METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

END-OF-YEAR EXAMINATION 2012
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: 11 October 2012

_____
Parent's Signature
Date:

This booklet consists of 17 printed pages including this page.

139

For each question from 1 to 25, 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.

[50 marks]

---

1 Tom walks through the park and makes the following comments:

A: The park is crowded with joggers.
B: I love the fragrance of the roses.
C: Bees are humming somewhere nearby.

Which senses are Tom using?

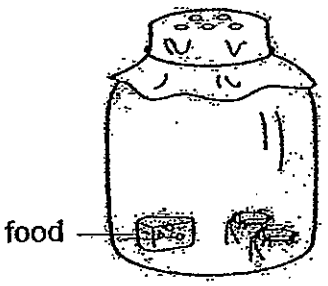
(1) Smell and sight
(2) Touch and hearing
(3) Sight, touch and hearing
(4) Sight, smell and hearing

2 Which of the following things have been grouped correctly?

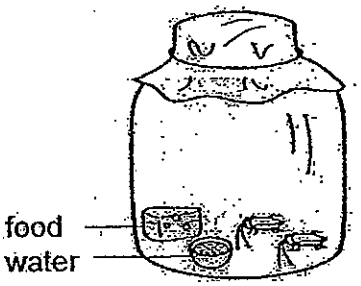
	Living things	Non-living things (never alive)	Non-living things (once alive)
(1)	Caterpillar	Plastic spoon	Porcelain cup
(2)	Dog	Leather bag	Rubber duck
(3)	Duck	Woollen shirt	Wooden table
(4)	Spider	Metal spoon	Tissue paper

3 All the four set-ups shown below are placed in a dark room. There are two cockroaches in each set-up. Which two cockroaches will die in the shortest time?

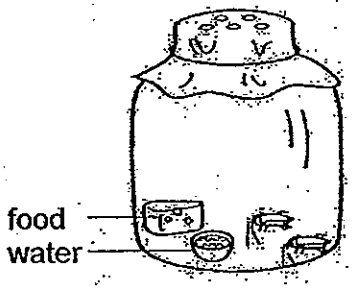
(1)



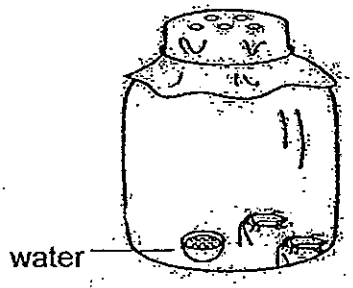
(2)



(3)



(4)



(Go on to the next page)

4 Study the two groups of ~~plants~~ below.

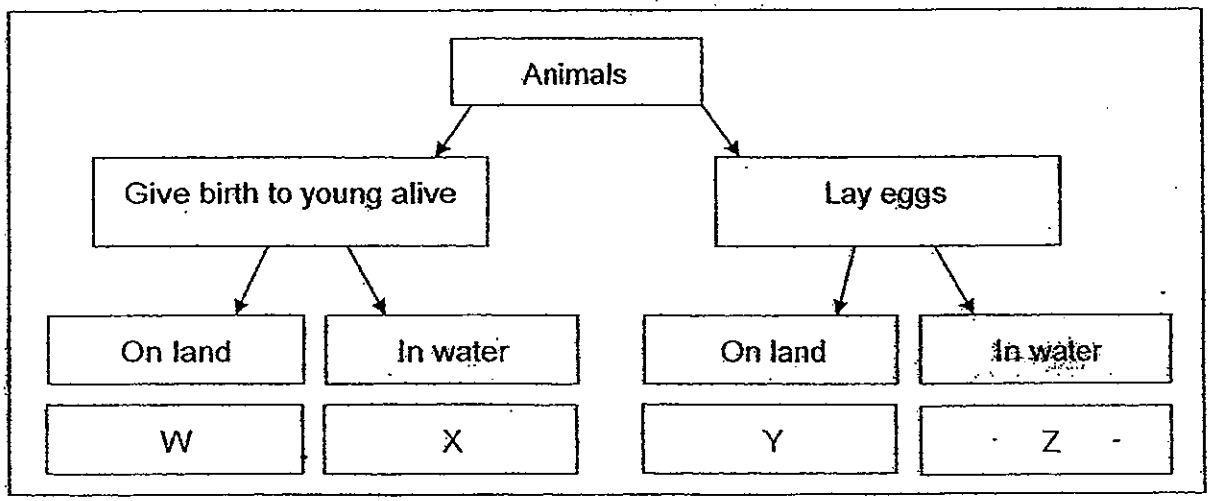
Group A	Group B
Bird's Nest fern Bracket fungus	Water Lily Chilli

Which of the following about these two groups of ~~plants~~ organisms are correct?

	Group A	Group B
(A)	Reproduce from spores	Reproduce from seeds
(B)	Cannot be seen with naked eye	Can be seen with naked eye
(C)	Cannot make their own food	Can make their own food
(D)	Do not produce flowers	Produce flowers

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

5 A classification chart of animals is shown below:



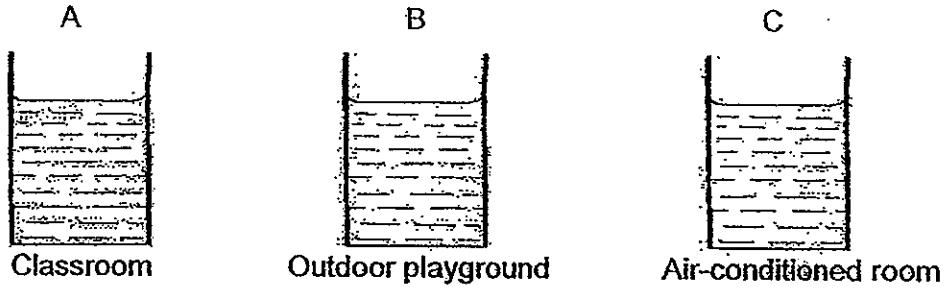
Which animals can W, X, Y and Z be?

	W	X	Y	Z
(1)	cat	guppy	ant	penguin
(2)	rabbit	dolphin	fish	frog
(3)	dog	goldfish	hen	shark
(4)	horse	guppy	turtle	frog

(Go on to the next page)

6 Peter has learnt that bacteria present in the air causes food to turn bad and that temperature affects how fast food turns bad. He wants to carry out an experiment to test this out.

He puts the same amount of milk in three similar containers and left them at different places at 12 noon on a sunny day for the same length of time.

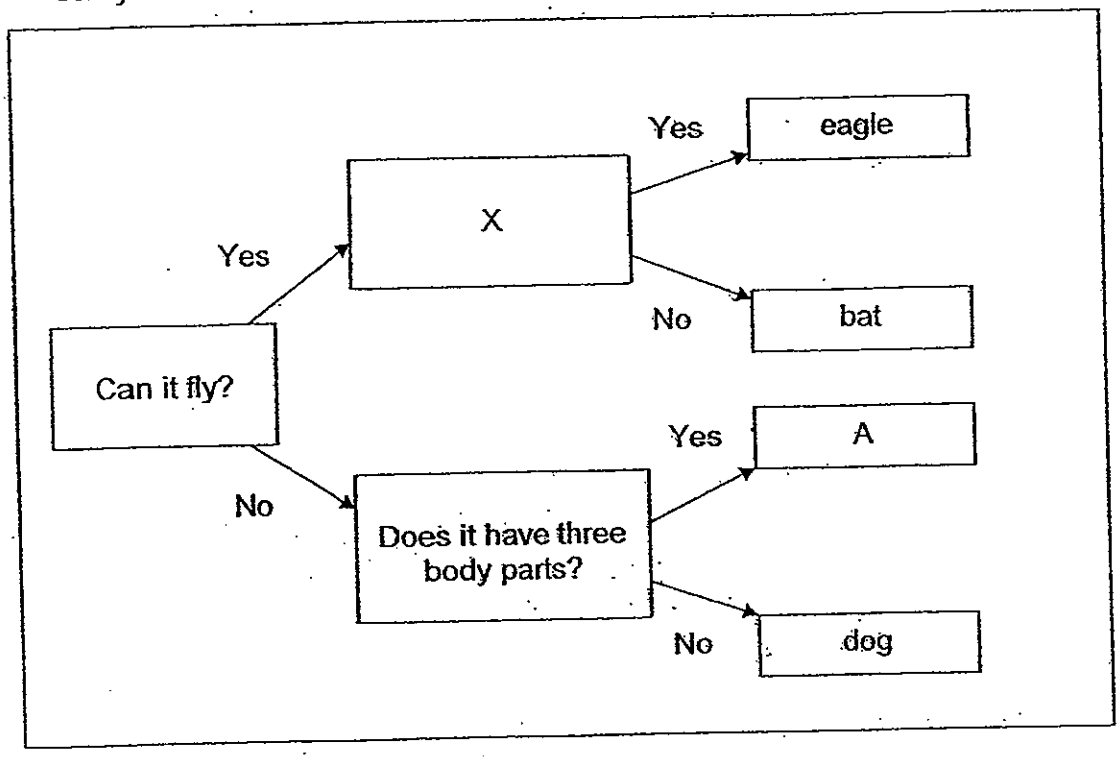


Which one of the following shows the correct order in which the milk in the set-ups turns bad, starting from the fastest to the slowest.

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

(Go on to the next page)

Study the flow chart below and answer questions 7 and 8.



7 Which one of the following questions does X represent?

(1) Does it eat plants?
(2) Does it have two legs?
(3) Does it have feathers?
(4) Does it have two wings?

8 Animal A is a _____.

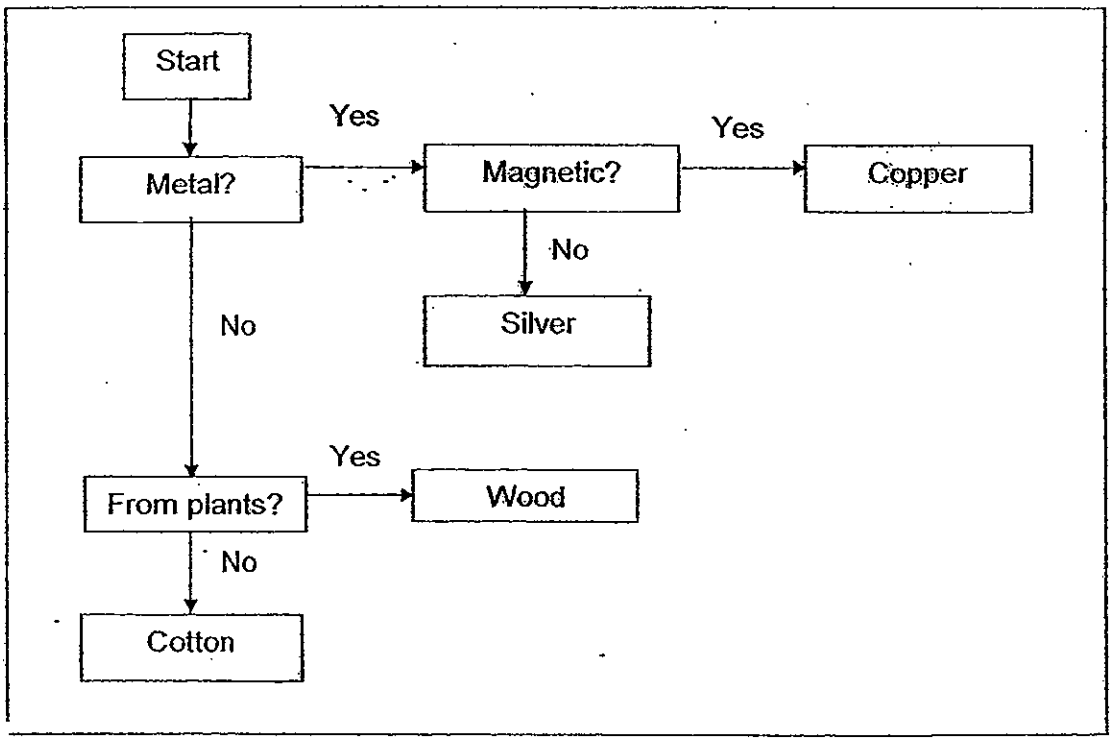
(1) spider
(2) silverfish
(3) mosquito
(4) caterpillar

9 Most of our clothes are made of cotton because the material _____.

A: is waterproof
B: floats on water
C: is light and soft
D: absorbs perspiration easily

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

10 Study the chart below carefully.

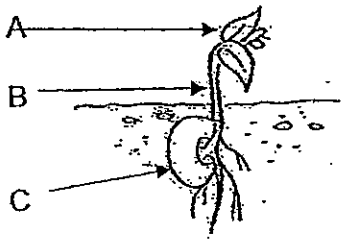


Which materials have been **incorrectly** placed in the chart?

(1) Copper and Silver
(2) Cotton and Copper
(3) Cotton and Silver
(4) Cotton and Wood

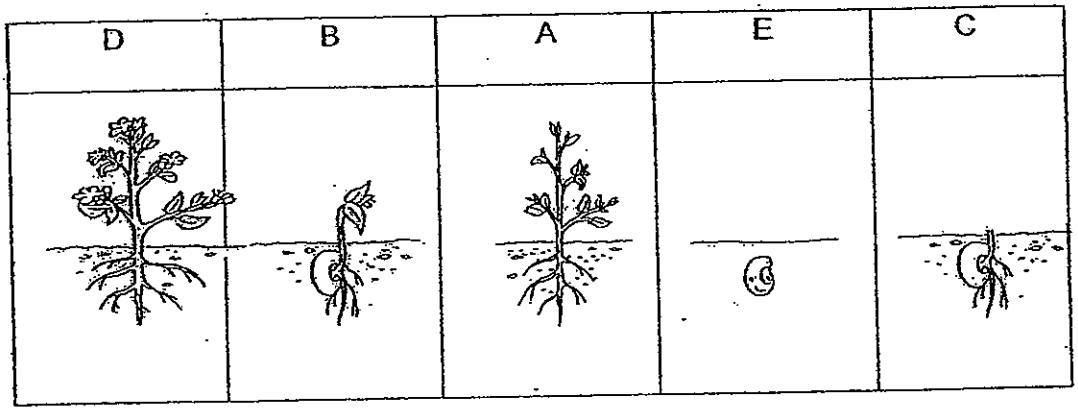
(Go on to the next page)

11 Which part of the seedling helps it to make food?



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

12 The diagram below shows the life cycle of a plant.



Which of the following correctly represents the order of its life cycle?

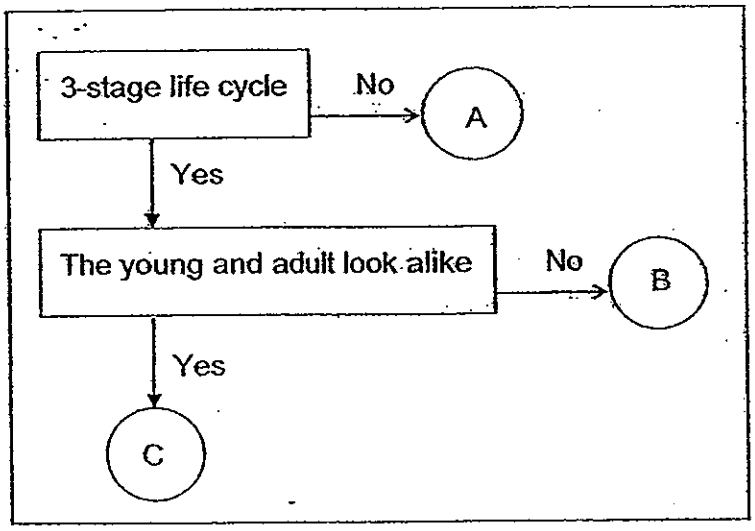
(1) E → B → C → A → D
(2) E → B → A → D → C
(3) E → C → B → A → D
(4) E → C → B → D → A

13 A dragonfly and a bee are similar because they both_____.

(A) have a three-stage life cycle
(B) have three body segments
(C) have six legs
(D) live in water

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

14 Study the flow chart below.



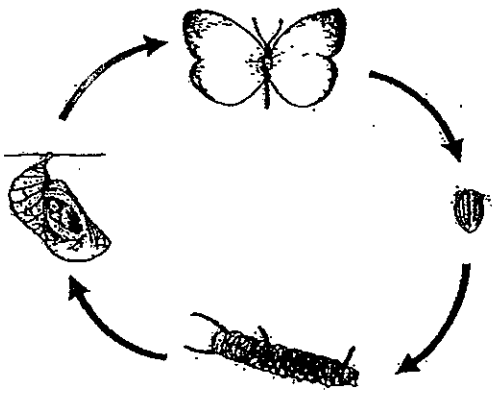
What could A, B and C be?

	A	B	C
(1)	Housefly	Cockroach	Mosquito
(2)	Mosquito	Housefly	Ant
(3)	Cockroach	Mosquito	Chicken
(4)	Butterfly	Frog	Cockroach

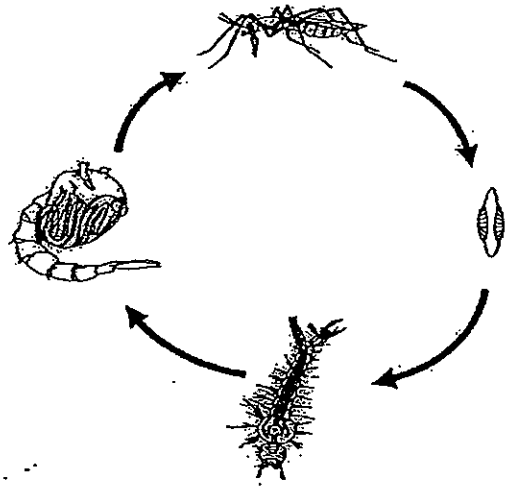
(Go on to the next page)

Refer to the diagram and answer questions 15 and 16.

Life cycle of a butterfly



Life cycle of a mosquito



15 Which of the following statements about the life cycle of a butterfly and a mosquito are true?

A: The butterfly and mosquito both have a 4-stage life cycle.
B: The adult butterfly lays one egg at a time while the adult mosquito lays many eggs at a time.
C: Both the caterpillar and the wriggler moult several times before changing into a pupa.
D: At the pupal stage, both the caterpillar and wriggler stop feeding.

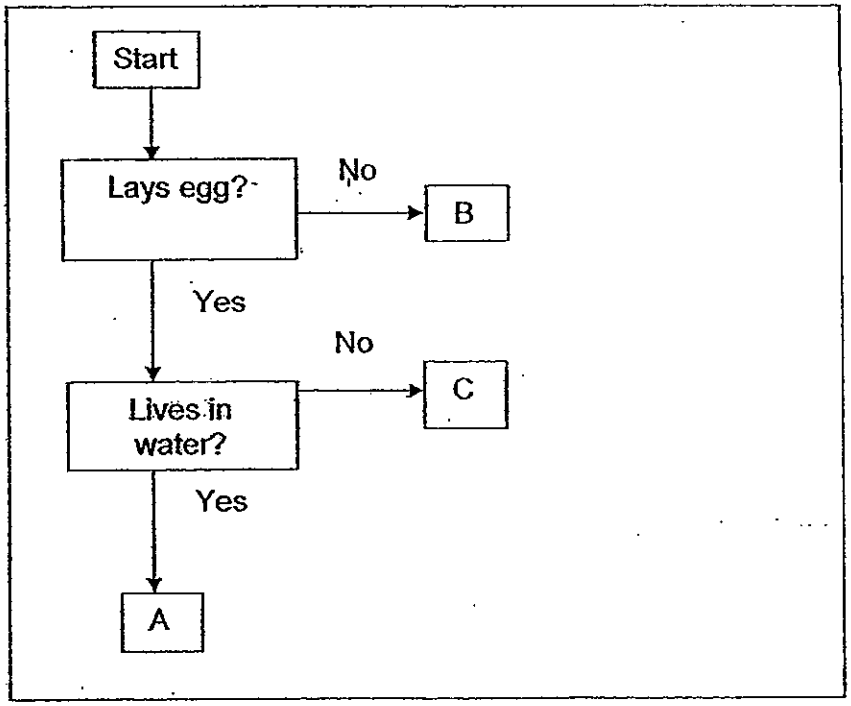
(1) A, B and C
(2) A, B and D
(3) A, C and D
(4) A, B, C and D

16 Which of the following animals has the same life cycle as the butterfly and mosquito?

(1) Frog
(2) Moth
(3) Dragonfly
(4) Cockroach

(Go on to the next page)

17

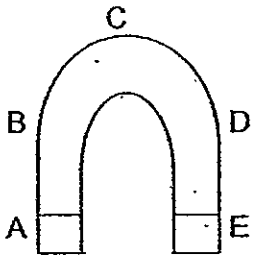


What can animals A, B and C be?

	A	B	C
(1)	Turtle	Guppy	Eagle
(2)	Goldfish	Eagle	Chicken
(3)	Whale	Guppy	Turtle
(4)	Platypus	Cow	Goldfish

(Go on to the next page)

18 Look at the picture of the magnet below.

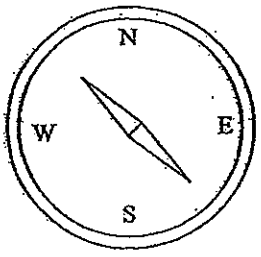


Which part/s of the magnet will attract the most paper clips?

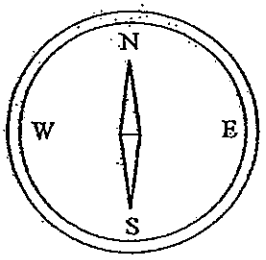
(1) A and B
(2) D and E
(3) B and D
(4) A and E

19 Which compass indicates the direction that a freely-turning magnet will come to rest?

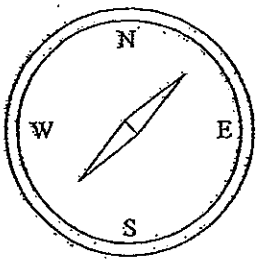
(1)



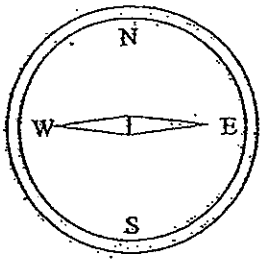
(2)



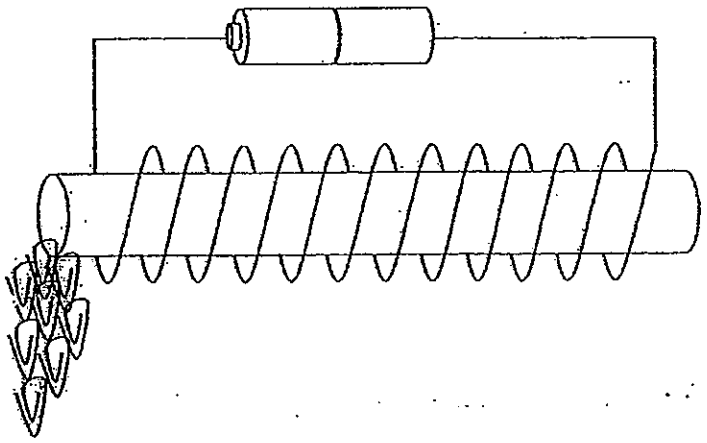
(3)



(4)



20 In the experiment set-up below, the rod will be able to attract paper clips if it is made of _____.

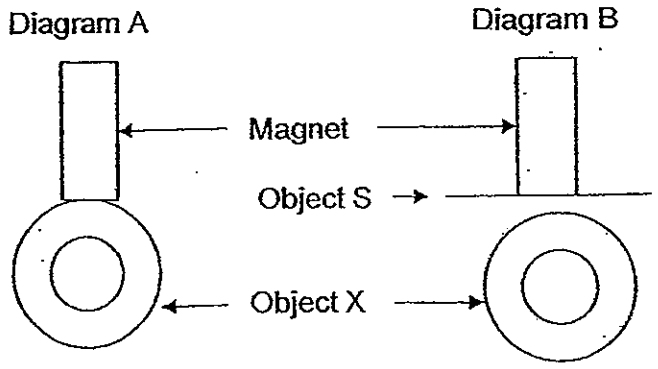


A: Aluminium
B: Iron
C: Steel

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

(Go on to the next page)

21 Sam was able to place Object X below a magnet without the Object X dropping as shown in Diagram A.



When a thin sheet of Object S was placed between Object X and the magnet as shown in Diagram B, Object X dropped. What could Object S and Object X be made of?

	Object S	ObjectX
(1)	Iron	Plastic
(2)	Plastic	Silver
(3)	Silver	Steel
(4)	Steel	Iron

22 Ali, Bill, ~~Candy~~ Caleb and Dave were puzzled why their magnet was no longer able to attract any paper clip. Each of them made a guess.

Ali: : Someone must have hit it many times with a hammer.
Bill : Someone heated it over a strong flame.
Caleb : Someone has stored it in oil for too long.
Dave : Someone must have dropped it on the floor.

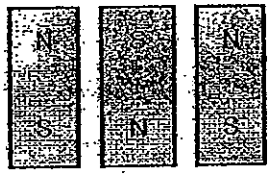
Whose statements are correct?

(1) Ali and Bill
(2) Ali, Bill and Caleb
(3) Ali, Bill and Dave
(4) Ali, Bill, Caleb and Dave

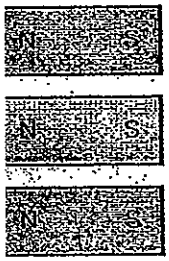
153

23 Look at the following arrangements shown in set-ups A, B, C and D. Which arrangements will cause the three magnets to push each other away?

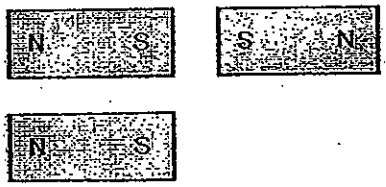
(A)



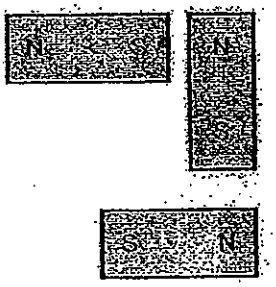
(B)



(C)



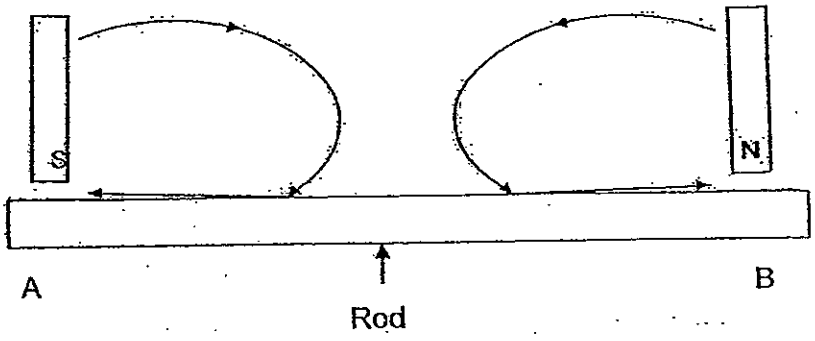
(D)



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

(Go on to the next page)

24 A rod is magnetized by two magnets as shown in the diagram below.

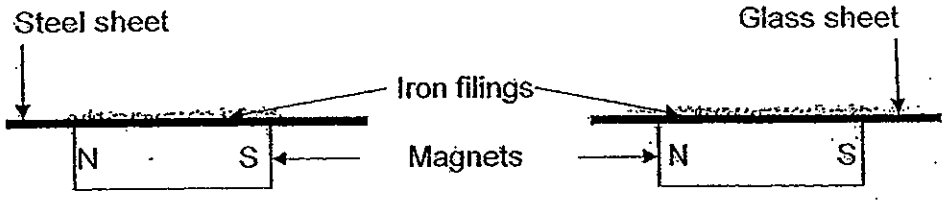


What would be the poles at A and B?

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

25 Tim conducted an experiment using two bar magnets, a piece of glass sheet and a steel sheet of the same thickness and some iron filings.

First, he placed the glass sheet over one magnet and the steel sheet over the other and dusted some iron filings over each of them. The diagrams X and Y show ~~her~~ his observations.



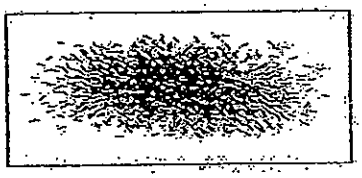


Diagram X

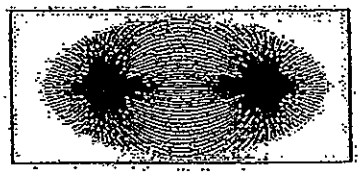


Diagram Y

Which of the following statements about ~~her~~ his observations are true?

(A) Iron filings are attracted to glass but not to steel.
(B) The force of a magnet can pass through glass but not steel.
(C) The force of a magnet can pass through steel but not glass.
(D) Steel is a magnetic material while the glass is a non-magnetic material.

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

—— End of Booklet A ——

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

END-OF-YEAR EXAMINATION 2012
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._____

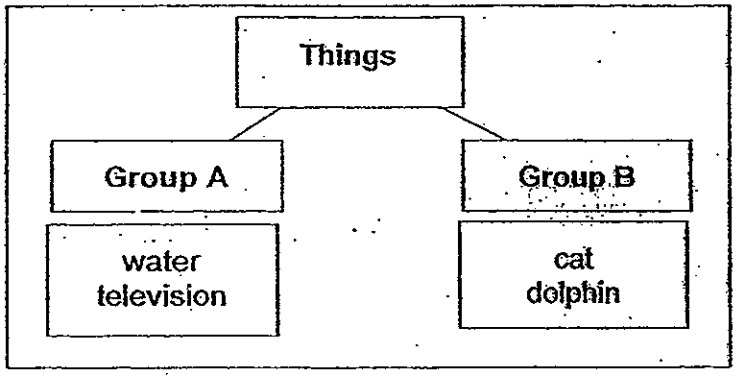
Date: 11 October 2012

Performance Task	/10
Booklet A	/50
Booklet B	/40
Total	90 /100

This booklet consists of 12 printed pages including this page. 15+

For questions 26 to 39, 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. [40 marks]

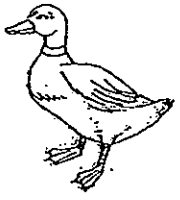
26 Look at the classification diagram below.



(a) Where should 'rock' be placed? [1]

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

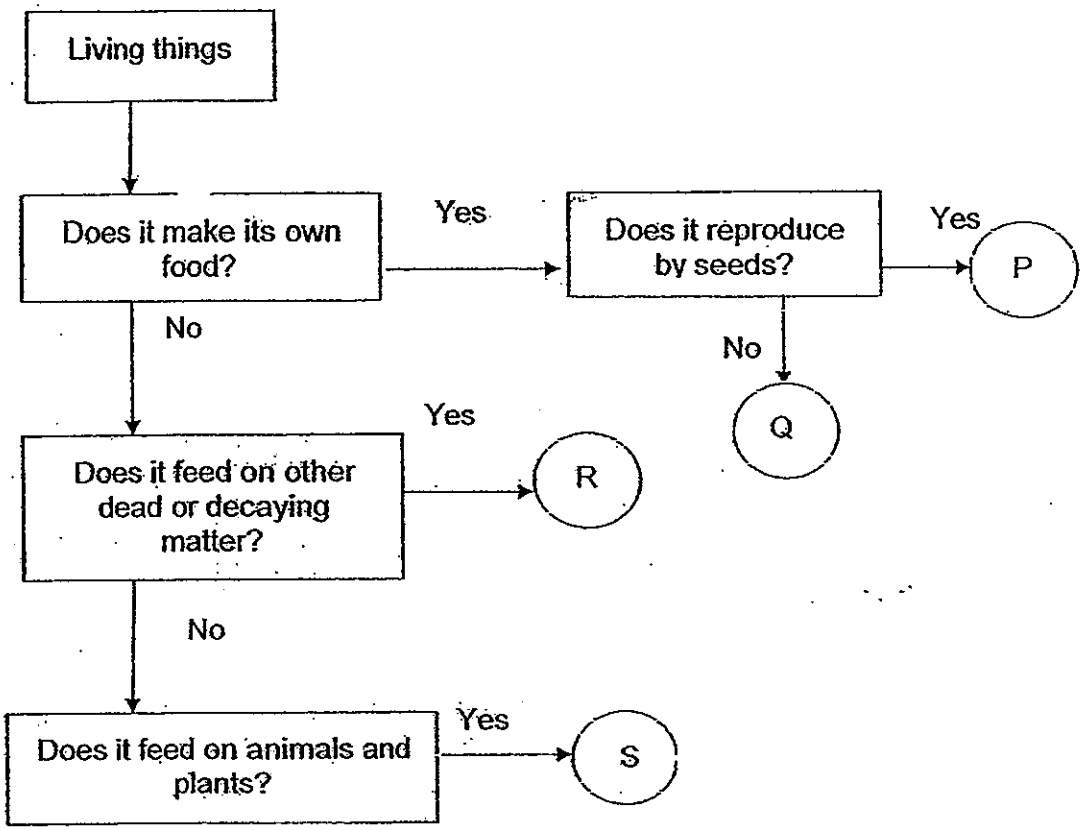
27 The picture below shows a duck.



(a) Name the body covering of the duck [1]

(b) Name two functions of the body covering given in (a) [1]

28



Give an example of P, Q, R and S. [4]

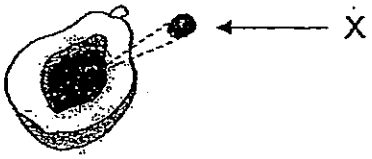
P: _____

Q: _____

R: _____

S: _____

29 The diagram below shows a fruit cut in half.



(a) Name the part marked X. [1]

_____

(b) Why is X important? [1]

_____

(c) How do plants without X reproduce? [1]

_____

30 Alex conducted an experiment using 4 seeds, A, B, C and D, to find out which factors would affect the germination of seeds. Study the table given.

Set-up (seed)	Type of soil	Amount of water given	Temperature	Air given	Sunlight
A	Clay	50 ml	25 °C	No	No
B	Garden	50 ml	25 °C	Yes	Yes
C	Garden	50 ml	2 °C	Yes	Yes
D	Clay	0 ml	2 °C	Yes	No

(a) Which 2 set-ups should he use if he wants to find out whether temperature is an important factor in the germination of seeds? [1]

_____

(b) Which seed is most likely to germinate? [1]

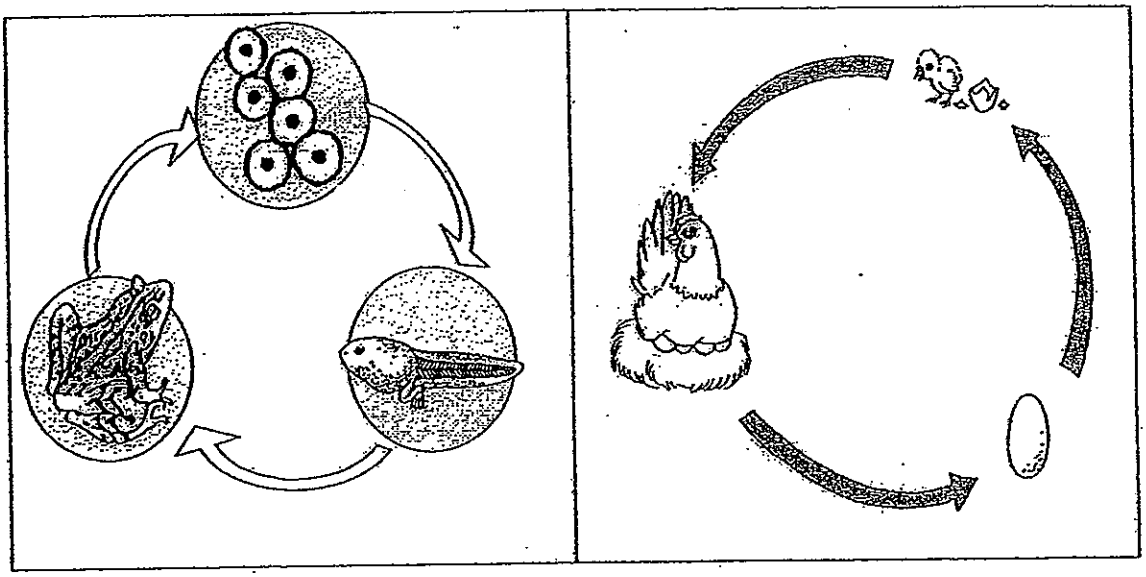
_____

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

_____

16

6



31 Based on the life cycle of a frog and a chicken as shown in the pictures above, list 1 similarity and 1 difference between them. [2]

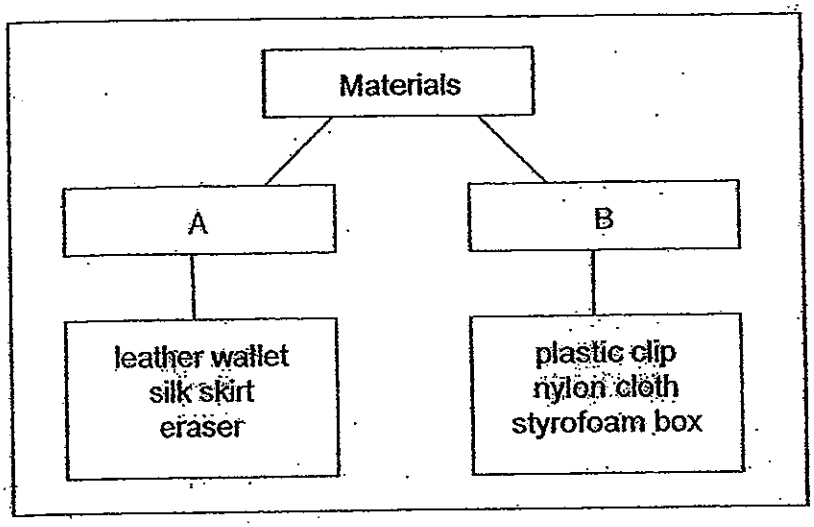
Similarity: _____

_____

Difference: _____

_____

32 Study the classification diagram given below.



(a) What headings would you give for A and B? [2]

A: _____

B: _____

(b) In which group, A or B, would you place a glass cup? [1]

_____

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

_____

33 Study the table below.

Type of material	Light	Strong	Bends easily	Good conductor of heat
A	Yes	No	Yes	No
B	No	Yes	No	Yes
C	No	Yes	No	No

(a) What are the characteristics of A? [1]

_____

_____

(b) What material should Mrs Lee use to make a pot for cooking? [1]

_____

(c) Give two reasons for your answer in part (b). [1]

_____

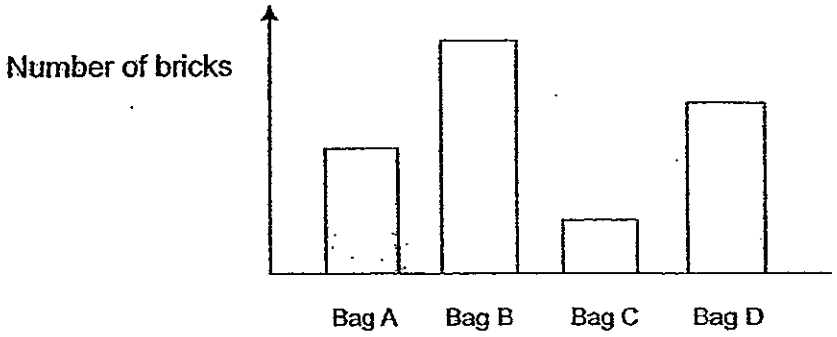
_____

(d) In what ways are materials B and C similar? [1]

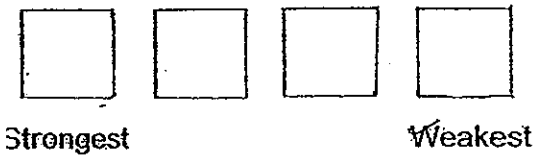
_____

_____

34 The graph below shows the maximum number of bricks that four bags made of different materials could hold before breaking.

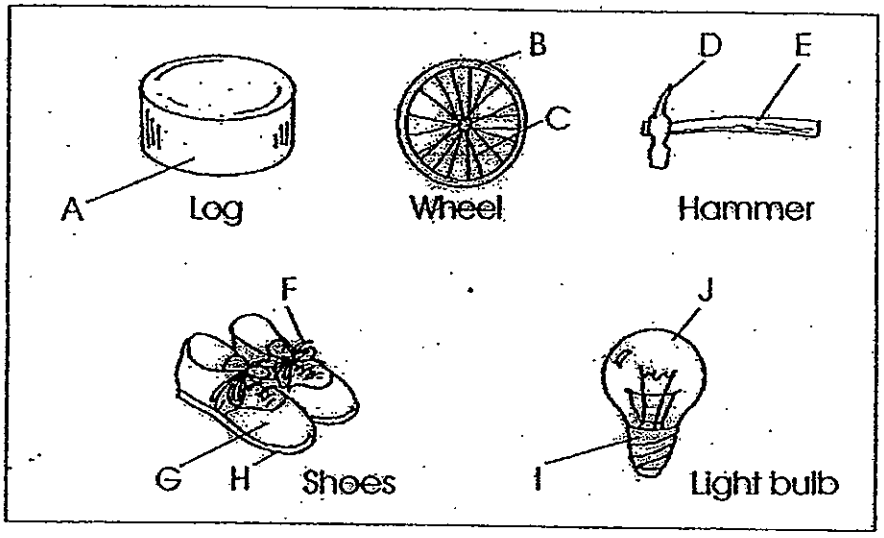


Arrange the bags according to their strength, from the strongest to the weakest. [1]



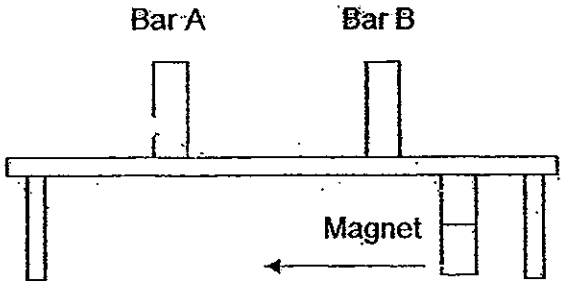
35 Complete the classification table with

(a) the correct heading (type of material). [2]
(b) the parts that are labelled (B,C,E,F,G,H, I and J) in the diagram under their respective headings in the classification table. Example D and A are given. [4]



	Materials				
(a)		Rubber	Fabric	Glass	
(b)	D				A

36 Ben placed two bars, Bar A and Bar B, that are of the same length and size on a wooden table. Then, he held a magnet under the table as shown below.



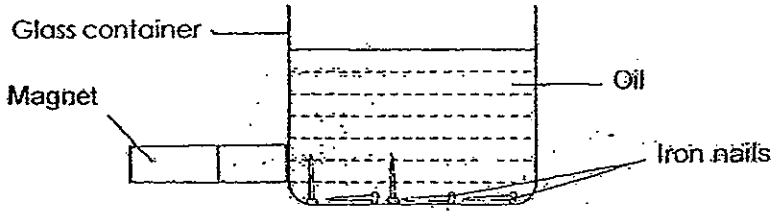
As he moved the magnet to the left, he observed that Bar B stayed where it was without moving while Bar A moved to the left with the magnet. He repeated the experiment and the result was the same.

Why do you think Bar A and Bar B reacted differently to the magnet? [2]

_____

_____

37 Noah wants to retrieve some iron nails from the glass container shown below.



(a) Will Noah succeed in getting the nails? Why? [1]

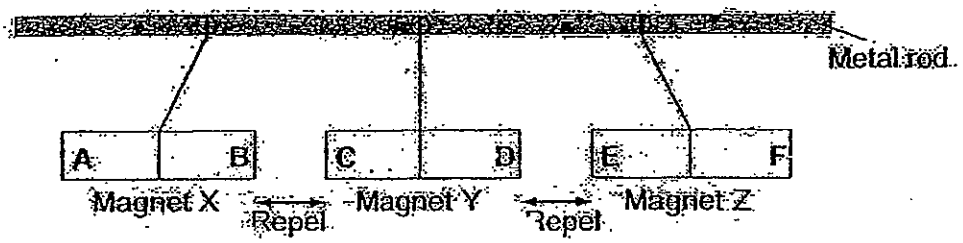
_____

_____

(b) What material must the container be made of to prevent him from retrieving the nails using a magnet? [1]

_____

38 Three similar bar magnets, X, Y and Z, are hung on a metal rod. The diagram below shows what happened to the magnets. The letters A, B, C, D, E and F represent the poles of the 3 magnets.



(a) If A is the south pole of Magnet X, what are poles E and F? [1]

(i) E: _____

(ii) F: _____

(b) What happens to Magnet X and Magnet Z when Magnet Y is replaced by a piece of steel rod? Why? [2]

_____

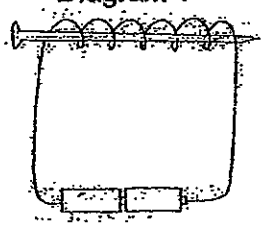
_____

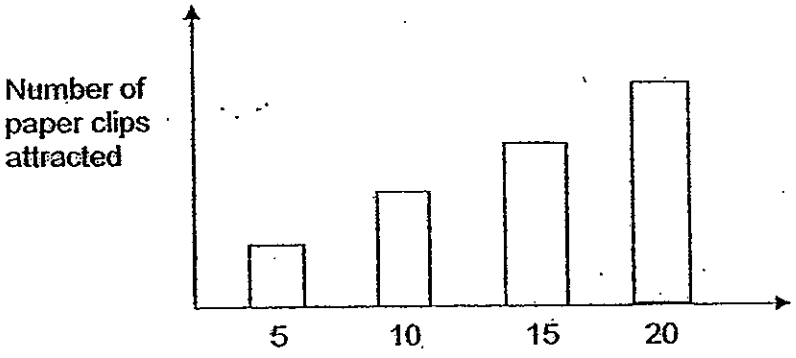
3

39 Joanne made an iron nail into an electromagnet, using a piece of wire and two batteries as shown in diagram 1. She then used the electromagnet to attract paper clips.

She repeated the experiment several times, changing the number of turns of the wire. The result is shown in the graph below.

Diagram 1





(a) From the graph above, what is the relationship between the number of turns and the number of paper clips? [1]

_____

_____

(b) Besides increasing the number of turns of the wire, what else can Joanne do to increase the number of paper clips attracted to the electromagnet? [1]

_____

_____

—— End of paper ——

Answer Ke

EXAM PAPER 2012

SCHOOL : MGS
SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
4	4	2	2	4	2	3	2	3	2	1	3	2	4	3	2	1

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25
4	2	3	4	3	2	3	2

26)a)Group A.
b)Rock is a non-living thing. Water and television are non-living things.

27)a)Feathers.
b)It is light so it will help it fly.

28)P: Ixora Q: bird-nest-fern R: bracket fungi S: dog

29)a)Seed.
b)It will ensure the continuity of its kind.
c)By spores.

30)a)Set up B and C.
b)Set up B.
c)It needs correct amount of water, temperature Air and B is given all the conditions.

31)Similarity: Have three stage in their life cycle.
Difference: The frog live in water and land but the chicken lives only on land.

END.
171

32)a)A: once alive.
B: never alive.
b)In B.
c)A glass cup is a man-made materials. All the objects in group B are man-made but object in group A are not. So the glass cup should be placed in group b.

33)a)It is light and bends easily.
b)Material B.
c)A frying pan suppose to be strong, and a good conductor of heat.
d)They are both strong and not light does not bend easily.

34)B D A C

35)a)Metal
b)D B G J A
I H F E
C

36)Bar A is a non-magnetic material. Bar A is either a magnetic material or a magnet as it is attracted to the magnet.

37)a)Yes. Because the glass container is a non-magnetic material.
b)Iron.

38)a)i)South pole
ii)North pole
b)Magnet X and magnet Z will more towards the steel rod.
Steel is a magnetic material and is attracted to the magnets.

39)a)The more number of turns, the more paper clip it will attract.
b)Add more batteries.