

PRIMARY 3 SCIENCE
SEMESTRAL ASSESSMENT 1
2017

BOOKLET A

Date : 8th May 2017
Duration : 1 h 20 min

Name : _____ ()

Class: Primary 3 ()

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Booklet A consists of 15 printed pages including this cover page.

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. Amy, Ben, Clara and Daryl made the following statements about living things.

Amy	All living things can reproduce.
Ben	All living things need food to survive.
Clara	All living things can make their own food.
Daryl	All living things can move freely from one place to another.

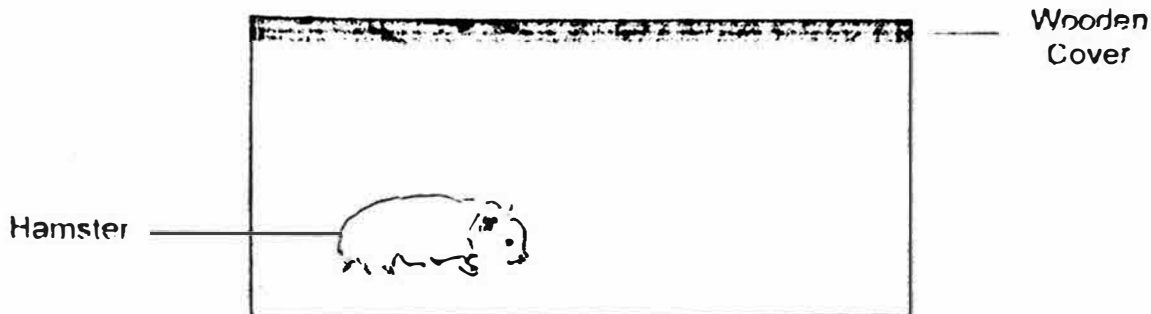
Who made the correct statement?

- | | |
|--------------------------|-------------------------------|
| (1) Amy and Ben only | (2) Amy, Ben and Daryl only |
| (3) Clara and Daryl only | (4) Amy, Ben, Clara and Daryl |
2. Which one of the following things in the table below was **wrongly classified?**

Things	
Living	Non-living
Fern Monkey Mushroom	Pencil Bacteria Computer

- | | |
|-----|----------|
| (1) | Fern |
| (2) | Pencil |
| (3) | Bacteria |
| (4) | Mushroom |

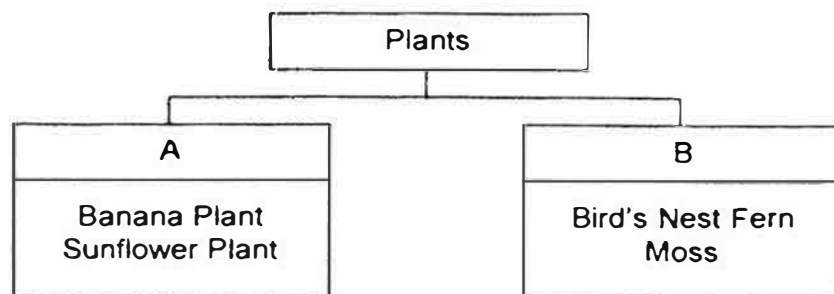
3. Nicole put a hamster in a covered box.



Which of the following must she do to make sure that the hamster stays alive for the longest period of time?

- A** Put a lamp in the box.
B Poke holes in the cover.
C Put a dish of food in the box.
D Put a dish of water in the box.
- (1) A and D only (2) B and C only
 (3) A, B and C only (4) B, C and D only

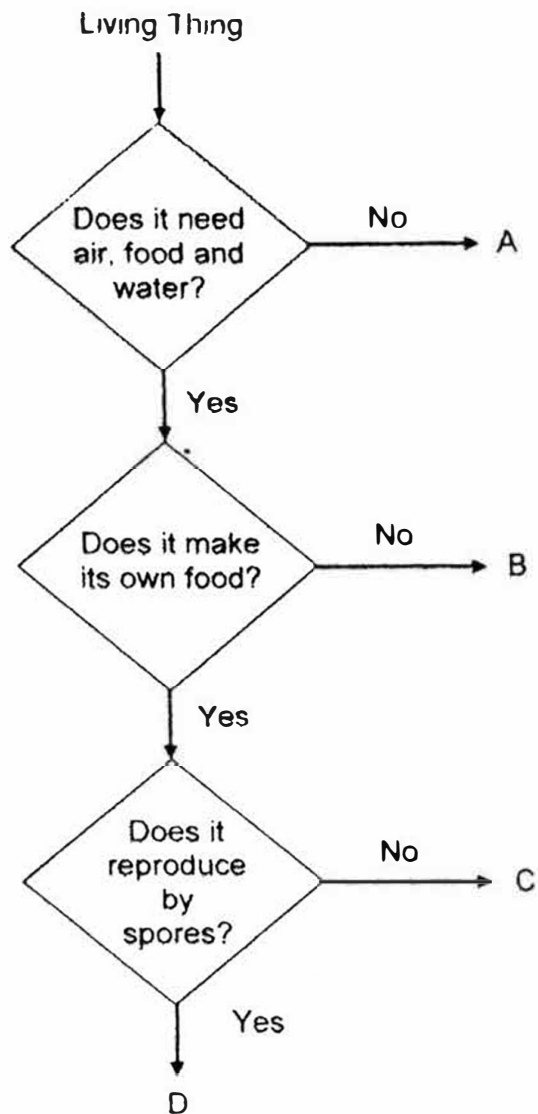
4. Study the classification chart below.



Which of the following are the correct headings to represent A and B?

	A	B
(1)	Flowering	Non-flowering
(2)	Have spores	Have no spores
(3)	Do not bear fruits	Bear fruits
(4)	Do not reproduce by seeds	Reproduce by seeds

5. Study the flowchart below.



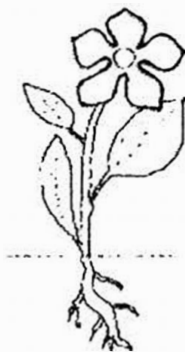
Based on the flowchart above, which one of the following best represents dragon scales fern?

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

6. Which one of the following statements about all flowering plants is true?

- (1) It produces fruits.
- (2) It reproduces by spores.
- (3) It cannot make its own food.
- (4) It produces flowers throughout the year.

7. The diagrams below show Plant X and Plant Y.



Plant X



Plant Y

Based only on the diagrams above, which of the following statements correctly state the similarities between Plant X and Plant Y?

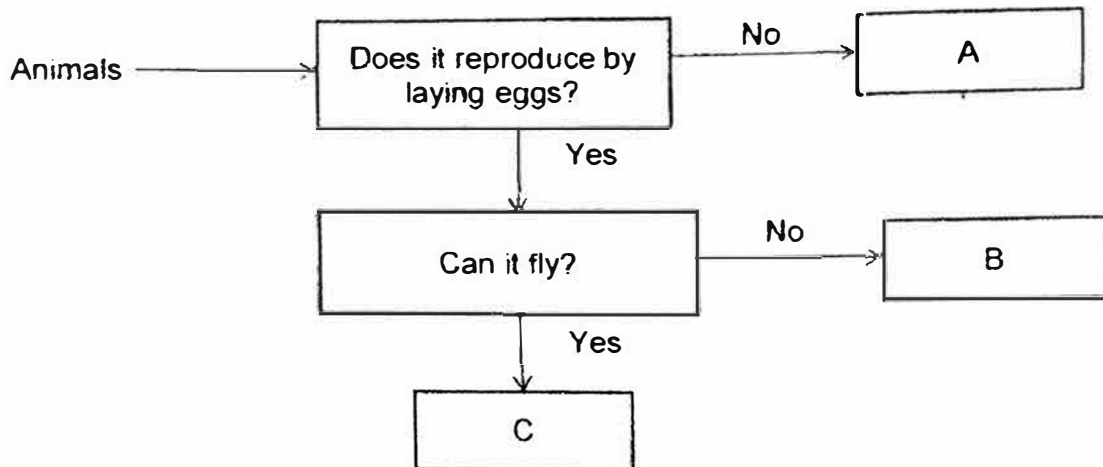
- A Both plants have roots.
- B Both plants have stems.
- C Both plants have leaves.
- D Both plants produce flowers.

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

8. Which of the following statements is **true** about **all** plants?

- (1) All plants can grow on land.
- (2) All plants cannot make their own food.
- (3) All plants can produce flowers and fruits.
- (4) All plants cannot move from place to place on their own.

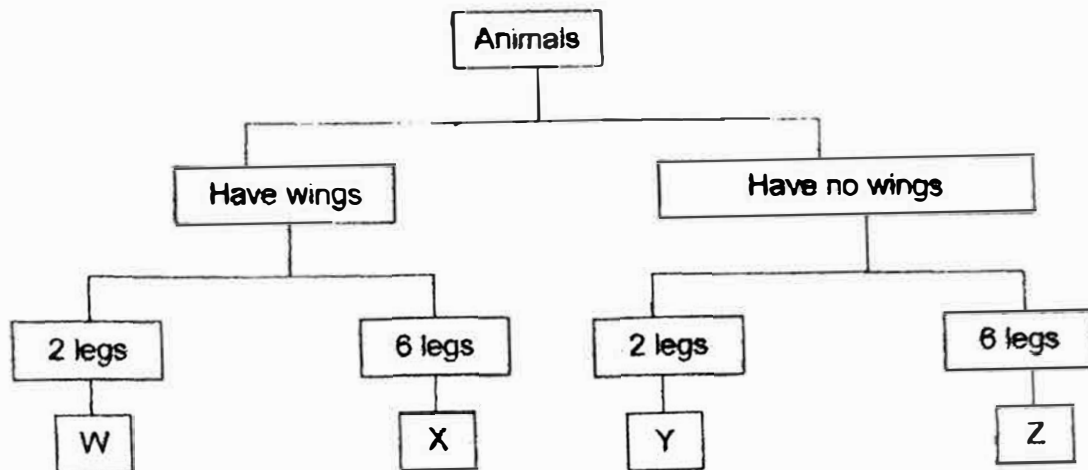
9. Study the chart below.



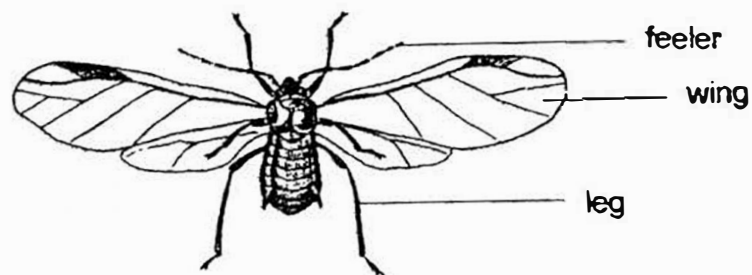
Which of the following correctly represents Animals A, B and C?

	A	B	C
(1)	cat	goldfish	eagle
(2)	cat	eagle	frog
(3)	eagle	frog	lizard
(4)	goldfish	lizard	frog

10. Study the chart below.



Which letter correctly represents this animal in the chart above?



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

11. The table below shows the characteristics of four animals, E, F, G and H. A tick (✓) shows a particular characteristic of the animals.

Characteristic	E	F	G	H
It lays eggs.	✓	✓	✓	✓
It has scales on its body.				✓
It lives both on land and in water.			✓	

Based on the characteristics above, Susan made the following statements.

- A Animal G is an amphibian
- B Animals F and H lay eggs.
- C Animal E is an insect that can fly.
- D Animal F is a reptile that lives on both land and in water.

Which of the following statements is/are definitely **correct**?

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

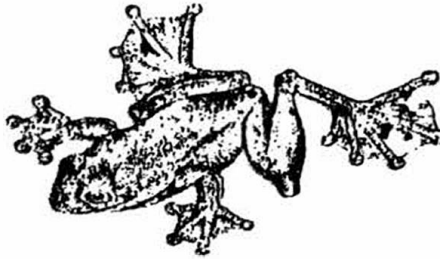
12. Study the diagram below.



Which one of the following is most helpful in helping to classify the animal as a bird?

- (1) It has a tail.
- (2) It has two legs.
- (3) It reproduces by laying eggs.
- (4) It has feathers as outer body covering.

13. Based only on the diagrams below, which comparison between Animal S and Animal T is correct?



S



T

- (1) They have moist skin.
- (2) They do not have a tail.
- (3) They breathe through lungs.
- (4) S lays eggs but T gives birth to young alive.

14. Study the diagrams below.



Animal X

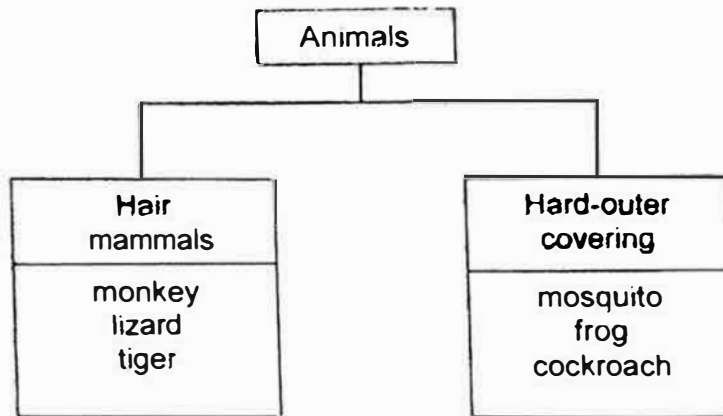


Animal Y

Based only on the diagrams, which one of the following statements is true for both Animals X and Y?

- (1) They have wings.
- (2) They have three pairs of legs.
- (3) They reproduce by laying eggs.
- (4) They have a body covering of feathers.

15. Study the classification table below.



Which of the following animals are grouped wrongly?

- | | |
|--|---|
| (1) frog and lizard
(3) cockroach and tiger | (2) lizard and cockroach
(4) mosquito and monkey |
|--|---|

16. The table below shows some of the characteristics in which animals E and F have. A tick (✓) shows that the animal has the characteristics.

Animal	Lays eggs	Has scales	Has gills
E	✓		
F	✓	✓	✓

Which of the following animals correctly represents E and F?

		E	F	
(1)		toad		lion
(2)		cat		mosquito
(3)		snake		crocodile
(4)		ant		goldfish

17. Which of the following statements about bacteria are false?

- A All bacteria are harmful.
- B All bacteria are of the same shape.
- C All bacteria can be seen with the naked eye.
- D All bacteria needs air, food and water to survive.

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

18. Olivier set up 2 different set-ups in a warm place. One week later, he recorded his results in the table below.

	Set-up A (Dry Bread)	Set-up B (Moist Bread)
Dark Place	No mould	Has mould
Bright Place	No mould	Has mould

What conclusion can he make based on the experiment?

- (1) Mould needs moisture to grow.
- (2) Mould needs light to grow but not moisture.
- (3) Mould needs moisture and darkness to grow.
- (4) Mould needs darkness to grow but not moisture.

19. Lucas carried out an experiment with four identical pieces of cloth made of materials, W, X, Y and Z.

Lucas placed the first piece of cloth into a pail containing 800ml of water. After 10 minutes, he removed the piece of cloth from the pail and measured the amount of water left in the pail.

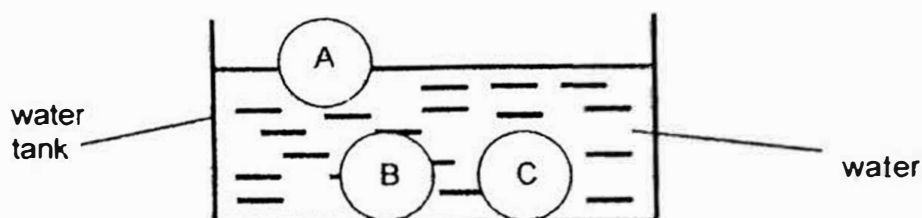
He repeated the experiment with the other 3 pieces of cloth. His results are shown in the table below.

Materials	Amount of water in the pail at the beginning	Amount of water left in the pail at the end
W	800ml	250ml
X	800ml	800ml
Y	800ml	350ml
Z	800ml	150ml

Which one of the materials, W, X, Y or Z absorbs the most amount of water?

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

20. Shu Wen put 3 solid balls, A, B and C, into the water tank as shown in the diagram below. The 3 balls are of the same size but are made of different materials.



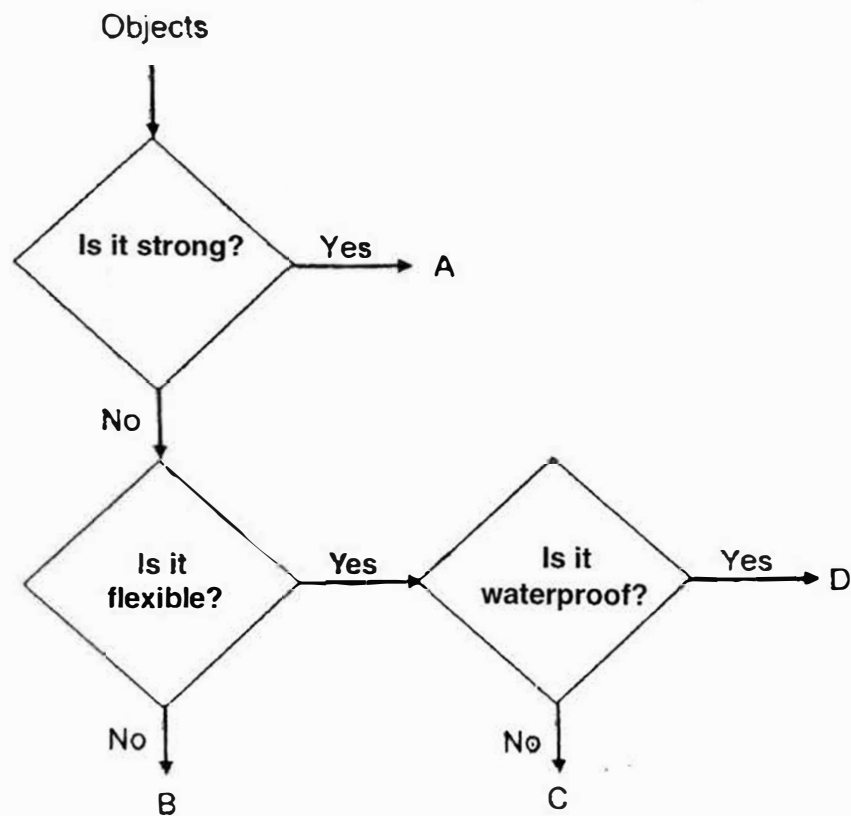
She then classified the 3 balls into the classification table below.

X	Y
A	B C

Which one of the following are the most suitable headings to represent X and Y?

	X	Y
(1)	Flexible	Not flexible
(2)	Not strong	Strong
(3)	Floats on water	Sinks in water
(4)	Allows some light to pass through	Allows most light to pass through

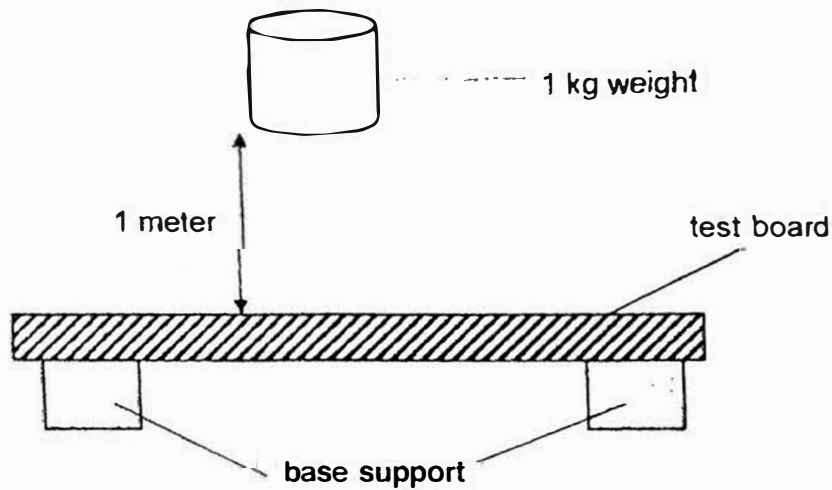
21. Study the flowchart below carefully.



Which one of the objects could represent a paper bag?

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

22. Miss Tan wanted to test the strength of four identical test boards, S, T, U and V, made of different materials. She dropped a 1 kg weight from a height of 1 meter onto each test board, as shown in the diagram below.



She recorded the number of times the 1 kg weight was dropped before the test boards broke. She recorded her results in the table below.

Material	S	T	U	V
Number of times the 1 kg weight was dropped before the test board broke	34	15	8	59

Based on the results above, Miss Tan arranged the materials from the strongest to the weakest. Which one of the following has been arranged correctly?

	strongest → weakest
(1)	U, T, S, V
(2)	V, S, T, U
(3)	S, T, U, V
(4)	T, U, V, S

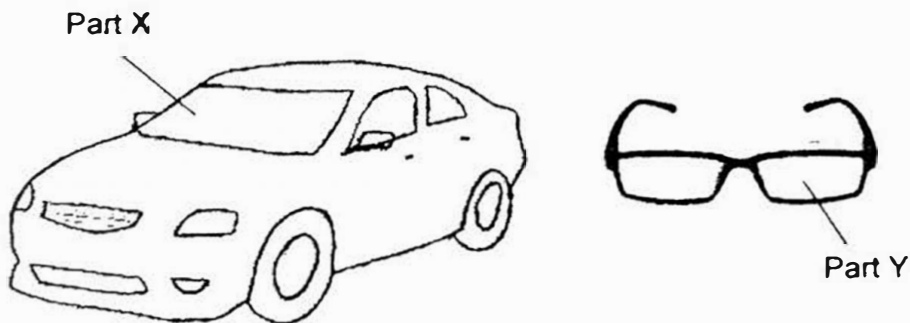
- 23 The table below shows the properties of materials, K, L, M and N.
A tick (✓) indicates that the material has that property.

Materials	Waterproof	Flexible	Strong
K	✓	✓	
L		✓	✓
M	✓		
N			✓

Which material is the most suitable for making a school shirt?

- (1) Material K
- (2) Material L
- (3) Material M
- (4) Material N

24. Study the diagrams below carefully.
Parts X and Y are made of the same material.



Which of the following are properties of the material that made it suitable to be used to make parts X and Y?

- A Waterproof
- B Ability to sink
- C Allows most light to pass through

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

PRIMARY 3 SCIENCE
SEMESTRAL ASSESSMENT 1
2017

BOOKLET B

Date : 8th May 2017

Duration : 1 h 20 min

Name :

Class: I

Marks Scored:

Booklet A:		48
Booklet B :		32
Total :		80

Any query on marks awarded should be raised by 18th May 2017. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's signature:

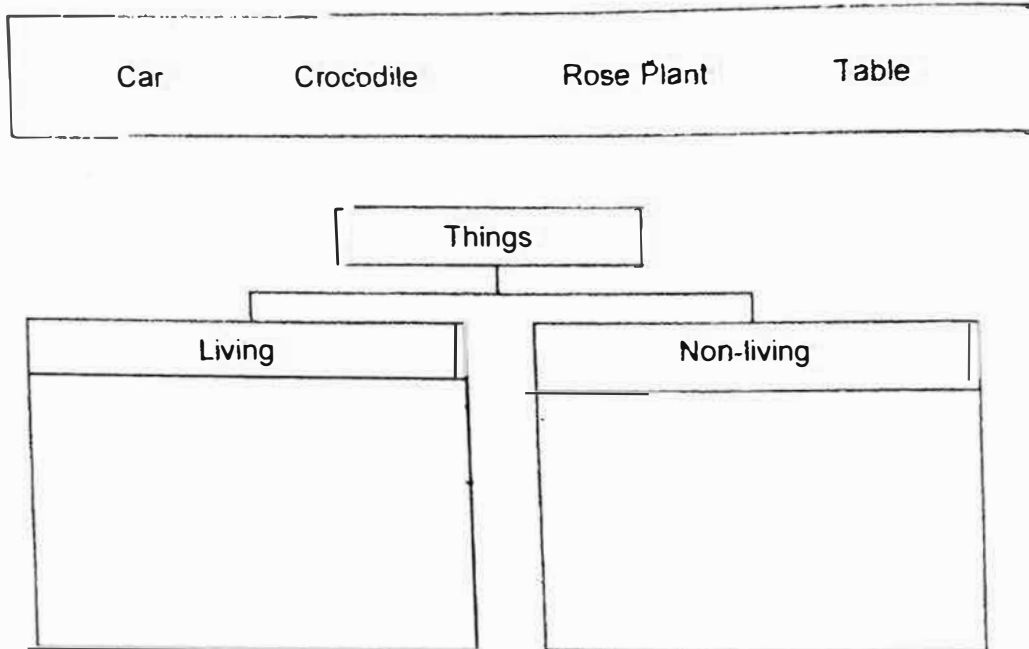
**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
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Booklet B consists of 12 printed pages including this cover page.

Section B (32 marks)

Write your answers to questions 25 to 34 in the spaces provided.

25. (a) Classify the following things under the correct headings in the diagram below. [1]

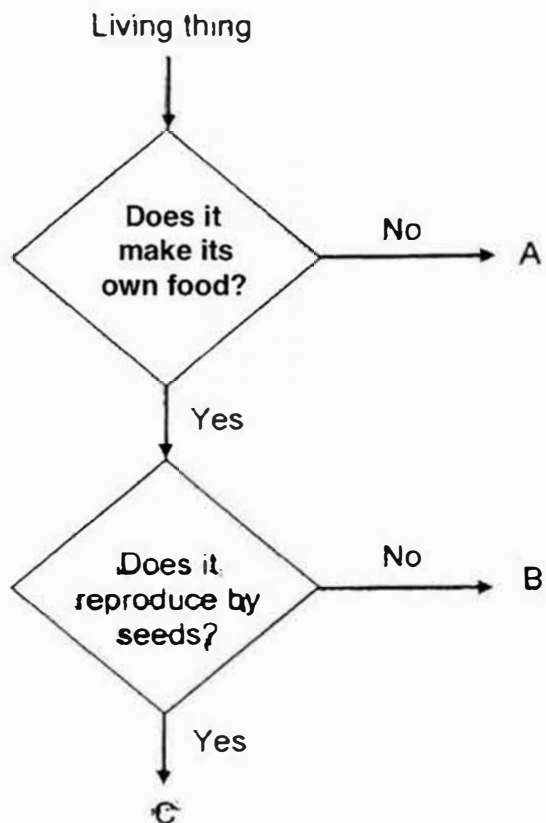


- (b) Living things need air, food and water to survive.
Based only on the characteristics, state two other **differences** between living and non-living things. [2]

(i) _____

(ii) _____

26. Study the flowchart below carefully.

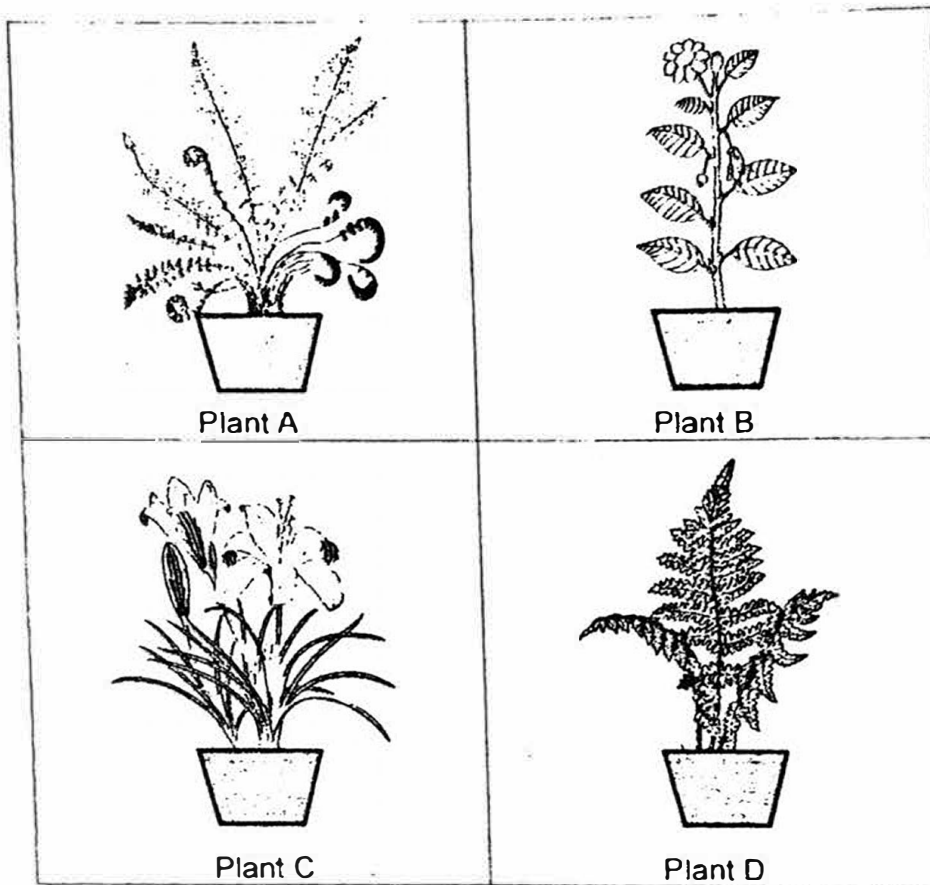


- (a) Based on the flowchart above, write down **all** the characteristics of living thing **B**. [1]

- (b) State one **difference** between living thing B and living thing C [1]

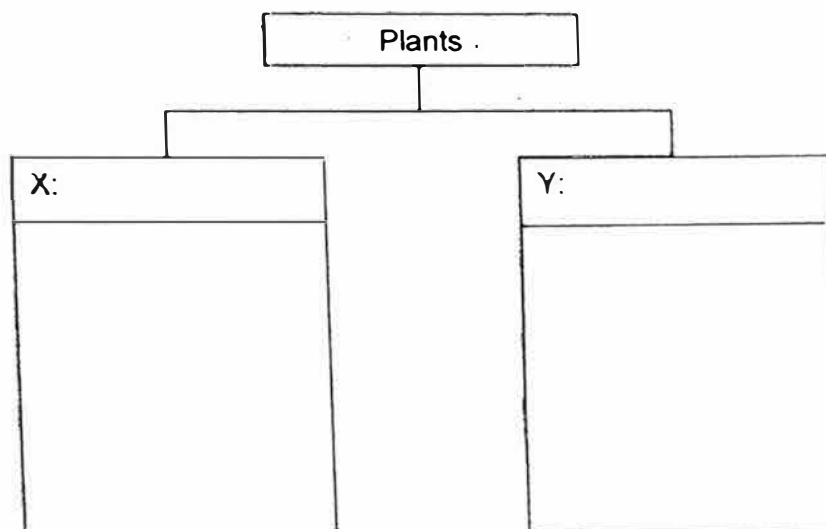
- (c) Which living thing, A, B or C, best represents a rabbit? [1]

27. Study the diagram below.



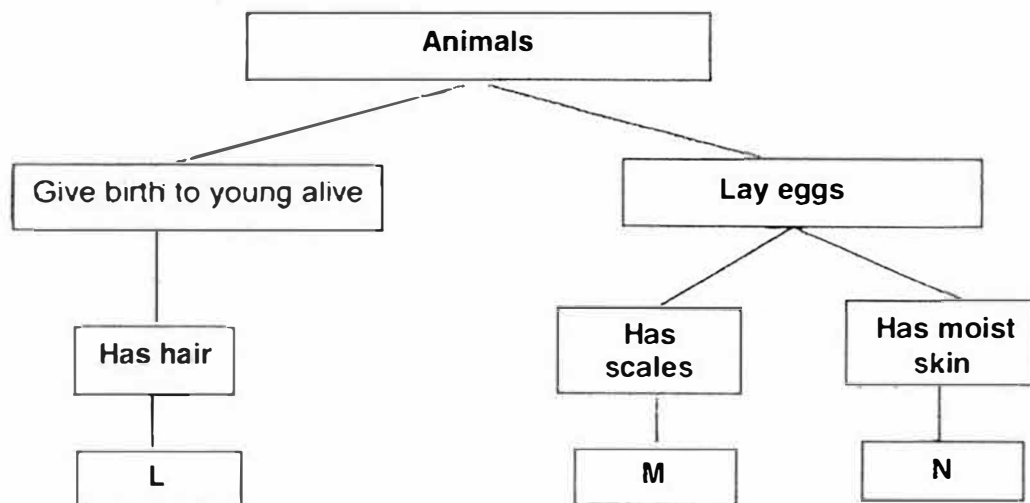
(a) Based on the diagrams above, Plants A, B, C and D are classified according to their characteristics.

- (i) Give suitable headings to the classification chart below. [1]
 (ii) Classify the plants. [2]



- (b) Matthias saw a plant with no flowers and concluded it to be a fern. His teacher said he was wrong. Suggest why. [1]

28. The chart below is used to classify three animals, L, M and N



- (a) State **all** the characteristics of Animal L. [1]

- (b) State one difference between Animal M and Animal N. [1]

- (c) Anisah said that Animal M was a frog. Explain why she was wrong. [1]

29. The table below shows five types of animals and their characteristics.

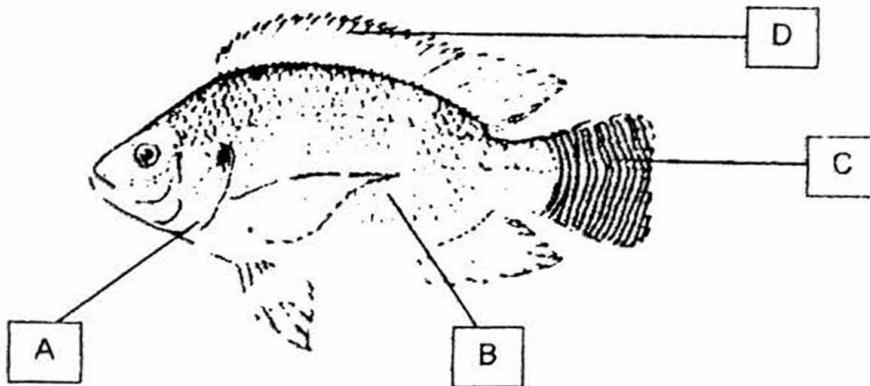
Animal	Outer Covering	Wings	Feelers	Beak
S	Hair	-	-	-
T	Feathers	2	-	1
U	Scales	-	-	-
V	Moist skin	-	-	-
W	Hard-outer covering	2	2	-

- (a) Which animal is an insect? Explain why. [1]

- (b) State **all** the characteristics of Animal T, based on the table shown above. [1]

- (c) A toad is an amphibian. Which one of the animals above would most likely be a toad? [1]

30. The diagram below shows a fish



(a) Match the letters (A, B, C or D) to the fish parts shown below. [2]

Scales : _____

Fin : _____

Gill cover : _____

Tail : _____

(b) The arrangement of the scales allows the fish to swim easily in the water. State another function of the scale. [1]

(c) Dolphin is a mammal, not a fish. Explain why. [1]

31. The table below shows the characteristics of living things S and T.

	Reproduce by spores	Cannot make its own food	Can only be seen under a microscope
S		✓	✓
T	✓	✓	

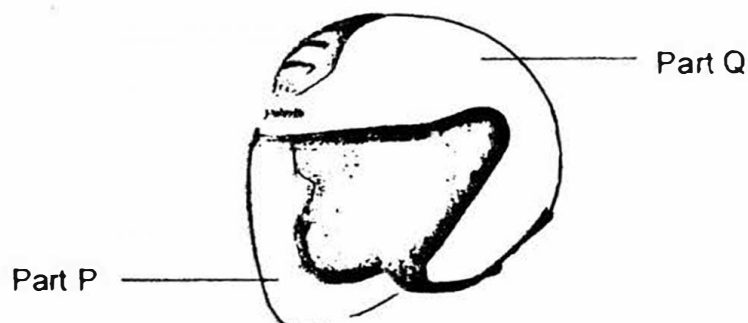
- (a) Based on the information given in the table above, which group of living things do living things S and T most likely belong to? [1]

(i) S: _____

(ii) T: _____

- (b) Sarah said that living thing T is a fern. Explain why she is wrong. [2]

32. Mr Lim wears a helmet when he rides his motorcycle to protect his head from any injuries.



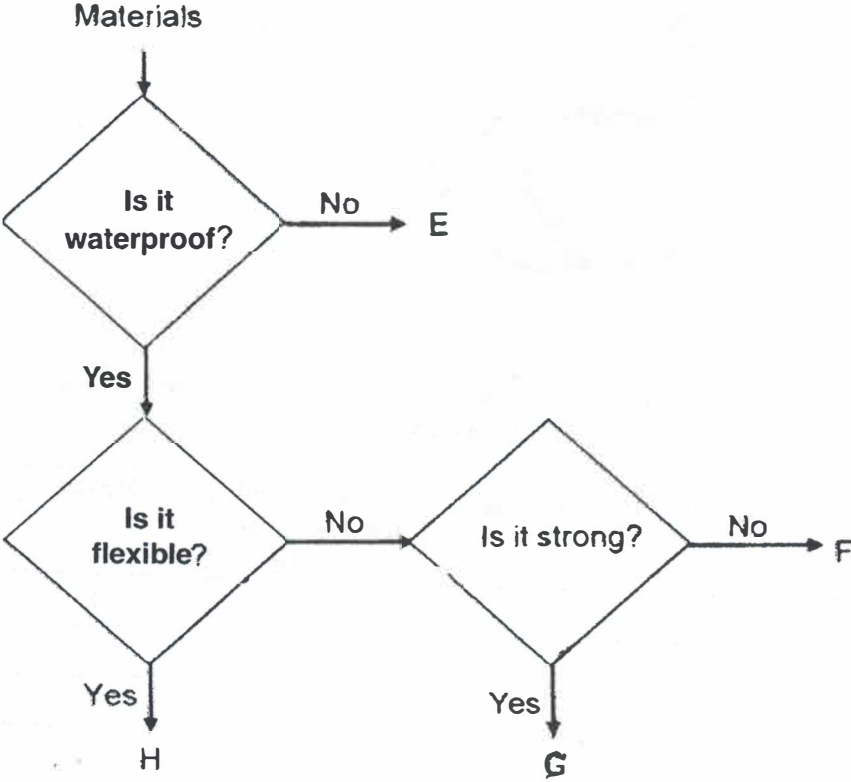
The table below shows the properties of materials W, X and Y. A tick (✓) in the table indicates that the material has that property.

Material	Waterproof	Strong	Allows most light to pass through	Flexible
W	✓			✓
X	✓	✓	✓	
Y	✓	✓		

- (a) Explain why it is better to use material X than material Y, to make part P. [1]

- (b) Explain why material W is not suitable to be used to make part Q. [1]

33. Study the flowchart below carefully.



(a) Describe **all** the properties of material G. [1]

The letters E, F, G and H, in the flowchart, represent the materials as shown in the box below.

Rubber	Cotton	Glass	Iron
--------	--------	-------	------

(b) Match E, F, G and H to the correct materials in the box below. [2]

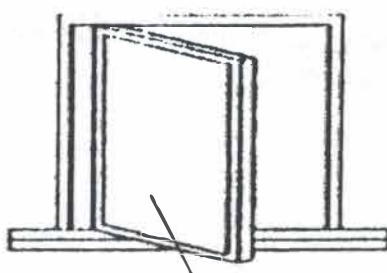
Rubber	
Cotton	
Glass	
Iron	

34

The table below shows the amount of light that can pass through materials A, B and C.

Material A	Allows most light to pass through
Material B	Allows some light to pass through
Material C	Does not allow any light to pass through

- (a) Sharon has a window in her bedroom.



Window pane

During the day, she wants to sit by the window to do her homework without the lights on. She also wants the window pane to be able to shield her from the bright sunlight.

- (i) Which material, A, B or C is the most suitable for making the window pane. Explain your answer. [1]

- (ii) Which material, A, B or C is the most suitable for making the toilet door in Sharon's toilet so that no one can see her when she is in the toilet. Explain your answer. [1]

- (b) Sharon went to the supermarket to buy a new milk bottle for her baby brother. She chose a bottle which is made of glass but her mother said that it was not suitable.

- (i) Based on **one** property of glass, explain why the glass milk bottle is not suitable for Sharon's baby brother. [1]

- (ii) Suggest another material which is more suitable for making the milk bottle. Explain your choice. [1]

ANSWER KEY

YEAR : 2017
LEVEL : PRIMARY 3
SCHOOL : NANYANG PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : SA1

SECTION A

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

SECTION B

Q25a) Living – Crocodile, Rose plant – Non-living – Car, table

Q25bi) Living things can reproduce but non-living things cannot reproduce.

Q25bii) Living things can move freely but non-living things cannot move freely.

Q26a) Living thing B makes its own food and does not reproduce by seeds.

Q26b) Living thing C reproduces by seeds but living thing B does not reproduce by seeds.

Q26c) Living thing A.

Q27a) X: Flowering plants → Plant B, Plant C

Y: Non-flowering plants → Plant A, Plant D

Q27b) It may have not been the right time for the flower to bear flowers.

Q28a) Animal L gives birth to young alive and has hair.

Q28b) Animal M has scales but Animal N has moist skin.

Q28c) A frog has moist skin but Animal M has scales.

Q29a) Animal Q. Animal W as a hard outer-covering and feelers like insects do.

Q29b) Animal T has feathers, 2 wings and 1 beak.

Q29c) Animal V

Q30a) Scales: B Fin: D Gill cover: A Tail: C

Q30b) The scales protect the fish.

Q30c) Dolphin has hair and can suckle its young but fish has scales and cannot suckle its young.

Q31ai) Bacteria ii) Fungi

Q31b) Living thing T cannot make its own food but fern can make its own food as it is a plant.

Q32a) Material X allows most light to pass through so that the user can see through it clearly.

Q32b) Material W is not strong so it will not be able to protect the user.

Q33a) Material G is waterproof, not flexible and strong.

Q33b) Rubber: H Cotton: E Glass: F Iron: G

Q34ai) Material B. It allows some light to pass through so it is able to shield her from the bright sunlight.

Q34aii) Material C. It does not allow any light to pass through so no one can see her when she is in the toilet.

Q34bi) Glass is not strong. It is easily broken when dropped.

Q34bii) Plastic. It is strong so it does not break easily when dropped.