



MAHA BODHI SCHOOL
2009 SEMESTRAL ASSESSMENT 2
SCIENCE

Name : _____ ()

Date : 30 October 2009

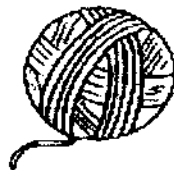
Class : Primary 3 _____)

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

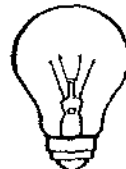
SECTION A : [30 x 2 marks = 60 marks]

For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.**

1. Which of the following is / are system(s)?



A



B



C



D

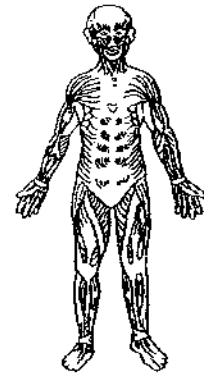
- (1) A and D only
- (2) B and C only
- (3) B, C and D only
- (4) A, B and C only

2. Which of the following form part of a plant system?

- A. pot
- B. soil
- C. leaf
- D. root

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

3. A living thing is made up of many systems. The following picture shows one of the systems in a human being.



Which one of the following statements is true about its function?

- (1) It helps to take in oxygen into the body.
- (2) It protects the important organs in the body.
- (3) It helps the different parts of the body to move.
- (4) It carries food, water and oxygen to all parts of the body.

4. Which of the following systems ensure(s) that the body receives enough oxygen?

- A. skeletal system
- B. digestive system
- C. circulatory system
- D. respiratory system

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

5. Which of the following form **part** of the digestive system?

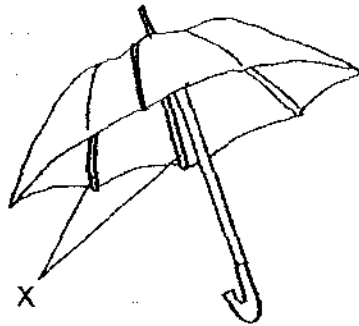
- A. anus
- B. nose
- C. heart
- D. mouth
- E. large intestine

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

6. Where does digestion start taking place for a newborn baby that can only drink water or milk?

- (1) mouth
- (2) gullet
- (3) stomach
- (4) small intestine

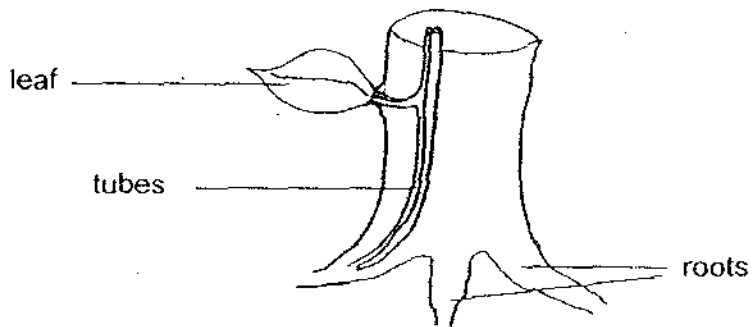
7. Observe the picture of an umbrella as shown below.



Which one of the following systems has a function that is similar to Part X?

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

8. The picture below shows the tubes in a plant which carry food to all parts of the plant.



Which one of the following systems in a human being has tubes which are similar in function to the tubes in the plant?

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

9. Johnson brought a new toy to school.

His friends made the following comments about the toy.

- A. The toy is a system because it produces wind.
- B. The toy is a system because it has parts that work together to perform a function.
- C. The battery is not part of the system because it can be removed.
- D. The stand is not part of the system because there are other important parts that make up the fan.



Which of the statements is / are correct?

- (1) B only
 - (2) C only
 - (3) A and B only
 - (4) A, B, C and D
10. Mabel took part in a 200-metre race. Which of the following systems did she use when she ran?
- A. Circulatory system
 - B. Digestive system
 - C. Muscular system
 - D. Respiratory system
 - E. Skeletal system
- (1) C and E only
 - (2) C, D and E only
 - (3) A, C, D and E only
 - (4) A, B, C, D and E



X is part of the digestive system. However, no digestion takes place at X.

Which of the following parts is X likely to be?

- A. mouth
 - B. small intestine
 - C. large intestine
 - D. anus
- (1) A only
 - (2) D only
 - (3) C and D only
 - (4) B, C and D only

12. Evan and Jovan have different eating habits. Evan loves to swallow his food without much chewing but Jovan loves to chew his food thoroughly before swallowing them.

Which of the statements below best describe what happens to their food?

- A. No digestion takes place at all in Evan's mouth.
- B. The food is digested completely in Jovan's mouth.
- C. Food leaving the mouth is softer in Jovan than in Evan.
- D. Food leaving the mouth is smaller in size in Jovan than in Evan.

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

13. Jensen placed a bar magnet near some objects. Which is/are the object(s) that will interact with the magnet?

- A. an iron rod
- B. a gold ring
- C. a silver necklace
- D. an aluminium can

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



14. Lydia fastens a bar magnet on a piece of styrofoam board which is then placed into a basin of water. She observes that the styrofoam board always comes to rest in a particular direction.

Which property of magnets is she observing?

- (1) Magnets are strongest at the poles.
- (2) Magnets can attract and repel one another.
- (3) Magnets can come in different shapes and sizes.
- (4) Magnets rest in the North-South direction when they are allowed to turn freely.

15. Lixia set up an experiment to make electromagnets from Object X and Y.

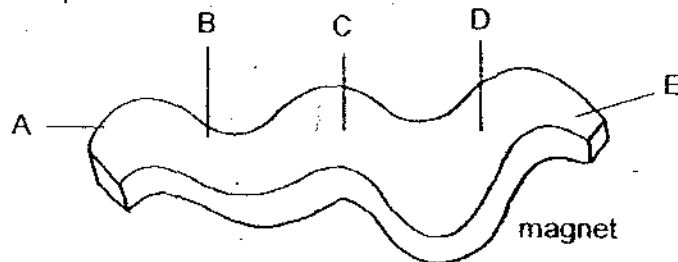
For each of the objects, she coiled a piece of wire around it and connected its ends to a battery. She then brought the set-up near some staples and recorded her observations on a piece of paper. She, however, accidentally dirtied the paper.

Number of coils	Number of staples attracted	
	Object X	Object Y
20	3	0
	8	
35	11	0

Which of the following can be concluded from the experiment?

- A. Object X became a magnet.
 - B. Object Y was made of a non-magnetic material.
 - C. As the number of coils increased, the number of staples attracted to Object X increased.
 - D. As the number of coils increased, the number of staples attracted to Object Y decreased.
- (1) A and B only
 (2) B and C only
 (3) A, B and C only
 (4) A, B, C and D

16. Kyle found a piece of oddly-shaped magnet and decided to perform an experiment to find out more about it. He brought some paper clips near the magnet and recorded how many paper clips were attracted to it. He recorded his observations in a table as shown below.



	Number of paper clips attracted				
	Position A	Position B	Position C	Position D	Position E
1 st reading	8	6	?	7	9
2 nd reading	9	7	?	6	10

Which of the following is the **most likely** number of paper clips Kyle would find at Position C?

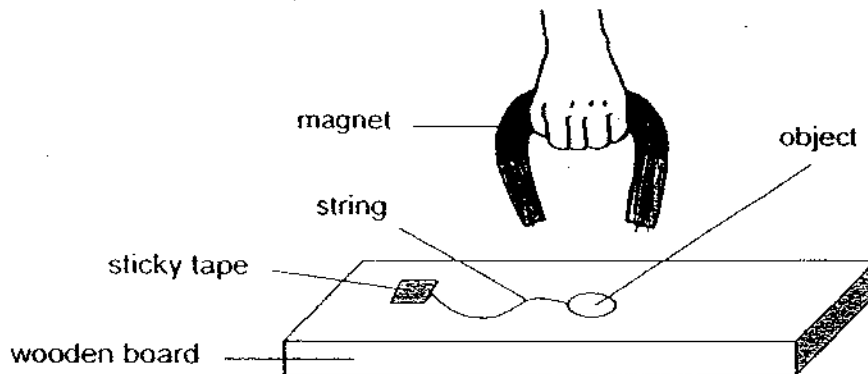
- (1) 4
- (2) 6
- (3) 8
- (4) 10

17. Weibin conducted an experiment to find out how the strength of a magnet was affected by the number of times it was dropped. He dropped a magnet several times from a height of 3m and recorded the number of pins attracted to it. His observations are recorded in the table as shown below.

Number of times the magnet was dropped	Number of pins attracted to the magnet
0	20
5	12
10	4
15	X
20	0

Based on the table, what is the most likely value of X?

- (1) 0
 (2) 3
 (3) 5
 (4) 7
18. Kasim set up an experiment to find out how Object C, D and E would interact with a magnet.



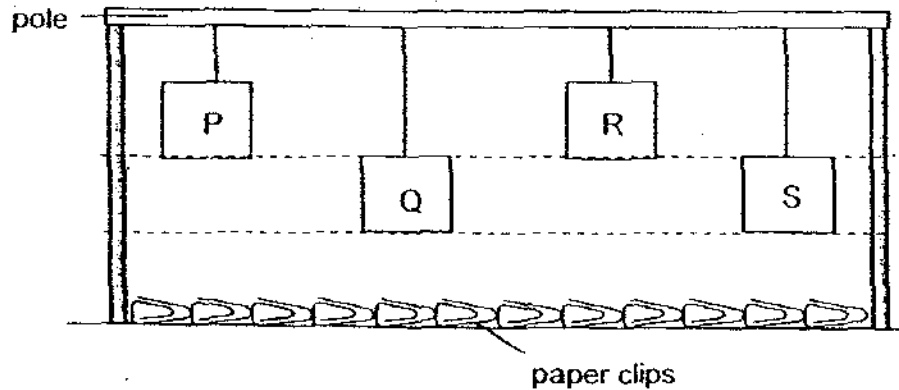
He tied one end of a string to one object and taped its other end to a wooden board. He then held his magnet above of the object and recorded his observation. He repeated the activity with the other two objects.

Object	Observations
C	The string tightened as the object rose up into the air.
D	The string remained loose and the object remained unmoved.
E	The object moved away from the magnet at first before it turned and rose up into the air.

Based on the above observations, which of the following most likely represent Object C, D and E?

	Object C	Object D	Object E
(1)	Aluminium foil	Magnet	Iron nail
(2)	Magnet	Iron nail	Copper wire
(3)	Iron nail	Copper wire	Magnet
(4)	Copper wire	Aluminum foil	Iron nail

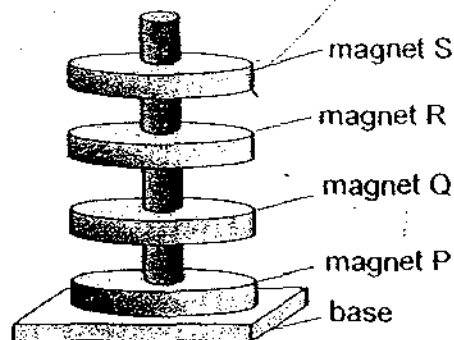
19. Adele hung 4 magnets, P, Q, R and S, from a pole and placed some paper clips below them. He recorded his observations as shown below.



Magnet	Number of paper clips attracted
P	5
Q	5
R	9
S	9

Which one of the magnets is the strongest?

- (1) Magnet P
 - (2) Magnet Q
 - (3) Magnet R
 - (4) Magnet S
20. Four ring magnets are arranged in a setup as shown below.



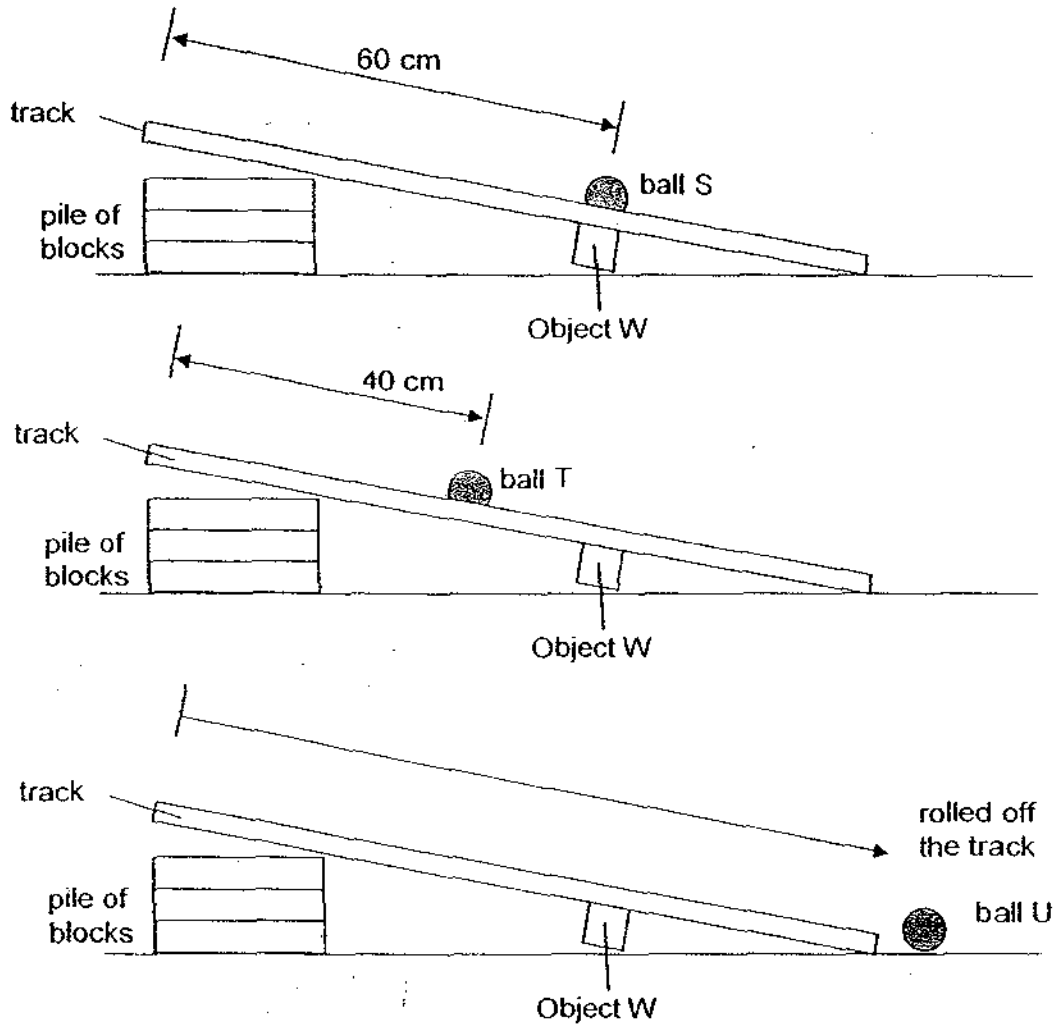
What will happen if Magnet Q is turned over?

- A. Magnet R will repel Magnet Q.
 - B. Magnet S will repel Magnet R.
 - C. Magnet Q will be attracted to Magnet P.
 - D. Magnet Q will be attracted to Magnet R.
- (1) C only
 - (2) A and C only
 - (3) B and D only
 - (4) B, C and D only

21. One end of a rigid plastic track was placed against a pile of blocks and its other end rested on the ground to form a slope. Object W was taped to the underside of the plastic track.

3 balls made of material S, T and U were released from the top of the track and allowed to roll down the track. The balls were of the same shape, size and weight.

The diagrams below show where each of the objects stopped moving on the track.



Which of the following statements can be concluded from the activity?

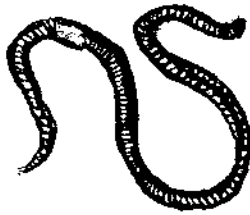
- A. Object W is a magnet.
- B. Ball S is made of a magnetic material.
- C. Ball T is made of a non-magnetic material.
- D. Ball U is made of a non-magnetic material.

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

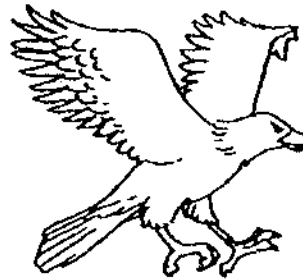
22. Upon seeing a dead cockroach in her cabinet, Pauline's hairs stood on their ends. Which characteristic of a living thing does this show?

- (1) Living things can reproduce.
- (2) Living things can respond to changes.
- (3) Living things need air, food and water.
- (4) Living things can move by themselves.

23. A group of children made some statements based on their observation of the following pictures.



Animal J



Animal K

- Allan : Both Animal J and Animal K lay eggs.
- Boya : Animal K has legs but Animal J does not.
- Caleb : Animal J responds to light but Animal K does not.
- Dillon : Animal K has an outer covering of feathers but Animal J does not.

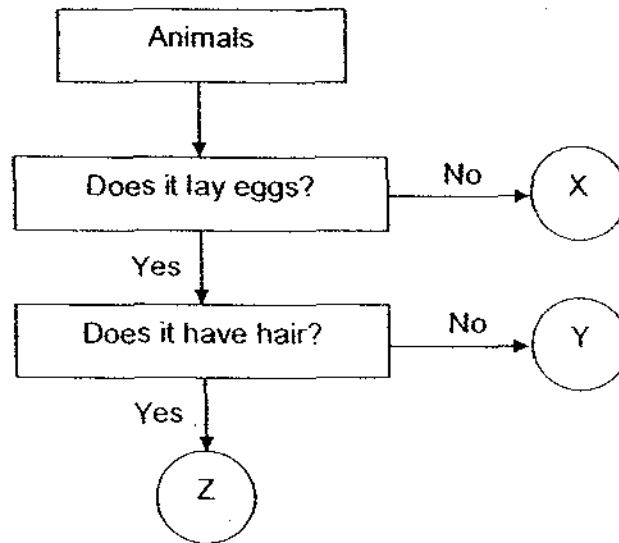
Which of the children made a statement that cannot be observed?

- (1) Allan and Caleb only
- (2) Boya and Dillon only
- (3) Allan, Boya and Caleb only
- (4) Allan, Boya, Caleb and Dillon

24. The following table gives some information on three animals, A, B and C, based on two characteristics. A tick '✓' shows that the animal has the characteristics.

Characteristics	Animal A	Animal B	Animal C
Gives birth to its young alive		✓	
Has an outer covering of hair		✓	✓

From the above information, where do animals A and C belong in the following flowchart?



	Animal A	Animal C
(1)	X	Z
(2)	Y	Z
(3)	Z	Y
(4)	Z	X

25. Olinder carried out an experiment to find out more about the growth of mould on some bread slices.

	What Olinder did to the bread	Where the bread was placed
Bread A	Sprinkled water on the bread then toasted it for 10 minutes.	Table
Bread B	Sprinkled water on the bread.	Table
Bread C	Sprinkled water on the bread then toasted it for 10 minutes	Freezer
Bread D	Sprinkled water on the bread.	Freezer

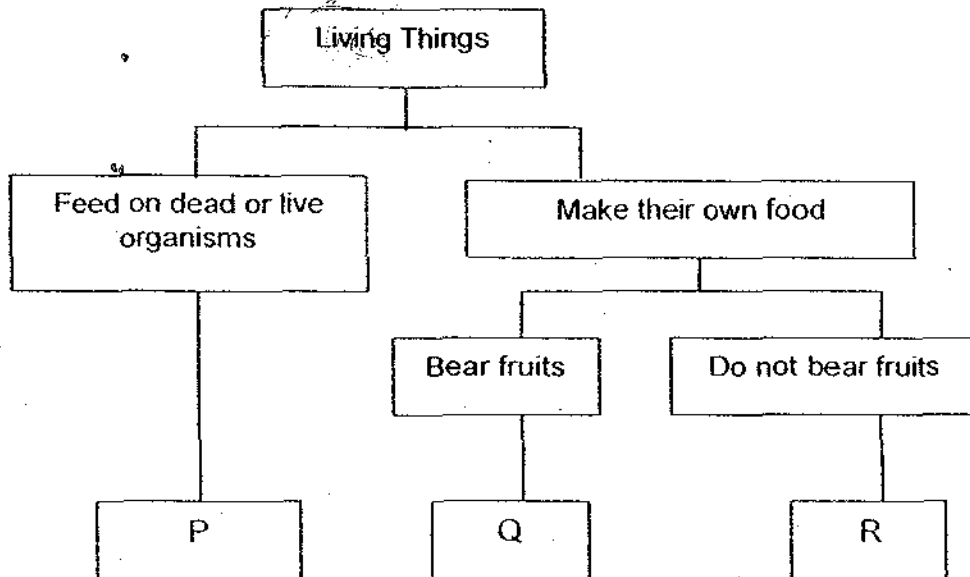
On which piece of bread was she likely to observe mould being formed the soonest?

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

26. The following table gives information on the moss, mushroom and pong pong based on some characteristics. A tick '✓' shows that the organism has the characteristics.

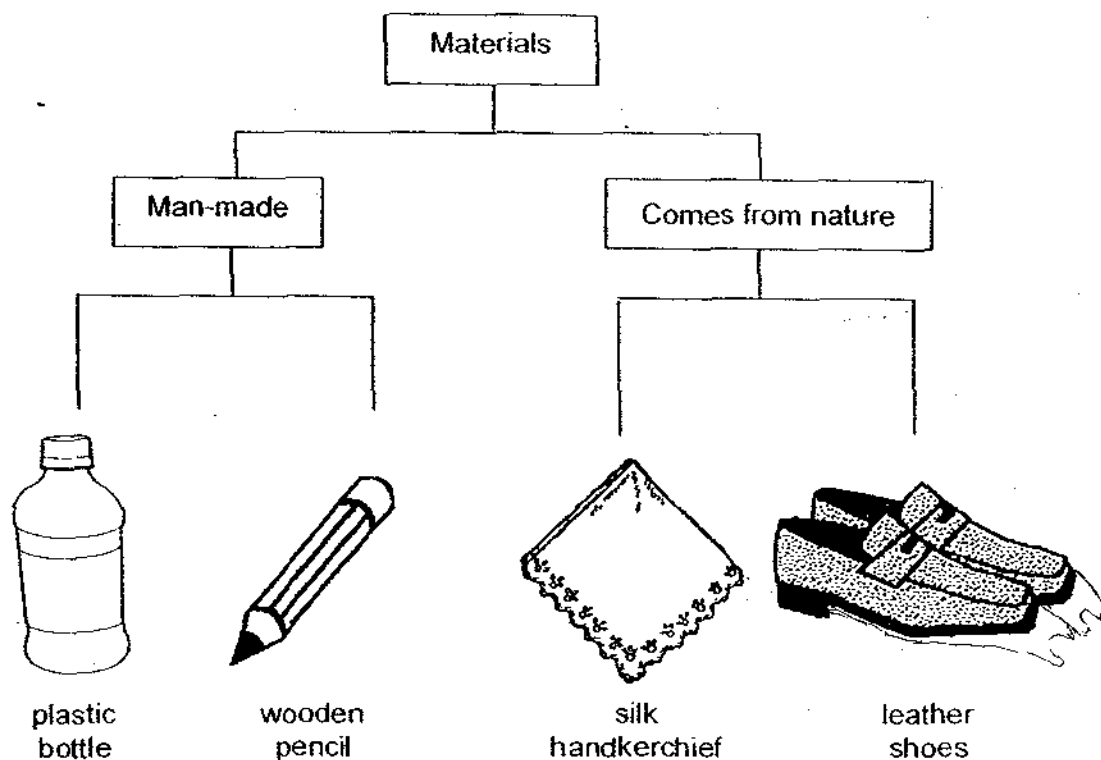
	Makes its own food	Reproduces from seeds	Reproduces from spores
Moss	✓		✓
Mushroom			✓
Pong Pong	✓	✓	

Based on the classification chart below, which group, P, Q and R, do the moss and the pong pong belong to?



- | | Moss | Pong Pong |
|-----|------|-----------|
| (1) | P | Q |
| (2) | R | Q |
| (3) | P | R |
| (4) | Q | R |

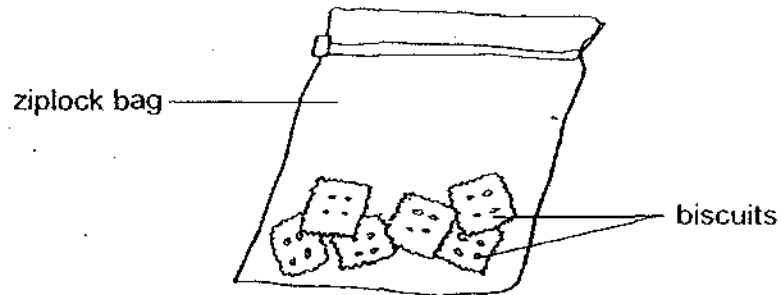
27. Four items have been classified according to the materials which they are made of in the chart shown below.



Which one of them has been classified wrongly?

- (1) plastic bottle
- (2) wooden pencil
- (3) silk handkerchief
- (4) leather shoes

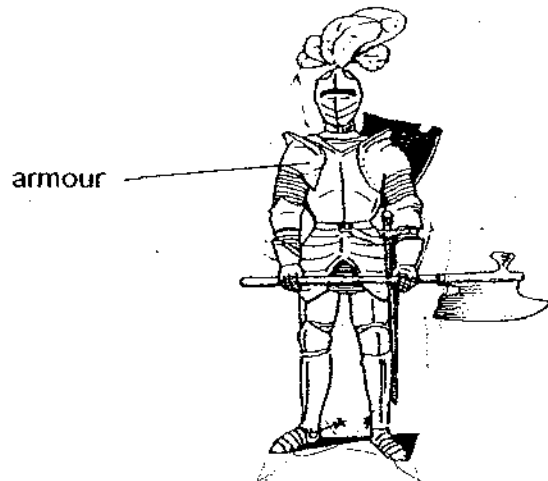
28. Chenxi placed his biscuits in a ziplock bag. He accidentally spilled water over it, but found out that the biscuits inside the bag did not get wet.



Which of the following could be the reason(s) for this?

- A. The ziplock bag was soft.
 - B. The ziplock bag was flexible.
 - C. The ziplock bag was waterproof.
 - D. The ziplock bag was transparent.
- (1) A only
(2) C only
(3) B and C only
(4) C and D only

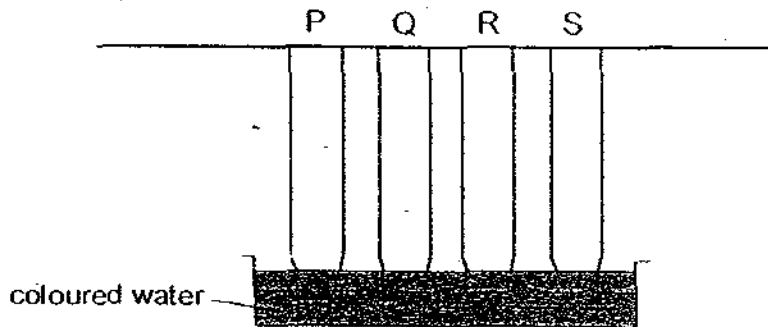
29. The picture below shows the metallic armour a soldier wore to war in the past.



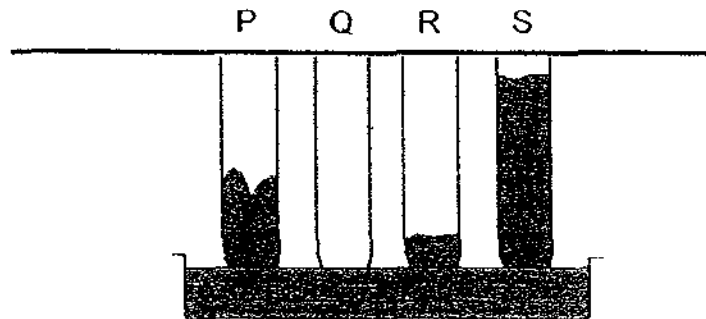
Which are the main reasons why metal was used for the armour?

- A. It is stiff.
 - B. It is hard.
 - C. It is strong.
 - D. It sinks in water.
- (1) A and B only
(2) B and C only
(3) B, C and D only
(4) A, B, C and D

30. Aishah hung four materials, P, Q, R and S, from a string so that the base of these materials touched the coloured water in a basin.



Five minutes later, she observed the following.



Which of these materials is most suitable for making a towel?

- (1) Material P
- (2) Material Q
- (3) Material R
- (4) Material S

END OF SECTION A

GO ON TO SECTION B



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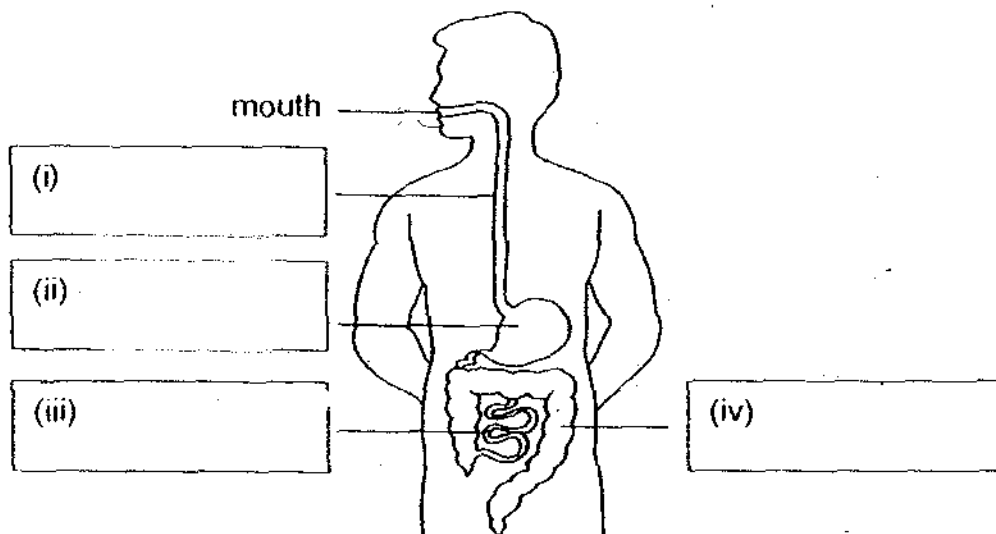
Section A	/ 60
Section B	/ 40
Total	/ 100

Parent's Signature _____

SECTION B : [40 marks]

For questions 31 to 46, write your answers in the spaces provided. The number of marks available is shown in the brackets [] at the end of each question or part-question.

31. The diagram below shows the digestive system in a human being.



(a) Name the parts (i, ii, iii and iv) by filling in the boxes. [2]

(b) Food enters the mouth. State what happens to the food in Part (iv) several hours later. [1]

Marks:

/ 3

32. The sentences below describe some body parts. Match these sentences to the body system which the body parts come from. [3]

Description

I produce a form of liquid which helps to make your food softer so that it can be easily digested. Which body system do I come from?

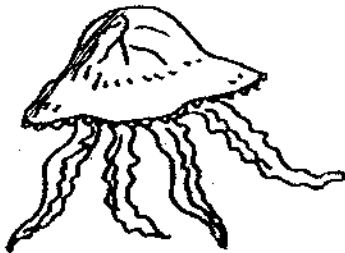
I help your arms to move and carry things. Which body system do I come from?

I help you to breathe in fresh air. Which body system do I come from?

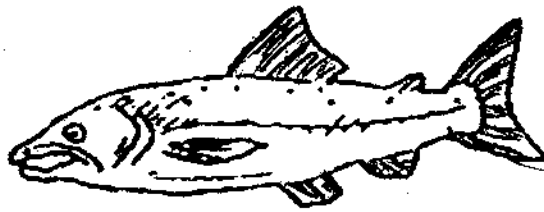
Body System

- Respiratory system
- Muscular system
- Circulatory system
- Skeletal system
- Digestive system

33. The jellyfish is soft and has no fixed body shape, unlike the fish.



jellyfish



fish

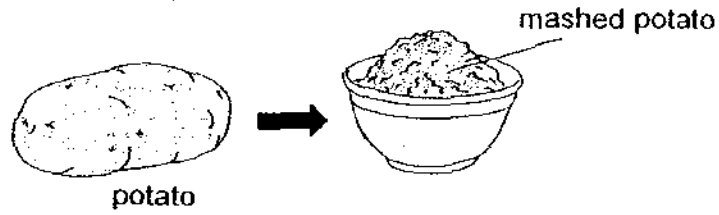
- (a) Which of the body systems is absent in the jellyfish, causing it to be soft and not to have a fixed body shape? [1]

- (b) State one other main function of the body system mentioned in (a). [1]

Marks:

15

34. Farhan wanted to eat mashed potato one afternoon. He decided to make his own using a potato masher.



(a) Which organ in the digestive system has a function that is similar to the potato masher? [1]

(b) In what way is the organ mentioned in (a) similar to the potato masher? [1]

(c) In what way is the organ mentioned in (a) different from the potato masher? [1]

35. Yiwei was reading a newspaper article about a baby being choked to death after swallowing a toy. He asked his mother, "Why did the baby die?"

His mother said, "When the baby swallowed the toy, he did not get enough air and he died."

(a) Which body system was affected when the baby swallowed the toy? [1]

(b) State two main functions of the body system mentioned in (a). [2]

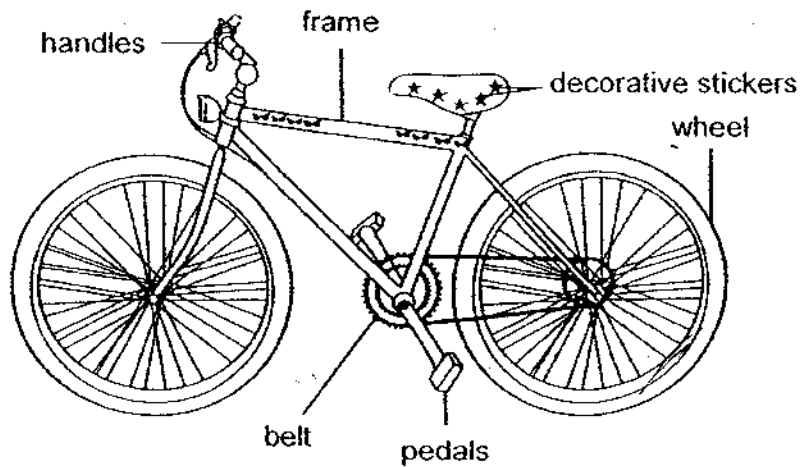
(i) _____

(ii) _____

Marks:

/ 6

36. The diagram below shows a bicycle.



(a) Can the frame be made of rubber? Explain your answer. [1]

(b) Do the decorative stickers form part of the bicycle system? Explain your answer. [1]

37. Kaixiang wants to try making his own temporary magnet. The materials given to him are an iron rod and a bar magnet.

Before he strokes the iron rod with the bar magnet, he remembers two instructions his Science teacher has mentioned that he should follow to make the iron rod into a temporary magnet.

State the two instructions that Kaixiang should follow. [2]

(i) _____

(ii) _____

Marks:

/ 4

38. Jiayi set up an experiment to test if Object X, Y and Z interact with magnets. She brought a magnet near them and recorded her observations in the table below.

	Moves away from the magnet	Move towards the magnet
Object X	Yes	Yes
Object Y	No	No
Object Z	No	Yes

- (a) Based on the table, what is the similarity between Object Y and Object Z? [1]

- (b) Name one material which Object X can be made of. [1]

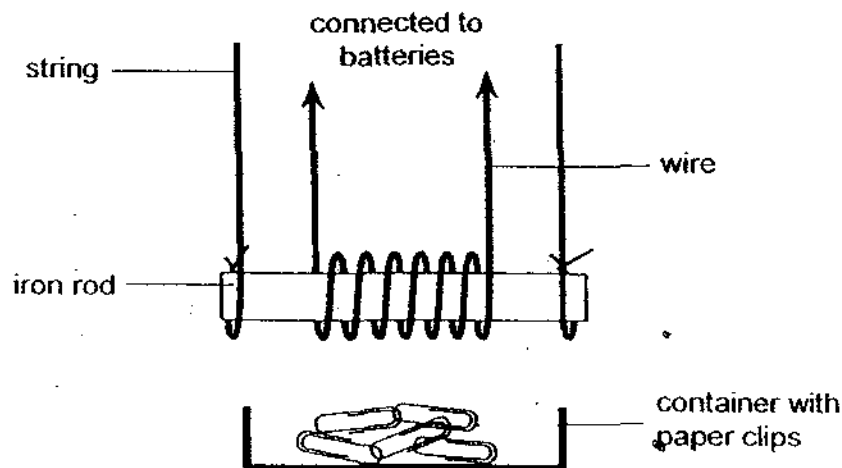
- (c) Name one material which Object Y can be made of. [1]

Marks:

13

39. Two separate set-ups A and B were prepared to make electromagnets.

In each of the set-ups, a similar iron rod was hung from a string and a piece of wire of the same length was coiled around it. A container containing fifty paper clips was placed below the setup and the ends of the wire were then connected to some batteries.



The number of paper clips left in the container was counted and recorded in the table shown below.

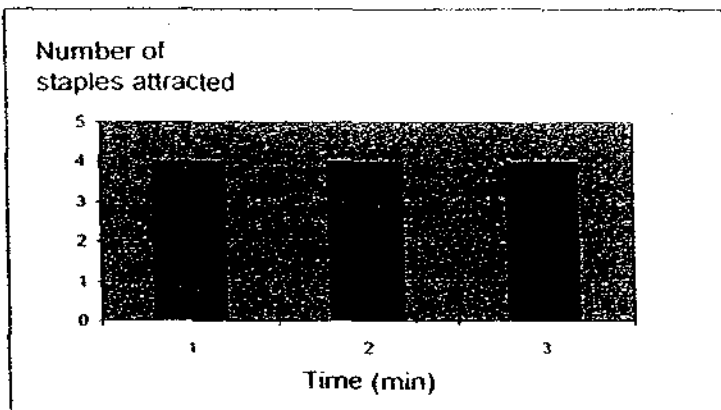
	Number of paper clips left in the container	
	Set-up A	Set-up B
1 st reading	25	38
2 nd reading	24	39
3 rd reading	26	38

(a) Based on the table, state the difference observed in Set-ups A and B. [1]

(b) State one possible reason to explain clearly the reading obtained for Set-up A, compared to the reading obtained for Set-up B. [1]

Marks: 12

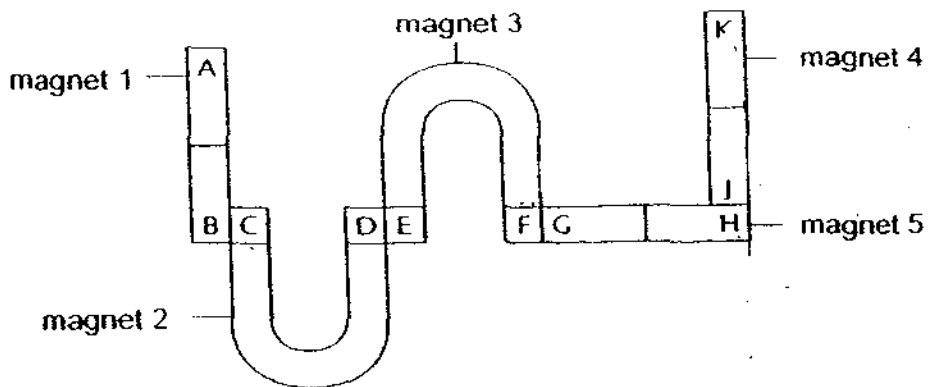
40. Sheila sets up an experiment to find out the number of staples that will be attracted to an electromagnet over a period of time.



- (a) What will happen to the number of staples attracted to the electromagnet if Sheila disconnects the electricity source at the 5th minute? [1]

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

41. Study the arrangement of magnets shown below.



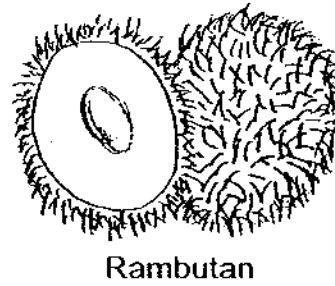
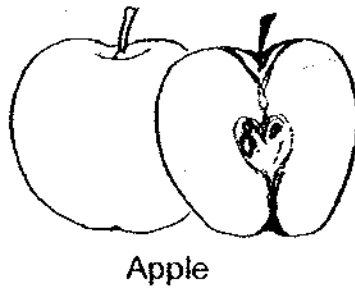
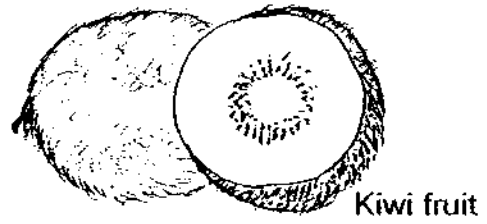
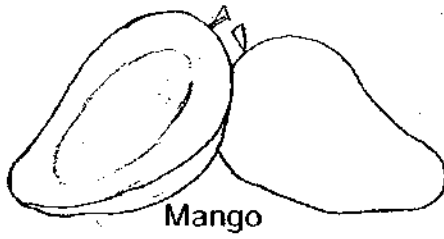
- (a) If F is the north-seeking pole, state what A and K are [1]

A: _____ K: _____

- (b) What would happen if the poles of Magnet 3 were switched over? [2]

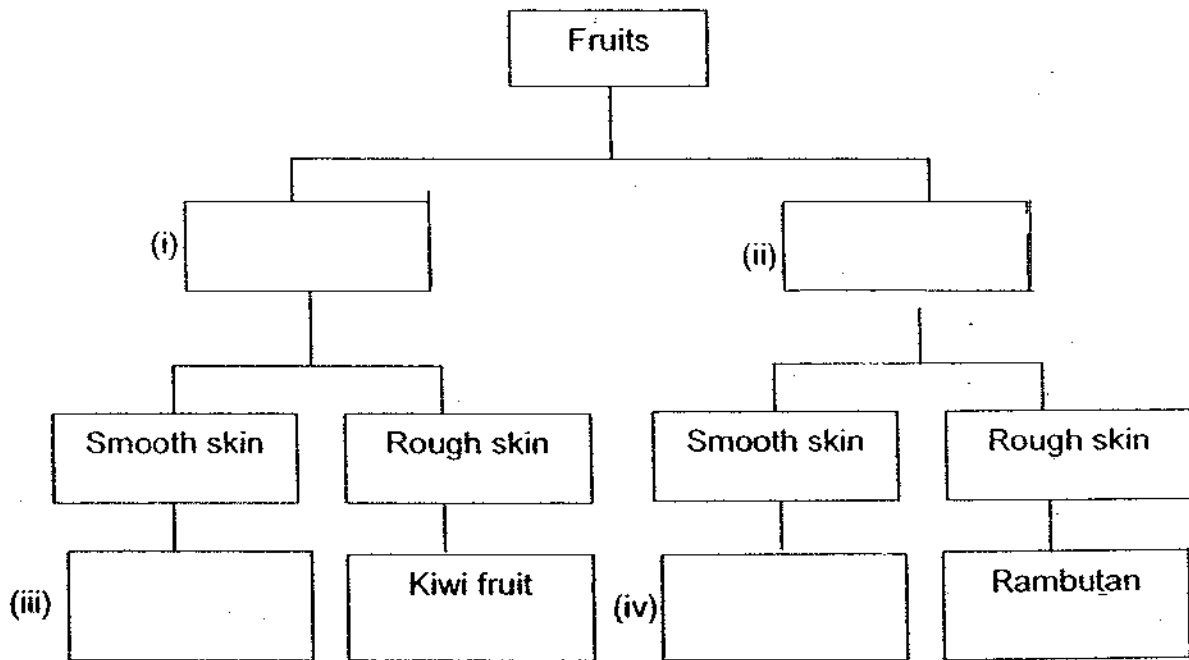
Marks: / 5

42. Peiming bought some fruits as shown below.



Peiming has drawn the following chart to classify the fruits that she bought. Complete the chart by filling in the boxes (i), (ii), (iii) and (iv).

[2]



Marks: 12

43. Qingyang placed Animal S and Animal T into two separate containers to find out about the food they eat. Both animals have hair, have four legs and they give birth to their young alive. He placed 2000ml of water, 700g of sliced meat and 700g of sliced fruits into each container.

The next day, he weighed the amount of food and water left and recorded his results in the table below.

	Animal S			Animal T		
	Amount of water	Amount of sliced meat	Amount of sliced fruits	Amount of water	Amount of sliced meat	Amount of sliced fruits
Day 1	2000 ml	700 g	700 g	2000 ml	700 g	700 g
Day 2	240 ml	110 g	350 g	260 ml	700 g	90 g

- (a) Which group of animals are Animal S and T likely to belong? [1]

- (b) Based on the table, state one similarity between Animal S and Animal T. [1]

- (c) Based on the table, state one difference between Animal S and Animal T. [1]

- (d) State one characteristic of living things shown from this experiment. [1]

Marks: / 4

44. Carrie carried out a simple experiment to test the hardness of three materials, A, B and C.

She used each material to scratch against the other two materials. She made observations on the materials that were being scratched.

The results are recorded in the table below.

	Can it be scratched by?		
	Material A	Material B	Material C
Material A		No	Yes
Material B	Yes		Yes
Material C	No	No	

- (a) Based on the table, identify the material that is the hardest. [1]
-

- (b) Which material, A, B or C, can be used to wipe a television screen? [1]
-

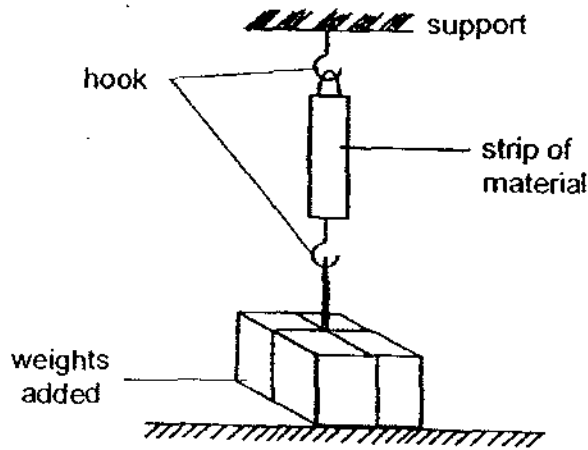
Marks:

12

45. Two strips of different materials, A and B, were used in an experiment.

The strip of material A was hung from a support. Some weights were added, one at a time, to the hook and the length of the strip was measured and recorded.

The activity was repeated with the strip of material B.



The results are as shown below.

Total weight added (g)	Length of strip of Material A (cm)	Length of strip of Material B (cm)
0	20	20
50	21	20
150	23	20
200	25	20

(a) Based on the results table, predict the likely length of the strips of material A and B if 100g of weight was hung on the hook. [1]

The length of the strip of material A: _____ cm

The length of the strip of material B: _____ cm

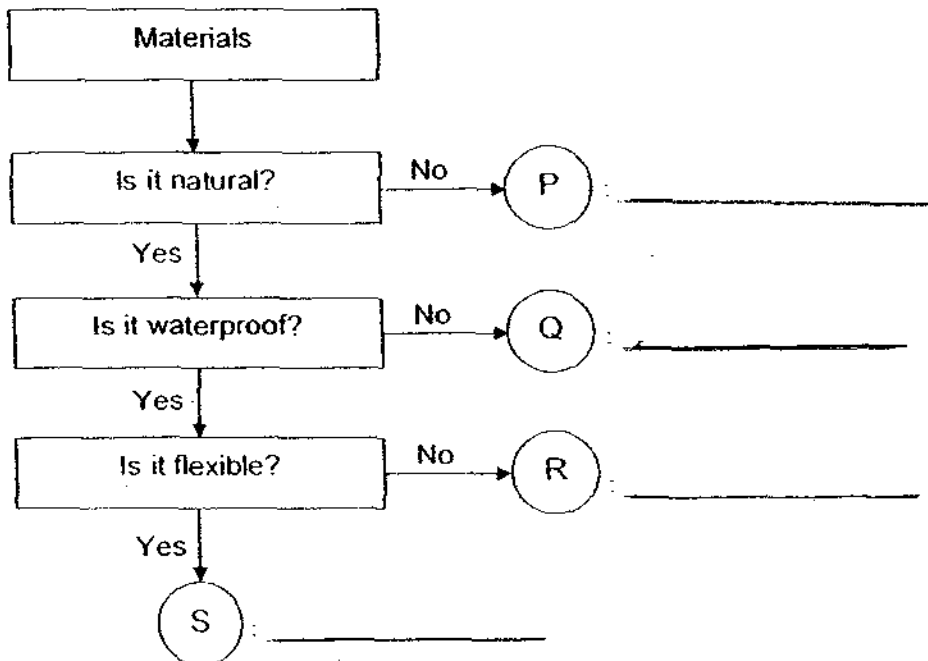
(b) What does this experiment show about the property of each of these two materials? [1]

Marks: . / 2

46. The table below shows the characteristics of four materials, iron, paper, rubber and styrofoam. A tick '✓' shows that the material has the characteristics.

Material	Characteristics		
	Man-made	Can be bent easily	Allows water to pass through
iron			
paper		✓	✓
rubber		✓	
styrofoam	✓	✓	

Based on the table above, identify which of the four materials are represented by the letters P, Q, R and S, by filling in the blanks. [2]



~ END OF PAPER ~

Marks: 12

EXAM PAPER 2009

**SCHOOL : MAHABODHI PRIMARY
SUBJECT : PRIMARY 3 SCIENCE**

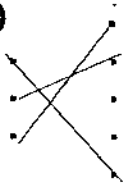
TERM : SA2

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

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

- 31) a) i) gullet ii) stomach iii) small intestine iv) large intestine
b) Water is absorbed from undigested food.

32)



- 33) a) The skeletal system is absent in the jellyfish.
b) It protects the delicate organs in the body.

34) a) Mouth.

- b) It chops and grind the food into smaller pieces.
c) There is saliva in the mouth to make food but the potato masher does not produce any saliva.

35) a) The respiratory system.

- b) i) Takes oxygen into the body.
ii) Removes carbon dioxide from the body.

36) a) No. Rubber is not strong enough to hold my weight.

- b) No. It does not work together with other parts to perform a function.

- 37) i) She should stroke the magnet in the same direction.
 ii) Stroke the rod with the same pole.
- 38) a) Both objects did not move away from the magnet.
 b) Object X could be made of a lodestone.
 c) Object Y can be made of aluminium.
- 39) a) Set-up A could attract more paper clips than set-up B.
 b) There are more batteries added in set-up A to make it a stronger magnet.
- 40) a) It will not attract any staples.
 b) The source of the electromagnet is the wire and the batteries, if you disconnect it the electromagnet will lose its magnetism.
- 41) a) A: South-seeking pole K: North-seeking pole
 b) Magnet two and magnet five will repel magnet three.
- 42) i) More than one seed ii) one seed iii) Apple iv) mango
- 43) a) Mammals.
 b) The amount of water decreased after a day.
 c) Animal S eats meat and fruits while animal T eats fruits.
 d) Living things need food and water to live.
- 44) a) Material C is the hardest material.
 b) Material B can be used to wipe a television screen.
- 45) a) A: 22cm B: 20cm
 b) Material A is flexible while material B is stiff.
- 46) P: Styrofoam
 Q: paper
 R: iron
 S: rubber.