



## AI TONG SCHOOL

### 2008 SEMESTRAL ASSESSMENT (2) PRIMARY FOUR SCIENCE

**DURATION : 1hr 45 min**

**DATE: 29 October 2008**

#### INSTRUCTIONS

**Do not open the booklet until you are told to do so.**

**Follow all instructions.**

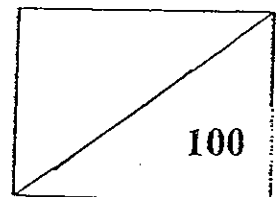
**Answer all questions.**

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

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

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

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



Section A (30 x 2 marks)

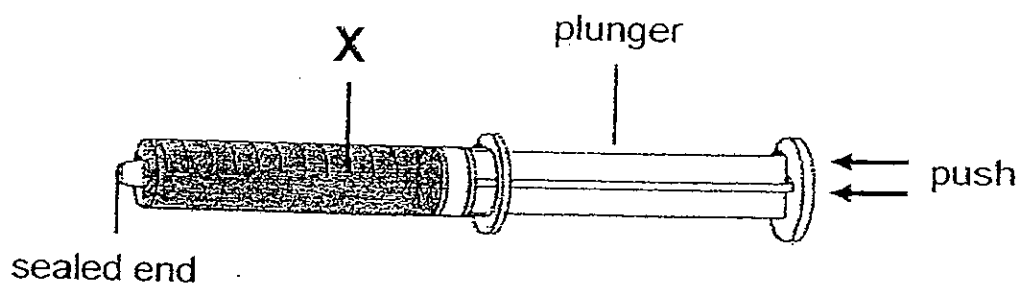
For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which of the following items is not matter?



- (1) Net
- (2) Boy
- (3) Butterfly
- (4) Shadow

2. The syringe in the diagram below is filled with substance X. Lishan tried to push the plunger into the syringe but she could not do so.



What could substance X be?

- (1) Air
- (2) Cotton
- (3) Sponge
- (4) Sea water

3. The table below shows how some matter have been classified.

Group A	Group B	Group C	Group D
Stone	Soya sauce	Wind	Plasticine
Ice	Vinegar	Oxygen	Clay

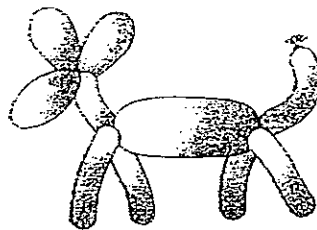


'Y' has a definite volume but it does not have a definite shape.

In which group should Daming place 'Y'?

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

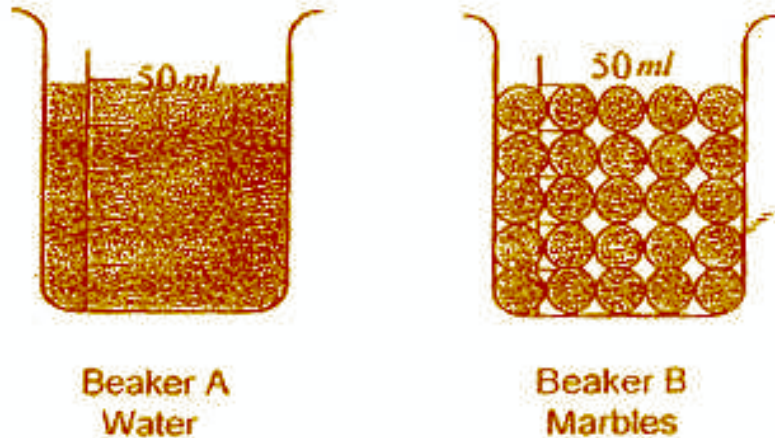
4. Ridwaan was at a funfair. He noticed a man twisting balloons to form different animal shapes.



Which property of air enabled the man to make such 'balloon animals'?

- (1) Air has mass.
- (2) Air occupies space.
- (3) Air has no colour.
- (4) Air has no definite shape.

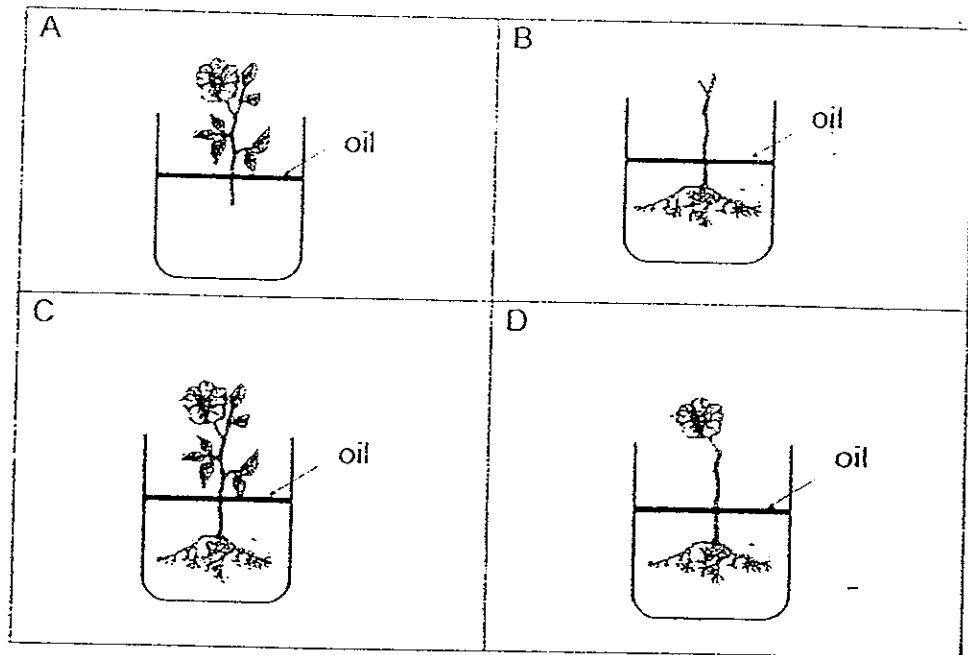
5. Mr Ong filled beaker A with water and beaker B with marbles as shown in the diagram below. Next, he transferred all the water and marbles into beaker C which has a capacity of 150 ml.



The volume occupied by the water and marbles in beaker C is likely to be

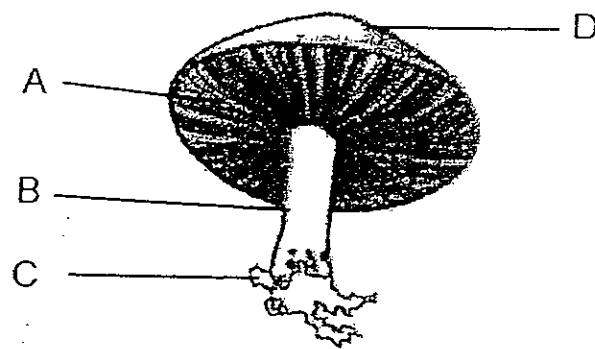
- \_\_\_\_\_
- (1) 100 ml  
(2) more than 100 ml  
(3) between 50 ml and 100 ml  
(4) between 100 ml and 150 ml
6. Amanda took her lunch an hour ago. What was the path taken by the food after she had swallowed it?
- (1) windpipe → stomach → small intestine → large intestine  
(2) windpipe → stomach → large intestine → small intestine  
(3) gullet → stomach → small intestine → large intestine  
(4) gullet → stomach → large intestine → small intestine
7. Susan was blindfolded and asked to identify an object. Which of the following is a possible statement made by her?
- (1) It is hard and shiny.  
(2) It is sweet but has no smell.  
(3) It is yellow with round edges.  
(4) It is thin and has a picture at the side.

8. Which one of the following beakers will have the lowest water level after 1 week?



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

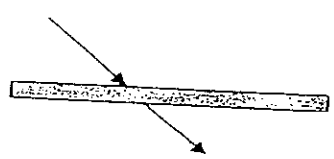
9. In which part of the mushroom, A, B, C or D are spores found?



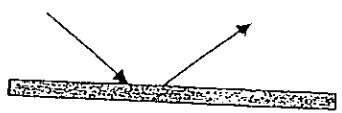
- (1) A
- (2) B
- (3) C
- (4) D

10. A boy shone a torch at a mirror. Which one of the following diagrams correctly shows how light travels to the mirror and is reflected?

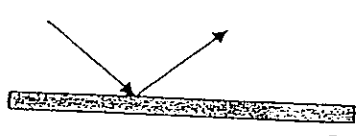
(1)



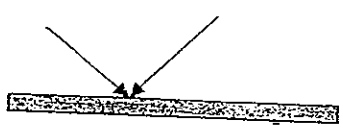
(2)



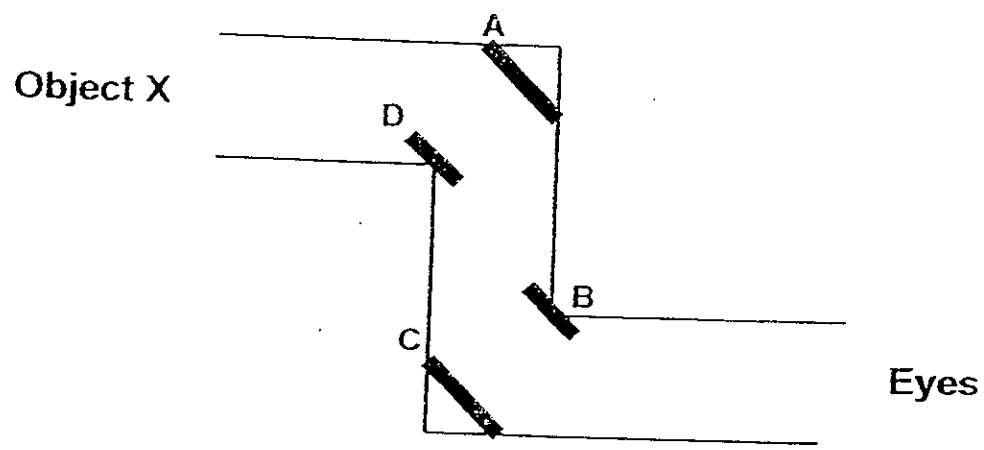
(3)



(4)



11. Ahmad wanted to construct a periscope for his science experiment. Where should he place the two mirrors?

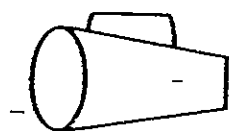
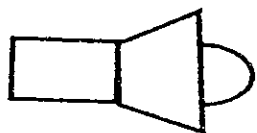


- (1) A and D
- (2) B and C
- (3) A and C
- (4) C and D

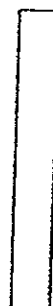
12. Which one of the following objects will cast the darkest shadow when a torchlight is shone on it?

- (1) textbook
- (2) tracing paper
- (3) frosted window pane
- (4) mineral water

13. Susan shone a torch at Object Z in the direction as shown.



Object Z



Which one of the following shadows was formed on the screen?

(1)



(2)



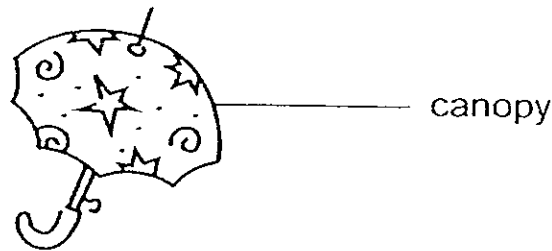
(3)



(4)



14. Mei Mei was given three types of materials to make the canopy of an umbrella.



She carried out an investigation with a data logger to find out the amount of light that passed through each material. Which of the following variables should be kept the same in order to carry out a fair test.

- A The type of material.
- B The kind of torch light.
- C The distance between the torch and the material.
- D The place of the investigation.

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

15. Study the table below.

Group A	Group B
Aluminium Iron	Rubber Wood

Which one of the following provides the best title for each group?

(1)	Matter	Non-matter
(2)	Solid	Liquid
(3)	Has a definite shape	Has no definite shape
(4)	Good conductor of heat	Poor conductor of heat



16. Which of the following statements about light are true?

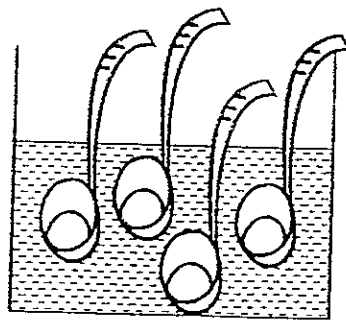
- A Light is matter.
- B Light travels in a straight line.
- C We can see an apple because it is reflected from our eyes.
- D Shadows are formed when light is blocked by an object.

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

17. Which one of the following things provides us with heat and light energy?

- (1) fire
- (2) moon
- (3) hot coffee
- (4) boiling water

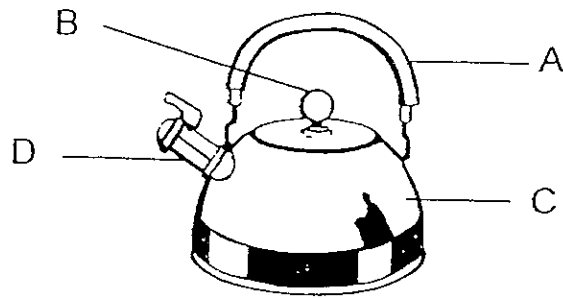
18. Miss Lin placed 4 different spoons in a cup of hot milo.



Which spoon feels the least hot after 5 minutes?

- (1) steel spoon
- (2) copper spoon
- (3) silver spoon
- (4) plastic spoon

19. The diagram below shows a picture of a kettle.

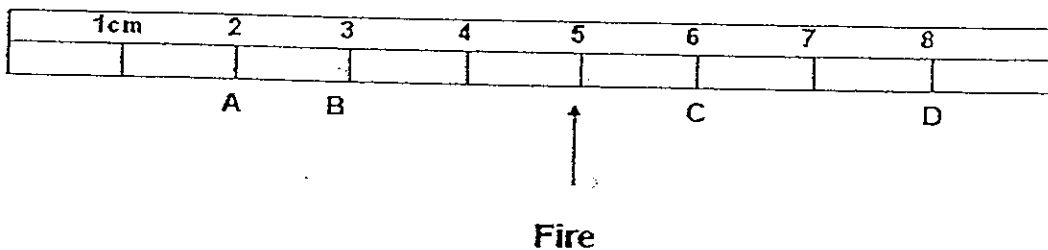


Which parts should be poor conductors of heat?

- (1) A and B
  - (2) C and D
  - (3) A, B and C
  - (4) B, C and D
20. Which one of the following conditions is false for an object to cast a shadow on a wall?

- (1) Light source must be present.
- (2) The object must be opaque.
- (3) The light source must be between the object and the wall.
- (4) The object must be between the light source and the wall.

21. Mei Mei stuck 4 pins on her metal ruler with some wax. She placed a fire at the 5cm mark of the ruler.



Which one of the following pins will be the first to drop from the ruler?

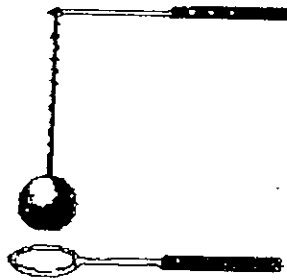
- (1) Pin A
- (2) Pin B
- (3) Pin C
- (4) Pin D

22. Which of the following gives out natural light?

- A Star
- B Sun
- C Moon
- D Earth

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

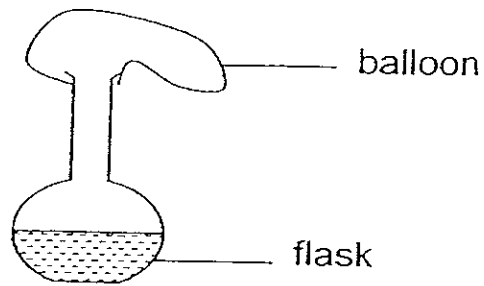
23. Johan was given a ball and ring apparatus as shown below. He was not able to put the metal ball through the ring.



What should he do to enable him to put the metal ball through the ring?  
He should \_\_\_\_\_

- (1) heat the ball
- (2) heat the ring
- (3) heat both the ring and metal ball
- (4) cool both the ring and the metal ball

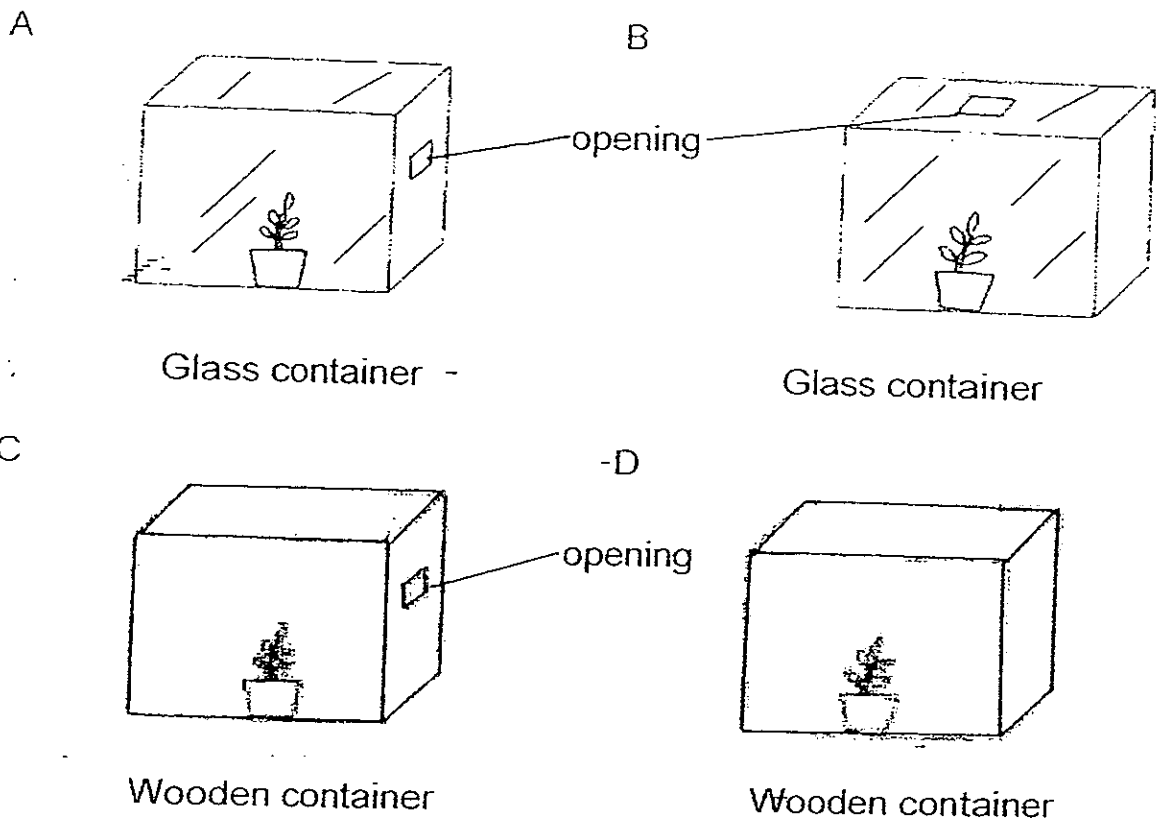
24. Mrs Tan set up the experiment as shown below. She filled a conical flask with tap water. She then placed it over a fire.



Why did the balloon inflate?

- (1) The air in the flask expanded and it occupies more space.
- (2) The air in the flask contracted and it occupies more space.
- (3) The container became bigger so it caused the balloon to inflate.
- (4) The tap water in the flask expanded and inflated the balloon.

25. Which one of the following set-ups can be used to demonstrate that plants move towards light?



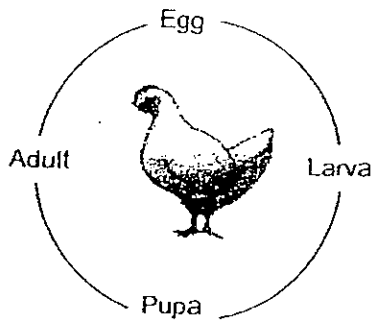
- (1) A
- (2) B
- (3) C
- (4) D

26. When John has the flu and his nose is blocked, he also loses his appetite for food. This is because his sense of \_\_\_\_\_ has affected his sense of \_\_\_\_\_.

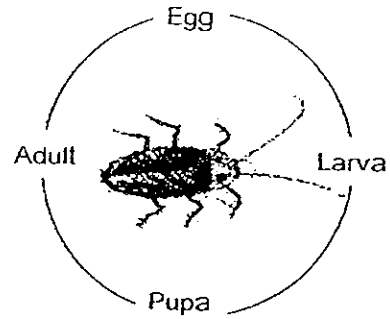
- (1) smell, taste
- (2) taste, sight
- (3) smell, sight
- (4) sight, touch

27. Which one of the following diagrams shows the correct life cycle of the animal ?

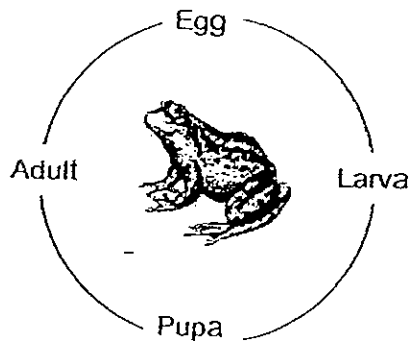
A



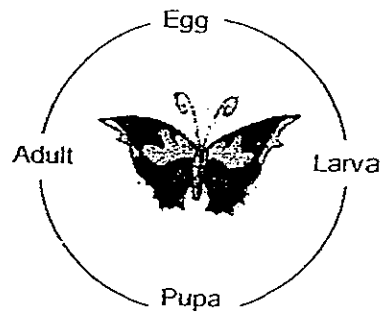
B



C

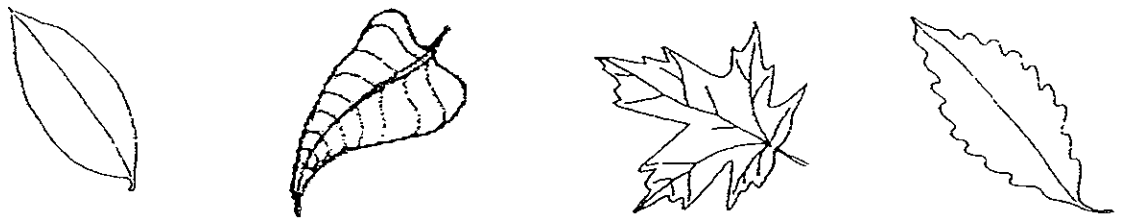


D



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

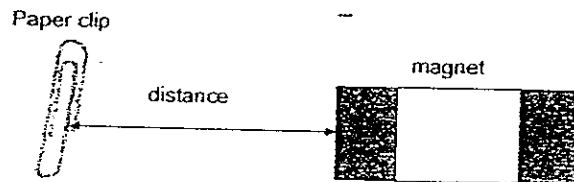
28. A pupil collected 4 pieces of leaves of the same colour. He was told to classify the leaves by putting 2 leaves in each group.



He could classify the leaves according to their \_\_\_\_\_.

- (1) colours
- (2) shapes
- (3) edges
- (4) sizes

29. Hwee Choo carried out an experiment with 3 bar magnets, P, Q and R. She moved each magnet towards a paper clip and recorded the results in a table shown below.



Results

Magnets	Can the magnet attract the paper clip at this distance?			
	1 cm	2 cm	3 cm	4 cm
P	Yes	Yes	Yes	Yes
Q	Yes	Yes	No	No
R	Yes	No	No	No

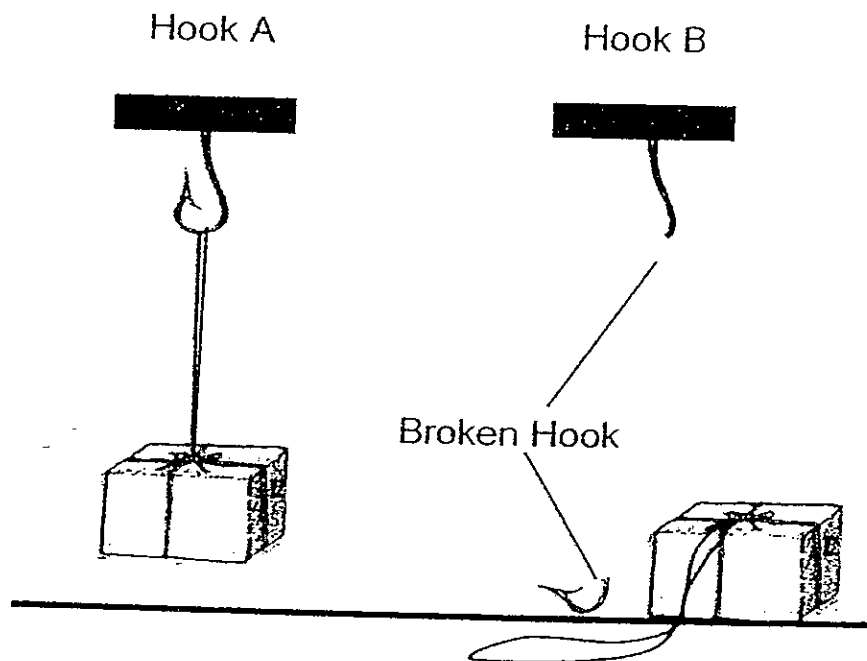
What was she trying to find out from her experiment?

- (1) The strength of magnets P, Q and R.
- (2) The poles of magnets P, Q and R.
- (3) The number of paper clips the magnets can attract.
- (4) The material the paper clips are made of.

30. Two hooks A and B made from different materials were secured to the ceiling.



Two boxes of the same mass were hung onto the hooks. The results were shown below.



From this experiment, we can conclude that \_\_\_\_\_

- (1) Hook A is lighter than Hook B
- (2) Hook A is stronger than Hook B
- (3) Hook A is more fragile than Hook B
- (4) Hook A is more flexible than Hook B



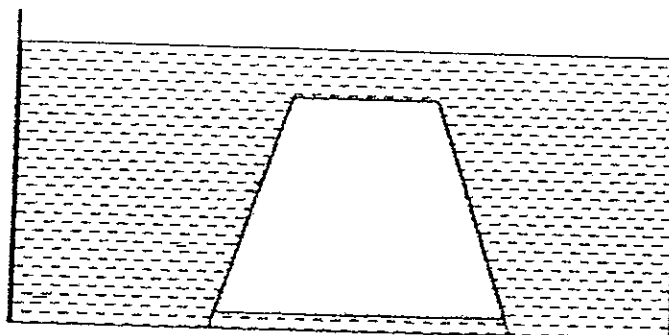
Primary 4 Science SA2 (2008)

Name: \_\_\_\_\_ ( )  
Class P4 ( )

Section B (40 marks)

For question 31 to 45, read the questions carefully and write your answers in the spaces provided.

31. When an empty styrofoam cup is inverted into a basin of water, some water enters the styrofoam cup as shown in the diagram below.



- (a) Explain why some water can enter the styrofoam cup.

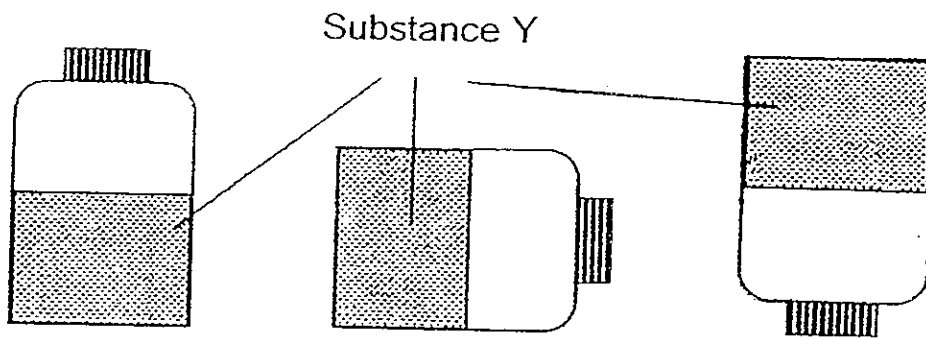
\_\_\_\_\_ [1]

- (b) Without removing the styrofoam cup from the basin, explain how you can fill the styrofoam cup completely with water.

\_\_\_\_\_ [1]

\_\_\_\_\_

32. Jimmy was given a bottle containing Substance Y. He turned the bottle in different directions and observed the behaviour of Substance Y as shown in the diagram below.



Based only on the observations of the above diagrams, decide which of the following statements are "True", "False" or "Not possible to tell" by putting a tick (✓) in the appropriate boxes.

		True	False	Not possible to tell
(a)	Y is a gas.			
(b)	Y is a liquid.			
(c)	Y has a definite shape.			
(d)	Y has a greater mass than the bottle.			

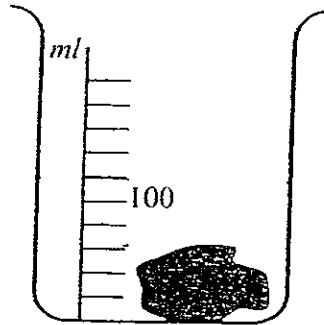
[2]

33. Faith wanted to investigate whether the volume of plasticine changes when its shape changes.

She filled a beaker with 100 ml of water. Then she lowered a lump of plasticine which measured  $20 \text{ cm}^3$  into the water.

- (a) Draw the new water level in the diagram below.

[1]



- (b) Faith took out the plasticine. She rolled it into a ball and lowered it into the beaker of water again.

What will happen to the water level in the beaker?

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[1]

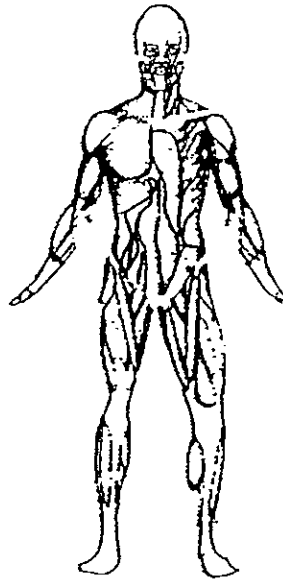
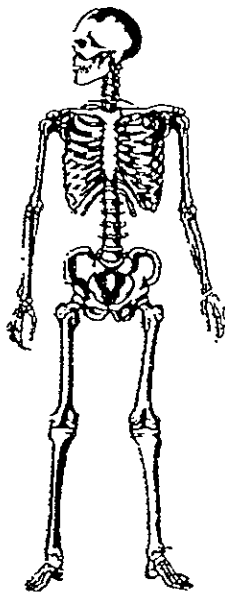
- (c) Explain your answer in (b).

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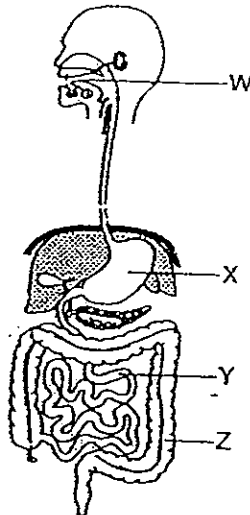
[1]

34. (a) Name the systems shown below.



(i) \_\_\_\_\_ (ii) \_\_\_\_\_ [2]

(b) The diagram below shows the human digestive system.

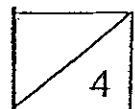


(i) Most of the food is digested in the organ labeled \_\_\_\_\_ [1]




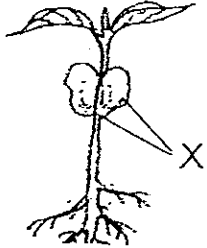
(ii) What happens to the digested food in organ Y?

\_\_\_\_\_

[1]



35. Simon measured the mass of one bean seed, put it in a pot of soil and placed it near the window. He measured the mass of the seedlings at intervals and recorded the data as shown below.

Stages		Total Mass
A		2g
B		5g
C		12g
D		18g

- (a) Why was there an increase in the total mass from stage A to stage B?

[1]

- (b) Name the part X.

[1]

- (c) If Simon removed part X, will the plant continue to grow? Explain.

[1]

36. Bala put an apple in front of the wall of his classroom. He shone a torch on the apple to create shadows of different sizes on the wall.



List 2 ways how he can create a smaller shadow on the wall.

(a) \_\_\_\_\_

(b) \_\_\_\_\_

[2]

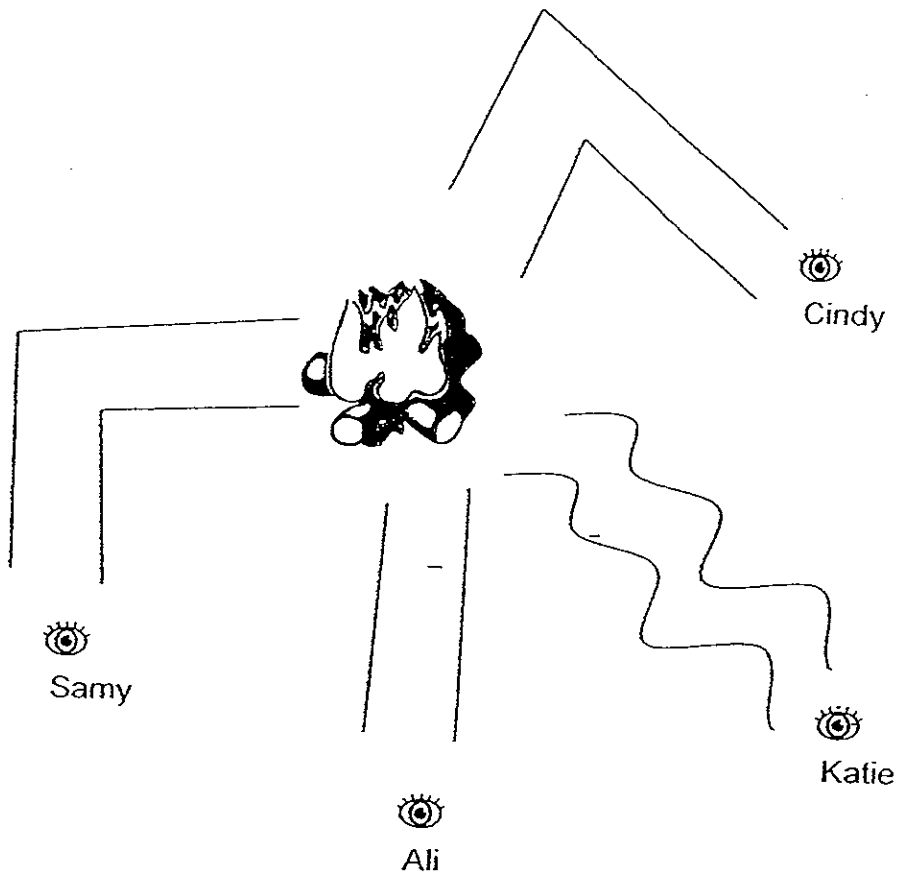
37. Lily is given the following objects. Classify the objects according to the amount of light which can pass through them.

aluminium foil	tissue paper	mineral water
clear glass	tracing paper	white board

Opaque	Translucent	Transparent

[3]

38. Four students tried to look at the fire through different tubes. However, not all of them were able to do so.



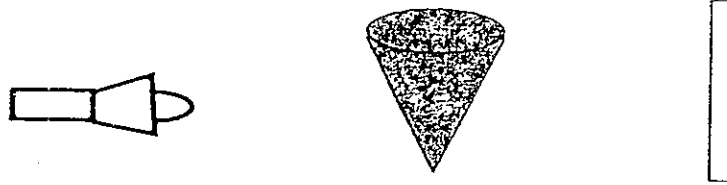
- (a) Which pupil can see the fire?

\_\_\_\_\_ [1]

- (b) What can you conclude about this experiment?

\_\_\_\_\_ [1]

39. John was given a cone, a torchlight and a screen as shown below. Draw in the box below the shadows that he can possibly produce.



(a)

Shadow 1	Shadow 2

[2]

(b) What materials can the cone be made of if it could produce a dark shadow?  
List 2 materials.

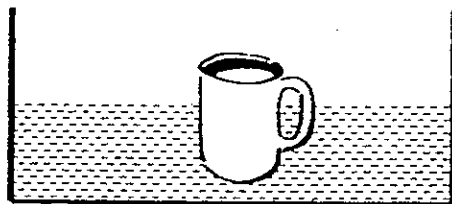
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[2]

40. Grandpa Lee wanted to drink his milk. He realized that the milk was cold. He put the mug of cold milk in a container of hot water.



(a) What will happen to the temperature of the milk and water?  
The temperature of milk \_\_\_\_\_

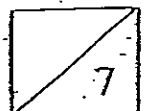
The temperature of water \_\_\_\_\_

[2]

(b) Explain your answer in (a).

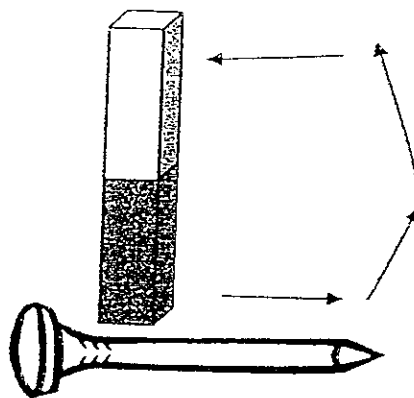
[1]

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41. A pupil was given an iron nail and a bar magnet. He stroked the nail in the same direction 20 times with the bar magnet.



(a) What will happen to the iron nail?

\_\_\_\_\_

[1]

(b) How can the pupil find out if his experiment is successful?

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

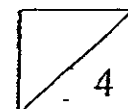
[1]

42. 4 different objects were given to Amy. Classify them by putting them in the table.

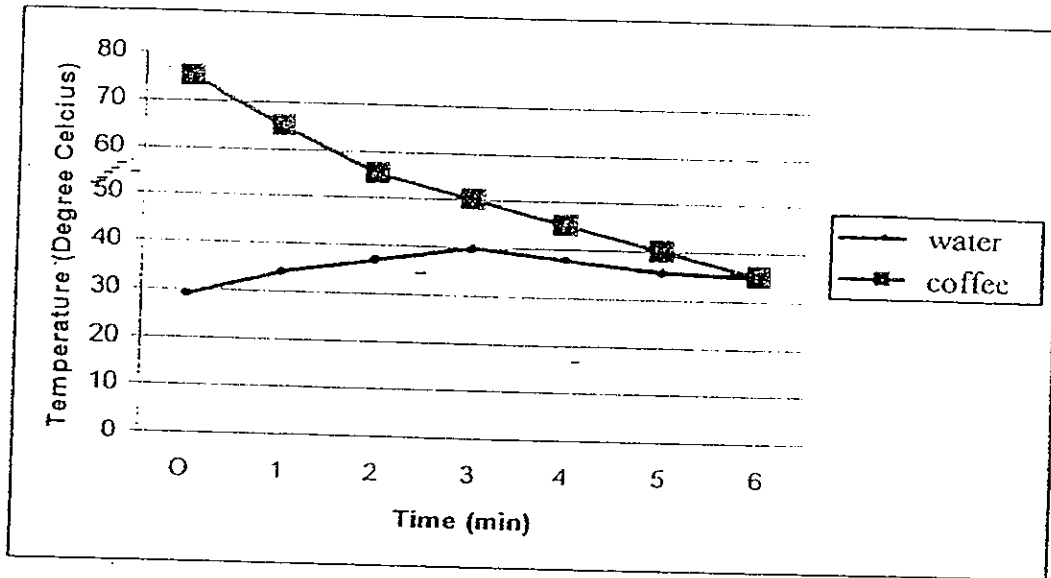
ice-cream stick aluminium foil	sewing needle plastic spoon
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Bad conductors of heat	Good conductors of heat

[2]



43. Lilian had a cup of coffee and a basin of water. She put the cup of coffee into the basin of water and measured the temperature every minute. She recorded the data in the graph shown below.



- (a) What was the temperature of the water at the beginning?

\_\_\_\_\_ [1/2]

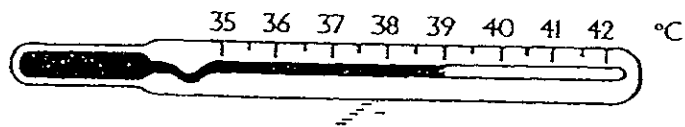
- (b) Describe the change in temperature of the coffee.

\_\_\_\_\_ [1/2]

- (c) How long did it take for both liquids to reach the same temperature?

\_\_\_\_\_ [1]

44. Charlotte suspected that she was running a fever because her forehead felt hot when she touched it with her hand. Her mother used the instrument shown below to check her body temperature. The instrument below shows her temperature.



- (a) Name the instrument shown above.

[1]

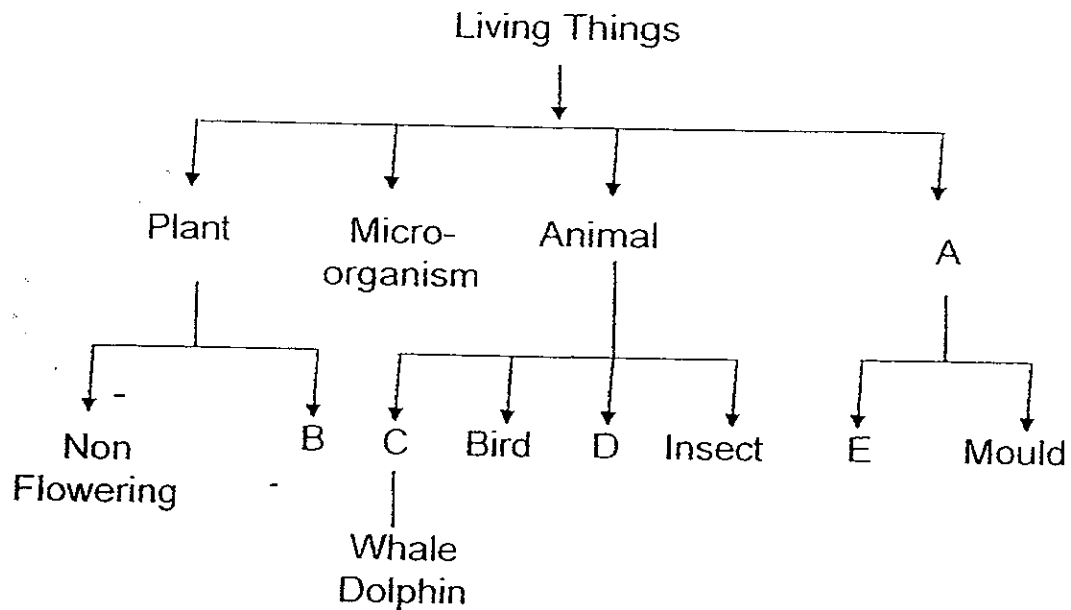
- (b) What was the reading of Charlotte's body temperature?

[1]



- (c) Explain why Charlotte should not rely on her sense of touch to determine if she was running a fever.

[1]

45. Ali drew a graphic organiser to classify living things as shown below.



Based on the diagram above, where should you place the two organisms shown below?

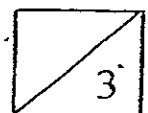
	Organisms	Group (A, B, C, D or E)
a)		
b)		

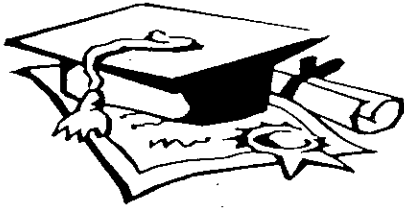
[2]

(c) Name one characteristic of organisms in C.

[1]

- End of Paper -





# ANSWER SHEET

EXAM PAPER 2008

SCHOOL : AITONG PRIMARY SCHOOL

SUBJECT : PRIMARY 4 SCIENCE

TERM : SA 2

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

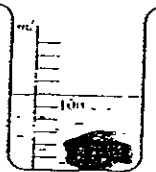
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
4	1	3	3	1	2	1	3	1	4	3	1	2

31) a) Air can be compressed.

b) I can poke some holes on the Styrofoam cup.

32) a) False    b) False    c) True    d) Not

33) a)



b) It will be the same.

c) The plasticine has a definite value, so the water level will be the same.

34) a) i) Skeletal system    ii) Muscular System

b) i) X

ii) The walls of the small intestine absorbed the digested food by the blood vessels and to all parts of the body.

35) a) It has taken in water.  
b) It is the seed leaves.  
c) Yes. When plant began to grow its leaves, it can makes it own food by itself, so the plant would not die if Simon removed part X.

36) a) Move the torch further away from the apple.  
b) Move the apple nearer to the wall.

37) aluminium foil                      tracing paper                      clear glass  
White board                              tissue paper                      mineral water

38) a) It is Air.  
b) Light travels in a straight line.

39) a) 1) ▽                      2) ●  
b) Metal, wood

40) a) rises, drops  
b) Heat was travelled from the hot water to the cold mug.

41) a) It will be magnet.  
b) Bring the nail to some paper clips and see if the \

42) Plastic spoon                      aluminium foil  
Ice-cream stick                      sewing needle

43) a) It is 30 °C                      b) 36 °C                      c) It takes six minutes

44) a) It is the thermometers.  
b) It is 39  
c) It is not accurate.

45) a) group D    b) group E  
c) They reproduce by giving birth to their young.