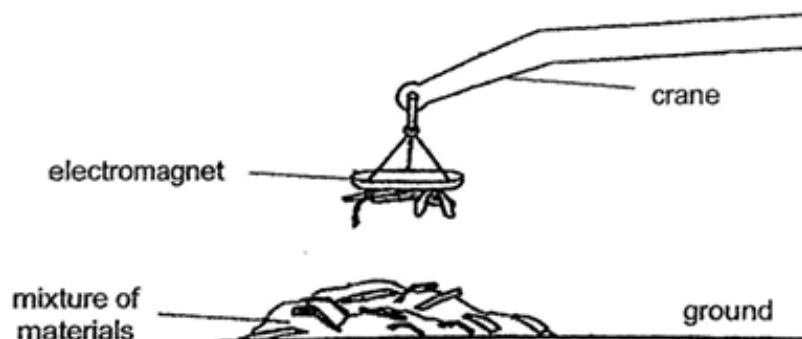


(4)



22. The diagram below shows an electromagnet.

The electromagnet is used in a junkyard to sort materials.



Study the statements below.

- A The electromagnet cannot work from a distance.
- B The electromagnet can be used to remove waste made of iron and steel.
- C The electromagnet will still be able to work even after electricity has been switched off.

Which of the statement(s) above is/are correct?

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

Section B: Open-Ended Questions [26 marks]

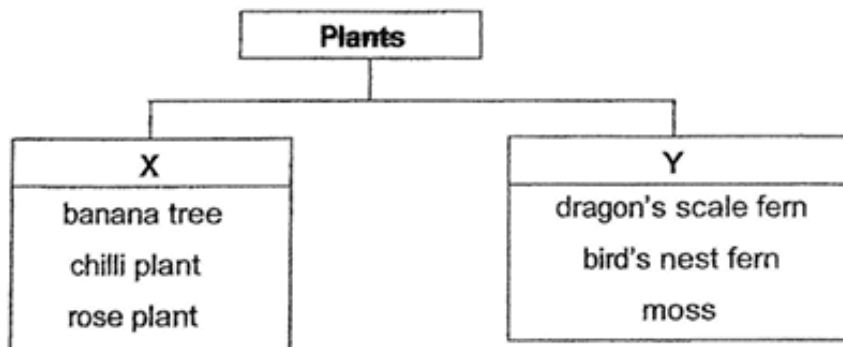
23. The table below shows the characteristics of W, X, Y and Z.

Things	Needs air, water and food to stay alive	Needs sunlight to make food	Can respond to changes around it
W	✓		✓
X			
Y			✓
Z	✓	✓	✓

Based on the information given in the table above, put a tick (✓) in the correct box to indicate if the statements are "True", "False" or "Not possible to tell". [2]

(a)	W is an animal.	True <input type="checkbox"/>	False <input type="checkbox"/>	Not possible to tell <input type="checkbox"/>
(b)	X is the only non-living thing.	True <input type="checkbox"/>	False <input type="checkbox"/>	Not possible to tell <input type="checkbox"/>
(c)	W, Y and Z are living things.	True <input type="checkbox"/>	False <input type="checkbox"/>	Not possible to tell <input type="checkbox"/>
(d)	Z is a plant.	True <input type="checkbox"/>	False <input type="checkbox"/>	Not possible to tell <input type="checkbox"/>

24. The classification diagram below shows how some plants can be classified.



(a) Give a suitable heading for X and Y. [1]

(i) X: _____

(ii) Y: _____

(b) Other than the characteristics given in (a), state **another** difference in characteristics between the plants in group X and group Y. [1]

25. Study the diagrams below.



parrot



tiger

- (a) State one similar function of the outer body coverings for both animals. [1]

- (b) Other than the outer body coverings, state another difference in characteristics between the parrot and the tiger shown in the diagrams above. [1]

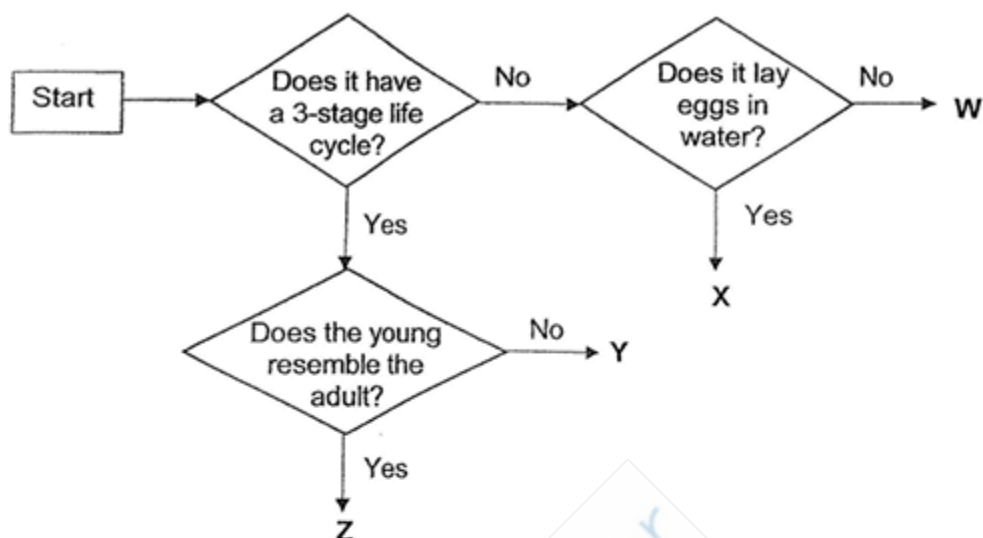
26. The diagram below shows a slice of bread with mould growing on it.



- (a) Where does the mould obtain its food from? [1]

- (b) Suggest one way to increase the amount of mould growing on the bread. [1]

27. Study the flowchart below.



(a) Give an example of animals X and Z. [2]

X: _____

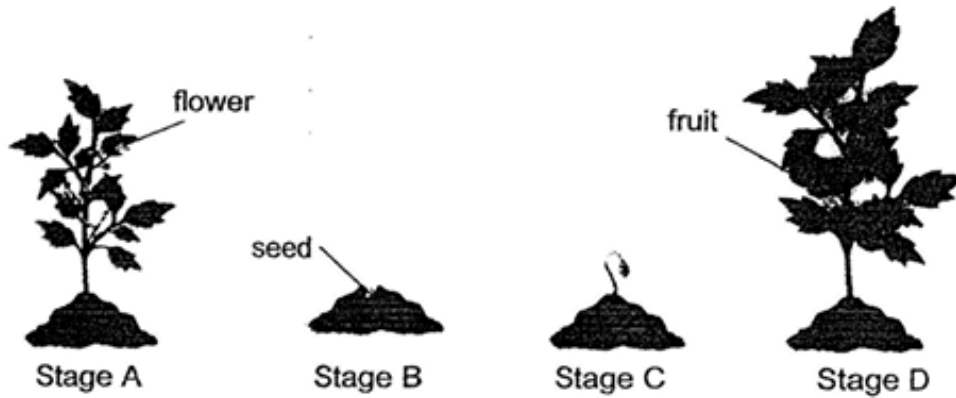
Z: _____

(b) Based only on the flowchart above, state all the characteristics of animal Y. [1]

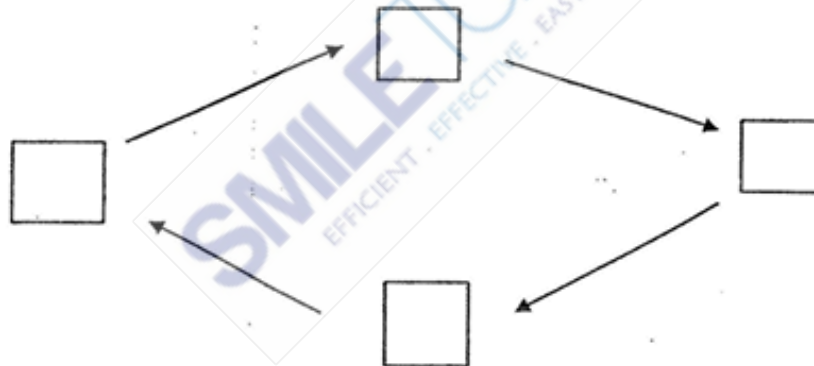
(c) Based on the flowchart above, state a similarity between animal Y and animal Z. [1]

(d) Give a reason why the young of animal W and animal X moult several times during the larva stage. [1]

28. The diagram below shows the stages of the life cycle of a tomato plant.



- (a) Using the stages above, write A, B, C and D in the diagram below to show the order of the tomato plant's life cycle. [1]



- (b) When a seed germinates, it will get its food from the seed leaves.

Besides food, state the other 3 conditions that the seed needs to have in order to germinate. [2]

29. Uncle Lennon needed to make a pair of rain boots as shown in the diagram below.



The table below shows the properties of materials W, X, Y and Z.

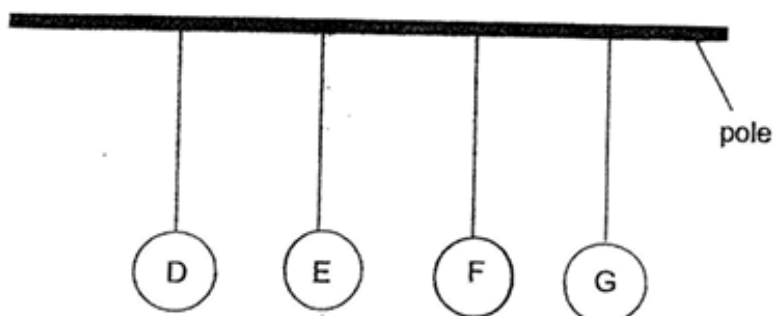
Property	Material W	Material X	Material Y	Material Z
Is it strong?	No	No	Yes	Yes
Does it absorb water?	Yes	No	Yes	No

- (a) Using information from the table above, which material, W, X, Y or Z, is the most suitable for making the rain boots? [1]

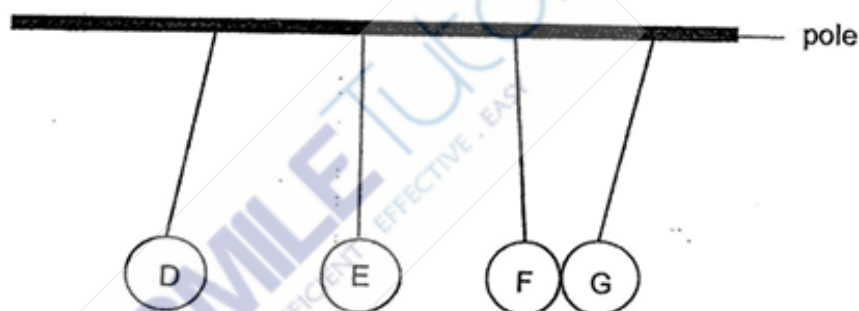
Material _____

- (b) Using one of the properties in the table above, give a reason why the material you have chosen in (a) is the most suitable. [2]

30. Objects D, E, F and G are hung side by side on a pole as shown in the diagram below.



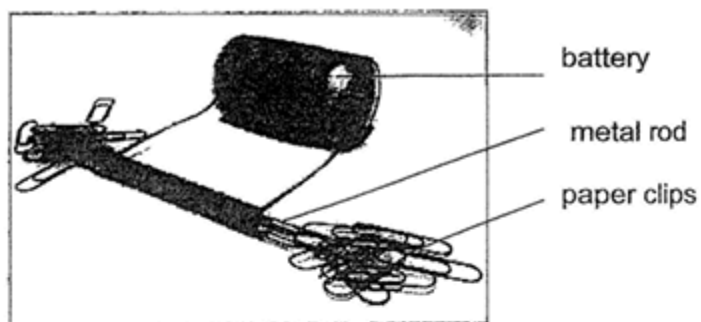
Nick squeezed objects D, E, F and G together before letting them go. He observed that the object remained in the position as shown below after Nick released them.



- (a) Give an example of object G. [1]

- (b) Explain why object D and E moved away from each other. [2]

31. Study the diagram below.



Tiffany coiled a wire around a metal rod and connected a battery to wire. She saw some paper clips were "stuck" to the ends of the metal rod.

- (a) Suggest a type of metal that the paper clips could be made of. [1]

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

- (c) Suggest two changes to make to the above so that the metal rod can attract more paper clips to the metal rod. [2]

i.

ii.

ANSWER SHEET

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

Section B Q23	NPTT/F/F/T
Section B Q24 (a)	X: Flowering plant Y: Non-flowering plant
(b)	Plants in group X reproduce by seeds but the plants in group Y reproduce by spores.
Section B Q25 (a)	Both body coverings keep the animals warm.
(b)	Parrot has wings but the tiger does not have wings.
Section B Q26 (a)	It obtains food from the bread.
(b)	Add a few drops of water to the bread.
Section B Q27 (a)	X: mosquito Z: cockroach
(b)	Y has 3-stage life cycle and its young does not resemble its adult.
(c)	Both have 3-stage life cycles.
(d)	The young of W and X moult to grow bigger.
Section B Q28 (a)	B, C, A, D
(b)	Water, air (oxygen), warmth (right temperature)

Q29(a)	Material Z
(b)	It is waterproof so that the person's feet will not get wet on a rainy day.
Q30(a)	Magnet / steel ball
(b)	Objects D and E repel each other. They are magnets with like poles facing each other.
Q31(a)	Steel / Iron / Cobalt / Nickel
(b)	Iron is a magnetic material so the electromagnet can attract the paper clips
(c)	i. Increase the number of coils of wire around the metal rod. ii. Increase the number of batteries used.

NANYANG PRIMARY SCHOOL PRACTICE PAPER

Section A: Multiple Choice Questions [44 marks]

For each question from 1 to 22, four options are given. One of them is the correct answer. Indicate your choice in this booklet and shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

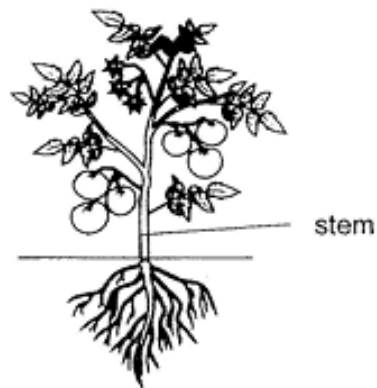
1. The table below shows some characteristics of living things.
 A tick (✓) in the box shows that the characteristic is present for A, B and C.

Characteristic	A	B	C
It needs water to survive.	✓		✓
It can make its own food.			✓
It responds to surrounding changes.	✓		✓

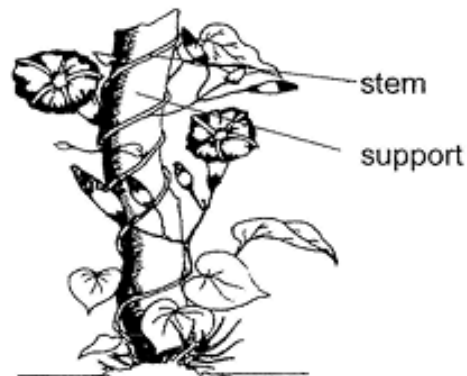
Which of the following correctly represents A, B and C?

	A	B	C
(1)	tomato plant	toy dog	cat
(2)	toy dog	cat	tomato plant
(3)	cat	tomato plant	toy dog
(4)	cat	toy dog	tomato plant

2. Study the two plants shown below.



Plant G



Plant H

John made the following statements about plant G and H.

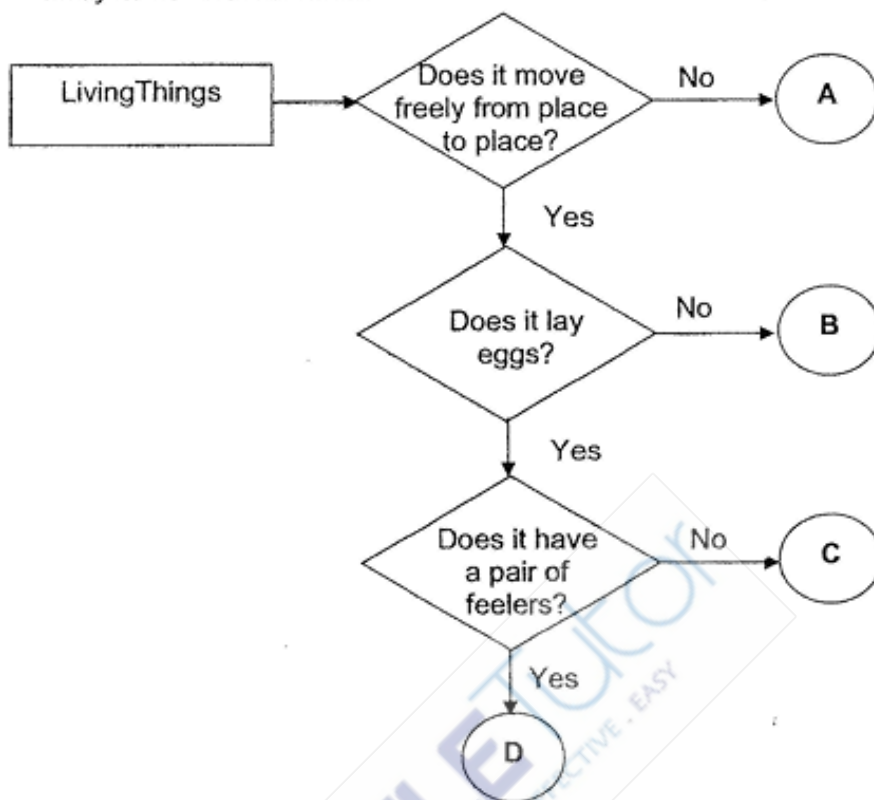
- A Both have strong stems.
- B Both plants grow on land.
- C Plant G reproduces by seeds
- D Plant H reproduces by spores.

Which of the statement(s) above is/are true about plant G and H?

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

3. The characteristics of plants J and K are listed below.

5. Study the flowchart below.



Based on the information above, which of the following best represents A, B, C and D?

	A	B	C	D
(1)	plant	amphibians	reptiles	insects
(2)	plant	mammals	reptiles	birds
(3)	fungi	mammals	fish	insects
(4)	fungi	amphibians	fish	birds

6. Which of the following statements about bacteria is **false**?

- (1) All bacteria can reproduce.
- (2) All bacteria cause diseases.
- (3) All bacteria need water to survive.
- (4) All bacteria can only be seen clearly using a microscope.

7. Study the diagram below.



fern

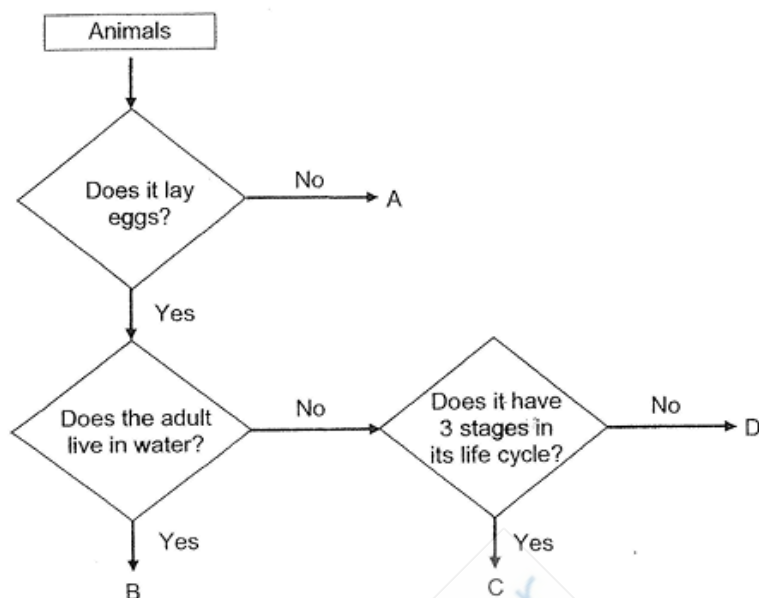


mushroom

How are the living things shown above similar?

- (1) They make their own food.
 - (2) They reproduce by spores.
 - (3) They are non-flowering plants.
 - (4) They feed on other living things.
8. Which one of the following statements about the similarities between fungi and bacteria is correct?
- (1) All fungi and bacteria are harmful to us.
 - (2) All fungi and bacteria can be eaten without harming us.
 - (3) All fungi and bacteria feed on living things dead or alive.
 - (4) All fungi and bacteria can only be seen under a microscope.

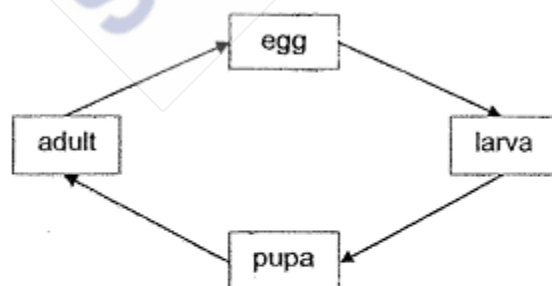
9. Study the flow chart below.



Which one of the following is most likely to be a grasshopper?

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

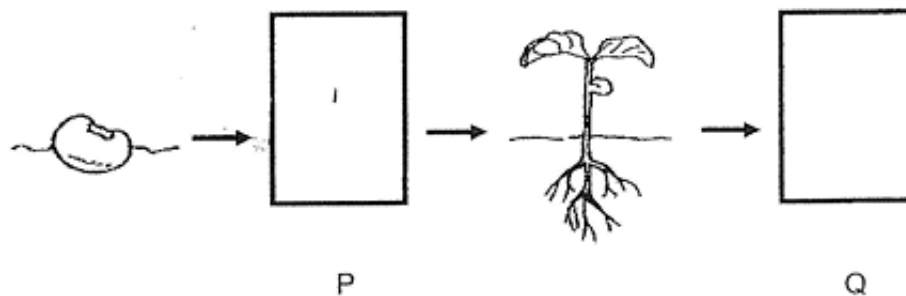
10. The diagram below shows the life cycle of an animal.











Which one of the following animals has a similar life cycle to the above?

- (1) Frog
- (2) Butterfly
- (3) Cockroach
- (4) Grasshopper

11. The diagram below shows the growth of a young plant with two missing stages, P and Q.



Which one of the following shows the correct stages for P and Q?

	P	Q
(1)		
(2)		
(3)		
(4)		

12. Mike was given a list of objects. He grouped them into 2 groups, X and Y, as shown below.

X	Y
metal rod glass bottle wooden chair floor tiles	table cloth tissue paper plastic bag aluminum foil

Which one of the following properties did Mike use to group the objects?

- | | |
|-----------------|------------------|
| (1) Flexibility | (2) Transparency |
| (3) Strength | (4) Waterproof |
13. Si Qing listed the properties of 4 materials, J, K, L and M, in the table below.

Properties	Material J	Material K	Material L	Material M
Does it tear easily?	No	No	Yes	No
Is it waterproof?	Yes	Yes	Yes	Yes
Can most light pass through it?	No	No	Yes	Yes
Is it flexible?	No	Yes	Yes	Yes

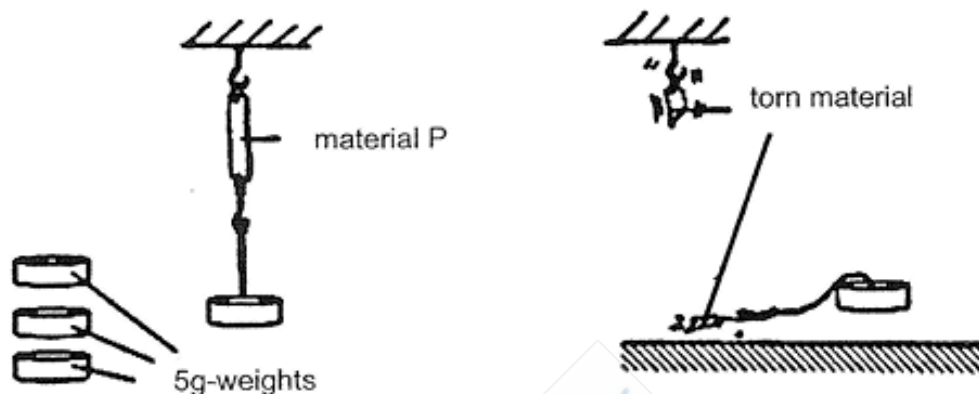
Which one of the materials is most suitable for making part F of a face shield?



- | | |
|----------------|----------------|
| (1) Material J | (2) Material K |
| (3) Material L | (4) Material M |

14. Osman carried out an experiment using 4 strips of different materials, P, Q, R and S. The 4 strips have the same length and thickness.

He hung one end of each strip from a hook as shown in the diagram below. At the other end of the strip, he hung 5g-weights, one at a time, until the strip tore.



He repeated the experiment with materials, Q, R and S. Osman recorded the number of 5g-weights hung below each strip of material before it tore, in the table below.

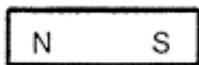
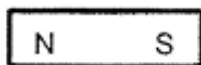
Material	Number of 5-g weights hung to tear material
P	6
Q	1
R	3
S	9

Based on the results of the experiment, which one of the following statements about the materials is true?

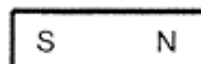
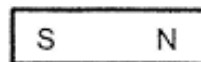
- (1) P is lighter than S.
- (2) P is weaker than R.
- (3) Q is the most flexible.
- (4) S is the strongest material.

15. In which one of the following set-ups will the two magnets push each other away?

(1)



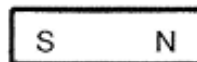
(2)



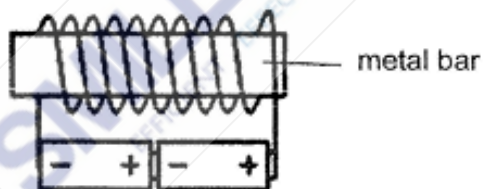
(3)



(4)



16. The diagram below shows an electromagnet.



Which one of the following should be done in order for the electromagnet to attract an iron nail from a greater distance?

- (1) Use a thinner wire
- (2) Use only one battery
- (3) Use a bigger metal bar
- (4) Make more coils of wire around the metal bar

17. Diagram 1 below shows a bar magnet lowered onto a pile of steel pins. Diagram 2 shows the bottom view of the magnet.

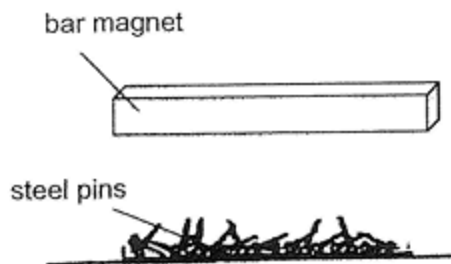


Diagram 1

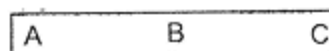
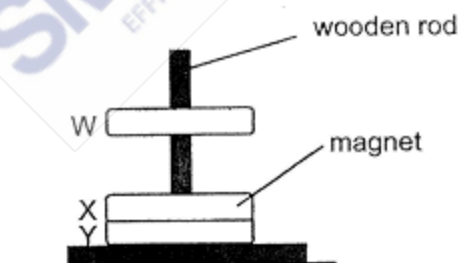


Diagram 2

Which one of the following most likely shows the number of pins attracted to the bottom of the magnet at positions A, B and C?

	A	B	C
(1)	6	18	6
(2)	12	6	13
(3)	15	10	5
(4)	10	10	10

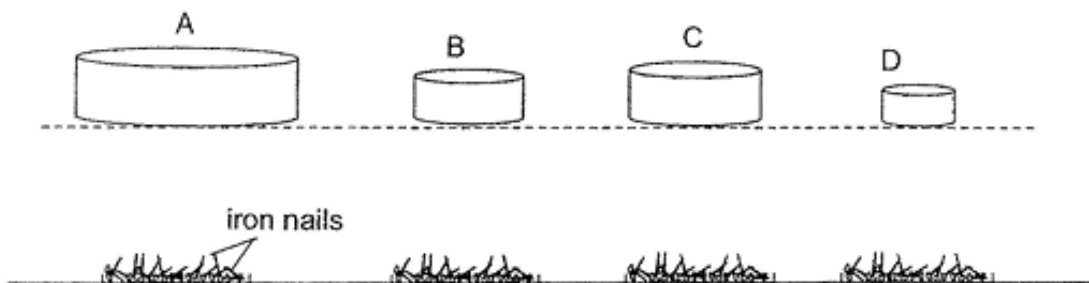
18. Three rings, W, X and Y are passed through a wooden rod. Ring X is a magnet.



Which one of the following is possible?

	W	Y
(1)	rubber	steel
(2)	steel	steel
(3)	magnet	magnet
(4)	steel	magnet

19. The diagram below shows four magnets, A, B, C and D, of different sizes. Each of the magnets was then placed at an equal distance above a pile of iron nails. The number of iron nails attracted to each magnet was recorded in a table as shown below.

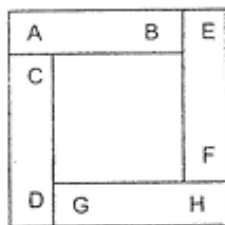


Magnet	A	B	C	D
Number of nails attracted	9	5	12	8

Based on the experiment above, which one of the following statements is incorrect?

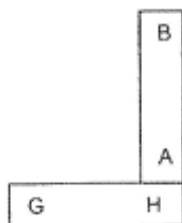
- (1) Magnet A is the strongest magnet.
- (2) Magnet C is stronger than magnet D.
- (3) Magnet B is the weakest among the magnets.
- (4) The strength of the magnet is not affected by its size.

20. Reena arranged four magnets with poles labelled A to H as shown below. The magnets do not repel one another.



Which one of the following is another possible arrangement of the magnets?

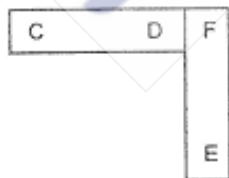
(1)



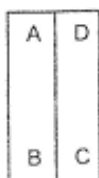
(2)



(3)

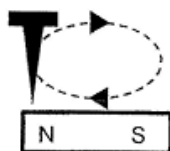


(4)

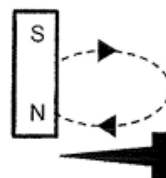


21. Which one of the following diagrams shows how to make an iron nail into a magnet using the stroking method?

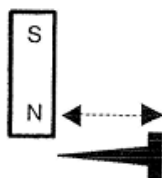
(1)



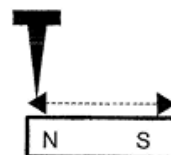
(2)



(3)



(4)



22. Derrick magnetised 2 iron nails and carried out an experiment as shown below.

He suspended one of the magnetised iron nails as shown in Diagram 1.
 He placed the other magnetised iron nail on a plastic that was floating in a basin of water as shown in Diagram 2.



Diagram 1

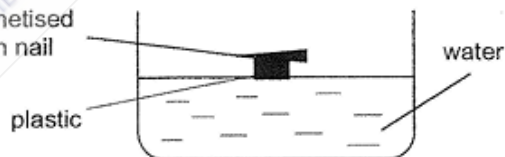


Diagram 2

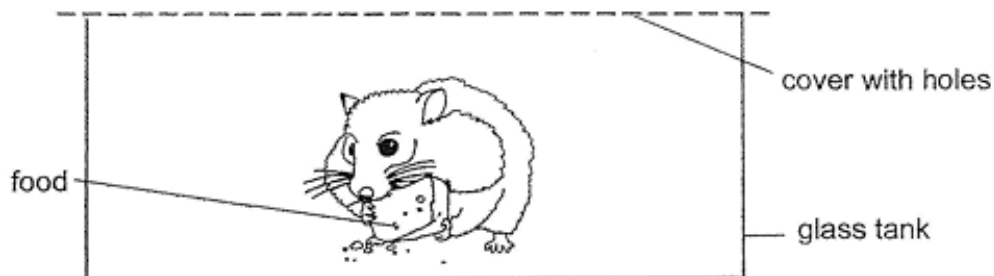
Which one of the following shows the direction that each iron nail come to a rest?

	Suspended iron nail in Diagram 1	Floating iron nail in Diagram 2
(1)	North-South	East-West
(2)	East- West	North-South
(3)	North-South	North-South
(4)	East-West	East-West

Section B: Open-Ended Questions [26 marks]

Write your answers to Questions 23 to 31 in the spaces provided.

23. Min kept her pet in a glass tank as shown below.



- (a) What else should Min provide to ensure that her pet could stay alive? [1]

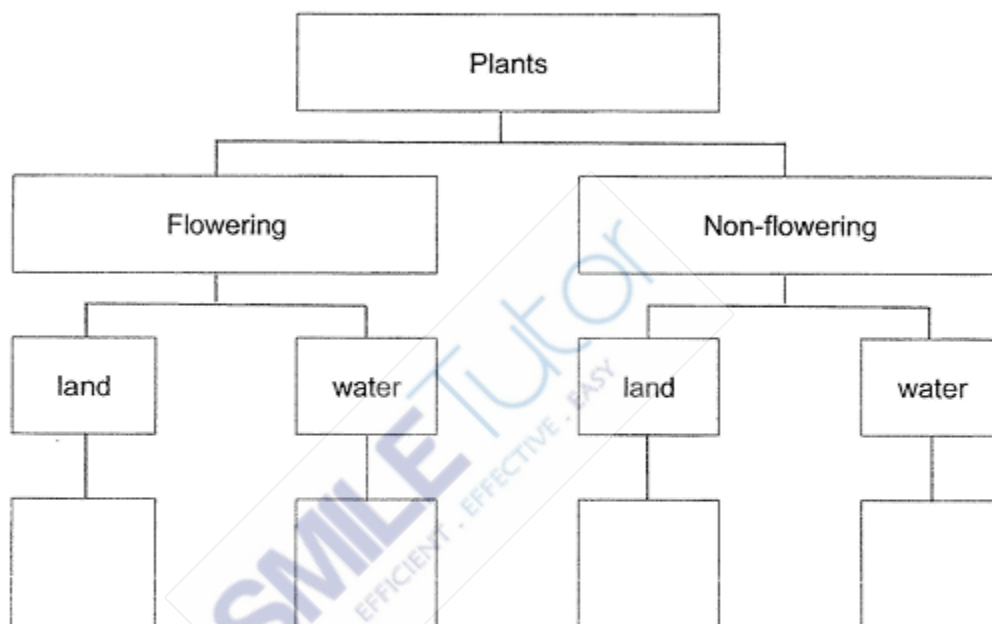
Min placed a cover over the tank so that her pet will not escape.

- (b) Why must the cover have holes? [1]

24. The table below shows the characteristics of four plants, A, B, C and D. A tick (✓) shows that the plant has that characteristic.

Characteristic	Plant A	Plant B	Plant C	Plant D
Produces spores	✓		✓	
Grows in water		✓	✓	

- (a) Based on the information given in the table above, classify plants A, B, C and D, by writing the letters in the chart below. [1]

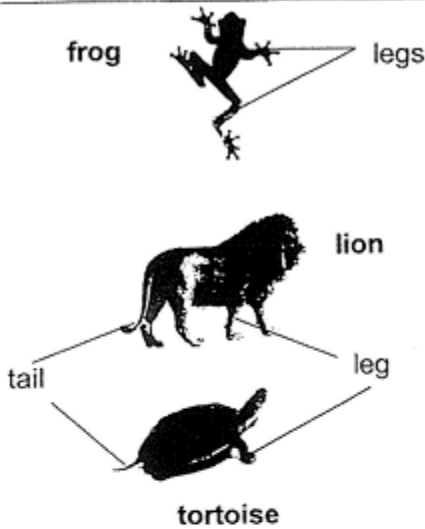
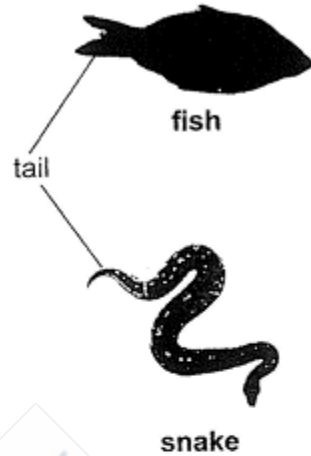


Zac labelled the plant shown below as a non-flowering plant but his teacher told him that it might not be true.



- (b) Give a reason Zac may not be right. [1]

25. Study the characteristics of the animals that are classified in the table below.

Group S	Group T
	

(a) Give a suitable heading for the table above. [1]

Group S: _____

Group T: _____

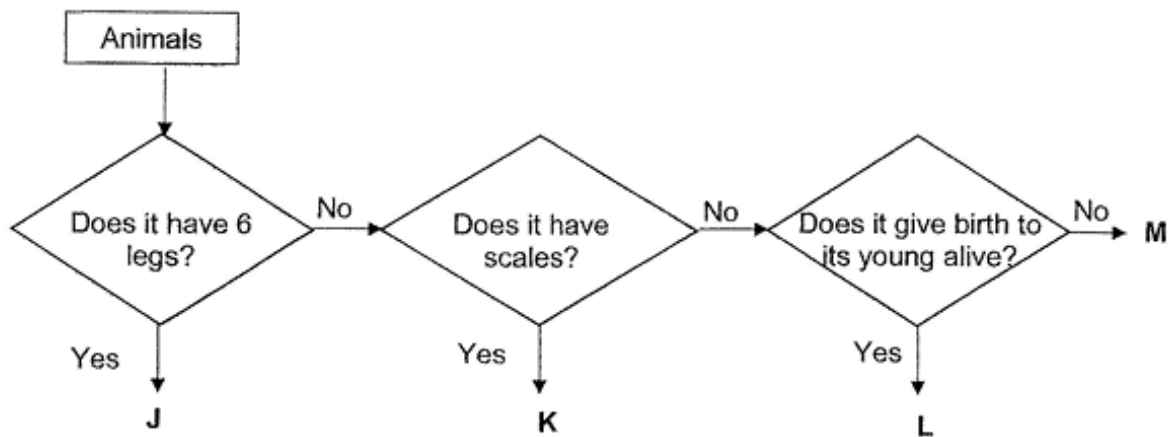
(b) State one similarity between the characteristics of the **fish** and the **tortoise**. [1]

Adam regrouped the animals as shown in the table below.

Group Y	Group Z
lion	fish snake frog tortoise

(c) State one difference between the characteristics of animals in **Group Y** and animals in **Group Z**. [1]

26. Study the chart below.



(a) Give ONE example of animal J. [1]

(b) Based only on the chart above, state **all** the characteristics of animal K. [1]

(c) State one difference between animals L and M. [1]

(d) Which animal group does animal M belong to? [1]

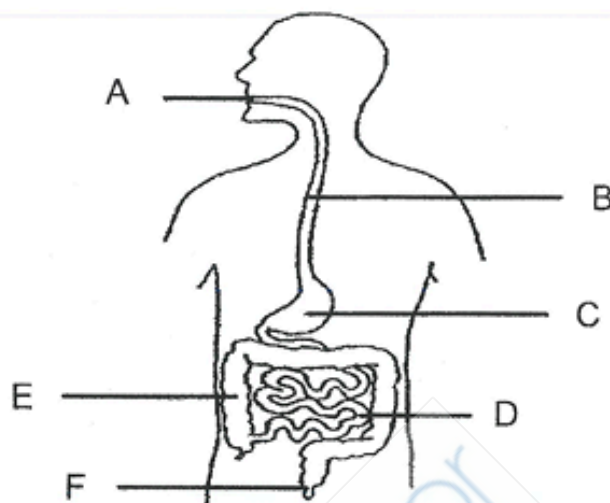
27. David conducted an experiment with four slices of bread. He wanted to find out how the amount of water affects the growth of bread mould. He recorded his observation in the table below.

Set-ups	A	B	C	D
Amount of water added to bread (ml)	0	5	10	15
Number of days before mould appeared on bread	11	6	X	2

- (a) State the number that can represent X in the table above. [1]

- (b) Based on the results above, state the relationship between the amount of water added to the bread and the number of days before the mould appeared. [1]

28. Study the diagram below.



Three student made the following statements about the human digestive system shown above.

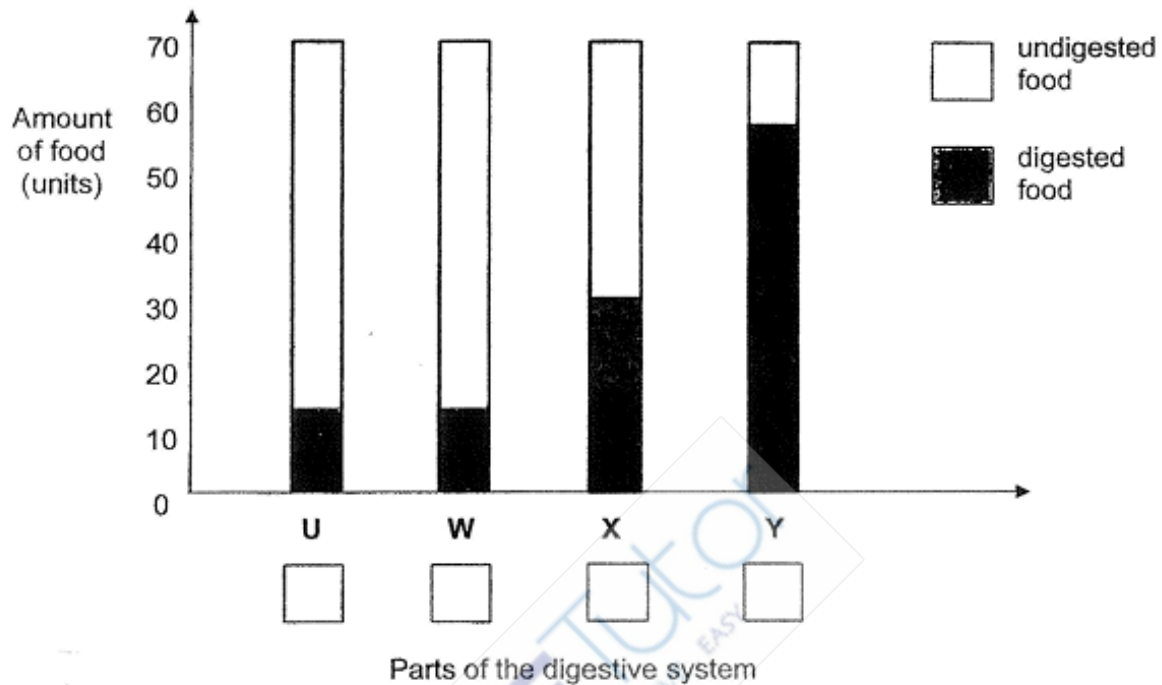
Student	Statements
Amy	Part A absorbs food.
Ben	Digestion of food continues and completes in part D.
Claire	The digestive juice produced in part C will mixed with the food.

(a) (i) Which student had made a wrong statement about the digestive system?

(ii) Write down the correct statement based on the function of the part. [1]

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

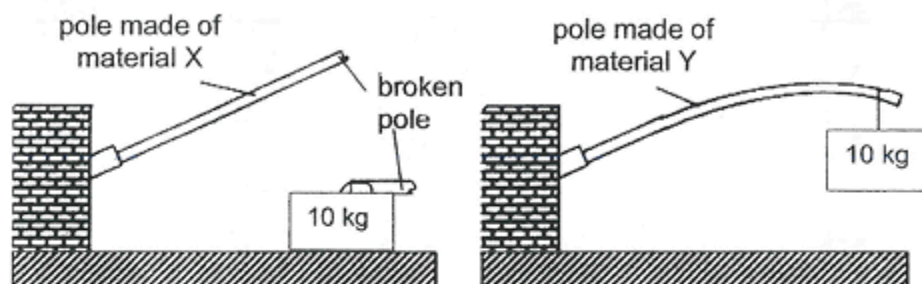
Kelly ate 70 units of food. The graph below shows the amount of food in different parts of her digestive system after it has been eaten.



- (c) Put a tick (✓) in the box that represents the small intestine. [1]
- (d) Give a reason why the amount of digested food in part W is the same as part U. [1]

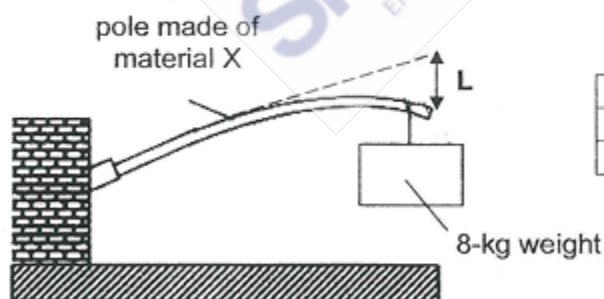
29. Joy wanted to find out which material, X or Y, would be more suitable for making poles to hang wet heavy clothes out to dry.

She secured 2 poles made of material X and Y on the wall. Joy then hung different weights on each pole one at a time until one of the poles broke, as shown in the diagram below.



- (a) Based on the property shown in the experiment above, **explain** which material is more suitable for making poles to hang the heavy wet clothes. [2]

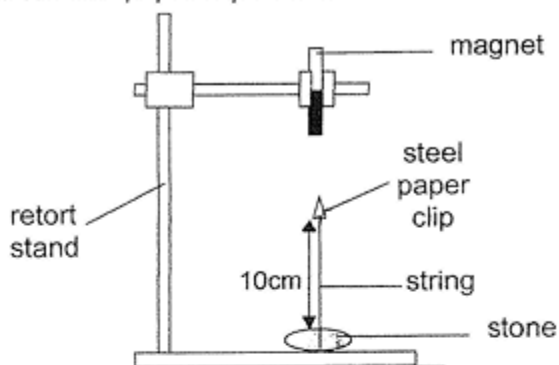
Using the same set-up, Joy also measured the bend of each pole when a 8-kg weight is hung. Both poles did not break. She recorded the results in the table below.



Material	Length of L
X	6 cm
Y	11 cm

- (b) Compare the property of material X and Y based on the table above. [1]

30. The diagram below shows an experiment that Sara had set up. She raised the steel paper clip up close to the magnet before letting it go. The paper clip was "floating" in the air. The paper clip was attached to a 10 cm-string tied to a stone.



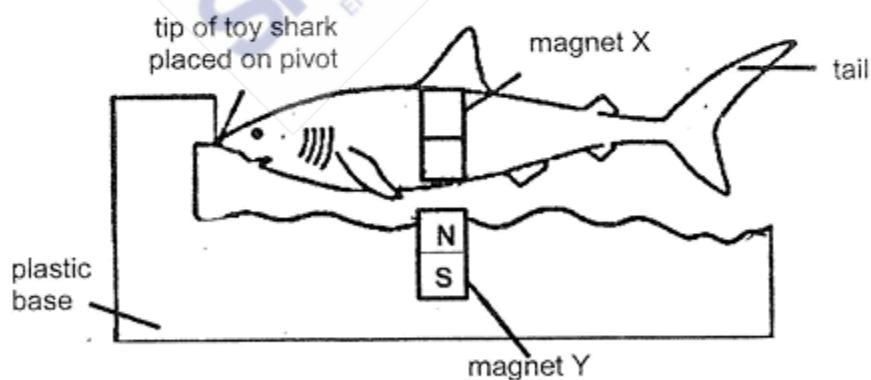
The magnet was then removed and heated over a flame for some time. Sara repeated the experiment after the magnet had cooled down.

- (a) State and explain the observation about the paper clip that Sara would make after she repeated the experiment with the cooled magnet. [2]

Observation : _____

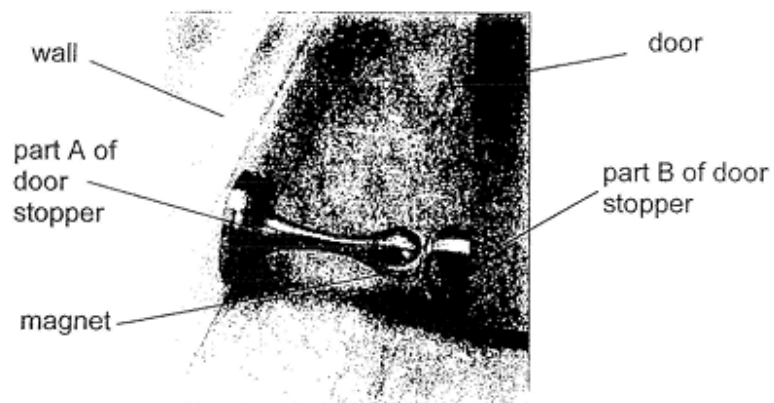
Explanation : _____

Sara had a magnetic toy shark. The diagram below shows the position of the 2 magnets, X and Y, in the magnetic toy. When the tip of the toy shark was placed on the pivot of the plastic base, the toy shark will be suspended in the air. The pivot allows the tip of the shark to turn freely.



- (b) Write the letters, **N** and **S**, on magnet X in the diagram above to show the poles of the magnet. [1]
- (c) Which property of magnets allows the toy shark to be suspended in the air? [1]

31. The diagram below shows part A and B of a set of door stopper.

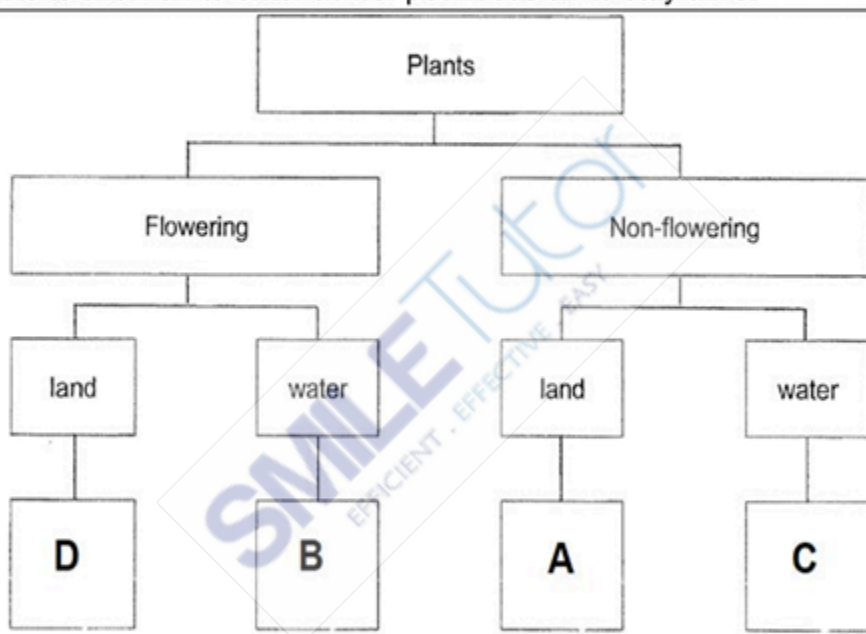


- (a) Name a material that part B of the door stopper can be made of. [1]

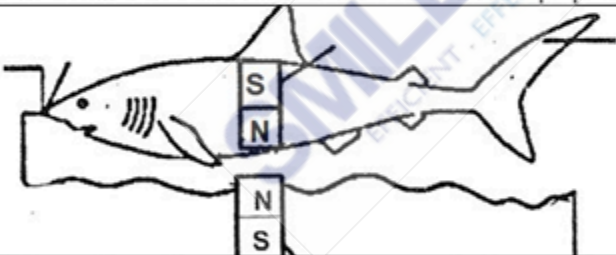
- (b) Explain how the set of door stopper works. [1]

ANSWER SHEET

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

Q23a	She should provide <u>water</u> .
Q23b	It is to allow air to enter as her pet needs air to stay alive.
Q24a	 <pre> graph TD Plants[Plants] --> Flowering[Flowering] Plants --> Non-flowering[Non-flowering] Flowering --> land1[land] Flowering --> water1[water] land1 --> D[D] water1 --> B[B] Non-flowering --> land2[land] Non-flowering --> water2[water] land2 --> A[A] water2 --> C[C] </pre> <p>The flowchart classifies plants into Flowering and Non-flowering. Flowering plants are further divided into land (D) and water (B). Non-flowering plants are divided into land (A) and water (C).</p>

24b.	The plant bears fruits so it must be a flowering plant. Only flowering plants can bear fruits.
25a.	Group S: Animals with (4) legs Group T: Animals with no legs
25b.	Both have <u>scales</u> .
25c.	Group Y give birth to young alive but Group Z does not give birth to young alive.

26a.	Any insect
26b.	Animal K has scales and does not have 6 legs.
26c.	Animal L gives birth to its young alive but animal M lays eggs.
26d.	Amphibians/Birds
Q27a	3, 4 or 5 (a range of values are accepted)
Q27b	The more amount of water added, the fewer number of days before the mould appear.
Q28a	i) Ben ii) Digestion of the food continues and completes in part E.
Q28b	The function of the large intestine is to absorb water and minerals.
Q28c	X <input checked="" type="checkbox"/>
Q28d	U and W is the same as main digestion is done in small and large intestines.
Q29a	Material Y. It is stronger so the pole can hold the wet, heavy clothes without breaking
Q29b	Material Y is more flexible.
Q30a	Observation: The steel paper clip will drop down, will not float in the air. Explanation: The magnet will lose some magnetism after it is being heated and will be too weak to attract the steel paper clip from the same distance.
Q30b	
Q30c	Like poles of magnets facing each other will repel.









31a.	Steel/ Iron
b.	Magnet on part A will attract the magnetic metal on part B.

NANYANG PRIMARY SCHOOL WA1 PAPER

Section A: Multiple Choice Questions (10 marks)

For each question from 1 to 5, four options (1, 2, 3 and 4) are given. One of them is the correct answer. Indicate your choice in the brackets provided.

1. Study the following things in Group X and Group Y.

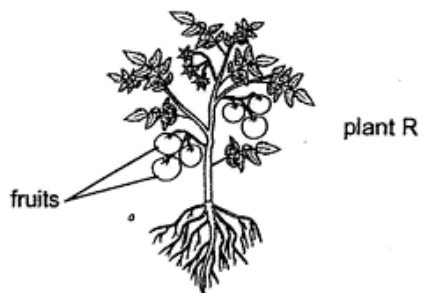
Group X		Group Y	
			
grass	millipede	teddy bear	hamburger
			
monkey	hibiscus plant	car	school bag

Which one of the following describes the things in the two groups incorrectly?

	Group X	Group Y
(1)	Can grow	Cannot grow
(2)	Can reproduce	Cannot reproduce
(3)	Respond to changes around them	Do not respond to changes around them
(4)	Do not need air, food and water to stay alive	Need air, food and water to stay alive

()

2. Emily found plant R in her garden. Plant R has fruits growing on it as shown in the diagram below.



From her observation, which of the following statements about plant R are correct?

- A It is an adult plant.
- B It is a young plant.
- C It is a flowering plant.
- D It is a non-flowering plant.

(1) A and C only

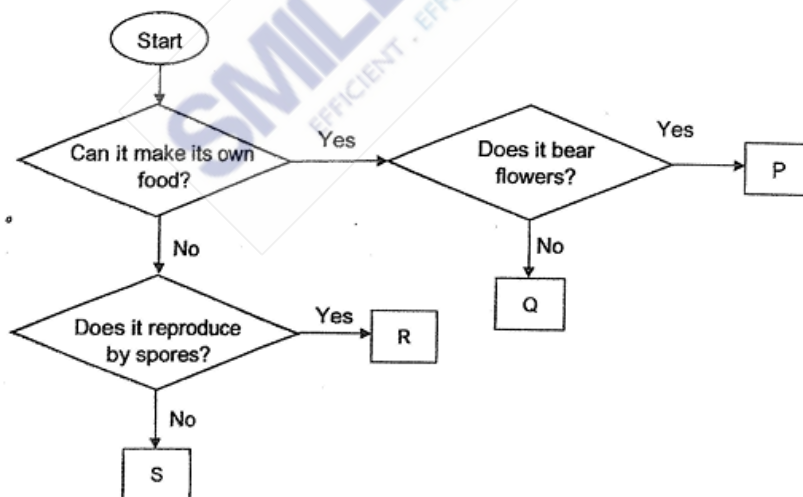
(2) A and D only

(3) B and C only

(4) B and D only

()

3. Study the flowchart below.

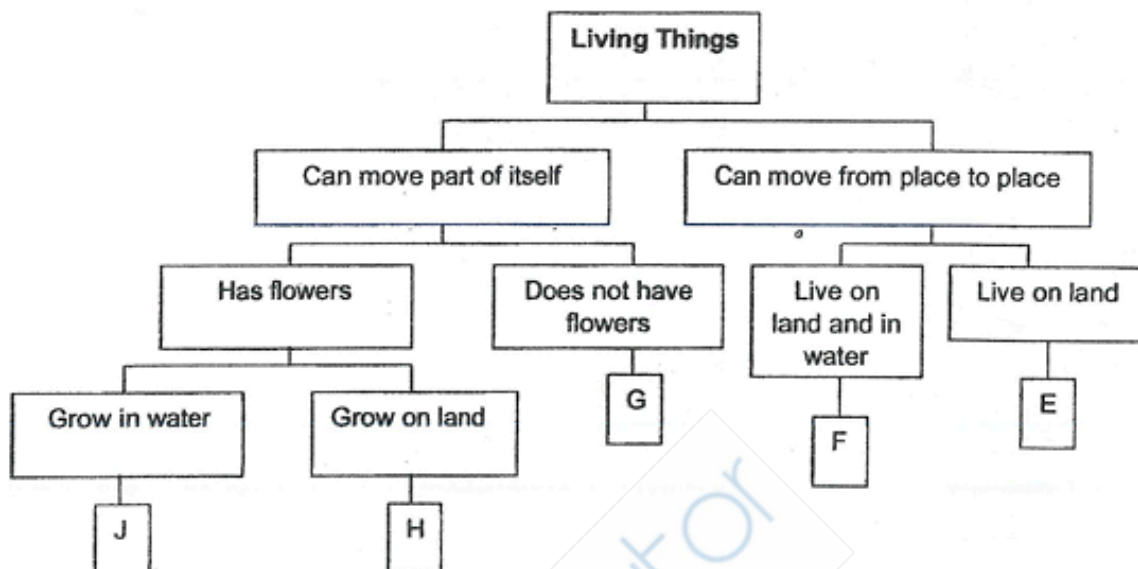


Based on the flowchart above, which one of the following statement is correct?

- (1) Q can bear fruits.
- (2) P is a flowering plant.
- (3) P, R and S are not plants.
- (4) Q and S reproduce by seeds.

()

4. The diagram below shows a classification chart of some living things.



Which one of the following statements is correct?

- (1) G is not a plant.
- (2) Only F is an amphibian.
- (3) Only H and J are plants.
- (4) E can make its own food.

()

5. Meng Ho found animal S near a pond and observed it for a few days.

Which one of the following observations will help him conclude that animal S is definitely an amphibian?





- (1) Animal S lays eggs.
- (2) Animal S can swim.
- (3) Animal S has moist skin.
- (4) Animal S eats only animals.

()

Section B: Open-Ended Questions (5 marks)

For questions 6 and 7, fill in your answers in the spaces provided.

6. The classification table below shows how 4 different plants were classified.

Group A		Group B	
			
bird's nest fern	ladder fern	rose plant	banana tree

- (a) Give a suitable heading for each of the 2 groups of plants.

[1]

Group A : _____

Group B : _____

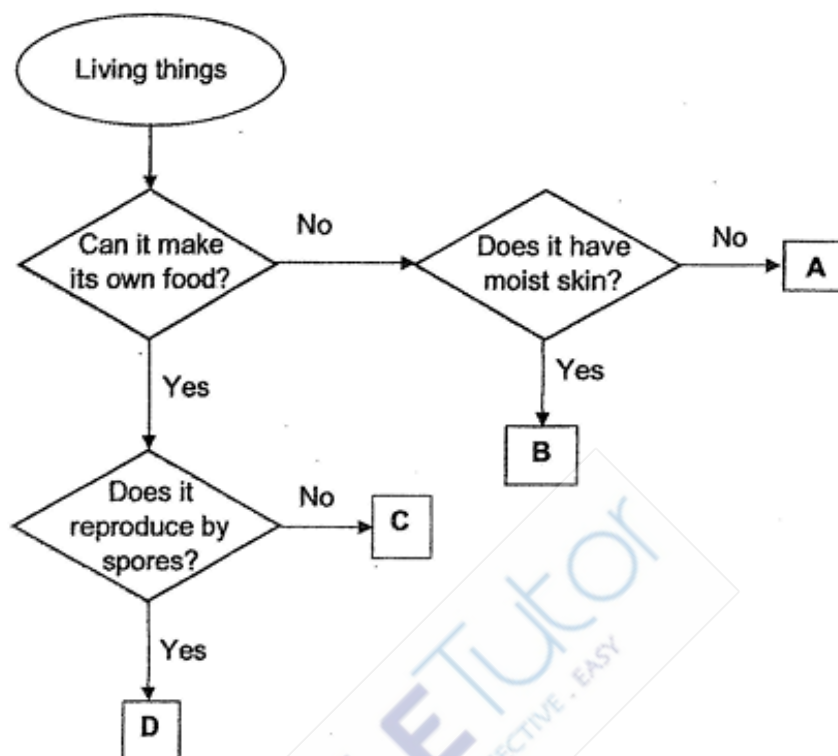
- (b) Write down a similar characteristic of living things between the ladder fern and the rose plant.

[1]

- (c) Other than the headings used in (a), what is another difference between the plants in Group A and Group B?

[1]

7. Study the flowchart below.



(a) Give an example of living thing D.

[1]

(b) Based on the flowchart above, state a difference between living thing B and living thing C.

[1]



ANSWER SHEET

Section A

1	4
2	1
3	2
4	2
5	3

Section B

Qn No	Acceptable Answers
6.	
(a)	Group A: Non-Flowering Plants Group B: Flowering Plants
(b)	Both ladder fern and the rose plants can grow
(c)	Plants in Group A reproduce by spores but plants in Group B reproduce by seeds.
7.	
(a)	Bird's nest fern
(b)	Living thing C can make its own food <u>but</u> living thing B cannot make its own food.

NANYANG PRIMARY SCHOOL WA2 PAPER

Section A: Multiple Choice Questions (10 marks)

For each question from 1 to 5, four options (1, 2, 3 and 4) are given. One of them is the correct answer. Indicate your choice in the brackets provided.

1. The table below shows the characteristics of animals X and Y. A tick (✓) indicates that the animal has that characteristic.

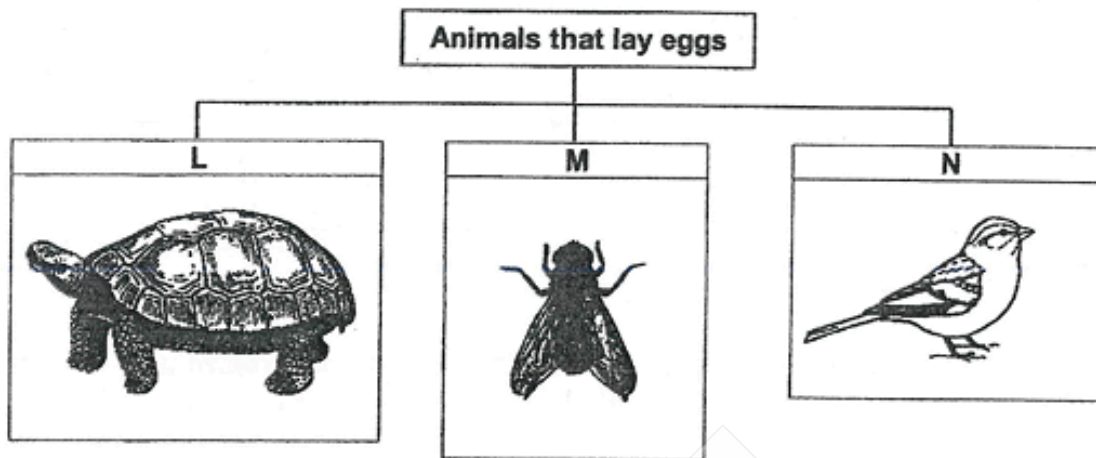
Characteristics	Animal X	Animal Y
Lays eggs	✓	✓
Breathes through gills	✓	
Has scales as outer covering	✓	
Has feathers as outer covering		✓

Based on the table above, which one of the following represents animals X and Y?

	Animal X	Animal Y
(1)	Amphibian	Bird
(2)	Fish	Insect
(3)	Reptile	Amphibian
(4)	Fish	Bird

()

2. Study the classification chart below.



Based on the classification chart, which one of the following best represents L, M and N?

	L	M	N
(1)	Has dry scales as outer covering	Has a hard outer covering	Has feather as outer covering
(2)	Has moist scales as outer covering	Has dry scales as outer covering	Has hair as outer covering
(3)	Has moist scales as outer covering	Has a hard outer covering	Has hair as outer covering
(4)	Has dry scales as outer covering	Has dry scales as outer covering	Has feather as outer covering

()

3. Which of the following statements about fungi and bacteria are correct?

- A: Mushroom is an example of a bacteria.
- B: All fungi and bacteria are microorganisms.
- C: Fungi and bacteria can be useful or harmful to humans.
- D: Fungi and bacteria feed on other organisms dead or alive.

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

()

4. The diagram below shows an electric drill. The part marked W is used to make holes in wooden planks.

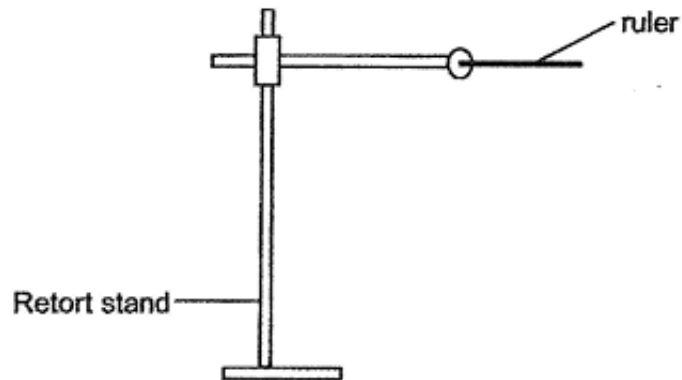


Which one of the following properties allows part W to perform this function well?

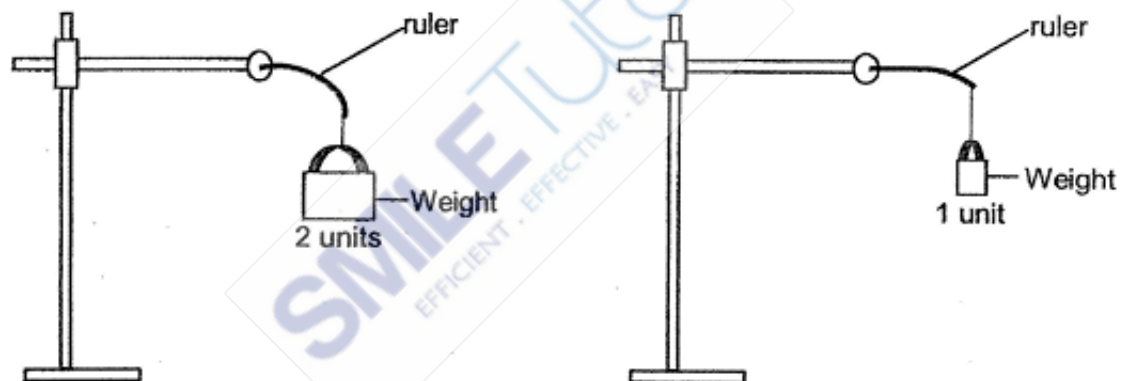
- (1) W is strong.
- (2) W is waterproof.
- (3) W sinks in water.
- (4) W does not allow light to pass through.

()

5. The diagram below shows a retort stand with a ruler attached to it.



Jessica added weights to the ruler and observed how much the ruler can bend. The diagram below shows how the same ruler looked like after different weights were added.



Which property of material is being tested in this experiment?

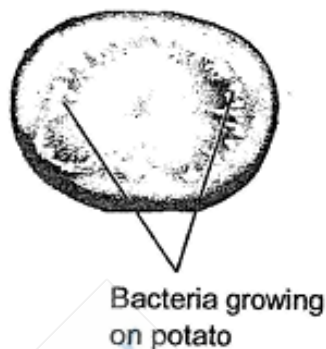
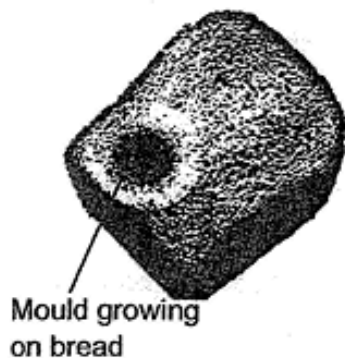
- (1) Strength
- (2) Flexibility
- (3) Waterproof
- (4) Allows light to pass through

()

Section B: Open-Ended Questions (5 marks)

For questions 6 and 7, fill in your answers in the spaces provided.

6. The diagram below shows fungi and bacteria growing on food.

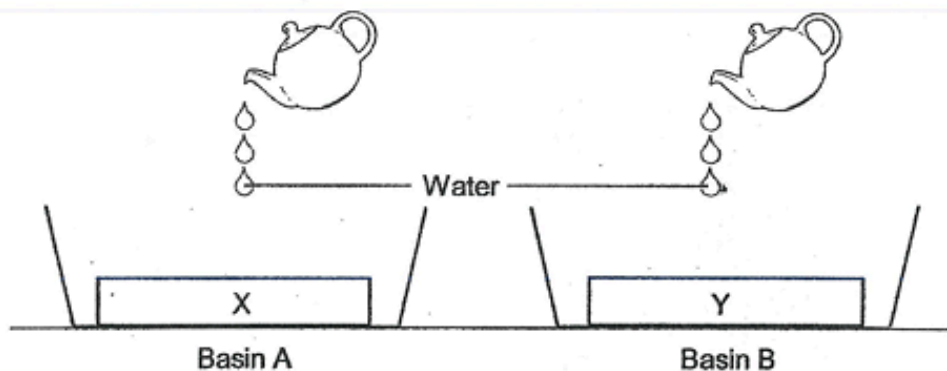


Fungi and bacteria will grow when the surrounding conditions are suitable.

(a) State three conditions that will allow fungi and bacteria to grow. [1]

(b) What can we do to the bread if we want to reduce the growth of fungi on it? [1]

7. Jenny set up an experiment as shown in the diagram below.



She poured equal amount of water over the materials, X and Y, and observed what happened.

The table below shows Jenny's observations of the two materials.

Material	Observations
X	Water slid off the material and is collected in basin A.
Y	Water is soaked up by the material. No water is collected in basin B.

(a) What property of material is Jenny trying to investigate?

[1]

(b) Which material, X or Y, is more suitable for making a cleaning cloth? Explain your answer.

[2]

- End of Paper -

ANSWER SHEET

Section A

1	4
2	1
3	4
4	1
5	2

Qn No	Acceptable Answers
6.	
a	Presence of air / oxygen, water, warmth, food
b	Store them in the fridge
7.	
a	To find out if the materials are waterproof or not.
b	Material Y because, it is not waterproff so that it can clean up water spillage.

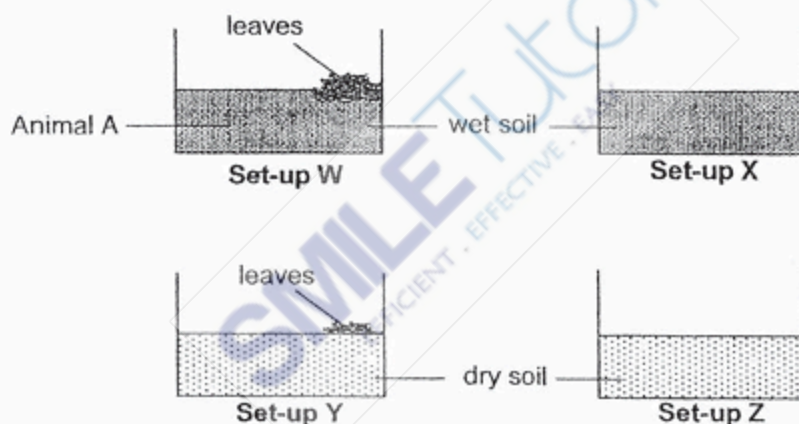
PEI HWA PRESBYTERIAN PRIMARY SCHOOL SA2 PAPER

For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice and shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet provided. (48 marks)

- 1 Which one of the following examples does **not** show the characteristic of living things?

- (1) A forest fire burning.
- (2) A butterfly laid 100 eggs.
- (3) A plant grew 5 cm taller compared to a week ago.
- (4) A lady jumped out of fright when she saw a cockroach.

- 2 Elmer designed 4 set-ups, W, X, Y and Z, as shown below. He placed animal A in each of the set-ups.



Which two set-ups should Elmer use to show that water is needed for animal A to survive?

- (1) W and X
 - (2) W and Y
 - (3) X and Y
 - (4) X and Z
- 3 Lucas quickly ran to find a shelter when it rained.
This shows that living things _____.
- (1) grow
 - (2) reproduce
 - (3) need water
 - (4) respond to changes

4 Which two living things reproduce by spores?

A



B



C

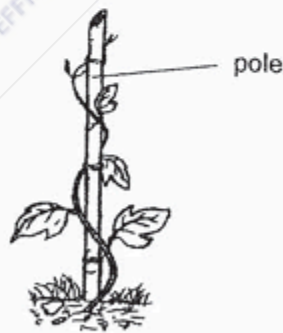


D



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

5 The diagram below shows a plant.



Based on the diagram above only, which of the following statements is true about the plant?

- (1) It is a water plant.
- (2) It has a weak stem.
- (3) It is a flowering plant.
- (4) It cannot make its own food.

6 Which of the following is true about plants?

- (1) All plants bear fruit.
- (2) All plants are found on land.
- (3) The moss is a flowering plant.
- (4) Most plants can make their own food.

7 Which of the following statements shows a similarity between fern and mushroom?

- (1) Both are microorganisms.
- (2) Both can make its own food.
- (3) Both are non-flowering plants.
- (4) Both do not reproduce by seeds.

8 Which statement(s) describe fungi correctly?

A	They are non-flowering plants.
B	They feed on dead and living organisms.
C	Some of them are edible.

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

9 Karen has a condition called Athlete's foot. Athlete's foot is a fungal infection that affects the skin on the feet.



What advice would you give her to prevent more growth of fungi on her feet?

- (1) Keep the feet dry.
- (2) Wet her feet often.
- (3) Wrap feet with warm towel often.
- (4) Scratch her feet to remove the fungi.

10 Which of the following is true about mould?

- (1) They reproduce by laying eggs.
- (2) They need air and water to grow.
- (3) They disappear after a few more days.
- (4) They grow faster at places with more light.

11 The diagram below shows a mushroom.



S is found in the gills. What is the function of S?

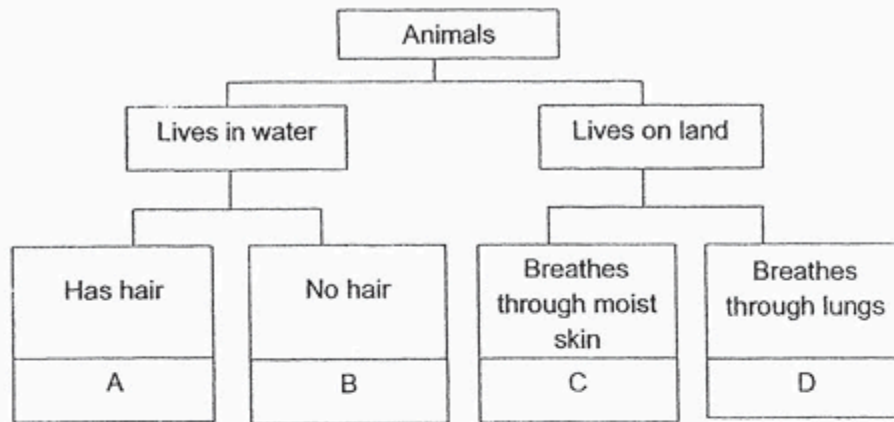
- (1) It makes food for the mushroom.
- (2) It provides food for the mushroom.
- (3) It helps the mushroom grow bigger.
- (4) It helps the mushroom to reproduce.

12 Wei Shan removed the roots from a plant. She then grew the plant in the soil of her garden and watered the plant daily.

Which could be a possible reason why the plant died after one week?

- (1) The plant is unable to bear fruits.
- (2) The stem takes in too much water.
- (3) Food is not made by the roots of the plant.
- (4) Water is not carried to different parts of the plant.

13 Study the classification diagram below.



Which letter represents a shark?

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

14 Leroy saw Animal Y in a park and recorded his observations of Animal Y:

- It can fly.
- It has feathers.
- It has two legs.

What could Animal Y be?

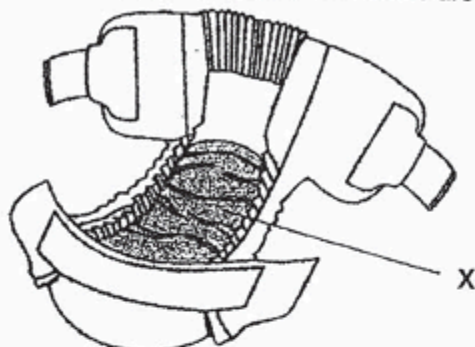
- (1) Bat
- (2) Eagle
- (3) Ostrich
- (4) Mosquito

15 Nathan observed Animal Z had a hard outer covering. What other characteristic could he observe to confirm its animal group?

- (1) It has wings.
- (2) It has scales.
- (3) It has a beak.
- (4) It has six legs.

- 16 The picture below shows a baby diaper. It is worn around the bottom and between the legs of a baby.

Part X (shaded) is where the baby's wet waste materials are contained.











What property(ies) of material is / are **required** to make part X of the diaper?
 A tick (✓) shows the presence of the property.

	Flexible	Strong	Waterproof
(1)	✓	✓	✓
(2)		✓	✓
(3)		✓	
(4)			✓

- 17 There are 4 pieces of sponges of similar size and thickness but made of different materials, P, Q, R and S.

Jolin soaked each sponge in four separate cups that are filled up with 100 ml of water. She then took out the sponges from the cups.

The diagram below shows the amount of water left in the cups.

80 ml left	20 ml left	100 ml left	50 ml left
 	 	 	 

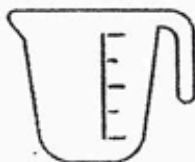
Which one of the materials will be the most suitable to make a raincoat?

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

- 18 The diagram below shows a chair, a measuring cup, and a swimming lifebuoy. Plastic is used to make the objects.



Chair



Measuring Cup



Swimming Lifebuoy

What property must the plastic have for each of these objects to work?

	Chair	Measuring Cup	Swimming Lifebuoy
(1)	strong	allow light to pass through	able to float
(2)	able to float	waterproof	allow light to pass through
(3)	allow light to pass through	strong	flexible
(4)	flexible	able to float	waterproof

19



Which two properties of the window allow Sarah to see the water droplets outside the window?

- (1) strong and flexible
- (2) strong and not waterproof
- (3) allow light to pass through and flexible
- (4) allow light to pass through and waterproof

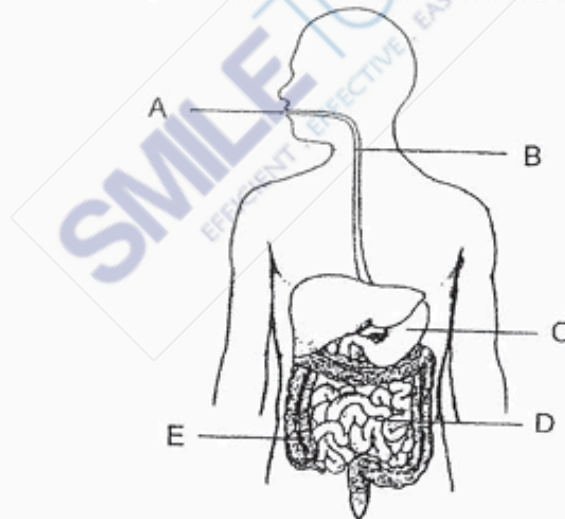
20 The circulatory system _____.

- (1) carries useful substances to all parts of the body
- (2) removes unwanted solid waste materials from our body
- (3) takes in air into our body and removes air from our body
- (4) breaks down food we eat into substances our body can use

21 Which one of the following actions involves the digestive and muscular system?

- (1) A girl blowing a balloon.
- (2) A boy chewing a piece of cookie.
- (3) A pitcher plant trapping a housefly.
- (4) A plant reaching out to the sunlight to make food.

22 The human digestive system is shown in the diagram below. The organs that make up the system are marked A to E.



Which organs contain digestive juices?

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

- 23 The diagram below shows a chilli plant.



How does Part Z get its food?

- (1) It makes its own food.
 - (2) It absorbs food from the soil.
 - (3) The food is transported from Part Y.
 - (4) The food is transported from the red chillies.
- 24 The photograph below shows the palm trees when blown by strong wind.



3 students explained why the palm trees did not fall.

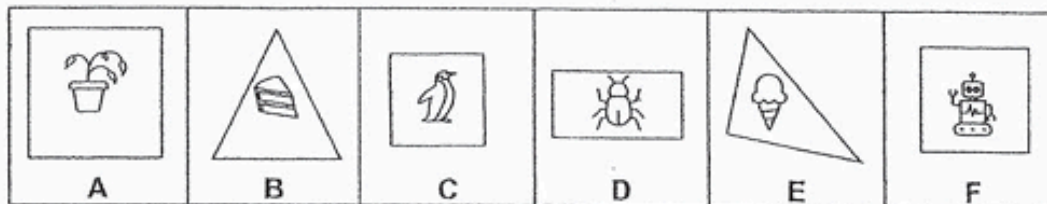
Leroy: The leaves on the tree blocked the wind.
Bernice: The trees had strong and thick stems.
Muthu: The roots held the trees firmly to the ground.

Which of the student(s) are correct?

- (1) Leroy and Bernice only
- (2) Leroy and Muthu only
- (3) Bernice and Muthu only
- (4) Leroy, Bernice and Muthu

Write your answers to the questions 25 to 33 in the spaces provided.
 The number of marks available is shown in brackets [] at the end of each question or part question. (32 marks)

- 25 The diagram below shows six stickers, A, B, C, D, E and F, with different number of sides.



- (a) Leanne classified the stickers into 2 groups, P and Q, as shown in the table below:

Group P	Group Q
A	B
C	E
D	
F	

Which sticker is placed in the wrong group? [1]

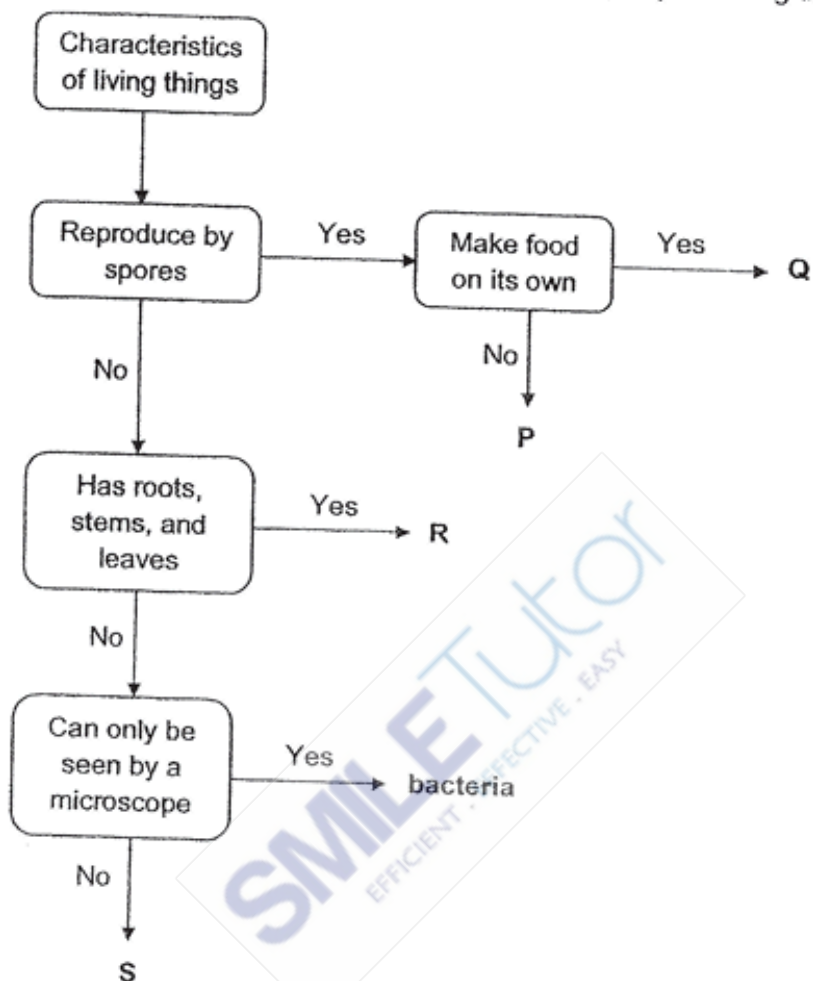
- (b) What is **another** way of classifying the 6 stickers? [2]

Write two suitable headings for the groups.

Group P: _____

Group Q: _____

26 The flowchart below is used to identify the different groups of living things.



(a) Which letter represents a fern?

[1]

(b) Which group of living things does P represent?

[1]

(c) What is the difference between bacteria and R?

[1]

- 27 Joseph had two identical slices of bread. He toasted one of the slices and then left both slices of bread in two identical sealed glass jars. Toasting removes water from the bread.

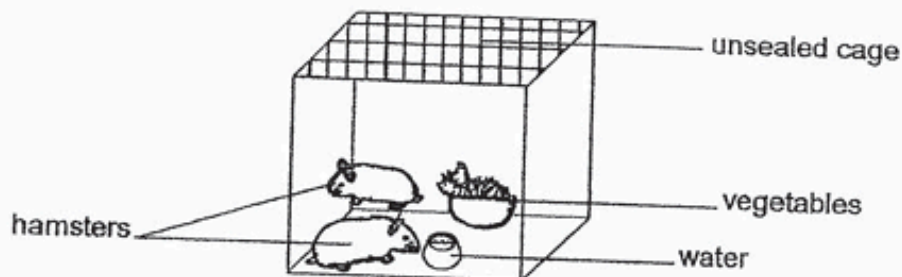
The diagram below shows what he observed two weeks later.



- (a) Joseph concluded that the black spots are bacteria. Do you agree with him? [1]
Why?

- (b) Based on the information above, which jar contains the toasted bread? [2]
Explain your choice.

- 28 Avalynn placed her pet hamsters, X and Y, in an unsealed cage with vegetables and water.



She gave vegetables and water every day. She did not buy any new hamsters.

- (a) Avalynn wrote down observations about the pet hamsters over a period of 2 years.

Tick (✓) the characteristic of animals shown by the observations in the table [2]

Observations	Animals grow	Animals reproduce	Animals respond to changes
"There were 5 hamsters now!"			
"Y was shivering on that rainy day!"			
"X's mass was 2 kg more than when I first bought him!"			
"Y bit my finger the first time I pick her up!"			

- (b) Avalynn wrote that the 3 baby hamsters were hatched from eggs.

(i) Was she correct? _____

[1]

(ii) Give a reason for your answer.

[1]

29 The diagram below shows 3 animals.



platypus



bat



butterfly

- (a) State how the bat and the platypus are similar in their outer covering. [1]

- (b) Which of the animals above reproduces the same way as a dolphin? [1]

- (c) What is the difference in physical characteristic of the bat and the butterfly? [1]
(Do not compare size, shape and colour.)

- (d) Name one other animal group that has a similar physical characteristic as both the bat and the butterfly. [1]

- 30 Ayden carried out an experiment using three bags of the same size and thickness made of different materials, J, K and L. He added tennis balls, one at a time, to each bag until the bag broke. The number of tennis balls needed to break each bag was recorded in the table below.

Material of bag	Number of tennis balls needed to break the bag
J	75
K	20
L	43

- (a) Which property of materials was Ayden testing? [1]

- (b) Material K was cardboard. Predict how many tennis balls will be needed to break a bag made of tissue paper. [1]

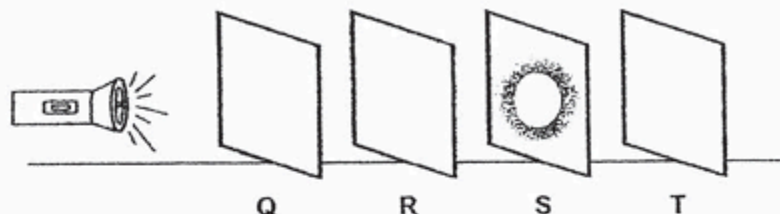
- (c) Ayden wants to make a travel luggage.



- (i) Which material, J, K or L is most suitable for making part X of the travel luggage? [1]

- (ii) Give a reason for your choice. [1]

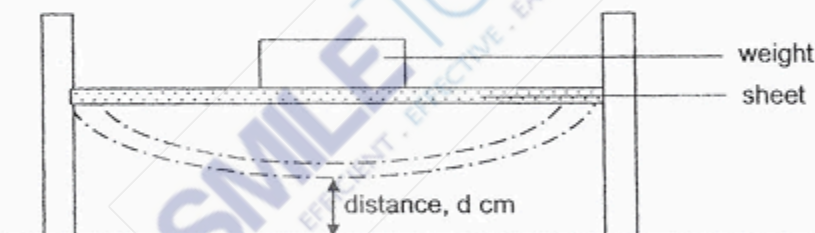
- 31 Raj placed sheets of the same sizes but made of different materials, Q, R, S and T in a row. He then shone the torchlight facing the sheets, as shown in the diagram below.



- (a) Each statement is either true or false. [1]
 For each statement, put a tick (✓) to indicate your answer.

Statement	True	False
Sheet R does not allow light to pass through.		
Sheet S does not allow light to pass through.		

- (b) Raj performed another experiment and put a weight in the middle of each sheet and measured distance, d .



- (i) Which property of material was Raj testing? [1]

- (ii) He recorded his results in the table below. [1]

Sheet	Distance, d (cm)
Q	10
R	25
S	2
T	?

Sheet T bent less than Q. What is a possible distance, d , for sheet T?

_____ cm

- 32 Sam ate 30 g each of three different types of food, A, B and C. All the food he ate can be digested in the human digestive system.

The table below shows the amount of undigested food for each food type when in different parts of the body.

Food Type	Amount of undigested food / g			
	At the beginning	In the mouth	In the gullet	In the stomach
A	30	30	30	30
B	30	20	20	20
C	30	30	30	20

- (a) Based on information in the table, in which part of the digestive system is Food Type A digested? [1]

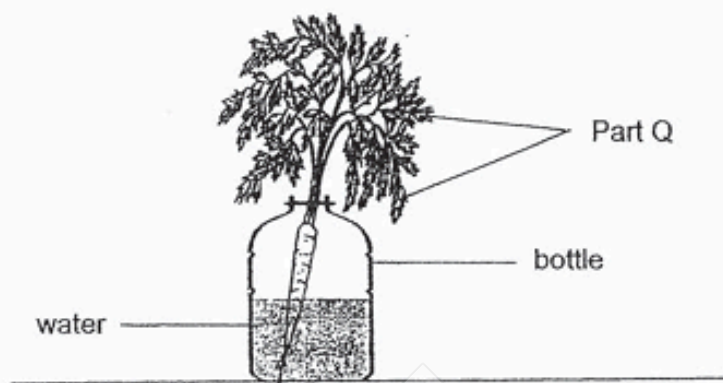
- (b) Which type(s) of food starts to be digested in the stomach? [1]

- (c) Why was the amount of undigested food in the mouth and gullet the same? [1]

- (d) If Sam chewed food type B for longer period of time, what would be a possible amount of undigested food left before it enters the stomach? [1]

 g

33 Gemma set up an experiment using plant P as shown below.



- (a) (i) State what happens to the amount of water in the bottle after a few hours. [1]

- (ii) Give a reason to the observation in (a)(i). [1]

- (b) What is the function of part Q? [1]

- (c) Plant P produces flower. [1]

State another characteristic which shows that plant P is a flowering plant.

~ End of Paper ~

ANSWER SHEET

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

Booklet B Q25 (a) (b)	D 4 sides, 3 sides
Booklet B Q26 (a) (b) (c)	Q Fungi R has roots, stems and leaves, but bacteria does not.
Booklet B Q27 (a) (b)	I do not agree because the black spots are mould. Jar M. Toasting removes water from the bread.
Booklet B Q28 (a) (b)(i) (ii)	Animals reproduce, animals respond to changes, animals grow, animals respond to changes No Hamsters are mammals, who give birth to its young alive.
Booklet B Q29 (a) (b) (c) (d)	Both of them have hair. Bat. The bat has 2 legs, the butterfly has 6 legs. Birds

- Q30. a) Strength
b) 10
c) (i) Material J
(ii) It is the strongest material.

- Q31. a) False, True
b) i) Flexibility

ii) 20 cm

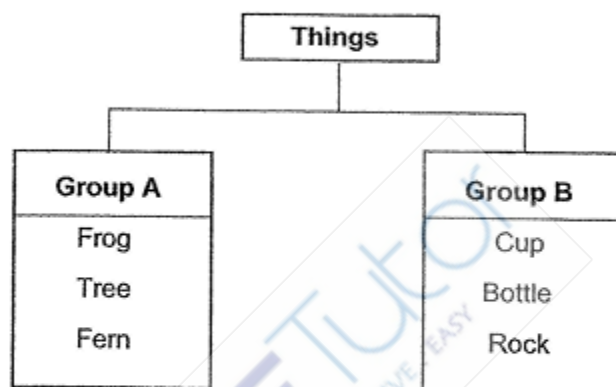
- Q32. a) Small intestine
b) Type C
c) There is no digestion taking place in the gullet as it does not have any digestive juices.
d) 10 g

- Q33. a) i) The amount of water decreases.
ii) The roots of Plant P absorb water to be transported to part Q.
b) It makes food for the plant.
c) It bears fruits.

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For each question from 1 to 6, four options are given. One of them is the correct answer. Make your choice and write your answer in the bracket provided. (12 marks)

- 1 Study the classification table below.



Which one of the following can be placed in the same group of things as group A?

- (1) Car
- (2) Table
- (3) Lizard
- (4) Mobile phone

()

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2. The table below show 3 things, L, M and N and their characteristics. A tick (✓) shows that the thing has the characteristic.

Things	Need air food and water	Moves from place to place by themselves	Respond to changes	Grow
L	✓	✓	✓	✓
M	✓	X	✓	✓
N	X	X	X	X

Based on the table above, which of the following statements below describes L, M and N correctly?

- (1) N is a non-living thing.
- (2) L is the only living thing.
- (3) L, M and N are living thing.
- (4) M and N are the only living things.

()

3. There are 4 statements, A, B, C and D made about living things.

- A They have young.
- B They can reproduce.
- C They come in different sizes and shapes.
- D They feed on other living things for food.

Which statements state the similarities between plants and animals?

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

()

4. Which of the following statements about a non-flowering plant is **not** true?

- (1) It does not have fruits.
- (2) It reproduces by spores.
- (3) It does not have any flowers.
- (4) It has roots, stems, leaves and seeds. ()

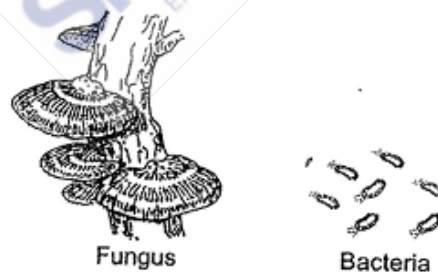
5. The characteristics of living thing K are listed below.

- Has a cap, stalk and gills
- Can be seen with naked eyes
- Feed on dead and living organisms.

Which of the following represents living thing K?

- (1) Yeast
- (2) Bacteria
- (3) Mushroom
- (4) Bread Mould ()

6. Study the diagram below.



They are living things that _____

- (1) produce flowers
- (2) can be useful to us
- (3) reproduce by spores
- (4) are called micro-organisms ()

Write your answers to the questions 7 and 8 in the spaces provided. The marks is shown in brackets [] at the end of each question or part question. (8 marks)

7. Study the animals shown below.



A



B



C

(a) Which animal group does Animal B belongs to? [1]

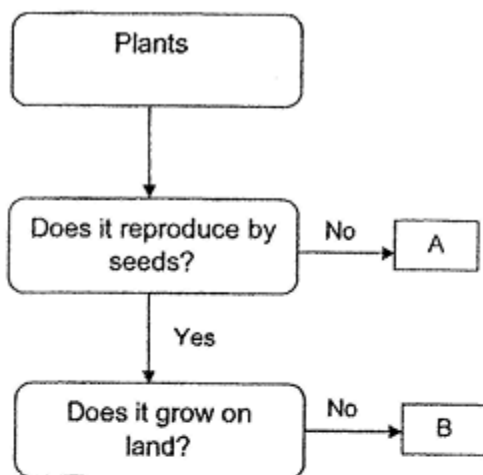
(b) State two characteristics of Animal B that is used to classify it as the animal group stated in **part (a)**. [2]

1. _____

2. _____

(c) State the difference between Animals A and C in terms of its body covering. [1]

8. Study the flow chart below.



(a) List one characteristic of B based on the flow chart. [1]

(b) Based on the flow chart, state one difference between A and B. [1]

(c) Mrs Tan said that A is not a mushroom. Why do you think she said so? [1]

(d) Which of the following can be an example of B? Circle the correct answer. [1]

Water Lily / Rose / Orchid

End of paper

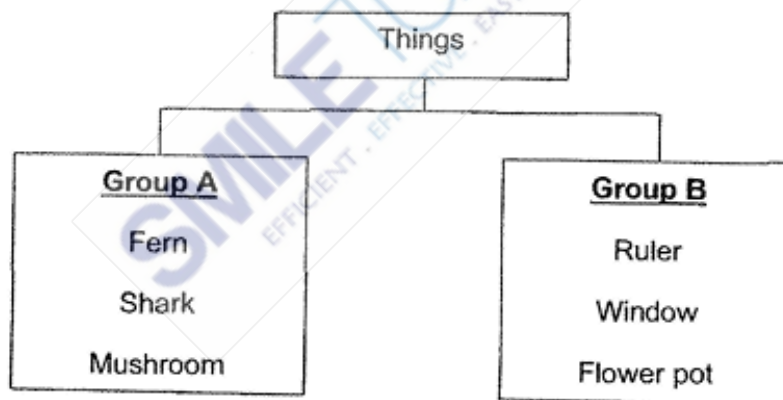
For each question, from 1 to 24, four options are given. One of them is correct. Make your choice and shade the oval (1, 2, 3, or 4) on the Optical Answer Sheet.

[48 Marks]

- 1 Which one of the following observations below is correctly matched to its characteristics of living things?

	Observations	Characteristics
(1)	The tortoise lays eggs.	Living things can reproduce.
(2)	A baby growing into an adult.	Living things can respond to changes.
(3)	A monkey swings from tree to tree.	Living things need air, food and water.
(4)	The leaves of a mimosa plant close up when we touch them.	Living things can grow.

- 2 The classification chart below shows two different groups of things.



Which of the following should be placed in Group A?

- (1) Butter
- (2) Mould
- (3) T-shirt
- (4) Feather

- 3 Jane kept 8 hamsters in a cage. The number of hamsters was counted and recorded over 24 months in the table below.

Number of months	Number of hamsters
6	10
12	14
18	9
24	8

Based on the information recorded in the table, which two statements below are true about the hamsters?

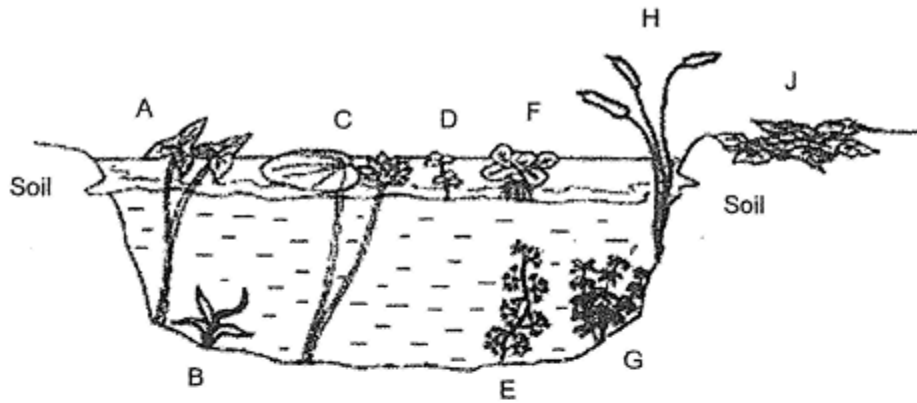
- A Living things can die.
- B Living things can reproduce.
- C Living things need air, food and water.
- D Living things respond to changes around them.

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

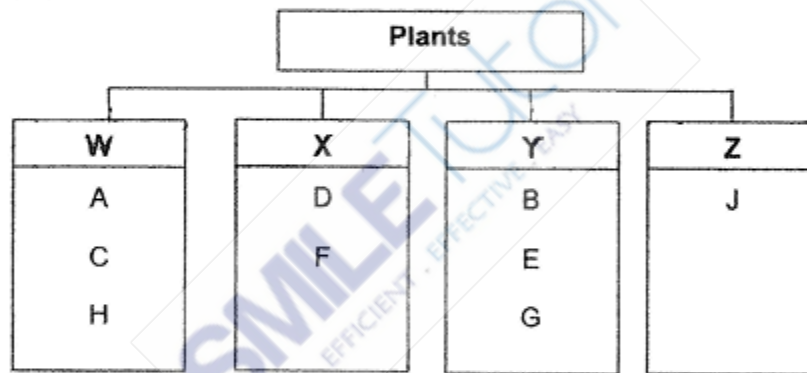
- 4 Which of the following statements is true?

- (1) All plants bear flowers.
- (2) Plants can only grow in soil.
- (3) Plants reproduce by seeds only.
- (4) Plants can respond to changes around them.

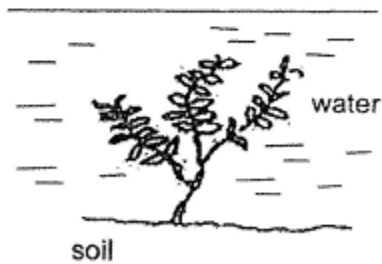
5 Sheela saw some plants in the school pond.



She classified the plants she saw in 4 different groups based on their characteristics.



Which group (W, X, Y or Z) should Sheela placed the plant below?



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

6 Below are some characteristics that describes Plant X.

- It grows on rock.
- It does not bear flowers.
- It reproduce by spores.

What could Plant X be?

- (1) Moss
- (2) Mould
- (3) Orchid
- (4) Mimosa

7 Which of the following are true about spores?

- A They are very small.
- B They help in reproduction.
- C They can only be found in fungi.
- D They can be developed into fruits.

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

8 What is the similarity between a mushroom and a bird's nest fern?



Mushroom



Bird's nest fern

- (1) Both have leaves.
- (2) Both are water plants.
- (3) Both reproduce by spores.
- (4) Both can make their own food.

9 Which of the following groups consist of different types of fungi?

- (1) Mould and fern
- (2) Fern and mushroom
- (3) Mushroom and toadstool
- (4) Toadstool and Bougainvillea

10 Look at the pictures below carefully.



How are the animals above similar?

- A They have wings.
- B They have six legs.
- C They have feelers.
- D They have a beak.

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

- 11 This living thing can be found in the wild.



Which of the following characteristics of the above living thing are useful in the classification of it as a mammal?

- A It has thick hair.
- B It has strong legs.
- C It feeds its young with milk.
- D It feeds on other animals only.

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

- 12 Study the pictures below.



Animal A



Animal B



Animal C

Which of the following shows the correct body coverings of Animals A, B and C?

	Animal A	Animal B	Animal C
(1)	Dry skin with scales	Feathers	Hair
(2)	Feathers	Scales	Hard outer covering
(3)	Scales	Hair	Feathers
(4)	Hair	Hard outer covering	Dry skin with scales

13 Study the group of animals below.



Crocodile



Frog



Turtle



Lizard

Why does the frog not belong to the group above?

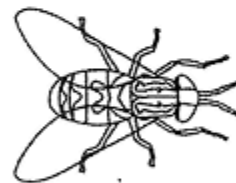
- (1) It has a tail.
- (2) It lays eggs.
- (3) It has 4 legs.
- (4) It has moist skin.

14 Which one of the following is an insect?

(1)



(2)



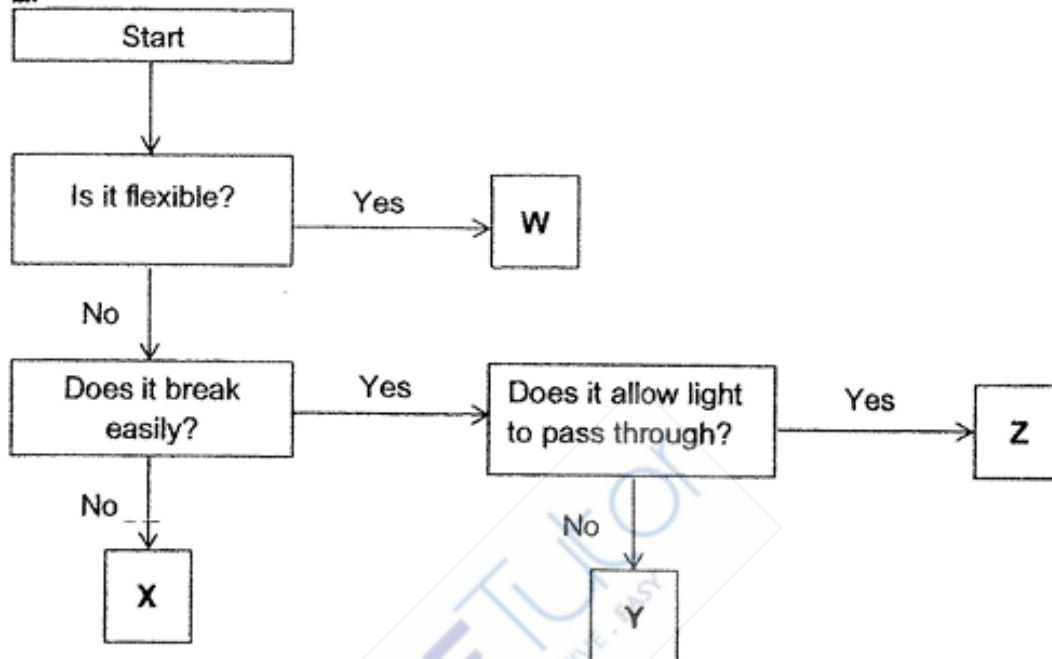
(3)



(4)



- 15 The flow chart below shows the properties of four different objects W, X, Y and Z.



Which of the following best represents objects W, X, Y and Z?

	W	X	Y	Z
(1)	Skipping rope	Rubber hose	Window pane	School gate
(2)	Mirror	Skipping rope	School gate	Rubber hose
(3)	Plastic ruler	Window pane	Fish tank	Mirror
(4)	Rubber hose	School gate	Mirror	Fish tank

- 16 Kathy described a material as follows:

- It is flexible.
- It is waterproof.
- It comes from plant.

Which object below is most likely made of the material that Kathy has described?

(1)



(2)



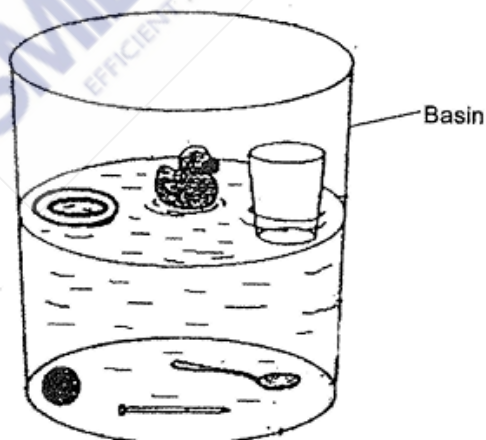
(3)



(4)



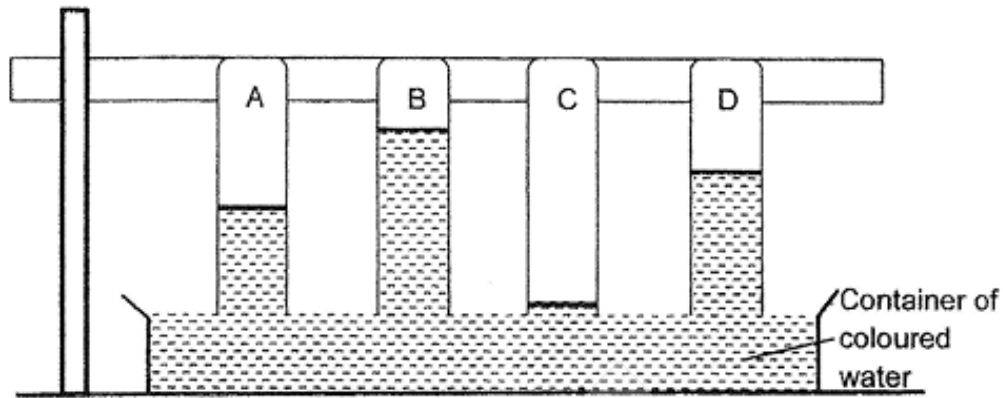
- 17 John put six objects made of different materials into a basin of water. The diagram below shows what he observed.



What was he trying to find out?

- (1) Flexibility of the objects
- (2) Transparency of the objects
- (3) Whether the objects sink or float
- (4) Whether the objects absorb water

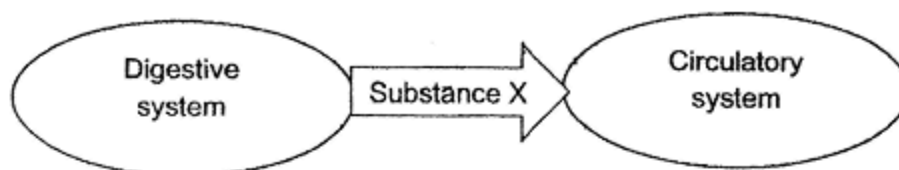
- 18 Sue set up an experiment to find out which 4 materials A, B, C and D is able to absorb water in the shortest time. She drew a line on the 4 materials to show the amount of water absorbed by each material as shown below.



Which of the material above is most suitable to make raincoat?

- (1) Material A
 - (2) Material B
 - (3) Material C
 - (4) Material D
- 19 The bones support our body and gives us shape. Which of the following systems works with our bones to enable movements?
- (1) Muscular system
 - (2) Digestive system
 - (3) Circulatory system
 - (4) Respiratory system

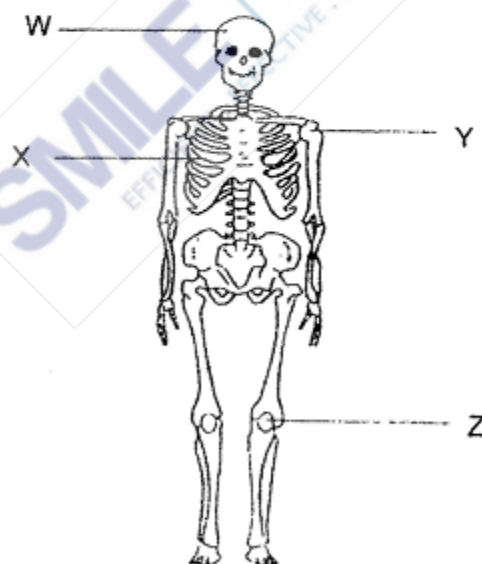
20 Study the diagram below.



What is the substance X that is absorbed into the circulatory system from the digestive system?

- (1) Solid waste
- (2) Digested food
- (3) Digestive juice
- (4) Undigested food

21 The diagram below shows the skeletal system.



Which parts of the skeletal system protect our organs?

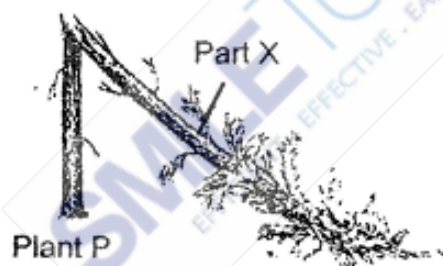
- (1) X only
- (2) W and X only
- (3) X and Y only
- (4) W, X, Y and Z

22 What is the main function of the stem of a plant?

- A Hold the plant upright
- B Absorb water and minerals
- C Trap sunlight to make food
- D Anchor the plant firmly to the ground

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

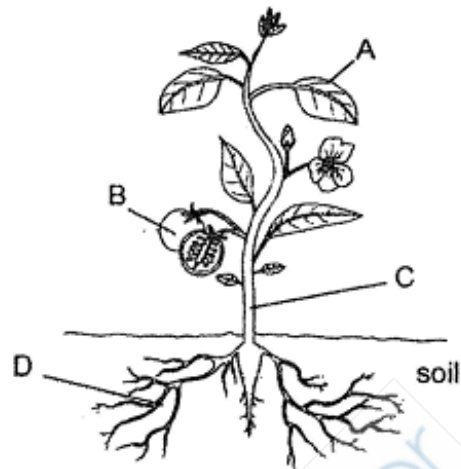
23 Study the diagram below carefully.



After a thunderstorm, Daniel noticed that the plant in front of his house died after a few days. What is the possible reason that caused Plant P to die?

- (1) Part X of the plant could not bear flowers.
- (2) Exchange of gases could not take place.
- (3) The leaves in Part X could not trap enough sunlight to make food.
- (4) Water was not able to be transported from the roots to the other parts of the plant.

- 24 Gina removed one of the parts in the plant below and she noticed that the plant can still survive after a few days.

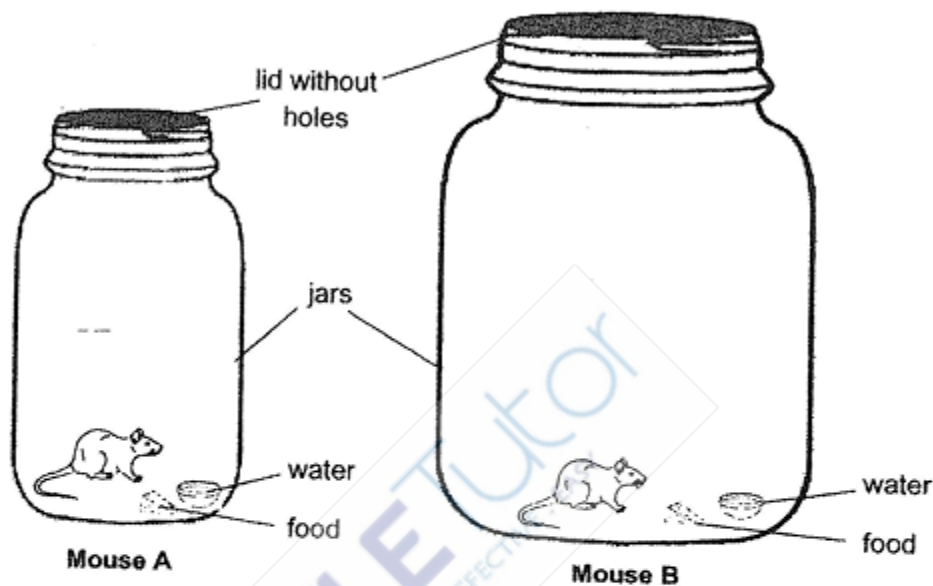


Which part of the plant did she remove?

- (1) All of A
- (2) All of B
- (3) All of D
- (4) Whole of C

For questions 25 to 33, write your answers in this booklet.
The number of marks available is shown in brackets [] at the end of each question or part question.
[32 Marks]

25 A mouse is kept in each of the jars as shown below.



- (a) After a few hours, Mouse A and Mouse B died.
What characteristic of living things did the mice show?

[1]

- (b) Which of the mice will survive for a longer time?

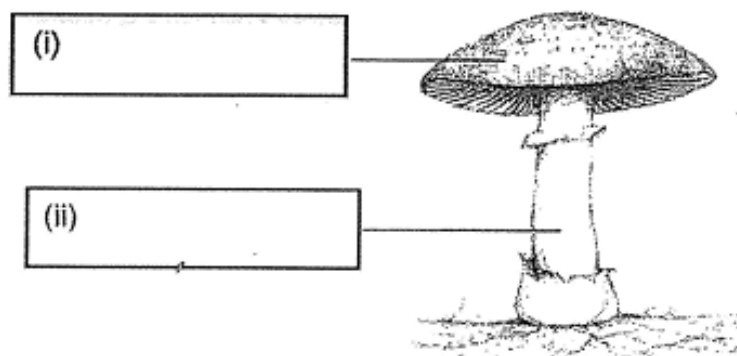
Mouse _____

Give a reason for your answer.

[1]

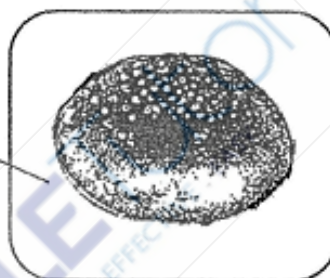
27 (a) Label all the mushroom parts below.

[2]

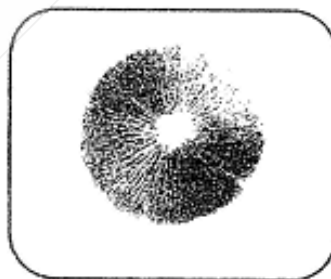


Mrs Lim plucked a mushroom and placed it on a piece of white paper as shown below.

White paper



After a day, she removed the mushroom and used a magnifying glass to look at the powdery black lines formed on the white paper as shown below.



(b) What are the powdery black lines?

[1]

28 The diagrams below show a penguin and a tiger.



Penguin



Tiger

(a) State 2 differences between penguin and tiger in terms of:

(i) the way they reproduce.

[1]

(ii) their outer coverings:

[1]

(b) Circle the group to show which group the tiger belongs to.

[1]

Group A	Group B

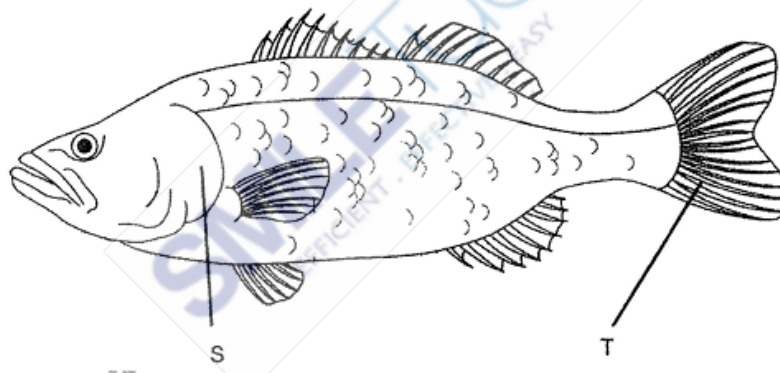
A platypus has a beak like the penguin but it belongs to the same animal group as the tiger.



Platypus

- (c) State one characteristic of the platypus that puts the platypus and the tiger in the same animal group. [1]

- 29 The diagram below shows a fish.

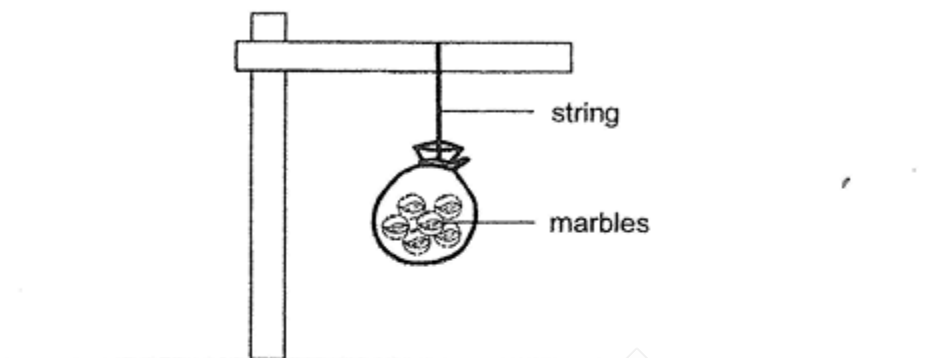


- (a) Name the part that is found underneath Part S. [1]

- (b) What is the function of the part in (a)? [1]

- (c) What is the function of Part T? [1]

- 30 Raymond conducted an experiment as shown below to find out which material is able to carry the most number of marbles. He used 3 strings, R, S and T that are made of different materials and hung different number of marbles on the string.



The table below shows the results of his experiment.

Number of marbles	String R	String S	String T
6	✓	X	✓
12	✓	X	✓
20	X	X	✓

Legend:

X - string broke

✓ - string did not break

- (a) (i) Which two strings will be able to hold 10 marbles? [1]

String _____ and String _____

- (ii) Based on the results from the table, arrange the string (R, S and T) from the strongest to the weakest [1]

Strongest
→
 Weakest

- (b) When fishing, Raymond would throw the fishing line into the water and Part Y was seen on the water, allowing Raymond to see where his fishing bait is when Part Z is in the water.

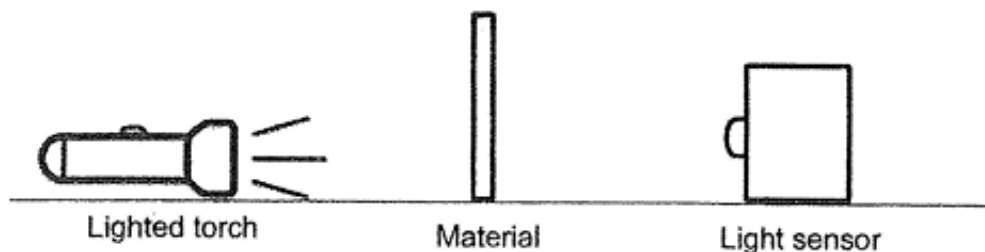


- (i) State the property of Part Y. [½]

- (ii) State the property of Part Z. [½]

- (iii) How does the property in (ii) make the Part Z suitable for fishing? [1]

- 31 Lily prepared the following set-up to test 4 different materials A, B, C and D for the amount of light that can pass through each material. He used a light sensor to detect the amount of light.



The table below shows the results.

Material	Amount of light detected (units)
A	22
B	60
C	0
D	100

- (a) (i) Based on the results, which of the material (A, B, C or D) is most suitable to make the lenses of a swimming goggles? [1]



lenses

Material _____

- (ii) Give a reason for your answer in (a)(i). [1]

(b) Spectacle lenses used to be only made from glass. However, in recent years, more lenses are made of plastic.

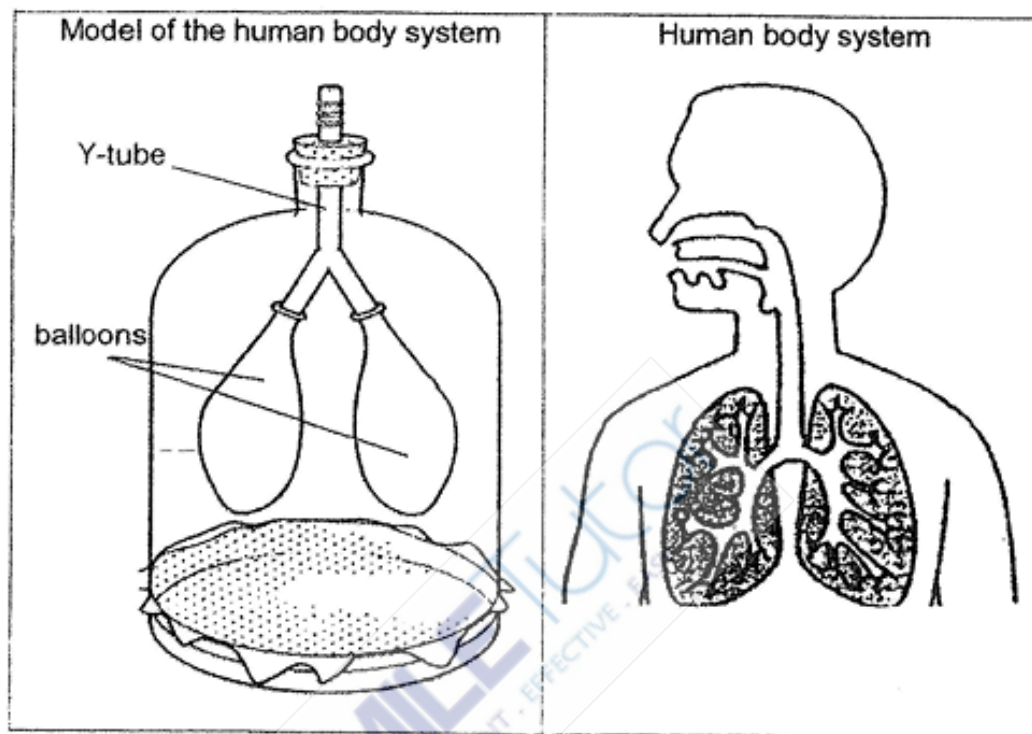
(i) State one property that explain why lenses are made of glass or plastic.

[1]

(ii) Based on the property of materials, give a reason why plastic is used to make lenses instead of glass.

[1]

- 32 Janel was given some items to make a model of a system in the human body. She referred to the human body system in the right box and put the items together to make up a model as shown in the left box below.



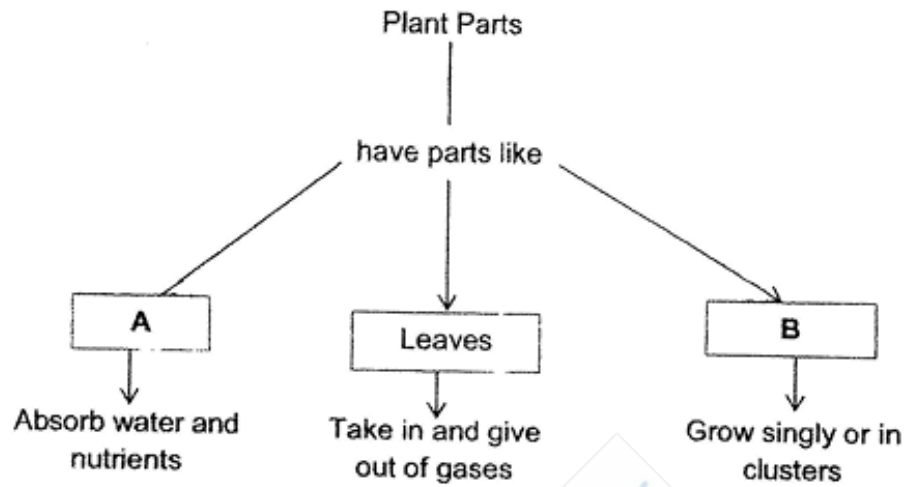
- (a) Which human body system does the model represent? [1]

- (b) Name the organs in the human body system which the parts in the model represent: [2]

(i)	Y-tube:	
(ii)	Balloons:	

- (c) The skeletal system serves to protect important organs.
Name the part in the skeletal system which protects the organs in (b)(ii). [1]

33 The chart below shows the description for the 3 plant parts.



(a) What plant parts could A and B be?

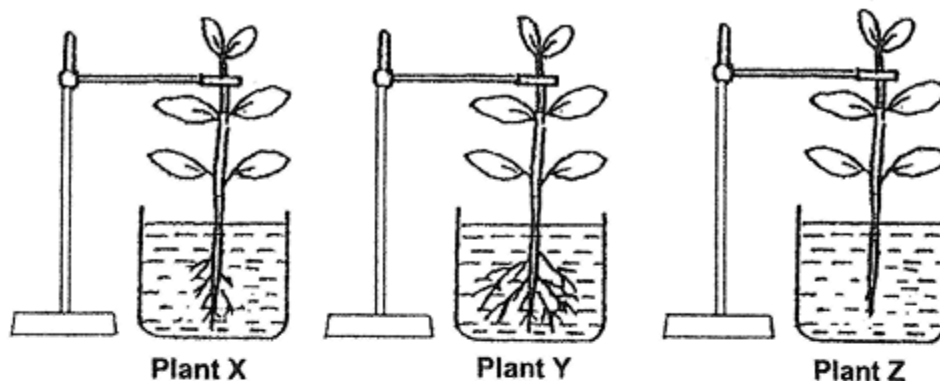
[1]

	Plant part
(i) A	
(ii) B	

(b) State one other function of the leaves.

[1]

- (c) The diagram below shows three similar plants, Plants X, Y and Z.



Amy left the three plants in the same room for a few days and recorded the amount of water taken in by the plant in the table below.

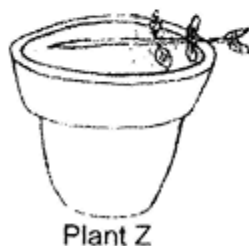
Plant	Amount of water taken in by the plant (ml)
X	?
Y	10
Z	3

What is the possible amount of water taken in by Plant X?

[1]

_____ ml

- (d) Amy later transferred Plant Y and Plant Z to two similar pots and placed them in her garden. She observed that only Plant Z fell over after a few days.



Give a reason for her observation above.

[1]

End of Paper

ANSWER SHEET

Q1	3	Q2	1	Q3	4	Q4	4	Q5	3
Q6	2								

- Q7a) Animal B belongs to insect group.
 Q7b) 1. It has 3 body parts.
 2. It has a pair of feelers.
 Q7c) Animal A has feathers and animal C has dry skin.
 Q8a) It reproduces by seeds.
 Q8b) A cannot reproduce by seeds and B can reproduce by seeds.
 Q8c) A mushroom is not a plant, instead it is a fungi.
 Q8d) Water lily

BOOKLET A

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

BOOKLET B

- Q25a) Both mice show that living things need air, food and water to survive.
 Q25b) Mouse B.
 Mouse B will survive for a longer time because it has a bigger jar which allows it to have more air.
- Q26a) Flowering plants: Water lily, Sunflower
 Non-flowering plants: Ladder fern, Staghorn fern
 Q26b) The water lily lives in water and the sunflower lives on land.
 Q26c) The Staghorn fern reproduce by spores.
- Q27a) i) Cap
 ii) Stalk
 Q27b) The powdery black lines are spores.
- Q28a) i) The penguin reproduce by laying eggs and the tiger reproduce by giving birth to its young alive.
 ii) The penguin has feathers on its body and the tiger has hair on its body.
- | | |
|-------|------------------------------------------------------------------------------------------------------------|
| Q28b) | Group A |
| Q28c) | The platypus and the tiger both have hair as their outer covering. |
| Q29a) | The gills |
| Q29b) | It helps the fish to breathe in water. |
| Q29c) | Part T helps the fish to swim in water. |
| Q30a) | i) String R and String T
ii) T, R, S |
| Q30b) | i) Part Y is light and waterproof so that it can float in the water.
ii) Part Z is strong and flexible. |

iii) It is strong so that when the fish bites into it, it can withhold when the fish tugs onto it.

Q31a) i) Material D

ii) Material D allows most light to pass through.

Q31b) i) Both are transparent

ii) Plastic does not break easily when it is dropped.

Q32a) It represents the respiratory system.

Q32b) i) Y-tube: Trachea

ii) Balloon: Lungs

Q32c) The ribcage

Q33a) i) A: Roots

ii) B: Flowers

Q33b) It can absorb light to make food.

Q33c) 5ml

Q33d) Plant Z fell over because it has no roots.

RED SWASTIKA SCHOOL CT1 PAPER

Section A: Multiple-Choice Questions (9 x 2 = 18 marks)

Choose the most suitable answer and write its number in the brackets provided.

1. Look at the table below.

Living things	Non-living things
fire	cup
butterfly	car

Which item in the table is grouped wrongly?

- (1) fire
- (2) cup
- (3) car
- (4) butterfly

()

2. Which of the following is a characteristic of mammals?

- (1) Lay eggs
- (2) Have four legs
- (3) Have hair on their bodies
- (4) Have hard outer coverings

()

3. James spotted a bird's nest fern as shown below.

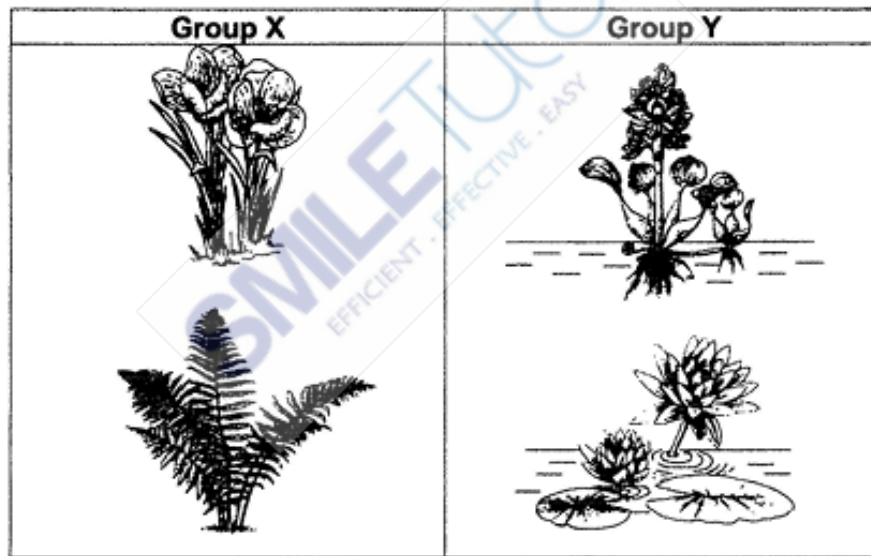


Which of the following statements about the bird's nest fern is incorrect?

- (1) It can grow.
- (2) It has leaves.
- (3) It cannot make food.
- (4) It reproduces by spores.

()

4. Study the diagrams below.

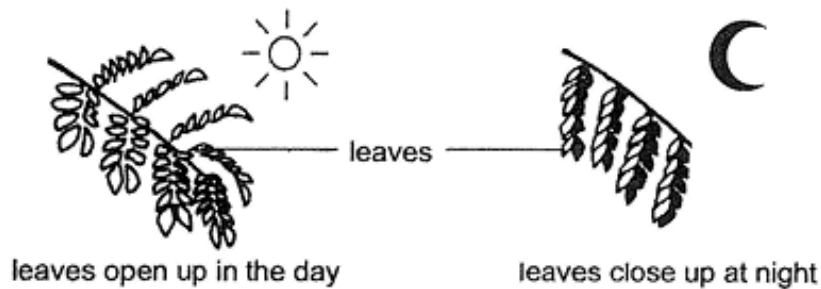


Which of the following are the most suitable headings for groups X and Y?

	Group X	Group Y
(1)	Land plants	Water plants
(2)	Flowering plants	Non-flowering plants
(3)	Non-living things	Living things
(4)	Non-flowering plants	Flowering plants

()

5. Rina observed that the leaves of a tree open up in the day but close up at night as shown below.

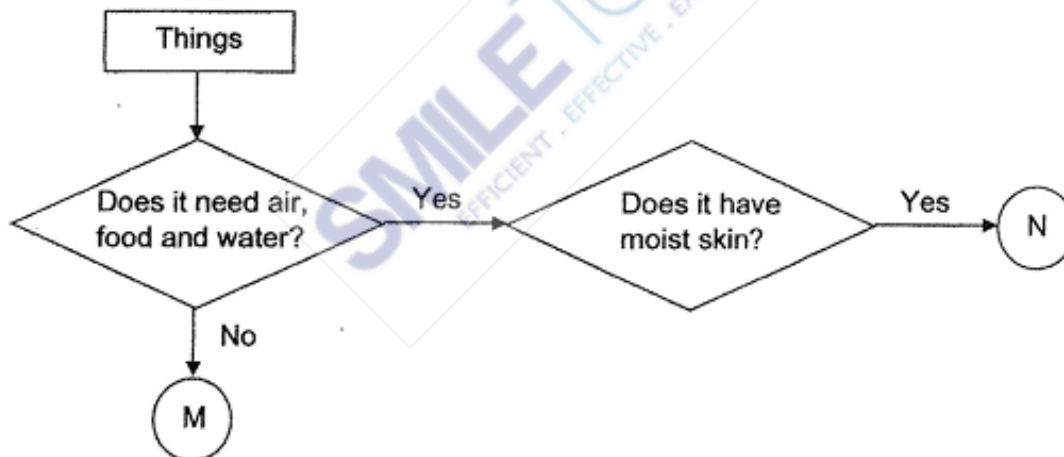


Which characteristic of living things is shown by the leaves above?

- (1) Living things can die.
- (2) Living things can grow.
- (3) Living things can reproduce.
- (4) Living things respond to changes.

()

6. Study the flowchart below.



What could M and N most likely be?

	M	N
(1)	book	frog
(2)	table	fish
(3)	fish	frog
(4)	fish	book

()

7. The table below shows the characteristics of animals A, B, C and D.

	Has dry skin	Has hair
Lives in water	A	B
Does not live in water	C	D

The diagram below shows a dolphin.



Which letter in the table above represents the dolphin?

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

()

8. The table below shows the characteristics of four animals, W, X, Y and Z.

Characteristics	W	X	Y	Z
Has hair		✓	✓	
Has wings	✓	✓		
Has a hard outer covering				✓

Which animal is most likely an insect?

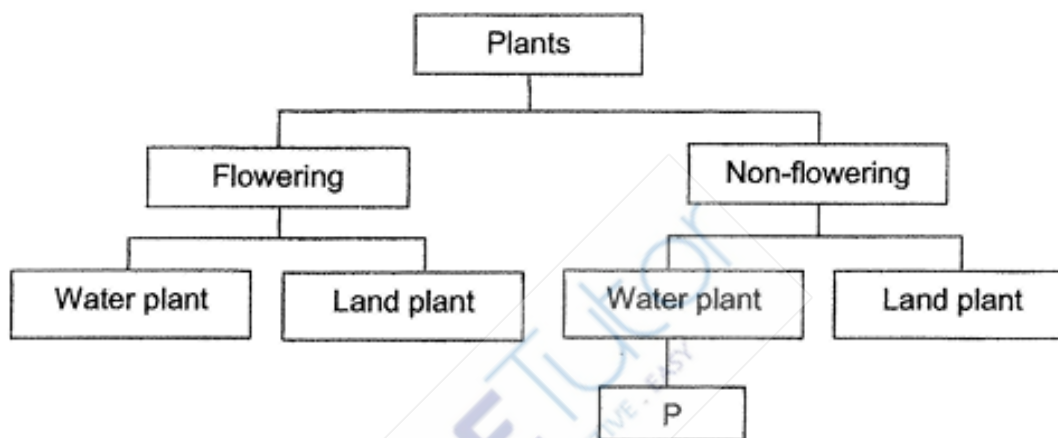
- (1) W
- (2) X
- (3) Y
- (4) Z

()

9. Nadia found four different plants, A, B, C and D. She recorded her observations of their characteristics in the table below.

Characteristics	A	B	C	D
Bears fruits	No	No	Yes	Yes
Grows on land	Yes	No	Yes	No

Using the information in the table above, Nadia wants to classify the four plants into the classification chart below.



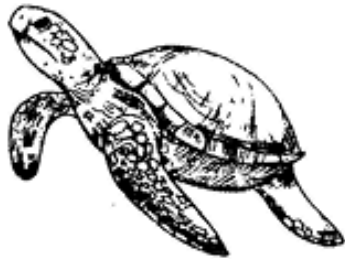
Which plant, A, B, C or D, can be classified under P?

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

()

Section B: Open-ended Questions (3 x 4 = 12 marks)

10. Ahmad saw two animals, A and B, as shown below.



Animal A



Animal B

- (a) State the animal groups that animals A and B belong to. (2m)

Animal A: _____

Animal B: _____

- (b) State a similarity in the way animals A and B reproduce. (1m)

- (c) State a difference in the body coverings of animals A and B. (1m)

11. Gerald has a toy robot. It is able to move and respond to sounds.



- (a) However, Gerald knows that the toy robot is not a living thing. Using the characteristics of living things, state two reasons why the robot is not a living thing. (2m)

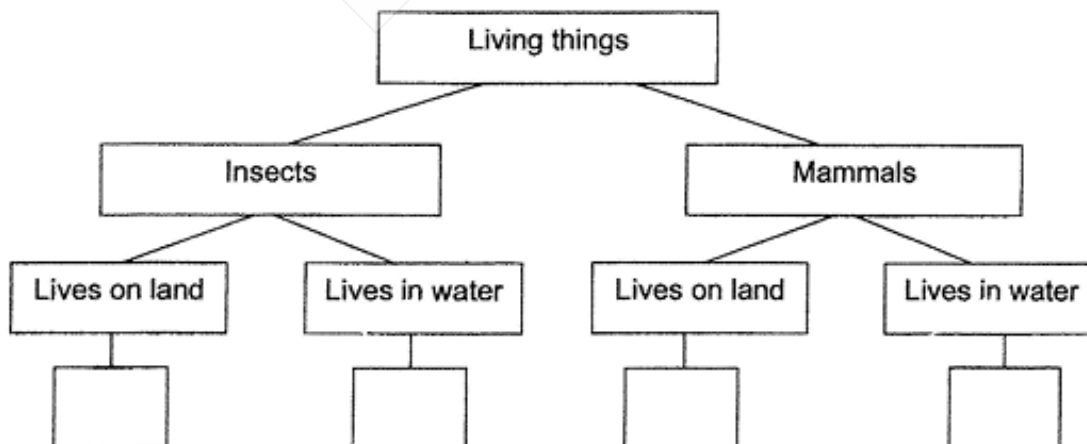
Reason 1: _____

Reason 2: _____

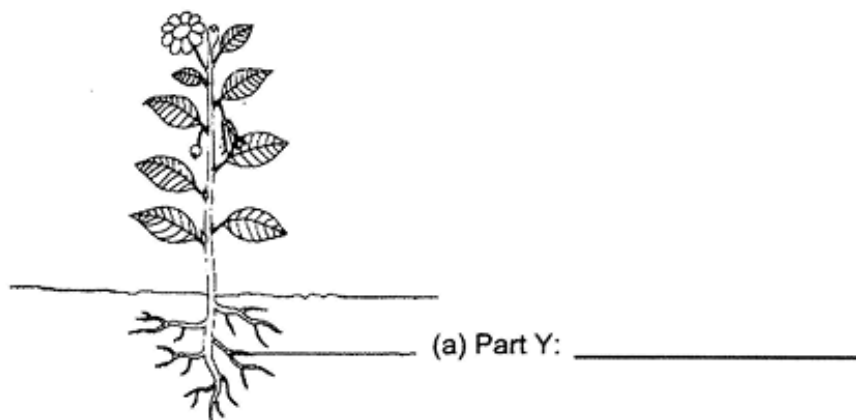
The table below shows the characteristics of two animals, M and N.

Characteristics	M	N
Gives birth to young alive	✓	
Has three body parts		✓
Lives on land		✓
Lives in water	✓	

- (b) Based on the information above, write M and N into the correct boxes in the classification chart below. (2m)



12. Study the diagram of the plant below.



(a) Name part Y of the plant above. (1m)

(b) How does the plant above reproduce? (1m)

Ashley placed four similar plants, A, B, C and D, under different conditions as shown in the table below.

	A	B	C	D
Plant was watered daily	Yes	Yes	No	No
Place where plant was left	Garden	Inside a dark cupboard	Garden	Inside a dark cupboard

(c) Predict which plant is likely to die first. (1m)

(d) Give a reason for your answer in (c). (1m)

End of Paper

Please check your answer.

ANSWER SHEET

Q1	1	Q2	3	Q3	3	Q4	1	Q5	4
Q6	1	Q7	2	Q8	4	Q9	2		

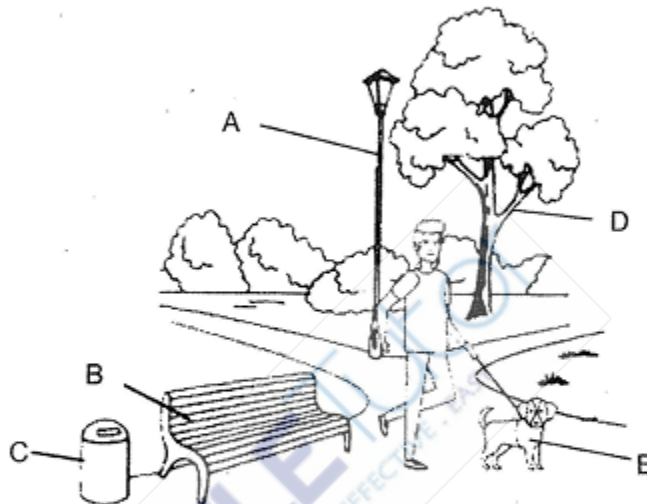
Q10	a)	Animal A: reptile Animal B: bird
	b)	Animal A and Animal B reproduce by laying eggs.
	c)	Animal A outer covering is dry skin with scales but Animal B out covering are feathers.
Q11	a)	Reason 1: It does not need air, food and water Reason 2: It will not die
	b)	Insects, lives on land: N Mammals, lives in water: M
Q12	a)	Roots
	b)	It reproduces by seeds.
	c)	Plant D will die first
	d)	D did not receive water to make food.

RED SWASTIKA SCHOOL CT2 PAPER

Section A: Multiple-Choice Questions (9 x 2 = 18 marks)

Choose the most suitable answer and write its number in the brackets provided.

1. The diagram below shows a park.

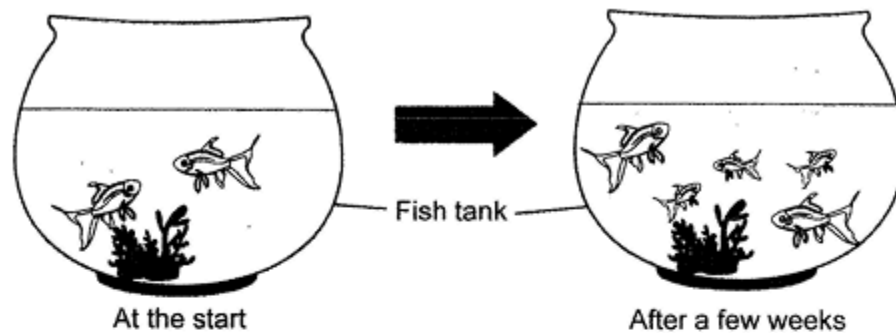


Which of the following things need air, food and water to survive?

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

()

2. Adriel kept two fish in a fish tank. He fed the fish every day and did not add in any new fish to the tank. He noticed that the number of fish increased after a few weeks.



Why did the number of fish increase?

- (1) The fish reproduced.
- (2) The fish grew in size.
- (3) The fish fed on other fish.
- (4) The fish responded to changes.

()

3. Look at the pictures of the living things, A and B, shown below.



A



B

Which of the following statements about A and B are true?

- A Both can grow.
- B Both can reproduce.
- C Both can make their own food.

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

()

4. Which of the following are true about bacteria?

- A Bacteria can reproduce.
- B Bacteria can make their own food.
- C Bacteria can only be seen with a microscope.
- D Bacteria respond to changes in the surrounding.

(1) A and B only

(2) B and C only

(3) A, B and C only

(4) A, C and D only

()

5. Jiayi wanted to carry out an experiment to find out if plants need water to grow. She used two identical pots of plants, X and Y, for her experiment. The conditions for Pot X are shown in the table below.



Pot X



Pot Y

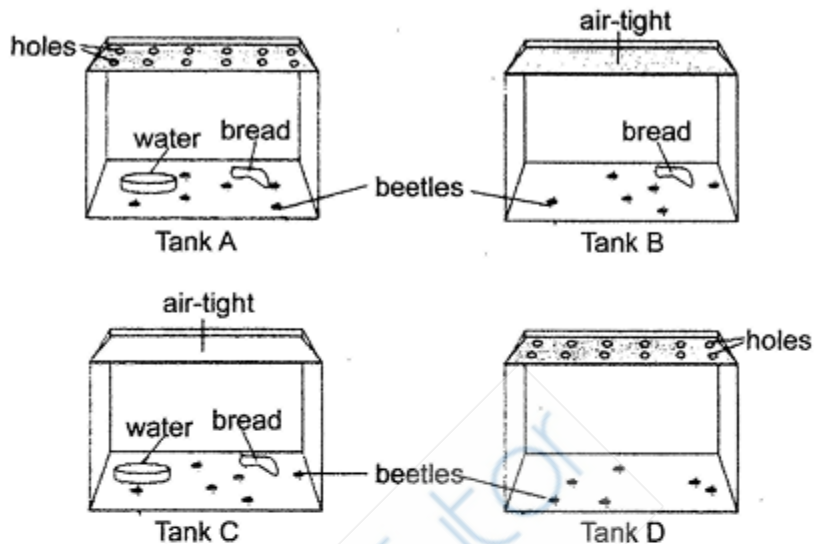
	Pot X	Pot Y
Amount of water (mℓ)	100	?
Number of hours in the sun daily	5	?

Which of the following conditions should Jiayi use for Pot Y so as to conduct a fair experiment?

	Amount of water (mℓ)	Number of hours in the sun daily
(1)	100	5
(2)	100	3
(3)	0	5
(4)	0	3

()

6. Dave kept the same number of beetles in four tanks, A, B, C and D, as shown in the diagram below. The beetles were left in the tanks for three weeks.



Which tank would have the greatest number of beetles alive after three weeks?

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

()





7. Jon observed an animal.

Which one of the following pair of observations would help Jon conclude that the animal is a mammal or a reptile?

	Mammal	Reptile
(1)	Found on land	Found in water
(2)	Has two legs	Has four legs
(3)	Gives birth	Lays eggs
(4)	Feeds on both plants and animals	Feeds on animals only

()

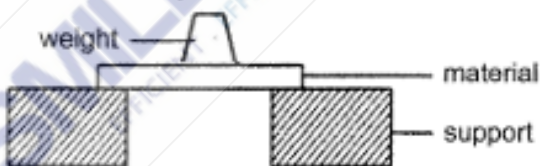
8. Some objects are classified into two groups, X and Y, as shown below.

Group X		Group Y	
			
paper towel	rubber floor mat	glass mug	metal spoon

Which of the following are the most suitable headings for groups X and Y?

	Group X	Group Y	
(1)	Flexible	Not flexible	
(2)	Breaks easily	Does not break easily	
(3)	Floats on water	Sinks in water	
(4)	Allows light to pass through	Does not allow light to pass through	()

9. Meiling wanted to find out the strength of materials W, X, Y and Z. She placed identical weights on the material, as shown in the set-up below. The materials were of the same size, thickness and shape.



She recorded the number of weights needed to break each material in the table below.

Material	Number of weights needed to break the material
W	20
X	3
Y	8
Z	15

What could be a possible conclusion based on the results in the table above?

- (1) W is the weakest material.
 (2) X is the strongest material.
 (3) Y is weaker than X.
 (4) Z is stronger than Y. ()

Section B: Open-ended Questions (3 x 4 = 12 marks)

10. Sarvesh went to the zoo. He observed two animals, P and Q, and recorded his observations in the table below.

Observation	Animal P	Animal Q
It breathes through gills.	Yes	No
Its body is covered with scales.	Yes	Yes

- (a) Based on the information above, name the two animal groups that animals P and Q most likely belong to. (2m)

(i) Animal P: _____

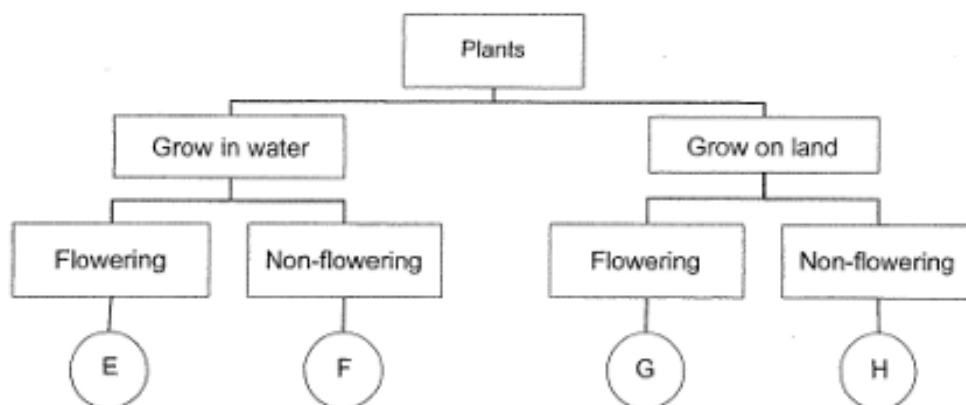
(ii) Animal Q: _____

Sarvesh concluded that a frog, as shown below, does not belong to the same group as Animal Q.



- (b) Which animal group does the frog belong to? Why do you say so? (2m)



11. Study the classification chart below. E, F, G and H represent four different types of plants.



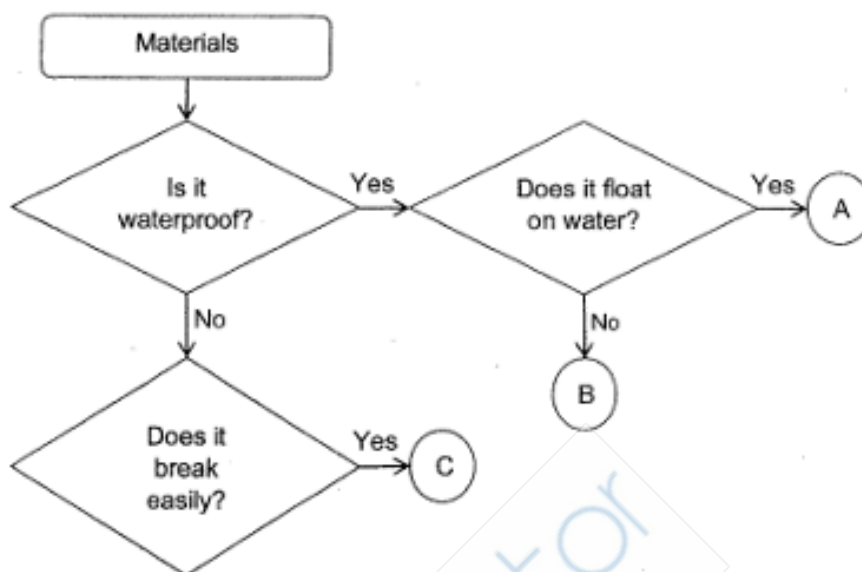
- (a) Based on the classification chart, state one similarity between plants E and G. (1m)

- (b) Based on the classification chart, state one difference between plants F and H. (1m)

- (c) Based on the classification chart, which letter, E, F, G or H, best represents each of the following plants? (2m)

Plant	Letter
 Fern	
 Hibiscus plant	

12. Study the flowchart below carefully. A, B and C represent three different types of materials.



- (a) Based on the flowchart, state the two properties of Material C. (2m)

The diagram below shows Lina learning how to swim with a kickboard.



- (b) Based on the flowchart, which material, A, B or C, is most suitable for making the kickboard? Explain why. (2m)

End of Paper

ANSWER SHEET





Q1	2	Q2	1	Q3	2	Q4	4	Q5	3
Q6	1	Q7	3	Q8	1	Q9	4		

Q10	a)
	i) Animal P : Fish ii) Animal Q : Reptile
	b) The frog belongs to the group amphibians because frogs have moist skin and can live on land and water
Q11	a) Plant E and G are flowering plants.
	b) Plant F grows in water but plant H grow on land.
	c) Fern: H Hibiscus plant : G
Q12	a) Material C is not waterproof and break easily.
	b) A. A can float on water. A kickboard must float so that Lina can hold on without sinking.

RED SWASTIKA SCHOOL REVISION PAPER 1

For Questions 1 to 15, choose the most suitable answer and shade its number in the OAS provided.

1. Study the table below.

Living things	Non-living things
 frog	 keys
 housefly	 hibiscus

Which one of the above was classified wrongly?

- (1) frog
- (2) keys
- (3) housefly
- (4) hibiscus

2. Which of the following has hair as its outer body covering?

- (1) insect
- (2) reptile
- (3) mammal
- (4) amphibian

3. Study the diagram of plant X shown below.



Plant X needs a wooden pole for support because it _____.

- A: has a weak stem
- B: needs to absorb more water
- C: needs to reach up for more sunlight

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

4. The table below shows the characteristics of four animals.

Characteristics	has six legs	has feathers	feeds its young with milk
bird	x	✓	x
fish	✓	x	x
insect	✓	x	✓
mammal	x	✓	✓

Which one of the following animals in the table is correctly described?

- (1) bird
- (2) fish
- (3) insect
- (4) mammal

5. Which of the following organs is not part of the human respiratory system?

- (1) nose
- (2) lungs
- (3) heart
- (4) windpipe

6. The diagram below shows one of the human body systems.



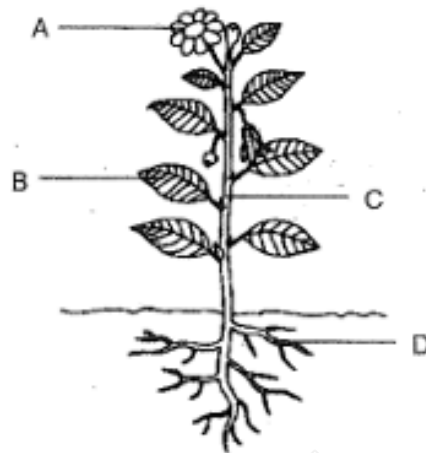
Some students shared statements about this human body system.

Abu:	It helps to give us shape.
Ben:	It helps to support our body.
Caela:	It helps to protect the important organs in our body.
David:	It helps to transport food and water to all parts of our body.

Which student made an incorrect statement?

- (1) Abu
- (2) Ben
- (3) Caela
- (4) David

7. The diagram below shows a plant.



Which part of the plant, A, B, C or D, helps to hold the plant firmly to the ground?

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

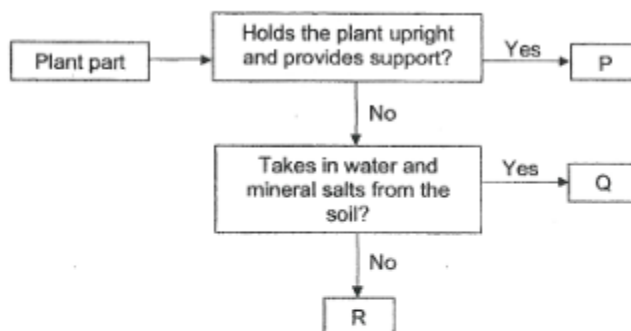
8. The diagram below shows one of the organs in the human digestive system.



Which of the following information about the organ is correct?

	Organ	Digestion of food takes place here	Water is absorbed
(1)	Small Intestine	Yes	No
(2)	Small Intestine	No	Yes
(3)	Large Intestine	No	Yes
(4)	Large Intestine	Yes	No

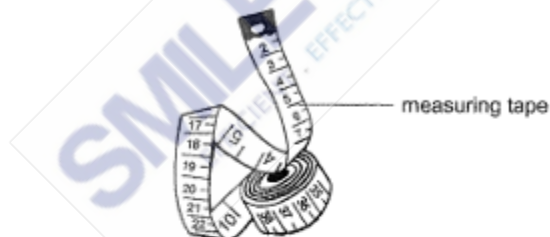
9. Study the flow chart below.



Which parts of a plant do P, Q and R represent?

	P	Q	R
(1)	stem	root	leaf
(2)	root	stem	leaf
(3)	stem	leaf	root
(4)	leaf	stem	root

10. The diagram shows a measuring tape. The measuring tape is used to measure the lengths of different objects.



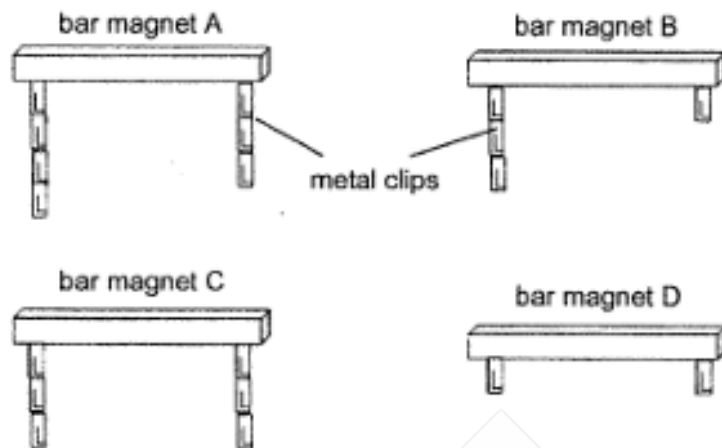
The table below shows the properties of four materials, A, B, C and D. A tick (✓) indicates that the material has the property and a cross (×) indicates that the material does not have that property.

Material	Strong	Flexible
A	✓	✓
B	×	✓
C	×	×
D	✓	×

Based on the properties shown above, which material is most suitable to make the measuring tape?

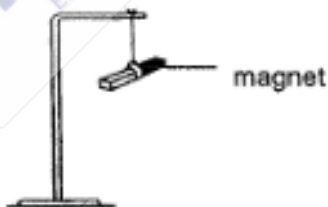
- (1) A
- (2) B
- (3) C
- (4) D

11. Susan hung metal clips to the poles of each magnet until the last clip could not be hung any more. The diagrams below show the results of her experiment.



Which bar magnet has the weakest magnetic strength?

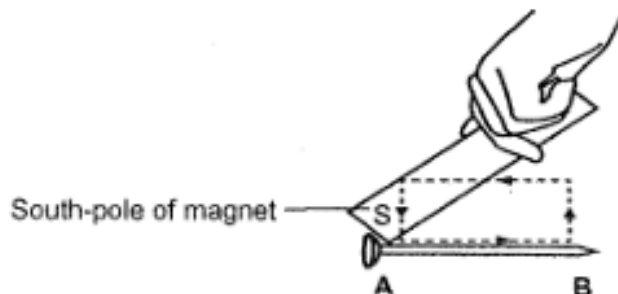
- (1) A
 - (2) B
 - (3) C
 - (4) D
12. Leah hung a magnet as shown in the diagram below. She gave the magnet a gentle push. The magnet turned and eventually stopped.



In which direction would the magnet come to a rest?

- (1) east-west
- (2) north-east
- (3) south-west
- (4) north-south

- 13 Jun Hong wanted to turn an iron nail into a temporary magnet. He used a bar magnet to stroke the iron nail in the same direction repeatedly as shown in the diagram.



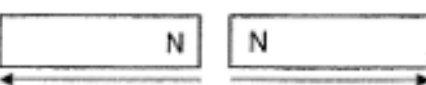



What will the poles of the temporary magnet be at points A and B?

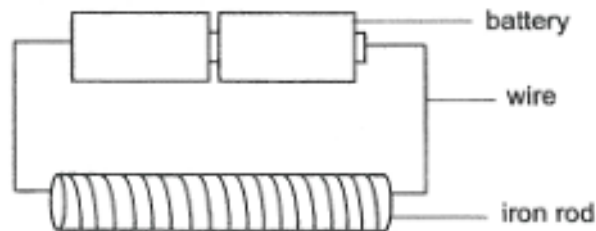
	A	B
(1)	North	North
(2)	South	North
(3)	South	South
(4)	North	South

14. Linda placed two bar magnets next to each other. She drew four observations as seen in the diagrams below. She indicated the North-pole of the magnet with the letter 'N'. The arrows show the movement of the magnets towards or away from each other.

Which of the following diagrams shows the correct observation?

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

15. Shaun wanted to find out if the number of coils around an iron rod would affect the strength of the electromagnet. He set up the experiment as shown in the diagram below.



Shaun repeated the experiment with three other set-ups with different number of coils around the iron rod. He recorded the results in the table below.

Set-up	Number of pins attracted to the iron rod
P	13
Q	17
R	5
S	8

Which set-up likely had the most number of coils around the iron rod?

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

ANSWER SHEET

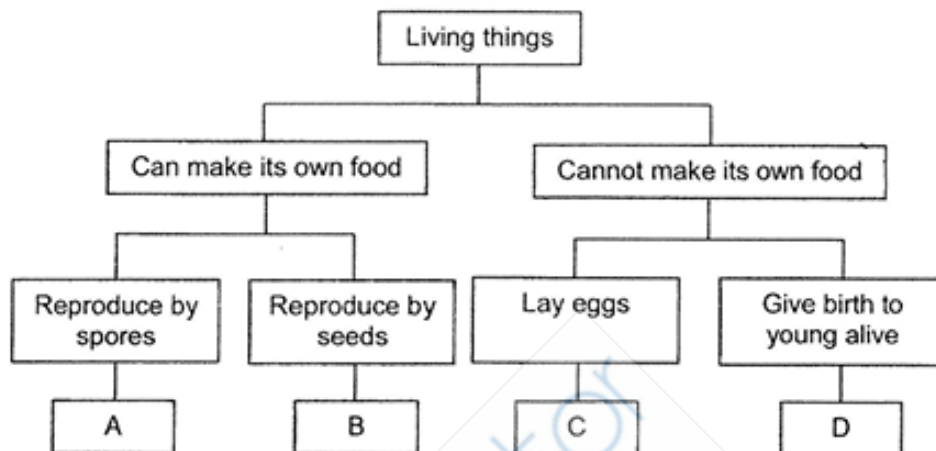
Q1	4	Q2	3	Q3	2	Q4	1	Q5	3
Q6	4	Q7	4	Q8	3	Q9	1	Q10	1
Q11	4	Q12	4	Q13	2	Q14	3	Q15	2



RED SWASTIKA SCHOOL REVISION PAPER 2

Answer all questions in the space provided.

16. Organisms A, B, C and D have been classified as shown below.

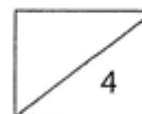


- (a) Based on the classification chart, state one similarity between C and D. (1m)

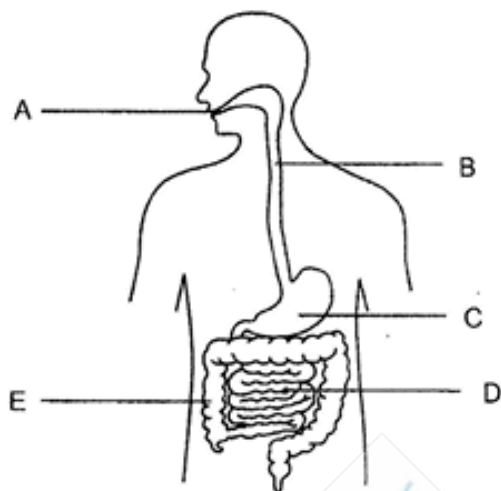
- (b) Which group of living things do A and B most likely belong to? (1m)

- (c) Classify these organisms according to the classification chart. Fill in the blanks with the letters A, B, C or D. (2m)

Organism	Letter (A, B, C or D)
Bird's nest fern	
Elephant	



17. Study the organ system below.



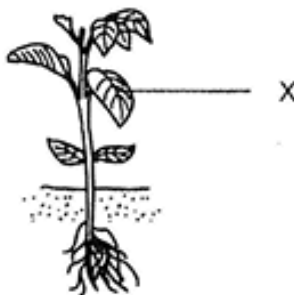
- (a) Which organs, A, B, C, D or E, produce digestive juices?
 Put a tick (✓) if digestive juices are produced in the organ. You may tick more than one organ. (1m)

Organ	A	B	C	D	E
Digestive juices produced					

- (b) Read the statements below. Write 'True' or 'False' in the correct boxes. (2m)

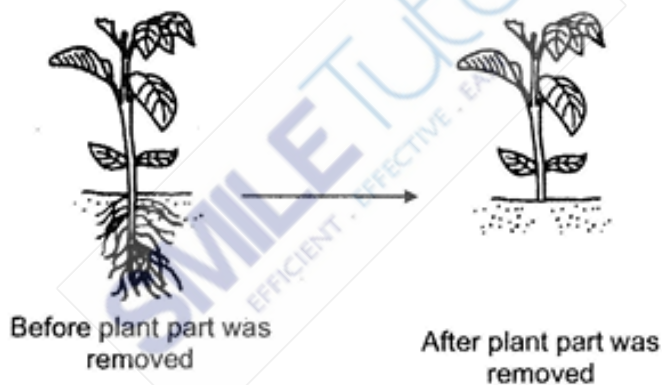
	Statements	True or False
(i)	Digestion starts in part B.	
(ii)	Digestion ends in part C.	
(iii)	Digested food passes through the walls of part D.	
(iv)	Undigested food in part E will pass out through the anus.	

18. The diagram below shows a plant.



(a) State one function of part X of the plant? (1m)

Part of the plant was removed as shown in the diagram below. After a few days, the plant died.



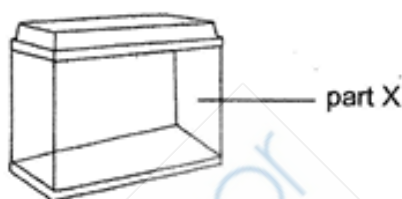
(b) Which part of the plant was removed? (1m)

(c) Explain how the removal of the plant part caused the plant to die. (1m)

19. The table below shows the properties of four materials, A, B, C and D. A tick (✓) indicates that the material has the property and a cross (×) indicates that the material does not have the property.

Material	Flexible	Allows light to pass through
A	✓	✓
B	✓	×
C	×	✓
D	×	×

Chris wanted to make a fish tank as seen in the picture below.



- (a) Based on the table, which material, A, B, C or D is most suitable to make part X of the tank? (1m)

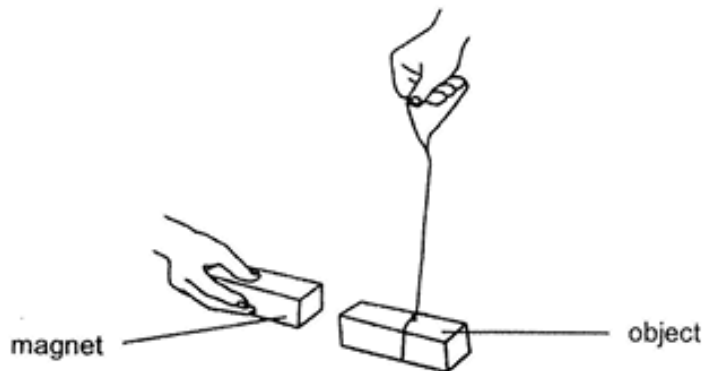
- (b) Explain your answer for part (a). (1m)

- (c) Chris placed material D into a container of water. She observed the following as shown in the diagram below.



Based on the diagram, which property of material can you tell about material D? (1m)

20. Leanne placed a magnet close to three objects made of different materials. An example of the set-up is shown below.



She moved the magnet slowly towards the objects. Then, she recorded her observations in the table as shown.

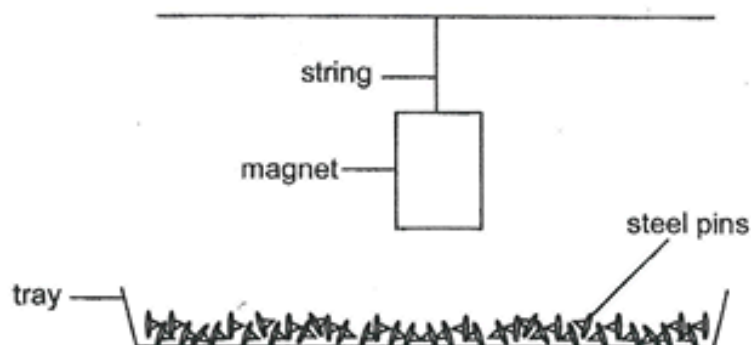
Objects	Observations	
	when facing north-pole of the magnet	when facing south-pole of the magnet
A	moved towards the magnet	moved towards the magnet
B	moved away from the magnet	moved towards the magnet
C	did not move	did not move

- (a) Which object, A, B or C, is likely to be a magnet? (1m)

- (b) Explain your answer in part (a). (1m)

- (c) Give an example of a material that object C can be made of. (1m)

21. Min Yan conducted an experiment to find out which magnet (A, B, C or D) has the greatest magnetic strength. She set up the experiment as shown below.



She hung magnets A, B, C and D from the same height and recorded the number of steel pins the magnet attracted in the table below.

Magnet	Number of steel pins attracted
A	5
B	13
C	16
D	9

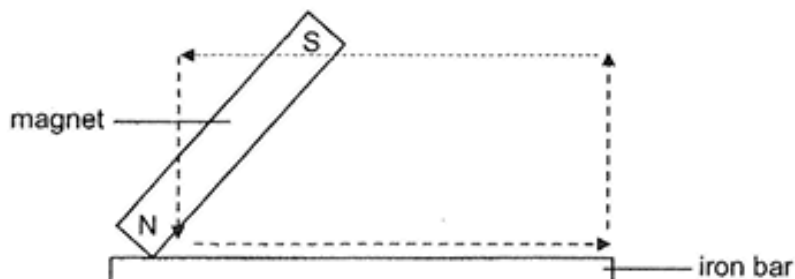
- (a) Based on the table above, arrange the magnets according to their magnetic strength. Write the letters A, B, C and D in the correct boxes below. (1m)

(i)	(ii)	(iii)	(iv)
-----	------	-------	------

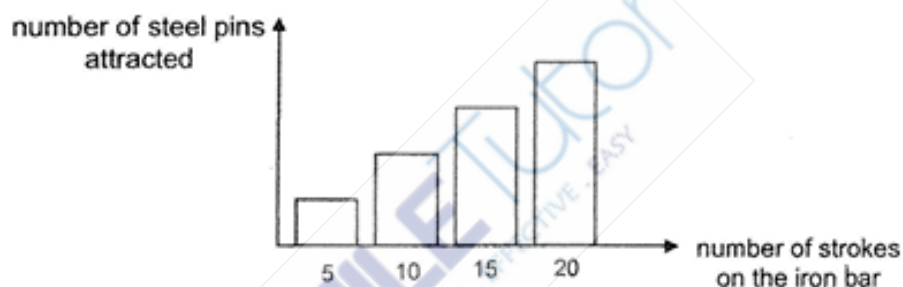
weakest
→
 strongest

- (b) Without adding or removing anything from the set-up, what can Min Yan do to make the magnets attract more steel pins? (1m)

22. Min Yan wanted to find out if the number of strokes would affect the strength of the temporary magnet. She stroked an iron bar using a magnet repeatedly in the same direction as shown in the diagram below.



Min Yan then placed the temporary magnet over some steel pins to see how many steel pins the temporary magnet attracted. She recorded her results in the graph below.



- a) Based on the graph, what is the relationship between the number of strokes on the iron bar and the number of steel pins attracted? (1m)

- b) Min Yan repeated the experiment with an aluminium bar instead. She found that she was not able to attract any steel pins. Why is this so? (1m)

ANSWER SHEET

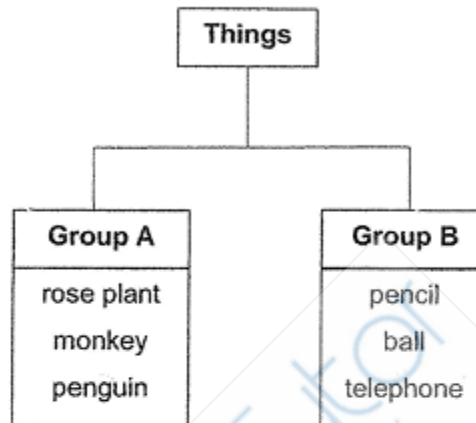
Q16	a) They both cannot make its own food.
	b) A and B are plants.
	c) Bird's nest fern : A
	Elephant : D
Q17	a) A, C, D
	b)
	i) F
	ii) F
	iii) T
Q18	iv) T
	a) The function of part X is to make food for the plant.
	b) Roots was removed from the plant.
	c) The removal of the plant part caused the plant to die because the roots helps to absorb water and mineral so when it was removed it could not absorb water or mineral so the plant die of not having any water or mineral
Q19	a) The most suitable material to make part X is C.
	b) Because C is not flexible and allows light to pass through.
	c) It sinks in water

Q20a)	B is likely to be a magnet.
Q20b)	B is repelled by magnet. It means their like poles are facing each other. So both are magnet.
Q20c)	An example of a material that object C can be made of is copper.
Q21a)	A, D, B, C
Q21b)	Put the magnet closer to the steel pin.
Q22a)	As the number of strokes on the iron bar increases, the number of steel pins attracted also increases.
Q22d) b	Aluminium bar cannot attract any steel pins because it is not a magnetic material.

RED SWASTIKA SCHOOL EOY PAPER

For Questions 1 to 15, choose the most suitable answer and shade its number in the OAS provided.

1. Sharon classified some things into two groups as shown below.



Which one of the following can be placed under Group A?

- (1) keys
 - (2) shoes
 - (3) wallet
 - (4) cockroach
2. Which one of the following animal groups is correctly matched to its body covering?

	Animal Group	Body Covering
(1)	Birds	Hair
(2)	Reptiles	Dry skin with scales
(3)	Insects	Feathers
(4)	Mammals	Moist Skin

3. Study the table below.

Characteristics	A	B	C
It makes its own food.	yes	no	no
It has flowers.	yes	no	no
It can move from place to place on its own.	no	yes	no

Which group of living things does A, B and C each belong to?

	A	B	C
(1)	plants	fungi	animals
(2)	fungi	animals	plants
(3)	plants	animals	fungi
(4)	animals	plants	fungi

4. Leo wanted to find out if water was necessary for mould to grow on bread. The table below shows the conditions of four different set-ups.

Set-up	A	B	C	D
Temperature (°C)	5	28	5	28
Amount of water on the bread (drops)	7	0	10	7

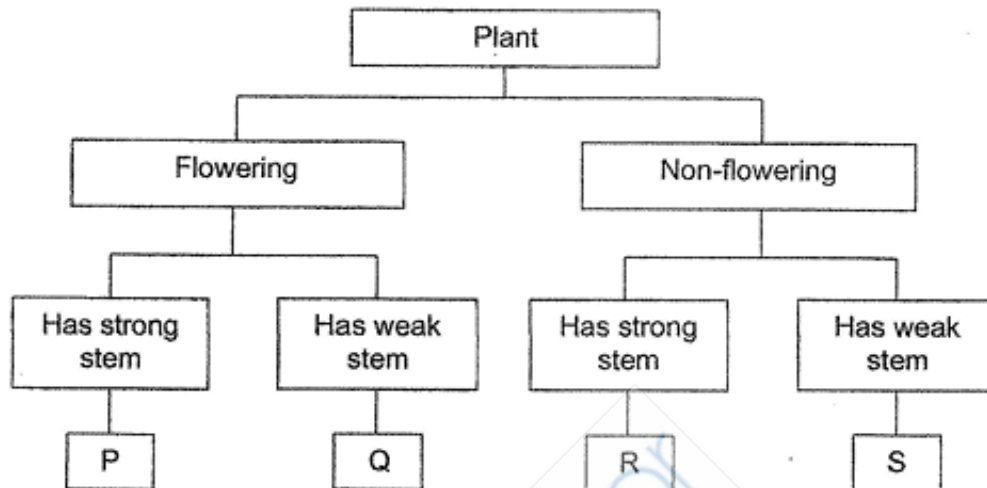
Based on the information given above, which two set-ups should he use for the experiment?

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

5. Which of the following organs is not part of the human digestive system?

- (1) lungs
- (2) mouth
- (3) stomach
- (4) small intestine

6. Study the classification chart below.

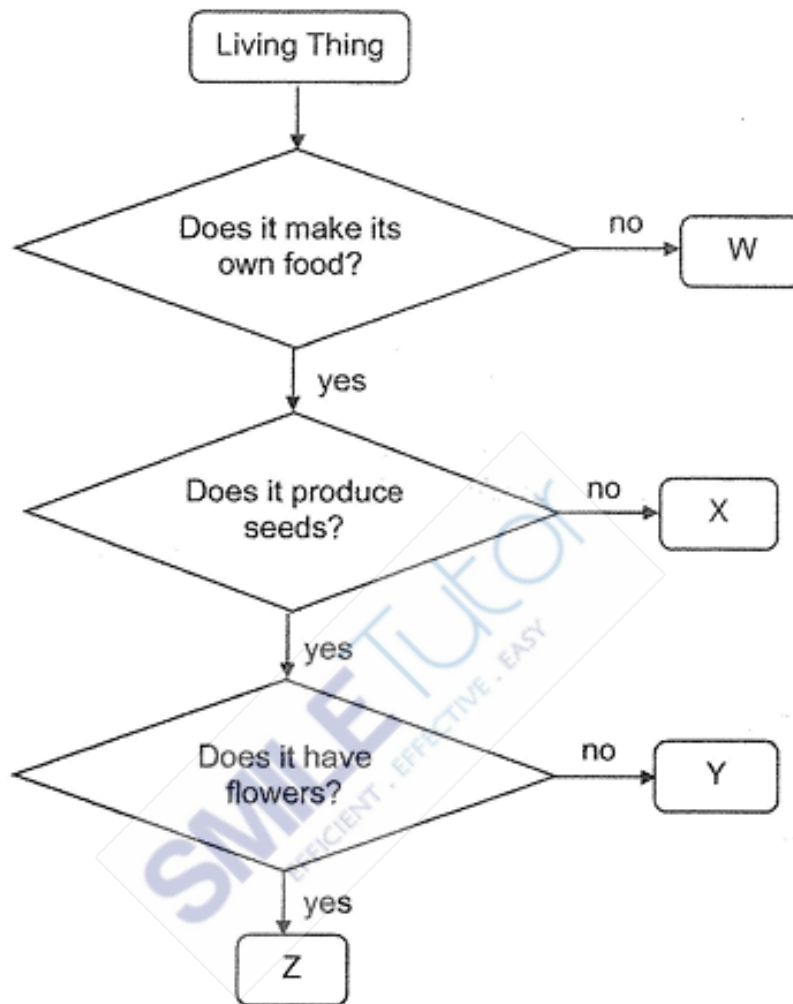


Based on the classification chart, which group does the plant shown below belong to?



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

7. Study the flowchart below.



Which letter (W, X, Y or Z) best represents a fern?

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

8. Debbie was roller-blading in a park.

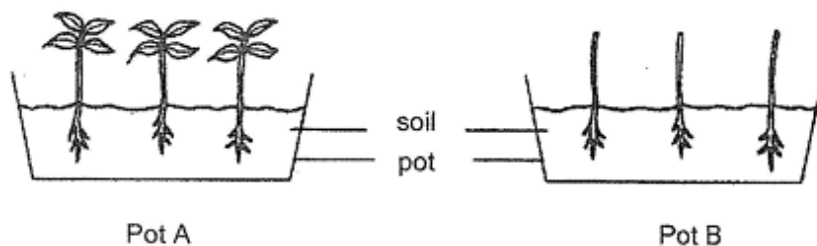


Which body system(s) worked together during the roller-blading session?

- A: Skeletal System
- B: Muscular System
- C: Circulatory System
- D: Respiratory System

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

9. Jenny has two identical pots of plant, A and B. She cut away the leaves of the plants in Pot B. She placed both pots in the garden and continued watering the plants every day.



After some time, the plants in Pot B died. Which one of the following statements explains why the plants in this pot died?

- (1) The plants could not make food.
- (2) The soil did not have enough water.
- (3) There was too much sunlight in the garden.
- (4) The stem was too weak to support the plant.

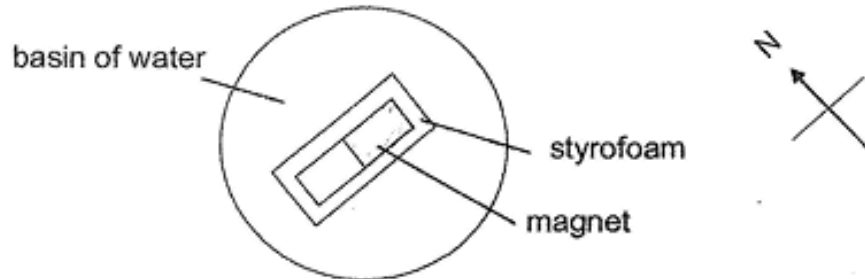
10. Mrs Tan wanted to get a cycling helmet for her son.



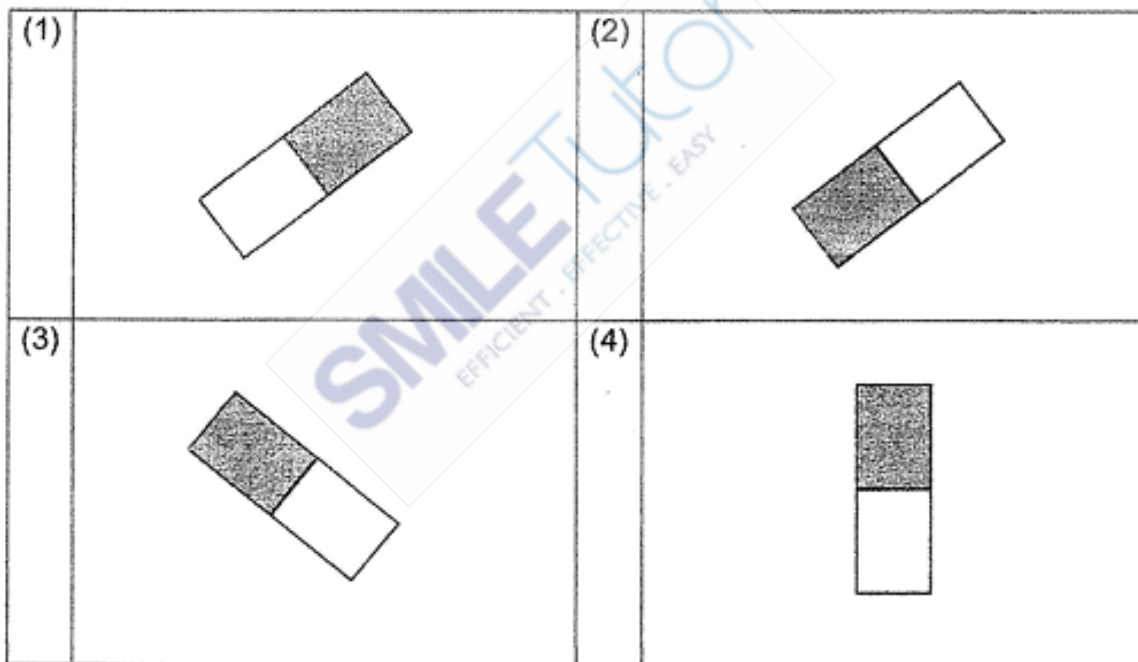
Based on the properties of the materials shown below, which material is most suitable for making part X of the cycling helmet?

	Material	Property	
		strong	flexible
(1)	A	No	No
(2)	B	No	Yes
(3)	C	Yes	No
(4)	D	Yes	Yes

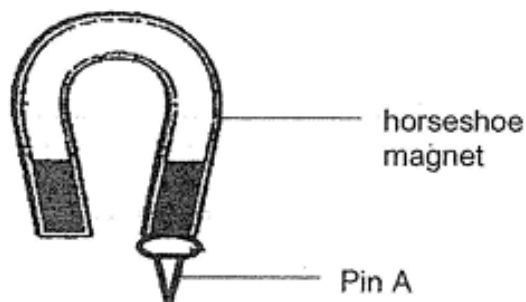
11. A magnet was taped onto a piece of styrofoam and placed into a basin of water as shown below. The magnet was then spun until it came to rest.



Which of the following shows the correct direction of the magnet at rest?



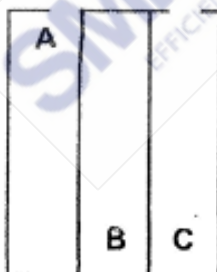
12. A horseshoe magnet is held over some pins. The diagram shows the interaction between the horseshoe magnet and Pin A.



What material could Pin A be made of?

- (1) Steel
- (2) Glass
- (3) Plastic
- (4) Copper

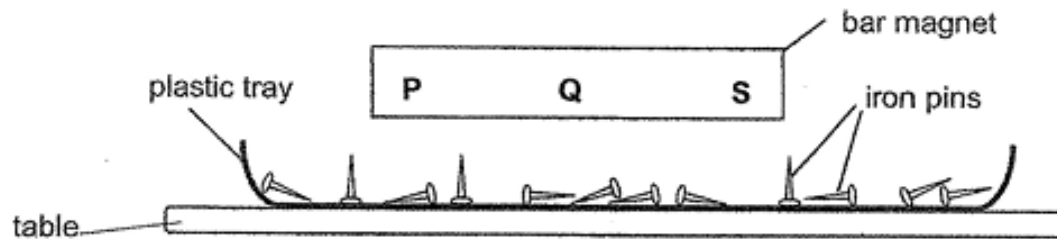
13. Three bar magnets were arranged side by side. All the magnets attracted each other as shown in the diagram below.



Which of the following are the possible poles for the magnets at A, B and C?

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

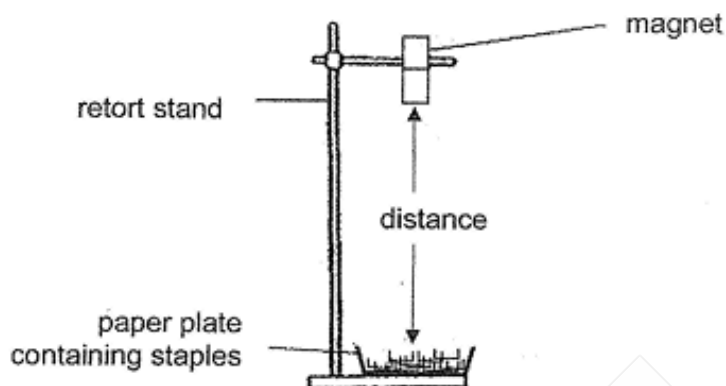
14. Ivan placed a bar magnet above a plastic tray filled with iron pins.



Which of the following shows the possible number of pins attracted at points P, Q and S respectively?

	P	Q	S
(1)	2	5	5
(2)	2	2	5
(3)	2	5	2
(4)	5	2	5

15. Aaron wanted to find out if the distance between the magnet and the staples would affect the number of staples attracted by a magnet. He set up the experiment as shown below.



He recorded his results in the table below.

Distance (cm)	10	7	4	1
No. of staples attracted	0	1	3	6







What can he conclude from his experiment?

- (1) The distance of the magnet from the staples does not affect the magnetic strength of the magnet.
- (2) As the distance of the magnet from the staples increases, the magnetic strength of the magnet increases.
- (3) As the distance of the magnet from the staples increases, the magnetic strength of the magnet decreases.
- (4) As the distance of the magnet from the staples decreases, the magnetic strength of the magnet decreases.

End of Booklet A

Answer all questions in the space provided.

16. Six animals are classified into the groups as shown below.

Group X	Group Y	Group Z
 	 	 

(a) Name the method of reproduction of the animals in Group X and Group Y. (1m)

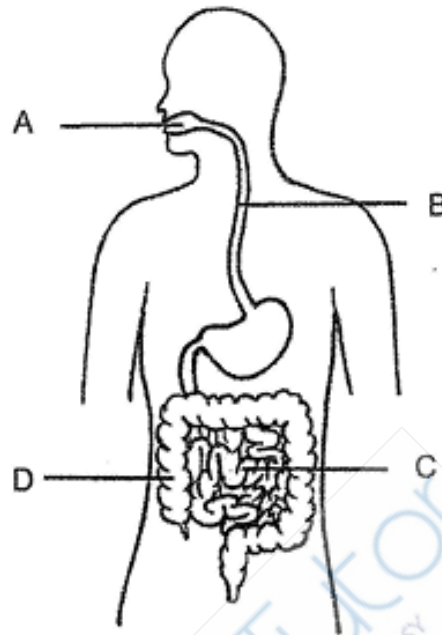
(i) Group X: _____

(ii) Group Y: _____

(b) Other than the method of reproduction, state two other characteristics that only animals in Group Z have. (2m)

(c) Jane saw a caterpillar in the garden and decided to feed it with leaves. The caterpillar moved away when Jane went nearer. Which characteristic of living things does the caterpillar show? (1m)

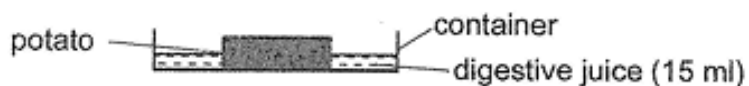
17. Study the organ system below.



(a) Match the parts A, B, C and D to their correct functions. Write your answer in the table below. Each letter can only be used once. (2m)

	Function	Part
(i)	Water is absorbed from undigested food.	
(ii)	Digestion first begins in this part.	
(iii)	Digestion is completed and ends here.	
(iv)	Food is passed from the mouth to the stomach.	

17. Eileen conducted an experiment to find out how the amount of digestive juice affects the mass of a potato. She measured the mass of the potato after being soaked in 15 ml of digestive juice after six hours.



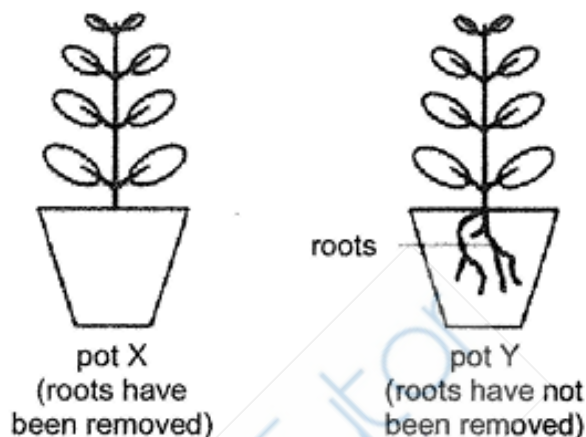
Eileen repeated her experiment by increasing the amount of digestive juice. The results are shown below.

Amount of digestive juice in the container (ml)	Mass of potato (g)	
	At the start of experiment	Six hours later
15	35	32
20	35	24
25	35	17
30	35	9

- (b) What is the relationship between the amount of digestive juice and the mass of potato left after six hours? (1m)

18. David set up an experiment using 2 similar pots of identical plants, X and Y. He removed the roots of the plant in pot X but did not remove the roots of the plant in pot Y as shown below.

He left both plants in a garden and continued watering them daily.

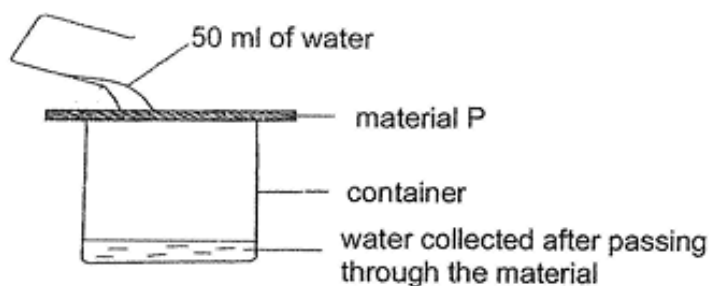


After two weeks, David noticed that the plant in pot X had died.

- (a) Explain why the plant died after some time. (2m)

- (b) State another function of the roots other than the one mentioned in part (a). (1m)

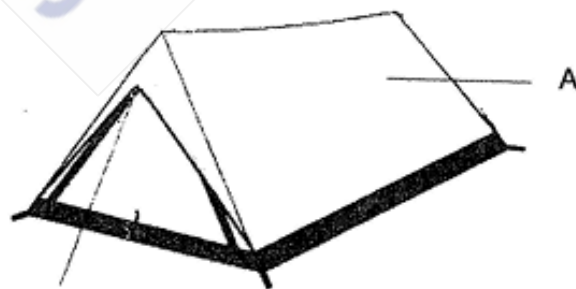
19. Guiling set up an experiment as shown. She poured 50 ml of water over material P and measured the amount of water collected in a container.



She then repeated the experiment using materials Q and R. She recorded the results in the table below.

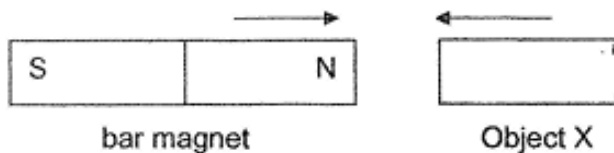
Material	Amount of water collected in the container (ml)
P	15
Q	40
R	0

- (a) Which property of materials did Guiling test in this experiment? (1m)



- (b) Based on the results of the experiment above, which material, P, Q or R, should Guiling choose to make part A of the camping tent? Explain why. (2m)

20. Kate placed a bar magnet close to object X as shown in the diagram below.



She noticed that object X was attracted to the bar magnet. So, she concluded that object X must be another magnet.

(a) Is Kate's conclusion correct? Why? (2m)

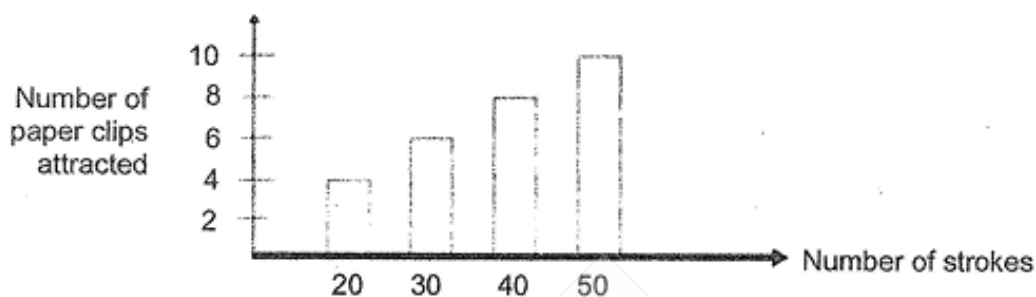
She then placed the bar magnet close to object Y. She observed that object Y did not move.



(b) What could be a possible material for object Y? (1m)

21. Johan conducted an experiment to find out how the number of strokes made by a magnet on an iron nail would affect the magnetic strength of the iron nail. After the iron nail was magnetised each time, he counted the number of paper clips it could attract.

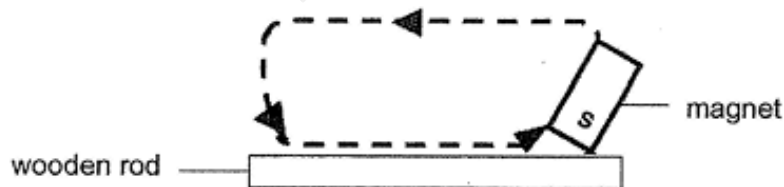
The results of his experiment are shown below.



- (a) Name one variable that was changed in this experiment. (1m)

- (b) What can he conclude from the results of his experiment? (1m)

Johan replaced the iron rod with a wooden rod. He stroked the wooden rod with a bar magnet several times as shown in the diagram.



- (c) Can the wooden rod attract the paper clips? Explain why. (2m)

ANSWER SHEET

BOOKLET A

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

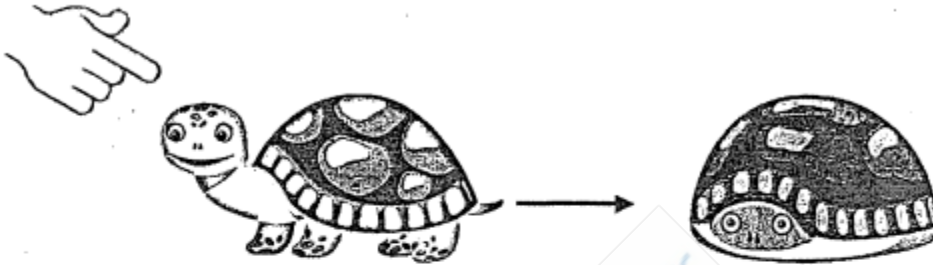
BOOKLET B

Q16a)	i) Give birth to their young ii) lay eggs																
Q16b)	They have six legs and three body parts.																
Q16c)	Living things respond to changes.																
Q17a)	<table border="1"> <thead> <tr> <th></th><th>Function</th><th>Part</th></tr> </thead> <tbody> <tr> <td>(i)</td><td>Water is absorbed from undigested food.</td><td>D</td></tr> <tr> <td>(ii)</td><td>Digestion first begins in this part.</td><td>A</td></tr> <tr> <td>(iii)</td><td>Digestion is completed and ends here.</td><td>C</td></tr> <tr> <td>(iv)</td><td>Food is passed from the mouth to the stomach.</td><td>B</td></tr> </tbody> </table>		Function	Part	(i)	Water is absorbed from undigested food.	D	(ii)	Digestion first begins in this part.	A	(iii)	Digestion is completed and ends here.	C	(iv)	Food is passed from the mouth to the stomach.	B	
	Function	Part															
(i)	Water is absorbed from undigested food.	D															
(ii)	Digestion first begins in this part.	A															
(iii)	Digestion is completed and ends here.	C															
(iv)	Food is passed from the mouth to the stomach.	B															
Q17b)	As the amount of digestive juice increases, the mass of potato left decreases.																
Q18a)	There are no roots so the roots cannot absorb for the plant.																
Q18b)	Roots hold the plant firmly to the ground.																
Q19a)	Waterproof																
Q19b)	R. It does not allow water to pass through so the camper staying in the tent will remain dry.																
Q20a)	No. Object X could be a magnetic material. If it is a magnet, she needs to see repulsion with the bar magnet.																
Q20b)	Wood/ plastic/ rubber/ any non-magnetic material																
Q21a)	The number of strokes made by a magnet.																
Q21b)	The more the number of stroke made by a magnet on iron nail, the greater the magnetic strength of the iron nail.																
Q21c)	No. The wooden rod is a non-magnetic material																

ROSYTH SCHOOL EOY PAPER

For each question from 1 to 23, 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.** (46 marks)

- 1 The diagram below shows a characteristic of living things.



Which statement best describes this characteristic?

- (1) Living things can grow.
 - (2) Living things can reproduce.
 - (3) Living things can respond to changes.
 - (4) Living things need air, food and water to survive.
- 2 The diagram shows an animal.



Which group of living things does the animal belong to?

- (1) fish
- (2) reptile
- (3) mammal
- (4) amphibian

3 Which of the following is/are non-living thing/s?

	Can it move from one place to another?	Can it make its own food?	Can it grow?
A	No	Yes	Yes
B	Yes	No	No
C	No	No	No
D	Yes	No	Yes

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

4 Fungus can affect the nails.



Which statement does **NOT** help to prevent nail fungus?

- (1) Keep the nails trimmed and clean.
- (2) Dry the feet thoroughly after wash.
- (3) Wear sandals as much as possible.
- (4) Wear nylon socks throughout the day.

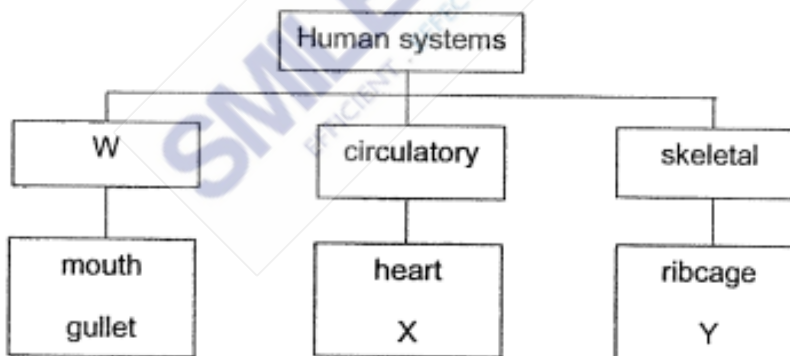
- 5 The diagram below shows a human system.



What is the function of P in the above human system?

- (1) To exchange gases
- (2) To allow air to enter only
- (3) To allow air to enter and leave the body
- (4) To absorb oxygen and remove carbon dioxide

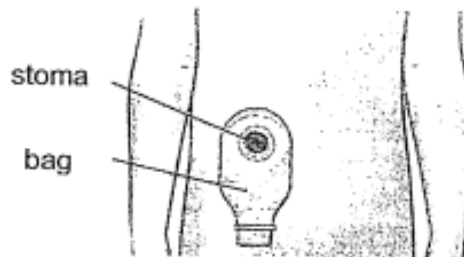
- 6 Study the classification chart below showing the human systems.



Based on the chart, which of the following best represents W, X and Y?

	W	X	Y
(1)	respiratory	muscles	spine
(2)	muscular	small intestine	muscles
(3)	digestive	blood	lungs
(4)	digestive	blood vessels	skull

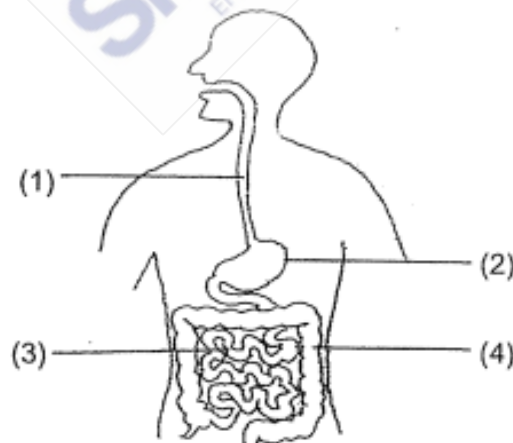
- 7 Study the diagram below carefully. Stoma is an opening made to the large intestine during a surgery. The bag collects the waste matter which passes from the large intestine through the stoma.



Which of the following are the best properties for the bag?

- (1) light and waterproof
- (2) strong and absorbent
- (3) heavy and absorbent
- (4) heavy and waterproof

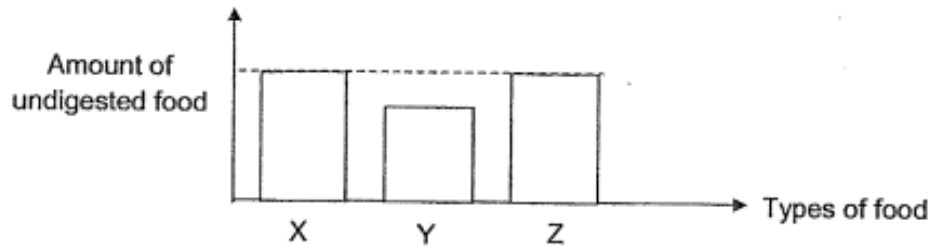
- 8 The diagram below shows the human digestive system.



Which part (1, 2, 3 or 4) absorbs the most digested food into the bloodstream?

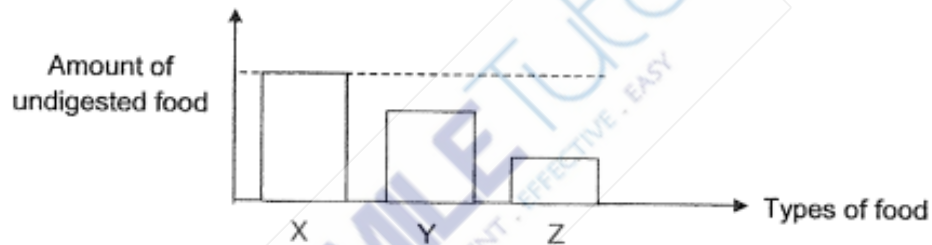
- 9 The graph below shows the amount of three types of undigested food, X, Y and Z before entering the human digestive system.

At the start:

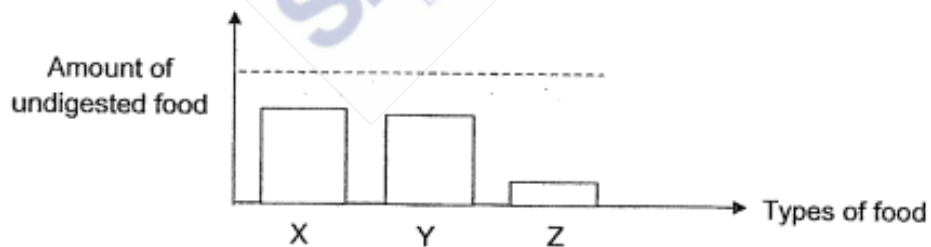


The graphs below show the amount of each type of undigested food left in the mouth and stomach just before leaving each part.

In the mouth:



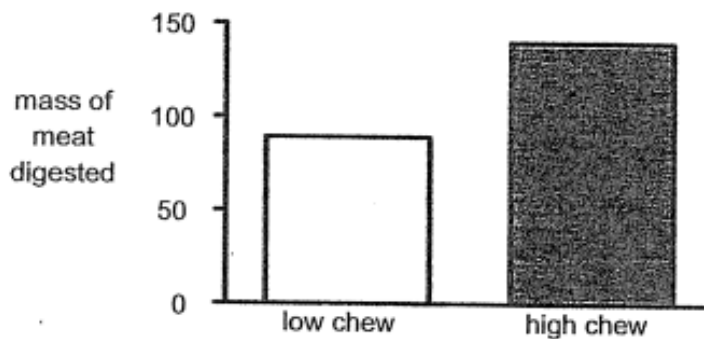
In the stomach:



Which type of foods, X, Y and/or Z, only start(s) being digested in the stomach?

- (1) X only
- (2) Z only
- (3) X and Z
- (4) X, Y and Z

- 10 Study the diagram below. It shows the amount of meat that is digested with different amount of chewing.



What is the possible reason for different amount of meat that is digested?

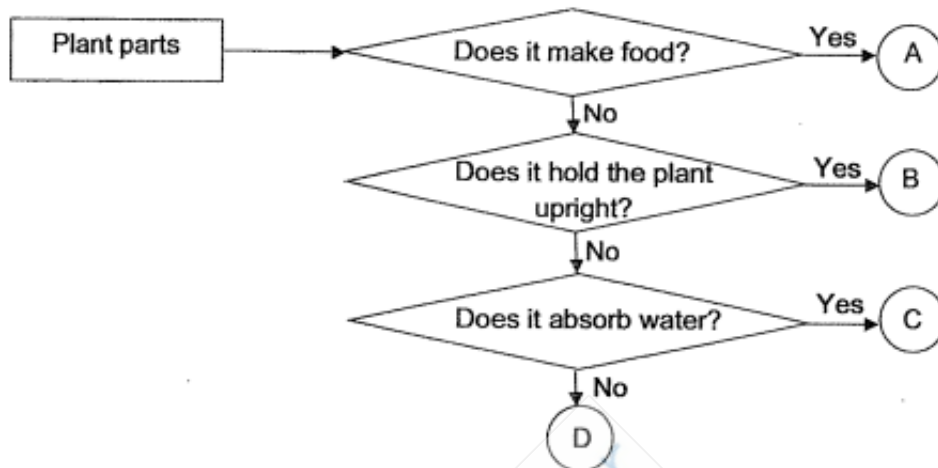
- (1) Chewing cuts the meat into tiny pieces.
 - (2) Chewing digests the meat into digested food.
 - (3) Low chewing increases the temperature of the meat.
 - (4) High chewing increases the time the meat is stored in the stomach.
- 11 The diagram below shows a plant.



Which of the following correctly represents the part P, Q and R?

	P	Q	R
(1)	Fruit	leaf	stem
(2)	Fruit	root	leaf
(3)	Flower	fruit	leaf
(4)	Flower	stem	root

- 12 The flowchart below describes the functions of different parts of a plant.



Which one of the following parts, A, B, C or D, best represents the stem?

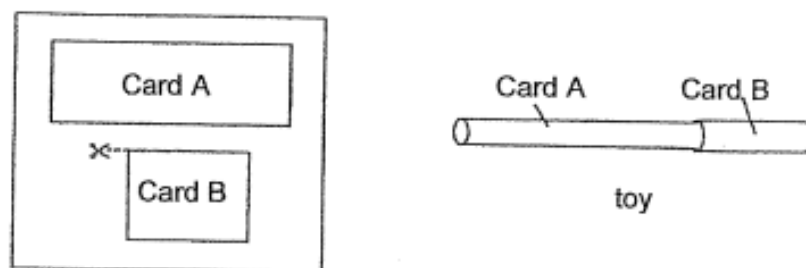
- (1) A
 - (2) B
 - (3) C
 - (4) D
- 13 Peter waters the plant by spraying water on the flower daily because plants need water to stay alive.



Which one of the following statements best explains how the plant takes in water?

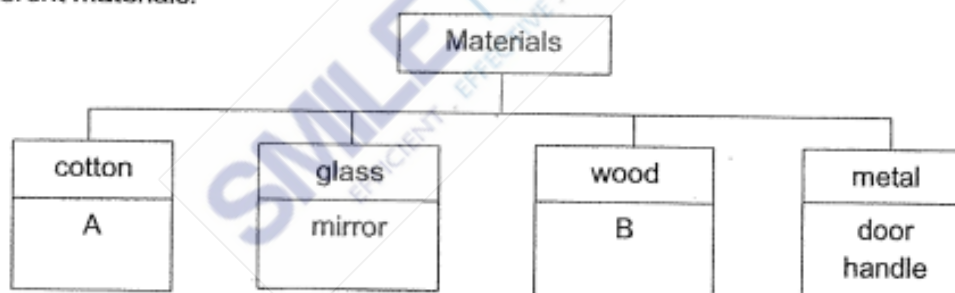
- (1) The plant takes in water through the flower.
- (2) The water drips from the flower to the stem for the stem to transport.
- (3) The water drips from the flower to the soil so that the roots can take in.
- (4) The water drips from the flower to the leaves so that the leaves can take in.

- 14 Randy cut out card A and card B to make a toy as shown below.



The card could be rolled without tearing. Why is this so?

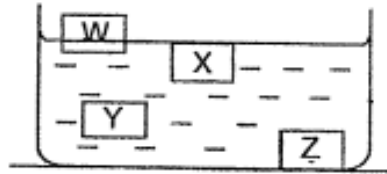
- (1) The card is strong.
 - (2) The card is flexible.
 - (3) The card is absorbent.
 - (4) The card is waterproof.
- 15 The flowchart below shows the classification of different objects made from different materials.



Based on the classification, what are object A and object B likely to be?

	A	B
(1)	cloth	spectacle lens
(2)	shirt	paper
(3)	balloon	table
(4)	handbag	paper clip

- 16 The picture below shows four similar objects of the same size in a container of water. They are made of different materials, W, X, Y and Z.

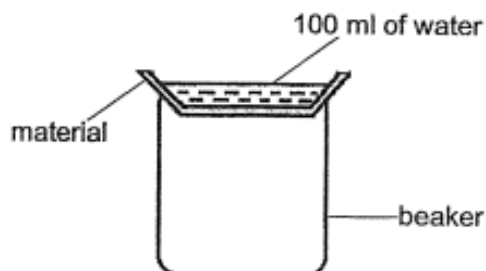


Which material is the most suitable for making a swimming float?



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

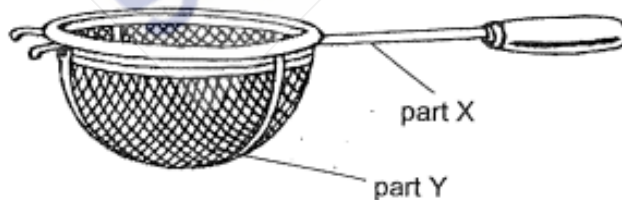
- 17 Zoe had four different pieces of materials, P, Q, R and S, of the same size and thickness. She set up an experiment as shown below. She poured 100ml of water onto each of the material.



After five minutes, Zoe recorded her findings in the table below.

Material	Amount of water in the beaker (ml)	Amount of water collected above the material (ml)
P	0	100
Q	10	0
R	50	40
S	0	0

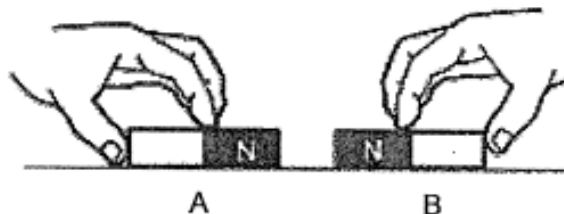
The picture below shows a sieve. Part X and part Y are made of the same material.



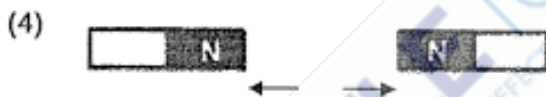
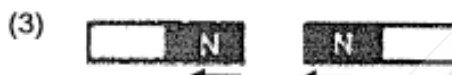
Based on the experiment above, which material is the most suitable to make part X and part Y of the sieve which is used to separate food from the soup?

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

- 18 Two magnets, A and B, were placed close together with their north poles facing each other as shown below.



When both magnets were released, they moved along the surface of a table. Which one of the following diagrams shows the correct observation?



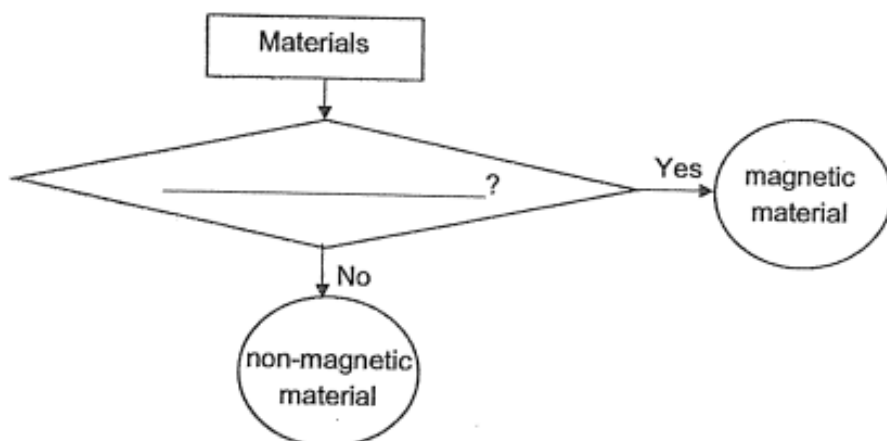
- 19 The diagram below shows a magnet which is freely suspended from a retort stand.



In which direction would the magnet point when it comes to rest?

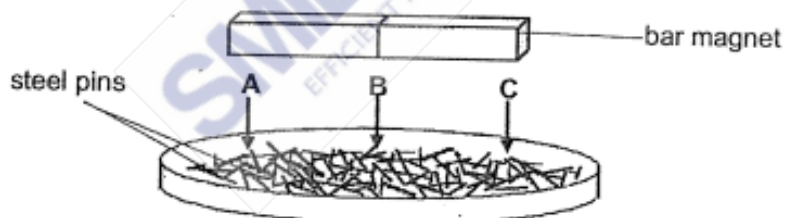
- (1) East-West
- (2) South-East
- (3) South-West
- (4) North-South

- 20 The diagram below shows a flowchart.



Which one of the following is the missing question in the flowchart?

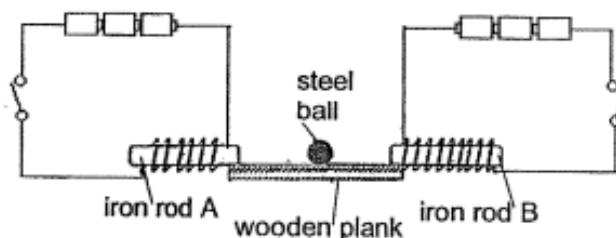
- (1) Is it a metal?
 - (2) Is it waterproof?
 - (3) Can it be made into a magnet?
 - (4) Can it be repelled by a magnet?
- 21 The diagram below shows a bar magnet which is lowered onto a tray of steel pins.



Which of the following shows the most likely number of steel pins attracted to the magnet at A, B and C?

Number of steel pins attracted at A, B and C			
	A	B	C
(1)	9	9	9
(2)	1	1	15
(3)	9	1	9
(4)	15	9	9

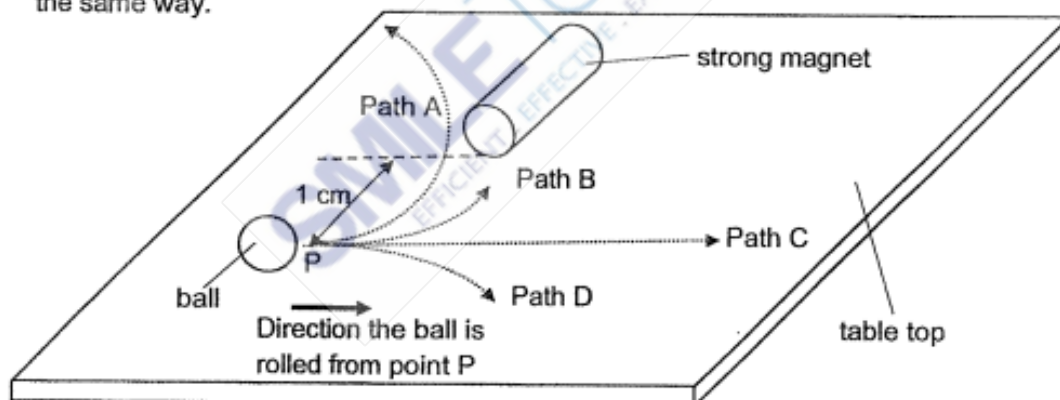
22 Study the set-up below.



What will happen to the steel ball when the switches are closed at the same time?

- (1) The steel ball will move towards iron rod A.
- (2) The steel ball will move towards iron rod B.
- (3) The steel ball will remain at the same position.
- (4) The steel ball will move towards iron rod B and then towards iron rod A.

23 Jill rolled a rubber ball from point P at a low speed past a strong magnet on a table in the direction as shown below. She next rolled an iron ball from point P in the same way.



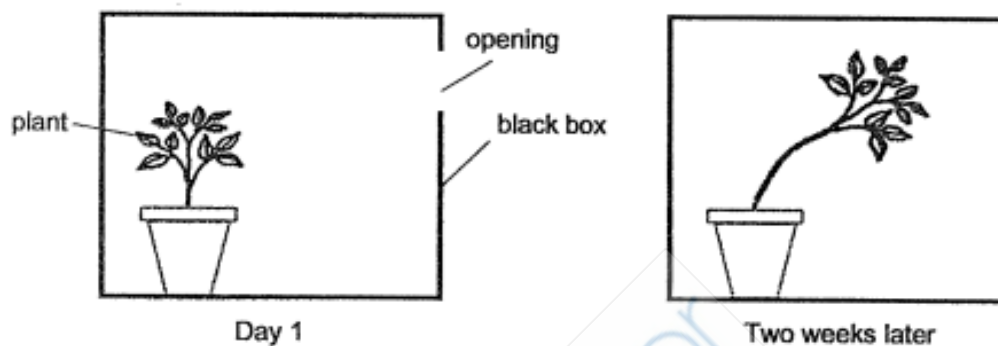
Which paths, A, B, C and D, would the rubber ball and iron ball most likely to roll?

	Rubber ball	Iron ball
(1)	A	D
(2)	C	A
(3)	C	B
(4)	B	D

For questions 24 to 34, write your answers in this booklet.

(34 marks)

- 24 Devi kept a healthy pot of plant in a black box with a small hole. After two weeks, she found the plant growing towards the opening of the black box.

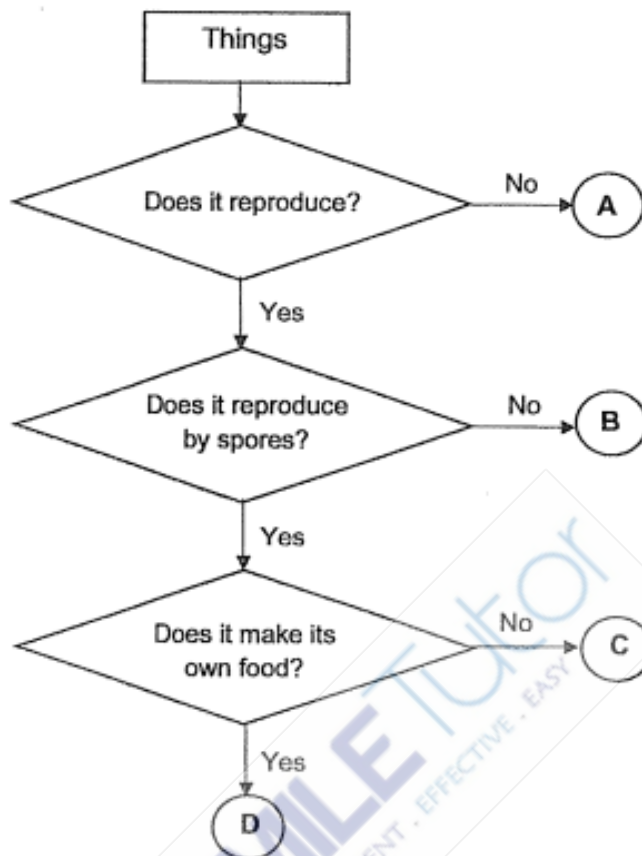


Based on your observations in the diagrams above, state two characteristics of plants that Devi had observed. [2]

Characteristic 1:

Characteristic 2:

25 Study the flowchart below.



(a) Which of the above letters, A, B, C and D, best represent the following? [2]

fern	
mushroom	
paper	
tree	

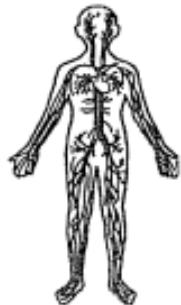
(b) According to the flowchart above, state one difference between B and D. [1]

26 (a) Match the following diagrams to the correct human system.

[2]



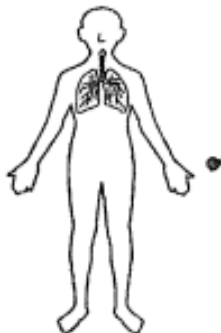
● circulatory system



● muscular system



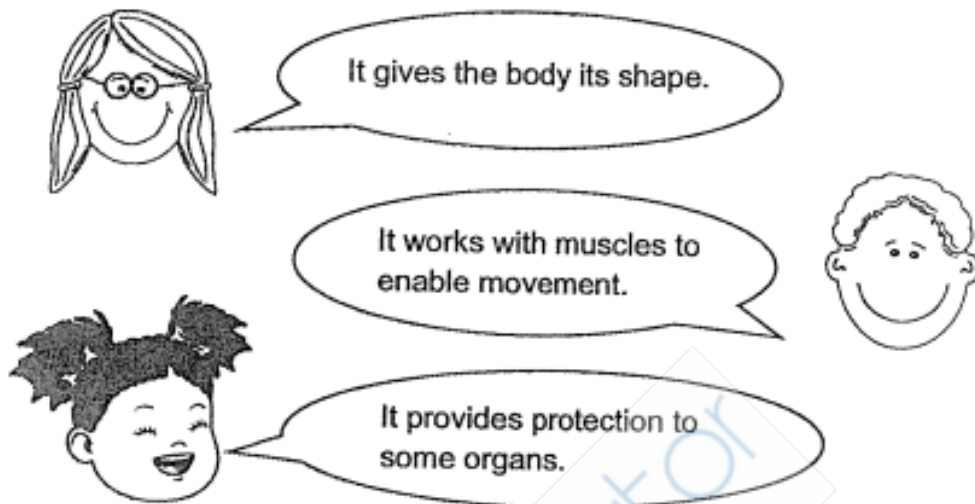
● respiratory system



● skeletal system

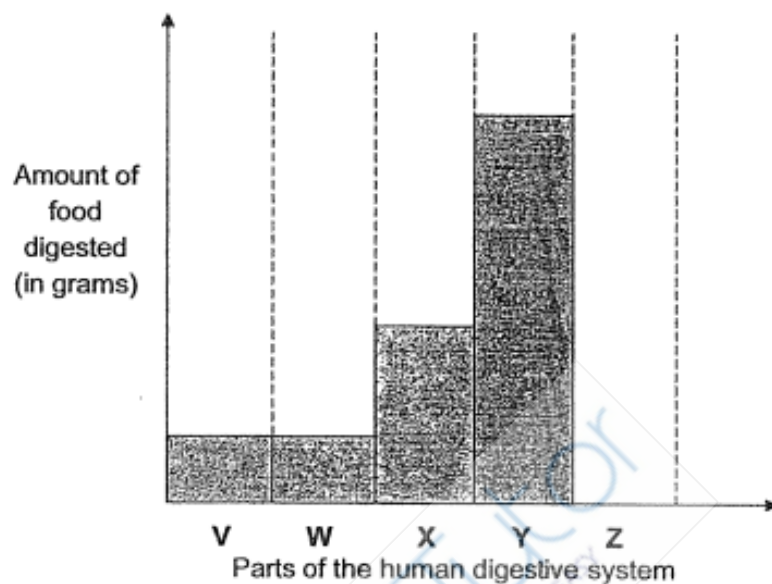
Question 26 continues on the next page

(b) Three students made the following statements about a human system.



Name a human system which best represents the students' descriptions. [1]

- 27 Jane had some food for lunch.
 The graph below shows the amount of food digested in different parts, V, W, X, Y and Z, of her digestive system.



- (a) Name the parts, V, W, X and Y, of the human digestive system.

[2]

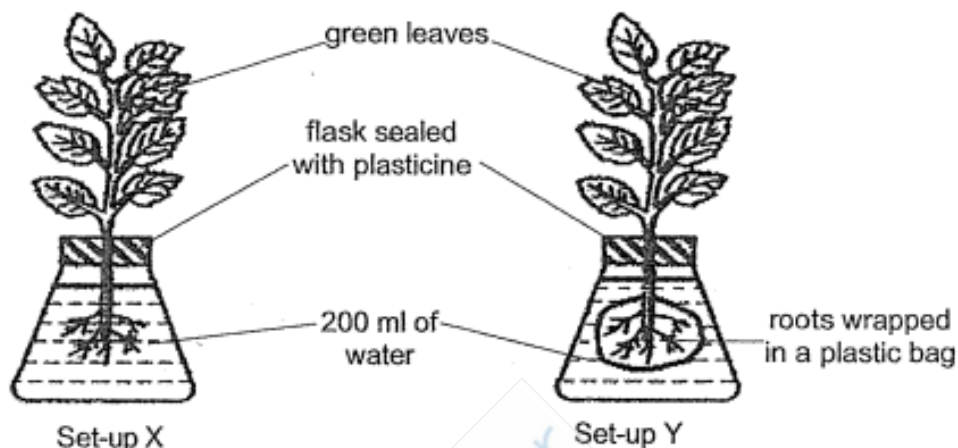
V	
W	
X	
Y	

- (b) Jane made a claim.

"There is no digestion taking place in part Z of the human digestive system."
 Do you agree with Jane? Use the graph to support your answer.

[1]

- 28 Zhi Ang set up an experiment on two similar plants as shown below. He wrapped the roots of one of the plants with a plastic bag and observed the water levels in both flasks daily.



- (a) What would Zhi Ang observe about the water level in the flasks in both set-ups after 10 days. Tick (✓) in the correct boxes. [1]

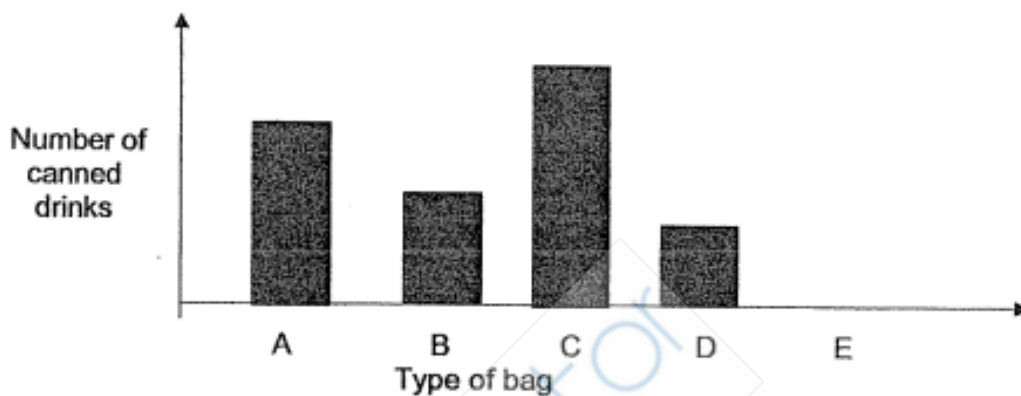
Water level	Increase	Decrease	Remain the same
Set-up X			
Set-up Y			

- (b) Give a reason for Zhi Ang's observation of the water level of set-up Y in (a). [1]

- (c) Describe the appearance of the leaves of the plant in Set-up Y after ten days. [1]

- 29 An experiment was carried out on five bags, A, B, C, D and E to find out which bag was the strongest. Each bag was filled with canned drinks, one at a time.

The bar graph below shows the greatest number of canned drinks each bag can hold just before it breaks.

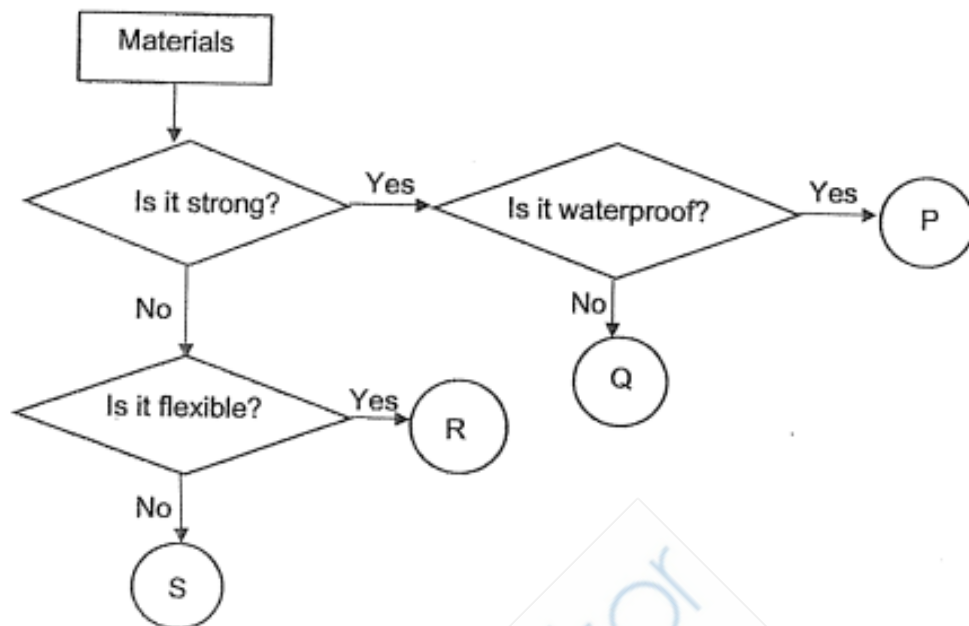


Bag E is not as strong as bag D.

- (a) Draw the bar for bag E in the bar graph above. [1]

- (b) Which bag A, B, C, D or E is the strongest? Explain your answer. [1]

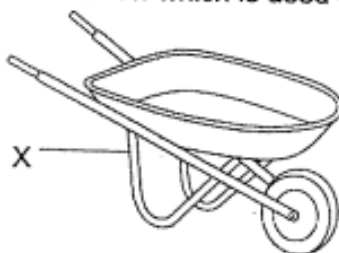
- 30 The flowchart below shows the characteristics of materials, P, Q, R and S.



- (a) State all the characteristics of material S. [2]

- (b) State a similarity between material P and Q. [1]

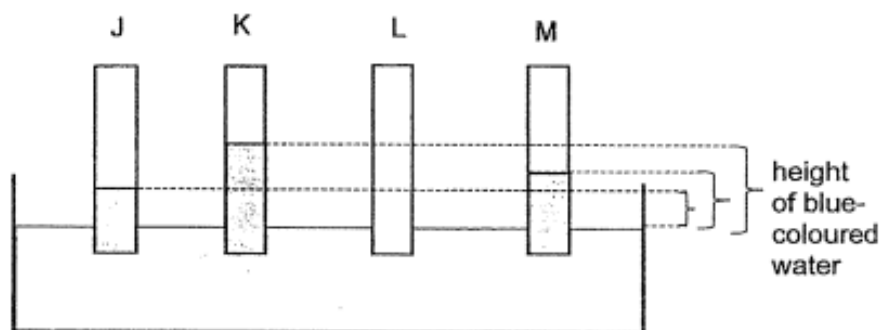
The picture below shows a wheelbarrow which is used to transport sand and bricks at construction sites.



- (c) Identify a suitable material, P, Q, R or S, that can be used to make Part X of the wheelbarrow. [1]

Material chosen to make Part X : _____

- 31 Peter conducted an experiment to test a property of four different materials, J, K, L and M. The materials of the same size and shape were lowered into a basin of blue-coloured water.



The height of the blue-coloured water on the material was measured after three minutes and the results were recorded in the table below.

Material	Height of blue-coloured water on the material after three minutes (cm)
J	6
K	12
L	0
M	8

- (a) Based on the results above, arrange materials, J, K, L and M, from the most absorbent to the least absorbent.

Most absorbent \longrightarrow Least absorbent

[1]

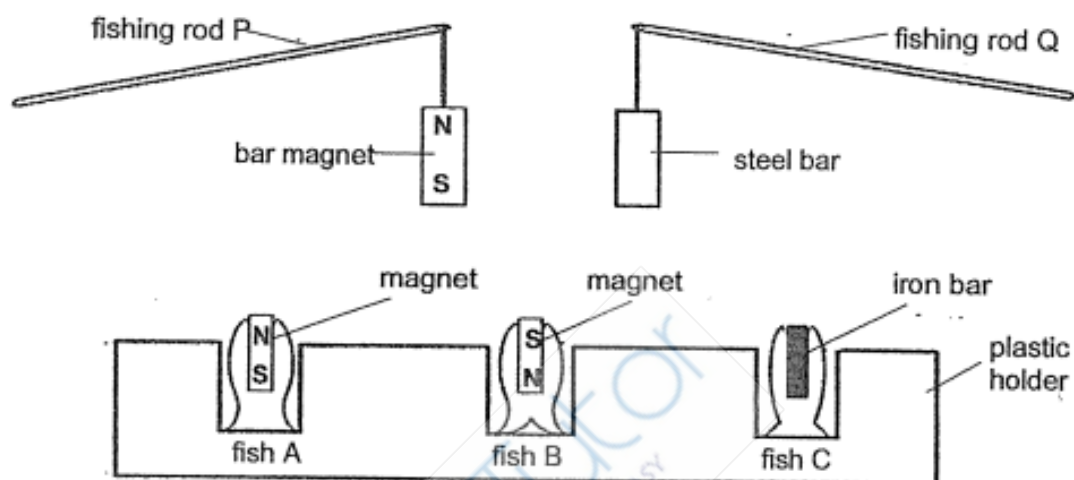
- (b) Explain why the height of the blue-coloured water on material L was 0 cm.

[1]

- (c) Based on the results above, which material J, K, L or M is the most suitable for making a mop? Explain your answer.

[2]

- 32 Ali made a game using the objects shown below. The lower end of each bar was used for catching fish. The fishing rods were lowered towards each fish A, B and C.

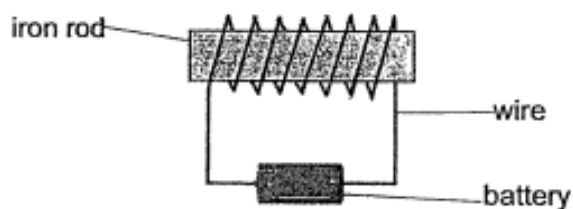


Study the diagram above and put a tick (✓) the correct boxes below.

[2]

Statement	True	False	Not possible to tell
(a) Fishing rod P can catch fish A, B and C.			
(b) Fishing rod Q can catch fish A and B only.			

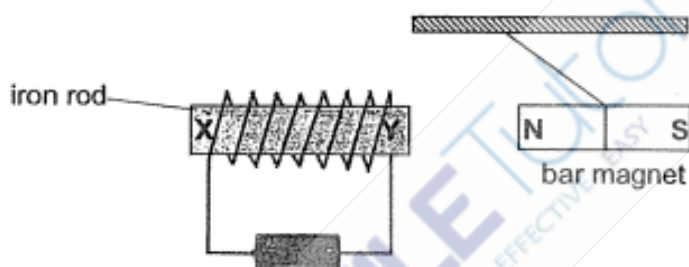
33 Jack did a set-up as shown below.



(a) What type of magnet was shown in the above set-up?

[1]

When the set-up was placed near a bar magnet, the bar magnet moved away as shown in the diagram below.



(b) Identify the pole X and Y by writing 'N' or 'S' in the blanks below.

[1]

X : _____

Y : _____

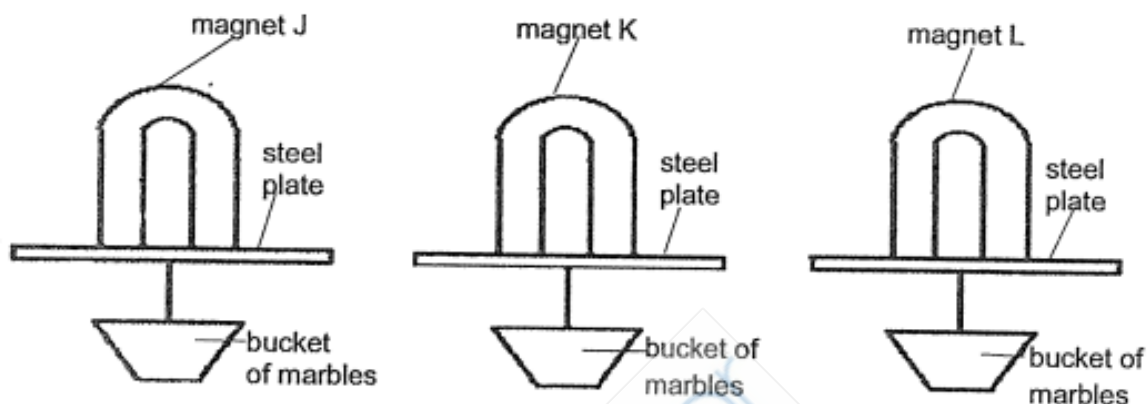
(c) What will happen to the bar magnet when the battery is removed from the set-up?

[1]

(d) Describe how the iron rod can be made into a magnet without using the coils of wire and battery.

[1]

- 34 Raj conducted an experiment with three u-shaped magnets, J, K and L, to find out their magnetic strength.



- (a) Indicate the poles of magnet J by writing 'N' and 'S' on magnet J in the diagram above. [1]

The results of Raj's experiment are shown in the table below.

Magnet	Number of marbles in the bucket before the steel plate dropped
J	31
K	25
L	18

- (b) Based on the table above, which magnet has the greatest magnetic strength? [1]

Magnet _____

- (c) Raj had a mixture of three types of small objects, P, Q and R, made of different materials in a container as shown in the diagram below.



The properties of three objects, P, Q and R, are given in the table below.

Object	Can it sink?	Is it a magnetic material?
P	No	Yes
Q	Yes	No
R	Yes	Yes

Raj wanted to obtain the objects, P, Q and R, separately as shown in the diagram below.



Fill in the blanks using 'P', 'Q' or 'R' to describe how Raj could separate the objects. Each letter 'P', 'Q' or 'R' may be used more than once. [2]

Step 1:	Fill the container with water to the brim.
Step 2:	_____ will float. Use the magnet in (b) to remove them out of the container from the surface of the water.
Step 3:	Pour away all the water in the container. Only _____ and _____ are left in the container.
Step 4:	Use the magnet in (b) to attract _____
Step 5:	Only _____ is left in the container.

End of Paper

ANSWER SHEET

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

BOOKLET B

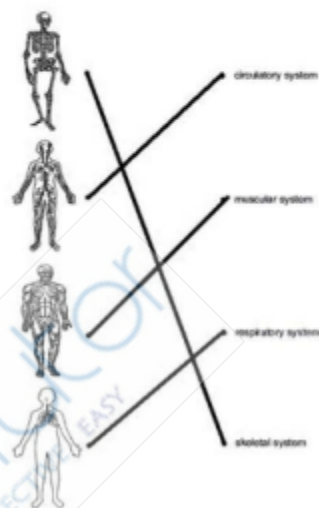
Q24. Characteristic 1: Plants respond to changes

Characteristic 2: Plants grow

Q25. a) D, C, A, B

b) D reproduces by spores but B does not.

Q26. a)



b) Skeletal system

Q27. a) mouth, gullet, stomach, small intestine

b) Yes. Digested food was not present in Z, which shows that it is the large intestine. Digestion does not take place in the large intestine.

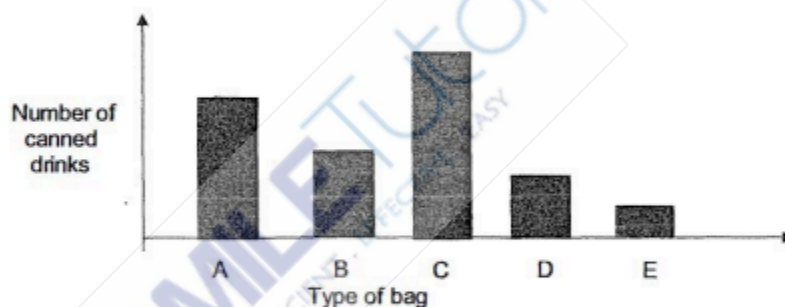
Q28. a) X: Decrease

Y: Remain the same

b) The roots were wrapped in the plastic bag, hence water cannot be absorbed.

c) They will turn brown.

Q29. a)



b) Bag C. It held the most number of canned drinks, showing that it is made of the strongest material.

Q30. a) It is not strong and is flexible

b) Both are strong.

c) P

Q31. a) K, M, J, L

b) It did not absorb any water

c) K. The height of the blue-coloured water was the highest, which shows that it is the most absorbent, which is most suitable for a mop.

Q32. a) False

b) True

Q33. a) Electromagnet

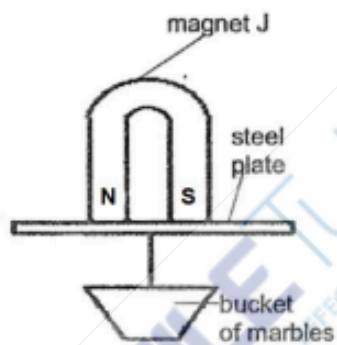
b) X: S

Y: N

c) It will move towards the iron rod.

d) Stroke the iron rod with the same pole of a bar magnet.

Q34. a)



b) J

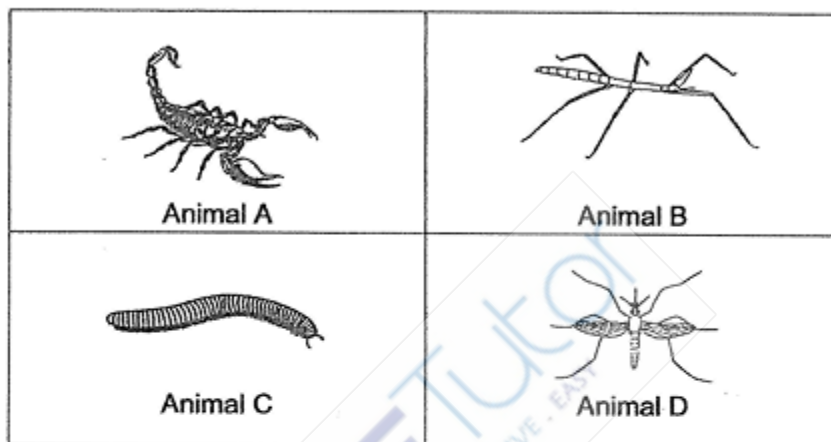
c) Step 2: P
Step 3: Q, R
Step 4: R
Step 5: Q

SINGAPORE CHINESE GIRLS' SCHOOL SA2 PAPER

Booklet A: 40 marks

For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet.

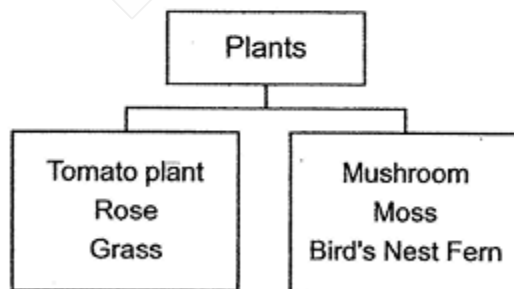
1. Look at the four pictures below.



Which of the animals is/are insect(s)?

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

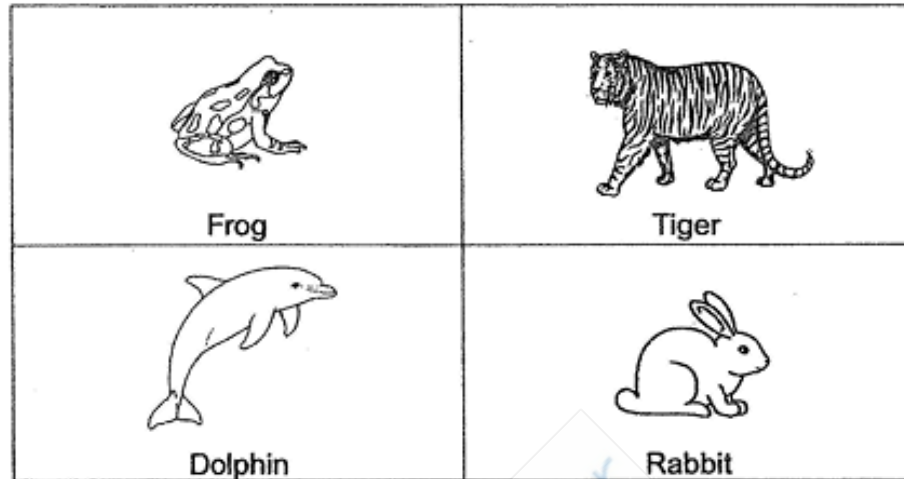
2. Study the classification table below.



Which of the following is grouped wrongly?

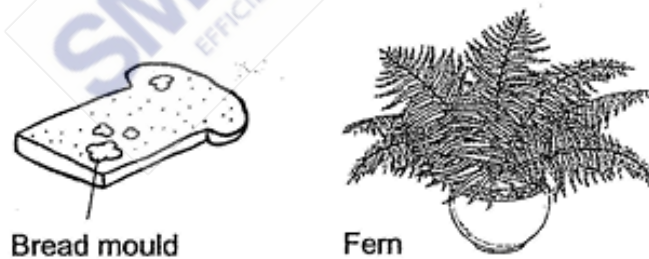
- | | |
|------------------|--------------|
| (1) Tomato plant | (3) Mushroom |
| (2) Grass | (4) Moss |

3. The diagram below shows four animals.



Which of the animals above does not give birth to its young alive?

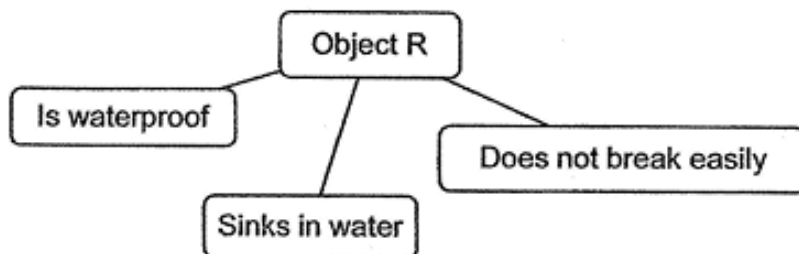
- (1) Frog
(2) Tiger
(3) Dolphin
(4) Rabbit
4. The diagrams below show bread mould and a fern.



Which of the following statements is true?

- (1) Both make their own food.
(2) Both reproduce by spores.
(3) Only the fern produces flowers.
(4) Only the bread mould can make its own food.

5. The properties of object R are shown below.



Which of the following objects could object R be?

- A: Glass cup
 B: Steel Paper clip
 C: Copper coin
 D: Handkerchief

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

6. The diagram below shows a few kickboards that are used for swimming.



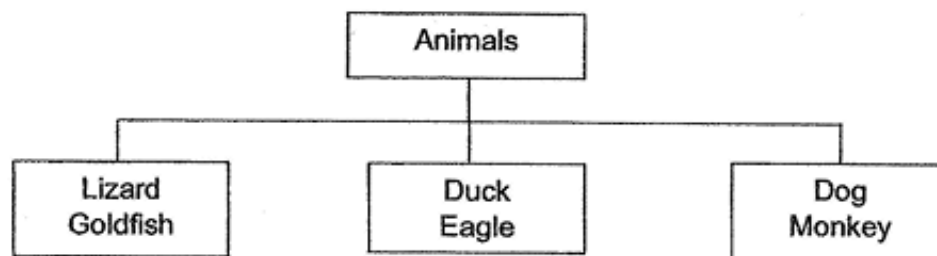
Peter has four different materials W, X, Y and Z and the table below shows the properties of materials

Materials	Waterproof	Transparent	Able to float
W	✓	✓	
X	✓		✓
Y			
Z	✓		

Which of the materials is the most suitable for making a kickboard?

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

7. Study the classification chart below.



The animals above are classified according to _____.

- (1) how they move
- (2) where they live
- (3) their outer body covering
- (4) how they reproduce

8. The functions of three body systems are stated below.

System P: Takes air into the body.

System Q: Carries digested food to all parts of the body.

System R: Protects organs in the body.

Which of the following identified the systems correctly?

	System P	System Q	System R
(1)	Circulatory system	Digestive system	Skeletal system
(2)	Respiratory system	Circulatory system	Skeletal system
(3)	Circulatory system	Digestive system	Muscular system
(4)	Respiratory system	Circulatory system	Digestive system

9. Three pupils had a discussion on human body systems.

The heart is part of the circulatory system.

Ally

Benny

The lungs are part of the circulatory system.

The windpipe is part of the respiratory system.

Caleb

Who is/are correct?

(1) Ally and Benny

(2) Ally and Caleb

(3) Benny and Caleb

(4) All of them

10. Terry swims every weekend.



Which of his body systems is/are involved when he swims?

A: Skeletal system

B: Respiratory system

C: Circulatory system

D: Muscular system

(1) B only

(2) B and D only

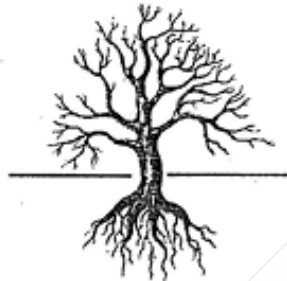
(3) C and D only

(4) All of the above

11. Where does digestion begin in the human body?

- | | |
|------------|---------------------|
| (1) Mouth | (3) Stomach |
| (2) Gullet | (4) Small intestine |

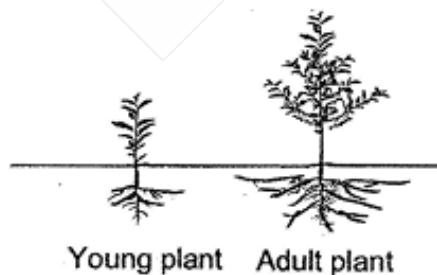
12. Look at the plant below.



Which of the following is the plant unable to do?

- (1) Make food
- (2) Absorb water
- (3) Transport water
- (4) Hold the plant firmly in the soil

13. Keira noticed that an adult plant has more and longer roots than a young plant.



What is the reason for this?

- (1) To take in more air for the plant.
- (2) To make more food for the plant.
- (3) To hold the plant more firmly in the soil.
- (4) To store more food for the plant.

14. Which of the following will not cause a magnet to lose its magnetism?

- (1) Dropping the magnet many times
- (2) Hammering the magnet
- (3) Heating it over a flame
- (4) Stroking it with a copper nail

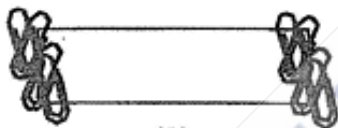
15. Which of the following shows how paper clips could be attracted to a magnet?



(1)



(3)

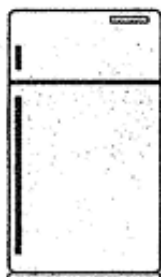


(2)



(4)

16. Which of the following objects uses magnets?



Refrigerator

(1)



Chair

(2)



Tissue Box

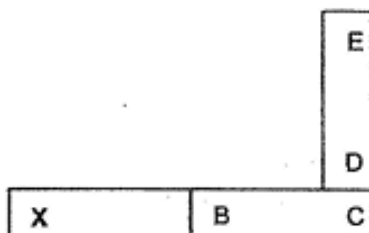
(3)



Stapler

(4)

17. Three magnets are arranged in the diagram shown below. The poles are labelled.



Which of the following poles will be attracted by 'X' Pole of the magnet?

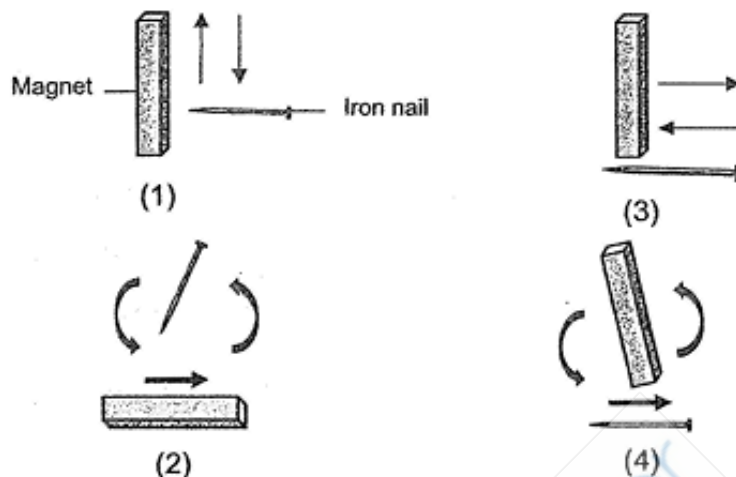
- | | |
|------------------|------------------|
| (1) B and D only | (3) C and D only |
| (2) B and E only | (4) C and E only |
18. Portia placed a magnet beside a few objects as stated below.

A: Glass rod
 B: Steel spoon
 C: Plastic pin
 D: Aluminium rod

Which of the following objects will be attracted by the magnet?

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

19. The arrows show the direction of movement of the magnet or nail.
Which is the correct way of stroking an iron nail to make it into a magnet?



20. Lena made four magnets A, B, C or D, by stroking them with the same magnet but different number of strokes.
To test the magnets made, she measured the attracting distance by placing the four magnets, one at a time, closer to an iron nail until the magnets attract it.



She recorded the attracting distance of the four magnets in the table below.

Magnet	Attracting distance
A	8 cm
B	5 cm
C	2 cm
D	4 cm

Which of the magnets did Lena stroke the least number of times?

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

End of Booklet A

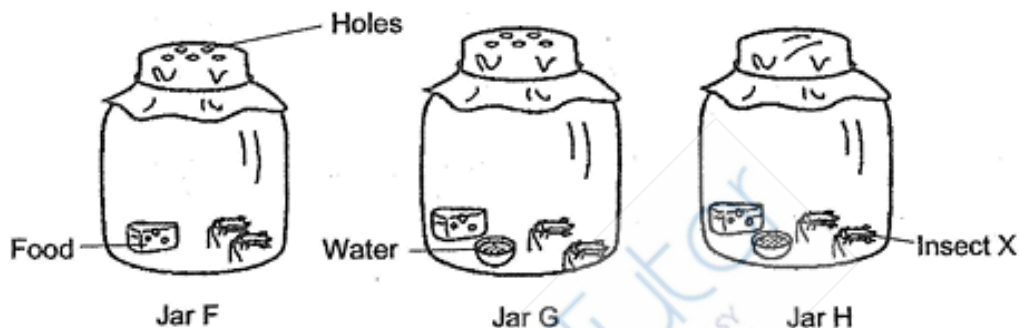
Please check your work.

Booklet B: 30 marks

For questions 21 to 28, write your answers in this booklet.

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

21. Daryl placed three set-ups as shown below in a dark room.



(a) Which jar will most likely have Insect X that are still alive after a week?

Explain your answer.

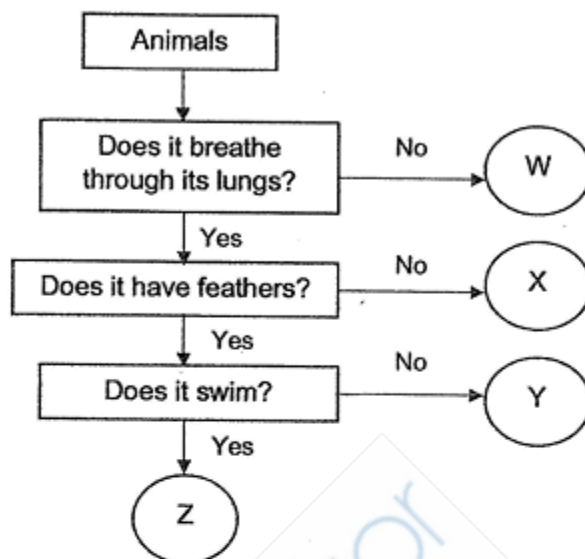
(2m)

(b) When the lights of the room were switched on, all the insects made a sound.

Which characteristic of living things is shown by the observation above?

(1m)



22. Look at the chart below carefully.

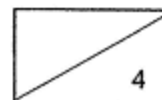


(a) Describe Animal X. (1m)

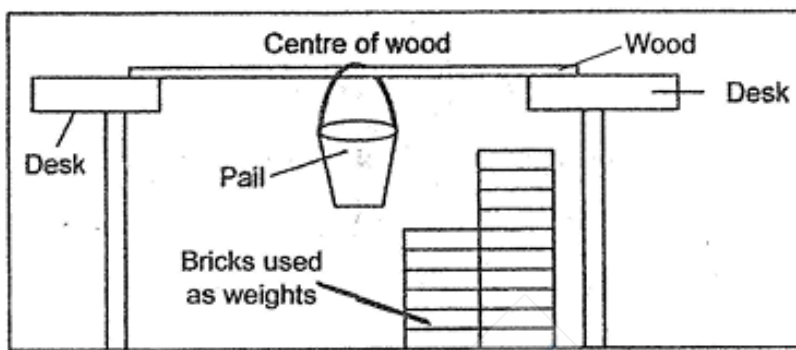
(b) State one difference between Animal W and Animal Y. (1m)

(c) Based on the chart above, which animals, W, X, Y or Z represents the animals below? (2m)

	
Animal _____	Animal _____



23. Grace tested three different types of wood, F, G and H, using the experiment below. The three types of wood are of the same thickness and length.



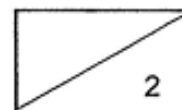
She placed the bricks into the pail one at a time until the wood broke. She repeated the experiment with different types of wood and recorded her results in the table below.

Type of Wood	Number of Bricks needed to break the Wood
F	10
G	20
H	14

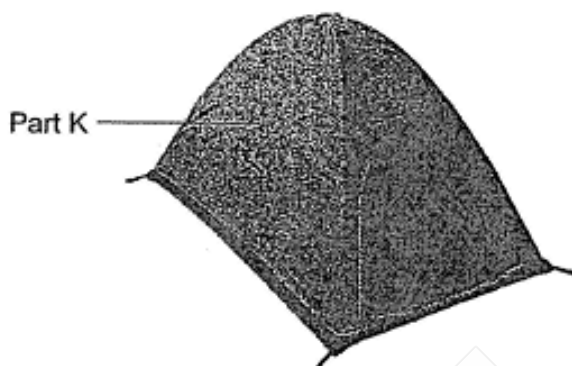
- (a) Which property of the wood is she testing? (1m)

Property: _____

- (b) Grace chose Wood G to make a bookshelf. Do you agree? Explain your answer. (1m)



24. Jeremy set up a tent below for his outdoor camp.



- (a) Circle the material that should be used to make Part K of the tent. (1m)

Glass

Wood

Plastic

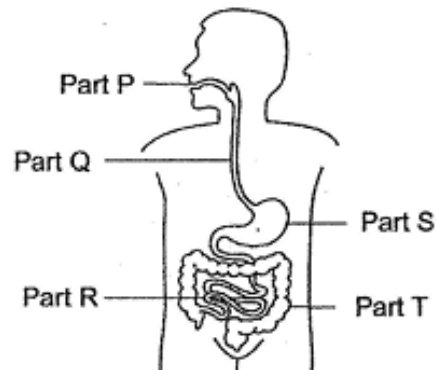
Iron

- (b) Compare the materials and give two reasons why you chose the material instead of the others above. (2m)

Reason 1: _____

Reason 2: _____

25. Different parts of the human digestive system are labelled in the diagram below.



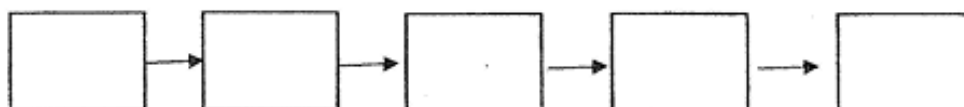
- (a) Match the parts of the digestive system (P, Q, R, S or T) to the statements below. (3m)

Statements	Parts
Food is not digested here.	_____ and _____
Digestion of food is completed here.	_____

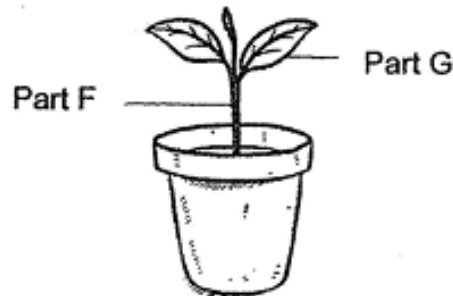
- (b) Fill in the blank. (1m)

In Part T, is removed from the undigested food.

- (c) State the flow of food in the digestive system by filling in the boxes with Parts P, Q, R, S and T. (1m)



26. The diagram below shows a plant. It is watered daily.



(a) Label the parts of the plant. (2m)

Part F: _____

Part G: _____

(b) What is the function of Part F? (1m)

(c) The roots of the plant above were removed.
Explain why the plant died after a few days. (2m)

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27. Kamala did two experiments using magnets.

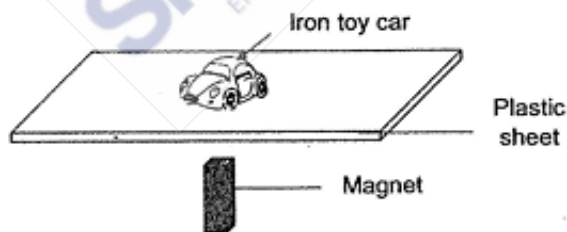
- (a) Kamala has three different objects, A, B and C, which are made of unknown materials. She placed a magnet close to Object A and recorded her observations in the table below. She repeated the experiment with Objects B and C.



Objects	Attracted to the magnet	Repelled by the magnet
A		
B	✓	
C		✓

Which of the objects, A, B or C, could be a plastic block or steel ruler?

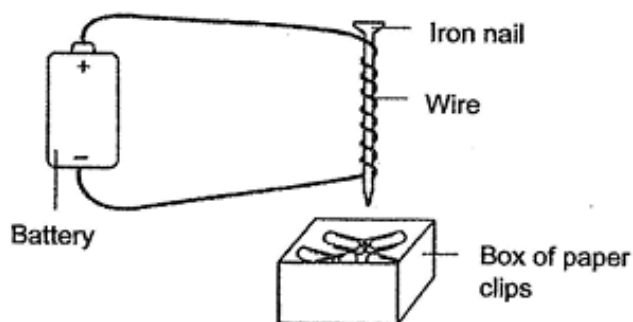
- (i) Plastic block: Object _____ (2m)
- (ii) Steel ruler: Object _____
- (b) Kamala then set up the second experiment with an iron toy car as shown below.



The toy car was able to move when Kamala moved a magnet under the plastic sheet. She repeated the same experiment using a wooden block, instead of a magnet.

Will the toy car be able to move? Explain your answer. (2m)

28. The diagram below shows an electromagnet placed near a box of paper clips.



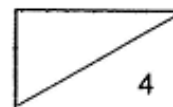
- (a) The electromagnet can attract five paper clips.
 State two possible changes to make the electromagnet stronger to attract more than five paper clips. (2m)

1st change: _____

2nd change: _____

- (b) The iron nail was replaced with a silver nail and no paper clips were attracted. Explain the observation. (2m)

End of Booklet B
Please check your work.



ANSWER SHEET

(BOOKLET A)

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

(BOOKLET B)

Q21	(a)	Jar G. Because it has holes for air to come in so that insect X can breathe and it also has food and water for insect X to stay alive.
	(b)	Living things respond to changes around them.
Q22	(a)	Animal X breathes through its lungs and does not have feathers.
	(b)	Animal W does not breathe through its lungs but Animal Y does.
	(c)	Animal W // Animal Y
Q23	(a)	Property: Strength
	(b)	Yes. Because Wood G needed the most number of bricks to break it.
Q24	(a)	*Circle Plastic*
	(b)	Reason 1: Plastic is lighter than iron, wood and glass.
		Reason 2: Plastic is flexible but iron, wood and glass are not flexible.
Q25	(a)	Parts: Q and T R
	(b)	Digestive water
	(c)	P → Q → S → T → R
Q26	(a)	Part F: Stem Part G: leaves
	(b)	It holds the plant upright.
	(c)	Roots absorb water and mineral salts for the plants, thus the plant could not receive any water for survival.
Q27	(a)	(i) Object A (ii) Object B
	(b)	No. The wooden block is not a magnet so it cannot attract the toy car.
Q28	(a)	1 st change: Put more batteries 2 nd change: Coil the wire more times around the iron nail.
	(b)	Because silver is a non-magnetic material so it cannot be magnetized.

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