PRIMARY THREE

SCIENCE

SEMESTRAL ASSESSMENT 1
2012

BOOKLET A

Date : 9 May 2012

Duration : 1 h 45 min

Name : _____ ( )

Class: Primary 3 ( )

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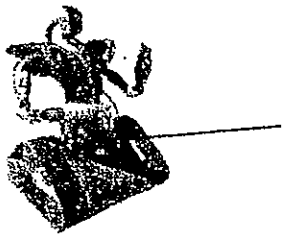
Booklet A consists of 15 printed pages including this cover page.

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Section A (30 x 2 marks = 60 marks)
For each question from 1 to 30, 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. Youxiang brought a new toy robot to school. He placed batteries inside the robot and turned it on. It was then able to move by itself.



When Youxiang placed a wooden block in front of it, the robot could change direction to avoid the wooden block.

Which one of the following statements made by his classmates is correct?

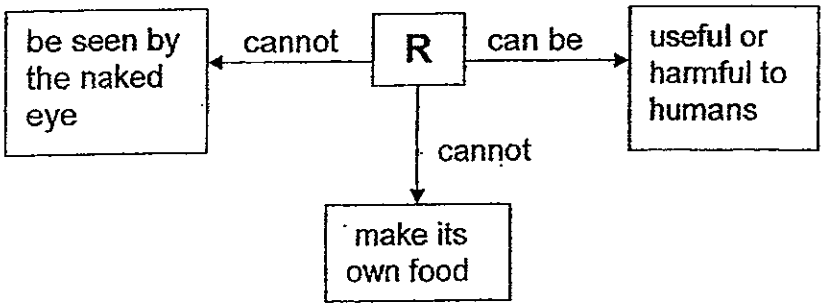
(1) The robot is a living thing because it could move.
(2) The robot is a non-living thing because it does not have legs.
(3) The robot is a living thing because it could respond to changes.
(4) The robot is a non-living thing because it does not need air, food or water.

2. Which one of the following observations **does not** match the characteristics of living things?

	Observations	Characteristics of Living Things
(1)	There is an increase in the number of crows in Bedok	Living things reproduce
(2)	A caterpillar changes into a butterfly in one week	Living things grow and develop
(3)	Mice running away from a cat	Living things respond to changes
(4)	Plants need sunlight to make food	Living things need light to survive

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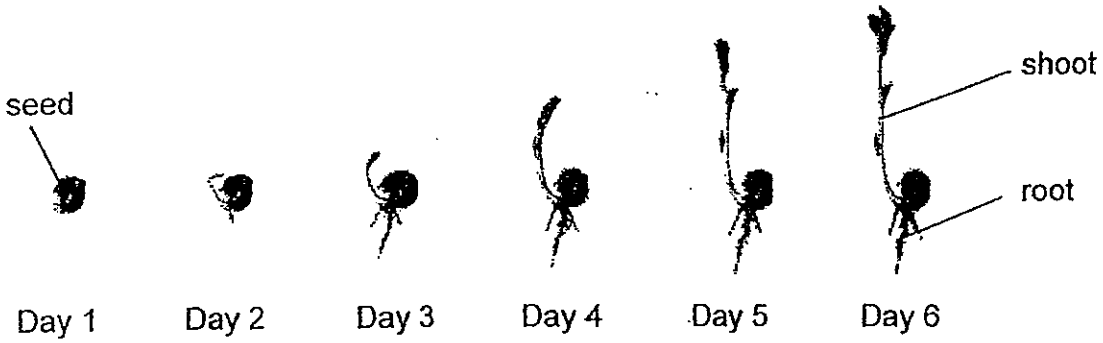
3. Study the concept map below.



Which of the following could represent R?

(1) ant
(2) rose
(3) mushroom
(4) bacteria

4. The diagram below shows the changes of a seed from day 1 to day 6.



Which of the following statements can be concluded based only on the diagram above?

(1) The seed is a living thing because it can die.
(2) The seed is a living thing because it can grow.
(3) The seed is a living thing because it can respond to changes.
(4) The seed is a living thing only from day 2 when it starts growing.

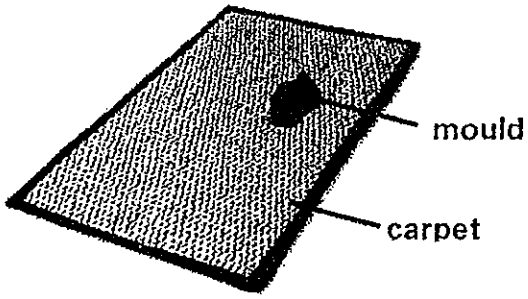
5. Which one of the following statements about micro-organisms is **false**?

(1) Micro-organisms can be harmful or useful.
(2) Micro-organisms can only feed on dead matter.
(3) Micro-organisms cannot be seen by the naked eye.
(4) Micro-organisms can be found on plants and animals.

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6. Li Min spilled some soft drink onto her brand new carpet and left it uncleaned. A week later, she saw that some mould had begun to grow on the carpet as shown below.



When she tried to remove the mould, she found a hole in the carpet. The hole was where the mould had been growing. Which of the following statements best explains her observation?

A The mould is a non-living thing.
B The carpet provided food for the mould.
C The soft drink that Li Min spilled provided food for the mould.

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

7. The diagram below shows a pile of leaves. Ted observed that the height of the pile of leaves decreased over a few weeks. Which one of the following statements is **not** a possible explanation for his observation?



(1) Some animals eat fallen leaves.
(2) Fallen leaves are moved by bacteria and fungi.
(3) The fallen leaves are broken down by bacteria and fungi.
(4) Some animals move and use the fallen leaves to build their homes.

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8. Which one of the following is a flowering plant?

(1) moss
(2) pine
(3) grass
(4) staghorn fern

9. Which of the following statement(s) is/are true of **all** flowering plants?

A They can only be found on land.
B They need light to make food.
C They have brightly-coloured flowers

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

10. Study the table below

	Plants		
	X	Y	Z
Does it have flowers?	No	Yes	No
Does it reproduce by seeds?	Yes	Yes	No
Does it have spores?	No	No	Yes

Which one of the following groups of plants correctly represents plants X, Y and Z?

	X	Y	Z
(1)	grass	rose	ladder fern
(2)	~~moss~~ pine	rambutan	bird's nest fern
(3)	money plant	staghorn fern	hibiscus
(4)	pine	moss	sunflower

11. Study the classification table below.

P	Q
chilli	staghorn fern
orchid	moss
watermelon	money plant

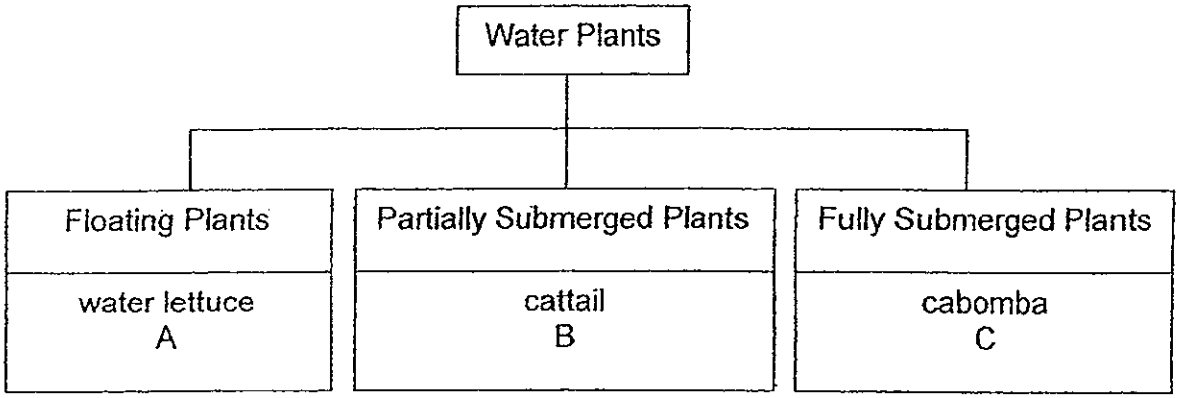
Which one of the following plants has been grouped **incorrectly**?

(1) orchid
(2) watermelon
(3) money plant
(4) staghorn fern

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12. Study the classification chart below.



Which one of the following groups of water plants best represents plants A, B and C?

	A	B	C
(1)	water hyacinth	water lily	hydrilla
(2)	water hyacinth	hydrilla	water lily
(3)	hydrilla	water lily	water hyacinth
(4)	water lily	hydrilla	water hyacinth

13. Jenna studied the following plants and classified them in the same group.

lantana
frangipani
pong pong

Which of the description(s) is/are **correct** about the plants listed?

A They are flowering plants.
B They reproduce by spores.
C They are poisonous plants.

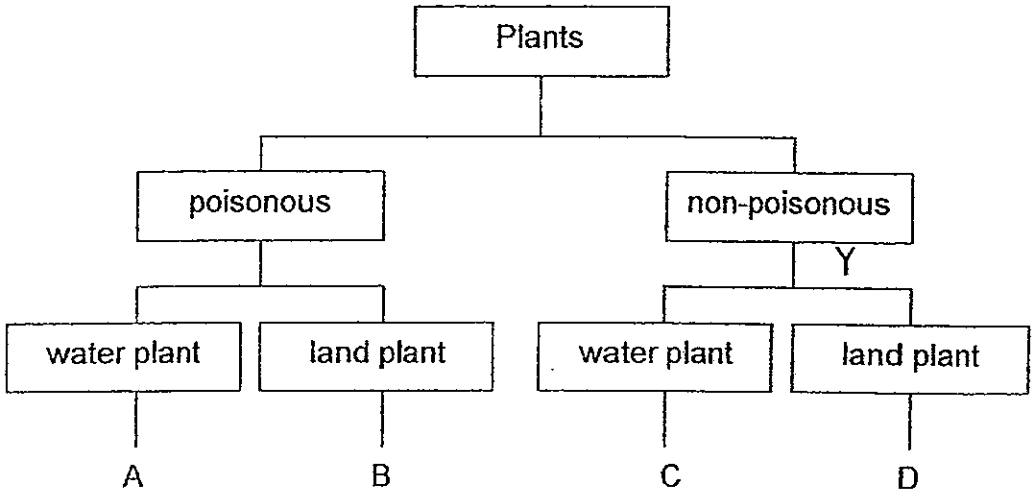
(1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

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14. The following table gives information on four plants, W, X, Y and Z, based on two characteristics. A tick (✓) shows that the plant has the characteristic.

Characteristic	Plants			
	W	X	Y	Z
Poisonous		✓		✓
Grows on land	✓			✓

From the information above, where do plants X and Y belong in the following classification table?



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

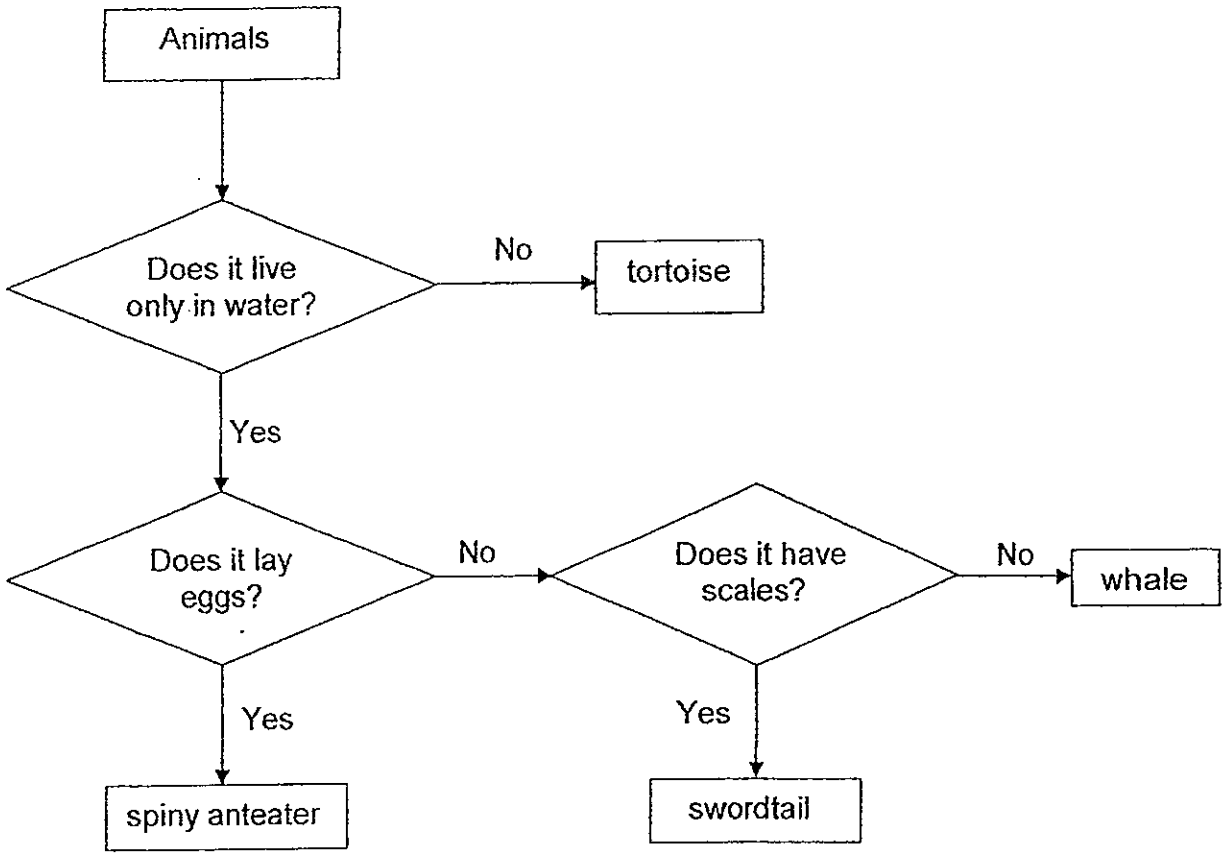
15. A shark is able to stay underwater all the time but a dolphin has to come to the surface for air. Which one of the following statements best explains this behaviour?

(1) A shark has gills but a dolphin has lungs.
(2) A shark has scales but a dolphin has hair.
(3) A shark can find food in water but a dolphin cannot.
(4) A shark lays eggs but a dolphin gives birth to its young alive.

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16. Chun Hong drew a flowchart as shown below.



His teacher told him that his flowchart was incorrect.

Which of the following animal(s) had he placed **incorrectly** in the flowchart?

(1) swordtail only
(2) spiny anteater only
(3) tortoise and whale only
(4) spiny anteater, swordtail and whale only

17. Three children made the following observations about an animal that they had found.

Gaya : It does not have wings.
Becky : It has three body parts .
Farah : It reproduces by laying eggs.

Which one of the following animals fits all of the children's description?

(1) moth
(2) lizard
(3) silverfish
(4) salmon

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18. Study the classification table below.

Group A	Group B
ostrich sparrow duck	molly dolphin cow

How are the animals in the classification table above grouped?

	Group A	Group B
(1)	Birds	Mammals
(2)	Can fly	Cannot fly
(3)	Warm-blooded	Cold-blooded
(4)	Lay eggs	Give birth to young alive

19. Uma recorded the characteristics of 4 animals using the table below. A tick (✓) indicates that the animal has that particular characteristic.

	Characteristics		
Animals	Has 4 legs	Can fly	Has 3 body parts
kiwi		✓	
ladybird		✓	✓
platypus	✓		
dragonfly		✓	✓

Which one of the following animals had been recorded **incorrectly**?

(1) kiwi
(2) ladybird
(3) platypus
(4) dragonfly

20. Which of the following statements about <u>all</u> insects are **correct**?

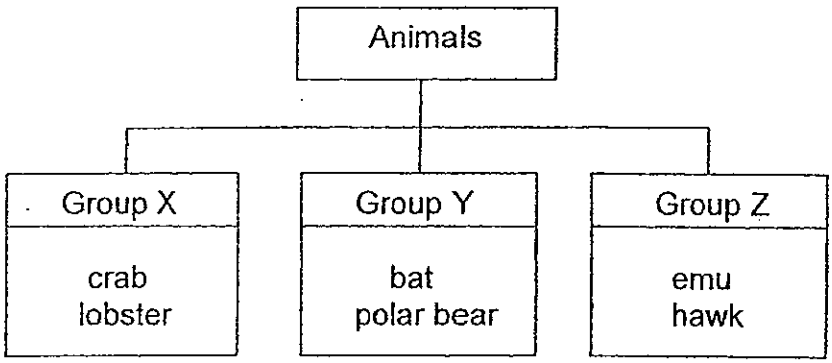
A They live on land only.
B They have wings and can fly.
C They have legs that are attached to the thorax.
D They have breathing holes that are found at the abdomen.

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

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21. The table below shows how some animals are grouped according to their body covering.



Which one of the following groups of animals best fits into groups X, Y and Z?

	X	Y	Z
(1)	seahorse	platypus	mosquito
(2)	eel	snail	sparrow
(3)	snail	seal	sparrow
(4)	seal	seahorse	mosquito

22. Mdm Quek showed a diagram of a living thing as shown below. She asked 4 pupils if the living thing was an insect.



The 4 pupils made the following statements:

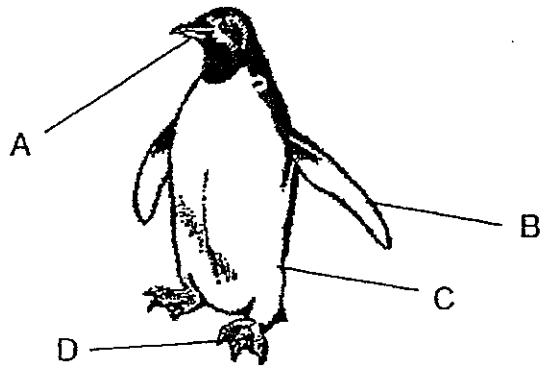
Yati : It is not an insect as it has eight legs.
Joey : It is an insect as it has a pair of feelers.
Ramly : It is not an insect as it does not have wings.
Wei Lin : It is an insect as it has a head and an abdomen.

Which pupil had given the **correct** statement?

(1) Yati
(2) Joey
(3) Ramly
(4) ~~Wee Lin~~ Wei

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23. The diagram below shows a penguin with parts labelled A, B, C and D



Penguin

A description of the function that represents each labelled part is stated in the table below.

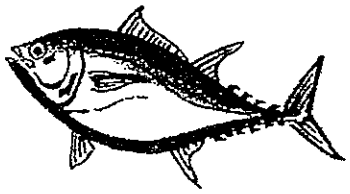
In the table below, which body part has been paired with the wrong function?

	Part	Function
(1)	A	Helps the penguin to feed on its prey.
(2)	B	Helps the penguin to fly.
(3)	C	Helps the penguin to keep warm.
(4)	D	Helps the penguin to swim in water.

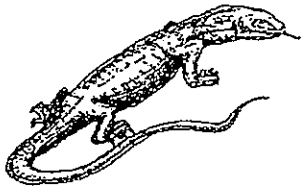
24. Which one of the following animals **does not** have the same body covering as the other animals?



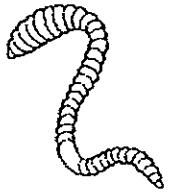
python
(1)



tuna
(2)



monitor lizard
(3)

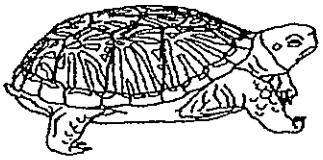


earthworm
(4)

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25. In the table below, K, L and M represent the different ways that the three animals move. A tick (✓) indicates the movement(s) of each of the ~~four~~ three animals.

	Ways that animals move		
	K	L	M
 Emu	✓		
 Frog		✓	✓
 Turtle		✓	

Which of the following movements best represent K, L and M?

	K	L	M
(1)	fly	swim	hop
(2)	walk	hop	swim
(3)	run	swim	hop
(4)	fly	crawl	swim

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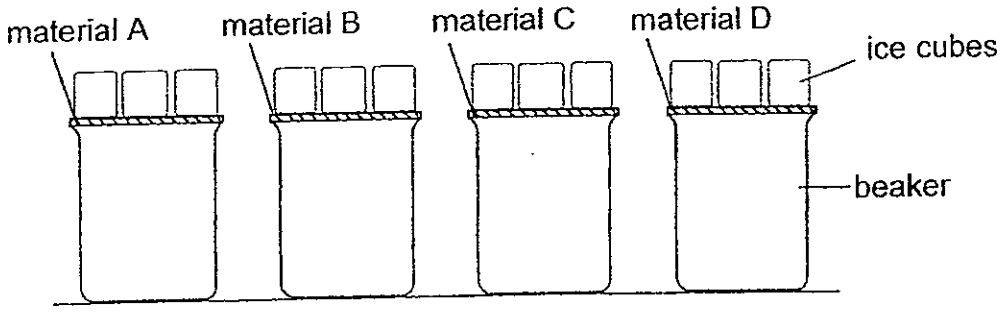
26. Sally gave her four-year-old brother a cup of water. The cup had the following properties.

- hard
- waterproof
- not easily broken

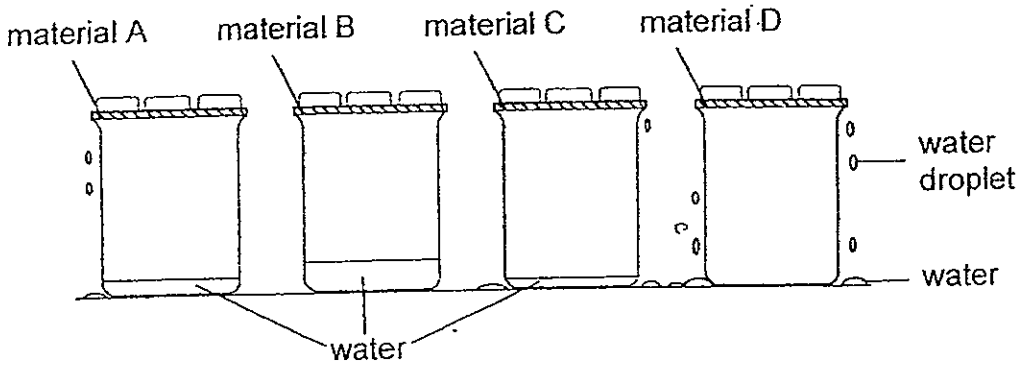
Based on all the properties above, which one of the following could the cup be made of?

(1) metal
(2) glass
(3) paper
(4) ceramic

27. John covered four similar beakers with four different types of materials. Then, he placed the same amount of ice cubes onto each material as shown in the diagram below.



After 20 minutes, he observed the following changes.



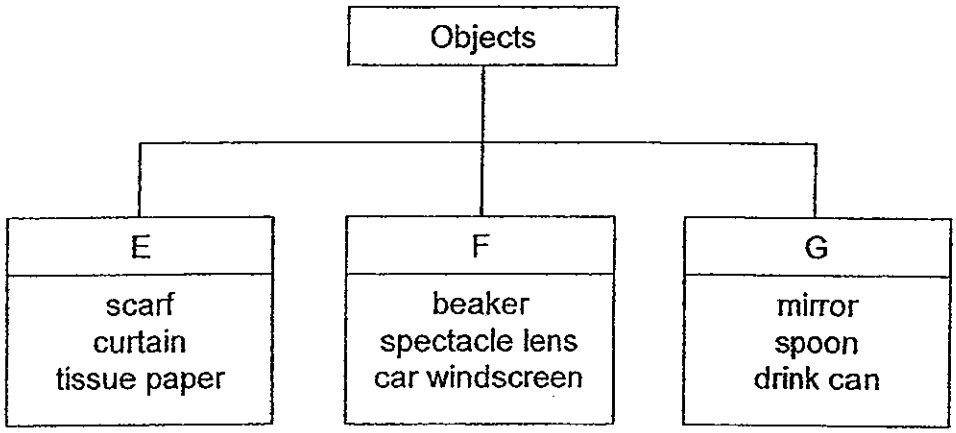
Which material is most suitable for making a raincoat?

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

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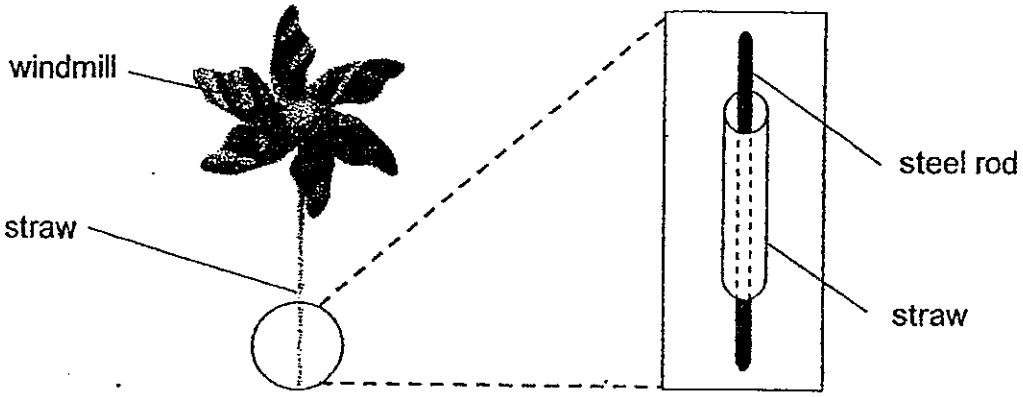
28. Chloe classified some objects into three different groups.



Which one of the following is a suitable heading to represent F?

(1) hard
(2) light
(3) strong
(4) transparent

29. Carolyn made a toy windmill as shown below. She noticed that the straw could not keep the windmill upright. To fix this problem, she placed a steel rod inside the straw.



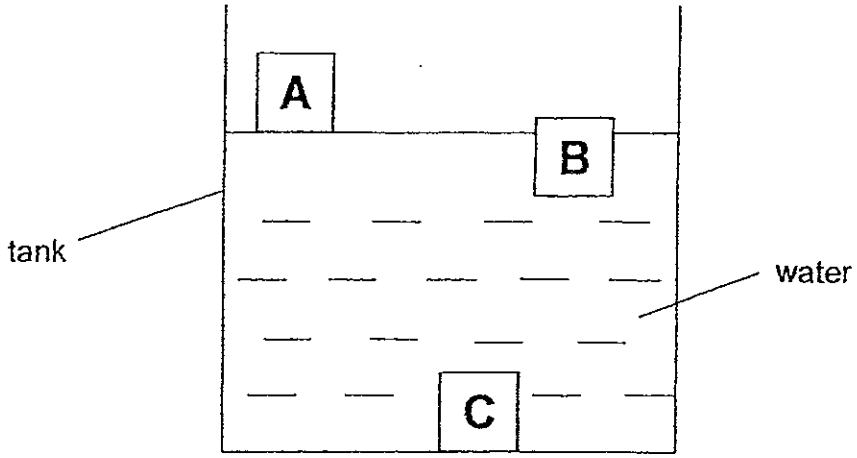
Which property of the straw **does not** allow it to keep the windmill upright?

A Hard
B Strong
C Flexible
D Waterproof

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

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30. Three objects, A, B and C were placed in a tank of water. The result is shown below.



Which of the following materials could A, B and C be made of?

	A	B	C
(1)	Wood	Iron	Styrofoam
(2)	Styrofoam	Glass	Plastic
(3)	Ceramic	Styrofoam	Rubber
(4)	Styrofoam	Wood	Copper

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PRIMARY THREE SCIENCE

SEMESTRAL ASSESSMENT 1

2012

BOOKLET B

Date : 9 May 2012

Duration : 1 h 45 min

Name : _____ ( )

Class: Primary 3 ( )

Marks Scored:

Booklet A:		60
Booklet B :		40
Total :		100

Any query on marks awarded should be raised by 21st May 2012. 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: ....

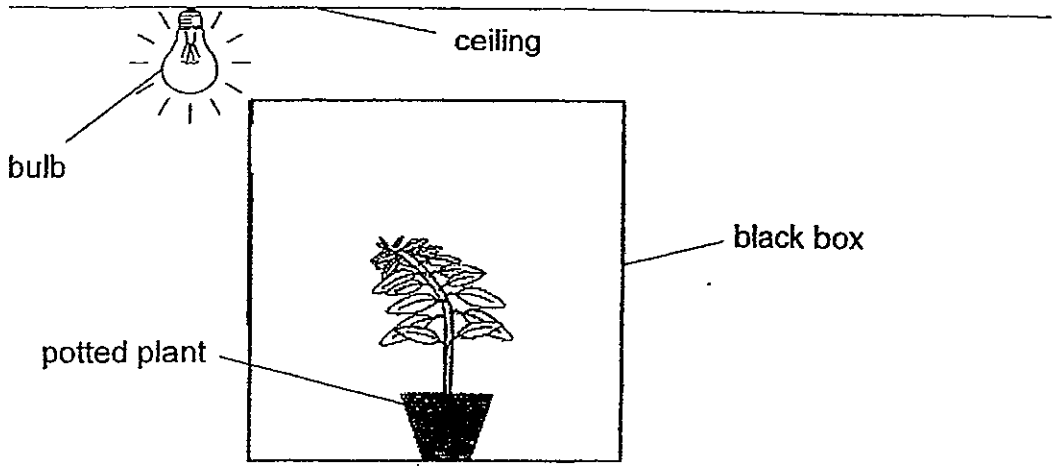
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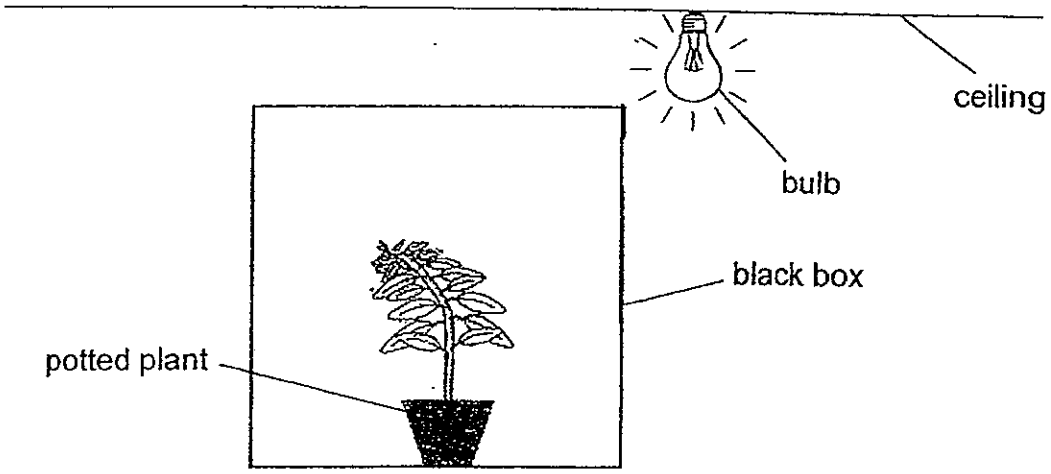
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Section B (40 marks)
Write your answers to questions 31 to 44 in the spaces provided.
Marks will be deducted for misspelt key words.

31. Li Kai placed a potted plant in a black box. He made an opening on one side of the box and placed the box near a brightly-lit light bulb as shown below. The diagram shows the set-up after two weeks.



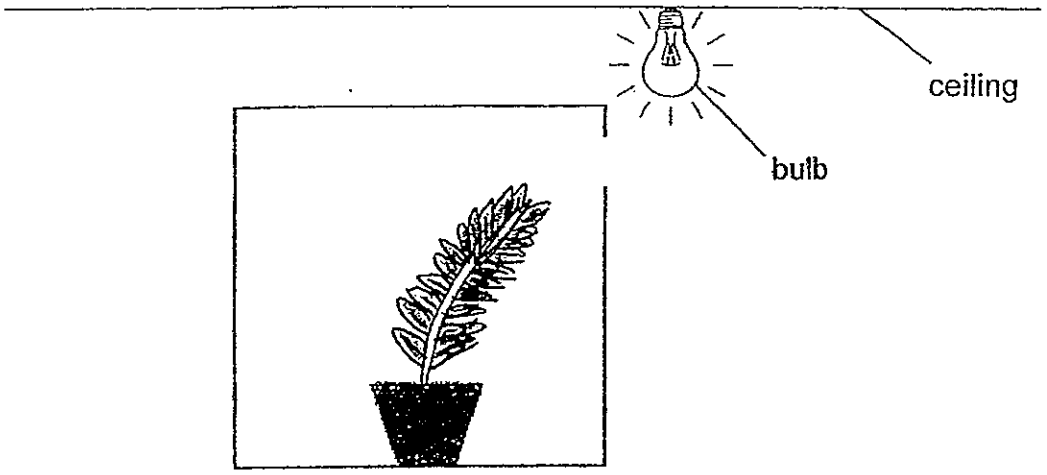
He then closed the opening and made a new one on the opposite side. He moved the box so that the opening is near the light bulb as shown below.



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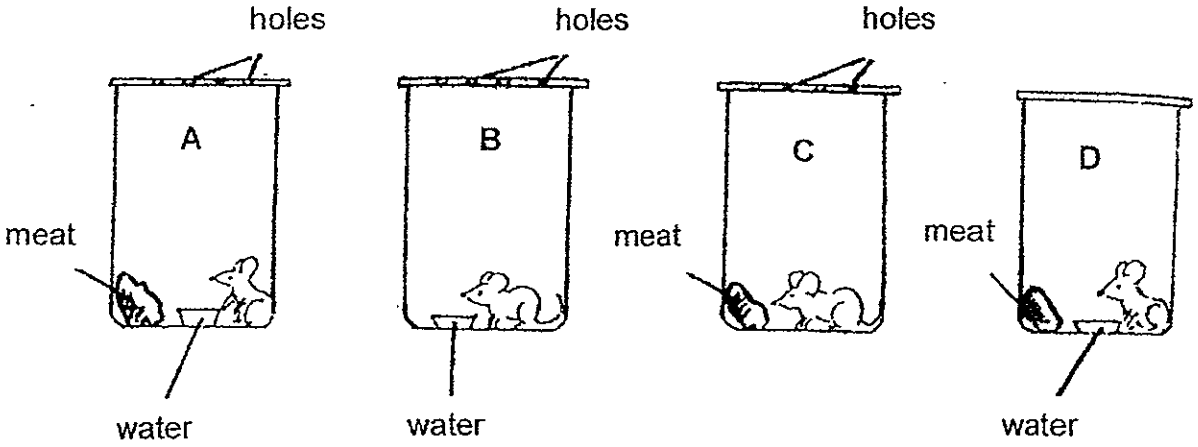
a) In the box below, draw what the plant would look like after another two weeks. [1]



b) What characteristic of living things can Li Kai write about the plant based on his experiment? [1]

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32. Four jars, A, B, C and D each contained a healthy mouse. Plastic sheets were used to cover the mouths of each jar.



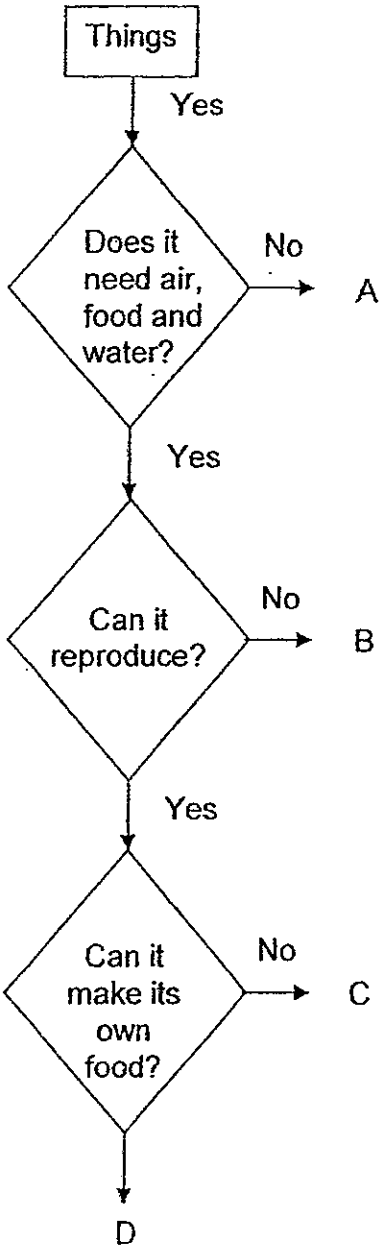
Complete the table below to describe and explain what will happen to the mice in each jar after 10 days. [4]

Jar	Observation after 10 days	Explanation
A		
B		
C		
D		

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33. Study the flow chart below and use the information to answer the questions that follow.



a) Which of the following, A, B, C or D, could represent fire? [1]

_____

_____

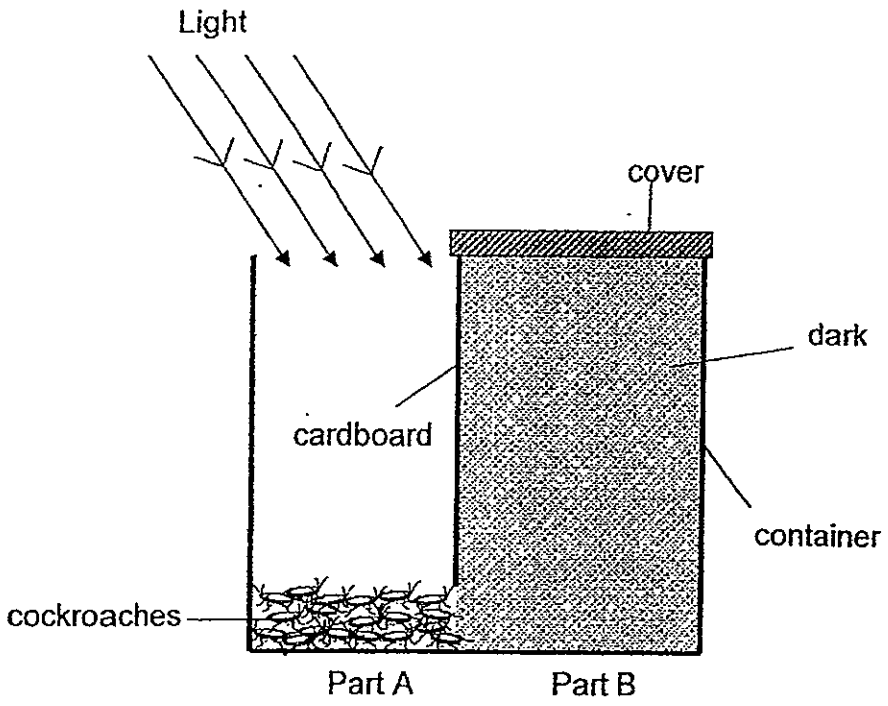
b) Based on the flowchart, write down the characteristics of C. [1]

_____

_____

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34. Grace conducted the following experiment in a dark room. She divided a container into two parts. Part A was uncovered and part B was totally covered as shown in the diagram.



She placed 30 cockroaches into Part A and shone light onto them. The cockroaches were free to travel between Part A and Part B. She recorded how many cockroaches remained in Part A after 1 minute. She repeated her experiment with different numbers of torches. Her observations were recorded in the table below.

a) Complete the table below to show the likely number of cockroaches left in Part A when 3 torches were used. [1]

Number of torches	Number of cockroaches in Part A
1	28
2	20
3	
4	7

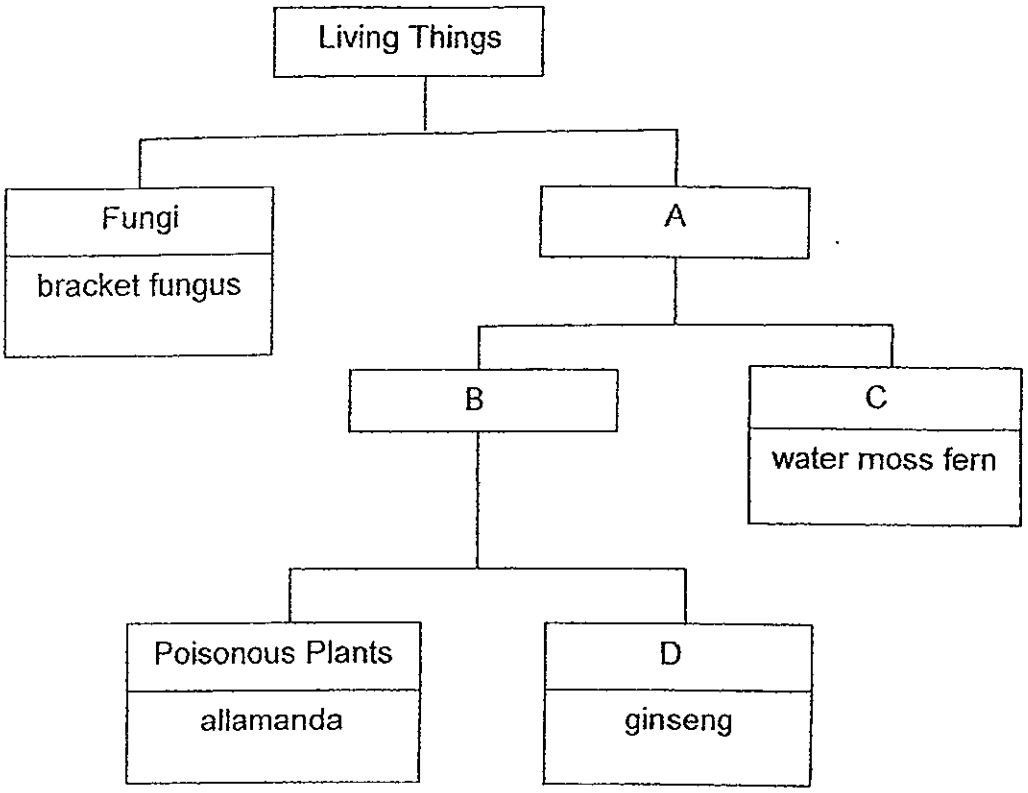
b) Based on this experiment, describe the condition that cockroaches prefer to live in. [1]

_____

_____ /1

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35. Study the classification chart below.



Write a suitable heading to represent A, B, C and D. [2]

A : _____

B : _____

C : _____

D : _____

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36. The diagram below shows a fern that May observed in the garden.



When she turned one of the leaves over, she saw rows of little brown spots like the ones shown below.



Underside of the fern's leaf

When she touched the spots, she found brownish powder on her finger.

(a) (i) What could this powder be? [1]

_____

(ii) Why are the 'powders' important to the fern? [1]

_____

_____

May found a similar powdery substance in the gills of a mushroom and concluded that the mushroom was a type of fern. Her teacher told her that this was wrong as mushroom is a fungi.

(b) State the difference between a fungi and a fern. [1]

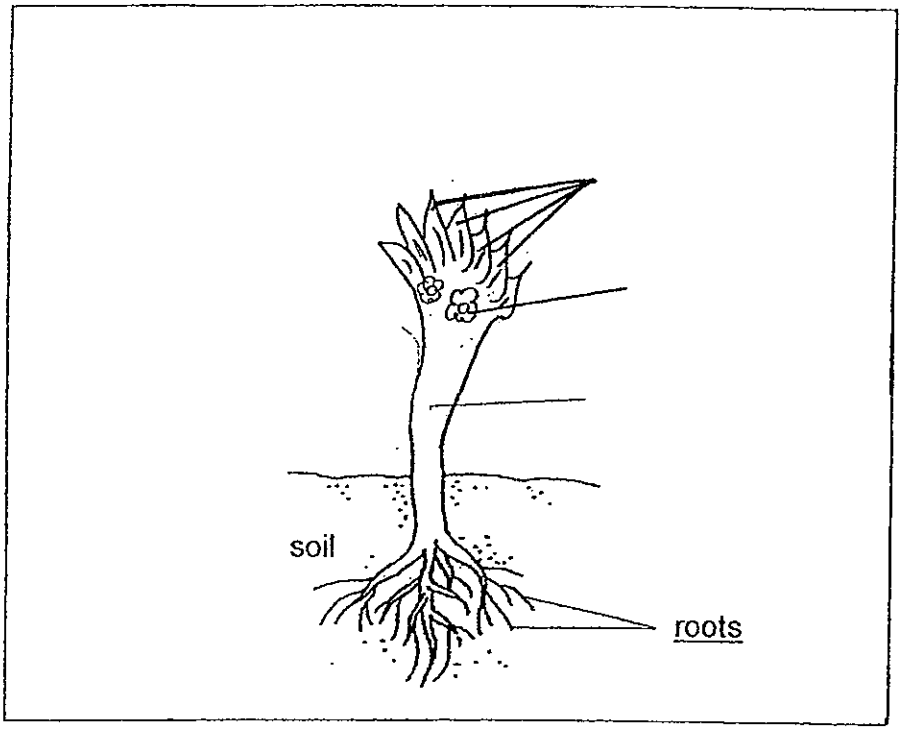
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37. Complete the drawing of a flowering plant to show its stem, leaves and flower. Label all the plant parts. [3]



38. Sophia planted 4 similar plants, A, B, C and D, on the same day. For each pot of plant, she gave different amounts of water daily. After ten days, she measured the height of each plant as seen in the table below.

Plants	Amount of water given daily	Height of plants after ten days
A	10 ml	10 cm
B	20 ml	16 cm
C	30 ml	22 cm
D	40 ml	22 cm

(a) What is the height of Plant A after ten days? [1]

_____ cm.

(b) Based on her results, what is the least amount of water needed for the plant to grow to a height of 22 cm within ten days? [1]

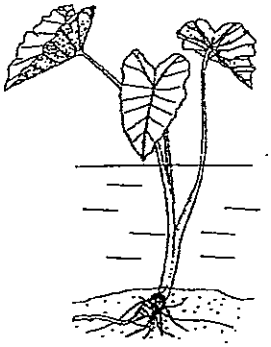
_____ ml.

(c) Other than water, what else do the plants require in order to make food? [2]

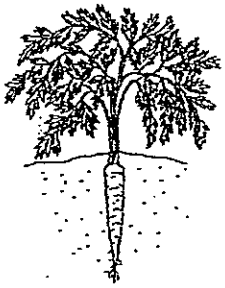
_____

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39. Study the diagrams of the three plants below.



arrowhead plant



carrot plant



maidenhair fern

(a) Based only on the diagrams above, state one similarity between the three plants. [1]

_____

_____

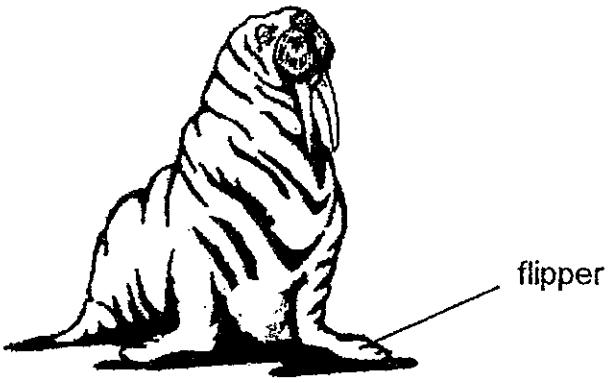
(b) (i) Classify the plants above into two groups. [1]
(ii) Give a suitable heading for each group. [1]

(ii)		
(i)		

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40. (a) The diagram below shows a walrus, which is a mammal. A walrus has a body part called the flipper, which has been labelled in the diagram.



Give an example of another mammal which has a flipper. [1]

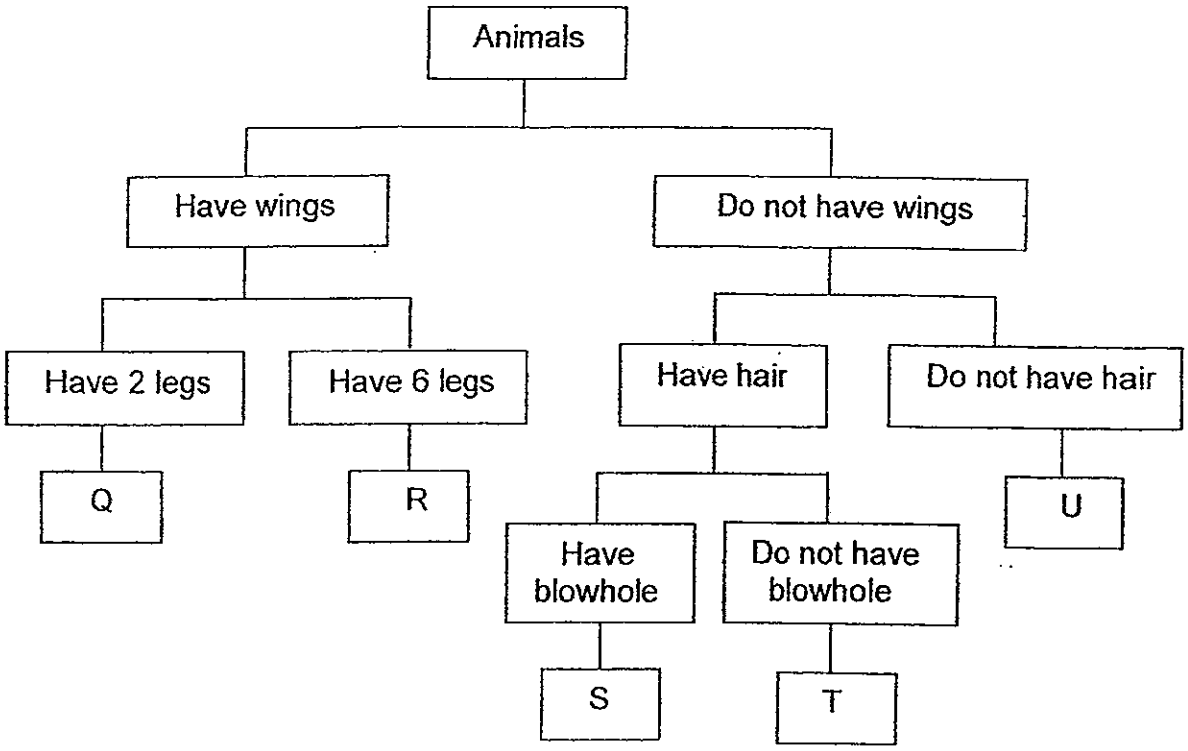
(b) State two characteristics of mammals. [2]

(i) _____

(ii) _____

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41. Study the classification chart as shown below.



(a) Based on the chart above, state all the characteristics of animal R. [1]

_____

_____

(b) The following animals represent 2 of the letters in the chart above. Write the correct letter in the boxes that matches the animals below. [2]

		Letter
(i)	Tigerbarb	
(ii)	Seal	

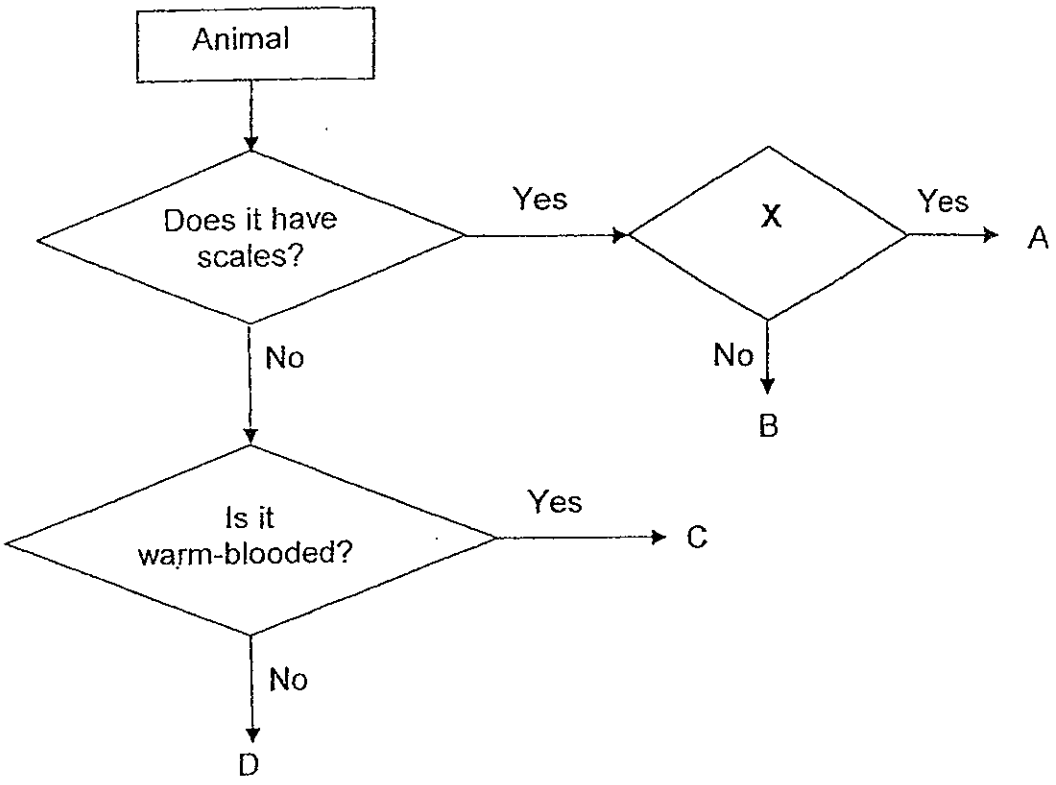
(c) Give a specific example of animals Q and S.

Animal Q: _____

Animal S: _____

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42. The flow chart below is used to classify 4 organisms, A, B, C and D.



(a) Based on the flowchart, state a **similarity** between animals A and B. [1]

_____

_____

(b) Based on the flowchart, state a **difference** between animals C and D. [1]

_____

_____

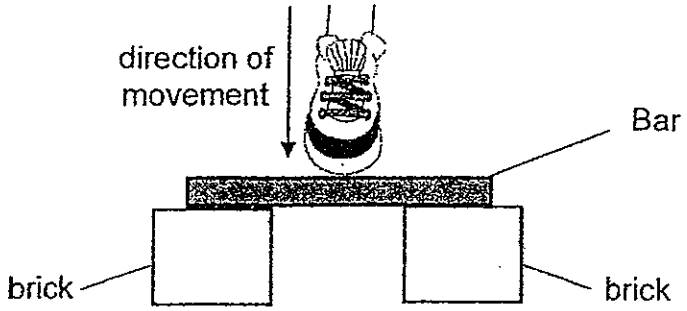
(c) If A is a molly and B is a goldfish, state a possible question that X can be, such that A and B are correctly classified.
(Do not mention colour, appearance or size). [1]

_____

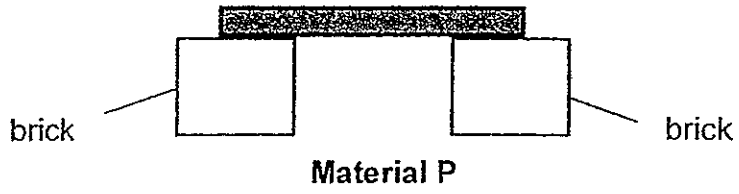
_____

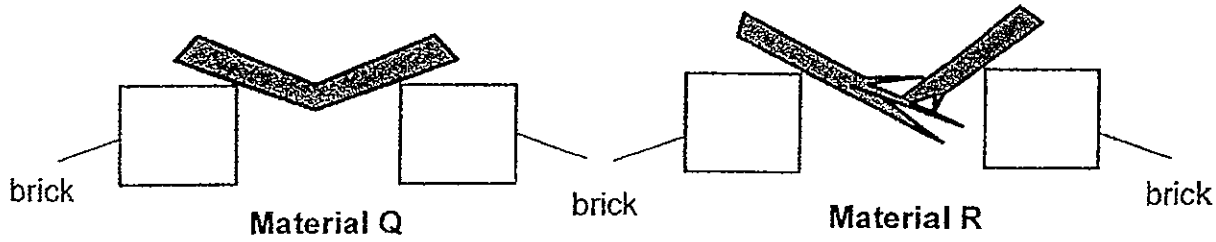
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43. Andy conducted an experiment using three bars which were made of different materials, P, Q and R. He placed each bar of a different material between two bricks and stepped on them in the direction shown below. He used the same amount of strength to step on each material.



The diagrams below showed the results after all 3 bars had been stepped on.





(a) Based on Andy's results, arrange the 3 materials according to their <u>strength</u>. [1]

strongest ——————————→ weakest

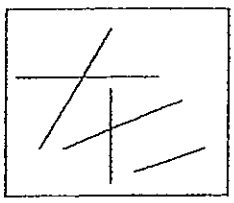
(b) The bar which is made of material P <u>will not break</u> no matter how much strength Andy uses to step on it. Name a possible **material** that material P can be. [1]

P : _____

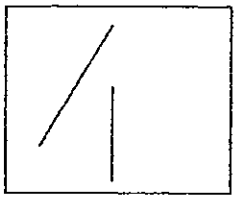
119

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44. Hafiz used an iron nail to scratch two materials, X and Y. He used the same amount of strength and the same number of strokes to scratch each object. The result is as shown below.



X



Y

a) Which property of material is Hafiz testing for? [1]

_____

_____

b) Based on the property of material mentioned in (a), which material, X or Y, would be more suitable to make a mobile phone screen protector?
Explain your answer. [2]

_____

_____

~~ END OF PAPER ~~~~~~~~

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ANSWER SHEET

EXAM PAPER 2012
SCHOOL : NANYANG PRIMARY SCHOOL
SUBJECT : PRIMARY 3 - SCIENCE
TERM : SA 1

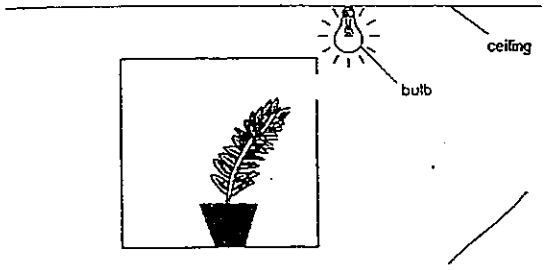
Booklet A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
4	4	4	2	2	3	2	3	2	2	3	1	2	1	1	2

Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
3	4	1	2	3	1	2	4	3	1	4	4	1	4

Booklet B

31. a)



b) Living things respond to changes.

32.

Jar	Observation after 10 days	Explanation
A	It will grow bigger.	It has enough air, water and food, so it would grow bigger.
B	It would die.	It does not have enough food so it would die.
C	It would die.	It does not have enough water so it would die.
D	It would die.	It does not have enough air so it would die.

33. a) Thing A could best represent fire.
b) C needs air, food and water, can reproduce and cannot make its own food.

34. a) 15
b) Cockroaches prefer to live in dark places.

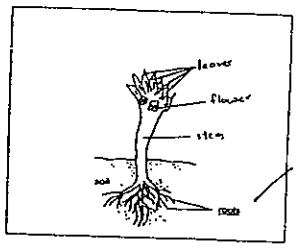
121 End.

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35. A: Plants B: Flowering plants C: Non-flowering plants D: Non-poisonous plants

36. ai) Spores
aii) The 'powders' help the fern to reproduce.
b) A fern can make its own food but a fungi cannot make its own food.

37.



38. a) 10cm
b) 30 ml
c) sunlight

39. a) They all have leaves.

b)

Water Plant	Land Plant
Arrowhead plant	Carrot plant Maidenhair fern

40. a) Dolphin
bi) They have hair/fur on their body.
bii) They feed their young with milk.

41. a) Animal R had wings and has six legs.
bi) U
bii) T
c) Animal Q: Penguin Animal S: whale

42. a) They both have scales.
b) Animal C is warm-blooded but animal D is cold-blooded.
c) A possible question is "give birth to young alive?"

43. a) strongest ⟶ weakest

P Q R

b) P: Metal

44. a) Hardness of the material.
b) Material Y. Material Y is harder than material X because it has fewer scratches. Phone screen protector should be hard.

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