

# Anglo-Chinese School (Junior)



SEMESTRAL ASSESSMENT 2021

PRIMARY 3

SCIENCE

BOOKLET A

Tuesday

3 November 2021

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 19 printed pages (inclusive of cover page).

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) and shade your answer on the Optical Answer Sheet.

(56 marks)

1. The animals shown are similar because both of them \_\_\_\_\_.

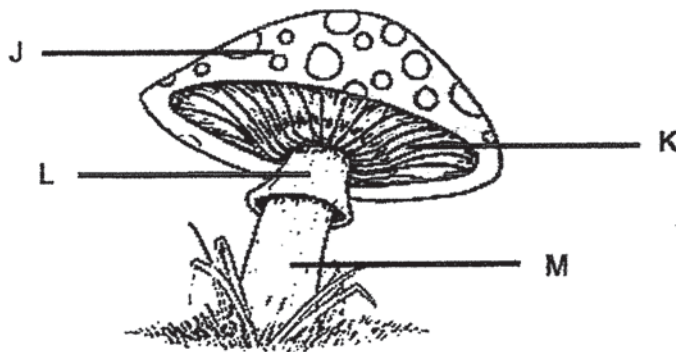


dragonfly



ostrich

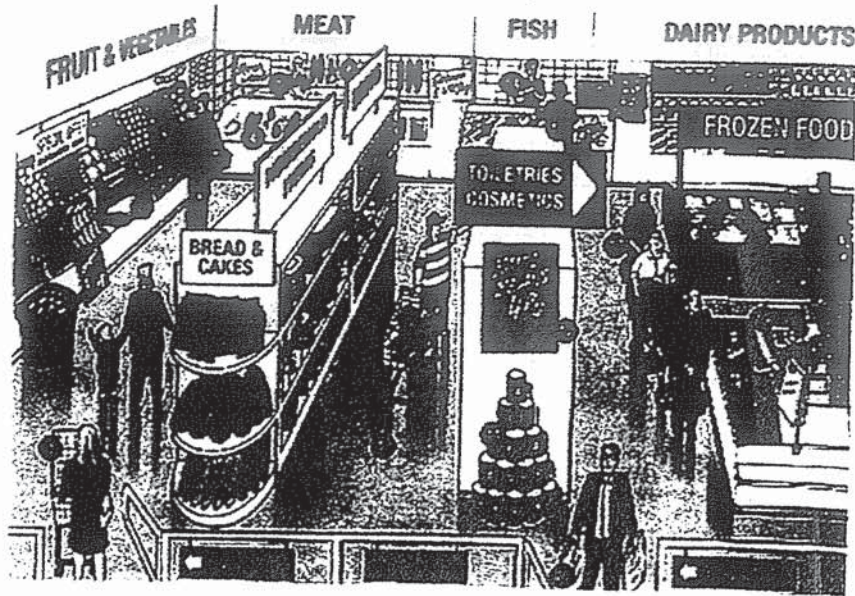
- (1) can fly
  - (2) have wings
  - (3) have the same number of legs
  - (4) have the same type of body covering
2. The picture shows a mushroom.



Which part of the mushroom, J, K, L or M, helps it to reproduce?

- (1) J
- (2) K
- (3) L
- (4) M

3. Items in a supermarket are organized by categories as shown.



Which one of the following best explains this arrangement?

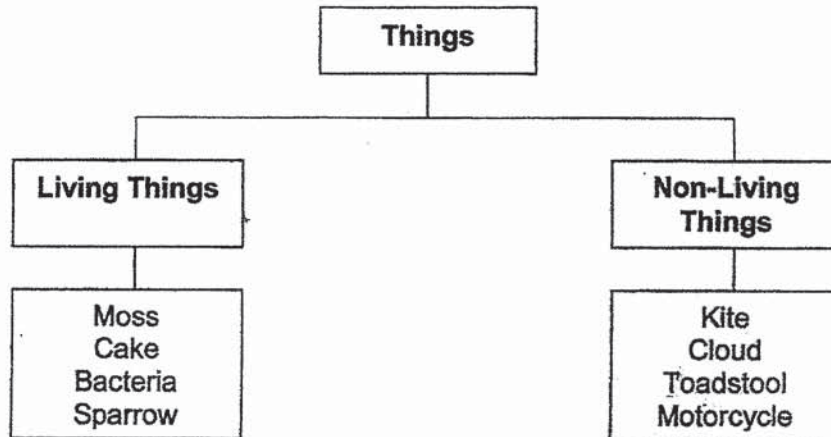
- (1) It looks attractive.
  - (2) It ensures customers' safety.
  - (3) It helps customers to find items easily.
  - (4) It helps to save space for the supermarket.
4. Which one of the following **does not** show a living thing responding to changes in its surroundings?
- (1) A hamster dies due to old age.
  - (2) A mouse runs when it sees a cat.
  - (3) A snail enters its shell when touched.
  - (4) A baby cries when it hears the thunder.
5. Study the classification table.

Group K	Group L	Group M
Eraser	T-shirt	Spectacle Lens
Tyres	Shoelaces	Window pane

Which of the following objects belong to Group L?

- (1) Socks
- (2) Marble
- (3) Balloon
- (4) Water bottle

6. Study the classification chart carefully.



Which of the following things are classified **wrongly**?

	Living Things	Non-living Things
(1)	Moss	Kite
(2)	Bacteria	Cloud
(3)	Sparrow	Motorcycle
(4)	Cake	Toadstool

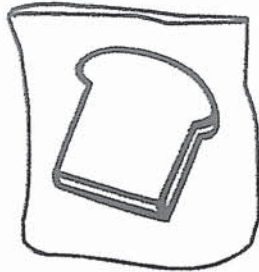
7. Study the table of four living things A, B, C and D. A tick (✓) indicates that the characteristic is present.

Living things	Reproduce by spores	Comes in different shapes and sizes	Can only be seen under a microscope	Makes its own food
A	✓	✓		
B	✓	✓		✓
C		✓	✓	
D			✓	✓

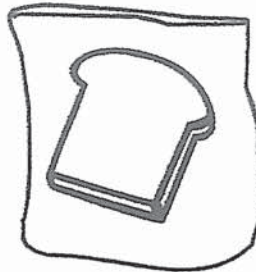
Which of the following living things best describes bacteria?

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

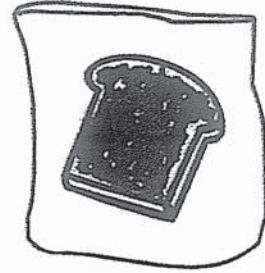
8. Lara conducted an experiment to find out the conditions in which bread mould would grow best. She used three identical slices of bread and did something to two of them. She then placed them in identical sealed bags for a week as shown.



A: bread with no water added



B: bread with water added



C: toasted bread

Which is the correct order of the bread, beginning with the one with the slice of bread that would have the least mould growing on it?

- (1) C, B, A
  - (2) B, C, A
  - (3) C, A, B
  - (4) B, A, C
9. Tom wrote the following riddle.
- "I cannot move from place to place.  
I produce spores for reproduction and cannot make my own food.  
I help to break down dead organisms into simpler substances.  
What organism can I possibly be?"

The riddle best describes \_\_\_\_\_.

- A bacteria
- B mushroom
- C bread mould
- D Bird's Nest Fern

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

10. Raj observed four objects, A, B, C and D, and recorded their characteristics in the table. A tick (✓) in the box indicates that the object has the characteristic.

Object	Able to respond to changes	Able to move from place to place	Able to grow	Able to make food
A	✓	✓		
B	✓	✓	✓	
C	✓			
D	✓	✓	✓	✓

Which object(s) is/are non-living thing(s)?

- (1) C only  
 (2) A and C only  
 (3) B and D only  
 (4) A, B and D only
11. The table shows some characteristics of four different groups of fruits, P, Q, R and S. A tick (✓) in the box indicates that the fruits in that group have the characteristic.

Characteristic	P	Q	R	S
Have smooth skin	✓			✓
Have many seeds		✓		✓

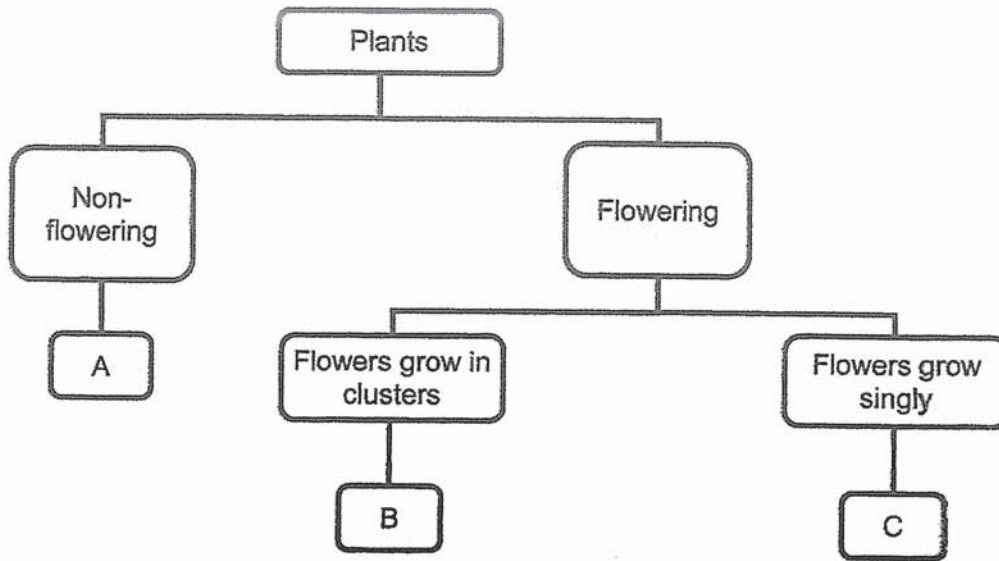
Faizal was given fruit X.



Based on the information above, which group of fruits, P, Q, R or S, does fruit X best belong to?

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

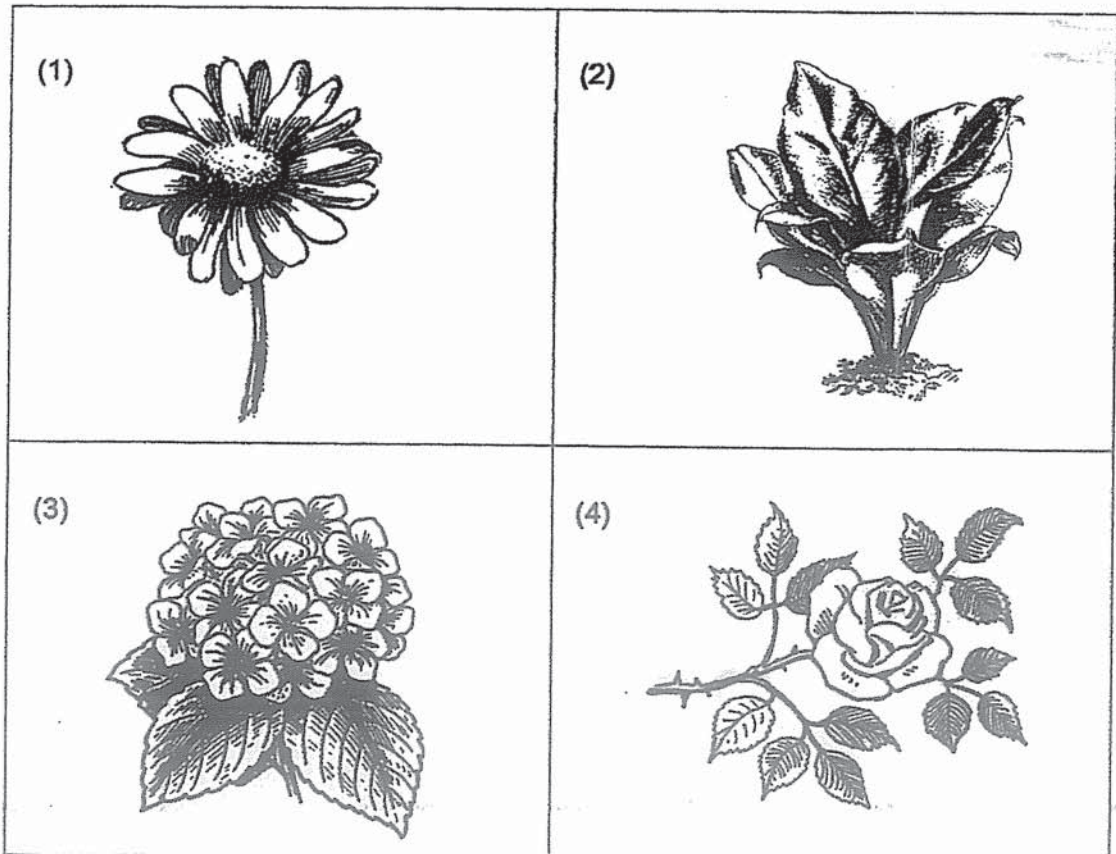
Study the classification chart and answer Questions 12 and 13.



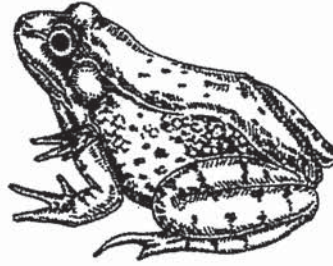
12. Which of the following statements about Plant A is **incorrect**?

- (1) It does not bear fruits.
- (2) It does not make its own food.
- (3) It could be the Bird's Nest Fern.
- (4) It needs air, food and water to survive.

13. Which of the following is most likely to be Plant B?



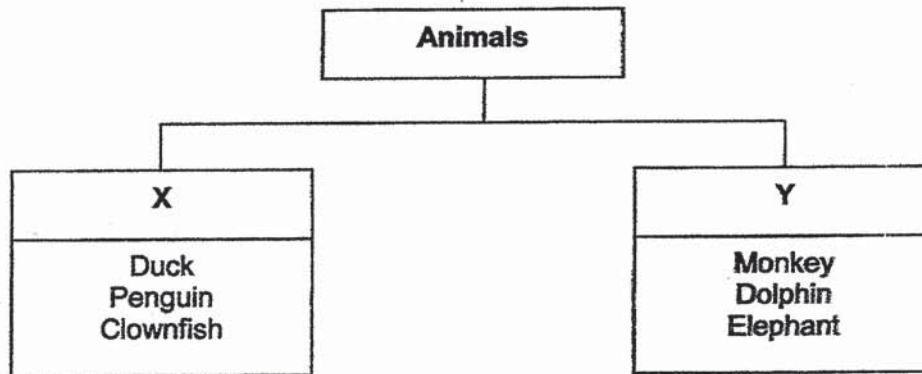
14. Study Animal T carefully.



Animal T

Which of the following questions will best help confirm if Animal T is an amphibian?

- (1) How many legs does it have?
  - (2) Can it live on land and in water?
  - (3) Does it breathe through its lungs?
  - (4) Does it reproduce by giving birth to its young?
15. Some animals are classified into two groups as shown.



Which of the following are most suitable sub-headings for X and Y?

	X	Y
(1)	Birds	Mammals
(2)	Have feathers	Animal-eaters
(3)	Animals that lay eggs	Animals that give birth to live young
(4)	Animals that live in the water	Animals that live on land

16. The table shows the characteristics of four animals, A, B, C and D. A tick (✓) in the box indicates that the animal has the characteristic.

Animal	Has scales	Gives birth	Breathes through gills
A	✓		✓
B		✓	
C	✓	✓	✓
D	✓		

Which animal is most likely to be a crocodile as shown?



- (1) A  
 (2) B  
 (3) C  
 (4) D
17. Peter carried out an experiment on four similar plants, W, X, Y and Z. For each plant, he removed some plant part(s). The table shows the plant part(s) being removed.

Plant	Part(s) being removed
W	All the roots
X	All the flowers
Y	All the roots and leaves
Z	All the fruits and leaves

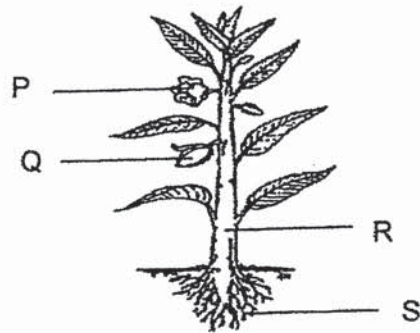
Which of the following plants, W, X, Y or Z, will most likely survive the longest?

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

18. Ahmad and Devi commented on one part of the plant.

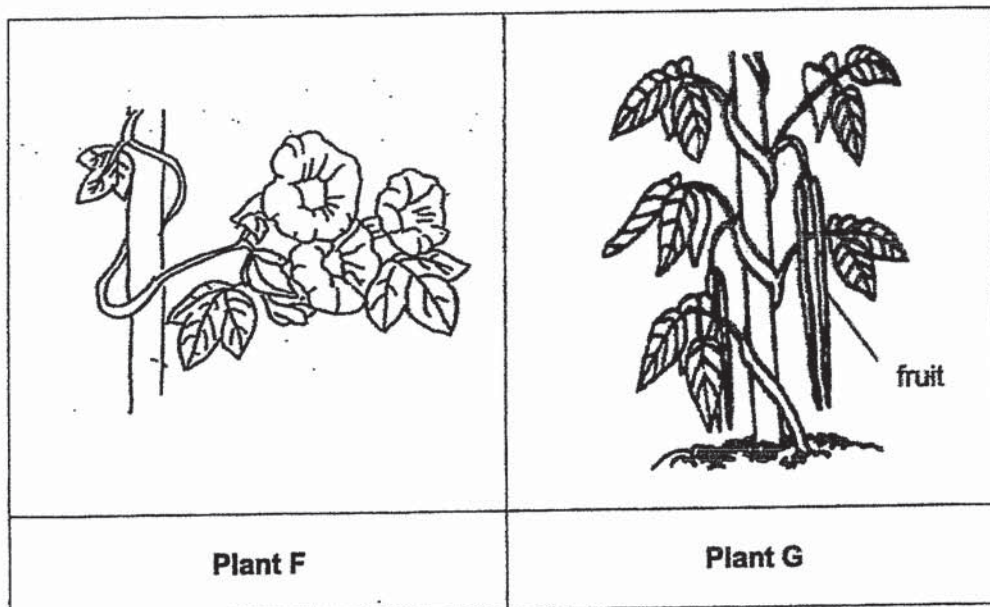
Ahmad : It supports the plant.

Devi : It holds the leaves up so that the plant can get enough sunlight.



Which part, P, Q, R or S, are they referring to?

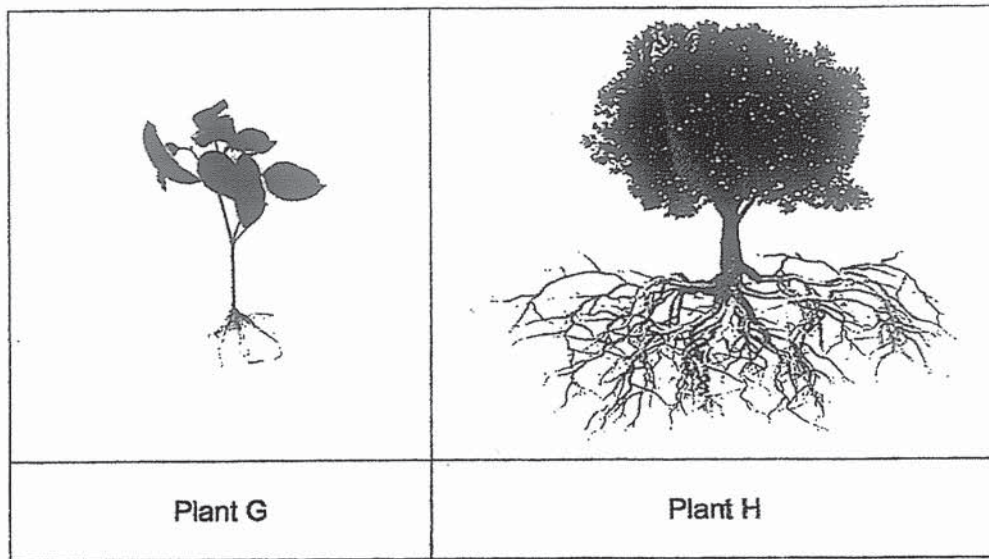
- (1) P
  - (2) Q
  - (3) R
  - (4) S
19. Observe Plants F and G.



Which of the following statement is true?

- (1) Plant G reproduce by spores.
- (2) Only Plant F is a flowering plant.
- (3) Both Plants F and G have weak stems.
- (4) Plant F has no roots but Plant G has roots.

20. Study the pictures of the two plants below.



Four students made comments about the plants. Which of the following comments are true?

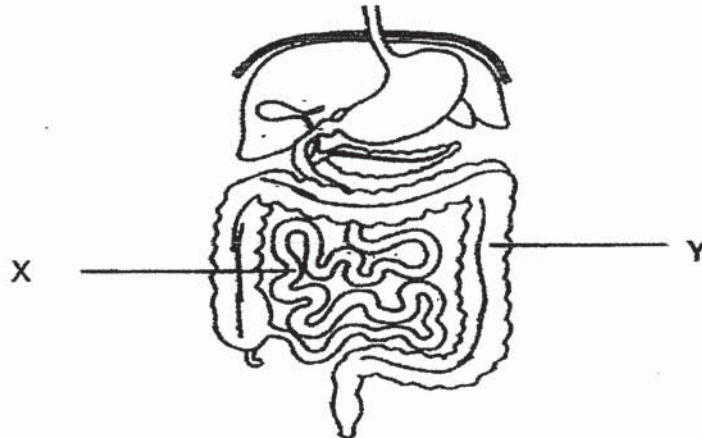
- Aminah: Only the roots of Plant H hold the plant firmly to the ground.  
Bala: Plant G will be uprooted more easily during a storm.  
Caden: Plant H can make more food than Plant G.  
David: The roots of Plant H absorb more water and minerals from the soil than the roots of Plant G.

- (1) Bala and David  
(2) Aminah and Caden  
(3) Bala, Caden and David  
(4) Bala, Aminah and David

21. Which two main body systems work together to enable the boy to move and dance?



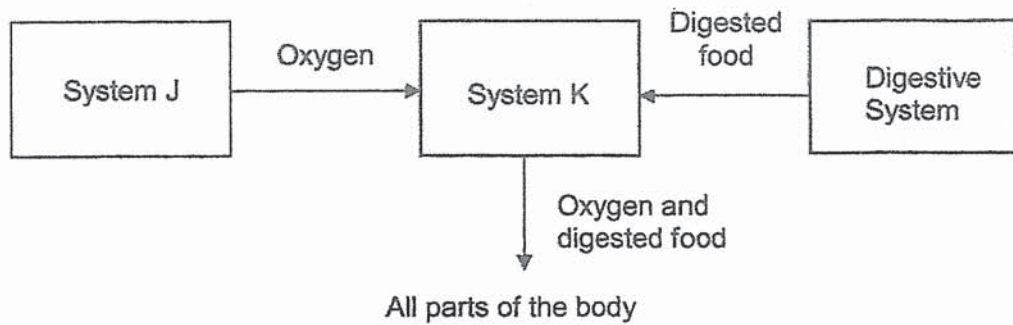
- (1) Skeletal and Muscular System  
 (2) Circulatory and Skeletal System  
 (3) Digestive and Muscular System  
 (4) Respiratory and Circulatory System
22. The diagram shows parts of the digestive system.



Which one of the following correctly matches what happens at parts X and Y?

	X	Y
(1)	Digestive juices are added to the partially digested food.	Waste is removed.
(2)	Food is further digested.	Digestion is completed.
(3)	Digested food is passed to the large intestine for further digestion.	Undigested food is pushed down into the anus.
(4)	Digestion is completed.	Water is absorbed from the undigested food.

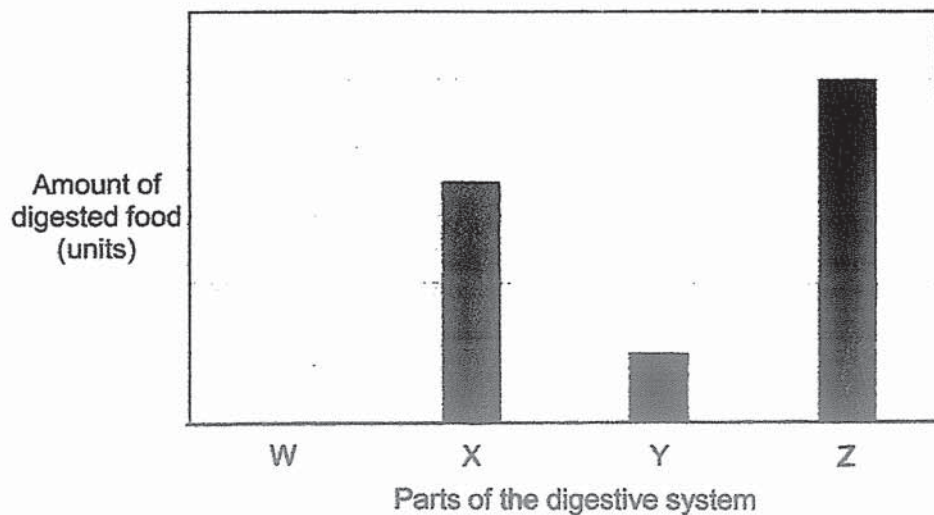
23. The flow chart shows how some substances are transported in the human body.



What are Systems J and K?

	System J	System K
(1)	Digestive	Skeletal
(2)	Digestive	Circulatory
(3)	Respiratory	Circulatory
(4)	Respiratory	Skeletal

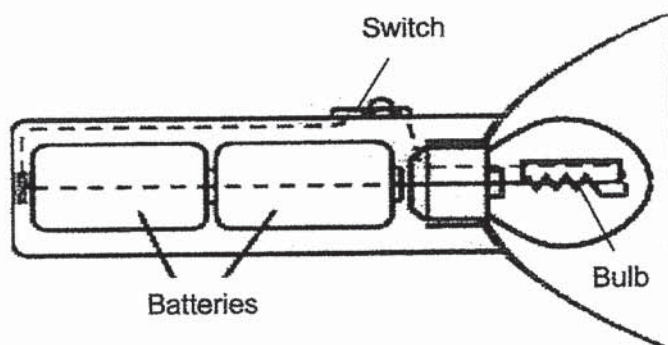
24. Brian ate a sandwich during recess. The bar graph shows the amount of digested food found in different parts of his digestive system, the mouth, stomach, small intestine and large intestine. The different parts are not arranged in order.



Which part represents the stomach?

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

25. Jack observed a torch and its parts.



When he turned on the switch, the bulb lighted up. He then removed one part of a torch each time and observed if the bulb lights up.

Part removed	Did the bulb light up?
Bulb	No
Switch	No
Batteries	No

Which of the following do(es) Jack's observations confirm?

- A. Each part of a torch has its own function.
  - B. A torch can be made of one or many parts.
  - C. Different parts of a torch must work together for the bulb to light up.
- (1) A only
- (2) A and C only
- (3) B and C only
- (4) A, B and C

26. The float shown is made of plastic and is designed to help a swimmer stay afloat in water while swimming.



Which of the following property/properties of plastic make(s) it suitable for making the float?

- A It is stiff.
- B It is waterproof.
- C It is able to float on water.
- D It allows light to pass through.

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

27. The diagram shows a pair of football boots.

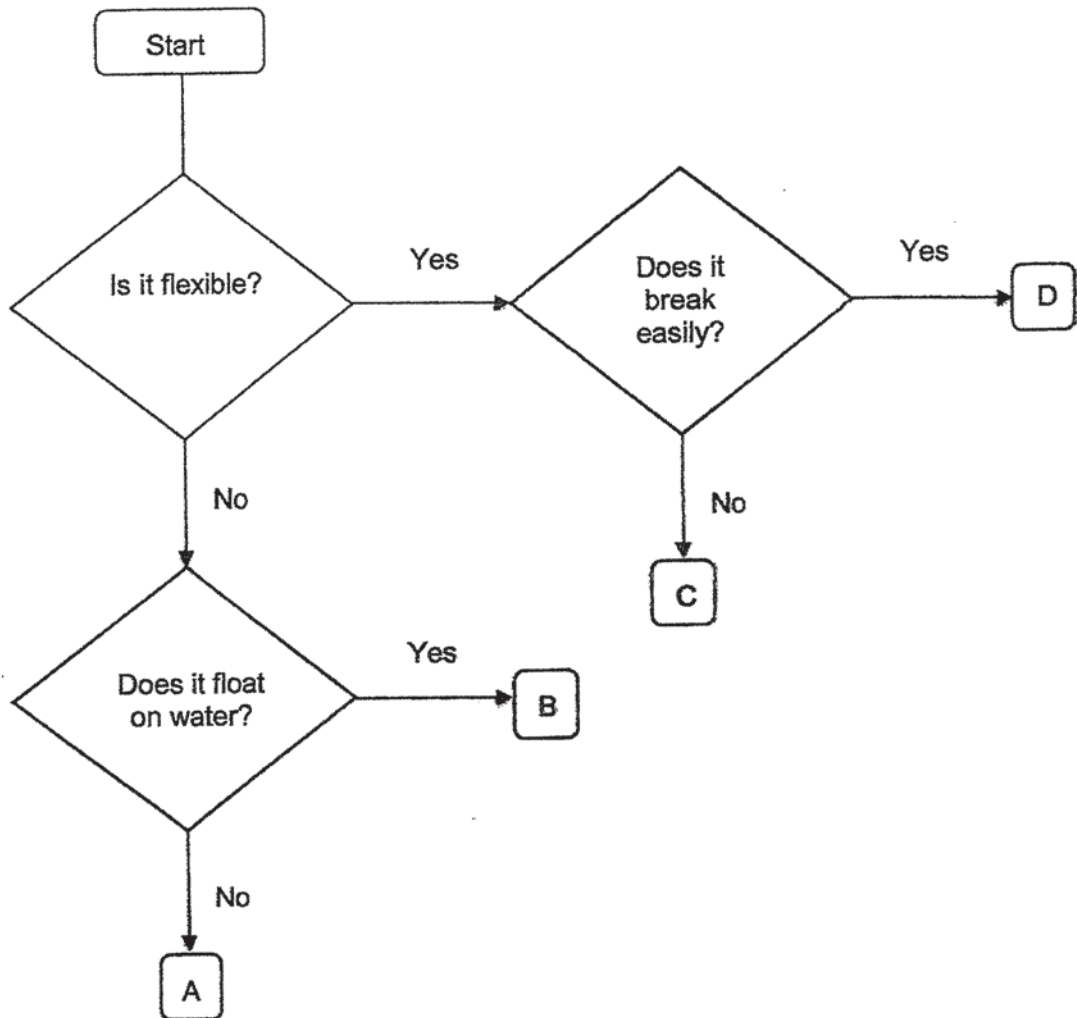


Which of the following properties of material X must be taken into consideration when making the football boots?

- A Flexibility
- B Waterproof
- C Ability to float on water
- D Allows all light to pass through

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

28. Study the flowchart of materials A, B, C and D.



A trampoline is usually used to exercise by jumping up and down on it. Which material would be the most suitable to make Part X of the trampoline below?



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

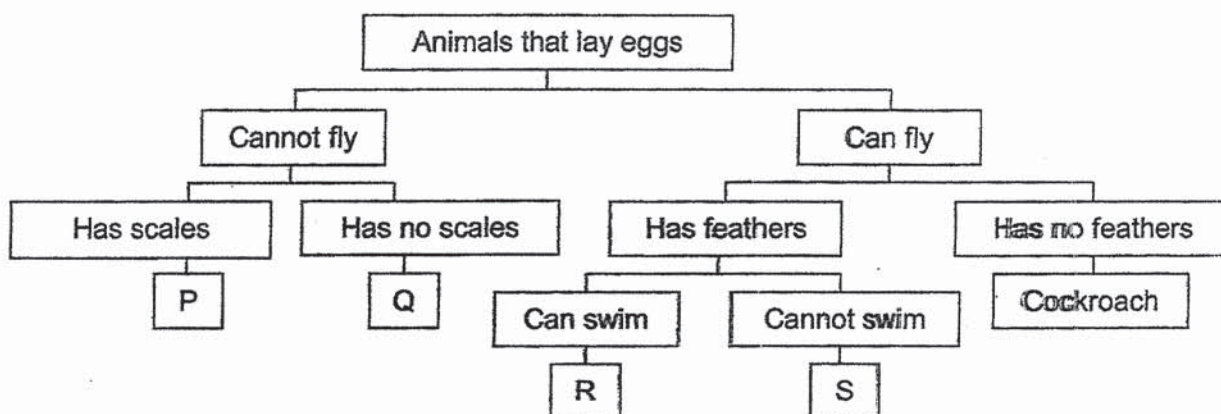
**End of Booklet A**

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

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.

29. Study the classification table.



(a) Based on the information given in the chart, state all the characteristics of a cockroach. [1]

\_\_\_\_\_

(b) Give an example of Animal P. [1]

\_\_\_\_\_

(c) Observe the swan carefully.



swan

[1]

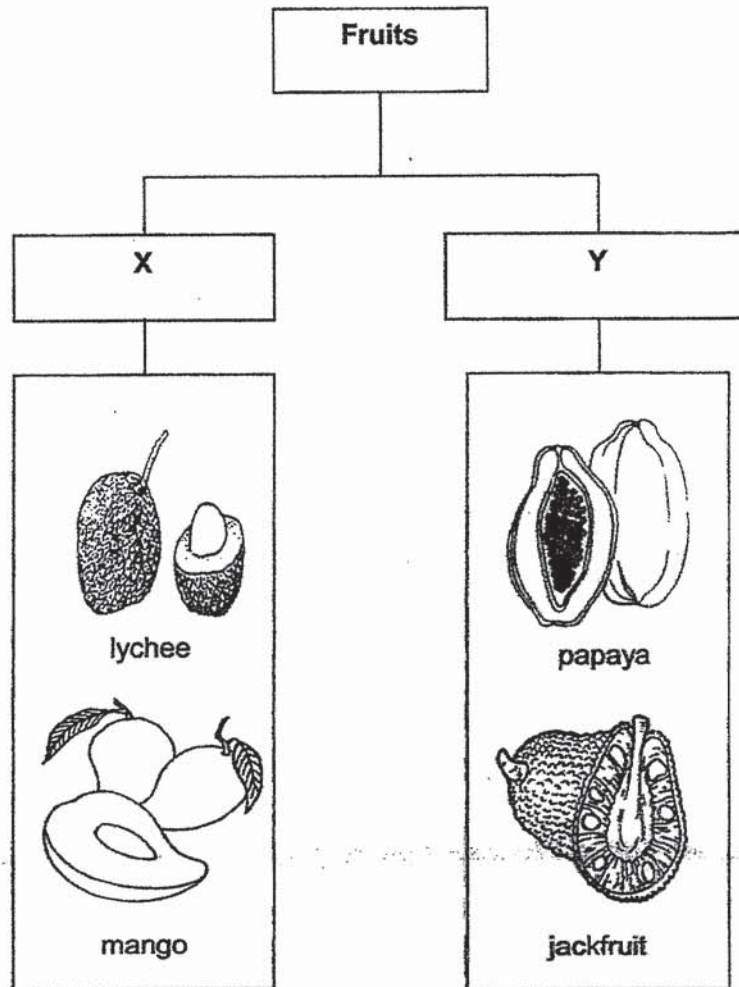
Which letter P, Q, R or S best represents a swan?

\_\_\_\_\_

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SCORE	3
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30. Four fruits are classified in the diagram below.



(a) Give suitable sub-headings for X and Y.

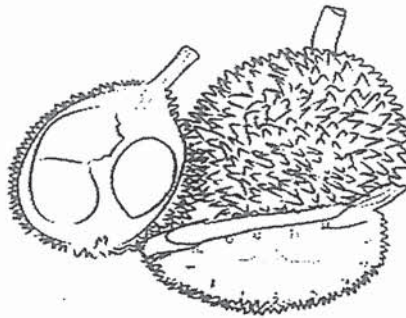
[1]

- i. X: \_\_\_\_\_
- ii. Y: \_\_\_\_\_

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SCORE	1
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The diagram shows Fruit Z.



Fruit Z

(b) Give a reason why Fruit Z **cannot** be classified under Group X.

[1]

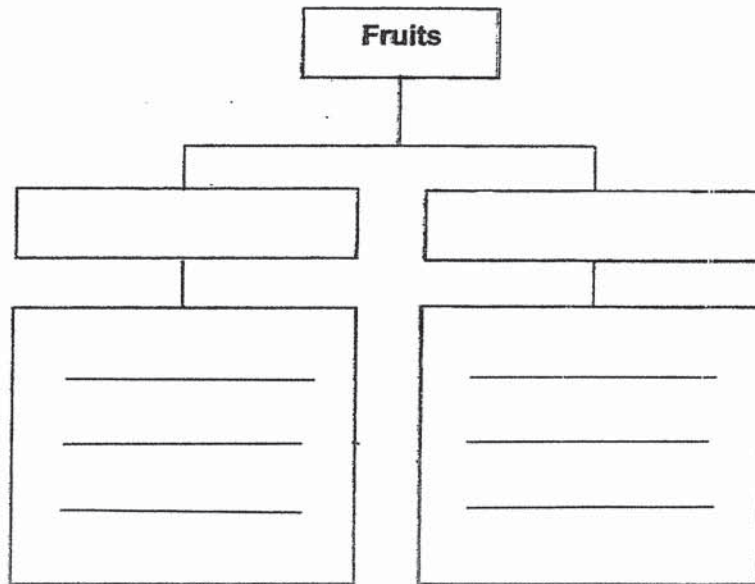
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(c) Classify the four fruits in part (a) and Fruit Z in part (b) in another way with new sub-headings in the table below. Do not compare shape, size or colour.

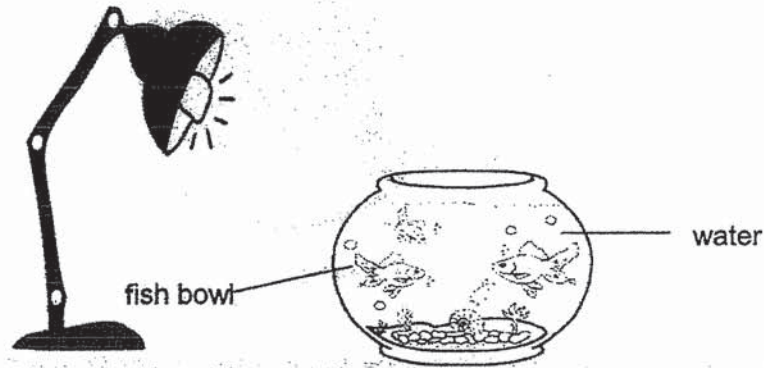
[1]



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SCORE	2
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31. Ivan bought three fishes and placed them in a fish bowl as shown. He fed them daily with some fish food. However, he noticed that the fishes kept swimming near the surface of the water.



- (a) Explain why the fishes were swimming near the surface of the water. [1]

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- (b) Suggest what Ivan could do to reduce the need for the fishes to swim near the surface of the water. [1]

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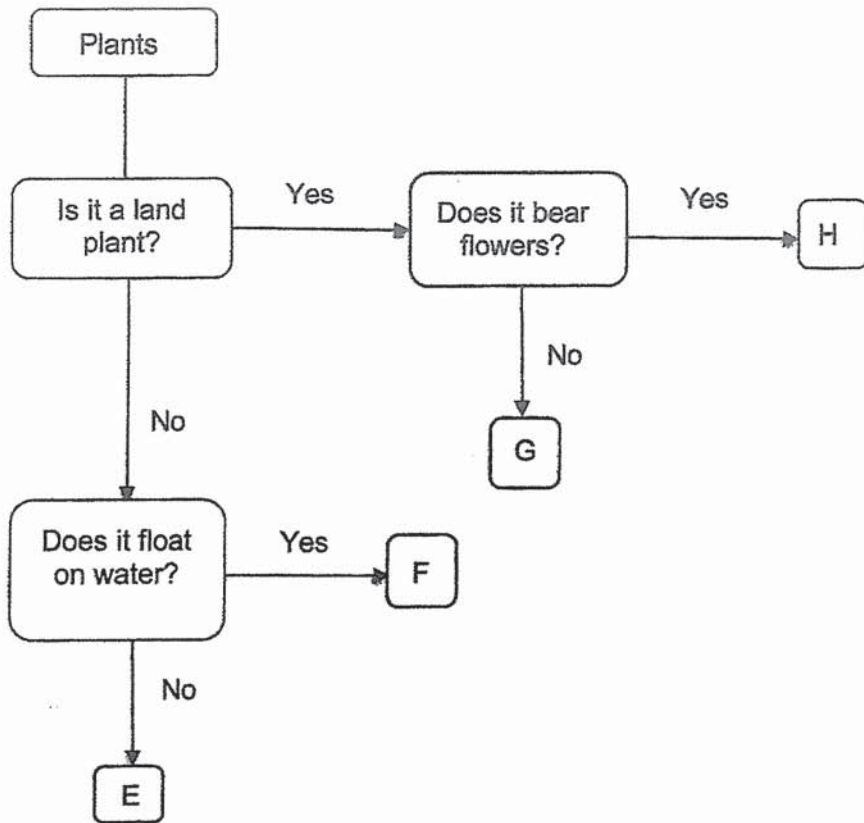
- (c) After three weeks, Ivan noticed that there were six fishes in his fish bowl although he did not add any more fishes to the bowl. Which characteristic of living things does this show? [1]

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SCORE	3
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32. Study the flowchart.



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

[1]

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

[1]

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(c) Which plant, E, F, G or H, most likely reproduces by spores?

[1]

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(d) Give an example of plant H.

[1]

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SCORE	4
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33. The table shows how animals have been classified into four groups, A, B, C and D, based on some characteristics.

Animals			
A	B	C	D
swordtail	toad	turtle	moth
clownfish	salamander	lizard	bee

- (a) List two characteristics that are unique only to animals in group D. [1]

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Study the four animals shown.



beetle



shark



snake



frog

- (b) Classify these four animals into the four groups, A, B, C and D, by writing their names in the table in part (a) above. [1]
- (c) Compare a similarity and a difference of the characteristics of animals in groups B and C. [2]

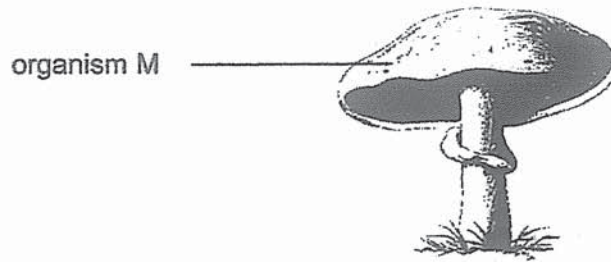
Similarity: \_\_\_\_\_  
 \_\_\_\_\_

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

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SCORE	4
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34. Ali saw organism M in the field and took a picture of it.



- (a) Which group of living things does organism M belong to? [1]

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Study the pictures.



- (b) How do the fern and the mould reproduce? [1]

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- (c) State a difference in the way the fern and the mould obtain food. [1]

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SCORE	5
	3

35. Tanks were used to be made of glass. However, in recent years they are also made of plastic. The tank shown is used for keeping live plants and animals.



- (a) State two properties of plastic that make them suitable for making this tank. [2]

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- (b) Explain why metal should not be used to make the tank. [1]

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- (c) The mesh wire was used as a cover for the tank to prevent the lizard from escaping the tank. Give another reason why the mesh wire was used [1]

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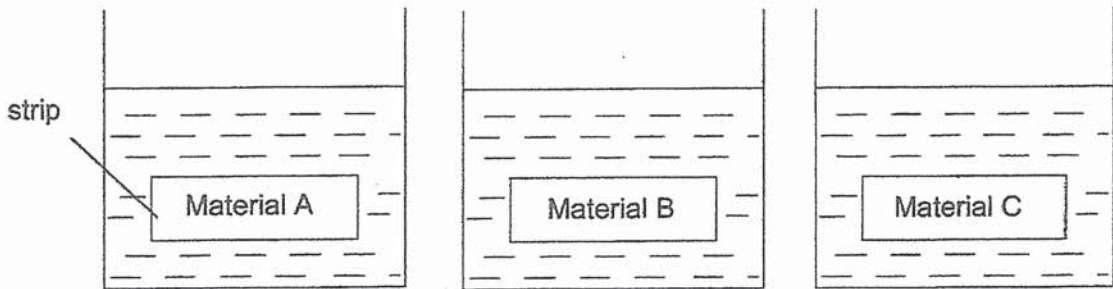


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SCORE	4
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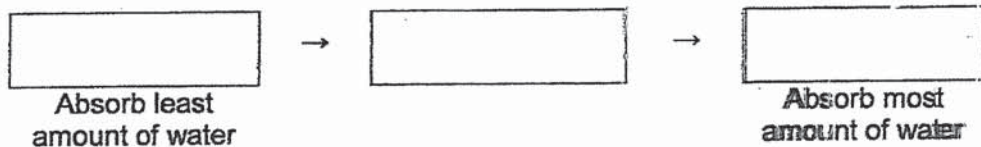
36. Jane placed three identical sized strips made of different materials, A, B and C, into each beaker of water as shown.



After 10 minutes, she removed the strips and measured the volume of water left in each beaker.

Material	A	B	C
Volume of water at the start (ml)	100	100	100
Volume of water after 10 minutes (ml)	76	54	98

- (a) Rank materials A, B and C, according to how absorbent they are, beginning with the one that absorbs the least amount of water. [1]



- (b) Which material, A, B or C, is most suitable to make a towel? Explain your answer. [1]

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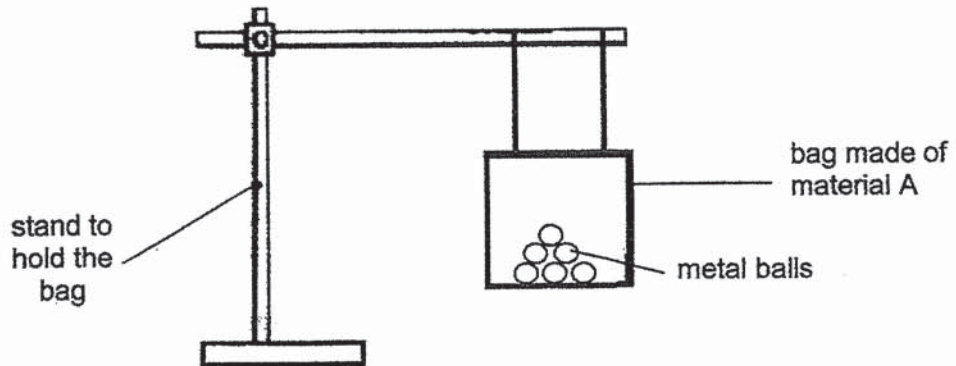


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SCORE	2
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Jane set up another experiment as shown with material A. She kept placing metal balls into the bag until the bag broke. She then repeated the experiment using bags made of materials B and C.



(c) Based on this experiment, which property of materials was she testing?

[1]

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SCORE	1
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37. Mrs Ng used a fork to smash four slices of banana of the same size for her baby to eat as shown.



- (a) Which part of the mouth has a similar function to the fork? Explain your answer. [1]

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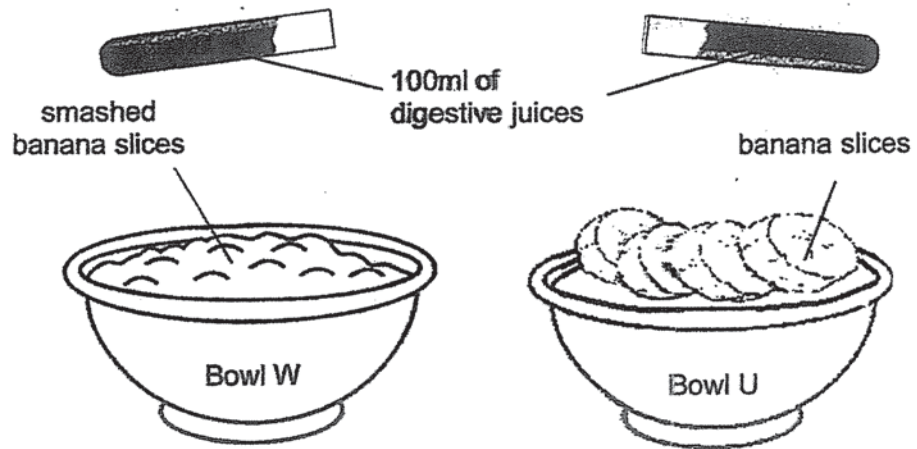


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- (b) State all the parts of the digestive system where digestive juice are produced. [1]

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Mrs Ng decided to conduct an experiment. She added 100ml of digestive juices into Bowls W and U as shown.



- (c) Which bowl of bananas, W or U, would the bananas digest faster after an hour? Explain your answer. [1]

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

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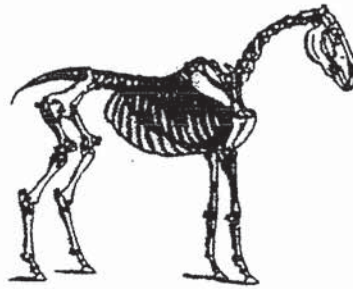


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SCORE	/
	4

38. The picture shows an animal body system that is similar to a human body system.



- (a) Which body system does the picture show? [1]

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- (b) State two functions of the body system mentioned in (a). [2]

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39. John left four similar potted plants, P, Q, R and S, in the Sun for different number of hours each day and watered them daily. He recorded the height of the plants after two weeks in a table.

Plants	P	Q	R	S
Number of hours each plant is in the Sun each day (hours)	1	3	5	7
Height of plant after two weeks (cm)	6	10	?	16

- (a) What was the aim of John's experiment? [1]

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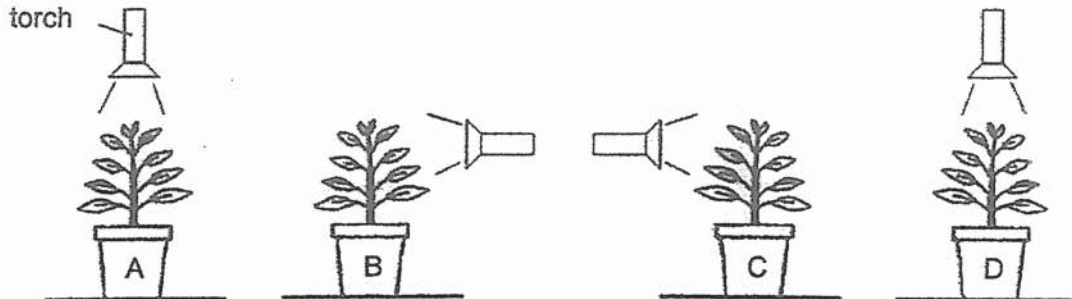
- (b) Predict the height of plant R after two weeks. [1]

Height of plant R: \_\_\_\_\_ cm

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SCORE	
	5

John decided to carry out another experiment with plants, A, B, C and D by shining light from a torch for different number of hours each day. He placed all the plants in a dark room but the torch was placed at different positions for each plant as shown.



He then recorded the heights of plants, A, B, C and D, after two weeks in another table below.

Plants	A	B	C	D
Number of hours he shone the torch on the plant each day (hours)	1	3	5	7
Height of plant after two weeks (cm)	7	7	13	13

- (c) His mother told him that his experiment was not a fair test. State one change he should make to the set-ups to make it a fair test. [1]

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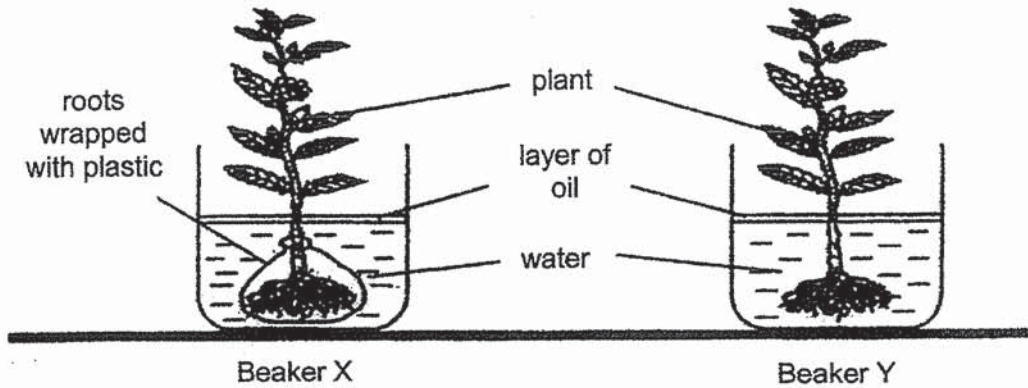


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SCORE	1
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40. Sarah used two identical plants to set up the experiment shown.



She left both beakers near a window for three days. After three days, she recorded the amount of water left in both beakers.

(a) How will the water level in each beaker change after three days? Circle the correct answer and explain your answer. [2]

Beaker	Water Level (circle the correct answer)	Explanation
X	increase / remain the same / decrease	_____ _____ _____
Y	increase / remain the same / decrease	_____ _____ _____

(b) State two variables that Sarah has to keep constant to ensure that the above experiment is a fair test. [1]

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

(c) Sarah wanted to find out if plants need sunlight to make food instead. What change(s) should she make to the set-up above? [1]

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

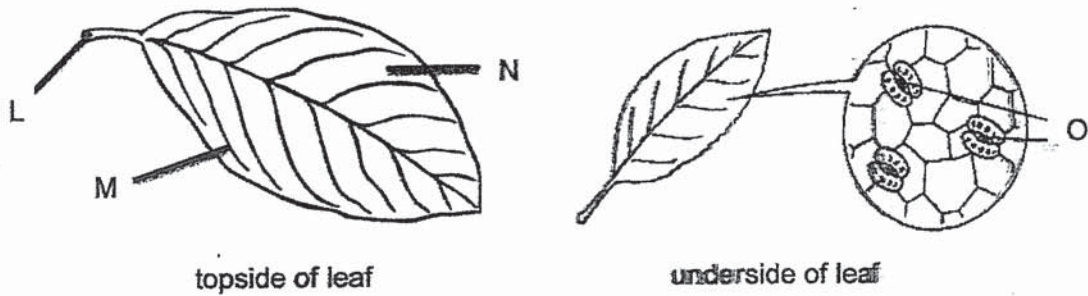
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SCORE	4
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41. Mr Tan had a potted plant in his garden as shown.



He plucked out one of the leaves and observed it.



(a) Name parts L, M, N and O.

[2]

L: \_\_\_\_\_

M: \_\_\_\_\_

N: \_\_\_\_\_

O: \_\_\_\_\_

(b) He decided to paint the underside of all the leaves of the plant with black paint and observed what happens after a week. He continued to water the plant daily.

After a week, Mr Tan observed that his plant had died. Explain why it died.

[1]

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End of Paper

SCORE	3



## ANSWER KEY

**YEAR : 2021**  
**LEVEL : Primary 3**  
**SCHOOL : Anglo-Chinese School(Junior)**  
**SUBJECT : SCIENCE**  
**TERM : SA2**

### BOOKLET A

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

### BOOKLET B

Q29	(a) The cockroach lay eggs, can fly and has no feathers. (b) clownfish (c) R			
Q30	(a)(i) X : one seed (ii) Y : many seed (b) It has many seeds. (c)			
	Smooth skin	Rough skin		
	papaya mango	Fruit Z jackfruit lychee		
Q31	(a) They wanted to get more air. (b) Add an air pump. (c) Living things can reproduce.			
Q32	(a) Plant G and H are land plants. (b) Plant E does not float on water while plant F floats on water. (c) G (d) mango plant			
Q33	(a) Group D has three body parts and six legs. (b)			
	A	B	C	D
	Shark	frog	snake	beetle

	(c) Similarity : They both reproduce by laying eggs. Difference : Group B has moist skin while group C has scaly skin.																		
Q34	(a) fungi (b) The fern and mould reproduce by spores. (c) The fern makes its own food while mould feeds on other living or non living thing.																		
Q35	(a) Plastic is transparent and it does not break easily. (b) Metal is not transparent. (c) It allows air into the tank.																		
Q36	(a) $C \rightarrow A \rightarrow B$ (b) C. It absorbs the most amount of water. (c) strength																		
Q37	(a) Teeth. The teeth smashes the food into smaller pieces. (b) mouth, stomach, small intestine (c) Bowl W. It is smashed into smaller pieces compared to those in Bowl U. (d) It passes through the walls of the small intestine into the bloodstream.																		
Q38	(a) Skeletal system (b) It supports the body and gives the body its shape.																		
Q39	(a) To find out whether the amount of light affected the growth of the plant. (b) 13cm (c) He should put the torch in the same position.																		
Q40	<table border="1"> <tr> <td>(a)</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Beaker</td> <td>Water Level</td> <td>Explanation</td> </tr> <tr> <td></td> <td>X</td> <td>Remain the same</td> <td>The roots cannot absorb the water because of the plastic bag.</td> </tr> <tr> <td></td> <td>Y</td> <td>decrease</td> <td>The plants root will absorb the water.</td> </tr> </table> <p>(b) The same layer of oil and the same amount of water. (c) Remove the plastic wrapping from Set-up X and put one of the setup in a dark box with no opening and put the other one in a garden.</p>			(a)					Beaker	Water Level	Explanation		X	Remain the same	The roots cannot absorb the water because of the plastic bag.		Y	decrease	The plants root will absorb the water.
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	Beaker	Water Level	Explanation																
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Q41	(a) L : leaf stalk M : vein N : leaf blade O : Stomata (b) The leaf could not take in gases and remove gases.																		