AI TONG SCHOOL

2008 CONTINUAL ASSESSMENT (2)
PRIMARY FOUR SCIENCE

DURATION : 1hr 45 min

DATE: 27 August 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 : _____

/100

Section A (30 x 2 marks)

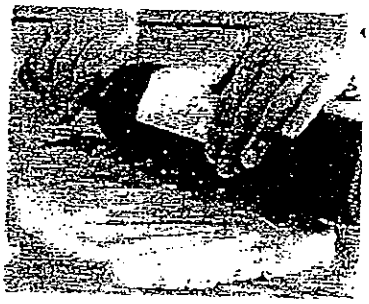
For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.**

1. Which of the following properties describe matter?

   A It has mass.
   B It has volume.
   C It can be seen.

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

2. The picture below shows a chef rolling dough using a bottle.



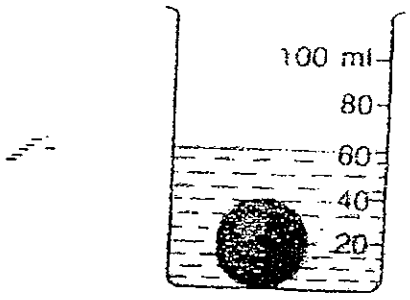
   Which one of the following properties of the dough has changed?

   (1) mass
   (2) shape
   (3) weight
   (4) volume

3. Jonathon has the same mass as a 40kg bag of sand. Both Jonathon and the bag of sand _____ _____.

   (1) have the same shape
   (2) have the same volume
   (3) have the same amount of matter
   (4) occupy the same amount of space

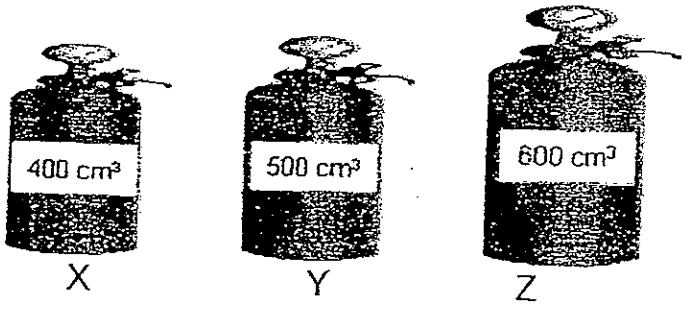
4. Gordon had a beaker filled with 40 ml of water. When he dropped a marble into the beaker of water, the water level rose as shown in the diagram below.



This shows that the marble _____.

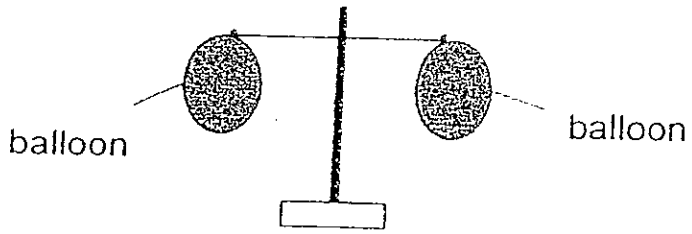
(1) is heavy
(2) has mass
(3) has shape
(4) has volume

5. Which of the following container(s) can be used to store 500 cm^3 of oxygen?

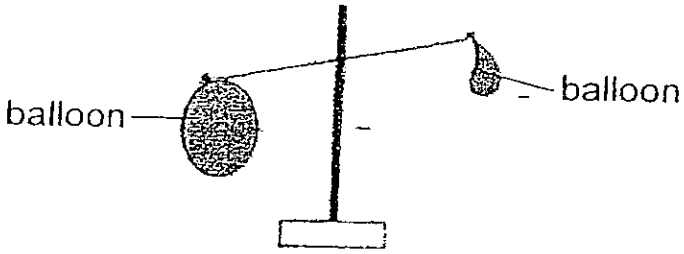


(1) X only
(2) Y only
(3) Z only
(4) All of the above

6. Samuel blew up two similar balloons to the same size and hung them on a balance as shown.



He pricked one of the balloons and air escaped from the balloon slowly. The result is shown in the diagram below.



What can Samuel conclude from this experiment?

(1) Air has mass.
(2) Air has no definite shape.
(3) Air has no definite volume.
(4) Air can spread out and fill any container.

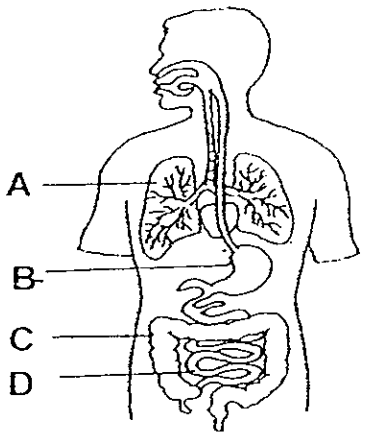
7. Our body is made up of several systems that _____.

(1) work together
(2) perform similar tasks
(3) function independently
(4) conflict with one another

8. How is food being absorbed by our body?

(1) Food is chewed into small pieces in the mouth.
(2) Food travels down the gullet into the stomach.
(3) Food mixes with digestive juices in the stomach.
(4) Food passes into blood vessels in the walls of the small intestine.

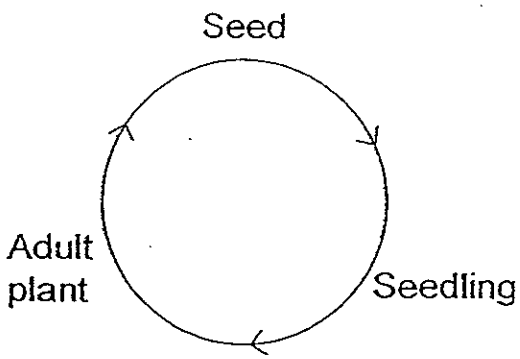
9. The diagram shows some organs in our body.



Which one of the following organs does **NOT** belong to the human digestive system?

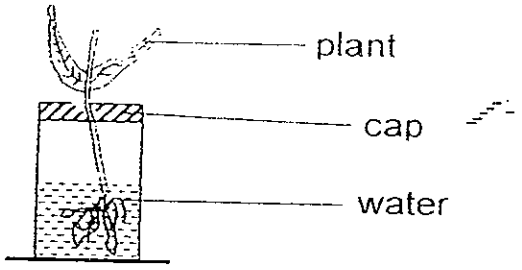
(1) A
(2) B
(3) C
(4) D

10. Based only on the observation of the life cycle below, what can you infer about the plant?



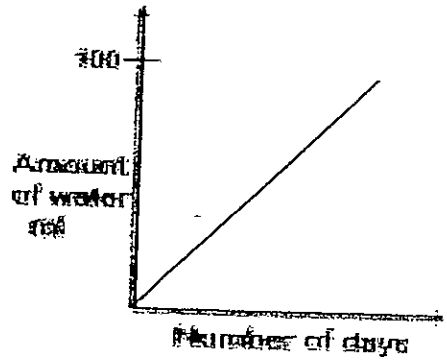
(1) The plant is a flowering plant.
(2) The plant will grow into a tree.
(3) The plant reproduces by spores.
(4) The fruit of the plant can be eaten.

11. Xiaoling poured 100ml of water into a cylinder. She removed the flowers of a plant and placed the plant into the cylinder. She covered the cylinder with a cap as shown in the diagram below.

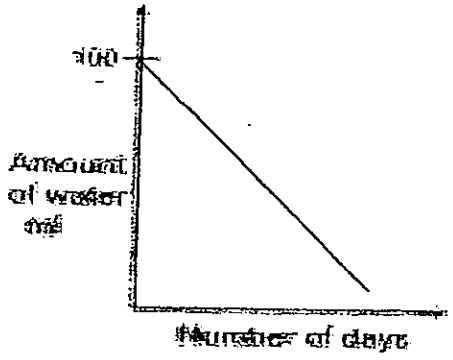


Which of the following graphs shows the amount of water left in the cylinder after a few days?

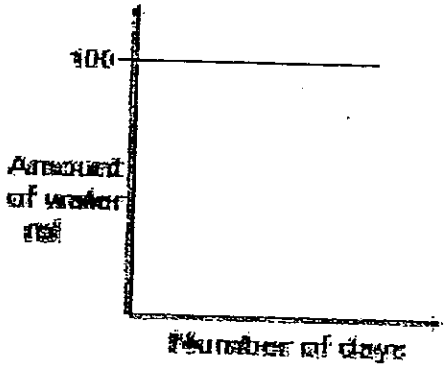
A



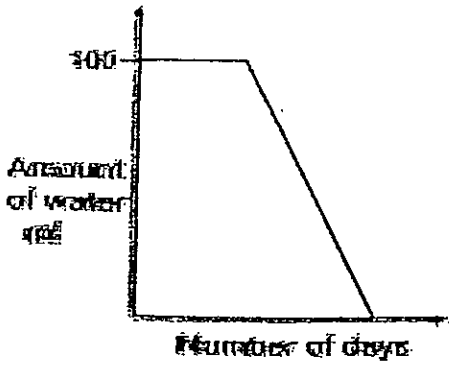
B



C



D



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

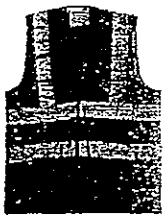
12. Which one of the following parts provides food for the growing seedling shown below?

(1) Baby plant
(2) Seed coat
(3) Seed leaf
(4) Roots

13. Light is a form of _____.

(1) matter
(2) energy
(3) system
(4) heat

14. Road workers wear safety vests made from a special material that appears bright when light shines on them as shown below.



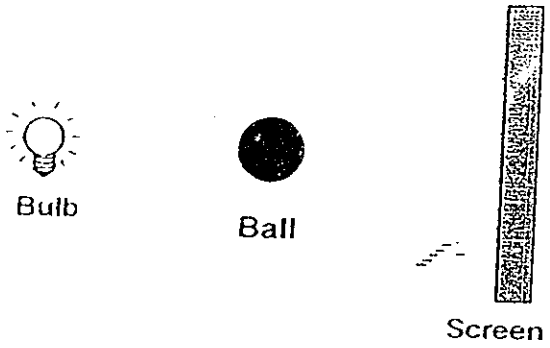
How do you think the special material enables drivers on the road to see the workers at night?

(1) It reflects light from light sources.
(2) It absorbs light from light sources.
(3) It gives out light on its own.
(4) It allows light to pass through.

15. Which one of the following objects will **not** cast a shadow?

(1) Mirror
(2) Book
(3) Wooden door
(4) Drinking glass

16. Dylan set up an experiment as shown below.



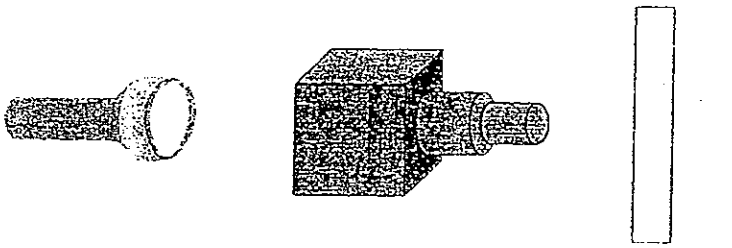
He wants to cast a bigger shadow of the ball on the screen. Which one of the following must he do?

(1) Move the ball nearer to the bulb.
(2) Move the ball further away from the bulb.
(3) Move the screen nearer to the ball.
(4) Move the bulb further from the ball.

17. Shadows are formed because _____

(1) objects absorb light
(2) objects reflect light
(3) light travels in a straight line
(4) light is a form of energy

18. Sally shines a torch on the object as shown below.

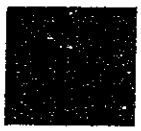


Object Screen

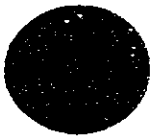
Which one of the following shadows can she see on the screen?

A

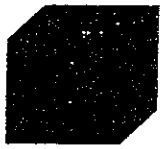
B



C



D

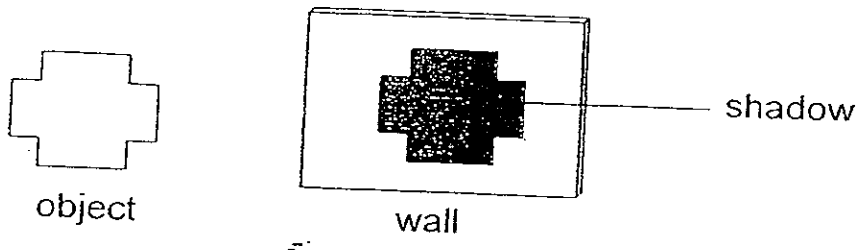


(1) A
(2) B
(3) C
(4) D

19. Which one of the following allows light to pass through it?

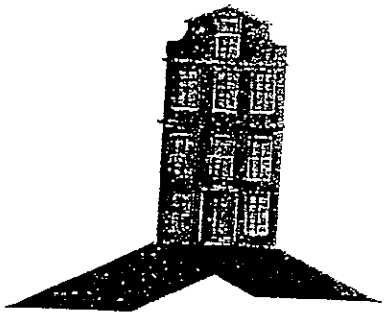
(1) Clay cup
(2) Brick wall
(3) Wooden chair
(4) Plastic book cover

20. Which one of the following is necessary for the object to cast a shadow on the wall as shown in the diagram below?



(1) The object must allow light to pass through it.
(2) The wall must allow light to pass though it.
(3) The object must be between the light source and the wall.
(4) The light source must be between the object and the wall.

21. The picture below shows a toy house with its shadows.

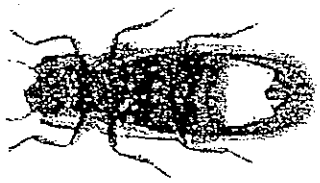


How many light source(s) is/are there?

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

22. Read the description of the 3 animals shown below.

Organism A :
Photuris pyralis (Linn.)



Brief Description :

•Soft bodied beetles which sizes range from 5 to 25 mm in length.

• Have special light organs on the underside of their abdomen that produce light which make them glow in the dark.

Organism B :
Trichocera annulata

Brief Description :

• Often mistaken for mosquitoes because of their appearance. These insects are primarily a nuisance when found in large numbers

•Attracted to light

Organism C :
GloFish

Brief Description :

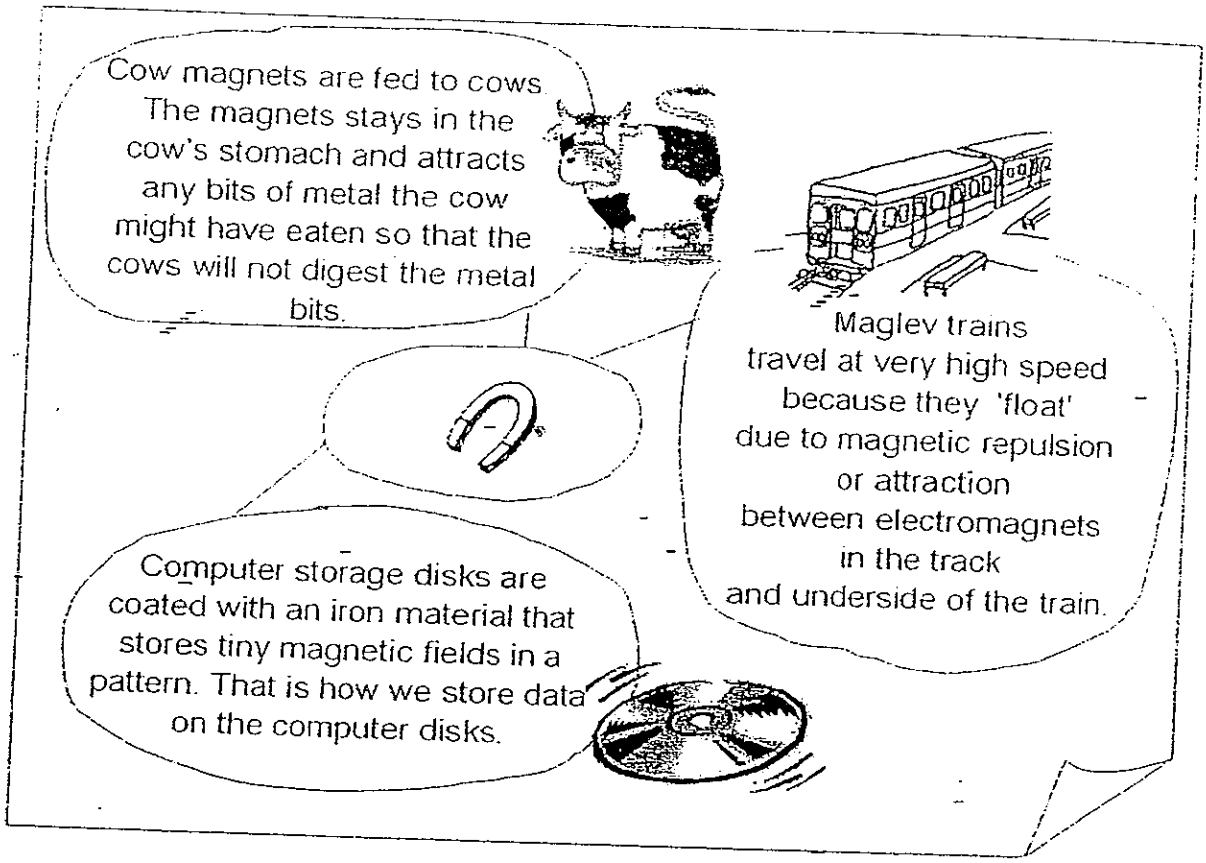
•First gene-altered pet which was developed in Singapore

•Created using gene from sea anemone inserted it into zebra fish that makes them glow fluorescent red

Which of the animals can be seen when there is no other source of light?

(1) Organism A and Organism B
(2) Organism B and Organism C
(3) Organism A and Organism C
(4) All of the above

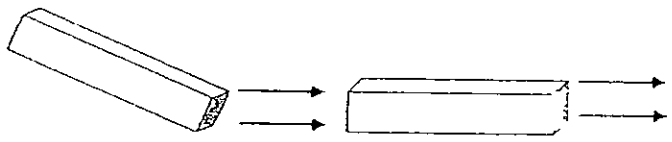
23.



The graphic organiser above tell us about _____.

(1) the types of magnets
(2) the uses of magnets
(3) the properties of magnets
(4) how to make magnets

24. When Magnet X was brought towards Magnet Y, Magnet Y moved away from Magnet X.

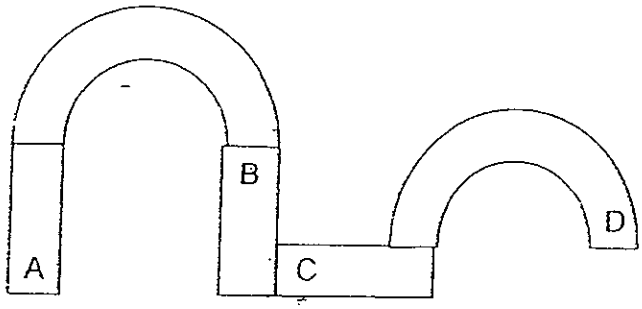


Magnet X Magnet Y

What can we conclude about magnet X and magnet Y?

(1) Magnet X is stronger than Magnet Y.
(2) Magnet Y is stronger than Magnet X.
(3) The like poles of Magnet X and Magnet Y are facing each other.
(4) The unlike poles of Magnet X and Magnet Y are facing each other.

25. The diagram below shows a number of magnets attracted to each other.



What could be the poles A, B, C and D?

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

26. Divers carry tanks to help them breathe underwater. The tanks help them to meet their basic need for _____.

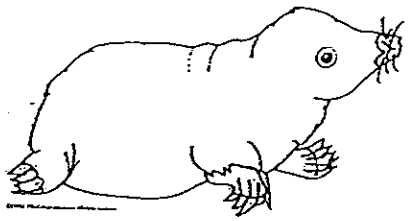
(1) air
(2) food
(3) water
(4) energy

27. Which one of the following characteristics is common to both plants and fungi?

Both plants and fungi _____.

(1) are green in colour
(2) feed on dead plants
(3) make their own food
(4) respond to changes

28. Moles are animals which live underground. To avoid colliding into each other they bump their heads against the sides of the tunnels to inform other moles of their whereabouts.



Which one of the following senses do the moles use to communicate?

(1) Sight
(2) Touch
(3) Smell
(4) Taste

29. Bryan spotted this organism in his garden.

Which one of the following activities will help him determine whether this organism is an insect?

(1) Weigh the organism.
(2) Measure the length of the organism.
(3) Examine the body covering of the organism.
(4) Count the number of body parts of the organism.

30. *Drosophila melanogaster* is a small, common fly found near unripe and rotting fruit.

Life cycle of *Drosophila Melanogaster*

Day 0	:	Female Drosophila lay eggs
Day 1	:	Eggs hatch into worm-like larva
Day 2 - 6	:	Larva eats, grows and moults continuously
Day 7	:	Larva form an immobile pupa
Day 11-12	:	The body is completely remodelled to give the adult winged form, which then hatches from the pupal case.

Which one of the following organisms has the same life cycle as the *Drosophila melanogaster?*

(1) Dog
(2) Chicken
(3) Cockroach
(4) Butterfly

Name: _____ ( )
Class P4 ( )

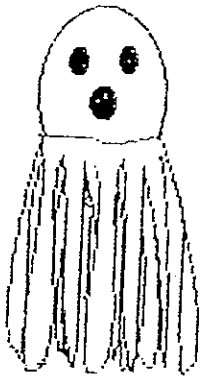
40

Section B (40 marks)
For question 31 to 45, write your answers in the spaces provided below.

31. Below is an instruction for making a balloon ghost.

Steps to make a 'Balloon Ghost'

1. Cut the handles off a white **plastic bag**
2. Cut the bags into strips but leave the seam at the bottom of the bag intact.
3. Blow some **air** into a white **balloon**
4. Apply some glue on the plastic bag and attach it around the balloon.
5. Use a black **coloured pencil** to draw the eyes and mouth on the balloon.



(a) Classify the items in **Bold** into the table below.

Solid	Liquid	Gas

[2]

(b) When Raju blows into a balloon, the size of the balloon increases.

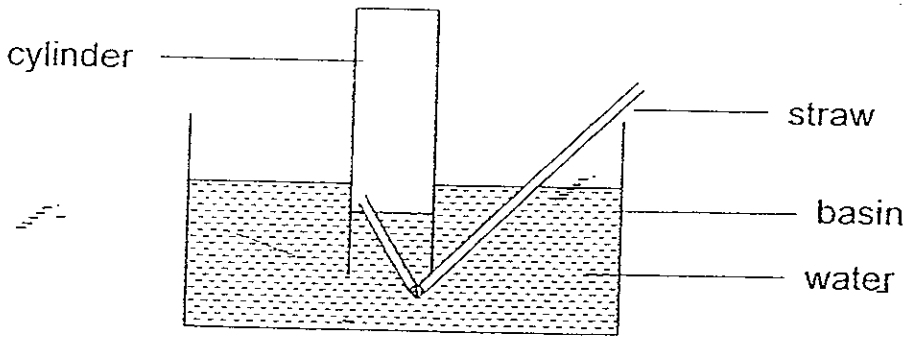
Explain why the balloon becomes bigger.

_____

_____ [1]

2

32. Kim Soon sets up an experiment as shown in the diagram below.



(a) What happens to the water level in the cylinder when Kim Soon sucks out some air through the straw?

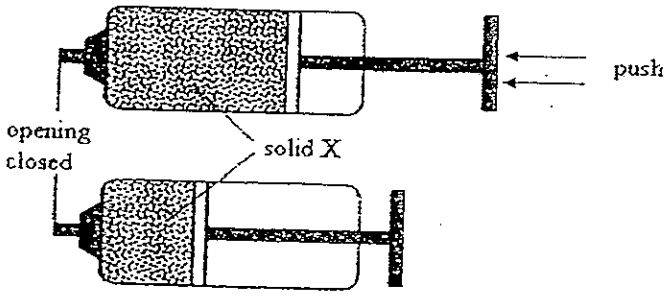
_____ [1]

(b) Explain your answer in (a).

_____

_____ [2]

33. Alice filled a syringe with small pieces of a Solid X. When the plunger is pushed, the volume in the syringe decreases as shown in the diagram below.



(a) Explain why the plunger can be pushed in.

_____ [1]

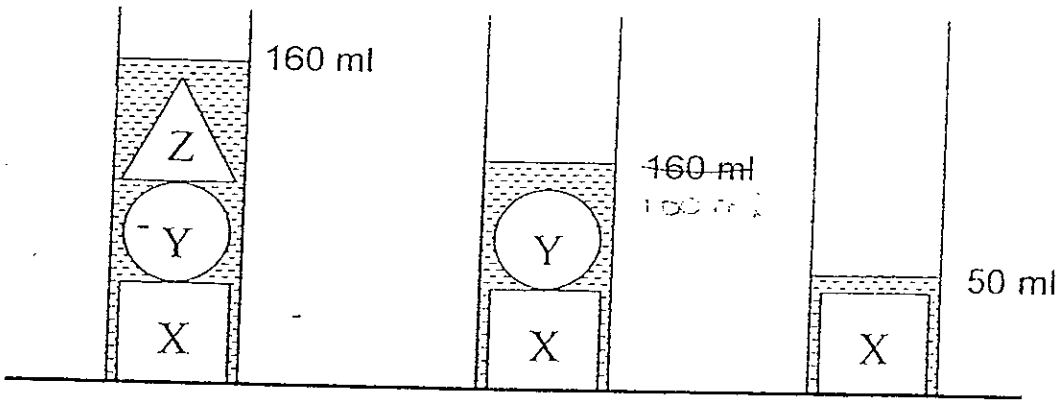
(b) What could Solid X be?

_____ [1]

(c) State one property of solids.

_____ [1]

34. A measuring cylinder is filled with water and objects X, Y and Z. Aloysius removed one object after another from the measuring cylinder. She recorded the water level in the measuring cylinder after each object is removed.



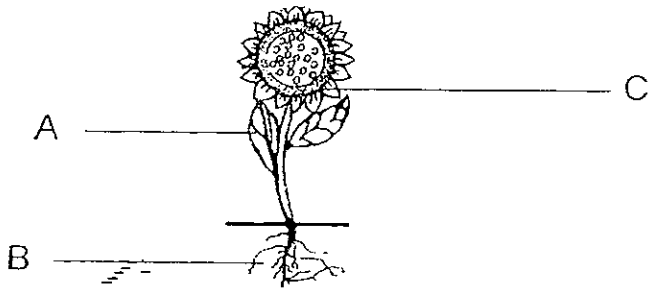
For each statement below, determine whether the statement is "True", "False" or "Not possible to tell" by putting a tick in the correct box.

		True	False	Not possible to tell
(a)	The volume of water is less than 50 ml.			
(b)	The volume of object Y is greater than the volume of object X.			
(c)	Object Z has a greater mass than object X.			
(d)	The volume of object Z is largest.			

[2]

2

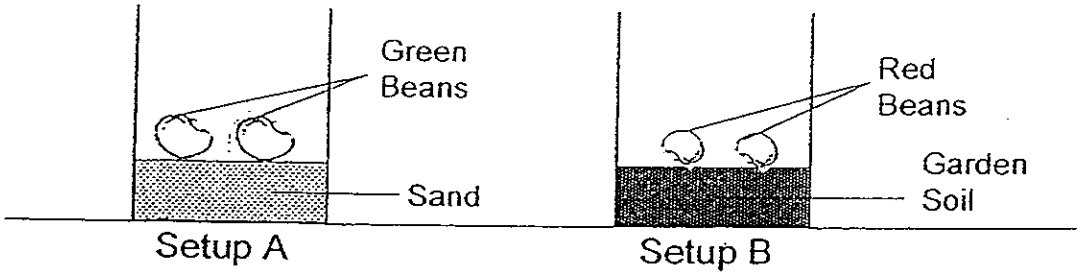
35. Look at the picture of a plant below.



(a) Part _____ makes food for the plant. [1]

(b) Part _____ holds the plant firmly to the ground. [1]

36. Elaine wanted to find out if sunlight affects the germination of seeds. She prepared 2 setups, A and B as shown below.



She placed beaker A near the window and beaker B in a dark store room. She watered both plants daily with equal amount of water. However, her brother said that this was not a fair test.

(a) Give two suggestions to make the test fair.

(i) _____

(ii) _____ [2]

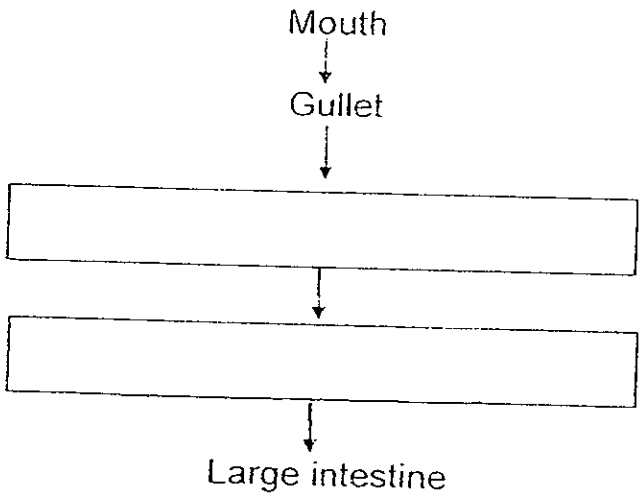
(b) Will the seeds in setup B germinate? Explain your answer.

_____ [1]

_____

5

37 The flow chart below shows the path taken by the food we eat.



(a) Complete the flow chart above. [1]

(b) Digestion of food begins in the _____. [½]

(c) In the large intestine, _____ is removed from undigested food before they are passed out of the body. [½]

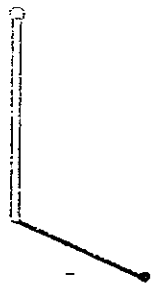
38 Name the following human systems based on the description given.

	Description	System
(a)	This system takes in oxygen needed by our body and removes unwanted carbon dioxide from our body.	
(b)	This system supports the body and keeps it in shape.	
(c)	This system carries food, oxygen and waste materials to and from various parts of the body.	
(d)	This system breaks down food into simpler substances for the body to absorb.	

[2]

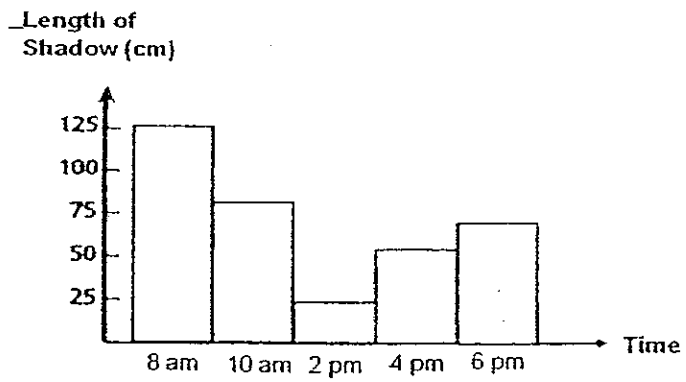
4

39. The diagram shows a pole with its shadow. The pole was placed in an open field.



(a) Mark the position of the sun with the symbol ☀ in the diagram above. [1]

Juliana observed the shadow of the pole throughout the day. She recorded her observations in a graph as shown below.



(b) Describe the pattern change in the length of the shadow between 2pm and 6pm.

_____ [1]

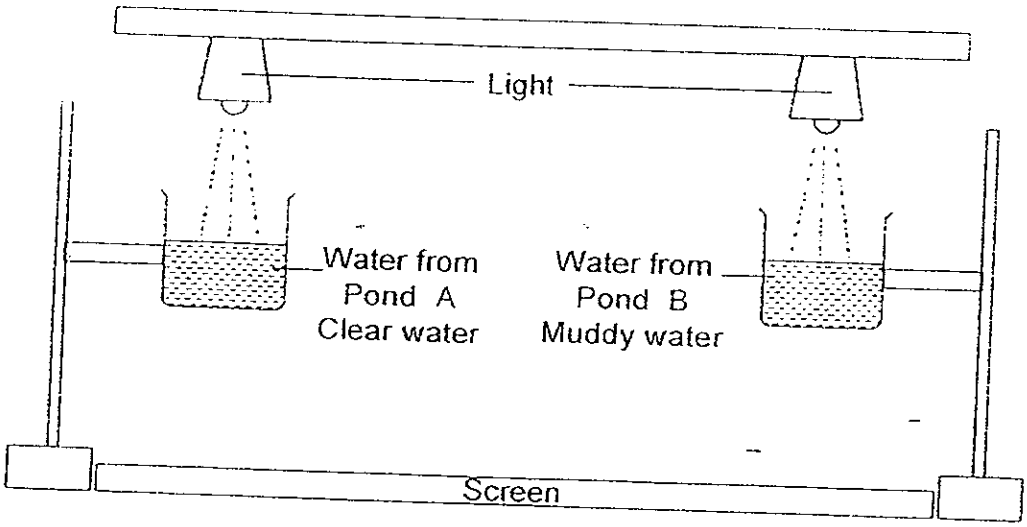
_____

(c) At what time will the shadow be about 20 cm?

_____ [1]

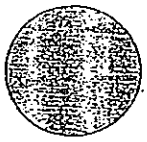
3

40. The following experiment was set up to investigate the amount of light that passes through water collected from two ponds, Pond A and Pond B.

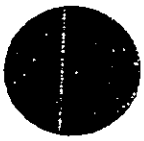


When the lights were switched on, shadows were formed on the white screen.

(a) Draw lines to match the water from the ponds to the shadows the water formed.



Light Shadow



Dark Shadow

- Clear Water from Pond A
- Muddy Water from Pond B

[1]

(b) What can you conclude from the experiment above? [1]

_____

_____ [1]

(c) Explain why there are no submerged water plants growing in Pond B.

_____

3

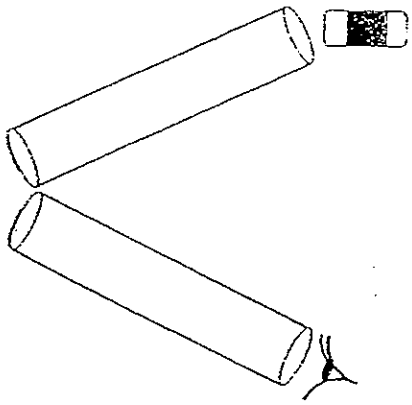
41. Samantha looked through a hose and she could see an eraser at the other end of the hose.

(a) Draw a line in the diagram below to show how light travels from the eraser to Samantha's eye, through the hose.

[1]

(b) Samantha was given two metal pipes and a mirror. Draw on the diagram below where she should place the mirror so that she could see the eraser.

[1]



2

42. Classify the following items listed below into the correct groups.

diamond	mirror
battery	lightning

(a)

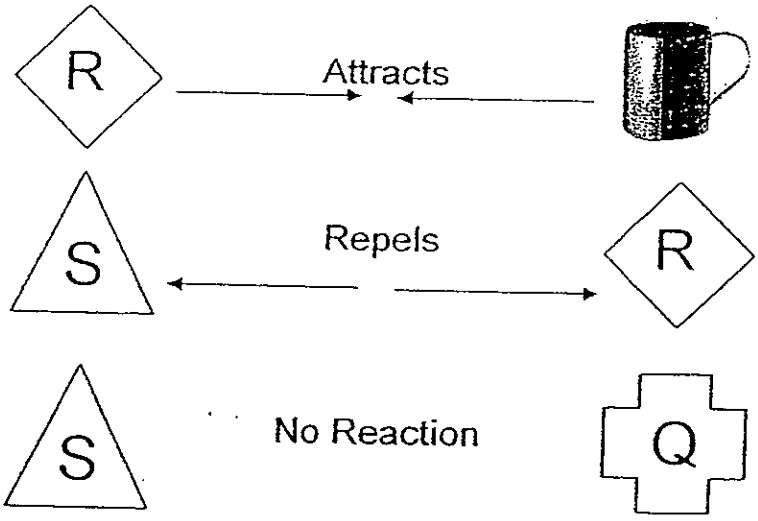
Gives out light on its own	Does **not** give out light on its own

[2]

(b) The moon does not give out light. How can we see the moon at night?

[1]

43. Three unknown objects Q, R and S and a cup are put close to each other to see how they interact. The results are shown in the table below.



(a) Objects _____ and _____ are magnets. [1]

(b) Object _____ is a non magnetic material. [1]

(c) What material is the cup most likely made from?

[1]

6

44. Under a special instrument Mohan could see a group of living things called micro-organisms, as shown in the diagram below.

(a) Name the instrument that Mohan used to observe the micro-organism.

_____ [1]

(b) Give an example of micro-organism.

_____ [1]

(c) State one way micro-organisms is useful to humans.

_____ [1]

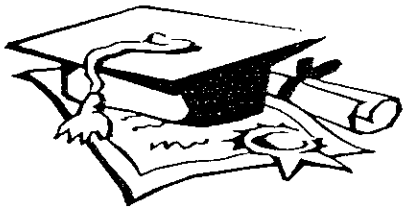
45. The organisms which are underlined show characteristics of living things. Name these characteristics based on the situations given below.

	Situations	Characteristics of living things
(a)	When Wenhui tried to catch the <u>fish</u> in an aquarium with her hands, they swam away.	
(b)	The potted <u>plants</u> in the garden died after it was not watered for a few weeks.	
(c)	Mrs Lee found some <u>cockroaches</u> and their eggs in her cupboard.	

[3]

– End of Paper –

6



ANSWER SHEET

EXAM PAPER 2008

SCHOOL : AITONG PRIMARY SCHOOL
SUBJECT : PRIMARY 4 SCIENCE

TERM : CA 2

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

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

31)a)

Solid	Liquid	Gas
Plastic bag		air
Balloon		
Coloured pencil		

b)Air occupies space, so when Raju blows air into the balloon, the air takes up space in the balloon.

32)a)The water level will be higher.

b)If the air was sucked up by the straw, the water occupies space from the air, so the water level will be higher.

33)a)There are some air between the small pieces of solid X.

b)It could be sponge.

c)Solids cannot be compressed.

34)a)True

b)True

c)Not

d)True

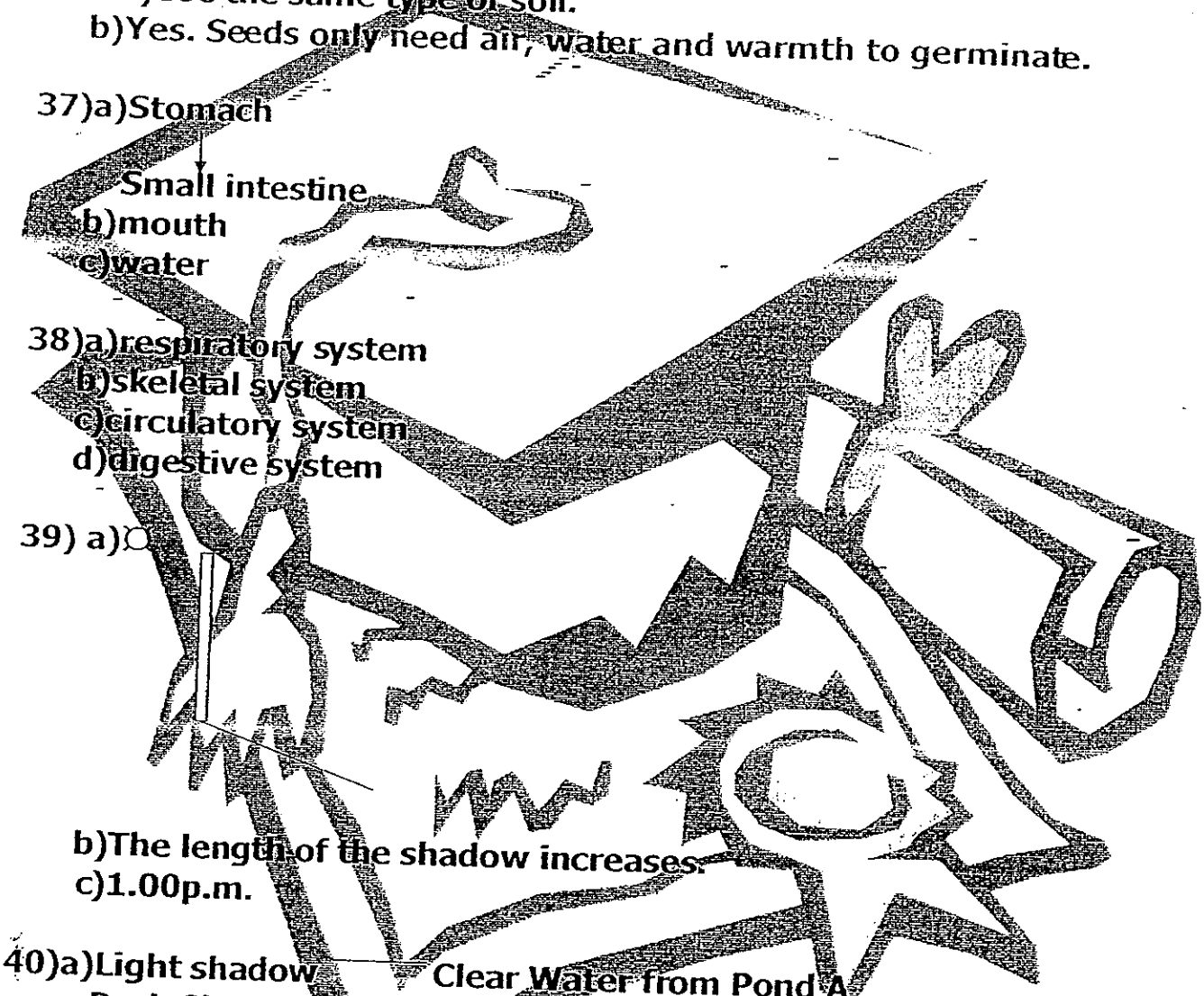
35)a)A b)B

36)a)i)Use the same type of beans.
ii)Use the same type of soil.
b)Yes. Seeds only need air, water and warmth to germinate.

37)a)Stomach
Small intestine
b)mouth
c)water

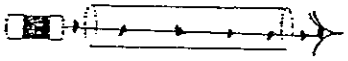
38)a)respiratory system
b)skeletal system
c)circulatory system
d)digestive system

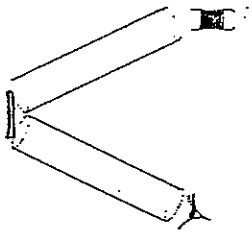
39) a)



b)The length of the shadow increases.
c)1.00p.m.

40)a)Light shadow — Clear Water from Pond A
Dark Shadow — Muddy Water from Pond B
b)Clear water allows more light to pass through than muddy water.
c)The muddy water will block the sunlight from entering, so the water plant cannot photosunthesise. Therefore they will die.

41)a) 

b) 

42)a)lightning
mirror
battery
diamond

b)The moon reflects light from the sun.

43)a)S and R
b)Q
c)It can made of steel

44)a)The microscope helps Mohan to observe the micro-organism.
b)It is bacterial.
c)Yeast helps to make bread fluffly.

45)a)Living things respond to changes.
b)Living things die.
c)Living things reproduce.