METHODIST GIRLS' SCHOOL

Founded in 1887

END-OF-YEAR EXAMINATION 2015
PRIMARY 3
SCIENCE

BOOKLET A

Total Time for Booklets A and B: 1 hour 30 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 2015

This booklet consists of 20 printed pages including this page.

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 on the Optical Answer Sheet (OAS).

[60 marks]

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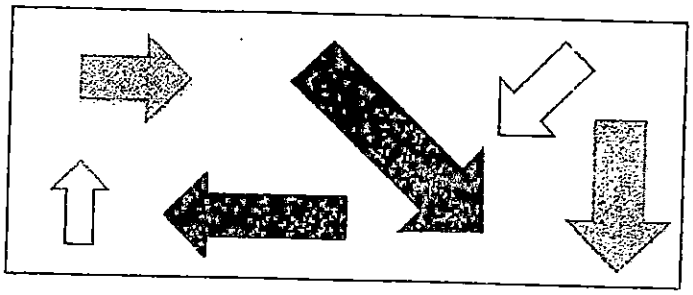
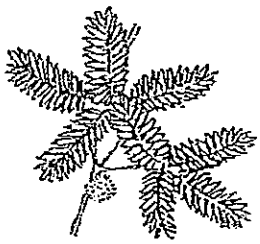
1. Look at the diagram below.



The arrows are of/have different __(a)__ but have the same __(b)__ .

	(a)	(b)
(1)	sizes	colour
(2)	shapes	size
(3)	number of sides	size
(4)	colours	number of sides

2. Jody saw a mimosa plant and touched the mimosa leaves with her fingers. To her surprise, the leaves did not close at all. What could be the reason?

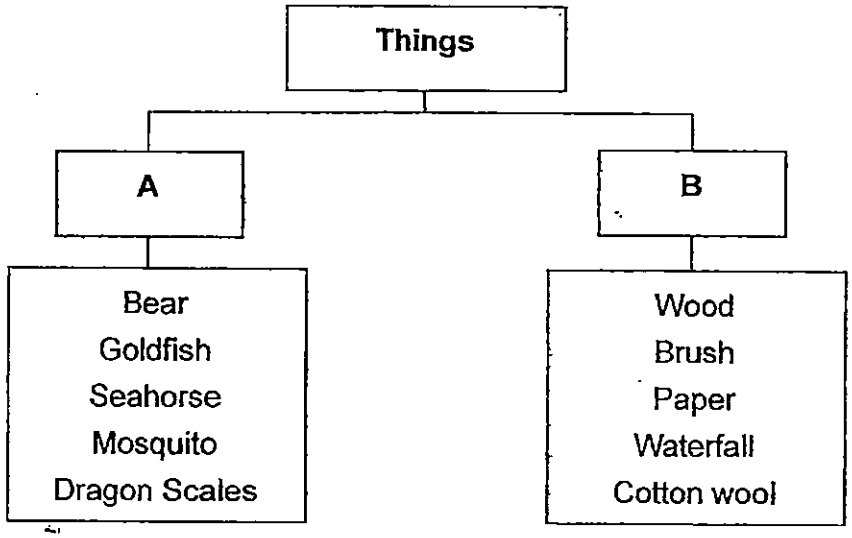


The mimosa plant was _____.

(1) germinating
(2) making food
(3) made of plastic
(4) slow in responding to changes

(Go on to the next page)

3. The classification table below shows how some things are classified.



Which of the following represents the sub-headings, A and B, correctly?

	A	B
(1)	Animals	Plants
(2)	Plants	Animals
(3)	Living things	Non-living things
(4)	Non-living things	Living things

4. Study the following description of animal Z.

It has hair.
It eats plants.
It hops on its hind legs.
It burrows underground.

Animal Z is most likely to be a _____.

(1) bat
(2) toad
(3) rabbit
(4) penguin

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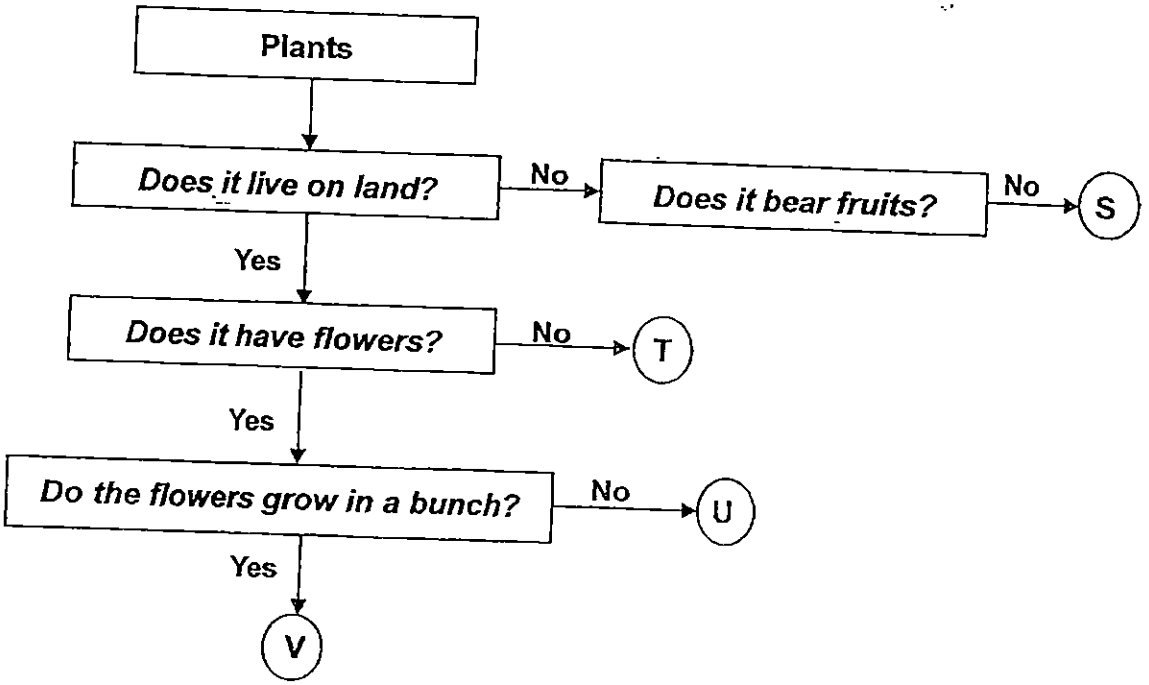
5. The flow chart below shows how some living things, S, T, U and V, have been classified.



Which one of the following best represents the Ixora?

(1) S
(2) T
(3) U
(4) V

6. Which of the following statements about bacteria is/are **false**?

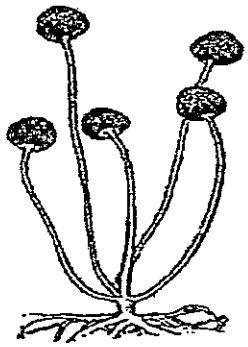
A: Bacteria can reproduce.
B: All bacteria are harmful.
C: Bacteria need food to survive.
D: Bacteria can be found everywhere.

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

(Go on to the next page)

7. The diagram below shows two organisms.

Mushroom



Mould

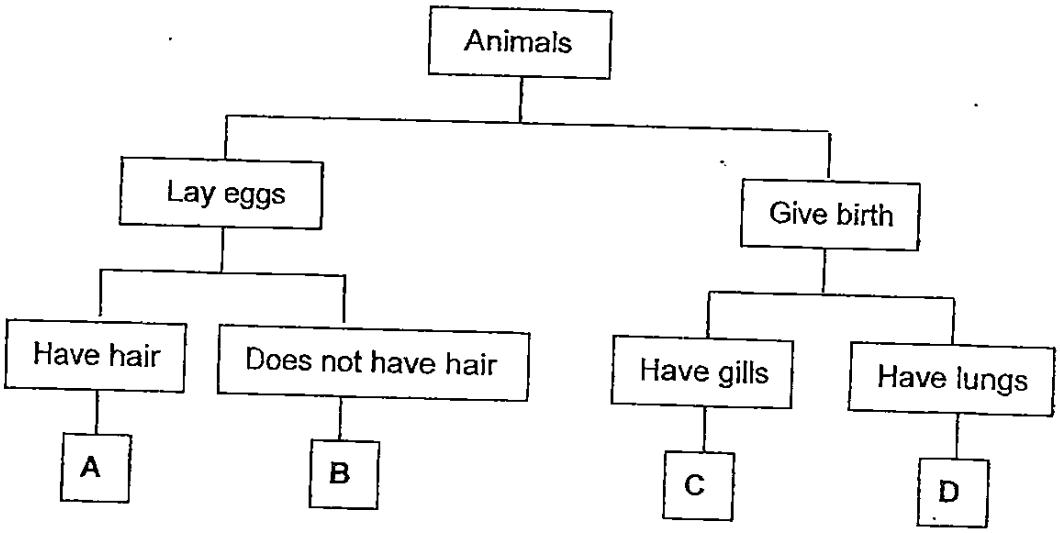
In what ways are the mushroom and the mould similar?

A: They can reproduce.
B: They can cause decay.
C: They cannot make their own food.
D: They can only be seen through a microscope.

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

(Go on to the next page)

8. Study the classification chart below carefully.

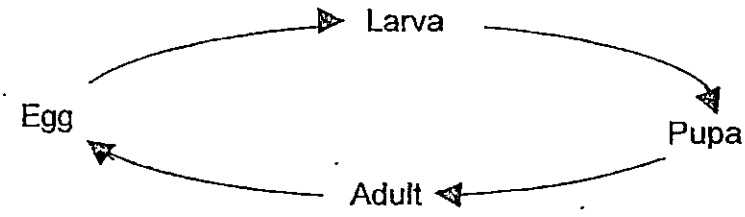


What animals can A, B, C and D be?

	A	B	C	D
(1)	Horse	Swordtail	Turtle	Platypus
(2)	Swordtail	Turtle	Horse	Platypus
(3)	Platypus	Swordtail	Horse	Turtle
(4)	Platypus	Turtle	Swordtail	Horse

(Go on to the next page)

9. Study the diagram below carefully.

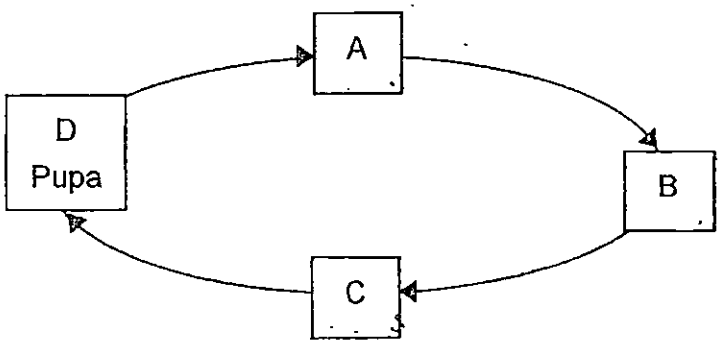


Which of the following animals go through the life cycle as shown above?

A: Mosquito
B: Cockroach
C: Grasshopper
D: Mealworm beetle

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

10. The diagram below shows the life cycle of a butterfly.

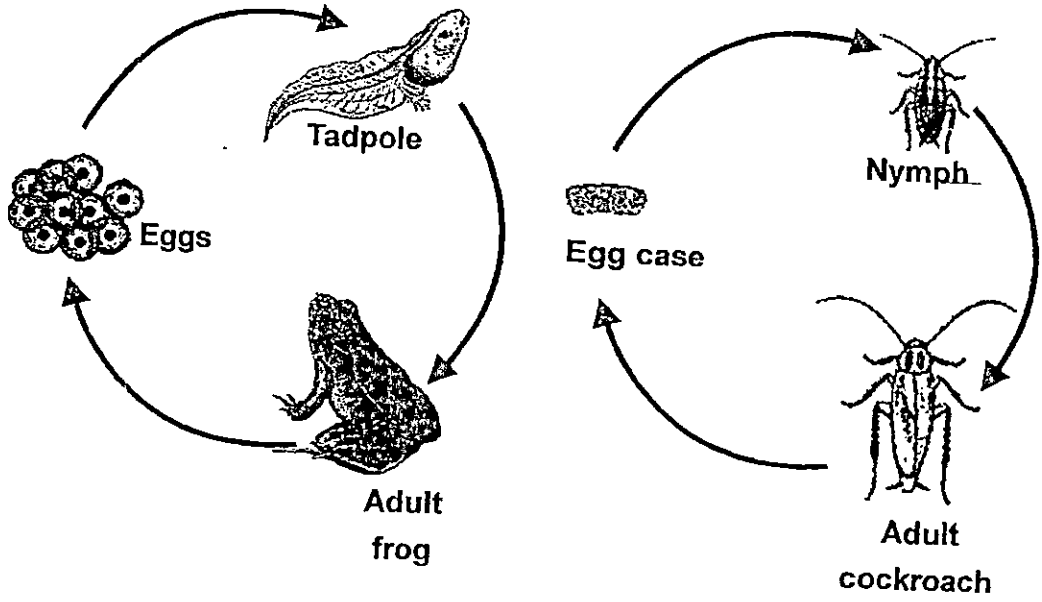


At which stage, A, B, C or D, does the butterfly cause harm to the plants?

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

(Go on to the next page)

11. Study the diagram below carefully.



Which of the following similarities between the life cycles of the two animals shown above are correct?

A: The young hatch from eggs.
B: The young look like the adult.
C: There are three stages in their life cycles.
D: The female adult lays many eggs at one time.

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

(Go on to the next page)

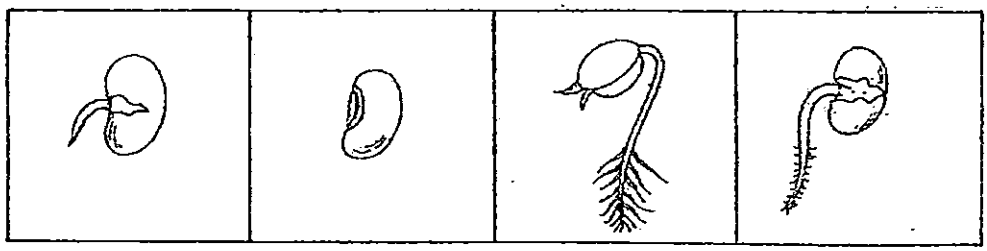
12. Nadia did a study on two animals, P and Q, and drew up a checklist.

What Nadia observed	Animal P	Animal Q
Eggs are laid in water	No	Yes
There are 3 stages in the life cycle	Yes	No
It has 3 pairs of legs	Yes	Yes

What are animals P and Q?

	Animal P	Animal Q
(1)	Moth	Ladybird
(2)	Chicken	Butterfly
	Grasshopper	Mosquito
(4)	Mealworm beetle	Dragonfly

13. The diagram below shows the different stages of the growth of a seed.



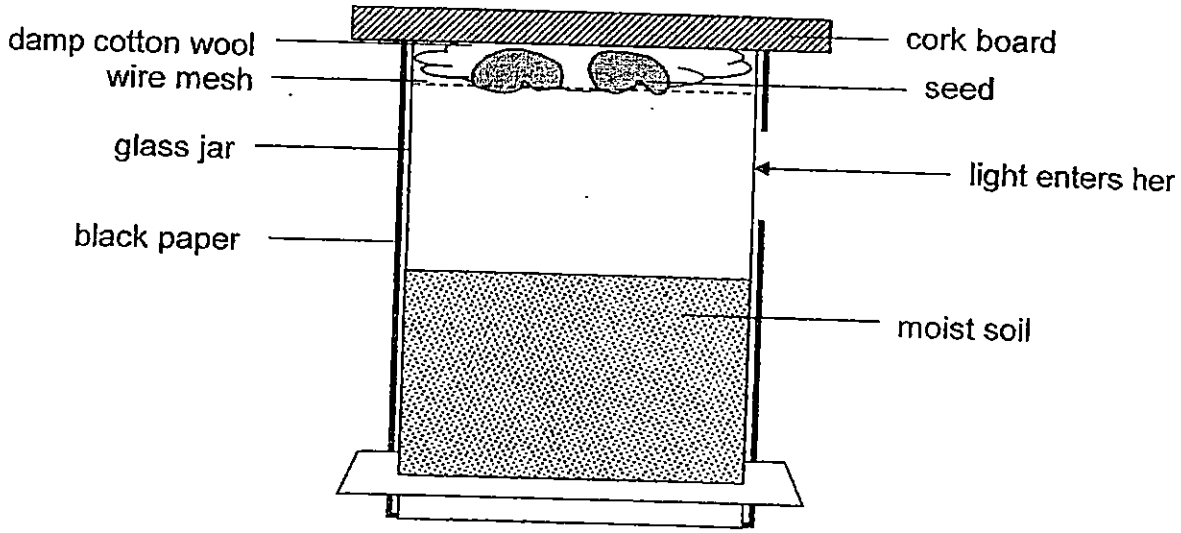
A B C D

Which one of the following options shows the correct order of growth?

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

(Go on to the next page)

Study the set up below carefully and answer questions 14 and 15.



14. What will happen to the roots when the seed begins to germinate?
They will grow _____.

(1) in all directions
(2) towards the light
(3) towards the moist soil
(4) towards the cork board

15. It was observed that the young plant grew towards the light. Why did this happen?

(1) The young plant needed light to make food.
(2) Light allowed the young plant to grow faster.
(3) The young plant needed nutrients for growth.
(4) Light would provide heat for the young plant to grow healthily.

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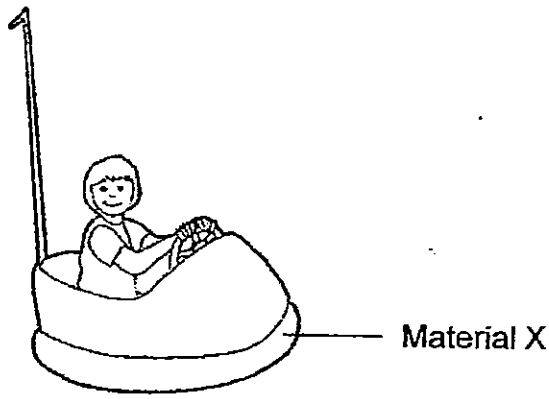
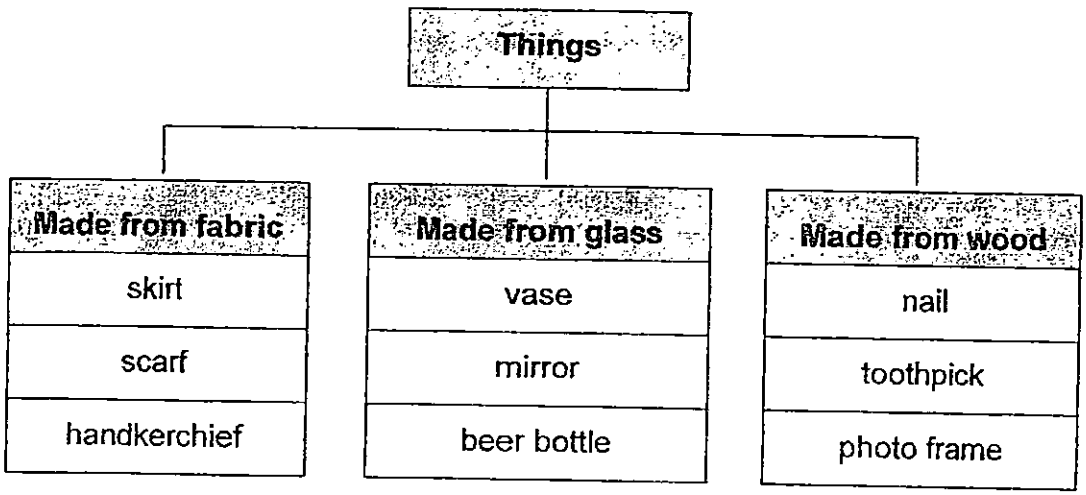
16. The picture below shows a bumper car.



Which of the following options correctly describe the property and reason for using Material X?

	Property	Reason
(1)	Stiff	Material does not allow light to pass through
(2)	Strong	Car will not be damaged easily
(3)	Flexible	Material will not break easily
(4)	Waterproof	Car will be able to move faster

17. Some things have been classified into three groups as shown below.

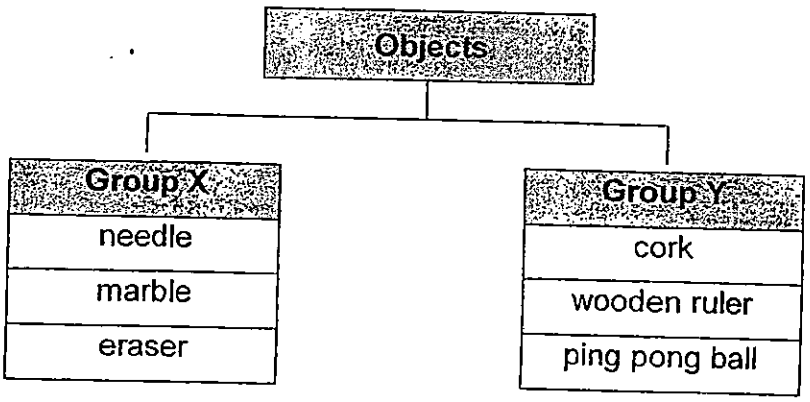


Which one of the following things has been grouped **wrongly**?

(1) nail
(2) mirror
(3) toothpick
(4) handkerchief

(Go on to the next page)

18. Some objects have been classified into two groups as shown below.



What can the headings for Groups X and Y be?

	Group X	Group Y
(1)	Flexible	Stiff
(2)	Waterproof	Absorbent
(3)	Sink in water	Float in water
(4)	Allows most light to pass through	Does not allow light to pass through

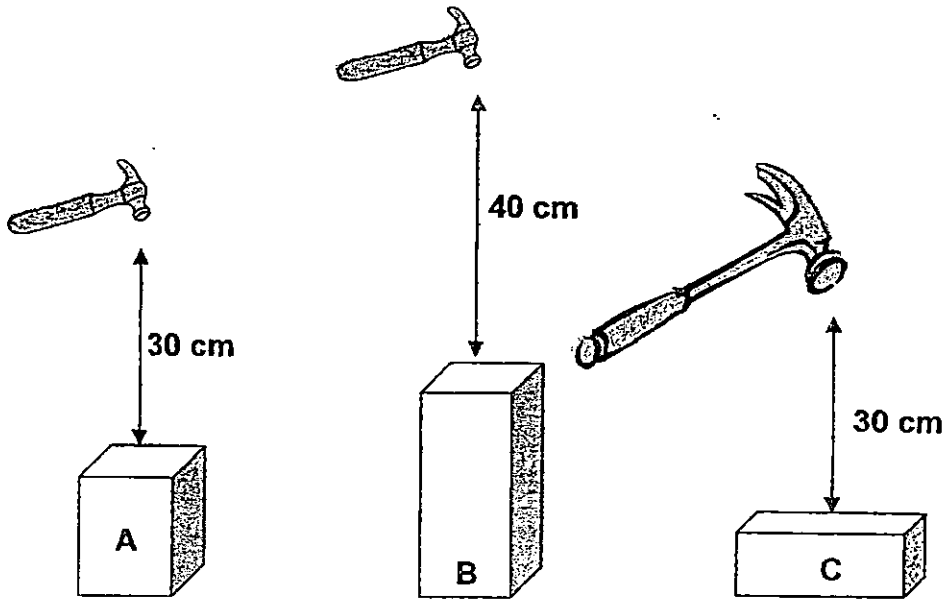
19. Omar wants to pack his footwear for a holiday at the beach. Based on the information below, which is the most suitable footwear for the beach?

Footwear	Flexible	Waterproof	Breaks easily
W	No	Yes	No
X	Yes	No	Yes
Y	No	No	Yes
Z	Yes	Yes	No

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

(Go on to the next page)

20. Rafael wanted to test the strength of objects A, B and C made of different materials by hitting them with a hammer. He concluded that object B is the strongest because it did not break. His teacher told him that his conclusion was incorrect because he did not conduct a fair experiment.



What should Rafael do to ensure that the experiment was fair?

A: All three objects should be of the same size:
B: Object A, B and C should be of the same material.
C: The same hammer must be used for all the objects.
D: The distance between the hammer and the objects must be equal:

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

21. Which of the following object(s) will be attracted to magnets?

A: Gold ring
B: Copper plate
C: Steel thumbtack
D: Aluminium frame

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

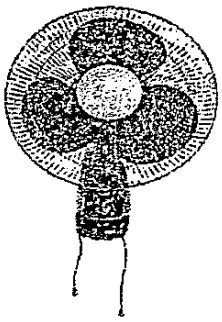
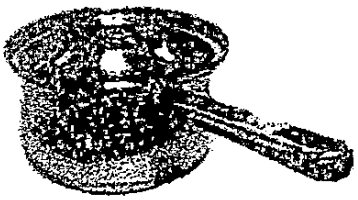
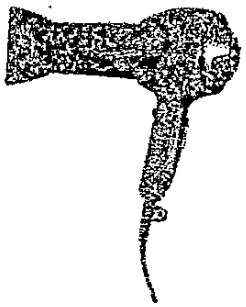
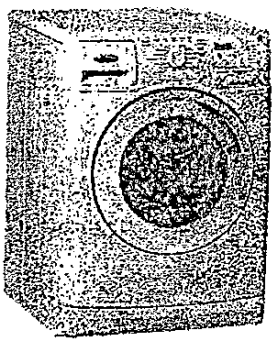
(Go on to the next page)

22. Rohei uses a hammer to hit a bar magnet many times.

What will happen to the bar magnet?

(1) Nothing will happen.
(2) The hammer will be magnetised.
(3) The bar magnet will become stronger.
(4) The bar magnet will lose its magnetism.

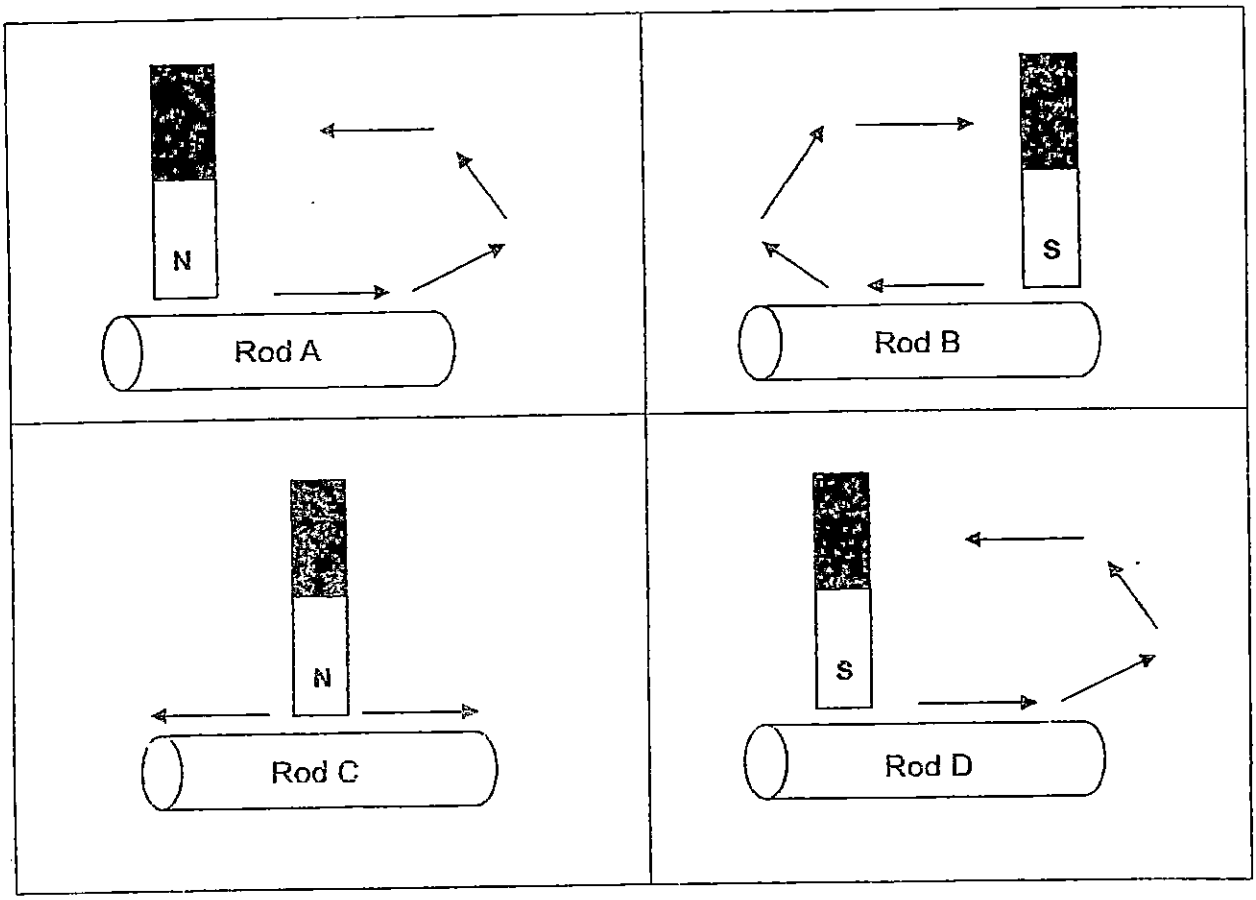
23. Which one of the following items is classified **wrongly**?

Makes use of magnets	Does not make use of magnets
 Electric fan	 Cooking pot
 Hair dryer	 Washing machine

(1) Hair dryer
(2) Electric fan
(3) Cooking pot
(4) Washing machine

(Go on to the next page)

24. Steve tried to magnetise four iron rods, A, B, C and D, using the stroking method as shown below.

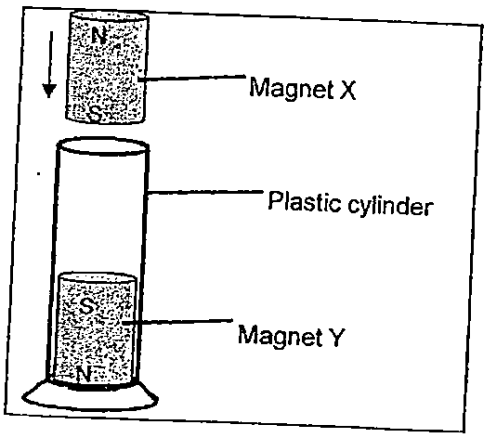


Which rod(s) will become temporary magnet(s)?

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

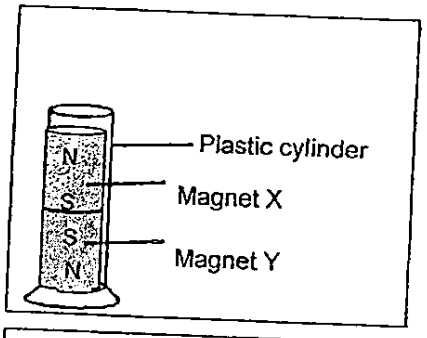
(Go on to the next page)

25. Study the diagram below.

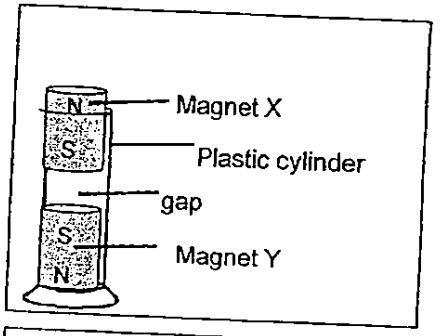


What will happen when magnet X is slowly lowered into the plastic cylinder?

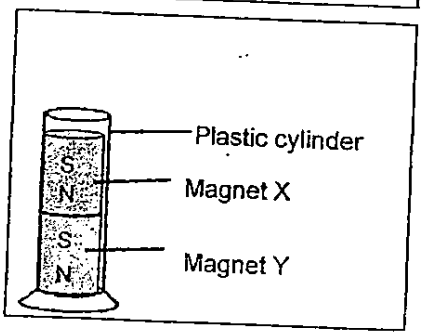
(1)



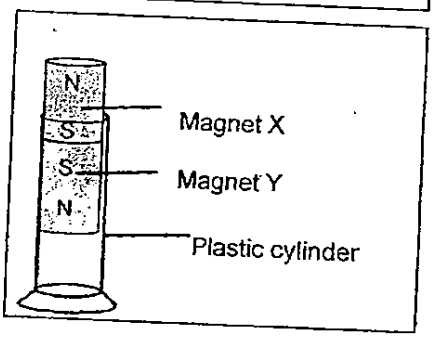
(2)



(3)



(4)



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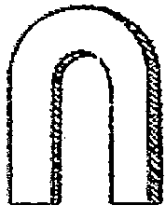
26. Anthony had three magnets, A, B and C, as shown in the diagram below.

Magnet A

Magnet B



Magnet C

He placed each magnet at the same distance from the same amount of paper clips. He then slowly moved the magnet nearer to the paperclips and measured the distance at which the magnet attracted the paper clips and the number of paper clips attracted.

The table below shows his results.

Magnet	Distance between magnet and paperclips (cm)	Number of paperclips attracted
A	7	12
B	2	5
C	4	12

Which of the following statements is correct?

(1) Magnet C is the weakest magnet.
(2) Magnet A is the strongest magnet.
(3) Magnet A is as strong as Magnet C.
(4) Magnet B is a stronger magnet than A.

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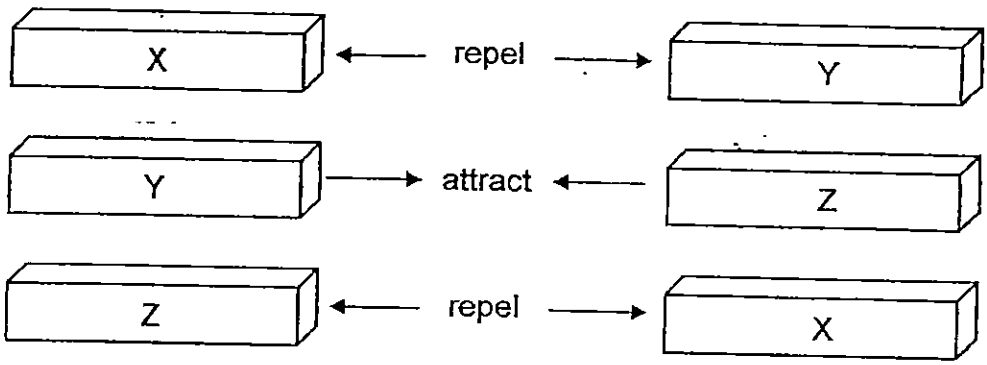
27. The following diagram shows how three bars X, Y and Z interact with one another.



Based on your observation, which of the following can you conclude?

A: X is a magnet
B: Y is a magnet
C: Z is a magnet

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

28. Which property of a magnet enables a compass to work?

(1) A magnet is strongest at its poles.
(2) A magnet attracts magnetic materials.
(3) A magnetic material can be made into a magnet.
(4) A freely turning magnet comes to rest in a North-South direction.

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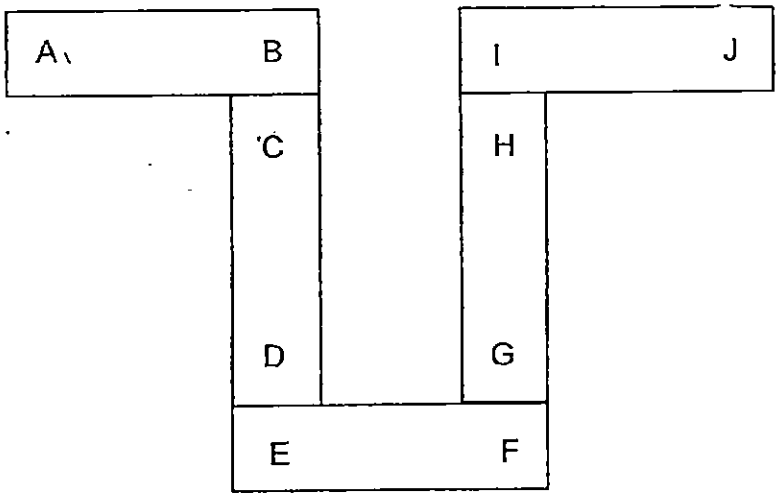
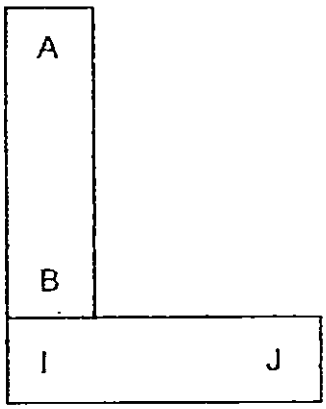
29. Five bar magnets with their ends marked A to J can be arranged as shown below.

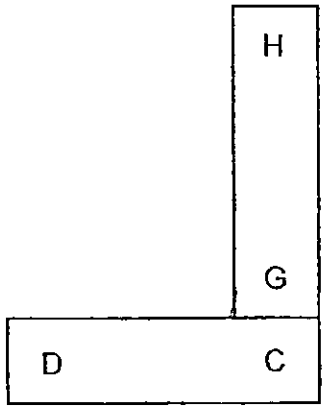


Which one of the following diagrams shows a possible arrangement of two of the magnets?

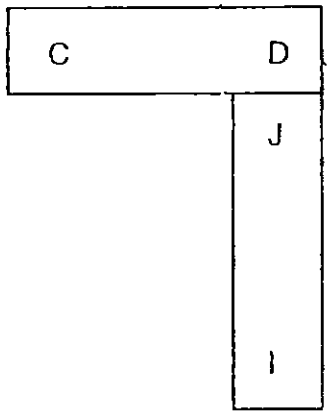
(1)



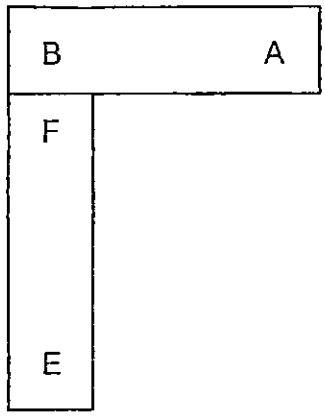
(2)



(3)



(4)



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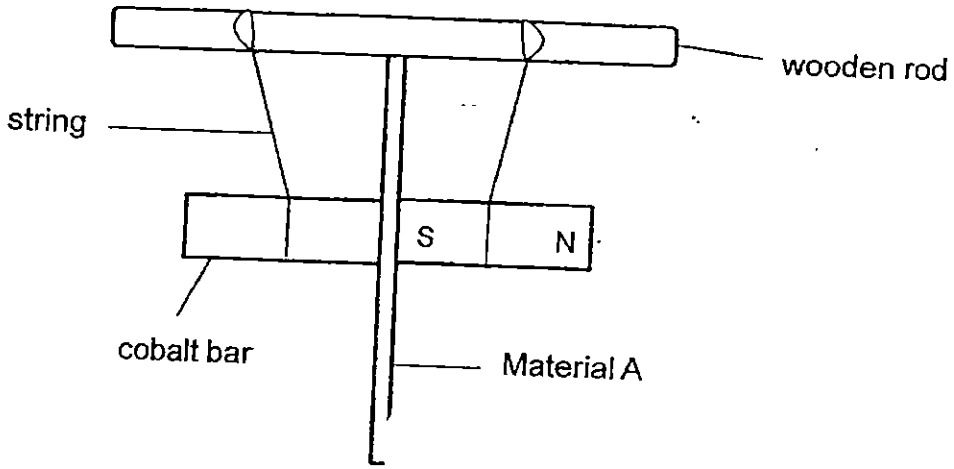
30. Two bar magnets, suspended by strings, are tied to a wooden rod. A thin sheet made of material A is placed between the two magnets. The two bar magnets moved towards each other as shown below.



What is material A?

(1) Iron
(2) Steel
(3) Glass
(4) Nickel

End of Booklet A

METHODIST GIRLS' SCHOOL

Founded in 1887

END-OF-YEAR EXAMINATION 2015
PRIMARY 3
SCIENCE

BOOKLET B

Total Time for Booklets A and B: 1 hour 30 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 2015

Booklet A	60
Booklet B	30
Total	90
Parent's Signature	

This booklet consists of 11 printed pages including this page.

For questions 31 to 40; write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[30 marks]

31. Taufiq set up an aquarium with 6 guppies. The graph below records how the number of guppies changed over time.

	Month				
	1st	2nd	3rd	4th	5th
Number of guppies	6	12	?	8	14

(a) What happened to the number of guppies from 1st month to 2nd month? [1]

(b) Explain your answer in (a). [1]

(c) Taufiq's younger brother added some soap by mistake into the aquarium at the end of 2nd month. Based on the above results, what could be the number of guppies that are still alive in the aquarium at the end of the 3rd month. Explain why. [1]

3

(Go on to the next page)

32. Look at the six animals below.

(A) Bee

(B) Termite

(C) Housefly

(D) Grasshopper

(E) Millipede

(F) Spider

(a) Which two animals are **not** insects? Write the letters in the boxes below. [1]

Animals ☐ and ☐

(b) Give a reason for your answer in (a). [1]

_____

_____

(c) Why do insects have a hard outer covering? [1]

_____

_____

3

(Go on to the next page)

33. Amri wanted to eat a piece of bread but found some greenish-grey spots on it.

(a) What were the greenish-grey spots found on Amri's bread? [1]

_____

_____

(b) Why are these greenish-grey spots in (a) harmful to us? [1]

_____

_____

(c) Give an example of a useful micro-organism. [1]

_____

3

34. (a) Match the following adult animals to their young. [1]

Butterfly	Nymph
Grasshopper	Wriggler
Mosquito	Caterpillar

(b) Study the given animals below.

(i) Which group of animal does it belong to? [1]

_____

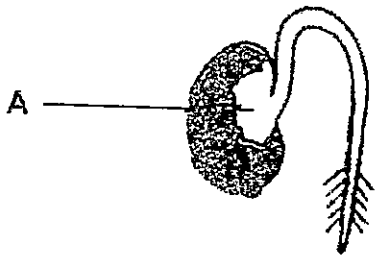
(ii) Describe one characteristic in which the adult is **different** from the young. (Do not compare the size, shape and colour). [1]

_____

_____

3

35: The diagram below shows a seedling.



(a) What is the part labelled 'A'? [1]

_____

(b) How is part A useful to the seedling at this stage of the plant growth? [1]

_____

_____

(c) What will happen to part A as the seedling grows bigger? [1]

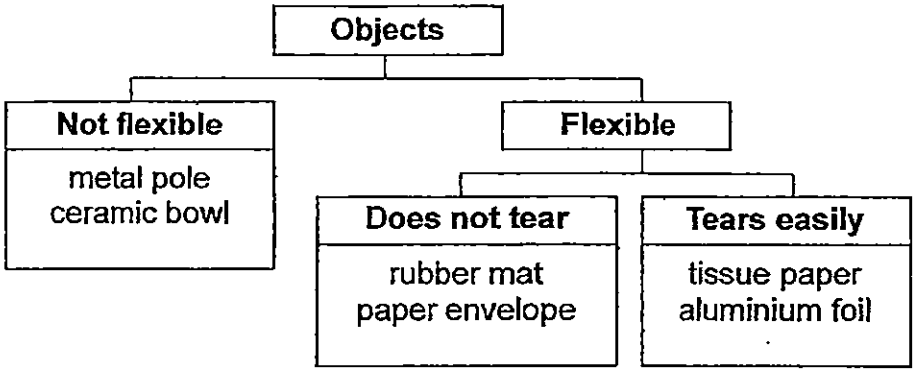
_____

_____

3

(Go on to the next page)

36. Jing Wen grouped some objects in the following way.

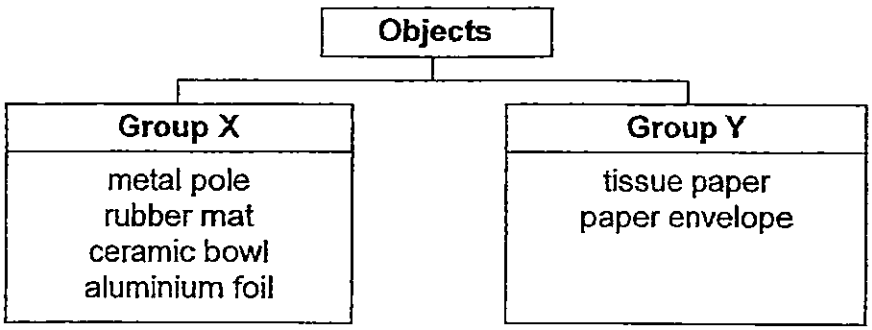


(a) Which one of the above objects has Jing Wen grouped **wrongly**? Give a reason for your answer. [1]

_____

_____

(b) Jing Wen decided to classify all the objects into Groups X and Y as shown below.



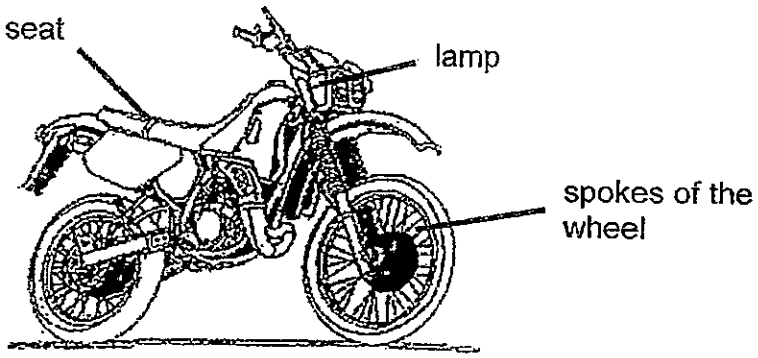
Which **property of material** is used to classify the objects into Group X and Group Y? [2]

Group X : _____

Group Y : _____

3

37. The diagram below shows a motorcycle.



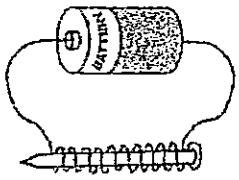
Fill in the blanks below under (a) and (b) with a suitable material that can be used to make each of the parts indicated above. State a property under (c) of the material that makes it suitable for that part. [3]

Part	Material	Property
lamp	(a) _____	Allows light to pass through it
seat	(b) _____	Flexible and waterproof
spokes	Metal	(c) _____

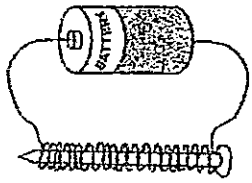
3

(Go on to the next page)

38 Johan made two electromagnets as shown in the diagrams below.



20 turns of wire



30 turns of wire

He compared the strength of the two electromagnets by observing the number of pins attracted to each electromagnet. The results are shown below.

	Number of pins attracted
Iron nail A with 20 turns of wire	17
Iron nail B with 30 turns of wire	24

(a) What happens to the strength of the electromagnet when more turns of wire were used? [1]

_____

(b) Based on the results, give a reason for your answer in (a)? [1]

_____

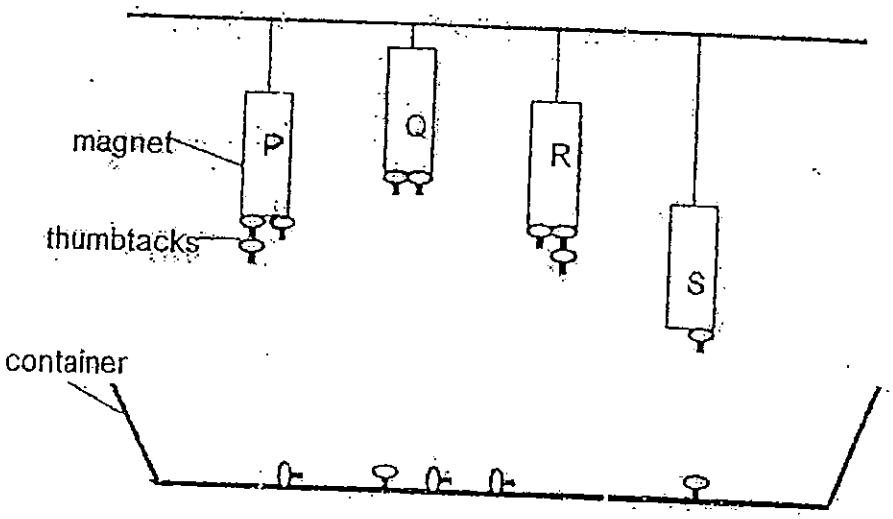
(c) Suggest another way that would make the electromagnet attract more pins? [1]

_____

3

(Go on to the next page)

39. Ainah hung 4 different magnets, P, Q, R and S from the ceiling to test the strength of the magnets as shown below.



(a) Which two magnets have the same magnetic strength? Explain why. [2]

(b) Ainah concluded that Magnet Q is the strongest. Do you agree with Ainah? Give a reason for your answer. [1]

3

(Go on to the next page)

40. Sandy used the 'stroke' method to make an iron rod into a temporary magnet. She recorded her observations in the table below.

Number of strokes	20	40	60
Number of paper clips attracted to the magnet	3	8	12

(a) Based on the results, what could Sandy conclude about the number of strokes and the strength of the magnet? [1]

_____

_____

(b) Name another material that the rod can be made of, in order to be made into a magnet. [1]

_____

_____

(c) Suggest another method Sandy can use to magnetise the iron rod. [1]

_____

End of Booklet B

EXAM PAPER 2015
LEVEL : PRIMARY 3
SCHOOL : METHODIST GIRLS' SCHOOL
SUBJECT : SCIENCE
TERM : SA2

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q9	Q 10
4	3	3	3	4	2	1	4	3	3
Q 11	Q 12	Q 13	Q 14	Q 15	Q16	Q17	Q18	Q19	Q20
4	3	2	3	1	2	1	3	4	4
Q21	Q22	Q23	Q24	Q25	Q 26	Q 27	Q 28	Q 29	Q 30
1	4	4	3	2	2	4	4	1	3

Q31a. The number increased.

Q31b. The guppies reproduced.

Q31C. There could be two guppies. They need clean water to survive.

Q32a. Animals E and F

Q32b. Animals E and F have more than six legs unlike insects, who only have six legs.

Q32c. The hard outer coverings is to protect them.

Q33a. The greenish – grey spots were bread mould.

Q33b. Inside, there is harmful bacteria that can make us sick.

Q33c. Yeast.

Q34a. Butterfly – Caterpillar
Q34a. Grasshopper – Nymph
Q34a. Mosquito – Wriggler

Q34b. (i) The amphibian group.
Q34B. (ii) The young has a tail but the adult tadpoles not.

Q35a. The seed leaf.

Q35b. It provides food for the seed until the seedling can make its own food.

Q35c. Part A will gradually drop off as the seedling can already make its won food.

Q36a. Paper envelope as paper tears easily.

Q36b. Group X: Waterproof Group Y : Non – waterproof

Q37a. Glass b. Plastic c. Stiff

Q38a. The magnetic strength will increase.

Q38b. There are more pins attracted by the electromagnet.

Q38c. He could add more batteries.

Q39a. P and R because they were hung at the same length and attracted the same number of thumbtacks.

Q39b. No, because the test was unfair as all the magnets were hung at different heights.

Q40a. The more times she stroked the iron rod, the stronger the iron rod's magnetic strength.

Q40b. Steel

Q40c. He could use the induction method.