



## AI TONG SCHOOL

### 2009 SEMESTRAL ASSESSMENT (1) PRIMARY FOUR SCIENCE

**DURATION : 1hr 45 min**

**DATE: 18 May 2009**

#### INSTRUCTIONS

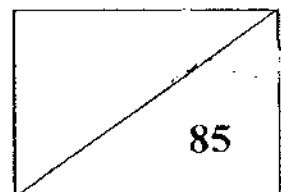
**Do not open the booklet until you are told to do so.  
Follow all instructions.  
Answer all questions.**

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 one of the following is grouped correctly?

	<b>Matter</b>	<b>Non-matter</b>
(1)	Oxygen	Cloud
(2)	Nitrogen	Wind
(3)	Sunlight	Heat
(4)	Mist	Shadow

2. Hydrogen is the lightest gas.  
It is sometimes used to fill balloons so that balloons can float in the air.  
Why is hydrogen considered to be matter?

- A : It has mass.
- B : It is a gas.
- C : It takes up space.
- D : It takes the shape of the balloon.

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

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

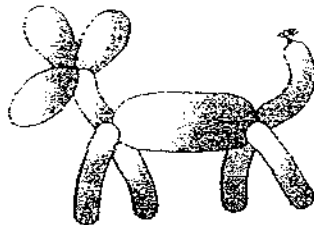


'Y' has a definite volume but it does not have a definite shape.

In which group should Daming place 'Y'?

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

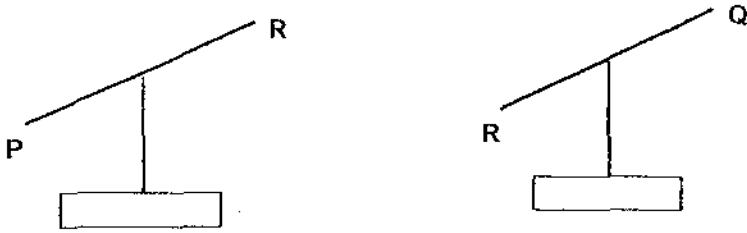
4. Ridwaan was at a funfair. He noticed a man twisting balloons to form different animal shapes.



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.

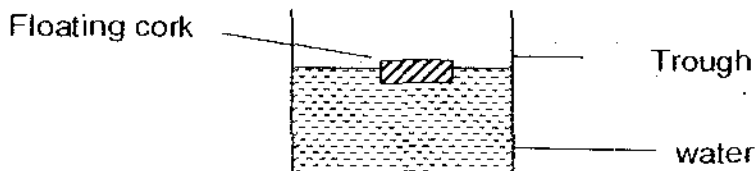
- 5 The diagram below shows the relationship between three objects when placed on a lever balance.



Which one of the following correctly identifies the masses of objects P, Q and R?

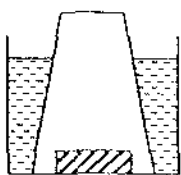
	P	Q	R
(1)	120 g	80 g	40 g
(2)	80 g	40 g	120 g
(3)	120 g	40 g	80 g
(4)	40 g	80 g	120 g

- 6 The diagram below shows a piece of cork floating in a trough of water.

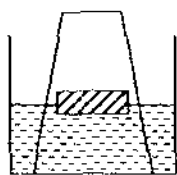


A plastic cup is inverted over the cork and held down.

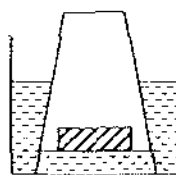
Which one of the following diagrams show what could possibly happen to the cork and water?



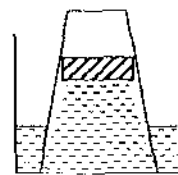
(1)



(2)



(3)



(4)

7. A plant can start reproducing when \_\_\_\_\_

- (1) the roots appear
- (2) the shoot appears
- (3) the leaves appear
- (4) the flowers appear

8. Which of the following do seeds need to germinate into seedlings?

A : Sunlight  
C : Water

B: Air  
D: Warmth

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

9. The diagram shows the stages in the growth of a green bean seed. At which stage(s) is light necessary for the young plant to survive?



A



B



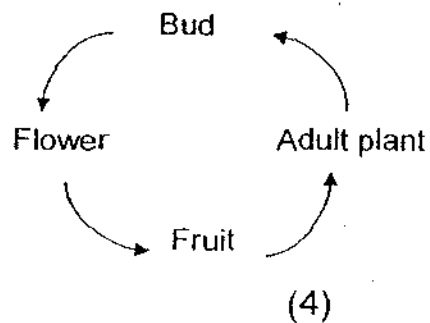
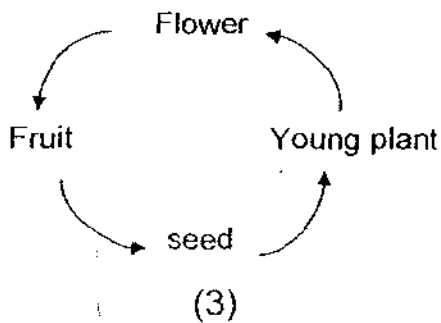
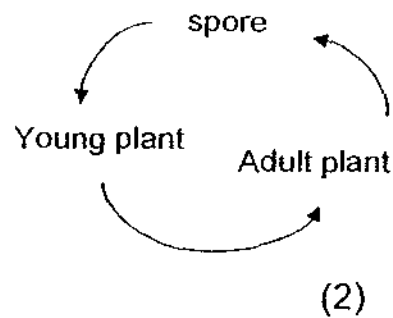
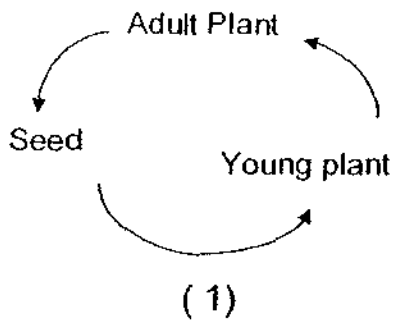
C



D

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

10. Which of the following shows the life cycle of flowering plants?



11. The table below shows the stages in the life cycle of a flowering plant but they are not in the correct order.

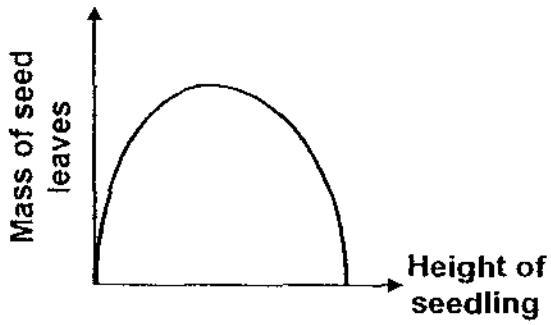
Stage	Development
A	Shoot grows upwards.
B	Seed coat splits open.
C	Root grows downwards.
D	Flowers appear.
E	Leaves start making food.

Which of the following shows the correct order of the stages?

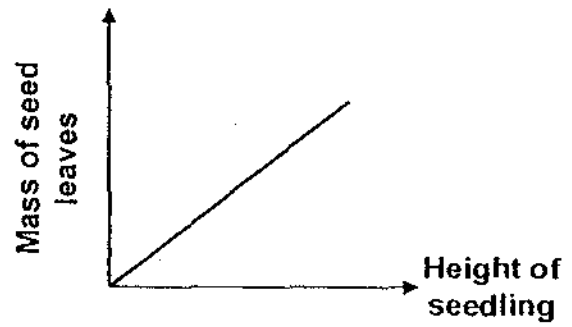
- (1) B, A, C, E, D ✓
- (2) C, B, A, E, D ✓
- (3) B, C, A, D, E
- (4) B, C, A, E, D

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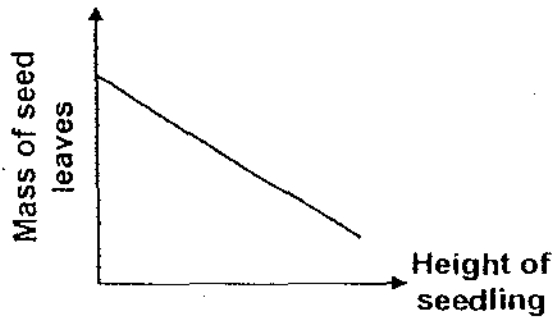
12. Which one of the following graphs below correctly shows the relationship between the mass of the seed leaves and the height of the seedling as it grows?



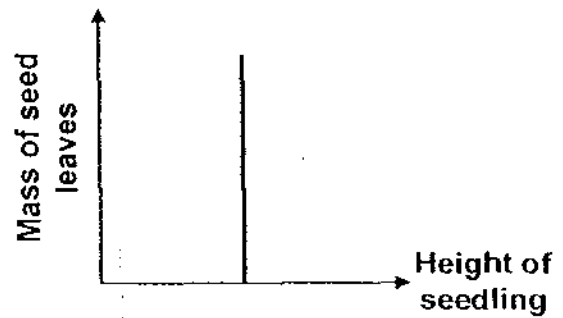
(1)



(2)

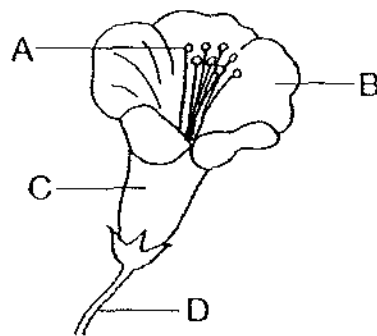


(3)



(4)

- 13.



Which part of the flower attracts insects to it?

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

14.



Three children were asked to describe what they observed about the stem of a plant shown above.

Noel said, "The stem is like the skeleton of a human. It gives support to the plant."

Amelia said, "The stem is like the blood vessels of a human. It transports food and water."

Nurul said, "The stem can make food for the plant."

Who was/were correct?

- (1) Noel and Amelia only
- (2) Noel and Nurul only
- (3) Amelia and Nurul only
- (4) All three of them

15. Jordan spread a layer of grease on different parts of four similar plants A, B, C and D according to the table below.

	A	B	C	D
Stems		✓		
Upper surface of leaves	✓			✓
Lower surface of leaves			✓	✓

The layer of grease prevents the exchange of matter with the surroundings. He watered the plants daily and placed them in a sunny place. He noticed that two of the plants wilted first. Which are most likely to be the two plants?

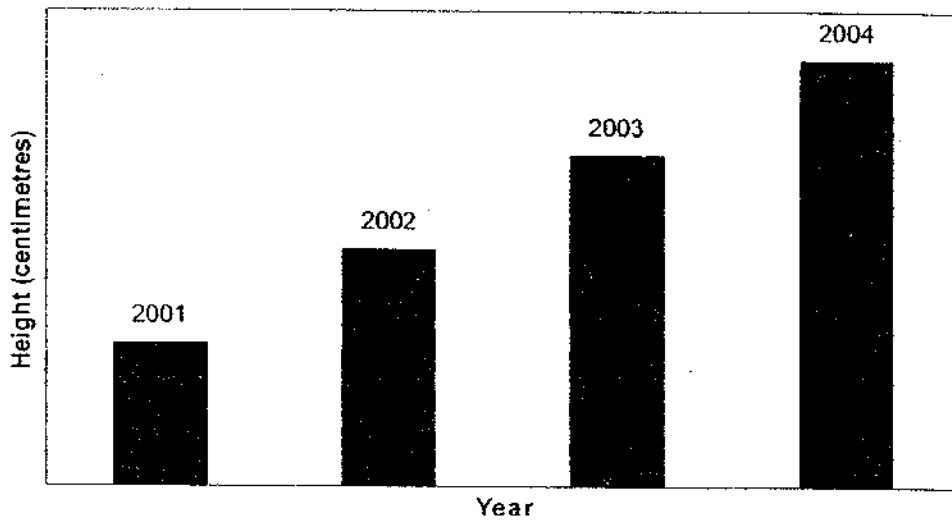
- (1) A and B  
 (2) C and D  
 (3) A and D  
 (4) A and C
16. The table below shows some animals that have been grouped according to X, Y and Z.

X	Y	Z
Whale Giraffe ?	Hen Penguin Ostrich	Grasshopper Cockroach Ant

Which one of the following animals can be placed in Group X?

- (1) shark  
 (2) emu  
 (3) cat  
 (4) eagle

17. The graph below shows the height of Mei-Mei over 4 years.



What do the graphs tell you about Mei-Mei?

- (1) She is putting on weight over the years.
- (2) She is growing taller over the years.
- (3) She is reproducing over the years.
- (4) She is moving about all the time over the years.

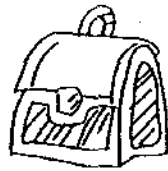
18. Mrs Lim is organizing a birthday party for her five year old son. She needs to buy some plates and cups that would be suitable for young children. Which material should the utensils be made up of?

- (1) wood
- (2) plastic
- (3) clay
- (4) glass

19. Look at the pictures below. Which of the following is made up of only 1 material?



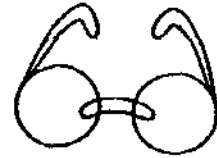
A



B



C



D

- (1) B and D only  
(2) A and C only  
(3) A, B and C only  
(4) A, C and D only
20. At which stage in a life cycle of a butterfly will it shed its old skin?
- (1) egg  
(2) larva  
(3) pupa  
(4) adult
21. A group of 4 pupils had just completed their lesson on the life cycle of a cockroach. Each pupil made a statement as shown below.

Aru : It has a 3 staged life cycle.

Aini : It has 6 legs.

Joey : It has a pupa stage.

Ailing : The young of the cockroach looks like the adult.

Which of the pupils made statements that are **true**?

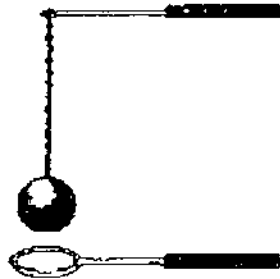
- (1) Aini and Joey  
(2) Aru, Joey and Ailing  
(3) Aru, Aini and Ailing  
(4) Aini, Joey and Ailing

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

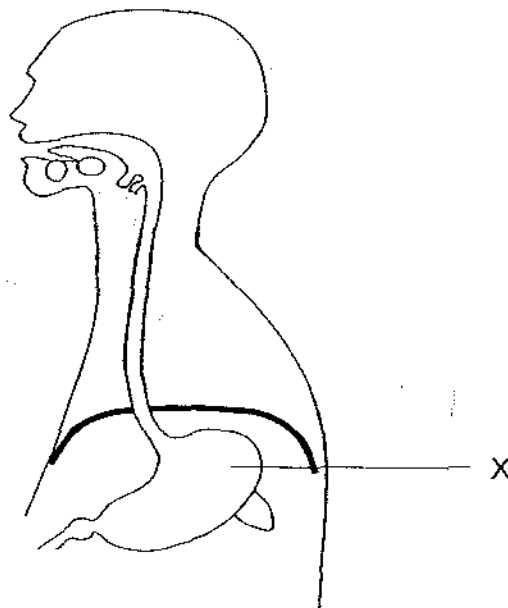
24. Which one of the following organisms does not have its young resembling its adult?
- (1) cockroach
  - (2) chicken
  - (3) grasshopper
  - (4) mealworm beetle
25. Which one of the following animals does not have the same number of stages in its life cycle as the others?
- (1) cockroach
  - (2) mosquito
  - (3) butterfly
  - (4) mealworm beetle
26. Which one of the following shows the correct flow on how food is digested in a digestive system?
- (1) mouth → gullet → stomach → large intestine → small intestine → anus
  - (2) mouth → gullet → small intestine → stomach → large intestine → anus
  - (3) mouth → gullet → large intestine → stomach → small intestine → anus
  - (4) mouth → gullet → stomach → small intestine → large intestine → anus
27. Which one of the following human organs is not needed in a respiratory system?
- (1) nose
  - (2) gullet
  - (3) lungs
  - (4) windpipe

28. John was given a riddle card as shown below.

I provide shape in your body.  
I enable you to move around.  
I also protect important organs in  
your body like your lungs.  
Can you guess what system am I?

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

29. Look at the picture below.



What is the function of the above organ X?

- (1) Digestion of food begins here.
- (2) Undigested food is stored here before it is passed out.
- (3) Water is absorbed here before going into the anus.
- (4) Food is further broken down into smaller parts.

30. Which one of the following systems is needed to work with the skeletal system in order for a person to move?

- (1) Digestive System
- (2) Respiratory System
- (3) Muscular System
- (4) Circulatory System

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

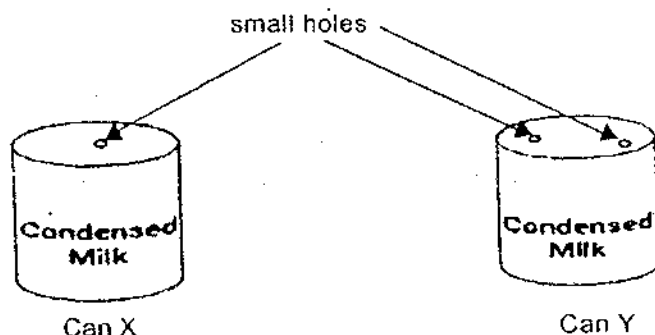
**Section B: 25 marks**

Read the questions carefully and write down your answers in the spaces provided.

31. Write 'True' or 'False' in the boxes next to the statements that follow.

	True/False	[2]
(a) All matter can be seen and felt.		
(b) All matter has mass.		
(c) All matter occupies space.		
(d) All matter is non-living.		

32. Small holes were pierced into two cans X and Y as shown below.

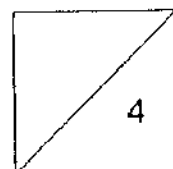


(a) From which can, X or Y, would the condensed milk flow out faster? [1]

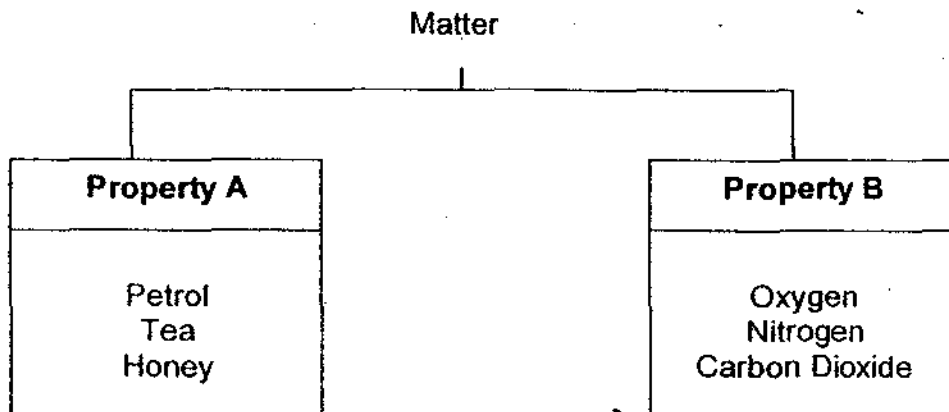
\_\_\_\_\_

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

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



33. The classification table below shows how matter can be grouped under two different properties.



- (a) Give suitable headings for Property A and Property B. [1]

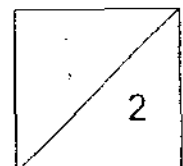
(i) Property A : \_\_\_\_\_

(ii) Property B : \_\_\_\_\_

- (b) In which group will you place the following? [1]

(i) Sand : \_\_\_\_\_

(ii) Water vapour : \_\_\_\_\_



34. Ronghui planted two seeds A and B in the same place. He recorded the observations of their growth in the table as shown below.

Date	Seed A	Seed B
1 May	Seed planted	Seed planted
10 May	Roots appeared	No change
17 May	Shoot with young leaves appeared	No change
23 May	Plant grew taller by 3 cm and more leaves appeared	No change

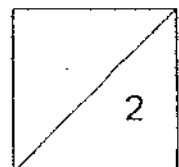
- (a) Based on the information given above, when did Seed A germinate? [1]

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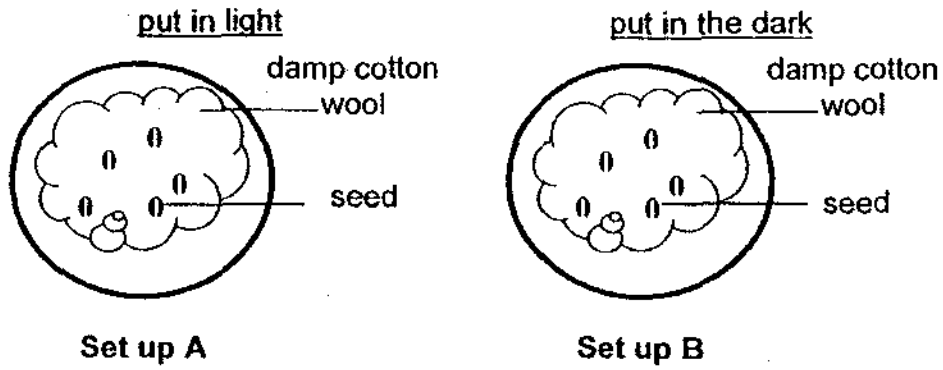
- (b) Suggest a reason for the different observations made for Seed B. [1]

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35. Kumar set up an experiment as shown in the diagram.



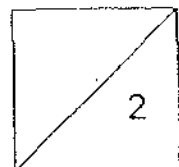
(a) What was the aim of the experiment? [1]

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(b) In which of the set-ups would the seeds germinate? [1]

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36. Study the pictures of the two leaves below.



Leaf A



Leaf B

(a) Based on the pictures, how are Leaf A and Leaf B the same? [1]

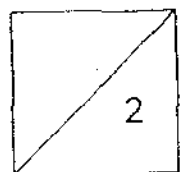
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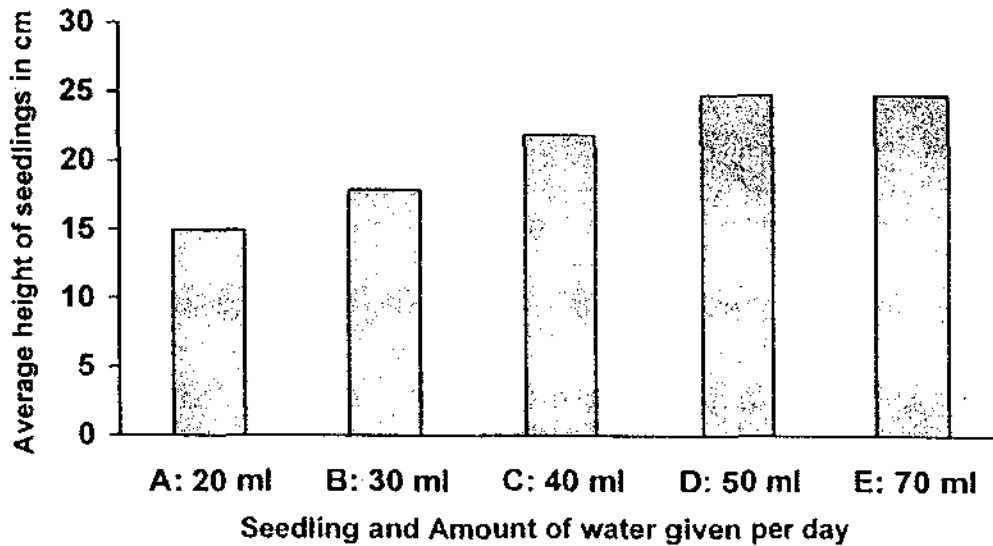
(b) Based on the pictures, how are Leaf A and Leaf B different? [1]

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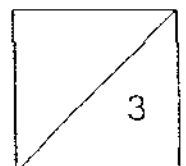
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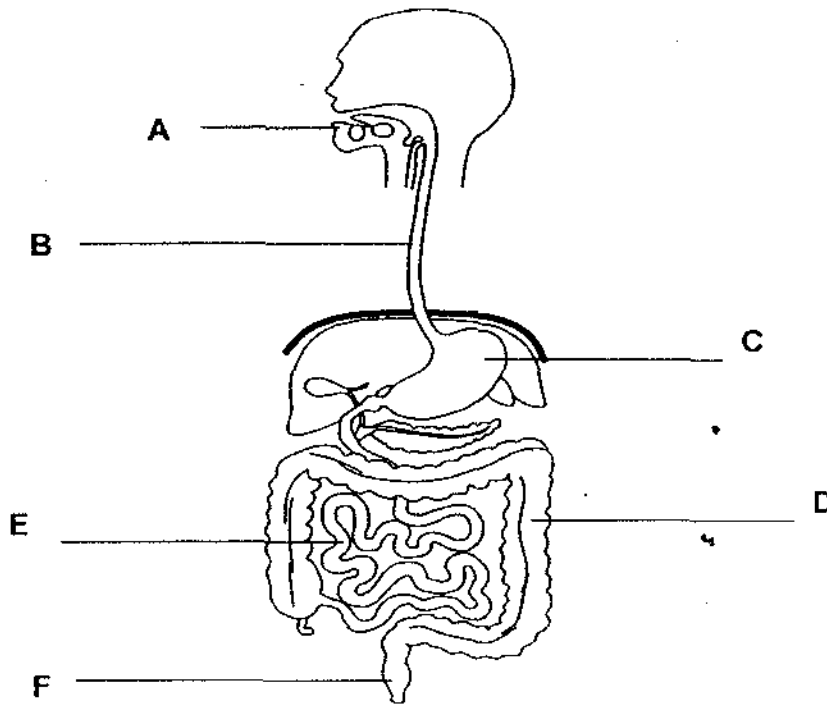
37. Michelle planted 5 string bean seedlings A, B, C, D and E in 5 similar pots. She watered each pot daily with different amounts of water. She measured their heights on the eighth day. Study her chart below.



- (a) Michelle's hypothesis is that the more water is given to the plant, the taller it will grow. Is her hypothesis correct? [1]
- 
- (b) Explain your answer in (a) [1]
- 
- 
- (c) From the chart, suggest the least amount of water to give to the seedlings per day to ensure that they grow well. [1]
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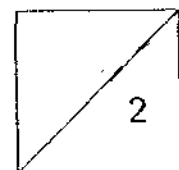


38. The picture below shows a human digestive system.



Read the statements below and write True or False in the spaces provided. [2]

- (a) Water will be absorbed from the undigested food at D.
- (b) Food starts its digestion process at B.
- (c) Digestive juices will be added at A, C and E.
- (d) Partly digested food will be stored at F.



39. John was shown a cockroach and a mosquito.

- (a) What observation can John make to show that they are insects? [1]

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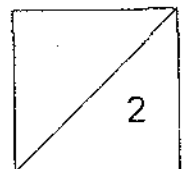
- (b) State a difference between these two insects in terms of their number of stages in their life cycle. [1]

(i) Cockroach

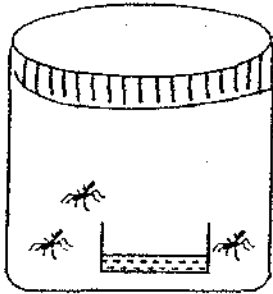
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(ii) Mosquito

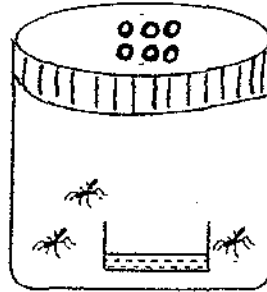
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40. Mrs Lim set up the experiment as shown below.



Container X



Container Y

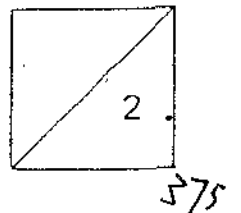
(a) In which one of the containers will the ants die first? [1]

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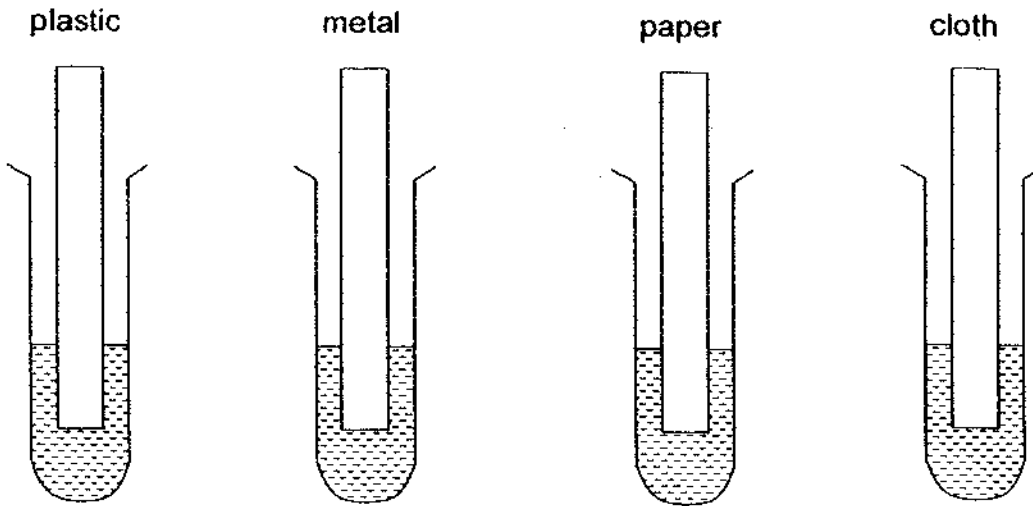
(b) Explain your answer in (a). [1]

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41. Susan and her partner filled four test tubes with the same amount of water each. Then she took 4 strips made of 4 different materials but of the same size and placed each strip into each of the test tubes.



- (a) Which strips will absorb water? [1]

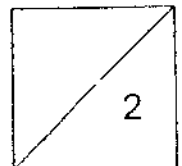
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- (b) Susan wants to make the blade of a kitchen knife. Which one of the above materials should she use? Explain your answer. [1]

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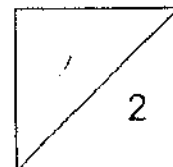


42. Sulin wrote four statements below in her Science Notebook. Identify the statement and write True or False in each box.

(a)	A robot is a living thing as it can move on its own.	
(b)	Lion will feed its young with milk.	
(c)	Fish has gills which help to take in dissolved oxygen from the water.	
(d)	Toadstool is a plant so it can make its own food.	

[2]

---End of Paper ---



# ANSWER SHEET

## EXAM PAPER 2009

SCHOOL : AITONG PRIMARY  
SUBJECT : PRIMARY 4 SCIENCE

TERM : SA1

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

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

31)a)F b)T c)T d)F

32)a)Can Y.

b)As air enters through one of the two holes, it pushes the milk out.

33)a)i)A: has definite volume. ii)B: Has no definite volume.

b)i)A ii)B

34)a)10may.

b)The seed was not given water.

35)a)It is to see if seeds could germinate in the dark.

b)Both set-up seeds will germinate.

36)a)They are oval shaped.

b)Leaf A has an entire edge when as Leaf B has a jagged edge.

37)a)No.

b)The plant with the most water was not the tallest.

c)The least amount of water is 50ml.

38)a)T b)F c)T d)F

39)a)They have three body parts and six legs.

b)i)It has three stages.

ii)It has four stages.

40)a)Container X.  
b)Container X has no holes for air to enter.

41)a)The cloth and paper will absorb water.  
b)She should use metal because it is hard.

42)a)F b)T c)T d)F