

# Anglo-Chinese School (Junior)



**SEMESTRAL ASSESSMENT (2022)**

**PRIMARY 3**

**SCIENCE**

**BOOKLET A**

**Friday**

**28 October 2022**

**1 hr 45 min**

Name: \_\_\_\_\_ ( ) Class: 3.( )

## **INSTRUCTIONS TO PUPILS**

- 1 Do not turn over the pages until you are told to do so.
- 2 Follow all instructions carefully.
- 3 There are 28 questions in this booklet.
- 4 Answer ALL questions.
- 5 Shade your answers in the Optical Answer Sheet (OAS) provided.

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**This question paper consists of 15 printed pages (inclusive of cover page).**



**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

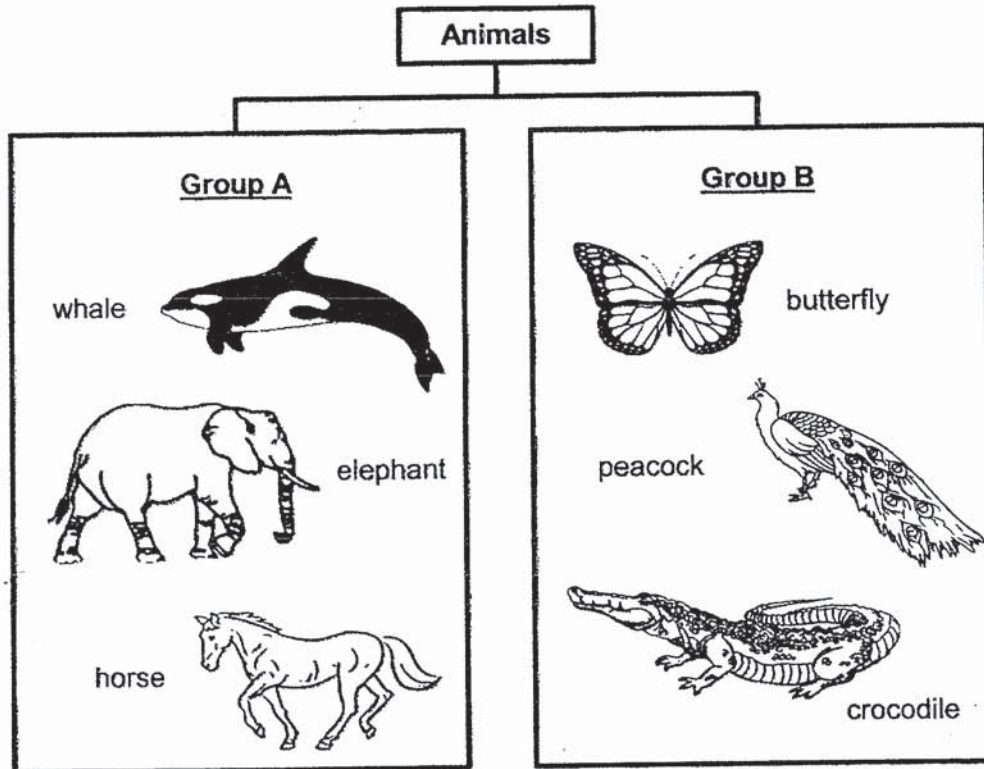
2. Bob grouped some things into the classification table.

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

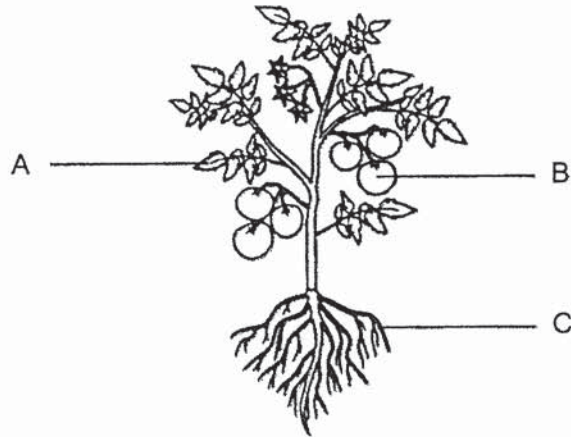
4. Study the classification table.

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

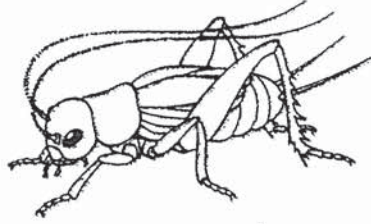
8. Study the two groups of living things, W and X.

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.

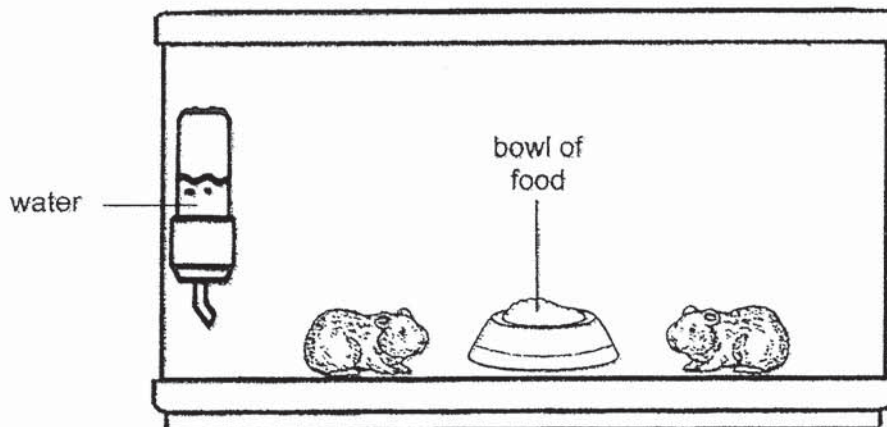


It belongs to a particular animal group. Which of the following characteristic(s) is/are special to its animal group, but not to others?

- 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

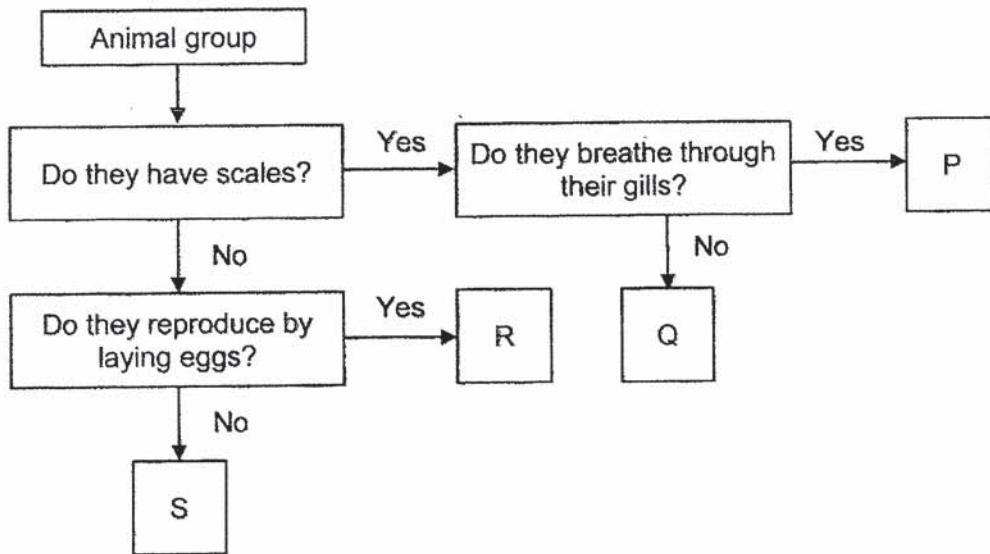
10. Harry placed two hamsters in a sealed glass container as shown in the diagram.



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

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

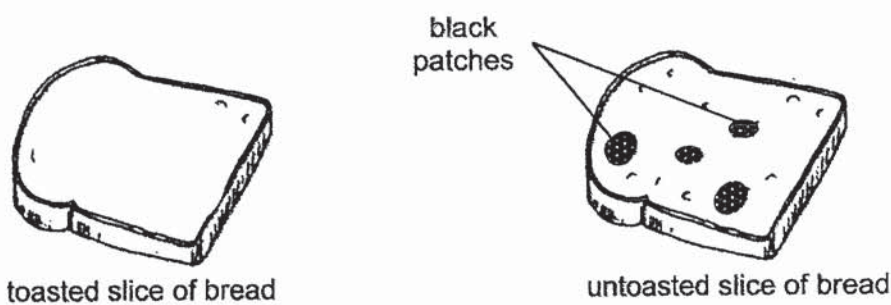
11. Study the flowchart.



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

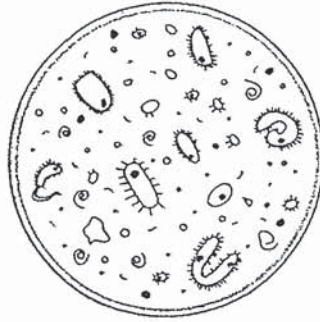
12. Two identical slices of bread were left on a dining table for five days. One of the slices of bread was toasted.



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.



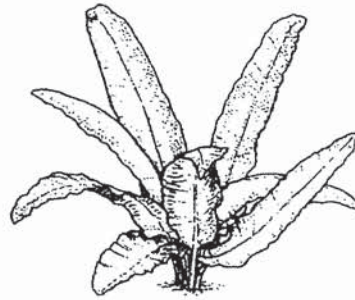
Which of the following statements describes bacteria **wrongly**?

- (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



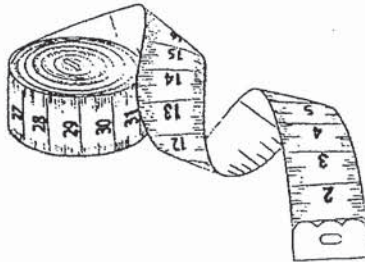
fern

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

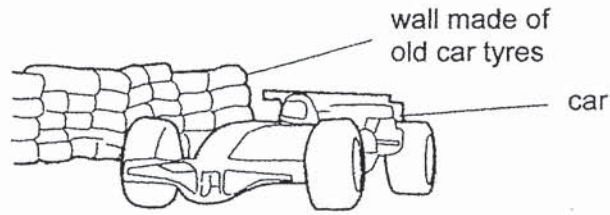
16. The diagram shows a measuring tape used by tailors.



Which property makes it suitable for measuring your waist?

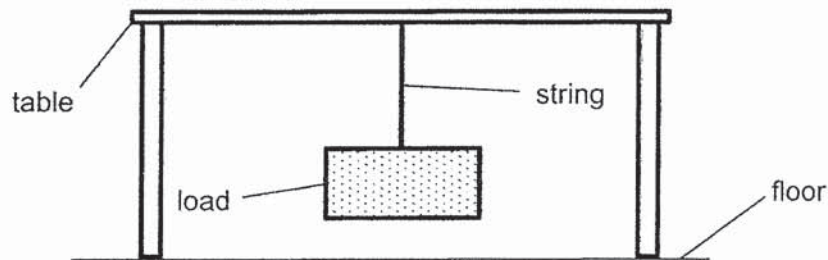
- (1) It is strong.
- (2) It is flexible.
- (3) It is opaque.
- (4) It is waterproof.

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.

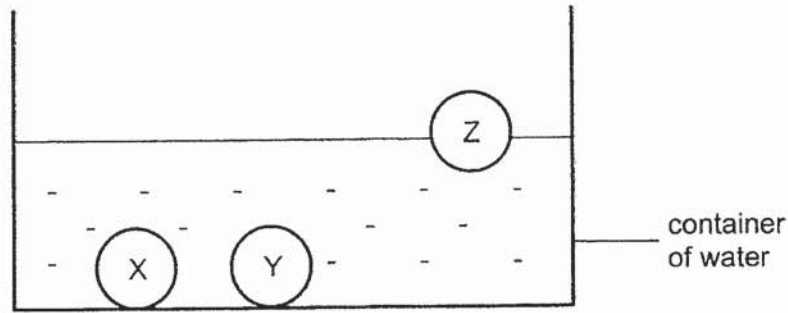


She increased the weight of the load until the string broke.

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

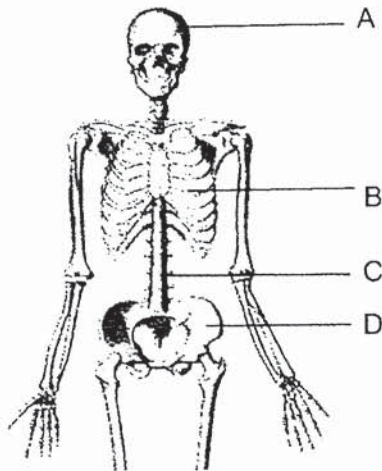
19. Ruby placed three objects, X, Y and Z, made of different materials, into a container of water.



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

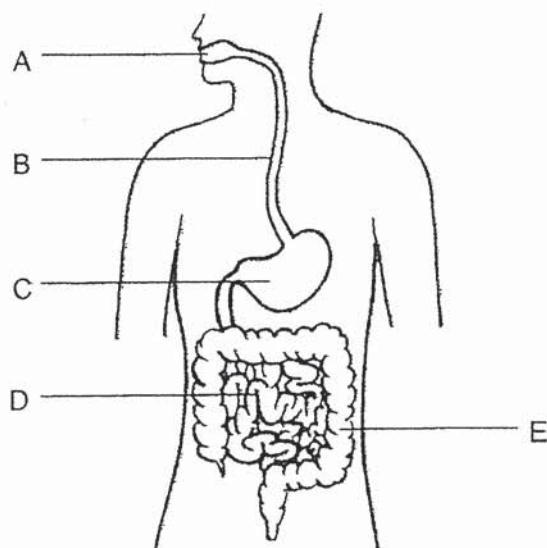
20. The diagram shows parts of the human skeletal system.



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

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

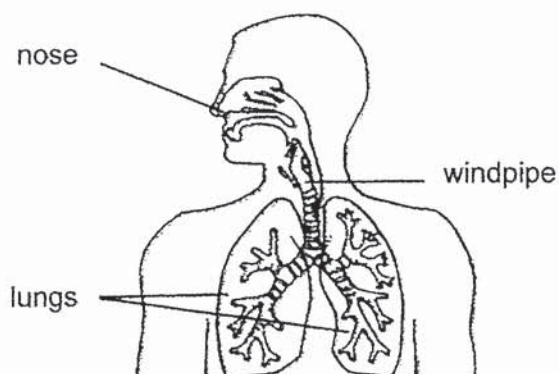
21. The diagram shows the human digestive system.



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

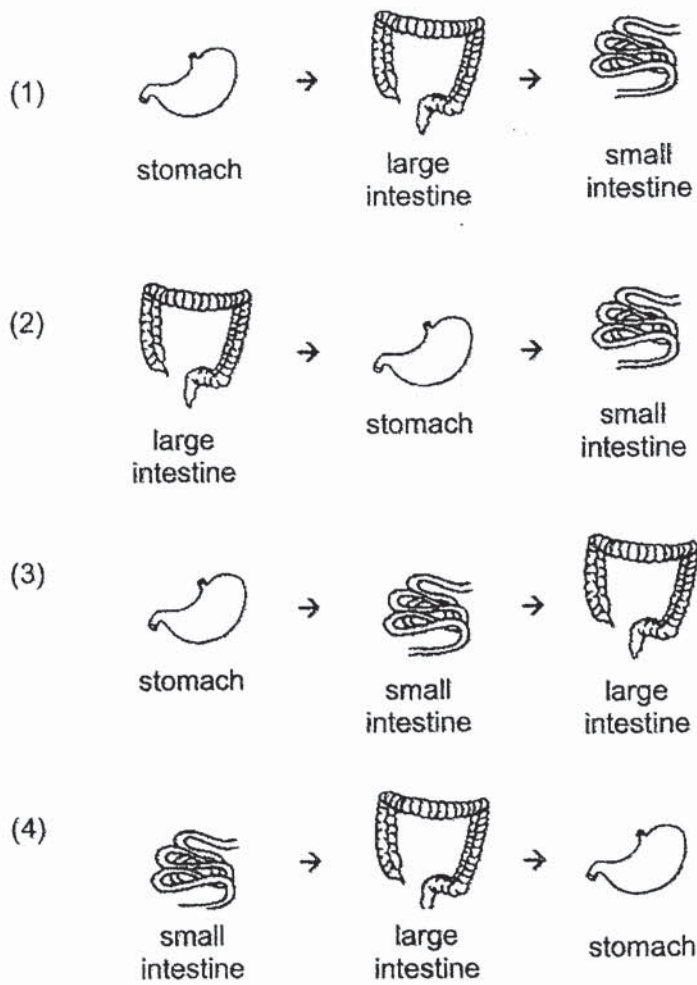
22. The diagram shows the human respiratory system.



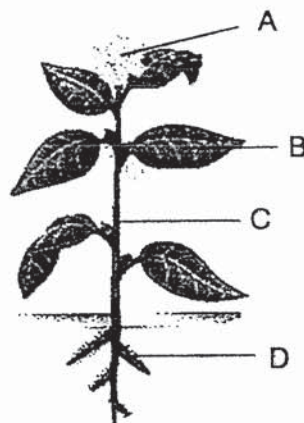
Which of the following is the function of the system?

- (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?

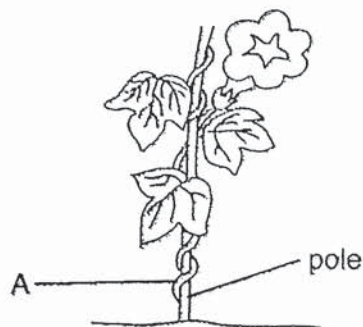
- (1) A  
 (2) B  
 (3) C  
 (4) D

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?

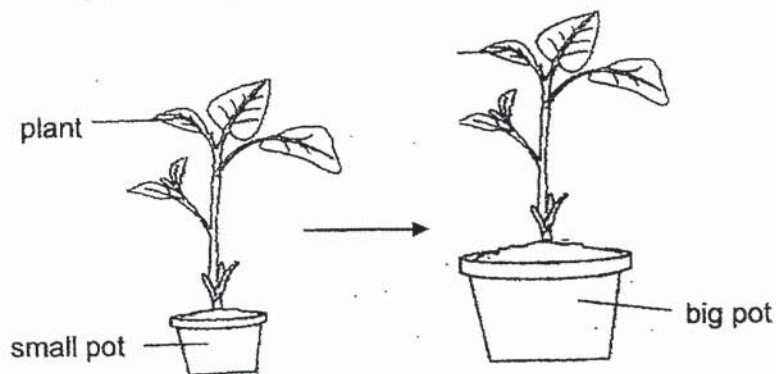
- (1) A only
  - (2) B only
  - (3) A and C only
  - (4) B and C only
26. The diagram shows a plant growing around a pole.



What is the function of part A?

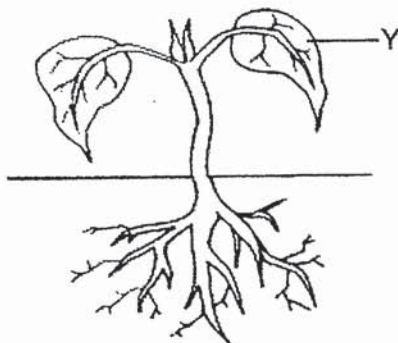
- (1) It anchors the plant firmly to the soil.
- (2) It traps light to make food for the plant.
- (3) It supports the leaves to receive more light.
- (4) It absorbs water and mineral salts from the soil.

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

**End of Booklet A**

# Anglo-Chinese School (Junior)



## SEMESTRAL ASSESSMENT (2022)

PRIMARY 3

SCIENCE

BOOKLET B

Friday

28 October 2022

1 hr 45 min

Name: \_\_\_\_\_ ( ) Class: 3.( ) Parent's Signature: \_\_\_\_\_

### INSTRUCTIONS TO PUPILS

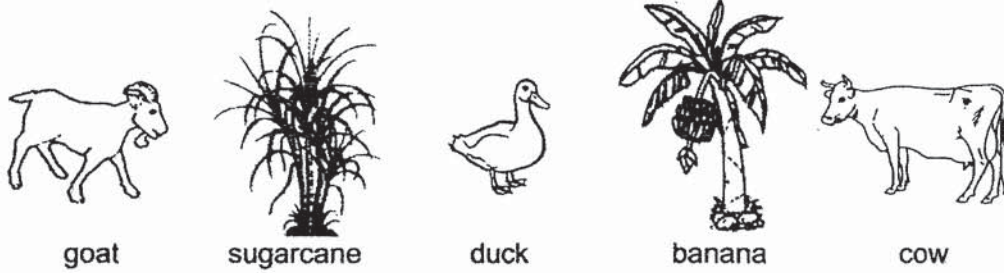
- 1 Do not turn over the pages until you are told to do so.
- 2 Follow all instructions carefully.
- 3 There are 13 questions in this booklet.
- 4 Answer ALL questions.
- 5 The marks are given in the brackets [ ] at the end of each question or part question.

Booklet	Possible Marks	Marks Obtained
A	56	
B	44	
Total	100	

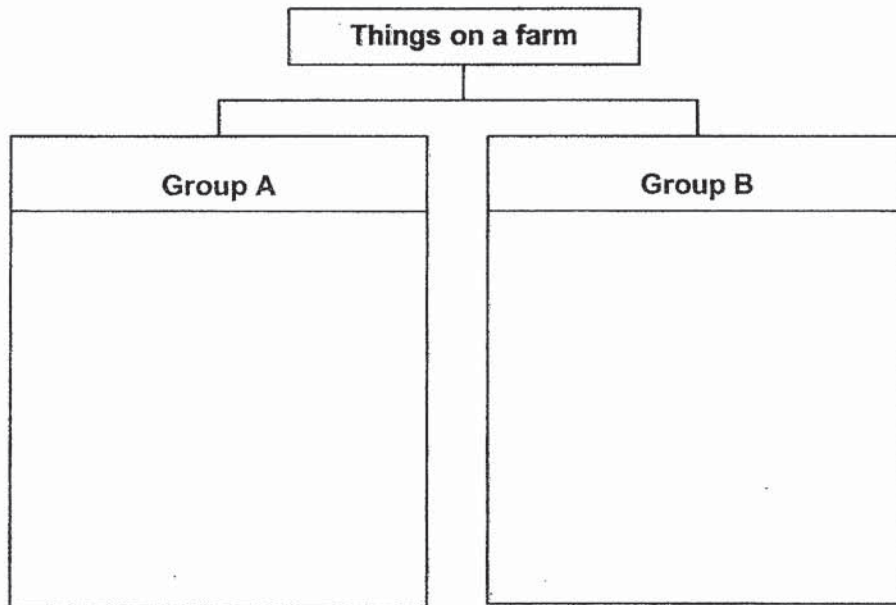
For questions 29 to 41, write your answers in this booklet.  
 The number of marks available is shown in brackets [ ] at the end of each question or part question.

(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]

\_\_\_\_\_

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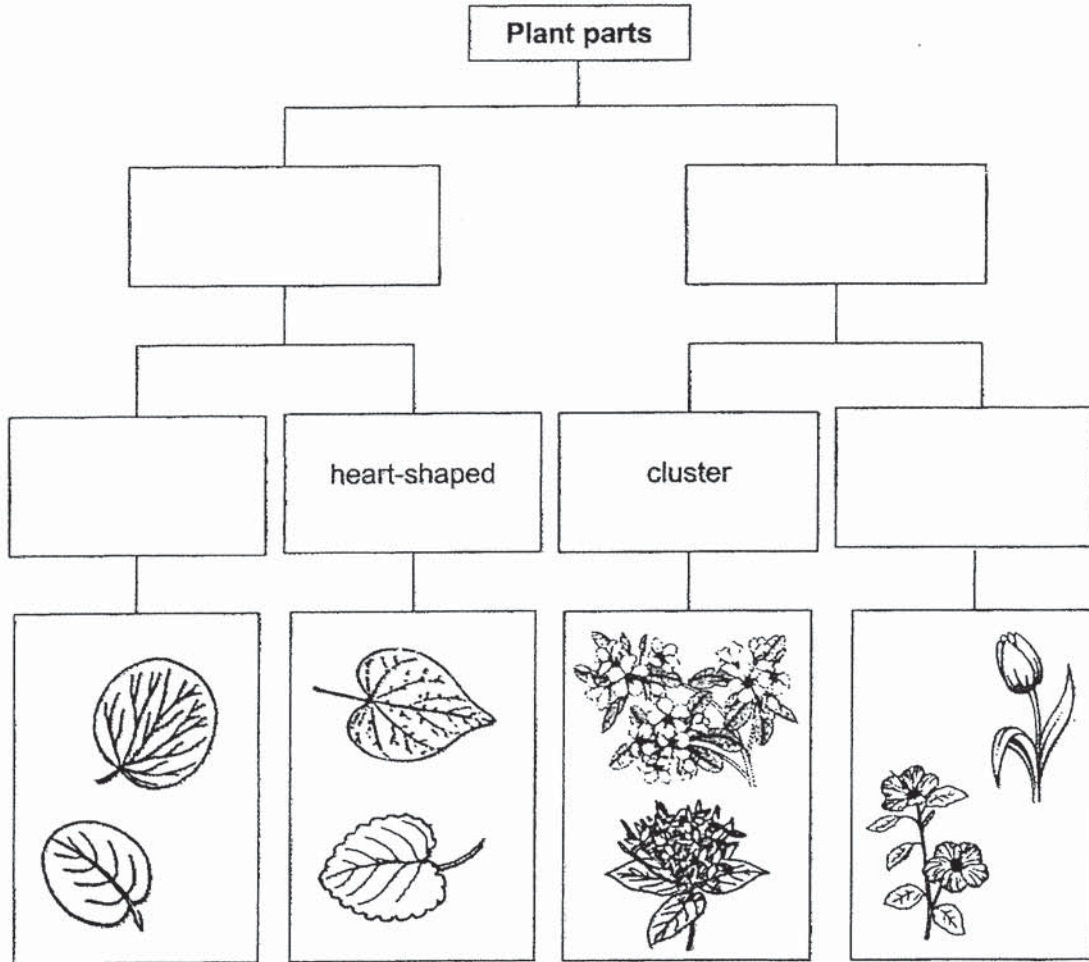
SCORE	3
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30. There are many kinds of plants in the ecogarden.

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

[2]

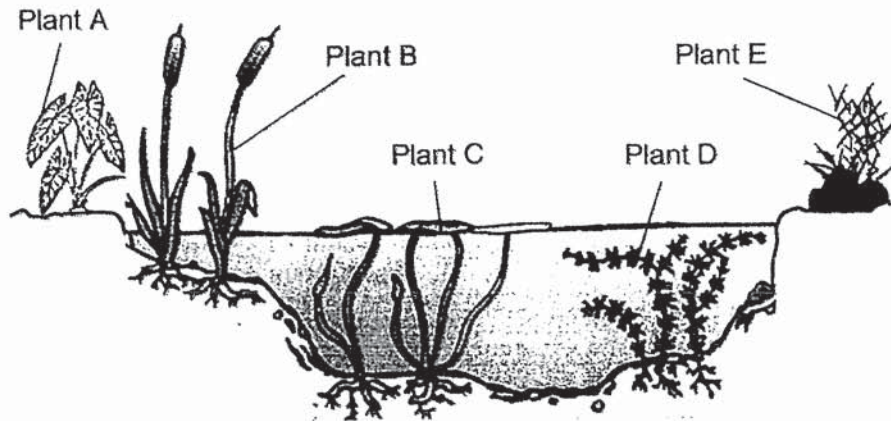
singly	flowers	veins	palm-shaped
round	round-shaped	leaves	long



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SCORE	2
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- (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]

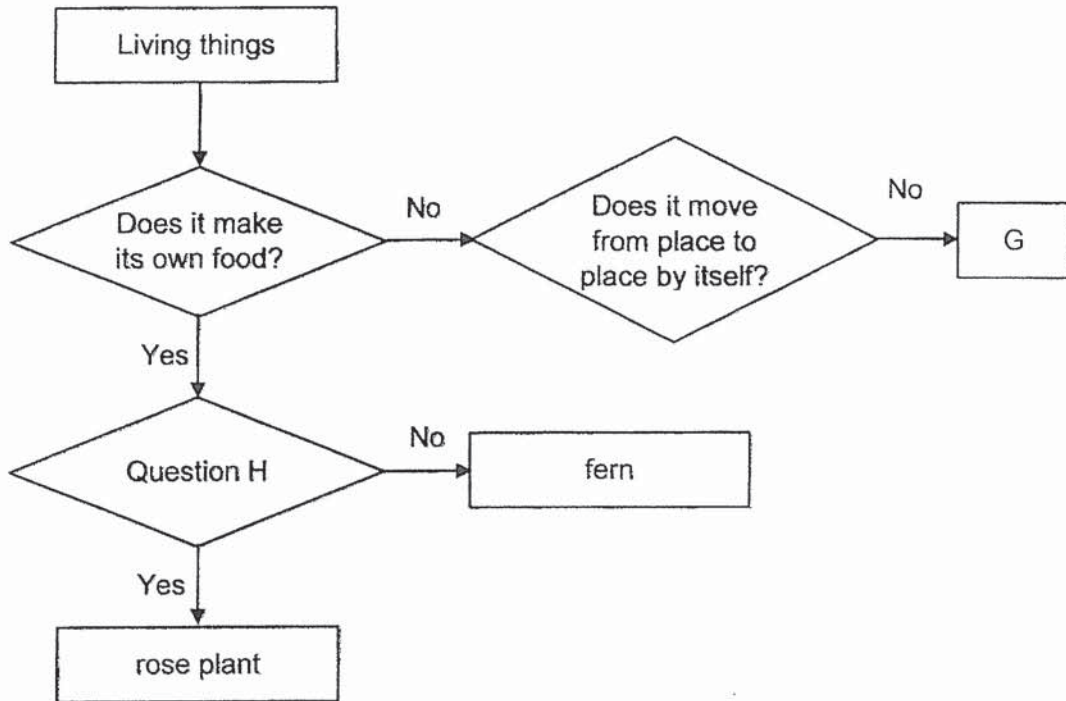
Sub-heading 1: \_\_\_\_\_

Sub-heading 2: \_\_\_\_\_

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SCORE	1
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31. Study the flowchart.



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

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(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]

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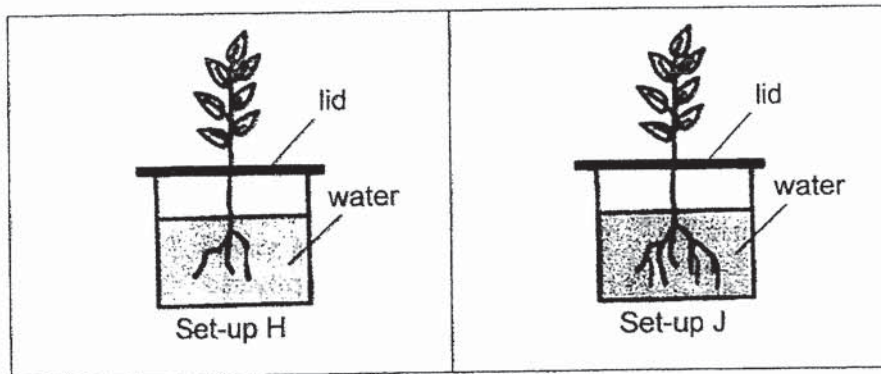


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SCORE	3
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32. Donald placed two plants in identical beakers with equal amount of water as shown.



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

- (a) State the aim of the experiment. [1]

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- (b) Which set-up, H or J, will have less amount of water left in the beaker after a week? [1]

Set-up: \_\_\_\_\_

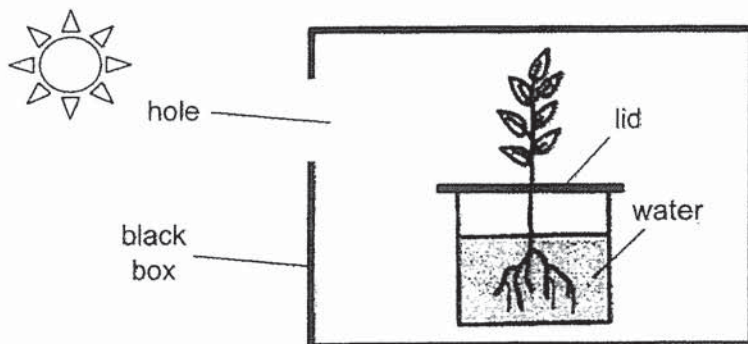
- (c) Donald carried out another experiment to find out if the number of leaves on a plant affects the amount of water that the roots take in. Tick (✓) the variable(s) that has/have to be kept the same for a fair test. [1]

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

(Go on to the next page)

SCORE	3
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- (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]

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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.	

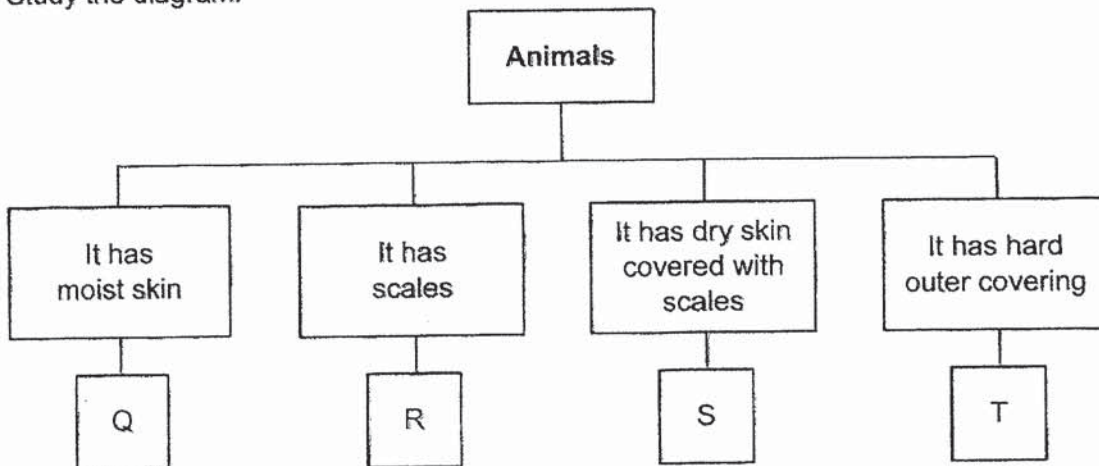
- (c) Name an animal that is in the same animal group as the bat. [1]

\_\_\_\_\_

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SCORE	4
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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	<input type="text"/>	Insect	<input type="text"/>
Reptile	<input type="text"/>	Amphibian	<input type="text"/>

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

Similarity : \_\_\_\_\_

\_\_\_\_\_

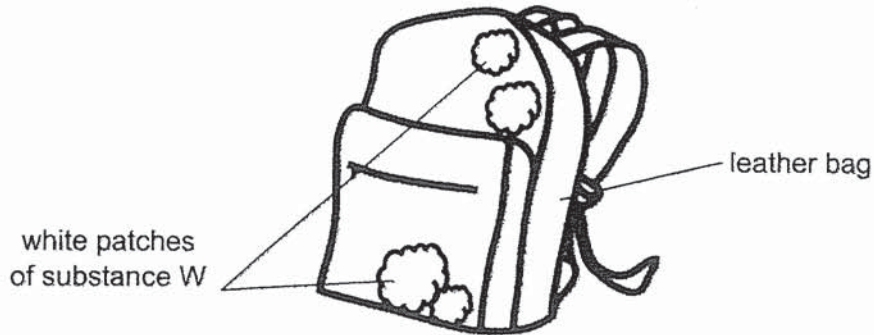
Difference : \_\_\_\_\_

\_\_\_\_\_

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SCORE	4
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35. Aliyah observed some white patches of substance W on her leather bag. Her father told her that substance W are living things.



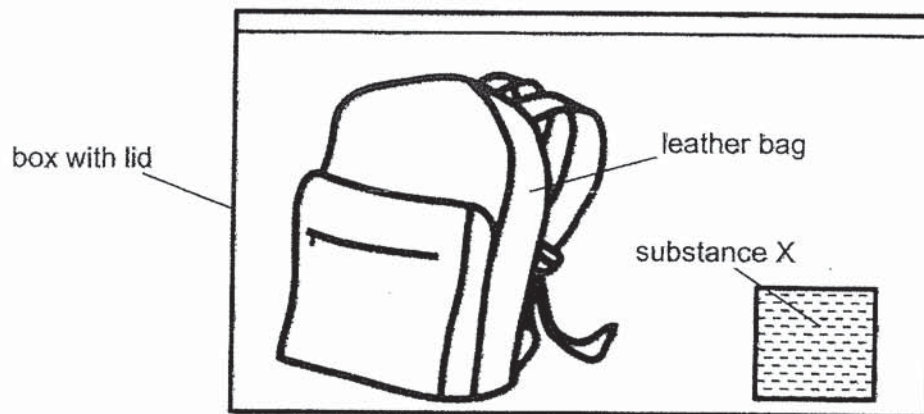
- (a) State the group of living things that the white patches of substance W belong to. [1]

(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.



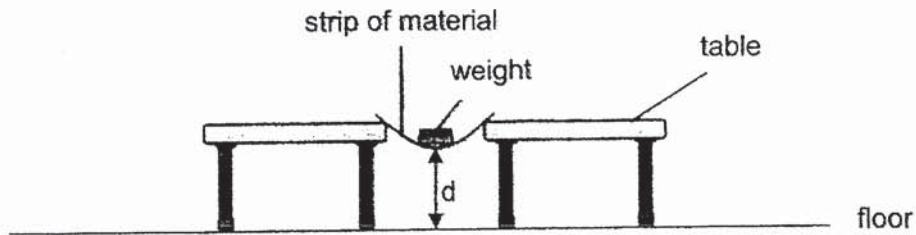
Give a reason why the white patches of substance W did not grow on the leather bag. [1]

\_\_\_\_\_  
\_\_\_\_\_

(Go on to the next page)

SCORE	
	3

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.

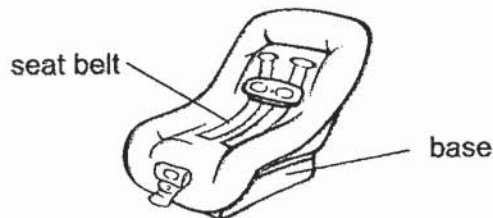
Material	Distance $d$ (cm)
A	1
B	3
C	6
D	8

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

[1]

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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]

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

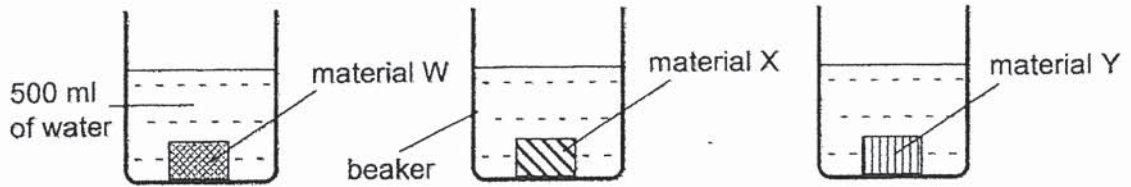
[1]

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SCORE	3
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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]

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

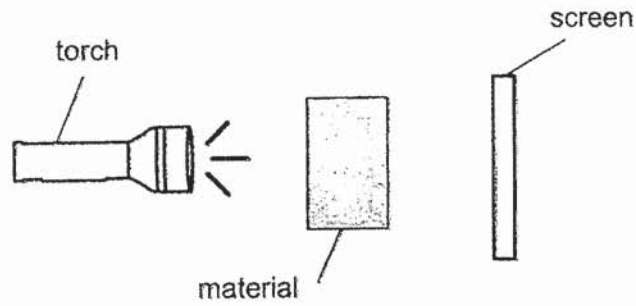
What should be the amount of water left in the beaker for him to make this conclusion? [1]

\_\_\_\_\_ ml

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SCORE	2
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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]

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

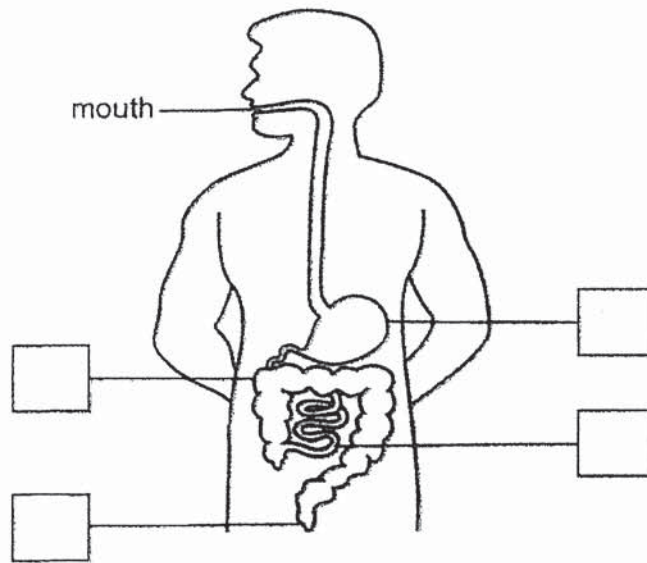
[1]

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SCORE	2
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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]

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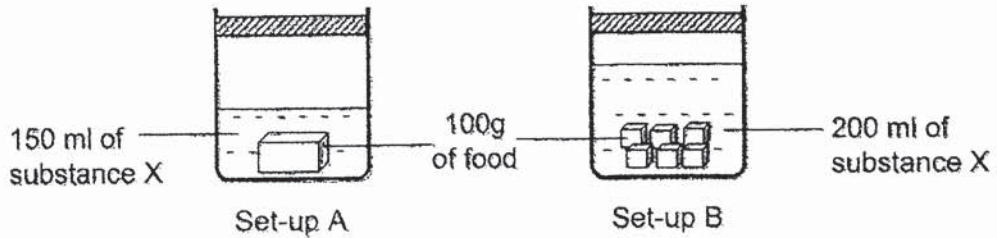
(c) Name the organ system that works with the above system to carry digested food to all parts of the body. [1]

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SCORE	3
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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]

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

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

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

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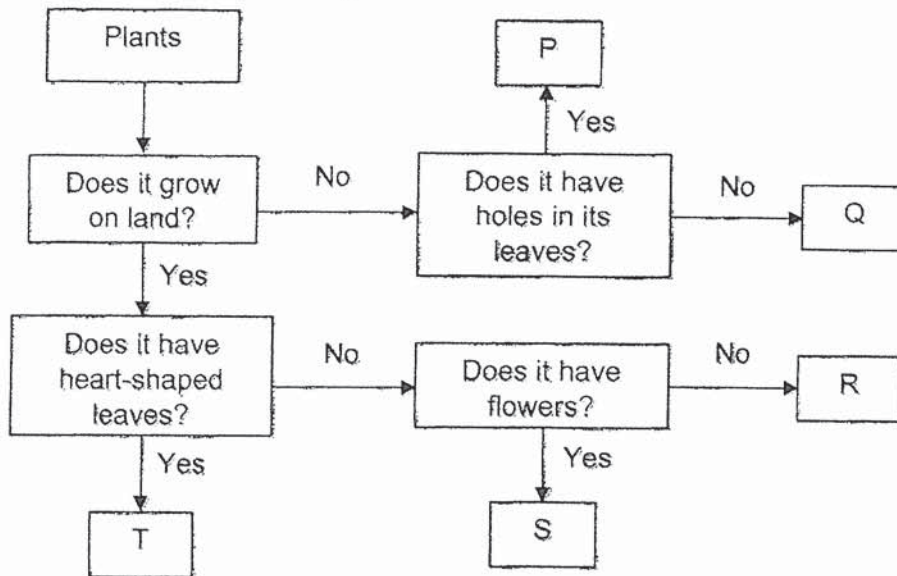


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SCORE	4
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40. Study the flowchart carefully.



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

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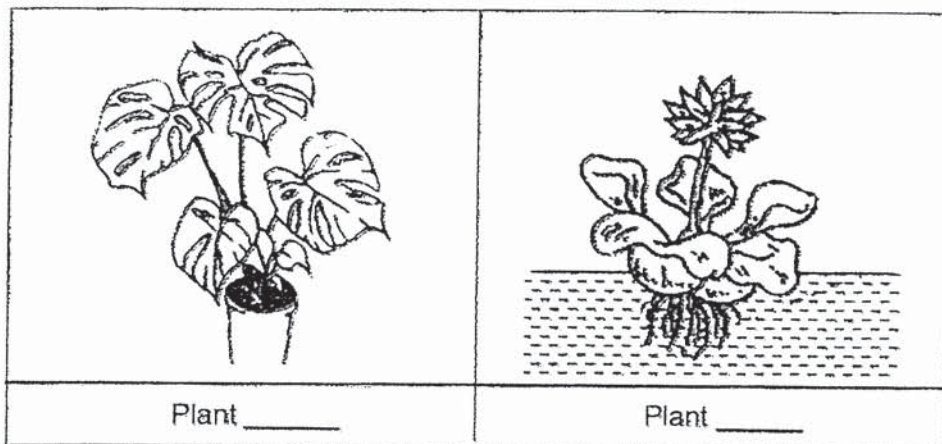
(b) State all the characteristics of plant P. [1]

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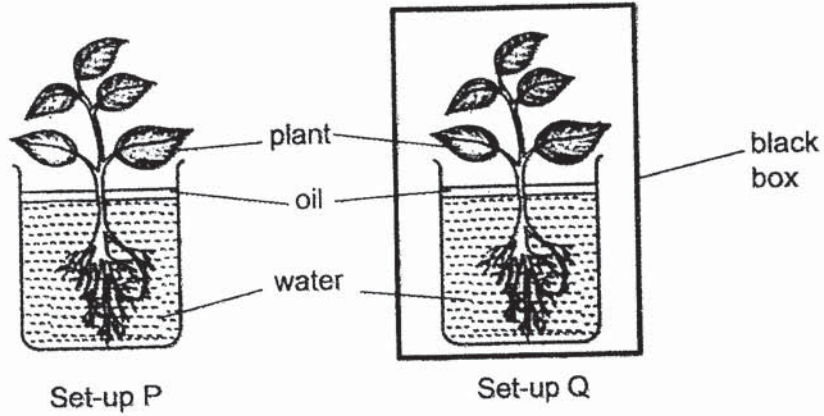
(c) Based on the flowchart, which plants, P, Q, R, S or T, represent the plants in the table? [1]



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SCORE	3
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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]

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- (b) The plant in set-up P became taller and had more leaves. State the characteristic of living things shown by the plant. [1]

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- (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]

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End of Paper

SCORE	
	4

**SCHOOL: ANGLO-CHINESE SCHOOL (JUNIOR)**

**SUBJECT: SCIENCE**

**LEVEL: PRIMARY 3**

**PAPER: SA2**

**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

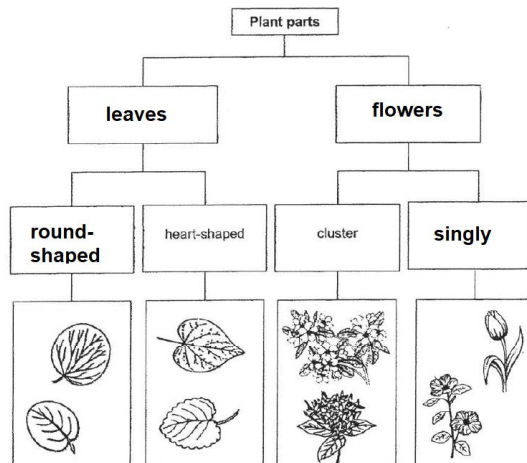
Group B: Sugarcane, Banana

(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.

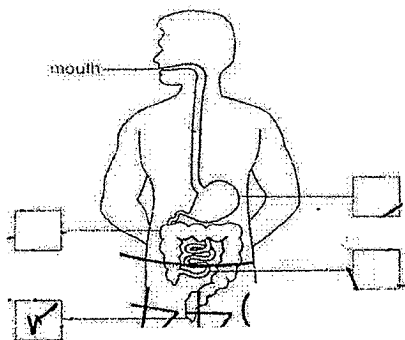
Q37. (a) None of the materials are suitable to make a roof as they absorb water and hence not waterproof.

(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.

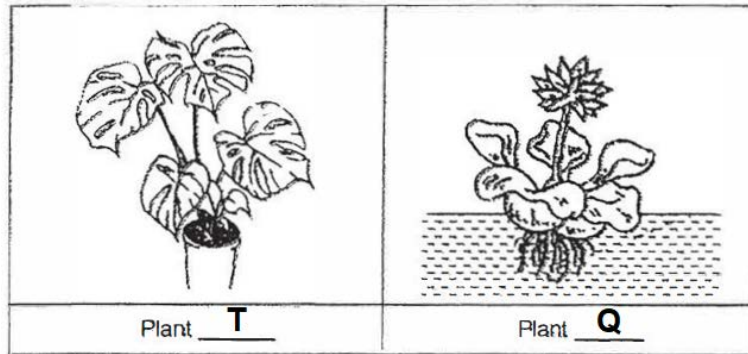
Q39. (a) There is more substance X in set-up B than in set-up A.

(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