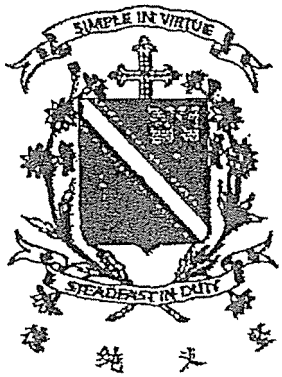
Name: _____( )

Class: Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3

SCIENCE

BOOKLET A

Total Time for Booklets A and B: 1 hour 30 minutes

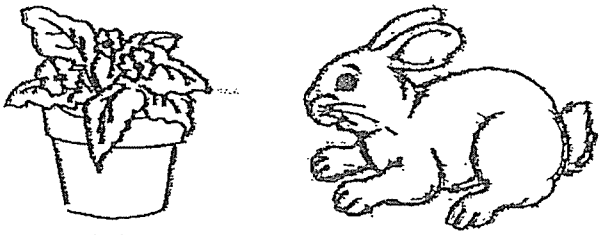
24 questions
48 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

This booklet consists of 15 printed pages.

Section A (24 x 2 marks = 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). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

1. The diagram below shows two living things.



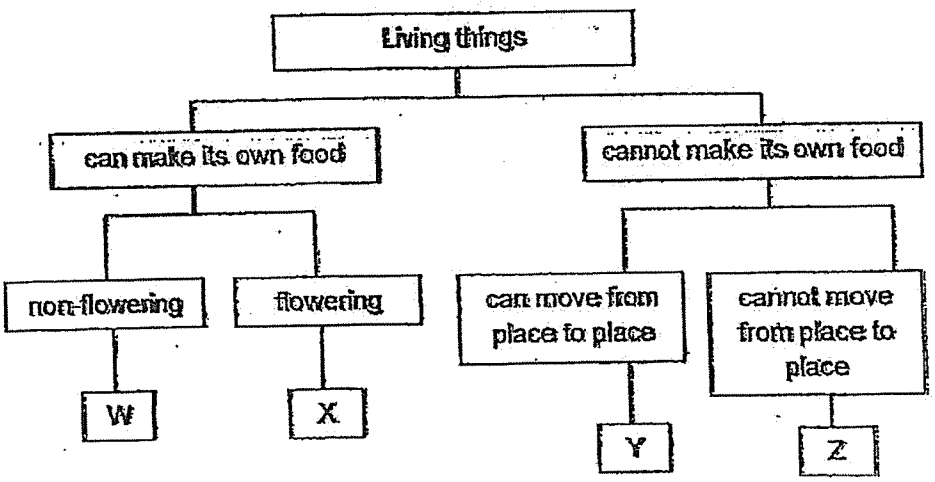
potted plant rabbit

Which of the following statements about the two living things are true?

A Both can grow.
B Both can reproduce.
C Both can respond to changes.
D Both can make their own food.

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

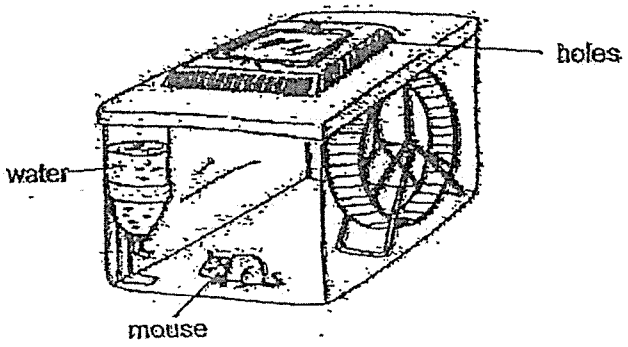
2. Study the classification chart below.



Based on the classification chart above, which letter W, X, Y or Z best represents bread mould?

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

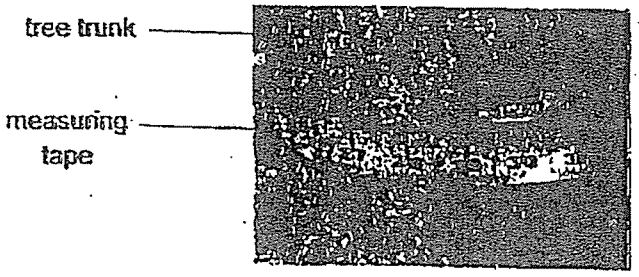
3. Joe decided to keep his pet mouse in a cage shown below.



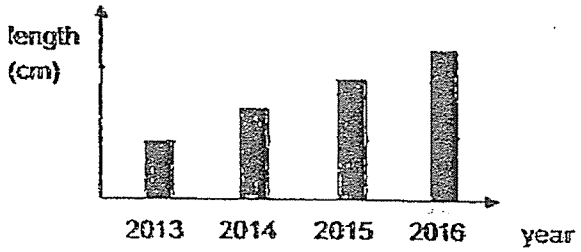
What should he do to help the mouse to stay alive?

(1) Give the mouse some air.
(2) Put some food in the cage.
(3) Add more water in the cage.
(4) Place a few more mice in the cage.

4. Jack measured the size of a tree trunk in his garden shown below.



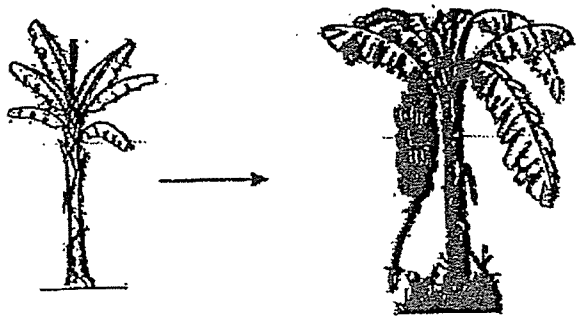
He recorded his results in the bar graph below.



What can he conclude from his results?

(1) The tree has grown.
(2) The tree has reproduced.
(3) The tree has produced flowers.
(4) The tree has responded to changes.

5. Sue observed the changes of a plant in her garden over a few years.

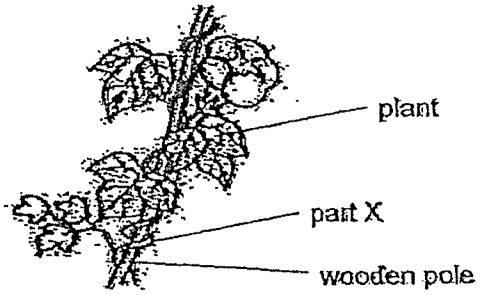


young plant adult plant

Based only on the diagram above, which one of the following statements is not true?

(1) It is a flowering plant.
(2) It can make its own food.
(3) It reproduces from spores.
(4) It produces fruits when it becomes an adult.

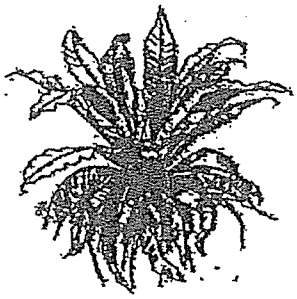
6. The diagram below shows a plant growing around a wooden pole.



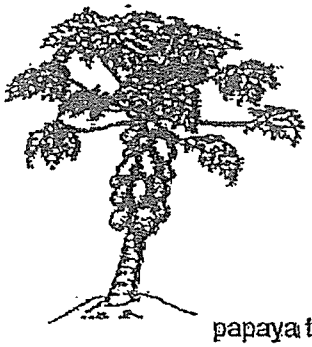
What is the function of part X?

(1) To support the stem
(2) To make food for the plant
(3) To absorb water and minerals
(4) To hold the leaves up so that they can get sunlight

7. Study the living things below.



fern



papaya tree

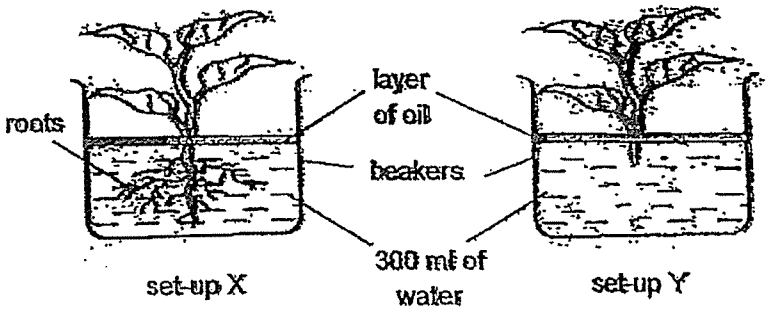
Three pupils Ali, Ben and Cindy made the following statements about the two living things shown above.

Ali:	They can make their own food.
Ben:	They have roots, stems and leaves.
Cindy:	They do not produce flowers.

Which of the pupils have made the correct statements?

(1) Ali and Ben only
(2) Ali and Cindy only
(3) Ben and Cindy only
(4) Ali, Ben and Cindy

8. Mary carried out an experiment using two similar plants shown below. The plant in set-up Y has its roots removed.



After two days, she recorded her observations in the table below.

Set-up	Amount of water left in the beaker (ml)
X	250
Y	300

What does she want to find out from her experiment?

(1) To find out if roots take in water.
(2) To find out if leaves can make food.
(3) To find out if plants need water to survive.
(4) To find out if the stem is a weak stem or a strong stem.

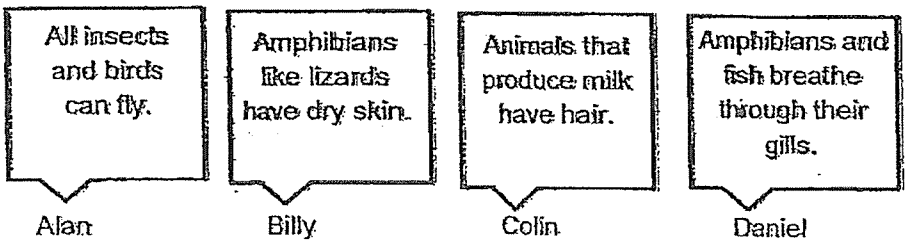
9. Max conducted an experiment. He removed only the leaves of a plant shown below. He watered the plant daily.
After a week, he observed that the plant had wilted and died.

Which of the following statement(s) best explain(s) why the plant died?

A The stem did not have any support.
B The plant was not able to make food.
C The plant was not able to absorb water.

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

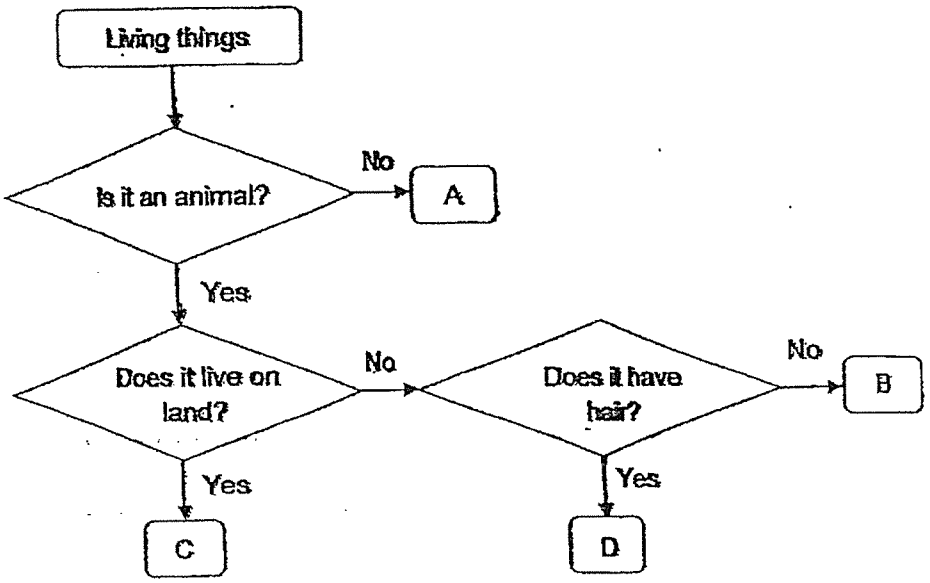
10. Four pupils Alan, Billy, Colin and Daniel made some statements about some animal groups.



Which one of the following pupils has made a correct statement?

(1) Alan
(2) Billy
(3) Colin
(4) Daniel

11. Study the flow chart below.



Based on the flow chart above, which letter A, B, C or D best represents a seal?

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

12. The table below shows how some animals can be grouped.

X	Y
tilapia pelican beetles	orang-utan elephant bat

Which of the following are suitable headings for group X and Y?

	X	Y
(1)	Can fly	Cannot fly
(2)	Lay eggs	Gives birth to the young
(3)	Live on land	Live in water
(4)	Have three body parts	Have two body parts

13. Sandy placed four similar slices of bread A, B, C and D into four similar boxes which were at different temperatures. She observed the growth of bread mould on the four slices of bread over a period of time.

She recorded her observations in the table below.

Bread	Amount of water added (ml)	Temperature in the box (°C)	Number of the days for bread mould to appear on the bread
A	8 ml	5	12
B	8 ml	10	?
C	8 ml	20	7
D	8 ml	30	4

Based on the table above, how many days would it take for the bread mould to appear on bread B?

(1) 4
(2) 6
(3) 9
(4) 13

14. Jeremy recorded his observations of organism P in the box below.

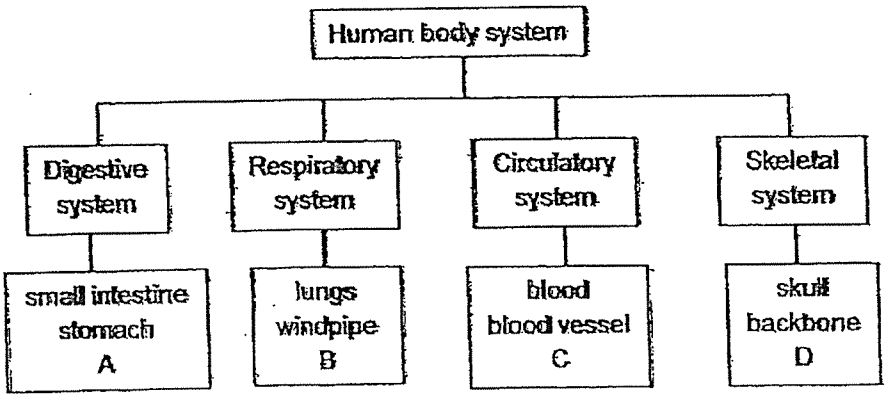
It cannot make its own food.
It can be useful or harmful to humans.
It can only be seen under a microscope.

Based on Jeremy's observations, which of the following best represents organism P?

A bacteria
B mushroom
C bracket fungi

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

15. Study the classification chart below carefully.



Which of the following is best represented by letters A, B, C and D?

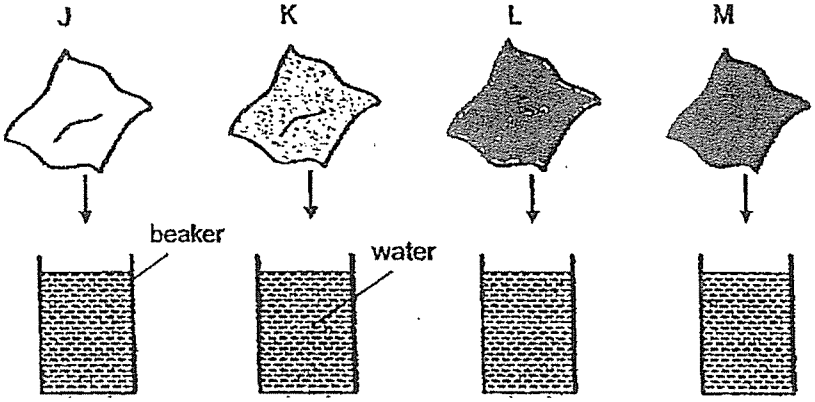
	A	B	C	D
(1)	large intestine	gullet	ribcage	muscles
(2)	mouth	nose	heart	ribcage
(3)	gullet	mouth	muscles	large intestine
(4)	anus	mouth	nose	ribcage

16. Which two systems work together to deliver oxygen to all parts of the body?

A Respiratory system
B Circulatory system
C Digestive system
D Skeletal system

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

17. Alvin placed four different materials J, K, L and M of the same size and thickness into four beakers containing equal amounts of water.



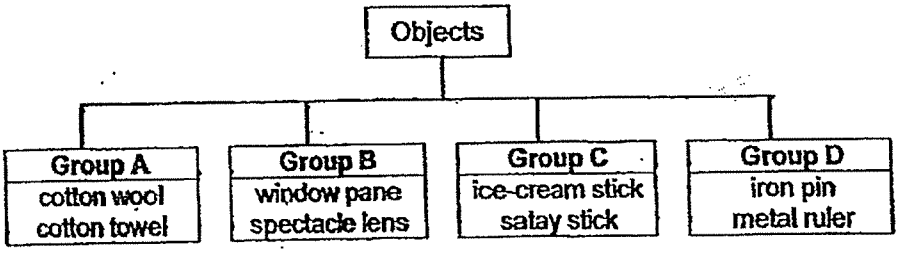
After ten minutes, the materials were taken out of the water and weighed. The results are recorded in the table below.

Material	Mass at the start (g)	Mass after 10 minutes (g)
J	10	16
K	10	30
L	10	20
M	10	35

Which material J, K, L or M is most suitable for making a bath towel?

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

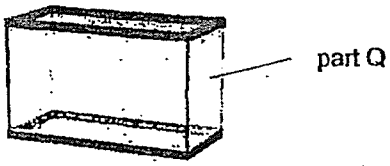
18. Study the classification chart below.



Based on the chart above, how were the objects grouped?

(1) By their size
(2) By their transparency
(3) By how they are used
(4) By the material they are made of

19. The diagram below shows a fish tank.



fish tank

Which of the following properties should the material used for part Q of the fish tank have?

A Flexible
B Waterproof
C Transparent
D Able to float on water

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

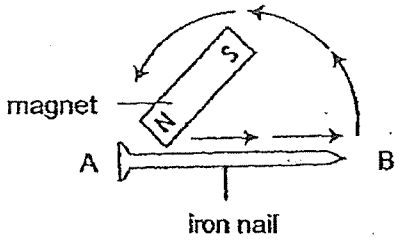
20. Wendy carried out an experiment using four bags A, B, C and D made of different materials. She put apples, one at a time, into each bag until it began to tear. She recorded her observations in the table below.

Bag	Number of apples in the bag before it began to tear
A	10
B	7
C	13
D	5

Based on the results in the table, what does she want to find out from her experiment?

(1) To find out which bag is waterproof.
(2) To find out which bag is the strongest.
(3) To find out which bag is the most flexible.
(4) To find out which bag allows light to pass through.

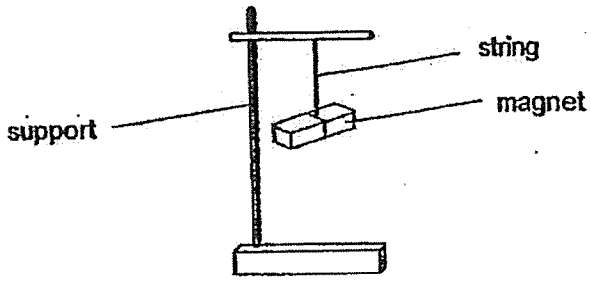
21. Kasper tried to magnetise an iron nail with a magnet using the stroke method in the direction shown below. After stroking the iron nail 15 times, the iron nail attracted three steel pins.



He repeated the experiment with another similar iron nail. What should he do if he wants to attract more than three steel pins?

(1) Stroke the iron nail using the same pole less than 15 times.
(2) Stroke the iron nail using the same pole more than 15 times.
(3) Stroke the iron nail using the same pole 15 times at a faster speed.
(4) Stroke the iron nail using both poles of the magnet for 15 times each.

22. The diagram below shows a freely suspended magnet.

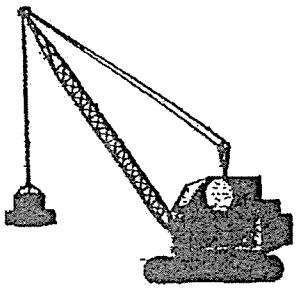


In which direction will a freely suspended magnet point?

(1) East-West direction
(2) South-East direction
(3) West-North direction
(4) North-South direction

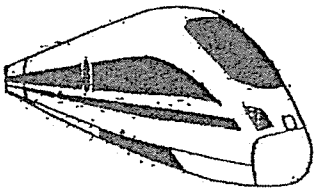
23. Study the pictures below. Which of the objects below is **not** a use of electromagnets?

(1)



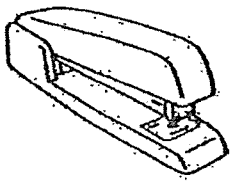
scrap iron crane

(2)



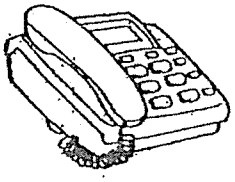
maglev train

(3)



stapler

(4)



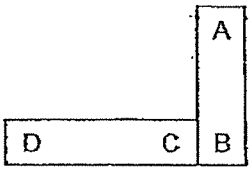
telephone

24. Two bar magnets AB and CD can be arranged as shown below.

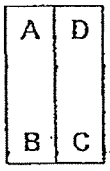
Which of the following arrangements of the magnets is not possible?

(1)

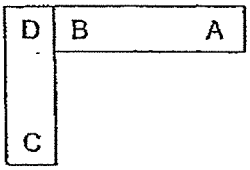
(2)



(3)



(4)



End of Section A

Name : _____( )

Class : Primary 3_____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Primary 3

SCIENCE

BOOKLET B

Booklet A	48
Booklet B	32
Total	80

Total Time for Booklets A and B: 1 hour 30 minutes

10 questions
32 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

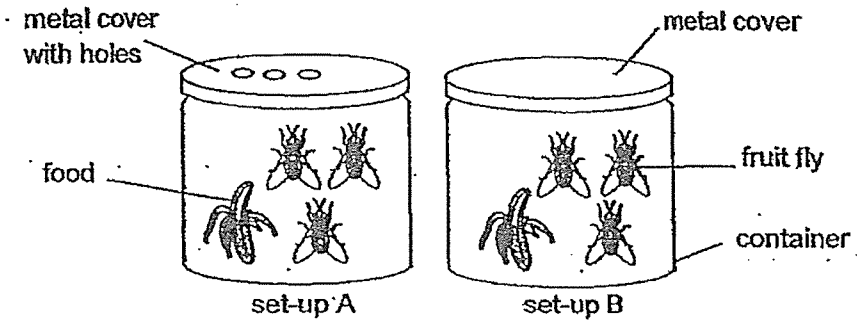
This paper consists of 10 printed pages.

_____

Parent's Signature/Date

Section B (32 marks)
For questions 25 to 34, write your answers in this booklet. The number of marks available is shown in the brackets [ ] at the end of each question or part question.

25. Jane set up an experiment as shown below. She observed that the fruit flies in set-up B died after two days while the fruit flies in set-up A were still alive.

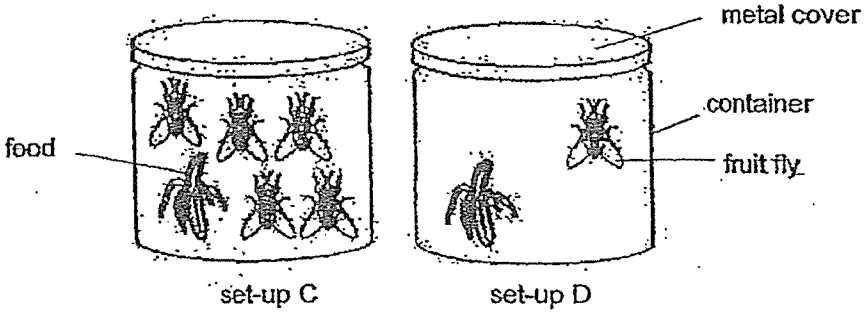


(a) What does Jane want to find out from this experiment? [1]

_____

_____

Jane conducted another experiment as shown below.

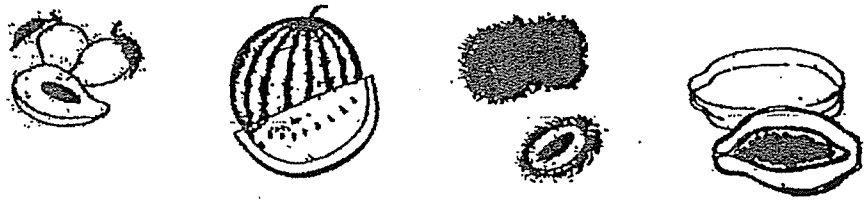


(b) In which set-up will the fruit fly/flies live longer? Explain your answer. [2]

_____

_____

26. Viknesh bought some fruits as shown below.



A B C D

(a) Classify the fruits by writing the letters A, B, C and D in the table below. [1]

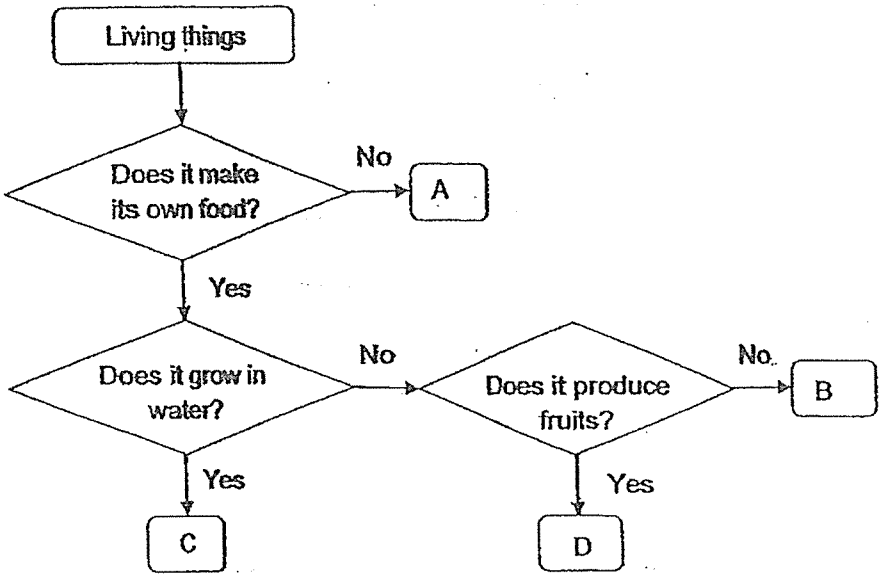
One seed	Many seeds

(b) Based on the diagram above, state a difference in the texture of the skin of fruit B and C. [1]

_____

_____

27. The flow chart below shows the classification of four organisms A, B, C and D.



(a) Based on the flow chart above, put a tick (✓) in the boxes below to show the characteristics that organisms C and D have. [2]

Organism	Produce fruits	Makes food	Grow in water
C			
D			

(b) Based on the flow chart above, state a difference between organism A and B. [1]

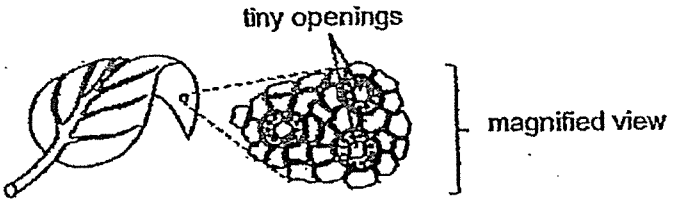
_____

_____

28. Study the roots of trees X and Y as shown below.

(a) During a storm, which tree X or Y will more likely be uprooted? Explain your answer. [2]

The diagram below shows some tiny openings on a leaf using a microscope.

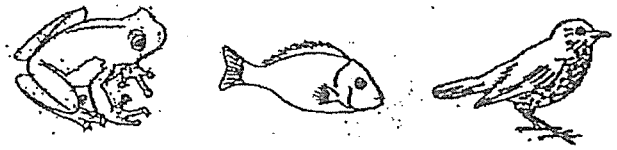


(b) State the function of the tiny openings. [1]

Look at the leaf shown below.

(c) The leaf is observed to have its leaflets spread out without overlapping. Explain how this arrangement of the leaflets help the plant to survive. [1]

29. Look at the animals R, S and T below.



R S T

(a) State one difference in the breathing method of animals R and S in the water. [1]

_____

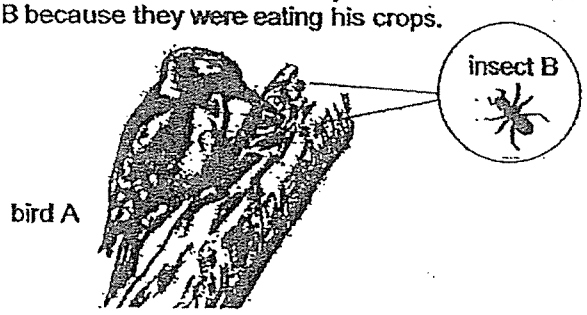
_____

(b) State one similarity in the reproduction method of animals R and T. [1]

_____

_____

The diagram below shows bird A. It feeds only on insect B. Farmer Suresh killed many insect B because they were eating his crops.

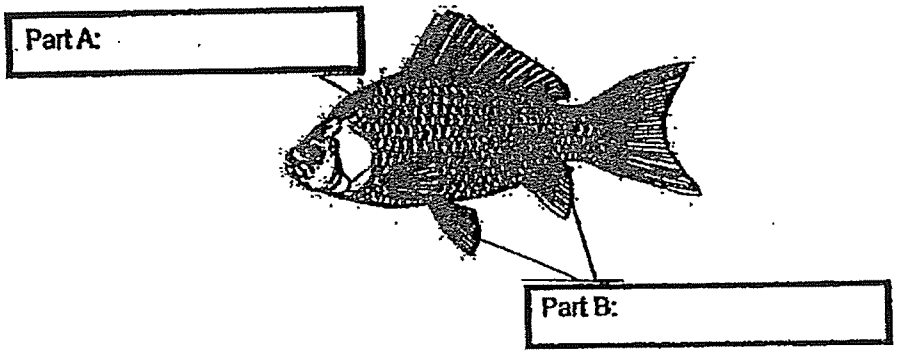


(c) After a few days, farmer Suresh observed that many bird A also died. Give a reason for his observation. [1]

_____

_____

30. The diagram below shows a fish.



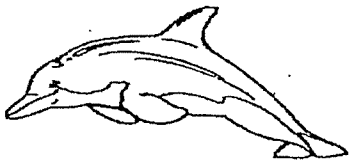
(a) Label the parts of the fish by writing in the boxes provided above. [1]

(b) State the function of part B of the fish. [1]

_____

_____

The diagram below shows a dolphin.



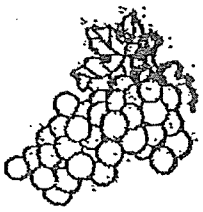
(c) Which animal group does the dolphin belong to? Give a reason for your answer. [2]

_____

_____

31. The diagram below shows some fruits.

dried fruit



fresh fruit

(a) Explain why the dried fruit will not become mouldy as easily as the fresh fruit. [1]

_____

_____

(b) Gary bought some fish from the market. Suggest one possible action Gary can take to prevent the fish from turning bad quickly. Give an explanation for your answer. [2]

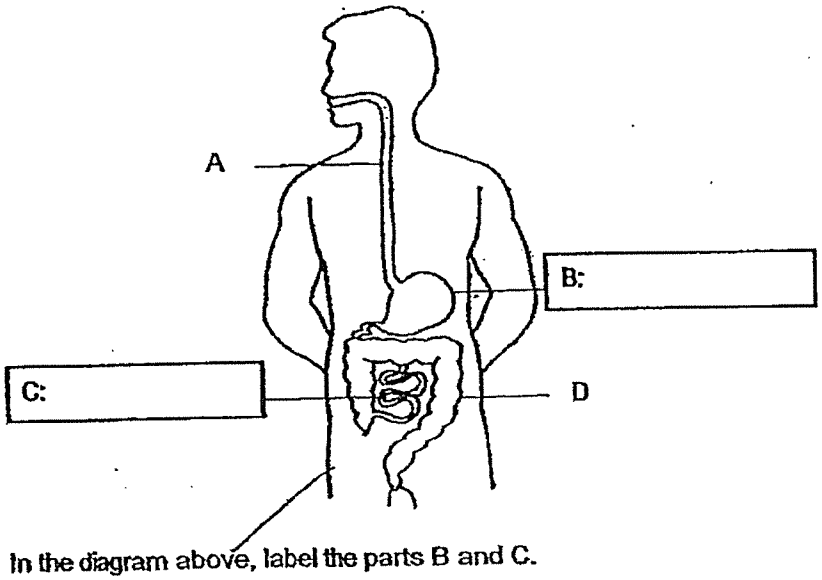
Action: _____

_____

Explanation: _____

_____

32. The diagram below shows the human digestive system.



(a) In the diagram above, label the parts B and C. [1]

(b) Put a tick (✓) in the table below to show whether digestion takes place at the parts A, B, C and/or D. [1]

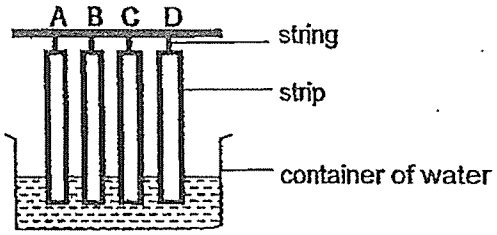
Part	Digestion takes place (✓)
A	
B	
C	
D	

(c) State the difference in the substances absorbed by part C and part D. [1]

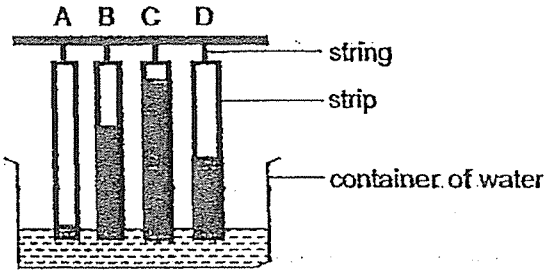
_____

_____

33. Jordan conducted an experiment to measure the amount of water absorbed by four different materials A, B, C and D. The four strips were of the same size and thickness. He dipped them into a container of water as shown below.



After ten minutes, he observed that the water had risen to different levels along the four strips of materials as shown below. The shaded part on the strips shows the absorption of water by the four strips of materials.

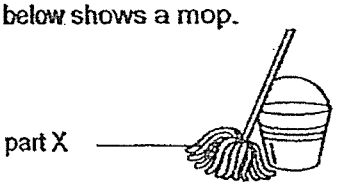


(a) Based on the results shown above, arrange the materials A, B, C and D according to the amount of water it can absorb. [1]

_____, _____, _____, _____

absorbs the least water — absorbs the most water

The diagram below shows a mop.

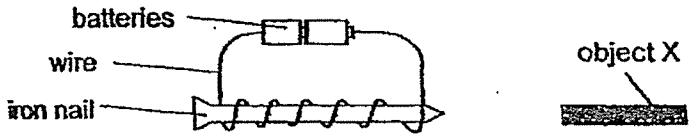


(b) Based on the results above, which material A, B, C or D is most suitable for making part X of the mop? Explain your answer. [2]

_____

_____

34. Shawn set up an electromagnet as shown below. When object X is brought near the iron nail, object X moved closer to the iron nail.



(a) Shawn concluded that object X is a magnet but his friend said that object X may not be a magnet. Give a reason why. [1]

_____

_____

(b) What can Shawn's friend do to show that object X is a magnet? [1]

_____

_____

Shawn carried out another experiment by changing the number of batteries attached to the electromagnet. He placed the electromagnet near some steel pins and recorded his observations in the table below.

Number of batteries	Number of steel pins attracted
2	4
3	6
4	8
5	10

(c) Based on the results above, tick (✓) to indicate if the statement(s) is/are true in the table below. [1]

	Statements	True
(i)	When the number of batteries increase, the number of steel pins attracted increase.	
(ii)	When the number of batteries increase, the number of steel pins attracted decrease.	
(iii)	When the number of batteries increase, the number of steel pins attracted remain the same.	

(d) Shawn replaced the steel pins with copper pins. He observed that no copper pins were attracted by the electromagnet. Give a reason for his observation. [1]

_____

_____

End of Booklet B

SCHOOL : CHIJ ST NICHOLAS GIRLS'
LEVEL : PRIMARY 3
SUBJECT : SCIENCE
TERM : 2023

BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	4	2	1	3	4	1	1	2	3
Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
4	2	3	1	2	1	4	4	2	2
Q 21	Q22	Q23	Q24						
2	4	3	4						

BOOKLET B

Q25)

(a) She wants to find out if living things need air to survive.
(b) The fruit fly in Set-up D will live longer. There is more air inset-up D for the fruit fly. Hence less competition for air.

Q26)

(a) One seed → A, C
Many seeds → B, D
(b) Fruit B has a smooth skin while fruit C has hairy skin.

Q27)

(a)

Organism	Produce fruits	Makes food	Grow in water
C		√	√
D	√	√	

(b) Organism A does not make its own food while organism B makes its own food.

Q28)

(a) Tree Y. The roots of tree Y are shorter so the roots cannot hold the tree firmly to the ground.
(b) The tiny openings allow the exchange of gases in its surroundings.
(c) The arrangement of the leaflets allows the plant to trap more sunlight to make food.

Q29)	(a) Animal R breathes through moist skin while Animal S breathes through gills. (b) Both animal R and T reproduce by laying eggs. (c) Bird A did not have enough food to eat as insect B was its food.
Q30)	(a) Part A : scales Part B : Fins (b) Part B allows the fish to move in water by pushing it to move. (c) Mammals. When the dolphin is young, it has hair at the tip of its nose and when it gets older, they slowly drop off.
Q31)	(a) The dried fruit is dry and mould need water to survive. (b) Action : Put the fish in refrigerator Explanation : To reduce warmth
Q32)	(a) B : stomach C : small intestine (b) Tick B and C (c) Part C absorbs the digested food while Part D absorbs water from the undigested food.
Q33)	(a) A, D, B, C (b) C. C absorbs the most water so it can clean up the spillage on the floor more efficiently.
Q34)	(a) Object X could be a magnetic material. (b) Turn Object X around to see if the other pole repels the iron nail. (c) Tick option (i) (d) Copper is a non-magnetic material so it will not be attracted by the electromagnet.