

CATHOLIC HIGH SCHOOL  
PRIMARY 4  
SEMESTRAL ASSESSMENT 1, 2008

SCIENCE

Name: \_\_\_\_\_ ( )

Class : Primary 4 \_\_\_\_\_

Date : 8 May 2008

BOOKLET A

30 Questions

60 Marks

Total Time for Booklets A & B : 1 hour 30 minutes

Instructions to Candidates

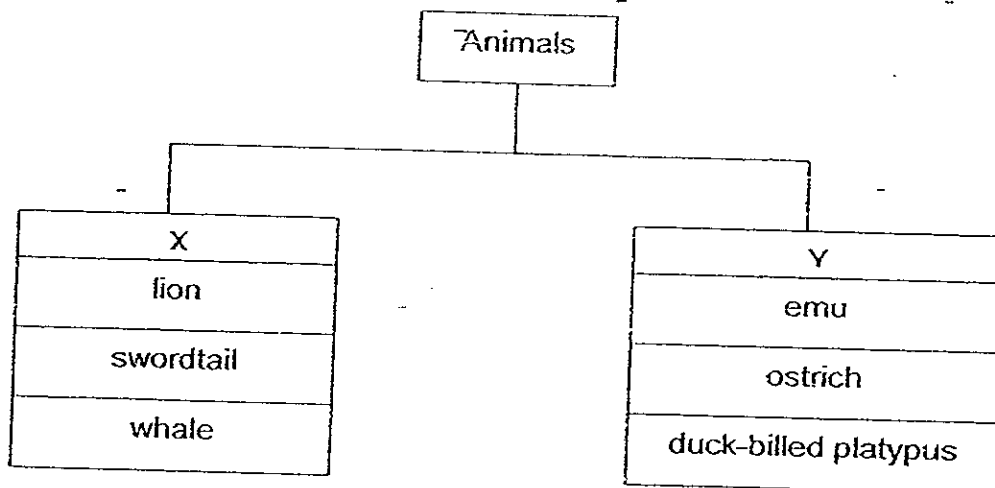
- Do not open this booklet until you are told to do so.
- Follow all instructions carefully.
- Answer all questions.

**Section A: Multiple Choice Questions (60 marks)**

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

1. Which one of the following does not reproduce in the same way as the rest?
  - (1) tiger
  - (2) dolphin
  - (3) penguin
  - (4) polar bear

2. Look at the classification table below.



How are the above animals grouped?

	X	Y
(1)	Live in water	Live on land
(2)	Feed on animals only	Feed on plants only
(3)	Give birth to young alive	Lay eggs
(4)	Have hair on their bodies	Have feathers on its body

3. Look at the two plants below.



Rose plant



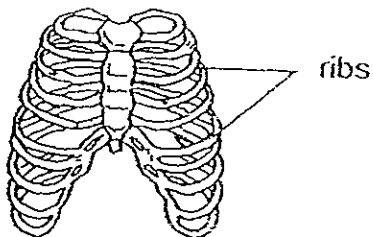
Tree Fern

What are the similarities between the two plants?

- A Both reproduce from seeds.
- B Both can make their own food.
- C Both have leaves, stems and roots
- D Both cannot move freely from place to place.

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

4. Study the diagram shown below.

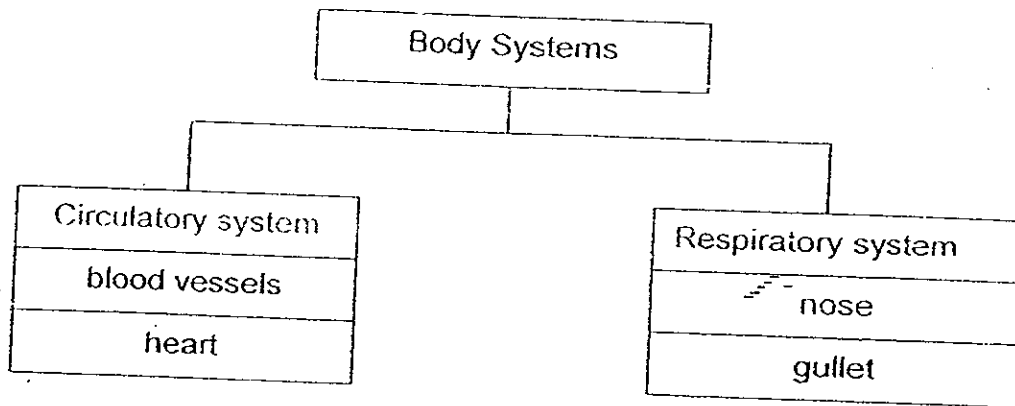


The ribs protect the \_\_\_\_\_.

- A brain
- B heart
- C lungs
- D stomach

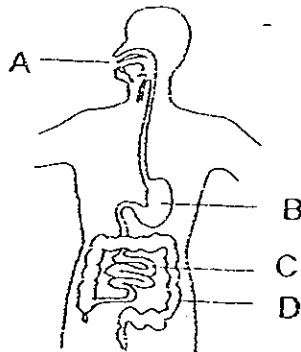
- (1) A and B only
- (2) B and C only
- (3) B, C and D only
- (4) A, B, C and D only

5. The table below shows the parts of two systems in a human body. Which part of the system is classified wrongly?



- (1) nose
- (2) heart
- (3) gullet
- (4) blood vessels

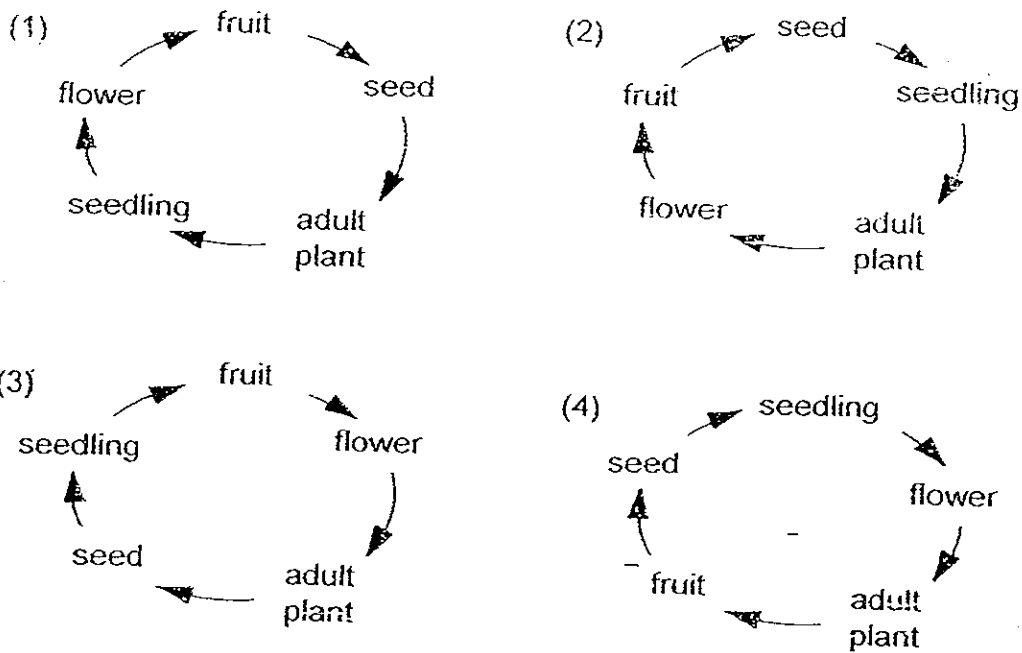
6. Study the path that food takes after it enters the body.



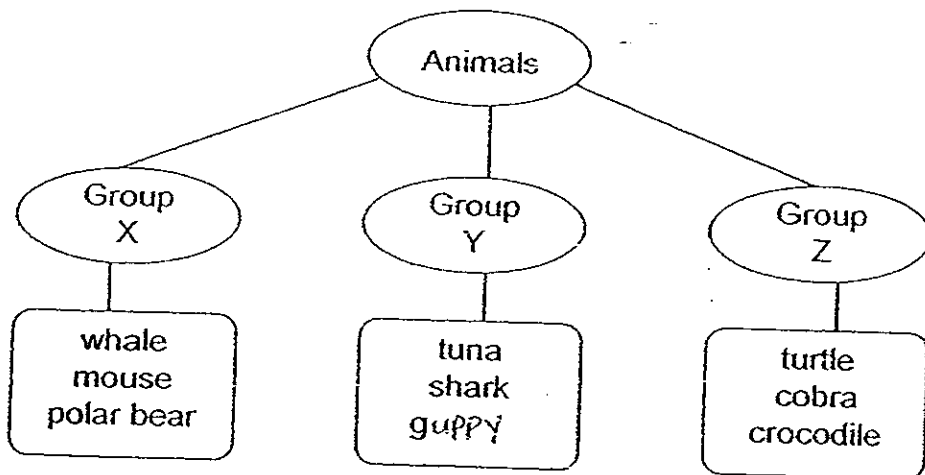
Which one of the above absorbs water from the undigested food?

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

7. Which one of the following shows the correct sequence of the life cycle of a papaya plant?



8. Study the following classification table.



Which of the following statements are correct?

- A There is at least an animal in each group that can swim.
- B Only the animals in Group X give birth to their young alive.
- C The animals are classified according to their animal groups.
- D Animals in Group Y and Z share at least one common characteristic.

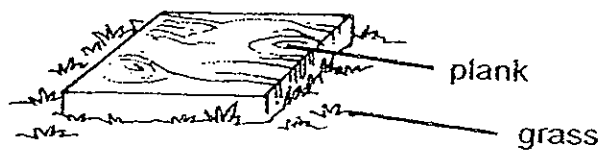
- (1) A, B and D only
- (2) A, B and C only
- (3) A, C and D only
- (4) B, C and D only

9. Four green plants are grown in four similar pots. Each pot of plant is given the same amount of soil. They are put under different conditions as shown in the table below. Which one of the following plants will most likely survive after two weeks?

Plant	Conditions			
	Air	Sunlight	Water	Minerals
A	x	✓	x	✓
B	✓	x	✓	x
C	x	✓	✓	✓
D	✓	✓	✓	x

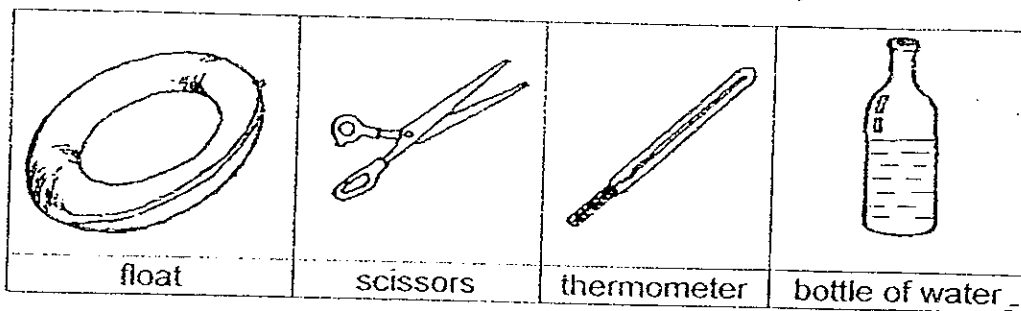
- (1) A  
 (2) B  
 (3) C  
 (4) D

10. A plank had been placed on some grass for a week. When it was lifted, the grass under the plank had turned yellow. This was caused by a lack of \_\_\_\_\_.



- (1) water  
 (2) oxygen  
 (3) sunlight  
 (4) carbon dioxide
11. Which one of the following objects is made from materials that were once alive?
- (1) A glass jar  
 (2) A plastic bag  
 (3) A metal ruler  
 (4) A leather belt
12. Which one of the following is a matter?
- (1) sand  
 (2) shadow  
 (3) thunder  
 (4) lightning

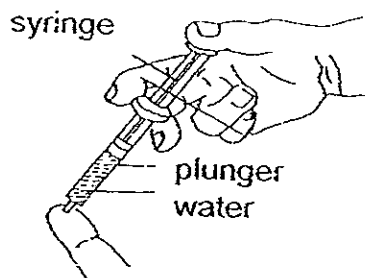
13. Look at the following objects. In what ways are the objects similar?



- A They have mass.
- B They occupy space.
- C They are of the same shape.
- D They are made from the same material.

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

14. A pupil filled a syringe with water. He covered one end of the syringe with his thumb and tried to push the plunger down as shown. However, he found that he could not do so.

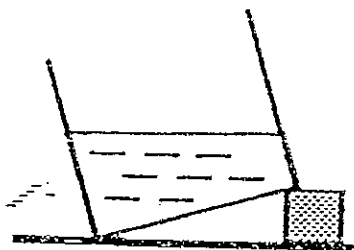


What can he conclude from the experiment?

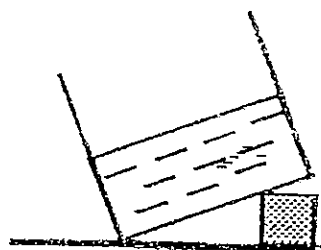
- (1) Water has a definite mass.
- (2) Water has a definite shape.
- (3) Water has a definite volume.
- (4) Water fills any container completely.

15. Which one of the diagrams below shows what is observed when the container is tilted?

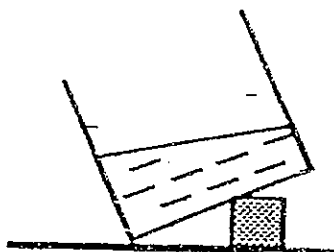
(1)



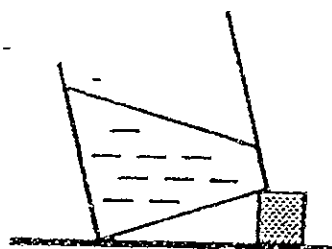
(2)



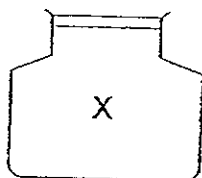
(3)



(4)



16. Don was given a matter. To find out more about the properties of this matter, he put 90g of this unknown matter into container X and another 90g of this matter into container Y. He discovered that the volume of this object was the same in both the containers. What could this object be?

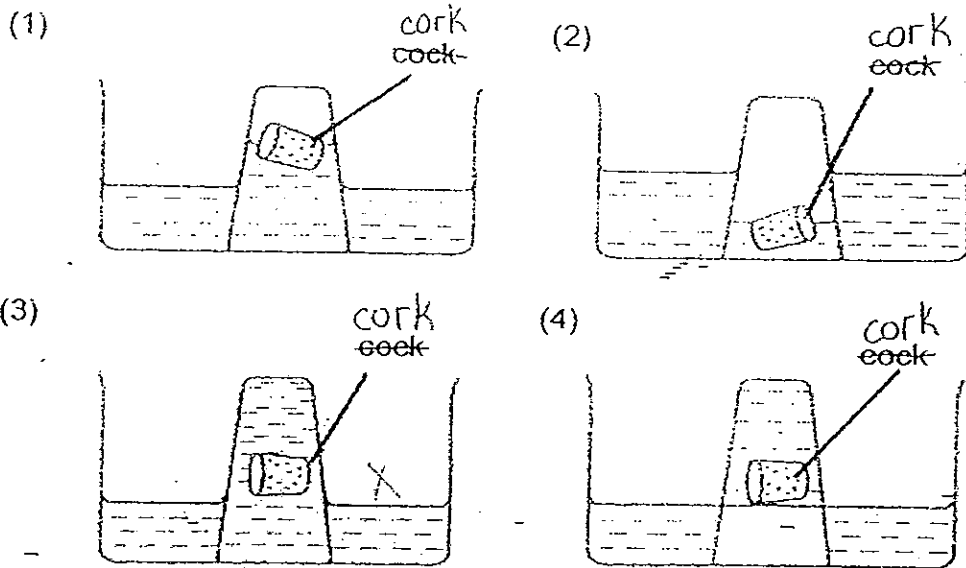


- A This object could be a solid.
- B This object could be a liquid.
- C This object could be a gas.

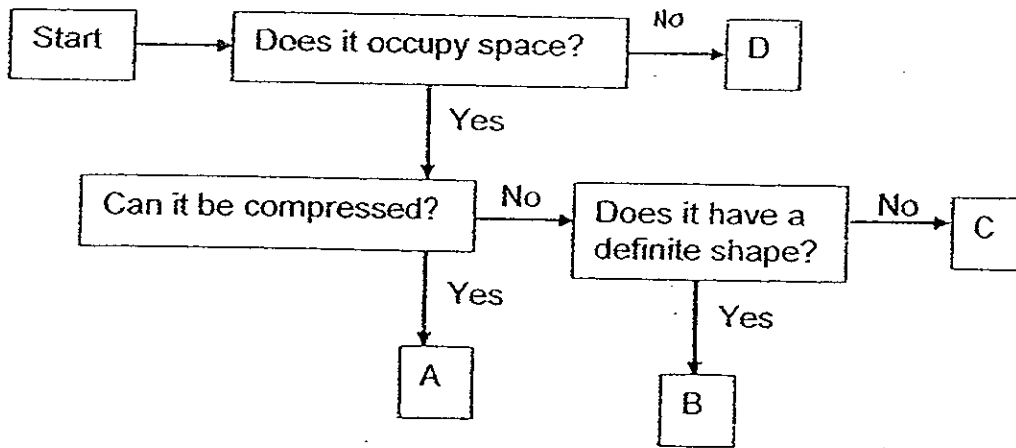
- (1) B only
- (2) C only
- (3) A and B only
- (4) B and C only



17. An empty glass is inverted over a cork floating in a basin of water. Which one of the following diagrams shows the possible observation?



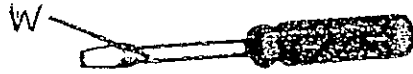
18. Study the flowchart below carefully.



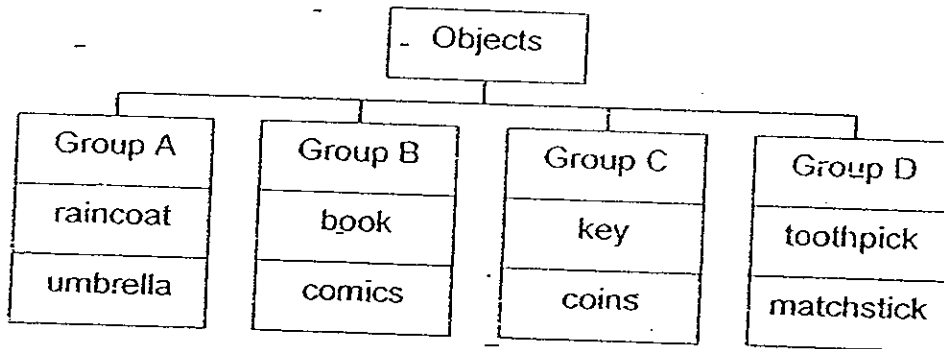
Which letter best describes sand?

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

19. The screwdriver below is made of two materials.  
Which one of the materials is used for making Part W of the screwdriver?



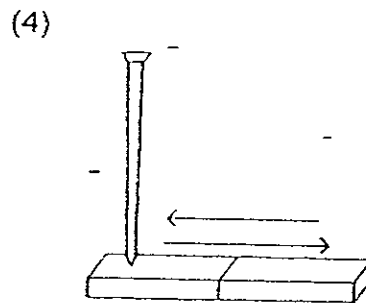
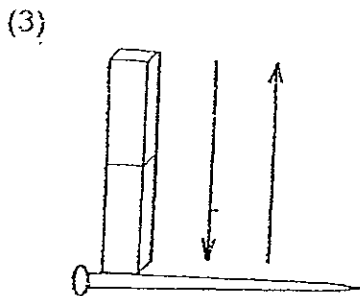
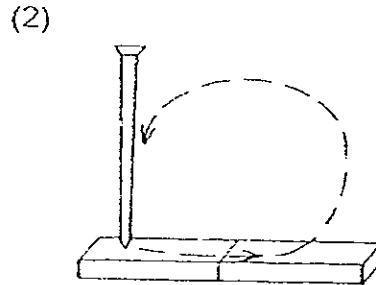
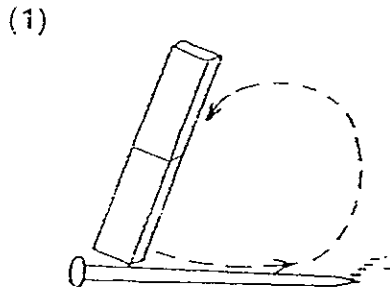
- (1) Glass
  - (2) Metal
  - (3) Plastic
  - (4) Rubber
20. Study the classification table below.



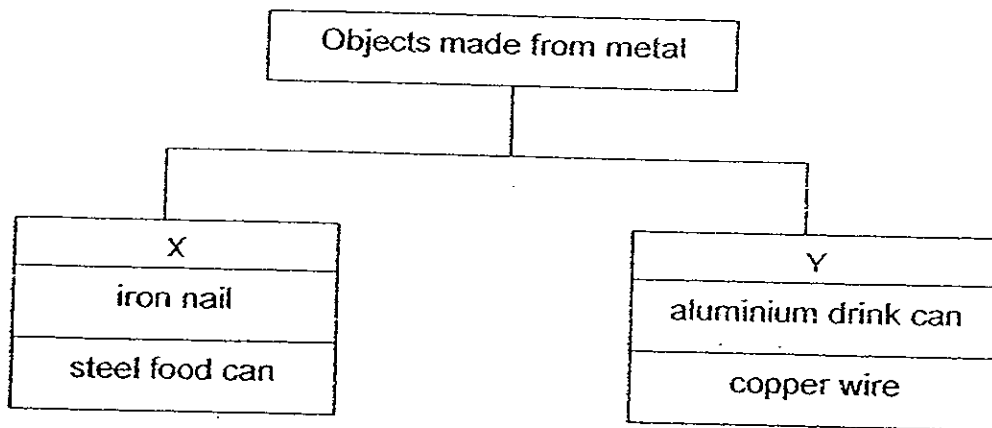
In which group will you put a needle?

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

21. Which one of the following diagrams shows the correct way of making a magnet out of a nail?



22. Look at the classification table below.



Which of the following are the correct headings for X and Y?

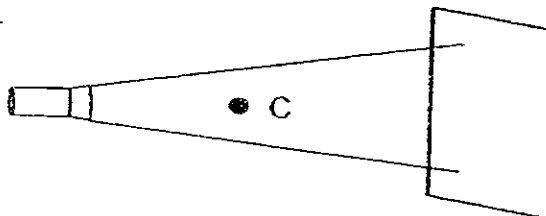
	X	Y
(1)	Objects that sink	Objects that float
(2)	Attracted by magnets	Not attracted by magnets
(3)	Good conductor of heat	Poor conductor of heat
(4)	Allow light to pass through	Does not allow light to pass through

23. A group of boys carried out an experiment to test the strength of different magnets. They recorded their observations in the table below.

Magnets	Maximum distance between the paper clip and magnet for attraction/cm	Number of paper clips attracted
A	6	3
B	5	7
C	10	6
D	10	4

Which one of the magnets is the strongest?

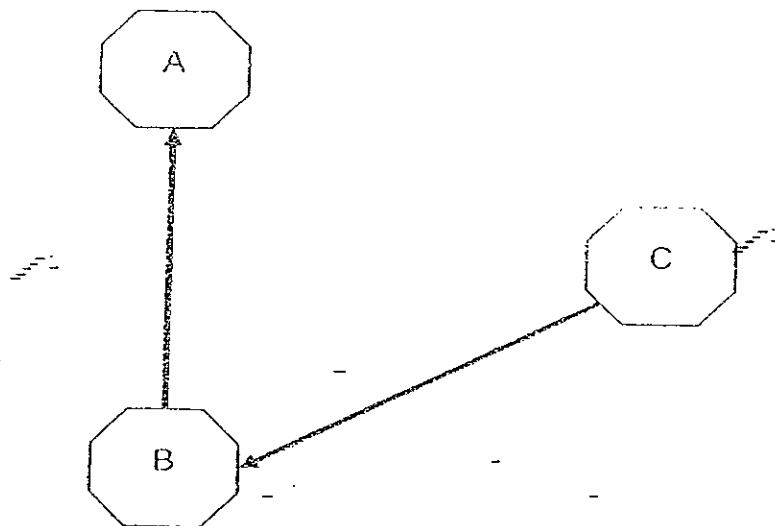
- (1) Magnet A
  - (2) Magnet B
  - (3) Magnet C
  - (4) Magnet D
24. Brian wants to see a dark shadow on the screen. Which one of the following objects must he place at point C?



A	Tennis ball
B	Chalkboard
C	Clear plastic
D	Wooden plank

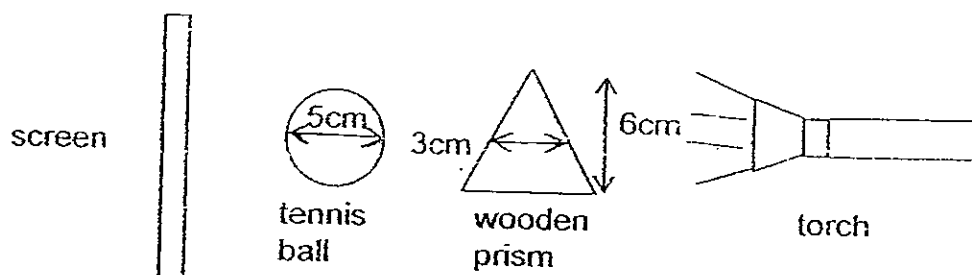
- (1) A and B only
- (2) B and C only
- (3) A, B and D only
- (4) All of the above

25. In the diagram below, the path of light is indicated by the arrows. Choose the option that best fits A, B and C.



	A	B	C
(1)	Eyes	Object	Light source
(2)	Eyes	Light source	Object
(3)	Light source	Eyes	Object
(4)	Object	Light source	Eyes

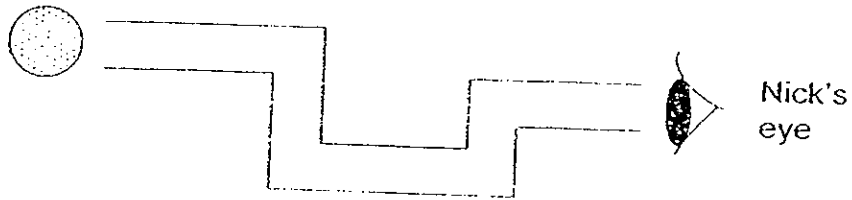
26. A torch is shone on a tennis ball and a wooden prism as shown below.



Which one of the following shows the shadow cast on the screen?

- (1) (2) (3) (4)

27. Nick wants to see the ball. What is the least number of mirrors he needs in order to help him see the ball?

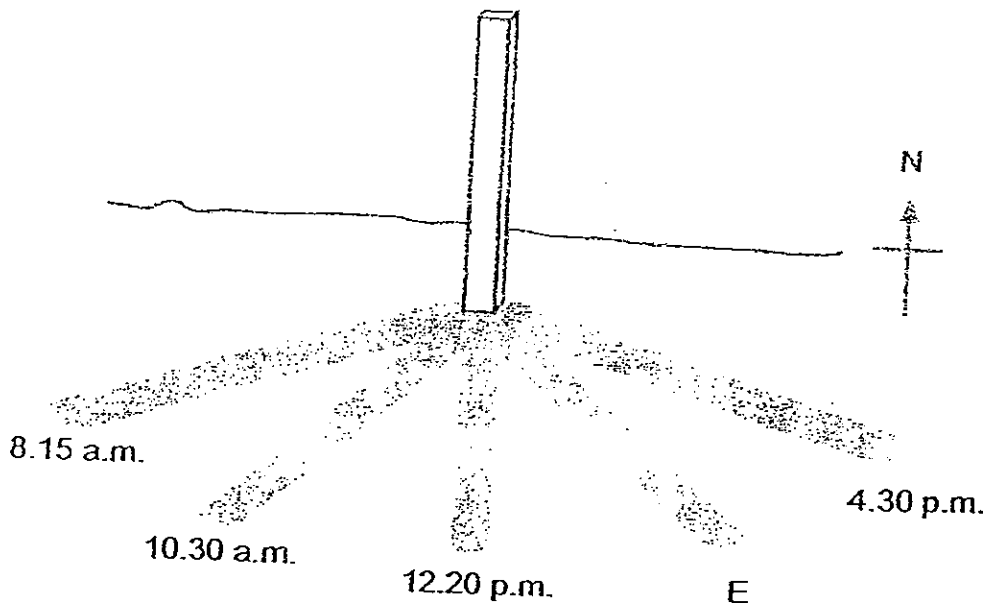


- (1) 1
- (2) 2
- (3) 3
- (4) 4

28. A magnet at rest will always point in a \_\_\_\_\_ direction.

- (1) south-east
- (2) north-north
- (3) east-west
- (4) north-south

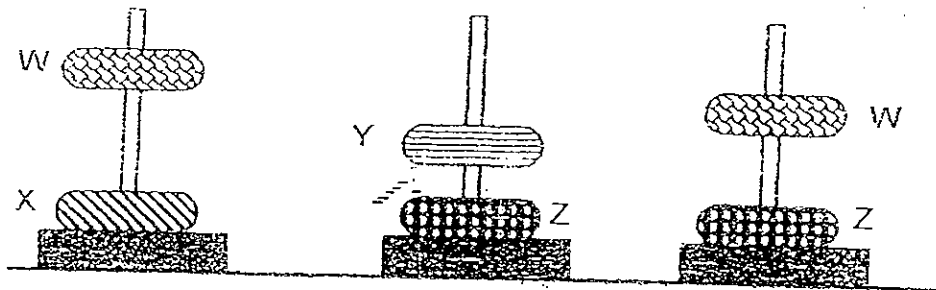
29. The stick below is placed on the ground under the sun. It forms five different shadows at five different timings.



At about what time will shadow E be formed?

- (1) At about 2.30 a.m.
- (2) At about 11.30 a.m.
- (3) At about 2.30 p.m.
- (4) At about 6.30 p.m.

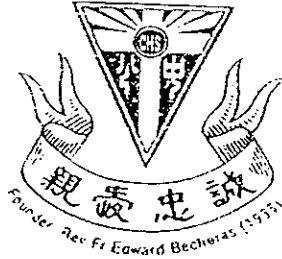
30. The 3 set-ups below show different ring magnets W, X, Y and Z whose like poles are facing each other. All the ring magnets have the same mass.



The following statements are based on the 3 set-ups. Which one of the following statements is most likely to be correct?

- (1) Magnet W is stronger than magnet X.
- (2) Magnet Z is stronger than magnet Y.
- (3) Magnet W is stronger than magnet Y.
- (4) Not possible to tell which magnet is the strongest.

—————End of Section A—————



CATHOLIC HIGH SCHOOL  
PRIMARY 4  
SEMESTRAL ASSESSMENT 1, 2008

SCIENCE

Name: \_\_\_\_\_ ( )

Class : Primary 4 \_\_\_\_\_

Date : 8 May 2008

BOOKLET B

16 Questions  
40 Marks

Total Time for Booklets A & B: 1 hour 30 minutes

Instructions to Candidates

Follow all instructions carefully.  
Answer all questions.

Parent's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

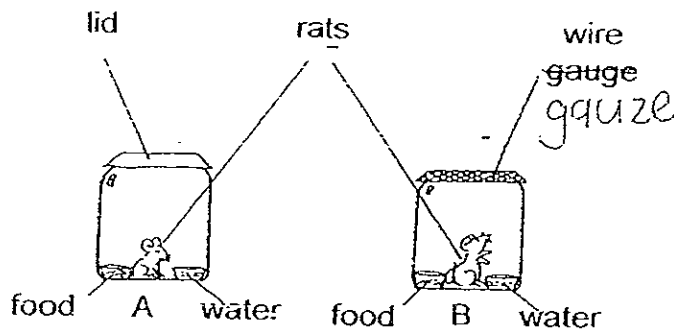
Score	
Section A	60
Section B	40
Total	100



**Section B: Open-Ended Questions (40 marks)**

Read the following questions carefully and write your answers in the space provided. The maximum marks that can be awarded is shown at the end of each question or part-question.

31. Two similar rats are placed in two containers of the same size with food and water. Container A is covered with a lid while container B is covered with wire gauze.



- (a) In which container will the rat die first? [1]

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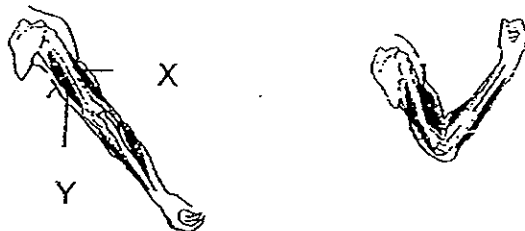
- (b) What does this experiment show? [1]

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32. The diagram below show the muscles found in Mr Jim's arm.

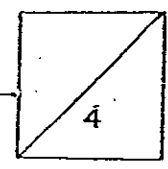


- (a) What is the function of the muscles? [1]

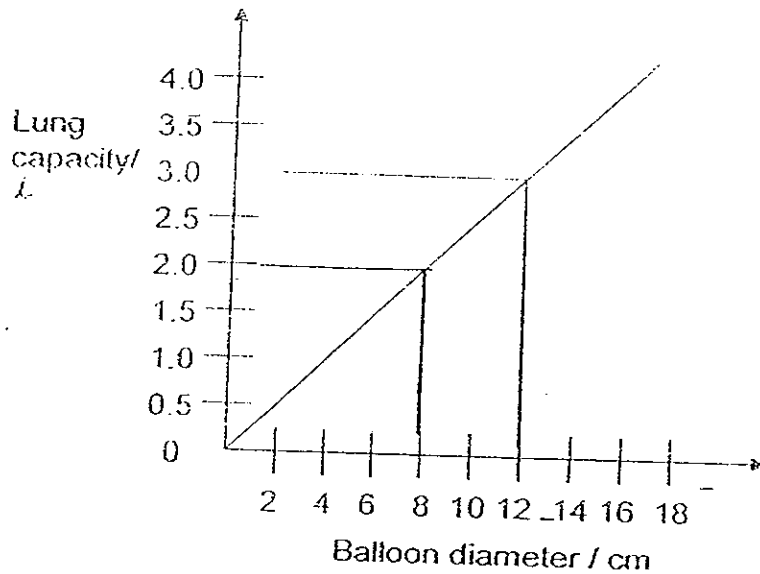
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- (b) What will happen to muscle X and Y when Mr Jim bends his arm? [1]

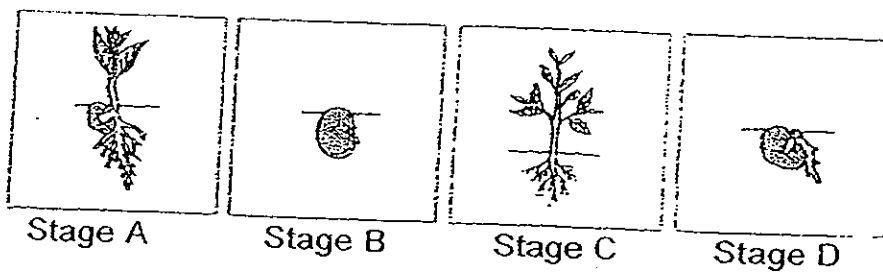
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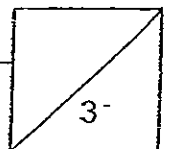
33. Phoebe blew a balloon and used it to measure her lung's capacity. She plotted a graph using the data collected.



- (a) From the graph above, what would her lung capacity be when the balloon's diameter is 8 cm? [1]
- 
- (b) What would the balloon's diameter be when she has a lung capacity of 3 litres? [1]
- 
34. The diagrams (not drawn to scale) below show the different stages of growth of a bean seed. They are not arranged in order.



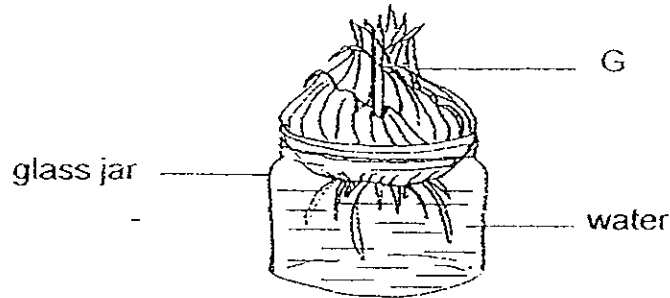
- (a) At which stage(s) of the bean plant, is/are the plant able to make its own food? [1]



- (b) Arrange the stages of growth of a bean seed in the correct order. The first stage has been done for you. [1]

Stage  B  → Stage \_\_\_\_\_ → Stage \_\_\_\_\_ → Stage \_\_\_\_\_

35. The diagram below shows an onion.



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

\_\_\_\_\_

- (b) What will the part 'G' develop into? [1]

\_\_\_\_\_

36. The diagram below shows a water hyacinth plant.



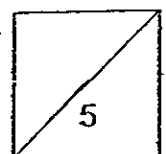
- (a) Name one important function of the part labelled 'P'. [1]

\_\_\_\_\_

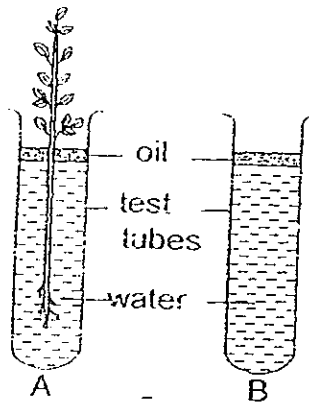
- (b) Complete the sentence below with suitable words. [1]

The part labelled 'P' of the above plant does not perform ..

the function of \_\_\_\_\_



37. The roots of a balsam plant are washed and then immersed in test tube A containing water. A similar test tube B is set up without a balsam plant. The same amount of water and oil were used for both the test tubes. The two test tubes were then placed side by side in a test tube rack.



- (a) What is the most likely observation on test tubes A and B after a few days? [2]

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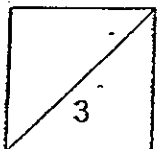
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- (b) Explain your answer in (a). [1]

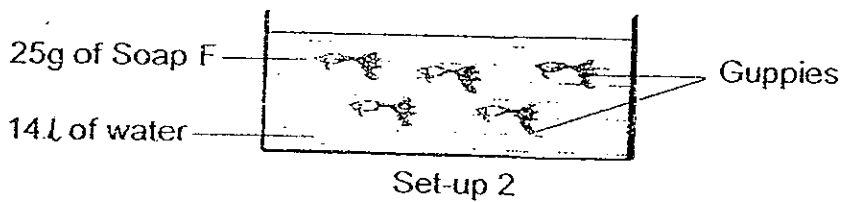
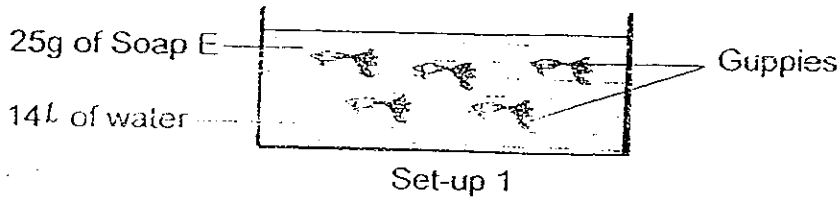
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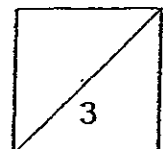
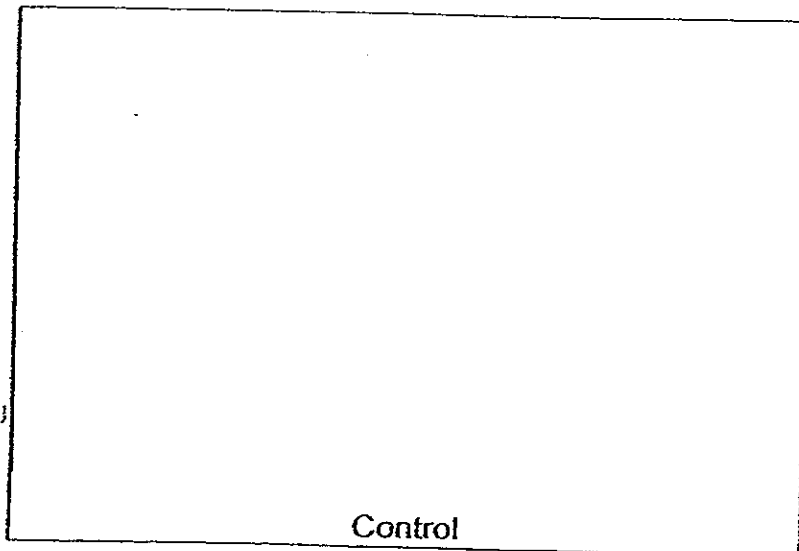
38. Lawrence wanted to find out the effect Soap E and Soap F had on guppies. He prepared 3 set-ups and put them at the same place. He observed the guppies for a week. The pictures below shows two of the set-ups.



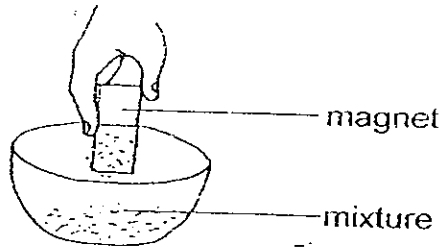
- (a) Which variable(s) should Lawrence keep the same to ensure that he has carried out a fair test? Tick [✓] the appropriate columns in the table below. [1]

Variable	Kept the same
Type of soap	
Amount of food	
Amount of water	
Number of guppies	

- (b) In the space provided below, draw and label what the control should be for this experiment. [2]



39. Ahmad pours a mixture of sawdust, glass powder, sand and iron fillings into a bowl below.



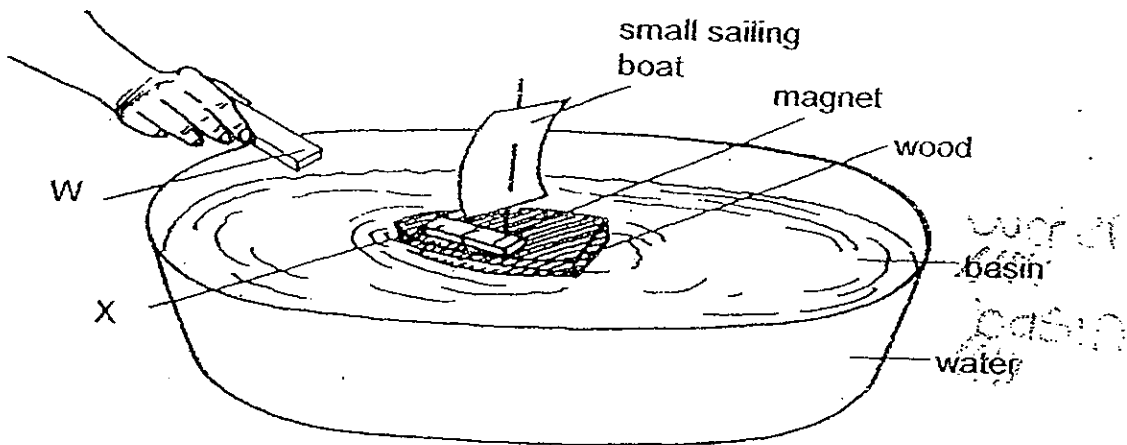
- (a) Ahmad dips the magnet into the bowl. Which material(s) will he be able to remove from the bowl? [1]

\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_

40. Miss Goh conducted an experiment as shown below. She put W near X and discovered that the small sailing boat was pushed away.



- (a) What could object W be? [1]

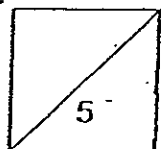
\_\_\_\_\_

- (b) Why did the small sailing boat get pushed away? [1]

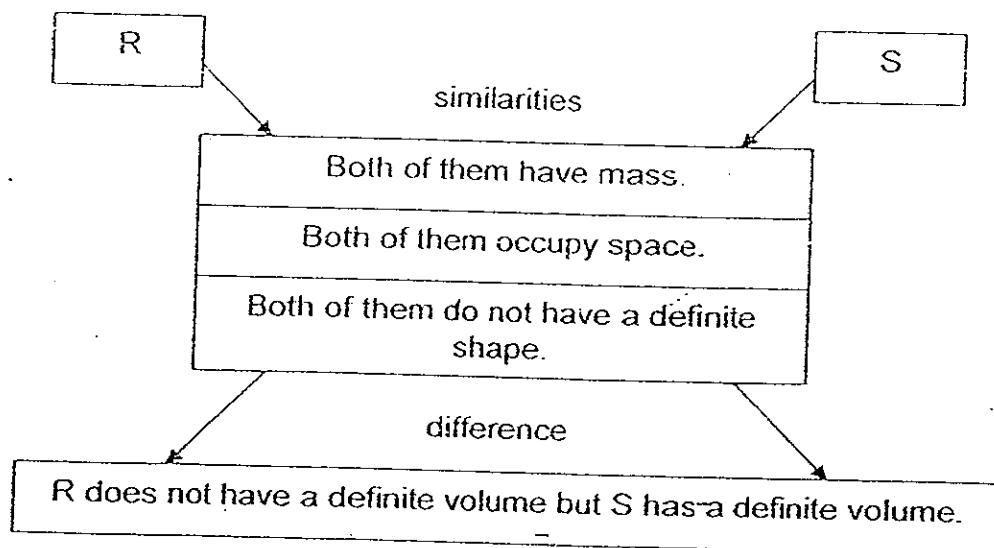
\_\_\_\_\_

- (c) What can you say about W and X? [1]

\_\_\_\_\_



41. The graphic organiser below shows the similarities and difference between R and S.



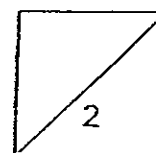
Study the graphic organiser carefully. What can you conclude about R and S?

[2]

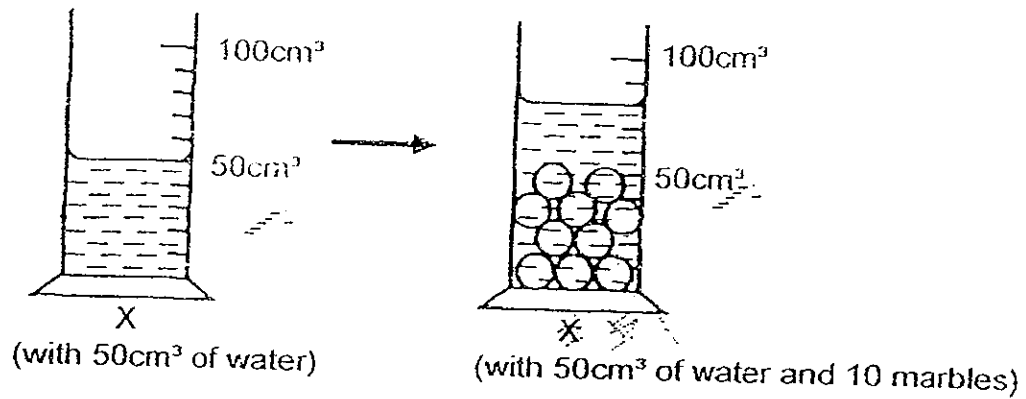
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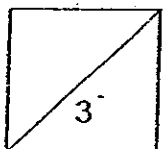
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42. Jasmine poured  $50\text{cm}^3$  of water into cylinder X. 10 marbles were put into cylinder X.



- (a) What is the volume of the marbles and water? [1]  
 \_\_\_\_\_
- (b) What is the volume of a marble? [1]  
 \_\_\_\_\_
- (c) If there were only 5 marbles in cylinder Y, where will the water level be? [1]  
 \_\_\_\_\_





43. Timothy has three substances A, B and C. He wants to classify them into the 3 states of matter. He puts the substances to four tests and records his results in the table below. A tick (✓) indicates that the substance shows a positive result to the test.

	Test	A	B	C
1.	Does this substance have mass?	✓	✓	✓
2.	Does this substance have a volume?	✓	✓	✓
3.	Can this substance flow easily?	✓	✓	x
4.	Can this substance be compressed?	x	✓	x

- (a) What do you think substance B is? [1]

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

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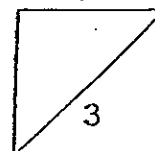
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- (c) List one similarity between substance B and C. [1]

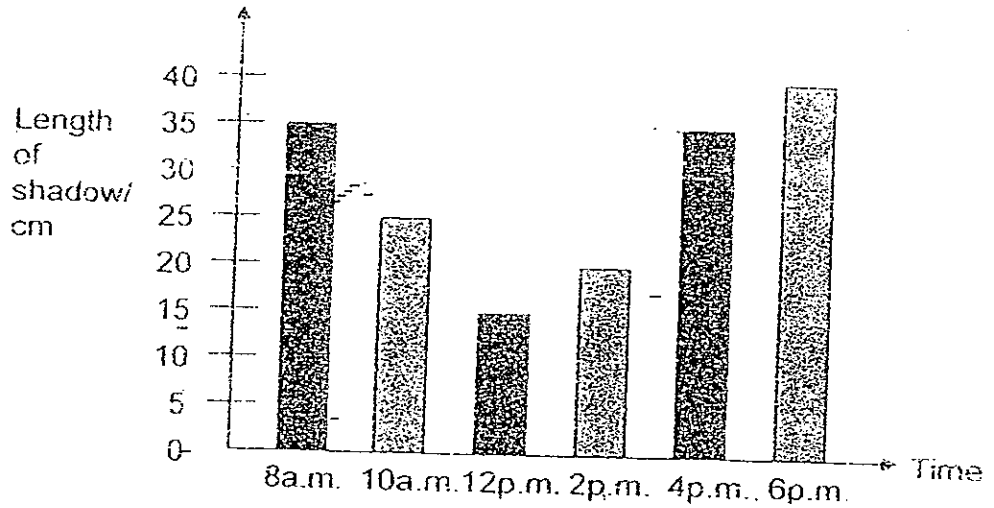
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- 44 Lilian recorded the length of the shadow cast by a rod. The graph below shows the length of the shadow at different times of a day.



- (a) What is the length of the shadow at 4p.m.? [1]

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- (b) What can you say about the length of the shadow at 12p.m.? [1]

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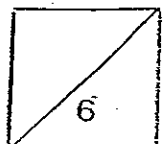
- (c) Give a reason for your answer in (b). [1]

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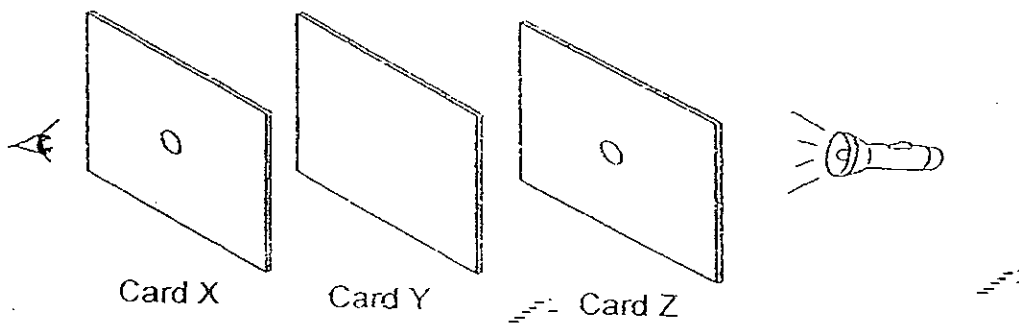
45. Classify the following objects under the correct headings. [3]

plywood      tissue paper      spectacle lens  
 mirror      frosted glass      tracing paper

Types of objects		
Opaque	Transparent	Translucent



46. A boy set up the experiment as shown below using 3 opaque materials.



(a) Based on the experiment above, why is he unable to see the light source? [1]

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(b) Apart from making a hole in Card Y, what change can he make to Card Y so that he can see the light source? [1]

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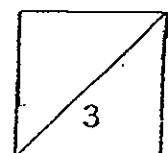
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(c) What can he conclude from the experiment? [1]

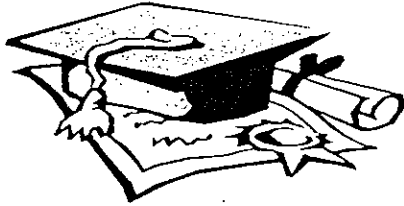
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# ANSWER SHEET

EXAM PAPER 2008

SCHOOL : CATHOLIC HIGH PRIMARY SCHOOL  
SUBJECT : PRIMARY 4 SCIENCE

TERM : SA 1

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

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

- 31)a)The rat in container A will die first.  
b)The experiment shows that living things need air to survive.

- 32)a)The muscular system works together with the skeletal system to enable us to move.  
b)Muscle X contracts while Muscle Y relaxes.

- 33)a)Her lung capacity will be 2.0/  
b)The balloon's diameter will be 12cm.

- 34)a)Stage A&C.  
b)B→D→A→C

- 35)a)Bulb  
b)Young plant.

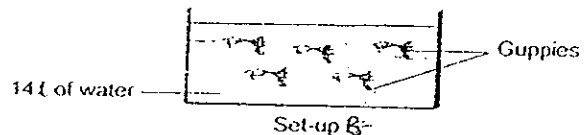
- 36)a)It takes in water and minerals.  
b)respiration.

37)a)The water level in A decreased while the water in B remains the same.

b)The roots of the plant adsorbed water in A but the layer of oil on top of the water in B. Therefore, the water level in B remains the same.

- 38)a)Amount of food  
Amount of water  
Number of guppies

b)



39)a)The iron fillings.

b)The iron fillings are made of magnetic materials and will be attracted to the magnet but sawdust, glass powder and sand are not magnetic materials.

40)a)A magnet

- b)The magnetic force from W push the small sailing.  
c)W and X are like poles.

41) R is a gas but S is a liquid.

42)a)The volume is  $80\text{cm}^3$ .

- b)The volume of a marble is  $3\text{cm}^3$ .  
c)The water level will be  $65\text{cm}^3$ .

43)a)Substance B is a gas.

- b)Gas can be compressed and it can flow easily and it has mass and volume.  
c)Both have mass and volume.

44)a)The length shadow is of the 35cm.

b)The shadow is the shortest.

c)The sun is directly above the rod.

45)

Types of objects

Opaque

Mirror

Plywood

Transparent

spectacle lens

Translucent

tracing paper

tissue paper

frosted glass

46)a)Card Y does not have a hole.

b)Change card Y into a transparent material.

c)He can conclude that opaque material does not allow light to pass through.

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