



MAHA BODHI SCHOOL
2012 SEMESTRAL ASSESSMENT 2
PRIMARY THREE SCIENCE

Name : _____ () Date : 31 October 2012

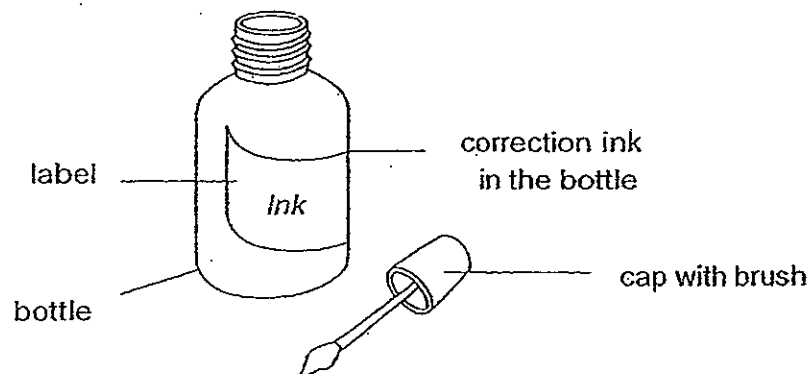
Class : Primary 3 ()

Duration : 1 h 30 min (Booklets A and B)

BOOKLET 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 your answer on the Optical Answer Sheet.**

1. The diagram below shows a bottle of correction ink.
Which part of the bottle will not affect its function?



- (1) bottle
- (2) label
- (3) correction ink
- (4) cap with brush

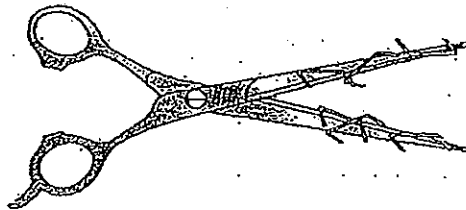
2. Which part of the human digestive system contains the most amount of digested food when digestion is completed?

- (1) Mouth
- (2) Stomach
- (3) Small intestine
- (4) Large intestine

3. Joe fell into a hole. It was dark and there was little fresh air. He felt suffocated and was gasping for air. Which one of these body systems helped him to take in oxygen for the body?

- (1) Muscular system
- (2) Skeletal system
- (3) Respiratory system
- (4) Circulatory system

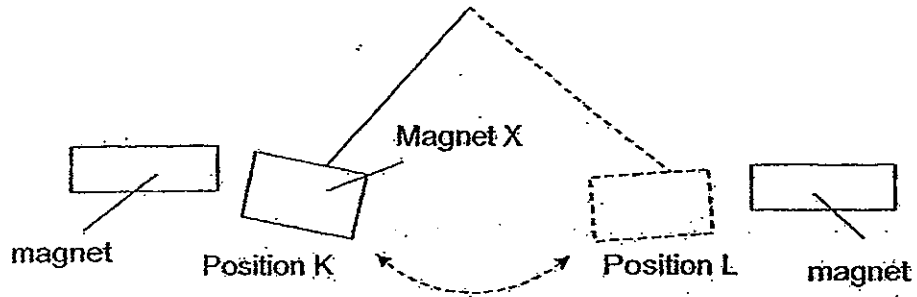
4. When Joe brought the blades of a pair of scissors near some staples, they were attracted to the blades.



Which of the following is the most likely explanation for this observation?

- (1) The blades are sharp.
- (2) The blades have been magnetized.
- (3) The staples have magnetized the blades.
- (4) The blades are made of the same material as the staples.

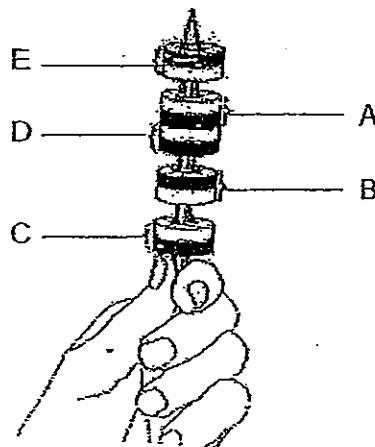
5. When Magnet X was released at a height, it swung back and forth between the positions K and L as shown in the diagram below.



What caused Magnet X to swing back and forth between positions K and L?

	Interaction at position K	Interaction at position L
(1)	Repulsion	Repulsion
(2)	Attraction	Repulsion
(3)	Attraction	Attraction
(4)	Repulsion	Attraction

6. Joe puts five ring magnets on a pencil.
The magnets are labelled A, B, C, D and E.



Which two magnets are attracting each other?

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

7. Joe had these substances in his kitchen.

Substance	Colour
chocolate	brown
icing sugar	white
flour	white
curry	yellow
coffee	brown

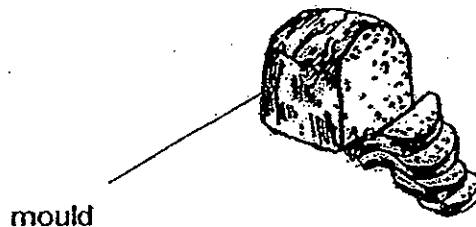
He used colour to sort these substances into groups.

Each group was of a different colour.

How many groups were there?

- (1) Two
- (2) Three
- (3) Four
- (4) Five

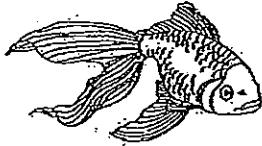
8. Which of the following need(s) to be present for bread to turn mouldy?



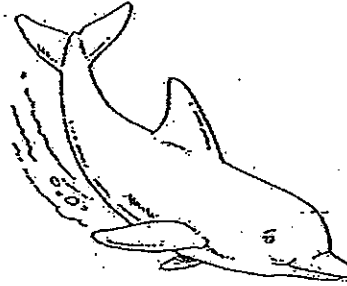
- A. air
- B. light
- C. food
- D. water

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

9. Look at the pictures below. The goldfish and the dolphin belong to different groups of animals.



Goldfish



Dolphin

Which of the following characteristics are different in a goldfish and a dolphin?

- A. body covering
 - B. the way they move
 - C. method of reproduction
- (1) A and B only
 - (2) A and C only
 - (3) B and C only
 - (4) A, B and C

10. Some of the materials we use today come from plants and animals. Which of the following correctly shows where the materials come from?

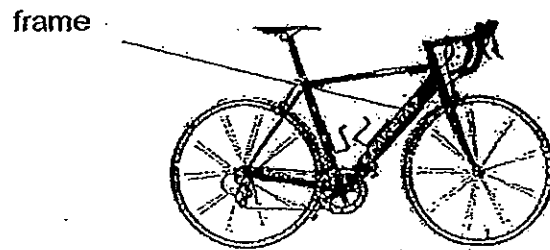
	From plants	From animals
(1)	wood	plastic
(2)	clay	fur
(3)	silk	feather
(4)	cotton	leather

11. The table below shows the arrangement of materials, W, X, Y and Z, in order of increasing weight and strength.

————— In increasing order —————>

weight	Z (lightest)	W	Y	X (heaviest)
strength	X (weakest)	W	Z	Y (strongest)

The frame of a racing bicycle needs to be both strong and lightweight. Based on the table, which material would be most suitable for making the frames of racing bicycles?



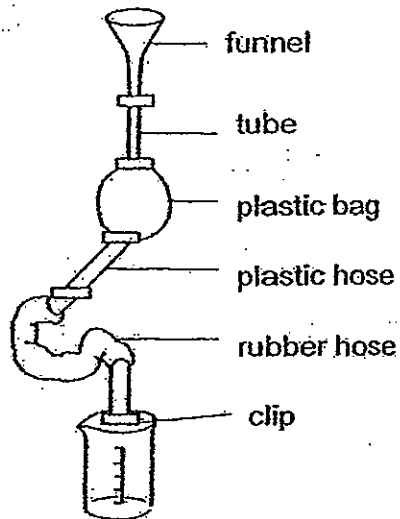
- (1) W
 (2) X
 (3) Y
 (4) Z
12. Study the two groups of objects shown below.

Group X	tyre, eraser, rubber band
Group Y	nail, window grille, 10-cent coin

Which of the following objects would you put in Group Y?

- A. gold bracelet
 B. rubber hose
 C. balloon
 D. key
- (1) A only
 (2) B only
 (3) B and C only
 (4) A and D only

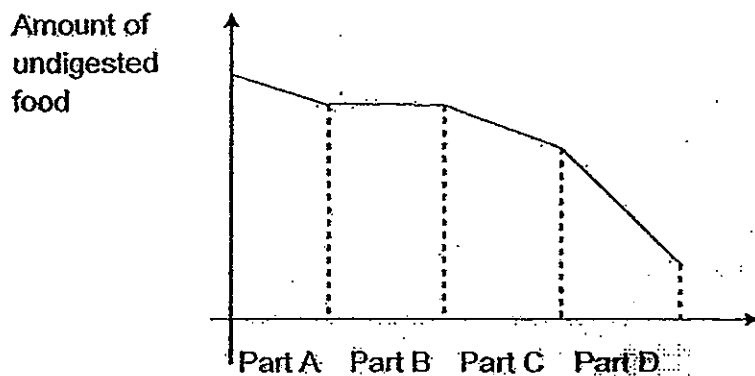
13. Joe made a model of the digestive system as shown below.



Which of the following shows the correct matching of the parts of the model to the parts of the digestive system?

Parts						
	Funnel	Tube	Plastic bag	Plastic hose	Rubber hose	Clip
(1)	gullet	mouth	large intestine	small intestine	stomach	anus
(2)	gullet	mouth	small intestine	stomach	small intestine	anus
(3)	mouth	gullet	stomach	large intestine	small intestine	anus
(4)	mouth	gullet	stomach	small intestine	large intestine	anus

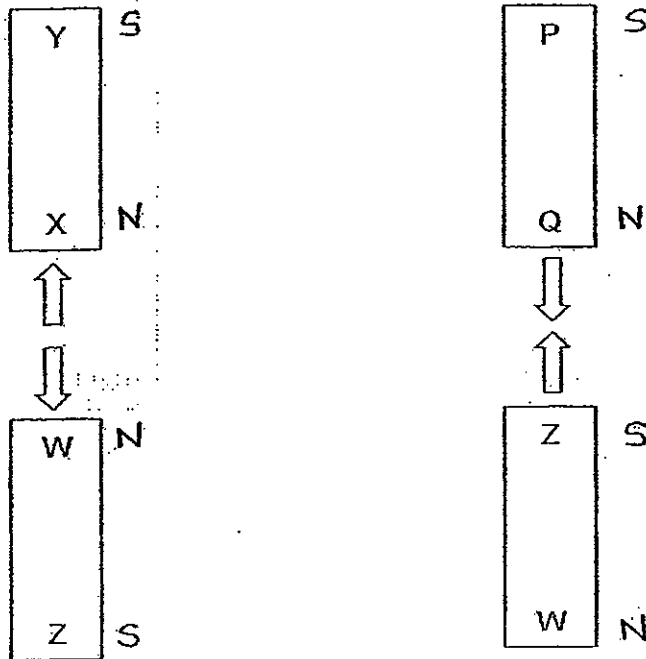
14. The graph below shows the amount of undigested food as it passes through some parts of the human digestive system.



Which part of the graph represents the stomach?

- (1) Part A
 - (2) Part B
 - (3) Part C
 - (4) Part D
15. Which of the following describes what happens to the food in the mouth?
- A. Food is chewed into small pieces.
 - B. Food is mixed with saliva and partially digested.
 - C. Food is softened to make swallowing easier.
 - D. Food is absorbed into the body.
- (1) A and B only
 - (2) C and D only
 - (3) A, B and C only
 - (4) A, B, C and D

16. Joe has three magnets. The diagrams below show how one of the magnets interacts with the other two magnets.



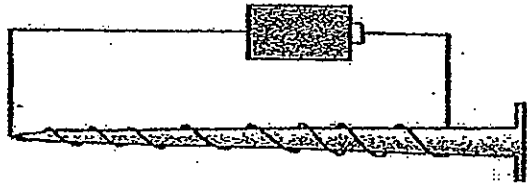
Y is the South pole.

What are poles Q and W if the three magnets interact with one another as shown in the above diagrams?

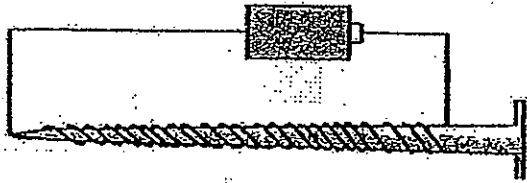
	Q	W
(1)	South	South
(2)	South	North
(3)	North	North
(4)	North	South

17. Four similar nails are made into electromagnets as shown below. Which nail will attract the greatest number of paper clips?

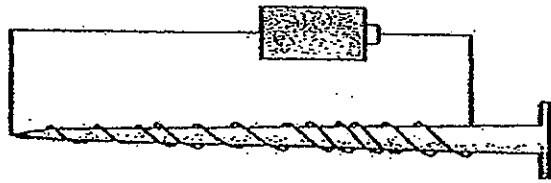
(1)



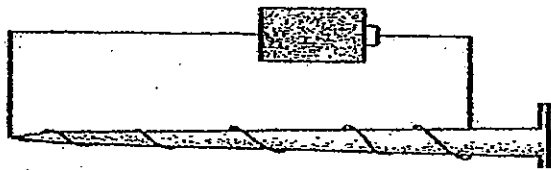
(2)



(3)



(4)



18. Different parts of a magnet were labelled V, W, X, Y and Z.

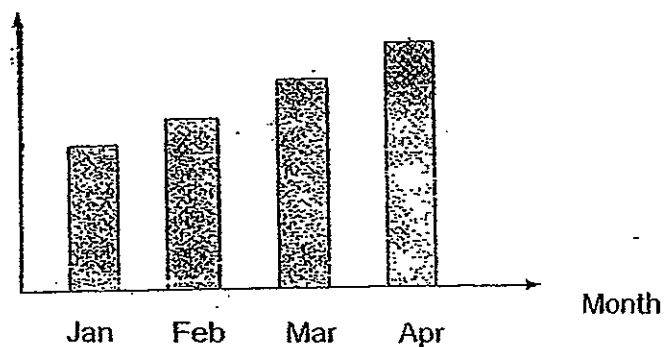
The bar magnet was then dipped into a container of pins. The number of pins attracted to the various parts of the magnet was recorded in a table as shown below.

Part of the magnet	Number of pins on the bar magnet
V	5
W	8
X	15
Y	3
Z	15

Which two letters represent the poles of the bar magnet?

- (1) V and W
 - (2) W and X
 - (3) X and Z
 - (4) V and Y
19. The graph below shows the number of millipedes in a garden for a period of four months.

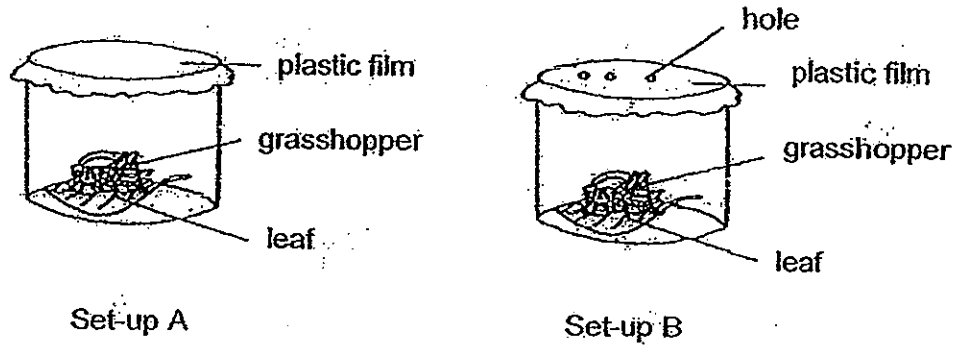
Number of millipedes



What is the characteristic of living things shown by the graph above?

- (1) Living things die.
- (2) Living things move.
- (3) Living things grow.
- (4) Living things reproduce.

20. Joe prepared 2 set-ups, A and B, as shown in the diagrams below.

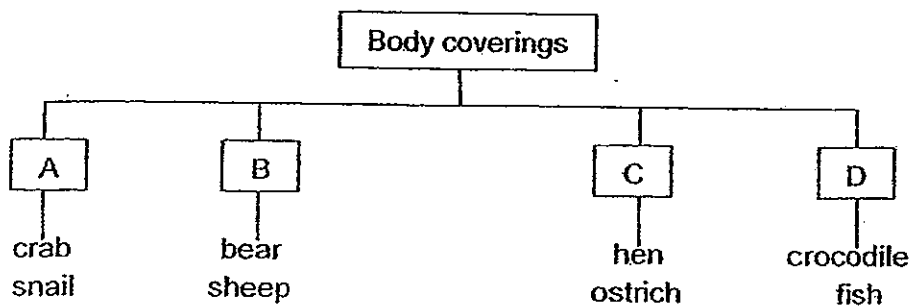


What was Joe trying to find out?

He was trying to find out if the grasshopper would _____.

- (1) need air to survive
- (2) need leaves for shelter
- (3) feed on leaves
- (4) reproduce

21. The diagram below shows how animals can be grouped according to their body coverings.



Which one of the following animals can be grouped under C?

- (1) Snake
- (2) Prawn
- (3) Platypus
- (4) Penguin

22. Joe conducted an experiment to find out the hardness of four different materials P, Q, R and S.

He used the sharp ends of a plastic rod and a wooden rod to scratch each of these materials. He recorded his observations in the table below.

Rod used to scratch material	Scratch marks observed on material			
	P	Q	R	S
Plastic	No	Yes	No	No
Wood	No	Yes	No	Yes

Which one of the following statements is true?

- (1) R and S are harder than wood.
 - (2) Q and S are harder than wood.
 - (3) P and R are harder than plastic.
 - (4) P and Q are harder than plastic.
23. Joe wanted to test whether some objects would float or sink in water. He did this by putting eight different objects into a bucket of water.

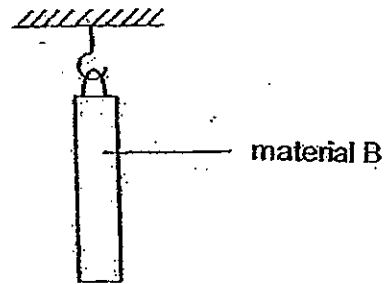
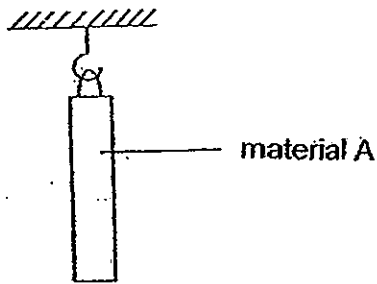
The table below shows his results.

Object	Material			Result	
	W	X	Y	float	sink
Button		✓		✓	
Toy car			✓		✓
Pencil	✓			✓	
Spoon			✓		✓
Bead		✓		✓	
Ruler	✓			✓	
Paper clip			✓		✓
Toy block	✓			✓	

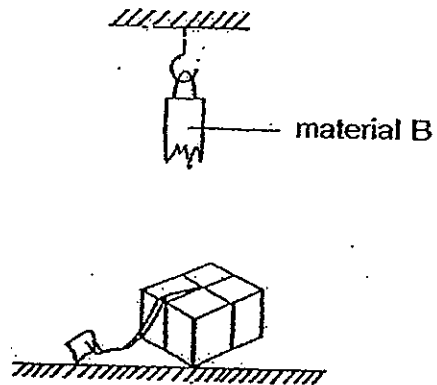
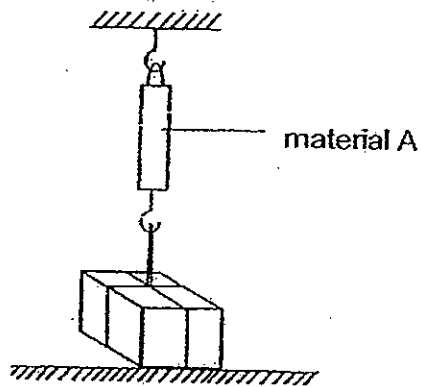
Joe's results suggest that object will float if they are made from _____.

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

24. A strip of material A and material B were each hung on a hook as shown below.



Two boxes of the same weight were then hung onto the strips. The results are shown below.



What can you infer from the results?

- (1) Material A is lighter than material B.
- (2) Material A is stronger than material B.
- (3) Material B is less flexible than material A.
- (4) Material B is softer than material A.

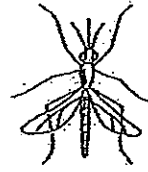
25. Study the pictures below.



A



B



C

Based on your observation, how can you conclude that they are insects?

- A: They have wings.
- B: They have feelers.
- C: They have six legs.
- D: They have three body parts.

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

26. Darrel conducted an experiment on 5 materials which had the same shape and size. His results were shown below.

Material	Results
A	It broke into pieces after 1 hit
B	It did not break at all
C	It broke into pieces after 10 hits
D	There were many scratch marks on it
E	There was no scratch mark on it at all

Based on the results in the table, which one of the following describes the materials correctly?

- (1) Material A is stronger than Material C.
- (2) Material B is stronger than Material A and C.
- (3) Material D is hard enough to scratch Material E.
- (4) Material C is more flexible than Material A and B.

27. Joe carried out an experiment with 4 similar slices of fresh bread A, B, C and D. He added different amounts of water on each slice of bread and placed them on his dining table. The observations are recorded in the table below.

Bread slice	Amount of water added (in teaspoons)	Number of days needed for the bread mould to form in the bread
A	0	12
B	2	10
C	6	?
D	10	2

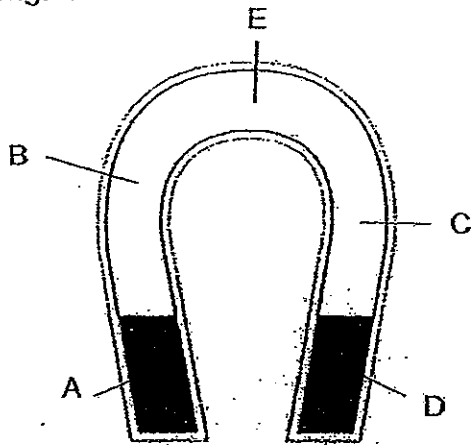
How many days are needed for the bread mould to form on the bread when 6 teaspoons of water are added to the bread?

- (1) 2
 - (2) 6
 - (3) 10
 - (4) 12
28. Which part(s) of the refrigerator has/have magnets?



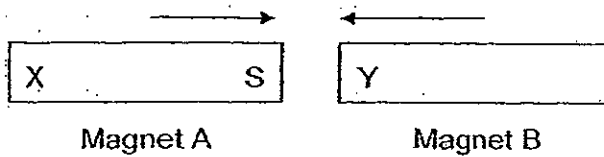
- (1) B only
- (2) D only
- (3) A and B only
- (4) C and D only

29. Which part(s) of the U-shape magnet has/have the strongest magnetic strength?



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

30. When two bar magnets, A and B, were brought near each other, as shown below, they attract each other.



If "S" is the S-pole of Magnet A, what are the unknown poles X and Y?

	X	Y
(1)	S-pole	N-pole
(2)	N-pole	N-pole
(3)	N-pole	S-pole
(4)	S-pole	S-pole

END OF BOOKLET A

GO ON TO BOOKLET B



MAHA BODHI SCHOOL
2012 SEMESTRAL ASSESSMENT 2
PRIMARY THREE SCIENCE

Name : _____ ()

Class : Primary 3 ()

Duration : 1 h 30 min (Booklets A and B)

Parent's Signature: _____

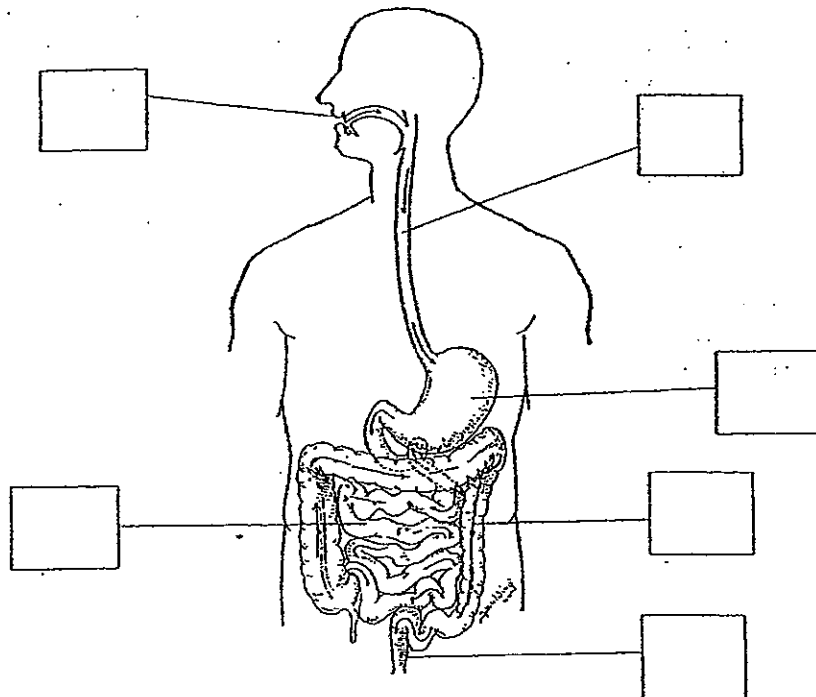
Booklet A (60 marks)	
Booklet B (40 marks)	
Total (100 marks)	

BOOKLET B : [40 marks]

For questions 31 to 43, write your answers in this booklet.

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

31. The diagram below shows Joe's digestive system.



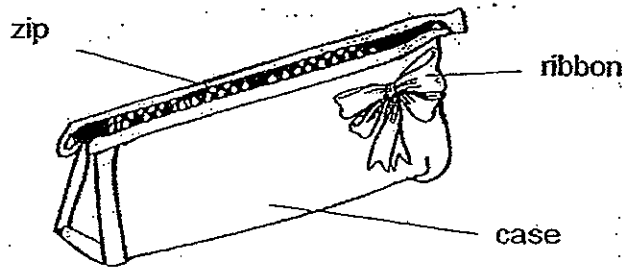
(a) Put a tick (✓) in the boxes where digestion of food takes place. [1]

Marks :

/ 1

- (b) Joe eats an apple. How do the teeth in his mouth make the digestion of the apple easier? [2]

32. The diagram below shows a pencil case.

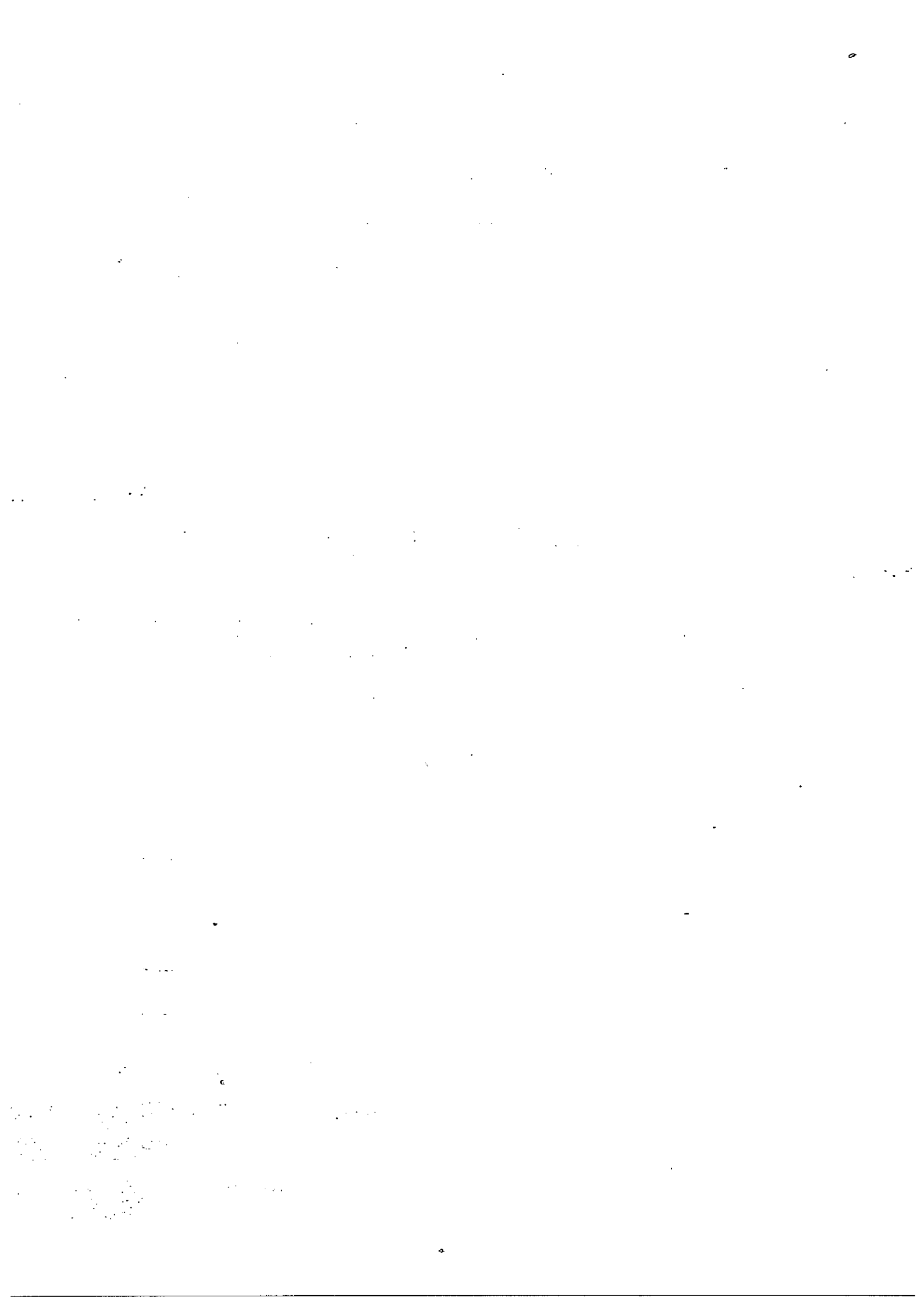


- (a) What are the parts of the pencil case that make it a system? [1]

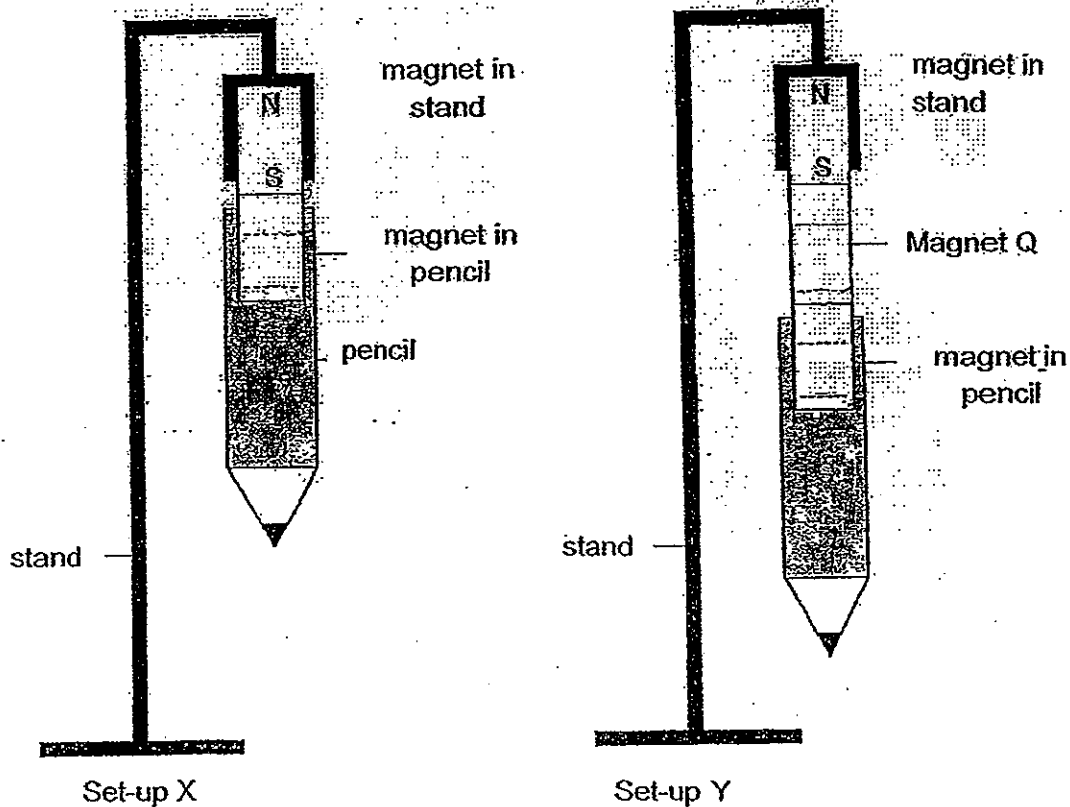
- (b) Why is the pencil case classified as a system? [2]

Marks:

15



33. Set-up X shows a pencil held up by two magnets, one in the stand and the other in the pencil.
 Joe puts another magnet, Q, between the two magnets as shown in Set-up Y.

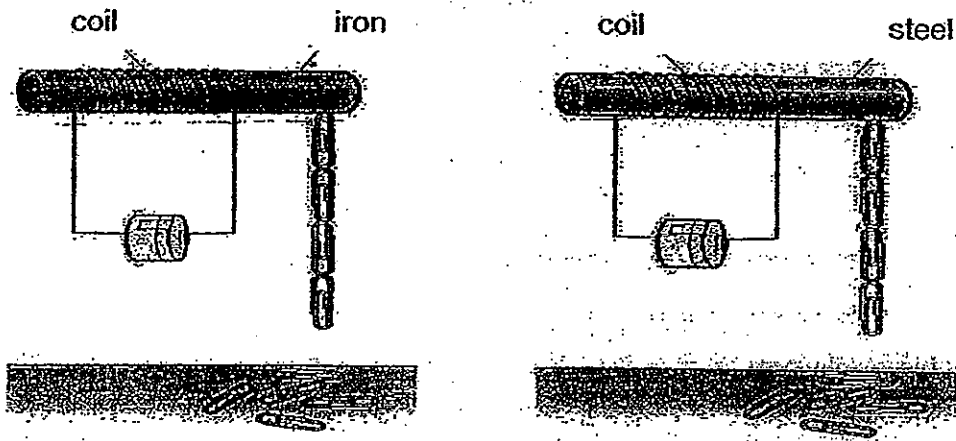


- (a) (i) Label the North-seeking pole (N) and the South-seeking pole (S) of the magnets on the dotted lines in the Set-up X and Y. [2]
- (ii) What metal could 'Q' be made of? [1]
-
- (b) Joe repeated the activity using a piece of wood instead of the Magnet Q. The pencil dropped. Give a reason for this. [1]
-
-
-

Marks :

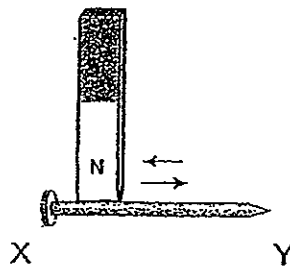
14

34. Joe made two electromagnets. He used paper clips to test the strength of each electromagnet. He observed the following result as shown below.



- (a) What can Joe conclude about the strength of both electromagnets based on his observation? Explain your answer. [2]

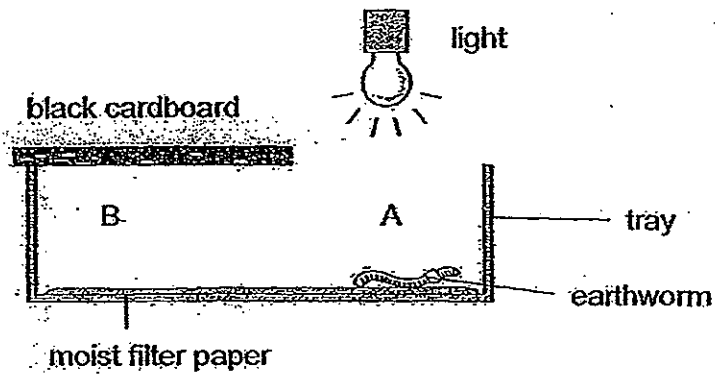
- (b) Joe wanted to magnetise an iron nail XY, as shown below.



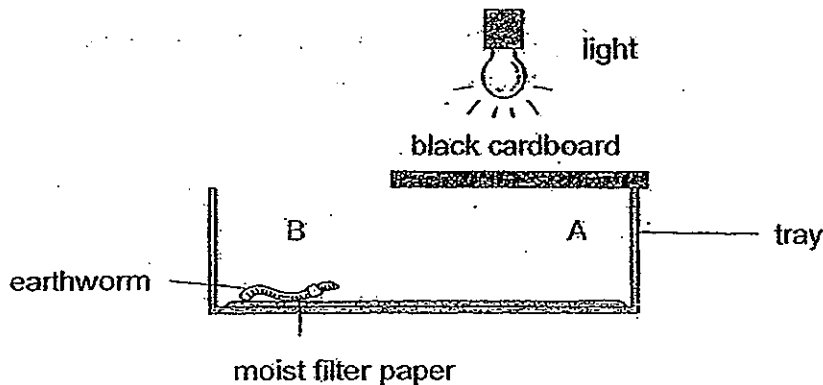
Give a reason why the iron nail XY cannot be magnetized by Joe's method. [1]

Marks : / 3

35. Joe conducted an experiment using the set-up as shown below.



He placed his earthworm on side A of the tray and shone light over the earthworm. After some time, the earthworm moved towards B. Joe then moved the black cardboard over to side A as shown below.



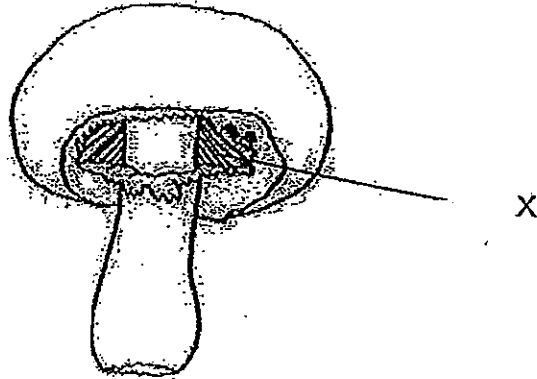
(a) What would Joe observe about the earthworm after some time? [1]

(b) Living things move by themselves. State another characteristic of living things that this experiment shows. [1]

(c) Joe replaced the earthworm with a rubber band. When he shone light on the rubber band, what would he observe about the rubber band? Explain your answer. [1]

Marks : 13

36. The diagram shows a mushroom.



(a) What is the part marked X called? [½]

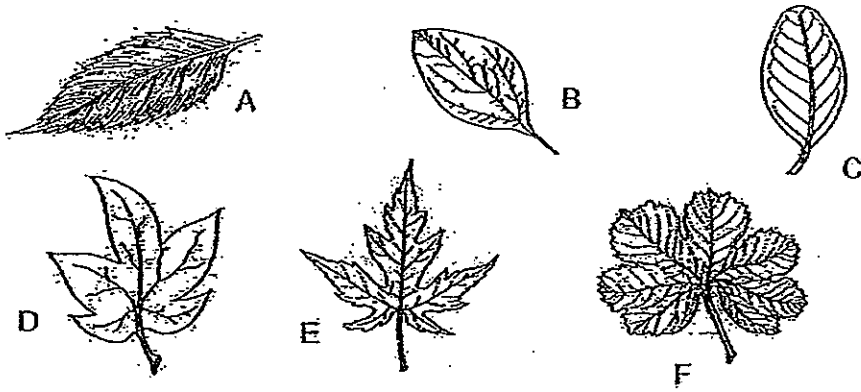
(b) When the cap of the mushroom is tapped a few times, a dust-like substance is released. What is this dust-like substance? [½]

(c) What is the function of this dust-like substance to the mushroom? [1]

Marks :

12

37.



Jane and Mary collected the leaves shown above and classified them into 2 groups.

Jane's Classification:

Group 1

A B C

Group 2

D E F

Mary's Classification:

Group 1

A E F

Group 2

B C D

How did Jane and Mary classify the leaves?

[2]

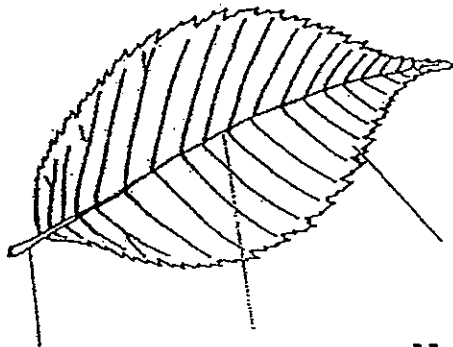
(a) Jane classified them according to _____.

(b) Mary classified them according to _____.

(c) Label the leaf below using the following words:

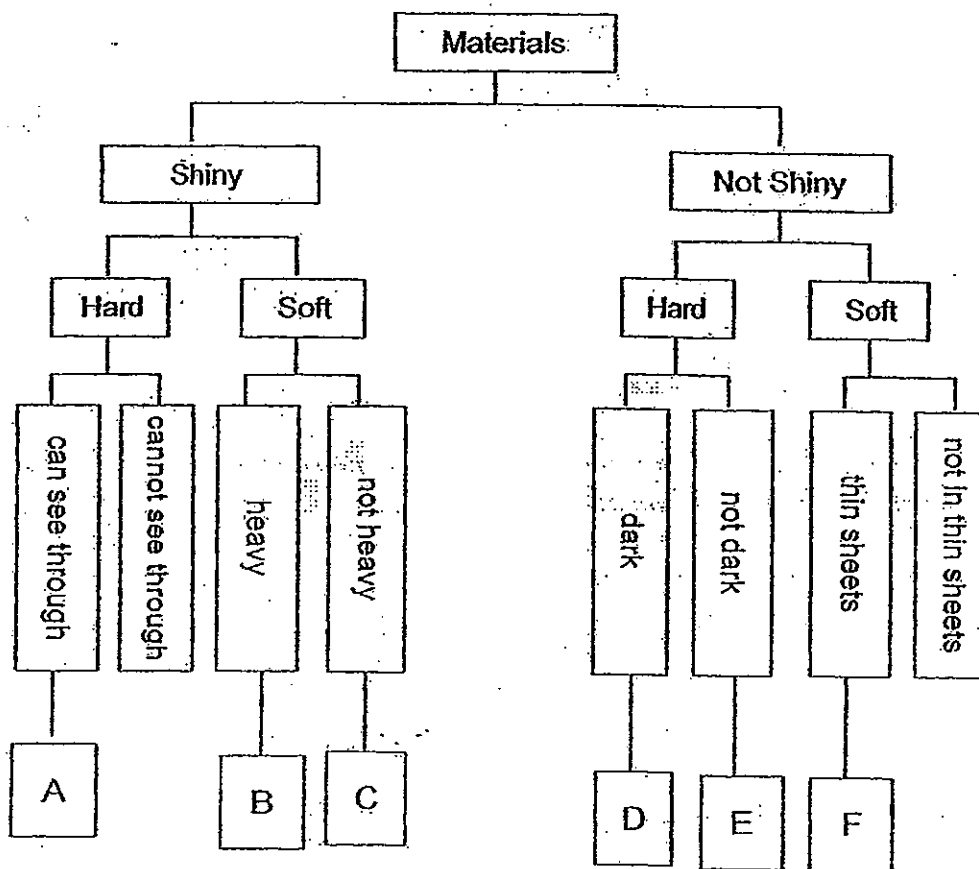
[2]

leaf blade main vein stalk



Marks :

38.



Study the classification diagram above.
The letters, A to F, represent different types of materials.

(a) Describe the material represented by the letter C. [1]

(b) Write down two differences between materials B and D. [2]

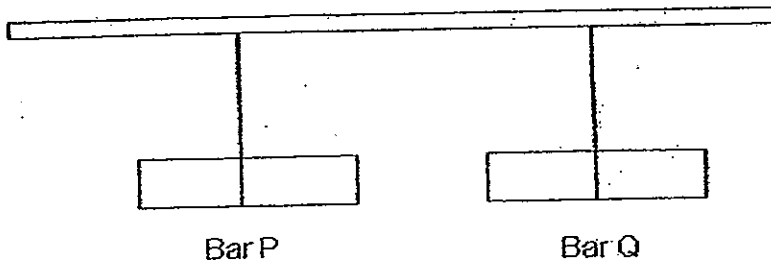
Marks :

/ 3

39. (a) John tried to separate a pile of objects with a magnet. The pile of objects consists of iron filings, sand, glass marbles, steel needles and scraps of paper.

Which of the objects would he be able to separate from the pile? [1]

- (b) Two bars, P and Q, are suspended such that they can turn freely. They come to rest on their own as shown below:



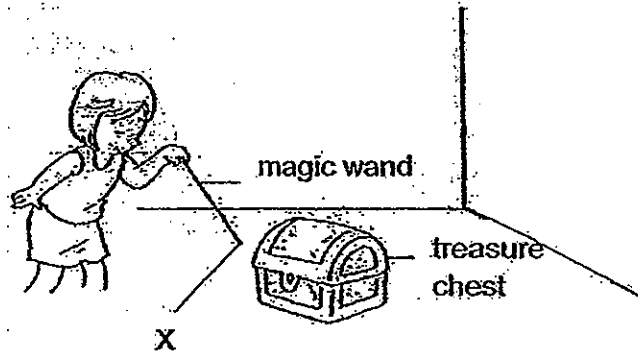
Bar P always comes to rest in a fixed direction but Bar Q comes to rest in different directions.

What does this tell you about the property of Bars P and Q? Explain your answer. [2]

Marks :

13

40. Peggy used one end of a 'magic wand' X to push a toy chest to a corner without touching it by putting end X near the front of the chest. Then she used the other end, Y, of the magic wand to attract the chest back to the original position.



- (a) What was the 'magic wand' and the front of the toy chest made of? [1]

- (b) Explain why the magic wand could push the chest without touching it. [2]

Marks :

13

41. The animals shown below belong to the same group.



Animal A



Animal B

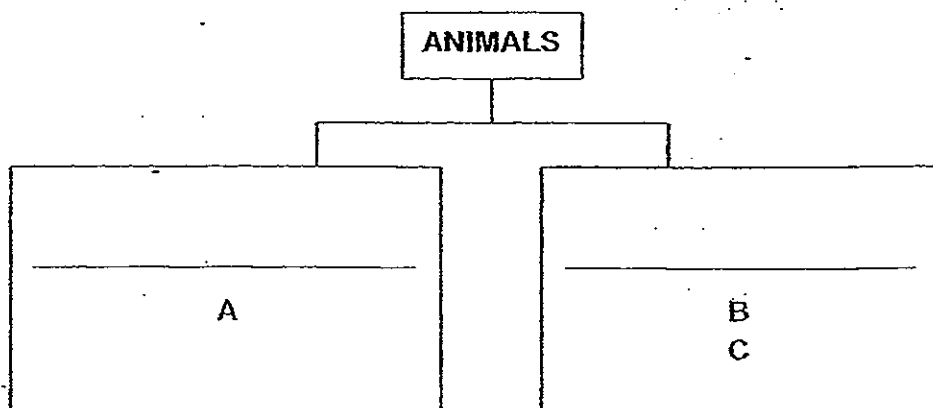


Animal C

(a) Which group do these animals belong to? [1]

(b) The platypus belongs to a different group of animals. It has a different characteristic as the animals shown above. State this characteristic. [1]

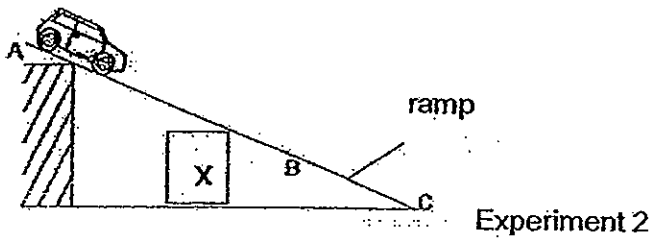
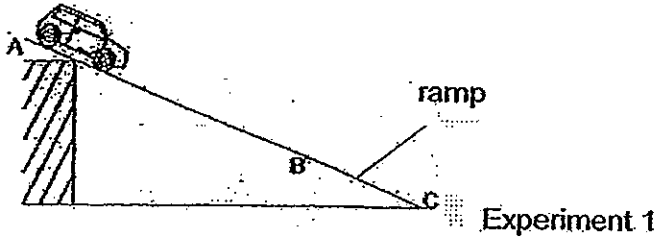
(c) Tom classified the animals, A, B and C into 2 groups as shown below. Write suitable headings for each of the groups. [1]



Marks : / 3

42. A toy car, made of steel, was released at A of a wooden ramp. The time taken for it to move from A to B was taken.
The same experiment was then repeated with object X placed under the ramp.

The set-ups for both experiments are as shown below.



The table below gives the time taken for the toy car to travel from A to B.

	Time (seconds) taken for toy car to move from A to B
Experiment 1	16
Experiment 2	12

- (a) Based on the information above, what was object X likely to be? [1]

- (b) Give a reason for the difference in the time taken for the toy car to travel from A to B in the two experiments. [2]

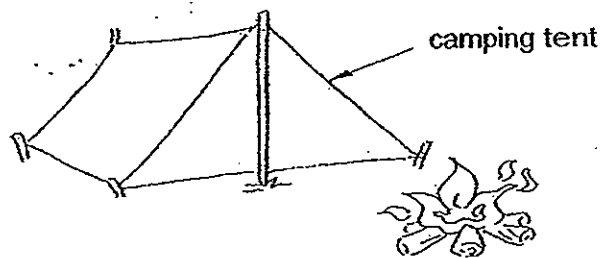
Marks :

13

43. There are 3 pieces of fabric X, Y and Z. Tim puts a dry table cloth below them. He pours 5 ml of water slowly onto each fabric and records his observations in the table below.

Fabric	Observation
X	Water seeps through it and the table cloth under it becomes wet.
Y	The fabric soaks up the water but the table cloth under it is dry.
Z	Water collects on top of the fabric and the table cloth under it remains dry.

- (a) Based on the observations made by Tim, which fabric is the most absorbent? [1]



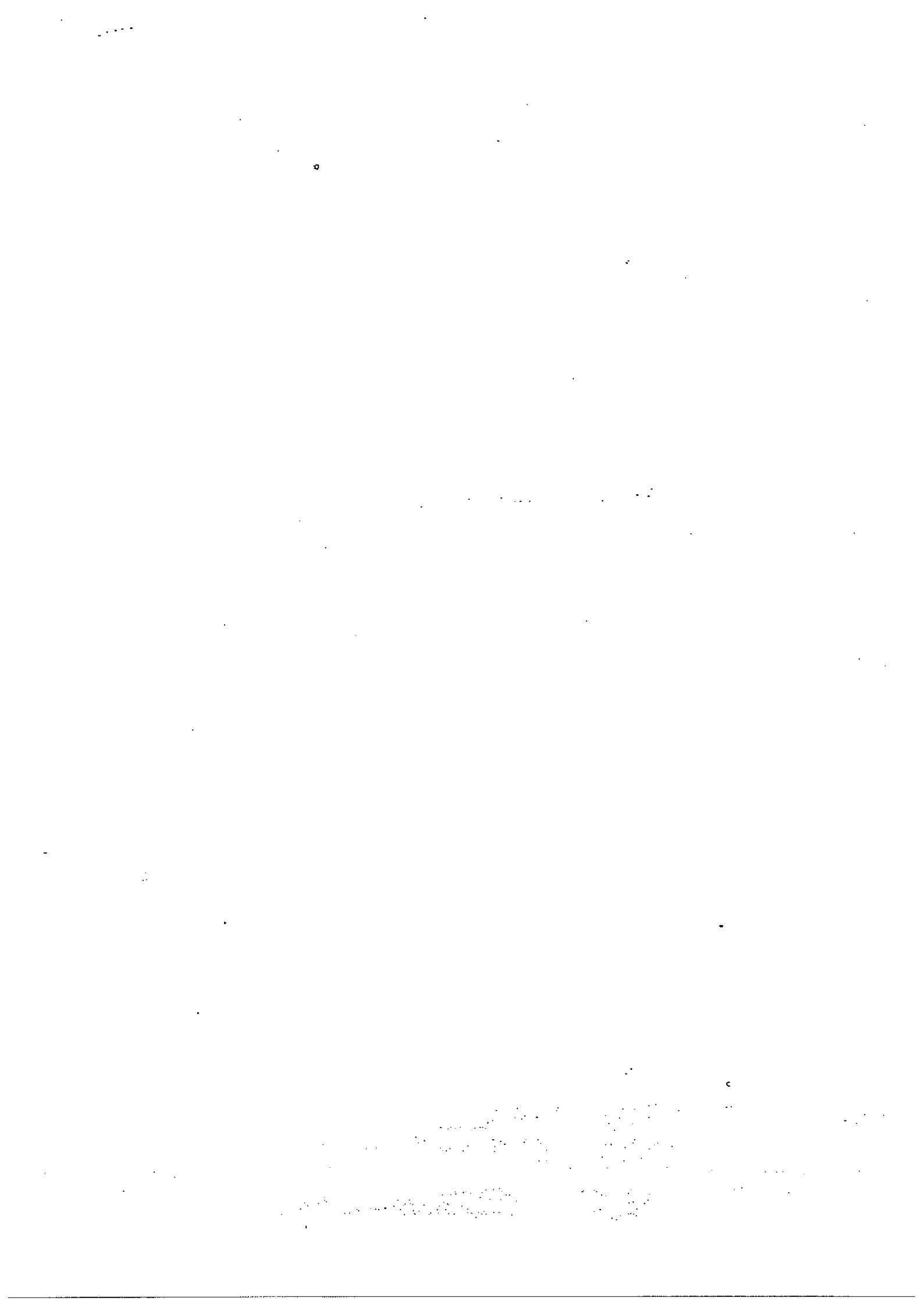
- (b) Which fabric should Joe use for the camping tent? Give an explanation for your answer. [2]

Marks :

13

Have you checked your answers?

~ END OF PAPER ~



ANSWER SHEET

EXAM PAPER 2012

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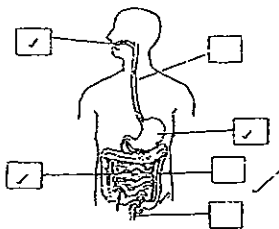
SUBJECT : PRIMARY 3 - SCIENCE

TERM : SA2

Booklet A

1) 2	2) 3	3) 3	4) 2	5) 1	6) 4	7) 2	8) 3	9) 2	10) 4
11) 4	12) 4	13) 4	14) 3	15) 3	16) 3	17) 2	18) 3	19) 4	20) 1
21) 4	22) 3	23) 1	24) 2	25) 4	26) 2	27) 2	28) 1	29) 3	30) 2

31a)

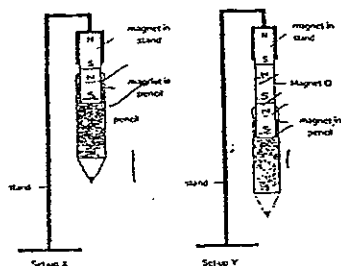


31b) The apple is chewed into smaller pieces so that it can be easily swallowed.

32a) The zip and case.

32b) The zip and case work together to allow stationery to be kept in it.

33ai)



33aii) 'Q' could be made of iron or steel.

33b) Wood is a non-magnetic material and a magnet can only attract magnetic materials.

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34a) He can conclude that the strength of both electromagnets are the same. Both electromagnets attract the same number of paperclips.

34b) Joe has to stroke the iron nail using only one pole of the magnet, stroking it in the same direction.

35a) The earthworm moved to A.

35b) It responds to changes around it.

35c) The rubber band will just stay still. A rubber band is a non-living thing and non-living things cannot respond to changes or move by themselves.

36a) Gills

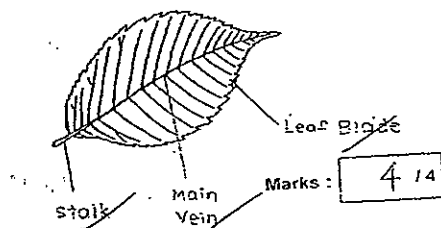
36b) It is spores.

36c) The function is to help them reproduce to continue their own kind.

37a) shape

37b) their edges

37c)



38a) It is shiny, soft, and not heavy.

38b) Material B is soft while material D is hard. Material B is shiny while material D is not shiny.

39a) He would be able to separate the iron filings and the steel needles from the pile.

39b) Bar P has a magnetic force while Bar Q does not. Bar P always comes to a rest at a fixed direction while Bar Q comes to rest in different directions.

40a) They are magnets.

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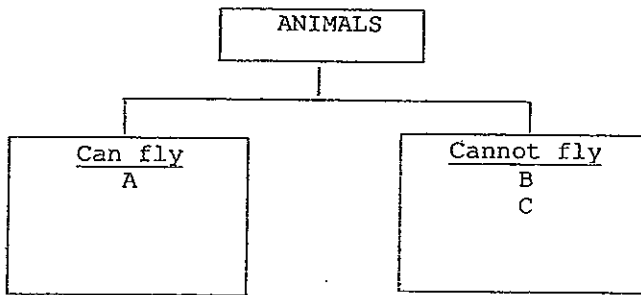
SUBJECT : PRIMARY 3 - SCIENCE
TERM : SA2

40b) The end X of the magic wand and front of the chest are like poles of magnet. When the like poles were facing each other, they repelled.

41a) Birds

41b) The platypus has hair as its outer covering.

41c)



Page 2

42a) It is a magnet.

42b) The steel toy car was attracted by object X and therefore it moved down within a shorter period of time.

43a) Fabric Y

43b) Fabric Z. It is waterproof so the inside of the tent will not get wet when it rains.

