

METHODIST GIRLS' SCHOOL

Founded in 1887



END-OF-YEAR EXAMINATION 2014 PRIMARY 3 SCIENCE

BOOKLET A

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Shade your answers in the Optical Answer Sheet (OAS) provided.

Name: _____ ()

Class: Primary 3. _____

Date: 30 October 2014

This booklet consists of 16 printed pages including this page.

For each question from 1 to 25, four options are given. One of them is the correct answer. Make your choice and shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

[50 marks]

1. Tasmin caught a frog and placed it in a jar with some water and fruit flies. She closed the jar tightly with a lid. The next day, the frog was dead. What could have caused the death of the frog?

- (1) There was no light.
- (2) There was insufficient air.
- (3) There was only a little food.
- (4) There was not enough water.

2. Which of the following is grouped correctly?

	Plant	Animal	Fungi	Micro-organism
(1)	Bacteria	Ixora	Guppy	Mushroom
(2)	Mushroom	Bacteria	Ixora	Guppy
(3)	Guppy	Mushroom	Bacteria	Ixora
(4)	Ixora	Guppy	Mushroom	Bacteria

3. Read the following statements carefully.

- A: Ferns are living things because they can reproduce by spores.
- B: Bacteria are non-living things as they do not need air to survive.
- C: Mushrooms are living things which require sunlight to make food.
- D: Clouds are living things because they can move by themselves.

Which of the following statement(s) is/are true about living and/or non-living things?

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

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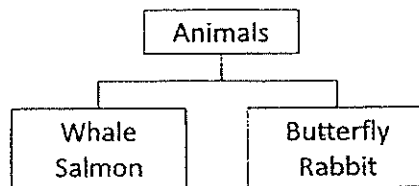
4. Study the table below.

Animal	Outer covering
Frog	Scales
Snake	Scales
Penguin	Fur
Polar bear	Fur

Which of the following animals have been matched with the correct outer covering?

- (1) Frog and Snake
- (2) Frog and Penguin
- (3) Snake and Polar bear
- (4) Penguin and Polar bear

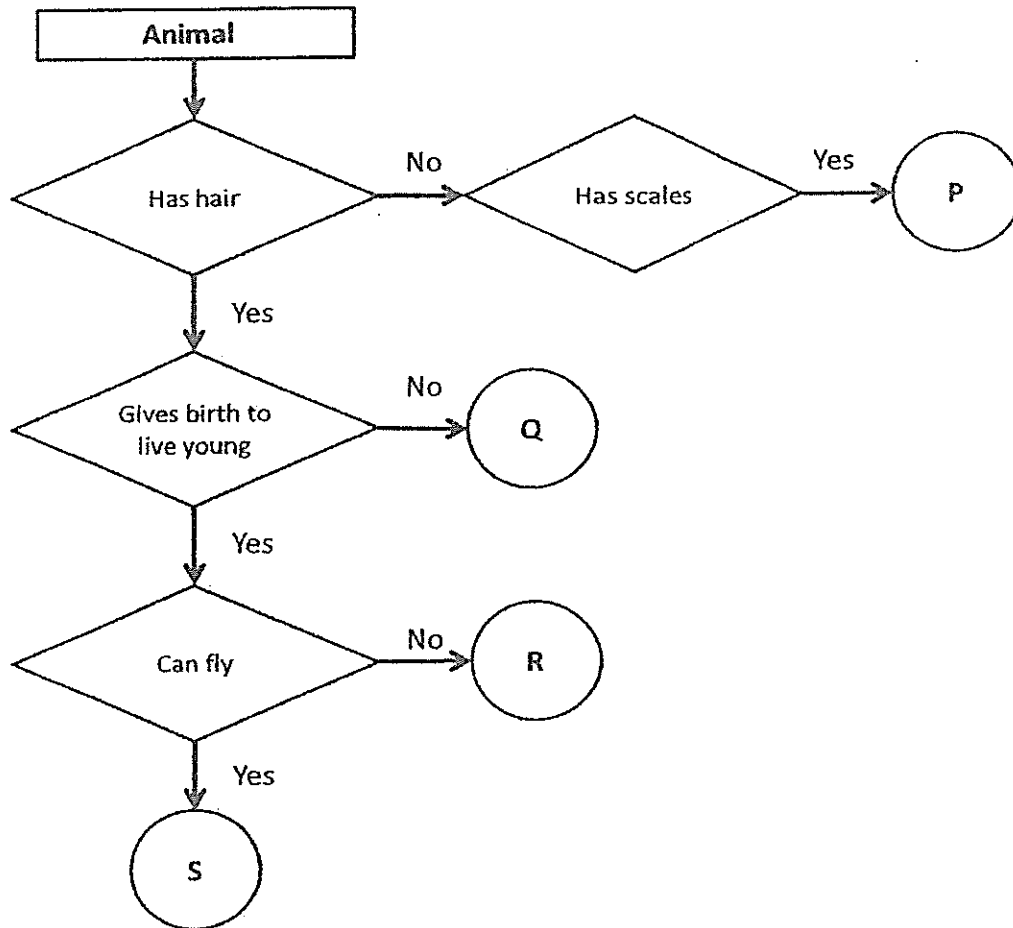
5. Study the classification chart below.



How are these animals classified?

- (1) Where they live
- (2) How they breathe
- (3) Their body covering
- (4) Their reproduction methods

6. Study the flow chart as shown below.

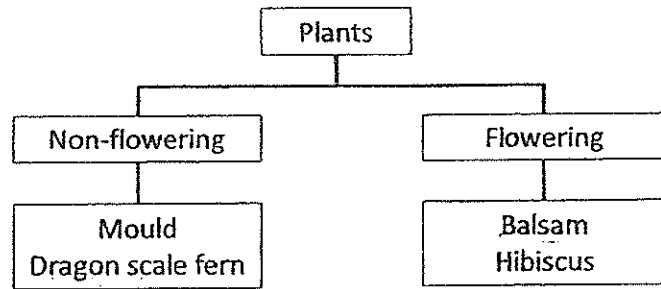


Which of the following animals represent the letters P, Q, R and S?

	P	Q	R	S
(1)	Crocodile	Penguin	Dolphin	Butterfly
(2)	Turtle	Spiny anteater	Mynah	Bat
(3)	Goldfish	Frog	Dog	Eagle
(4)	Salmon	Platypus	Giraffe	Bat

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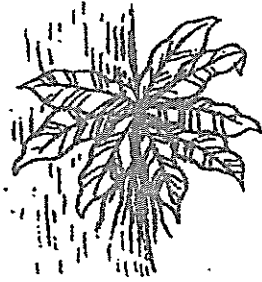
7. Study the classification chart as shown below.



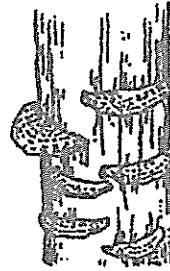
Which of the organisms is **incorrectly** placed in the classification chart?

- (1) Mould
- (2) Balsam
- (3) Hibiscus
- (4) Dragon scale fern

8. Study the two organisms shown below.



Bird's nest fern

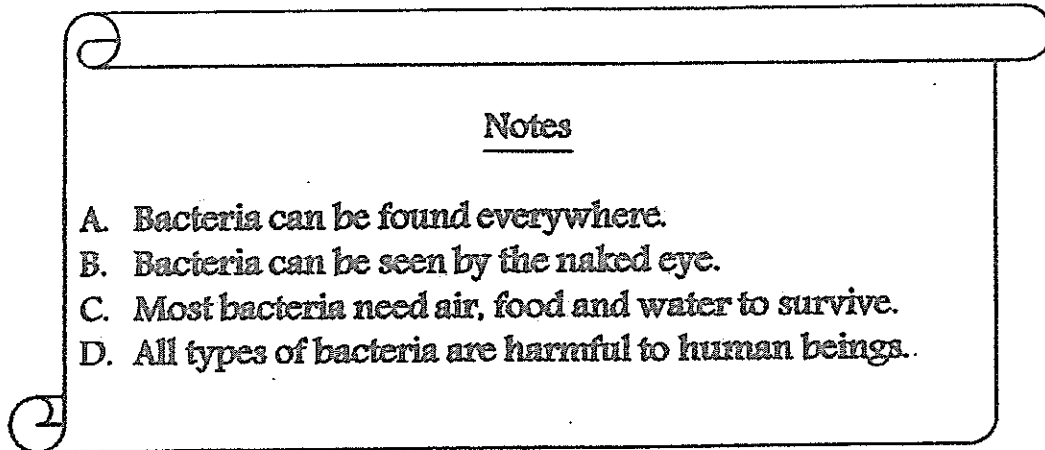


Bracket fungi

Which of the following states the **correct** similarity and difference between these two organisms?

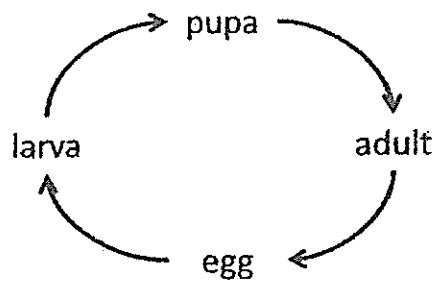
	Similarity	Difference
(1)	Both can make their own food.	The bird's nest fern reproduce by seeds but the bracket fungus reproduce by spores.
(2)	Both can make their own food.	The bird's nest fern produce flowers but the bracket fungus does not produce flowers.
(3)	Both reproduce by spores.	The bird's nest fern can make its own food but the bracket fungus cannot.
(4)	Both can only grow on trees.	The bird's nest fern reproduce by seeds but the bracket fungus reproduce by spores.

9. Rani found a piece of paper with the following notes.



Which of the above statements are true about bacteria?

- (1) A and D
(2) A and C
(3) B and D
(4) B and C
10. Study the diagram below.



Which one of the following animals goes through this life cycle?

- (1) Frog
(2) Cockroach
(3) Grasshopper
(4) Darkling beetle

(Go on to the next page)

11. Miss Goh asked a group of students a question.

“How are the life cycles of a chicken and cockroach similar?”

The responses of the students are shown below.

Tim : Both their young hatch from eggs.
Ali : Both have a 4-stage life cycle.
Siti : Both have a 3-stage life cycle.

Whose responses are correct?

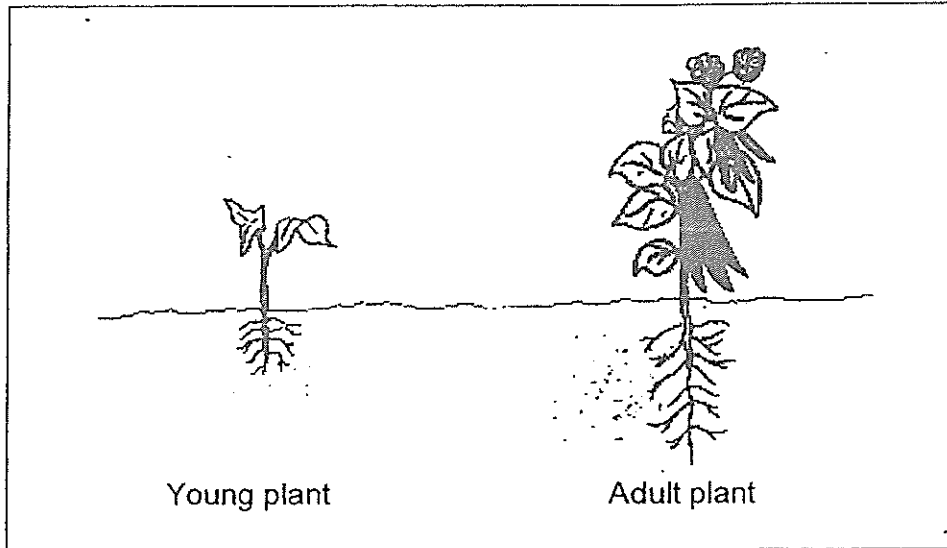
- (1) Ali only
- (2) Siti only
- (3) Tim and Ali
- (4) Tim and Siti

12. Which of the animals stated below undergo moulting at the young stage?

- (1) Frog and Mosquito
- (2) Frog and Butterfly
- (3) Mosquito and Butterfly
- (4) Mosquito and Chicken

(Go on to the next page)

13. The pictures below show a young plant and an adult plant. Which two parts can only be found on an adult plant but not on a young plant?



- (1) Fruits and stem
 (2) Leaves and roots
 (3) Flowers and fruits
 (4) Roots and flowers
14. The table below shows the development process of a flowering plant.

Process	Development
A	Shoot with leaves attached grows upwards.
B	Some flowers develop into fruits with seeds.
C	Plant grows taller and bears flowers.
D	Seeds are planted in the ground.

Which of the following shows the correct order of the development, starting with "Some flowers develop into fruits with seeds"?

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

15. Which of the following statements about some plant life cycles are correct?
- A: Most flowering plants have three stages in their life cycles.
- B: A plant life cycle shows the order of the different stages in plant.
- C: The life cycle of a bean plant consists of the seed, young plant and adult plant.
- D: Different plants take similar period of time to develop from seeds to adult plants.
- (1) A and B only
 (2) C and D only
 (3) A, B and C only
 (4) A, B, C and D

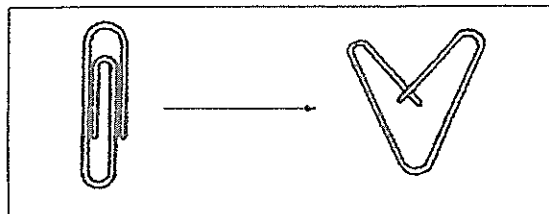
16. Study the classification table below.

Group X	Group Y
A piece of drift wood	A glass vase
An empty plastic bag	A metal fork

What would be the most suitable way to classify the objects in Group X and Group Y?

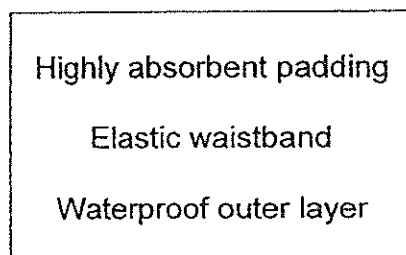
	Group X	Group Y
(1)	Transparent	Opaque
(2)	Waterproof	Absorbent
(3)	Flexible	Stiff
(4)	Float	Sink

17. Aiden bent a large paper clip to form the shape of a heart. The paper clip is made of only one material.



What is the property of the material of the paper clip that enabled him to shape it?

- (1) It is soft
 - (2) It is light
 - (3) It is shiny
 - (4) It is malleable
18. Most disposable diapers have the following features.



Which of the following materials was not used to make the different parts of a diaper?

- (1) Cotton
- (2) Plastic
- (3) Rubber
- (4) Aluminium

19. The table below shows four materials, A, B, C, D and their properties.

	Material A	Material B	Material C	Material D
Strong	Yes	Yes	No	No
Flexible	No	Yes	No	Yes
Waterproof	No	No	Yes	Yes
Transparent	Yes	No	Yes	No

Mrs Nathan wants to make curtains to block off the sunlight for her new house. Which material should she choose?

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

20. A group of students were having a discussion on magnets. They made the following statements:

Paul: All metals are magnets.

Siva: Every magnet has two poles, no matter what shape it is.

Nuru: Like poles of two magnets attract, while unlike poles repel.

Which of the following student(s) is/are correct?

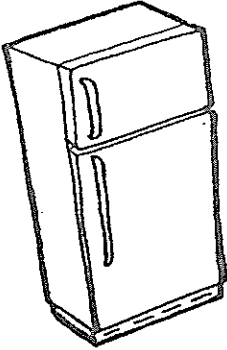
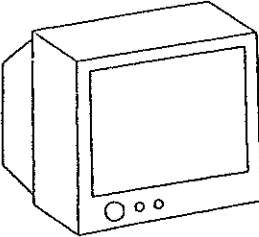
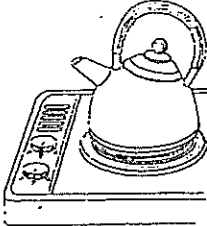

- (1) Siva only
- (2) Paul and Siva only
- (3) Siva and Nuru only
- (4) Paul, Siva, and Nuru

21. Which of the following ways can weaken the magnetism of a magnet?

- A: By hammering it many times
- B: By heating it over a strong flame
- C: By soaking it in oil for a few hours
- D: By dropping it repeatedly on the floor

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

22. Which of the following appliance(s) does/do not have any magnet in it/them?

			
A : Refrigerator	B : Television	C : Kettle	D : Telephone

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

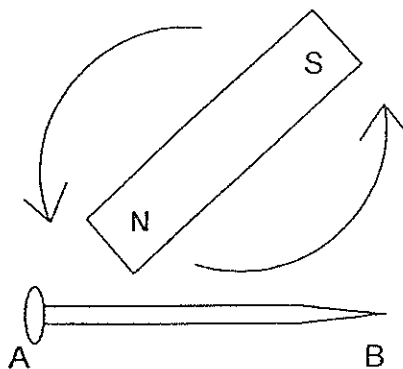
23. Zachary brought a U-shaped magnet near three objects, D, E and F. One is a magnet, one is a magnetic object and one is a non-magnetic object. Each of these objects interacted with the U-shaped magnet and he recorded his observations in the table below.

Object	Upon interaction with U-shaped magnet
D	No movement was observed
E	Moved away from the U-shaped magnet
F	Moved towards the U-shaped magnet

Which object is a magnet and which is a magnetic object?

	Magnet	Magnetic object
(1)	F	E
(2)	D	F
(3)	E	D
(4)	E	F

24. A temporary magnet can be made by stroking an iron nail fifty times with a bar magnet as shown below.

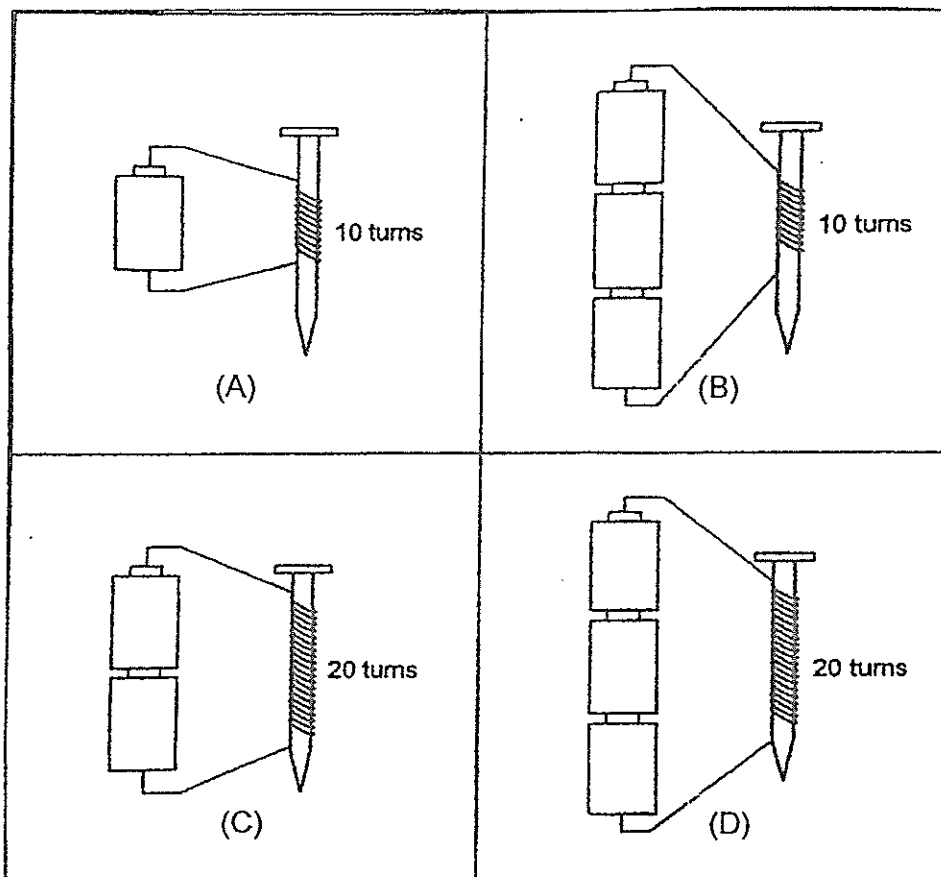


Which of the following could the ends, A and B, of the iron nail be, after it has been magnetised?

	A	B
(1)	North pole	South pole
(2)	North pole	North pole
(3)	South pole	North pole
(4)	South pole	South pole

25. Yusof wants to find out whether the number of coils of the wire affects the strength of a magnet. He sets up two arrangements. For each arrangement, he tests the strength of the magnet by counting the number of paper clips it can pick up.

Which two arrangements below should he set up so that a fair test can be conducted?



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

METHODIST GIRLS' SCHOOL

Founded in 1887



END-OF-YEAR EXAMINATION 2014 PRIMARY 3 SCIENCE

BOOKLET B

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

Name: _____ ()

Class: Primary 3. _____

Date: 30 October 2014

Booklet A	/ 50
Booklet B	/ 40
TOTAL	/ 90

This booklet consists of 16 printed pages including this page.

For questions 26 to 42, write your answers in this booklet.

The number of marks available is shown in brackets [] at the end of each question or part question.

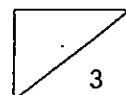
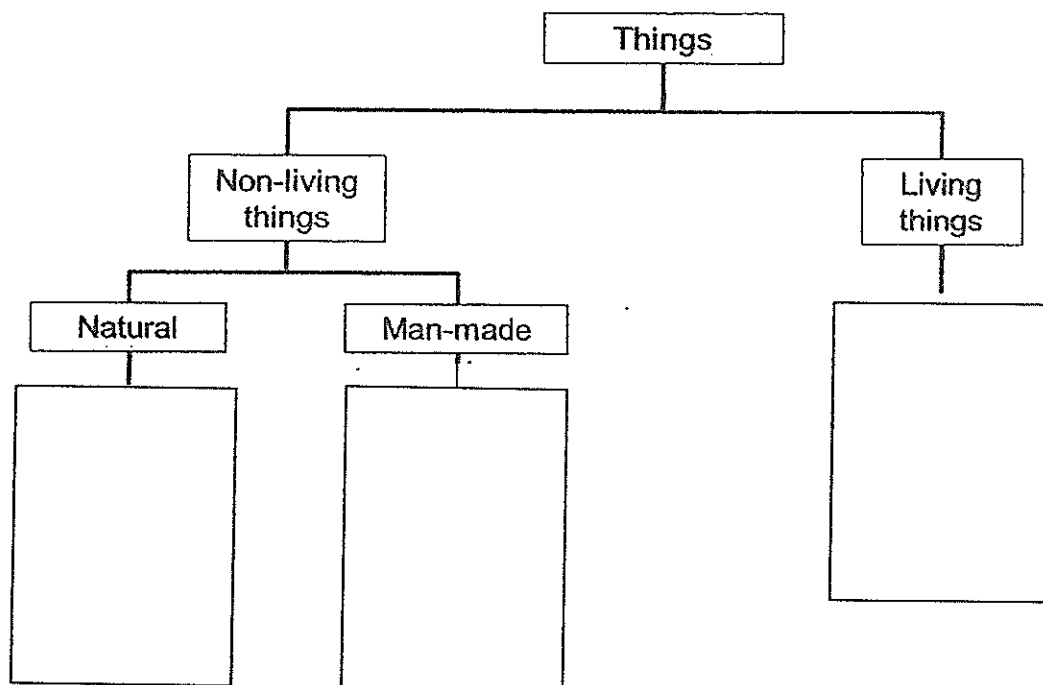
[40 marks]

26. Study the items as shown in the box below.

Styrofoam box	Copper	Cow
Moss	Coin	Salted fish

Classify all of the items correctly in the chart below.

[3]



(Go on to the next page)

27. Lisa was given a young guinea pig in a cage. The cage had holes on top. She provided her guinea pig with hay, carrots and cucumber every day for its meals. She also made sure that it had enough water to drink.

Two weeks later, Lisa realised that her guinea pig was getting too big for its cage and she intended to get a bigger one for it.

Based only on the information above, list two characteristics to show that the guinea pig is a living thing. [2]

28. Suresh went to the zoo and he recorded some observations in his biology book as shown below.

<p style="text-align: center;"><u>Group R</u> Animals have six legs. They have three body parts.</p> <p style="text-align: center;"><u>Group S</u> Animals breathe through lungs and moist skin. These animals reproduce by laying eggs.</p>
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What are the animal groups that Suresh had seen at the zoo?

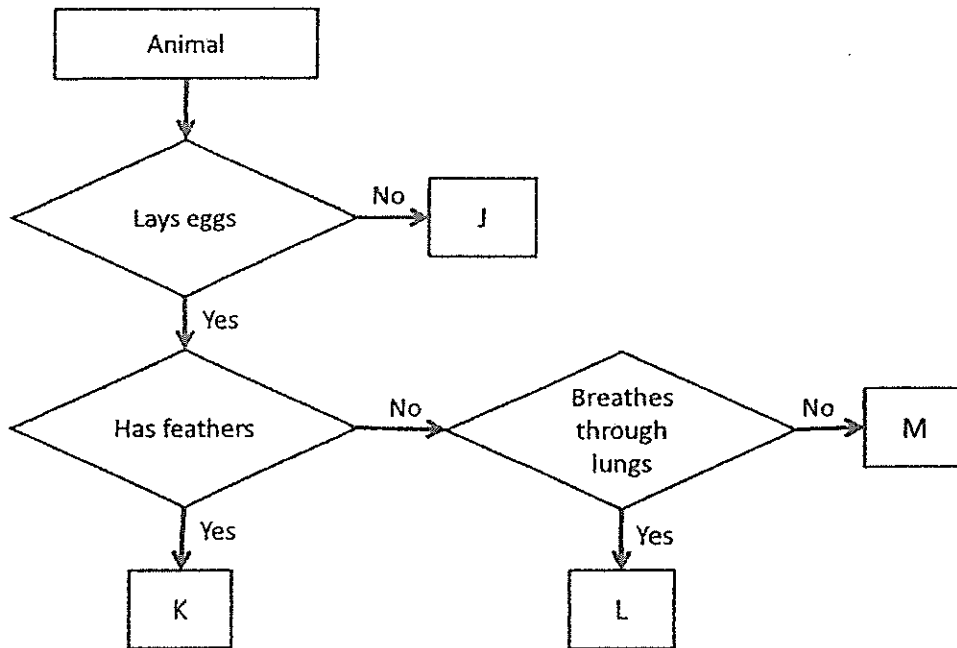
Group R: _____ [1]

Group S: _____ [1]



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29. Study the flow chart below.



(a) Based **only** on the helping words given in the box below, choose the correct animals that represent J, K, L and M.

Ant	Camel
Lizard	Emu

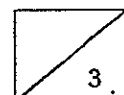
J: _____ [½]

K: _____ [½]

L: _____ [½]

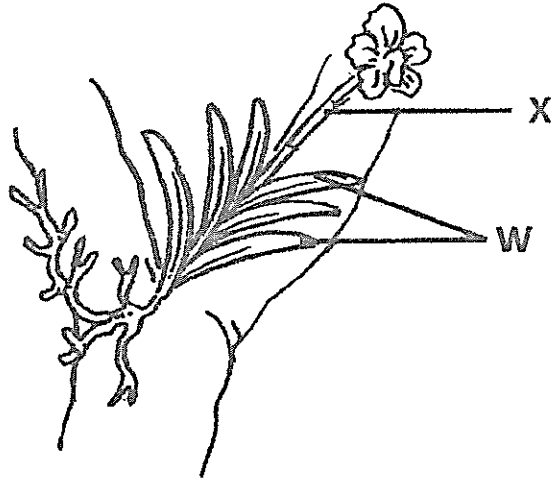
M: _____ [½]

(b) Based **only** on the flow chart above, state one similarity between K, L and M. [1]



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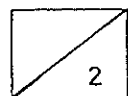
30. The diagram below shows a plant growing on a tree trunk.



Identify the plant parts W and X.

Plant part W: _____ [1]

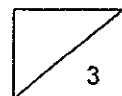
Plant part X: _____ [1]



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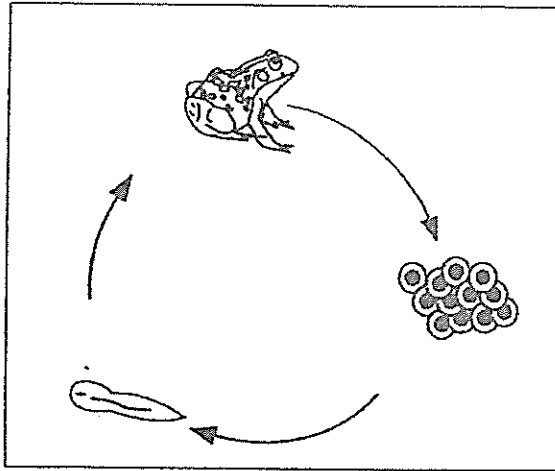
31. Read the statements below. Write "True" in the box for a true statement and "False" in the box for a false statement. [3]

	Statements	True/False
(a)	Some bacteria can cause food poisoning in humans.	
(b)	Yeast is used in some bread-making process.	
(c)	All plants reproduce by seeds.	
(d)	Ferns and mould are non-flowering plants.	
(e)	Mould will grow best in cold and dry places.	
(f)	All mushrooms are non-poisonous.	



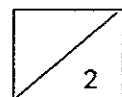
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32. The life cycle of a frog is shown below.



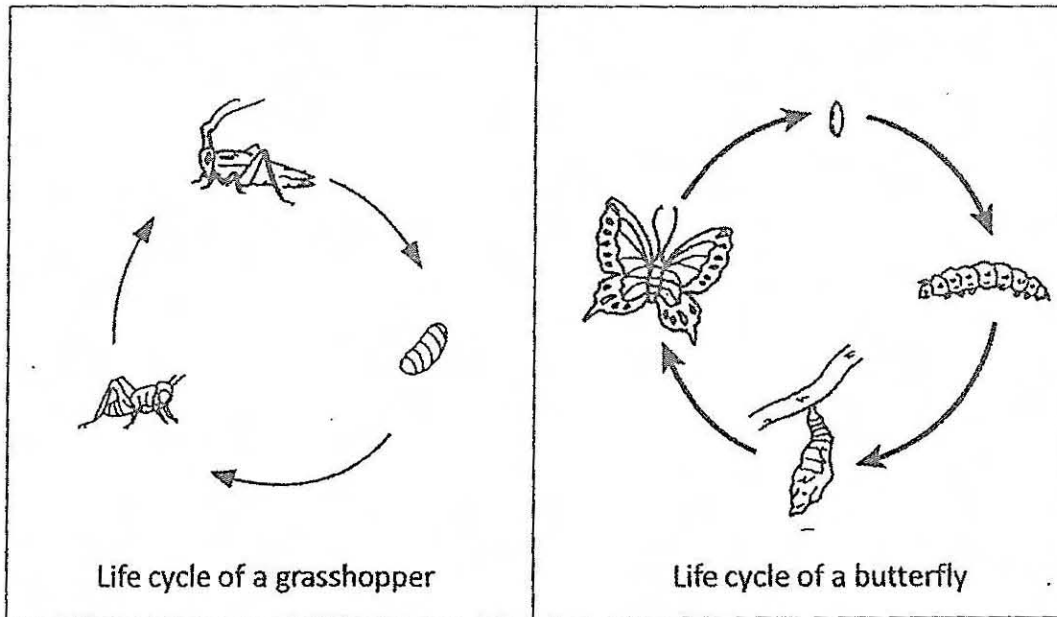
The adult frog and its young differ in some ways. Complete the table below to show the differences. [2]

	Adult	Young
Where it lives		
Breathing method		



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33. The diagrams show the life cycles of two insects.

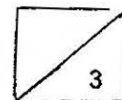


- (a) Name the stage of the young of the grasshopper. [1]

- (b) What are two differences between the life cycles of these two insects?
(Do not compare the eggs) [2]

Difference 1:

Difference 2:



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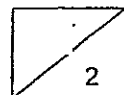
34. Complete the statements below by drawing lines to match the words correctly in both columns. [2]

(a) The seed coat • • air, water and warmth

(b) The root • • protects the seed

(c) Germination requires • • provide nutrients for the young seedling

(d) The seed leaves • • is the first part of a young plant to grow



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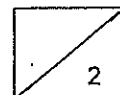
35. On their way to school, four children were caught in the heavy rain. Each of them chose the items as shown in the table to shield themselves from the rain.

	Choice of Items
Ann	Newspapers
Bala	Thin metal sheet
Caleb	Woollen jacket
Daniel	Plastic picnic mat

Only two of the four children remained relatively dry when they reached school. Which two children would most likely have remained dry and state the common property of these two materials that kept them dry.

[2]

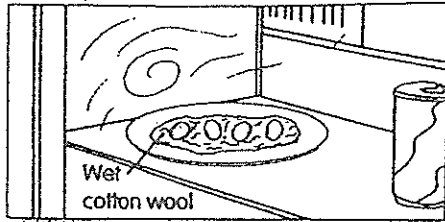
Name of children	Child 1 : _____ Child 2 : _____
Property of materials	



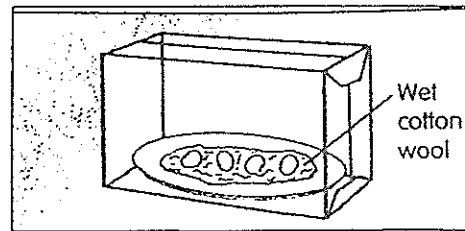
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36. Mei Ling placed some seeds on four plates in different conditions as shown below.

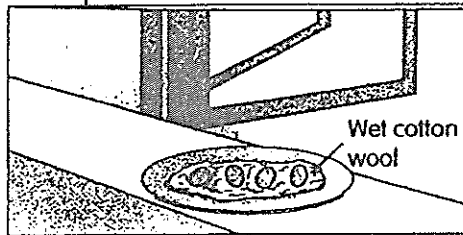
Set-up A: In a refrigerator



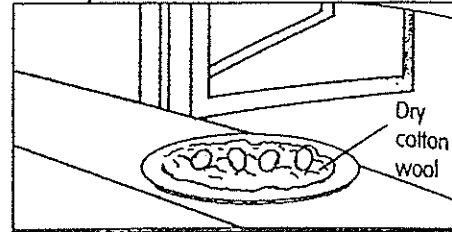
Set-up B: In a sealed box



Set-up C: Near the window



Set-up D: Near the window

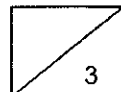


After a week, Mei Ling checked the seeds and found that the seeds in two of the set-ups did not grow into young plants.

In the box below, fill in the answers for the following questions:

- (a) In which two set-ups did the seeds **not** germinate? [1]
- (b) Give a reason each to support your answer in (a) [2]

Set-up	Reason



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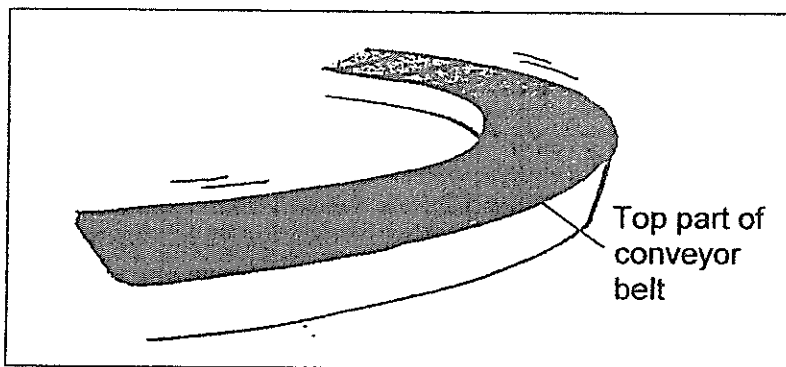
37. Jack wrote down the descriptions of three materials, X, Y and Z, in a table as shown below.

Material	Lightweight	Waterproof	Able to float
X	Yes	No	No
Y	Yes	Yes	Yes
Z	No	Yes	No

- (a) Which is the most suitable material for making an anchor to hold the ship? [1]

- (b) Suggest what material Y could be. [1]

38. The diagram below shows a luggage conveyor belt found in an airport terminal.

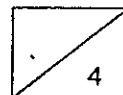


Name the material that is used to make the top part of the conveyor belt. Give a reason for your answer.

Material : _____ [1]

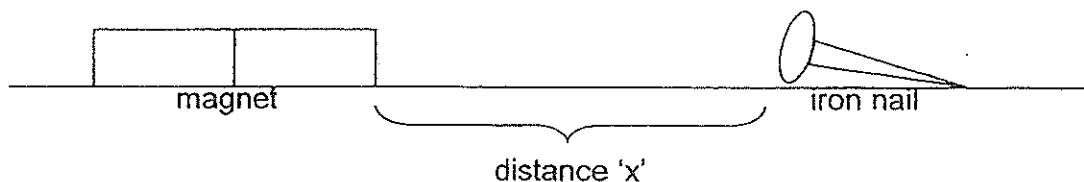
Reason : _____

[1]



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39. Kelvin carried out an experiment to test the strength of magnets as shown below.



He put magnet J on the table and measured the distance 'x' between the magnet and the iron nail just when the iron nail was attracted to the magnet.

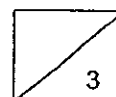
He repeated the experiment using magnets K, L and M and recorded the results in the table below.

Magnet	Distance 'x' (cm)
J	6
K	2
L	4
M	8

- (a) Which magnet has the strongest magnetism? [1]

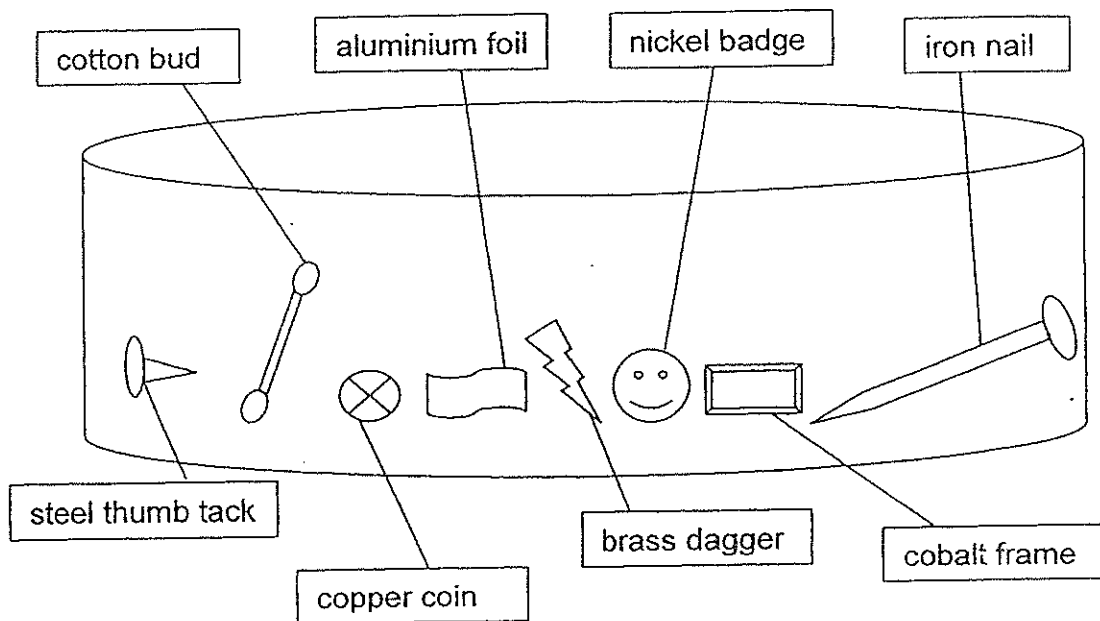
- (b) Name one variable that must be kept the same for the experiment to be considered a fair test: [1]

- (c) What should Kelvin do so that his results would be more reliable? [1]



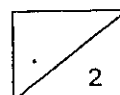
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40. Kavita had a glass tank filled with objects. She wanted to take some objects out of the glass tank without touching them with her hands. Her friend suggested that she tie a strong magnet to a fishing rod to attract the objects that are magnetic.



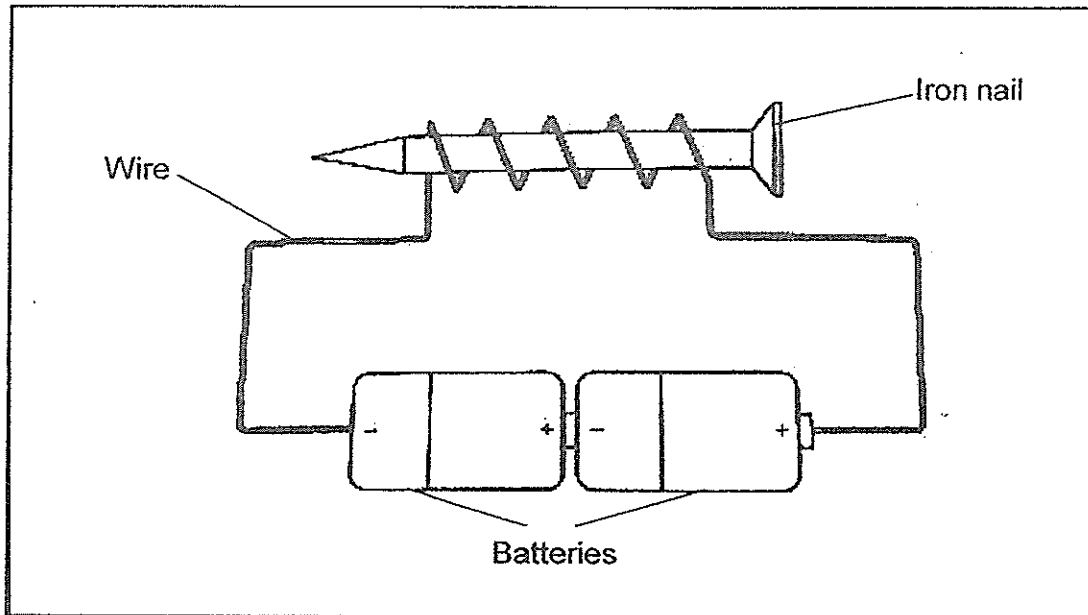
What were the four objects that she could remove from the glass tank? [2]

	Magnetic objects
1	
2	
3	
4	



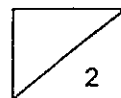
(Go on to the next page)

41. Fatima is using the electrical method to make a magnet as shown below. Suggest two ways in which she can make a magnet with greater magnetic strength. [2]



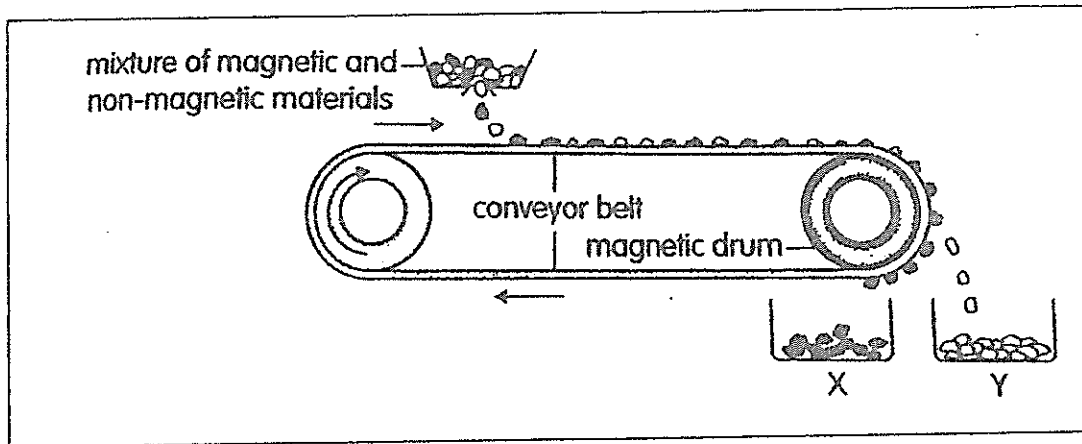
(a) _____

(b) _____



(Go on to the next page)

42. The diagram below shows how a magnetic separator is used to separate useful magnetic materials from non-magnetic materials.



- (a) Write the letters, X and Y, in the table below to show which container the magnetic and non-magnetic materials will fall into.

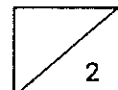
[1]

Type of materials	Container
Magnetic	
Non-magnetic	

- (b) Name a place where you can find a magnetic separator being used.

[1]

End of paper
Have you checked your work?



EXAM PAPER 2014

LEVEL : PRIMARY 3

SCHOOL : MGS

SUBJECT : SCIENCE

TERM : SA2

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

Q26 Natural – salted fish, copper
Man-made – coin, Styrofoam
Living things – moss, cow

Q27 It needs air, water and food and it grows.

Q28 Group R: Insects
Group S: Amphibians

Q29 (a) J: Camel
K: Emu
L: Lizard
M: Ant
(b) They all lay eggs,

Q30 Plant Part W: leaf
Plant Part X: stem

Q31 (a) True
(b) True
(c) False
(d) False
(e) False
(f) False

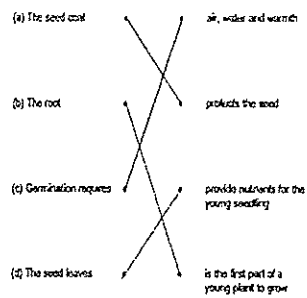
Q32

	Adult	Young
Where it lives	Land and water	Water
Breathing method	Lungs and moist skin	gills

Q33 (a) Nymph
(b) Difference 1: The butterfly's life cycle has 4 stages but the grasshopper's life cycle has 3 stages.
Difference 2: The young of a grasshopper looks like the adult but the young of a butterfly does not look like the adult.



Q34



Q35

Child 1: Bala
Child 2: Daniel

Waterproof

Q36

Set-up A: There is no warmth
Set-up D: There is no water.

Q37

- (a) Material Z
- (b) Plastic

Q38

Material: Rubber
Reason: It must be strong for the protection of the luggage.

Q39

- (a) Magnet M
- (b) The same iron nail
- (c) Repeat the experiment several times.

Q40

Steel thumbtack, nickel badge, cobalt frame, iron nail

Q41

- (a) She could use more coils around the iron nail.
- (b) She should add more batteries.

Q42

- (a) Magnetic – container X
Non-magnetic – container Y
- (b) A recycling factory

