

**TAO NAN SCHOOL**

**PRIMARY 3 SCIENCE END-OF-YEAR EXAMINATION 2010**

Name : \_\_\_\_\_ (    )    Date : 1 November 2010

Class : P3 \_\_\_\_\_

Time : 8.00 a.m. to 9.15 a.m.

**Booklet A**

**INSTRUCTIONS TO CANDIDATES**

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

Follow all instructions carefully.

Answer all questions.

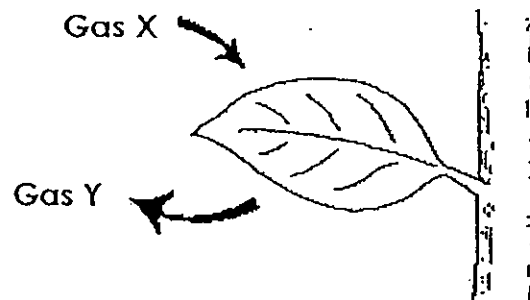
	Score	Marks
Section A		60
Section B		40
Total		100

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

**Section A (30 x 2 marks)**

For each question, choose the most suitable answer and shade its corresponding oval (1, 2, 3 or 4) in the optical response sheet.

1. The diagram below shows Gas X taken in and Gas Y given out by a leaf on a sunny afternoon.



Which of the following shows the exchange of gases of a leaf in a hot afternoon?

	Gas X	Gas Y
(1)	Oxygen	Oxygen
(2)	Carbon dioxide	Carbon dioxide
(3)	Carbon dioxide	Oxygen
(4)	Oxygen	Carbon dioxide

2. The table below shows how some fruits can be grouped.

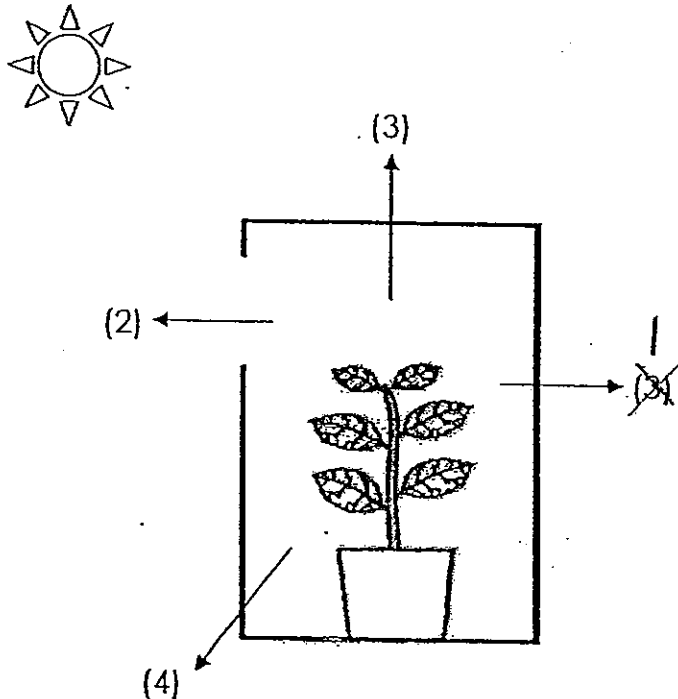
	One seed	Many seeds
Edible	A	B
Inedible	C	D

Which of the following represents a mango?

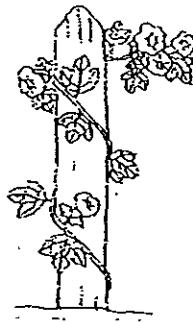
- (1) A  
(2) B  
(3) C  
(4) D

3. Mary wanted to find out how light affects the growth of a plant. She placed a pot of plant inside a cardboard box with an opening at one side for a week as shown in the diagram below. The plant was given enough water daily.

Which direction would the plant grow towards after a week?



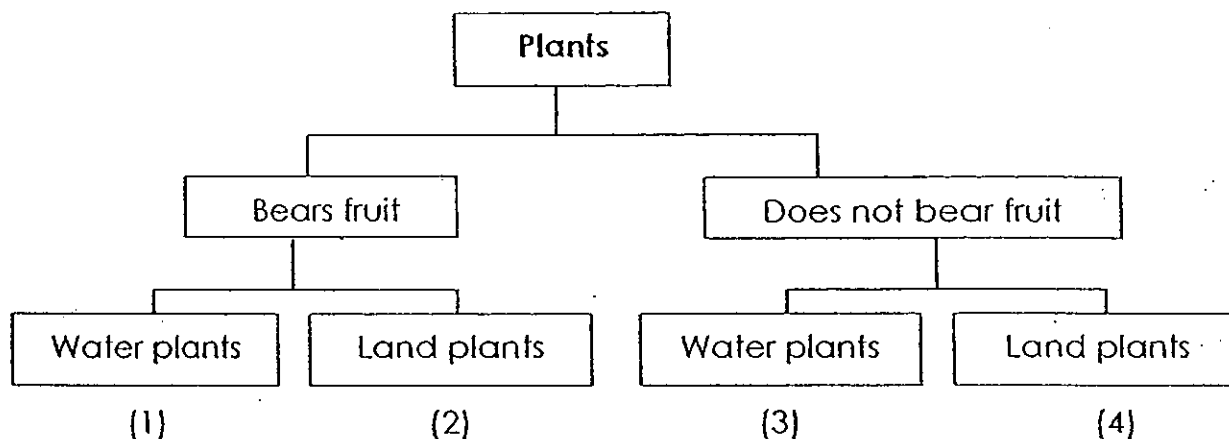
4. The drawing below shows a plant growing on a fence.



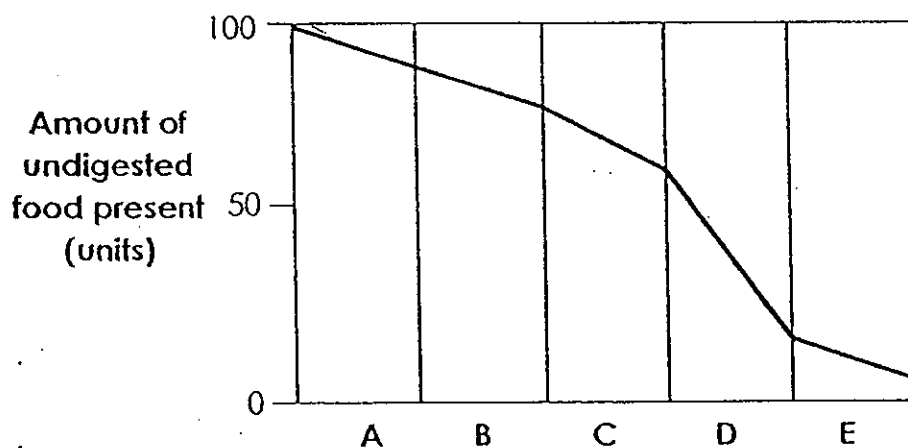
Based on the drawing, which is true about the plant?

- (1) This plant has fruit.
- (2) This plant has a weak stem.
- (3) This plant has green leaves.
- (4) This plant has purple flowers.

5. The following chart gives information on four plants. Which plant does not bear fruit and grows in water?



6. The graph below shows the amount of undigested food as it passes through the digestive system. The letters, A to E, represents the different parts of the digestive system. Letter A represents the mouth.

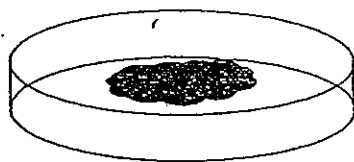


Which parts of the digestive system do C and E represent respectively?

	Part C	Part E
(1)	Stomach	Large intestine
(2)	Stomach	Small intestine
(3)	Small intestine	Small intestine
(4)	Small intestine	Large intestine

Study the table below and answer questions, 7 and 8, that follow.

John wanted to investigate the growth of four different types of bacteria cells over 80 minutes. After every 20 minutes, he measured the area occupied by the bacteria cells (in  $\text{cm}^2$ ) under the microscope and recorded the results in the table below.



Time (in minutes)	Area of Bacteria Cells A (in $\text{cm}^2$ )	Area of Bacteria Cells B (in $\text{cm}^2$ )	Area of Bacteria Cells C (in $\text{cm}^2$ )	Area of Bacteria Cells D (in $\text{cm}^2$ )
0	5	5	5	5
20	5	20	5	15
40	5	20	20	20
60	10	40	30	25
80	20	60	25	25

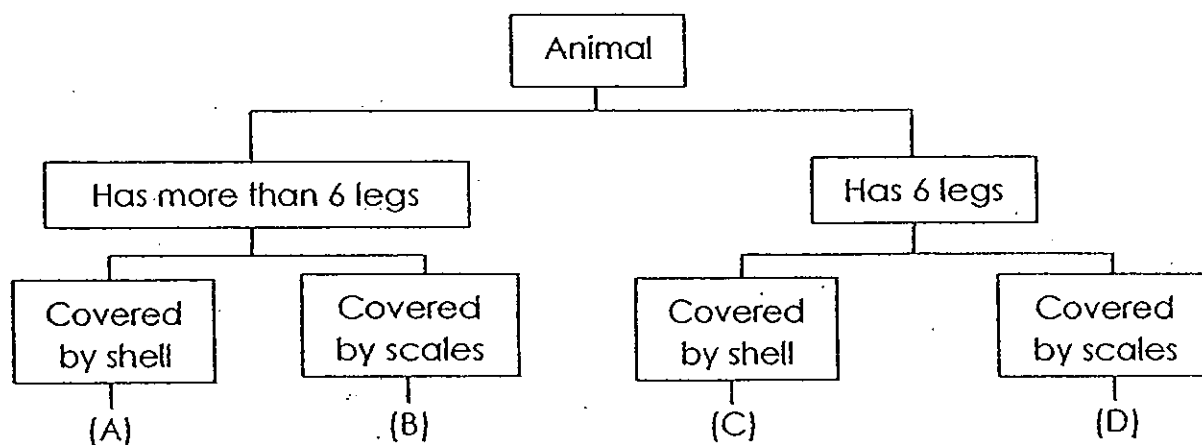
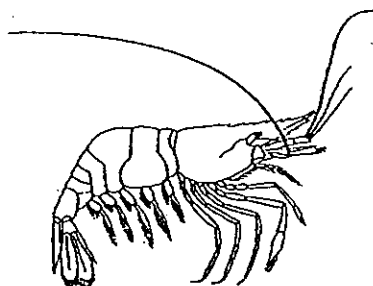
7. Which bacterial cells took the longest time to occupy  $20 \text{ cm}^2$ ?

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

8. Which variable did John change in his investigation?

- (1) The time in minutes.
- (2) The type of bacteria cells
- (3) The number of bacteria cells
- (4) The area occupied by the bacterial cells

9. Study the animal and the chart below.



Which letter, A, B, C or D represents the animal?

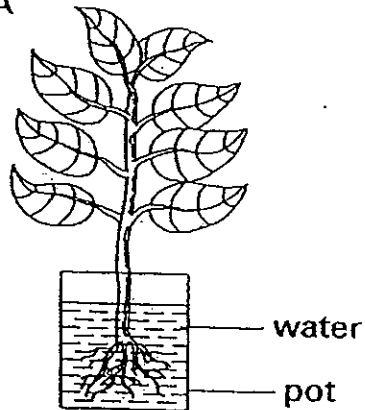
- (1) A
- (2) B
- (3) C
- (4) D

10. Four similar slices of moist bread are left in different locations for a week. In which of the following locations would the slice of moist bread **not** turn mouldy?

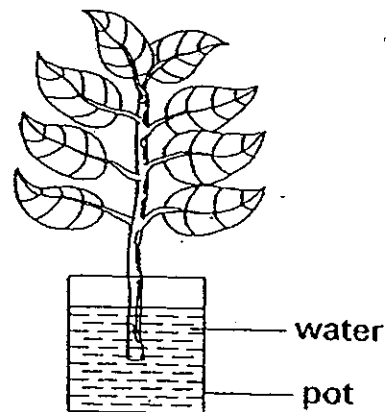
	Location
(1)	In a dark room
(2)	By an open window
(3)	By an oven
(4)	In a freezer

11. Four different set-ups are shown below.

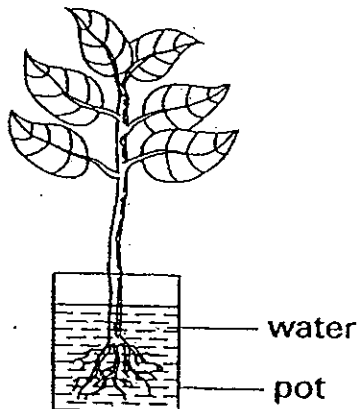
Set-up A



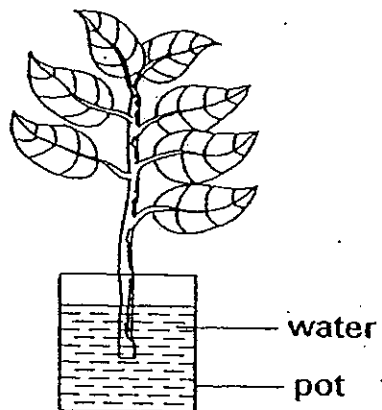
Set-up B



Set-up C



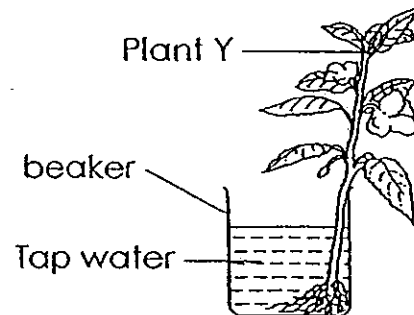
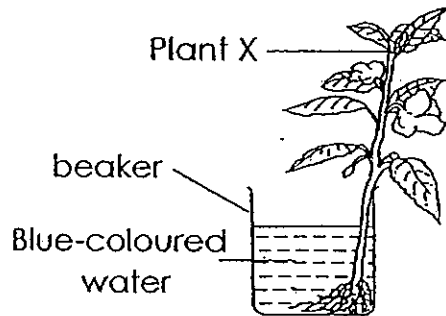
Set-up D



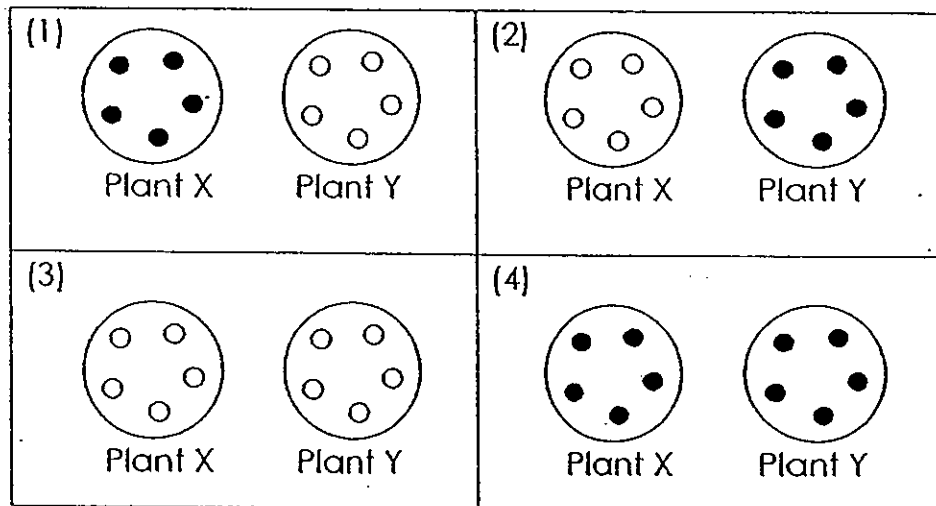
Which two set-ups should be compared to find out if roots are needed for the growth of the plant?

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

12. Amy placed two plants, Plant X and Plant Y, into two beakers containing blue-coloured water and tap water respectively as shown in the set-ups below. She left the plants in the beaker for five days.



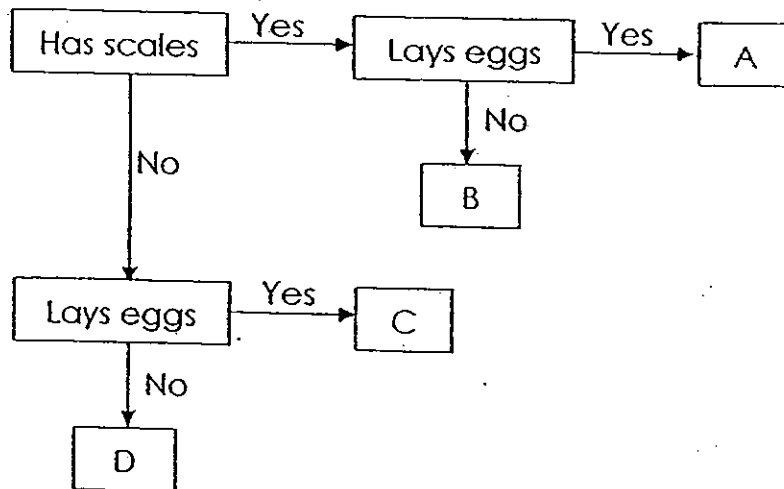
Plant X and Plant Y were cut at their stems on the fifth day. Which of the following diagrams show the cross-sections of the stems of Plant X and Plant Y on the fifth day?



Key: ● Blue coloured  
○ Not coloured



13. Observe the flow chart below.



Based on the flow chart, which of the following statements is **correct**?

- (1) A and C lay eggs.
- (2) B and D lay eggs.
- (3) C and D have scales.
- (4) A and B do not have scales.

14. Tom grouped the following together. Which item was **wrongly** grouped?



Basketball

(1)



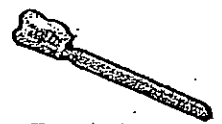
Goldfish

(2)



Jacket

(3)



Toothbrush

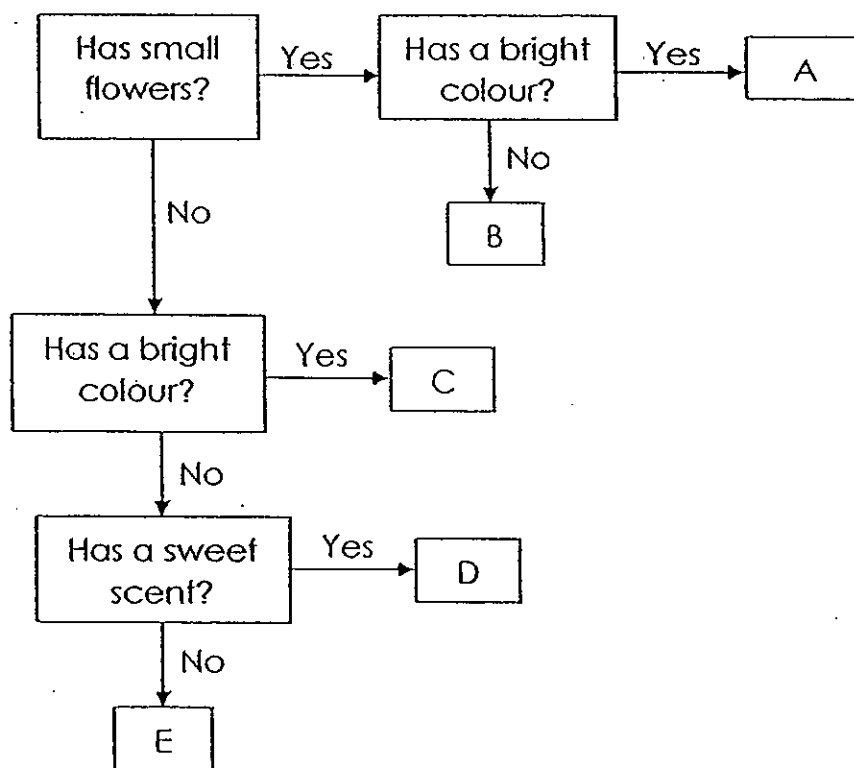
(4)

Study the information below and answer the questions, 15 and 16, that follow.

Candy observed the characteristics of different types of flowers that attracted different animals in her garden. The table below shows the characteristics of the flowers and the animals attracted.

Animals attracted	Characteristics of the flowers		
	Size	Colour	Scent
Butterfly	Small	Bright red	Sweet
Bee	Small	Purple	Sweet
Bird	Large	Bright yellow	Sweet

The flow chart below classifies the different flowers, A, B, C, D and E, according to their characteristics.



15. Which animal(s) will be attracted to flower A?

- (1) Butterfly only
- (2) Bird and Butterfly only
- (3) Bee and Butterfly only
- (4) Bee, Bird and Butterfly only

16. Animal X is attracted to large and dull coloured flowers. Which flowers could the animal be attracted to?

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

17. Peter wanted to find out if the number of seeds would affect their growth in a pot. He planted some seeds into three similar pots, X, Y and Z. The conditions for each pot are given below.

Conditions	Pot X	Pot Y	Pot Z
Number of seeds	10	15	20
Amount of water	100ml	150ml	200ml
Type of soil	Garden	Garden	Garden
Location of pots	Field	Field	Field

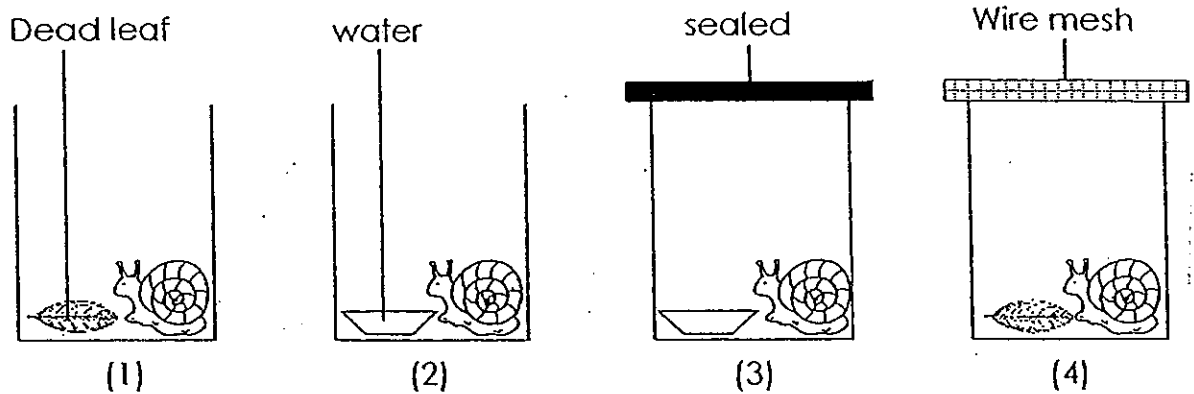
The experiment was **not** a fair test. Explain why.

- (1) The location of each pot should be different.
- (2) The type of soil in each pot should be different.
- (3) The number of seeds in each pot should be the same.
- (4) The amount of water given to each pot should be the same.

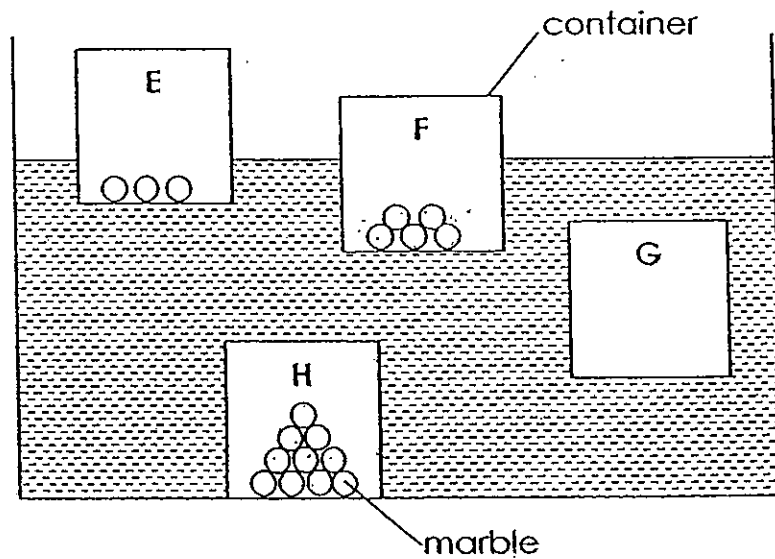
18. The leaves of a rain tree close in the evening and open during the day. Which characteristic of living things does this show?

- (1) Living things die.
- (2) Living things reproduce.
- (3) Living things need air, water and food.
- (4) Living things respond to their surrounding.

19. Sam sets up four beakers as shown below. In which beaker will the snail die first?



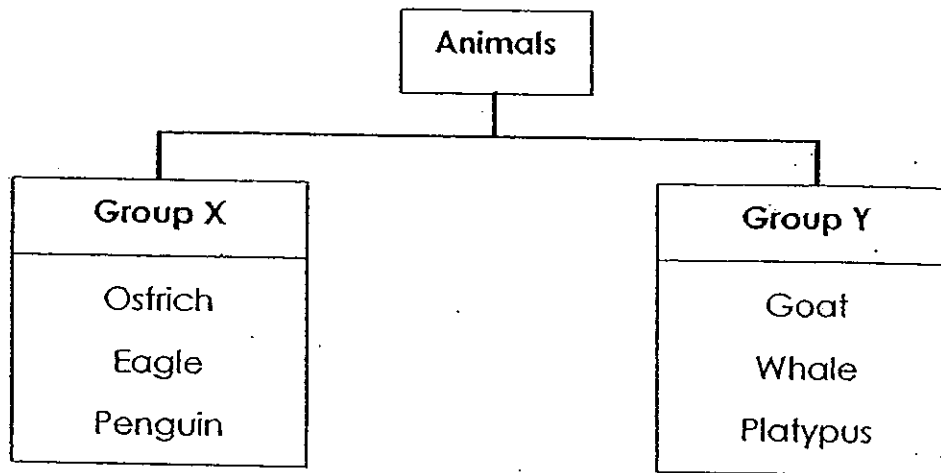
20. Amy placed different number of similar marbles into four different containers, E, F, G and H. The diagram below shows what she observed when the four containers were placed into a tank of water.



How many marbles did Amy place in container G?

- (1) 5
- (2) 8
- (3) 11
- (4) 13

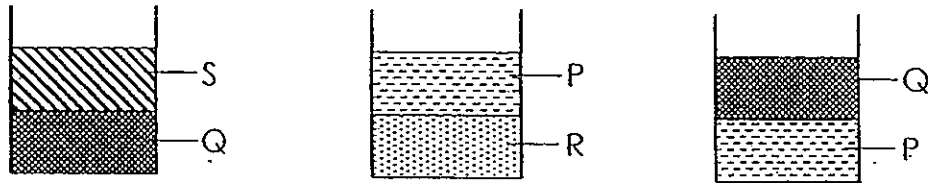
21. Susan grouped some animals into two groups as shown in the chart below.



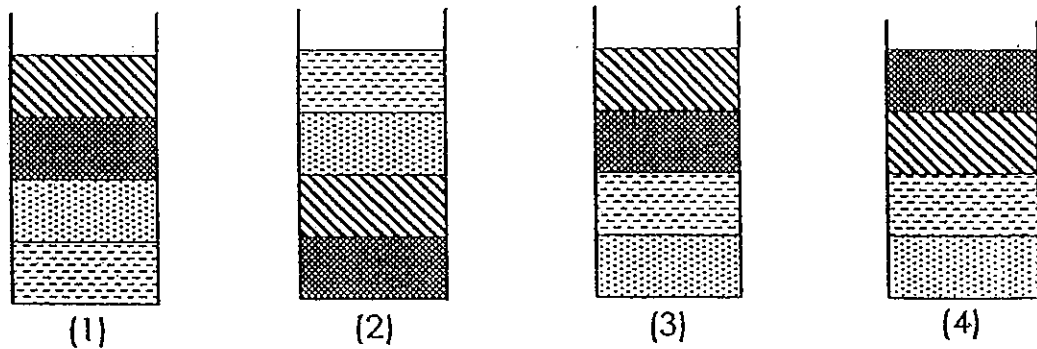
How are the animals grouped?

	Group X	Group Y
(1)	Animal eater	Plant eater
(2)	Outer covering of feathers	Outer covering of hair
(3)	Live on land	Live in water
(4)	Lay eggs	Give birth to young

22. Amy wanted to find out the properties of four different liquids, P, Q, R and S. The liquids did not mix when they were poured together, as shown below.



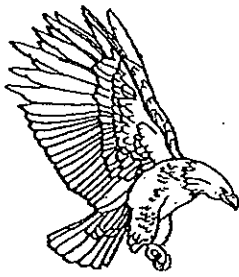
Which diagram shows what happens when all the liquids are mixed together?



23. Andrew wants to classify animals according to their type of body. What factors should he consider before classifying the animals?

- (1) The food they eat.
- (2) The way they move.
- (3) The way they reproduce.
- (4) The number of body parts.

24. Study the animals below carefully.



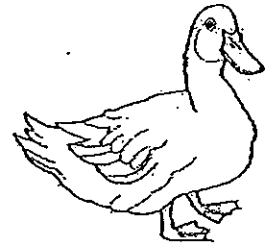
Eagle



Fly

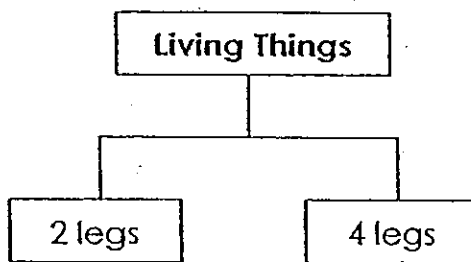


Ant

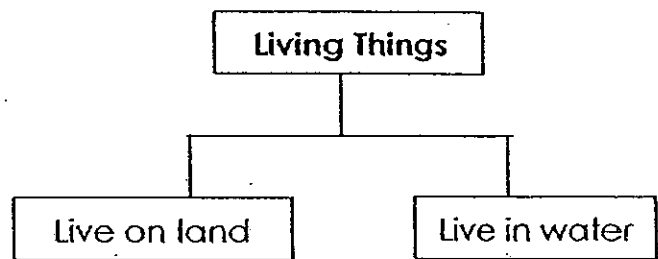


Duck

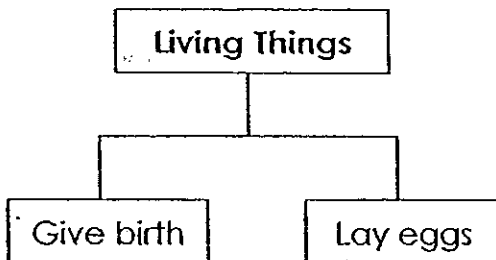
Which of the following classification charts can be used to classify these animals?



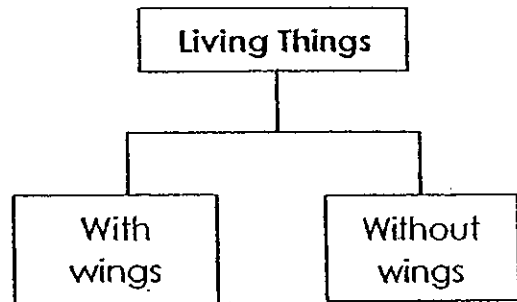
(1)



(2)



(3)



(4)

25. Which of the following about saliva is/are true?

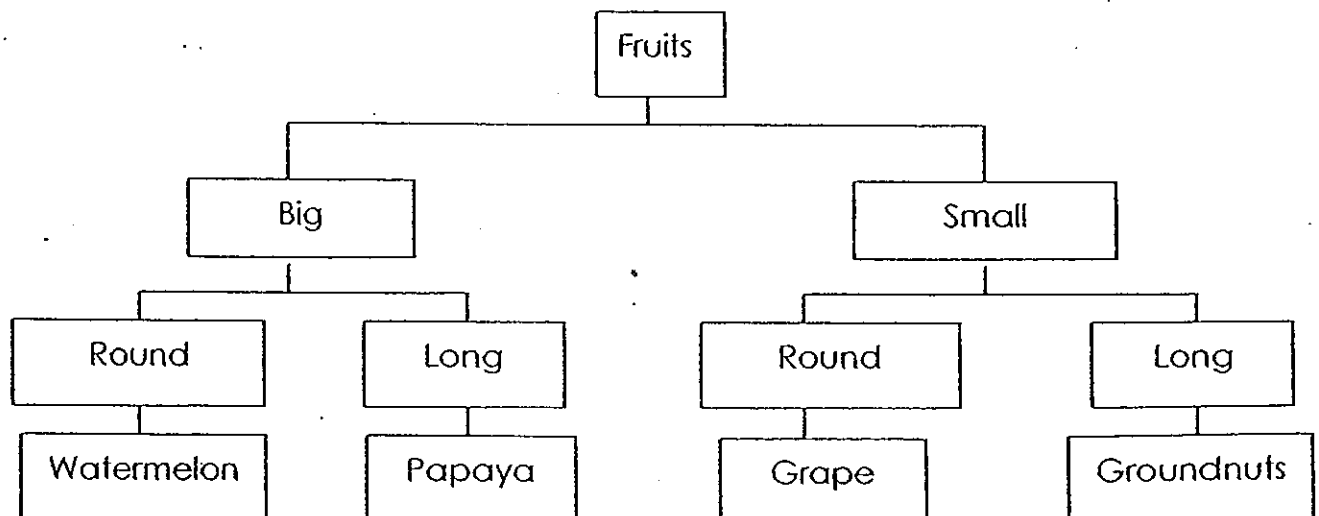
- A: Saliva is a liquid.
- B: Saliva helps to soften food.
- C: Saliva makes food easier to swallow.
- D: Saliva helps to digest food in the mouth.

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

26. Which of the following shows the correct path in which air travels from the surroundings into the body?

- (1) Nose → gullet → lungs
- (2) Nose → gullet → heart
- (3) Nose → windpipe → lungs
- (4) Nose → windpipe → heart

27. Study the classification chart below.

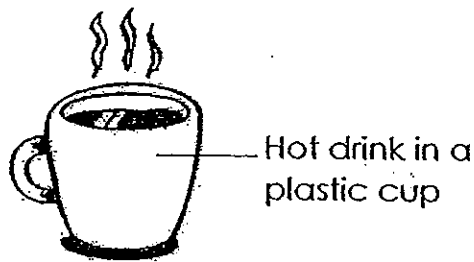


Based on the classification table only, which of the following is true?

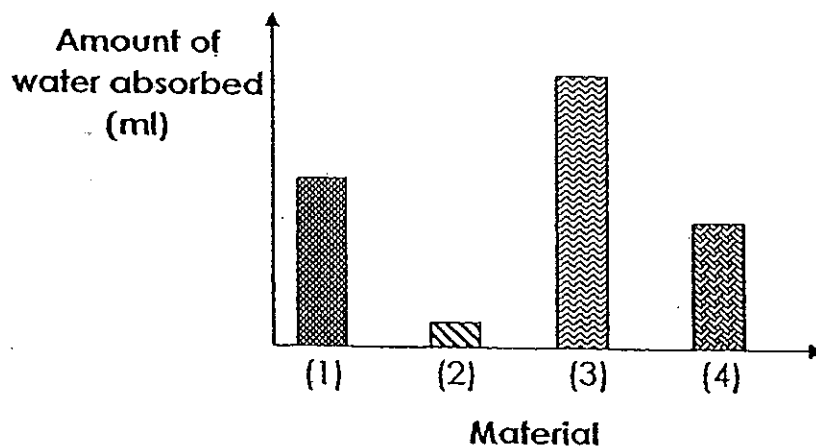
- (1) Papaya is big and juicy.
- (2) Grape is small and round.
- (3) Groundnut is small and tasty.
- (4) Watermelon is sweet and juicy.



28. A toddler is served a hot drink in a plastic cup instead of a ceramic cup. Which statement best explains the situation?



- (1) The plastic cup is bigger than the ceramic cup.
  - (2) The ceramic cup is harder than the plastic cup. ;
  - (3) The plastic cup is transparent but the ceramic cup is not.
  - (4) The ceramic cup is easily broken while the plastic cup is not.
29. Four different materials of the equal volume are soaked in a beaker of water for 3 minutes. The bar graph below shows the amount of water absorbed by the materials. Which material is most suitable for making a bath towel?



30. The table below shows some properties of four materials, A, B, C and D.

Property	A	B	C	D
Bends easily?	Yes	No	No	Yes
Breaks easily when dropped?	Yes	Yes	No	No
Can see clearly through it?	Yes	Yes	No	No

Which material is the **most suitable** for making spectacle lenses?

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

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TAO NAN SCHOOL

PRIMARY 3 SCIENCE END-OF-YEAR EXAMINATION 2010

Name : \_\_\_\_\_ (    )    Date : 1 November 2010

Class : P3 \_\_\_\_\_

Time : 8.00 a.m. to 9.15 a.m.

Booklet B

INSTRUCTIONS TO CANDIDATES

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

Follow all instructions carefully.

Answer all questions.

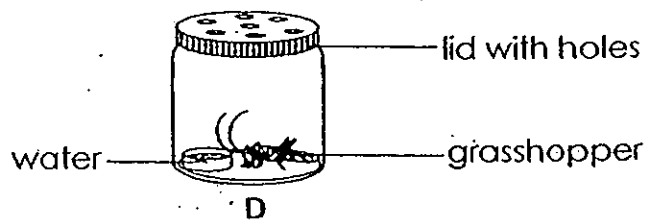
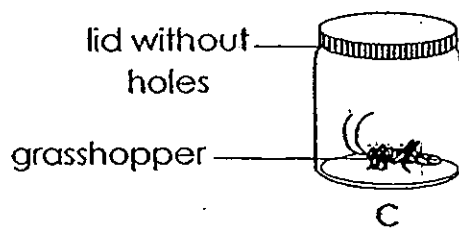
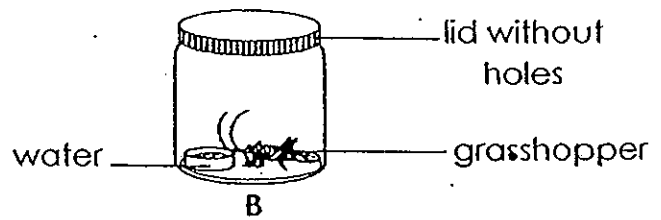
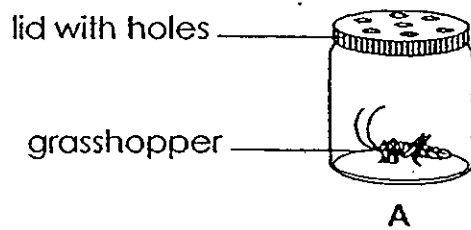
	Score	Marks
Section B		40

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

**Section B (40 marks)**

Write your answers in the space provided.

31. Jimmy set up four jars, A, B, C and D, as shown below.



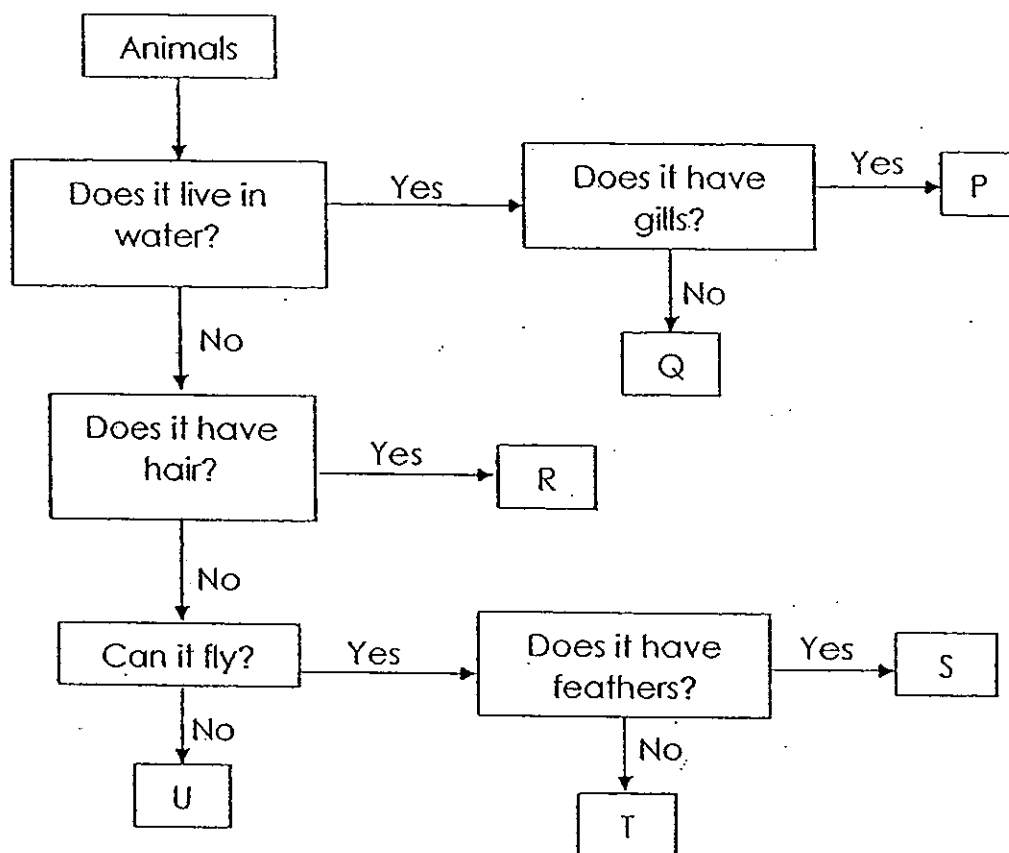
- a) Which two jars should Jimmy use to find out if a grasshopper needs water to survive? (1m)

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- b) Which two jars should Jimmy use to find out if a grasshopper needs air to survive? (1m)

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32. Study the flow chart below. P, Q, R, S, T and U represent different animals.



- a) What is the difference between the animals, S and T? (1m)

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- b) Which of the animals, P, Q, R, S, T or U represents a fish? (1m)

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- c) Based on the chart above, explain your answer in (b). (1m)

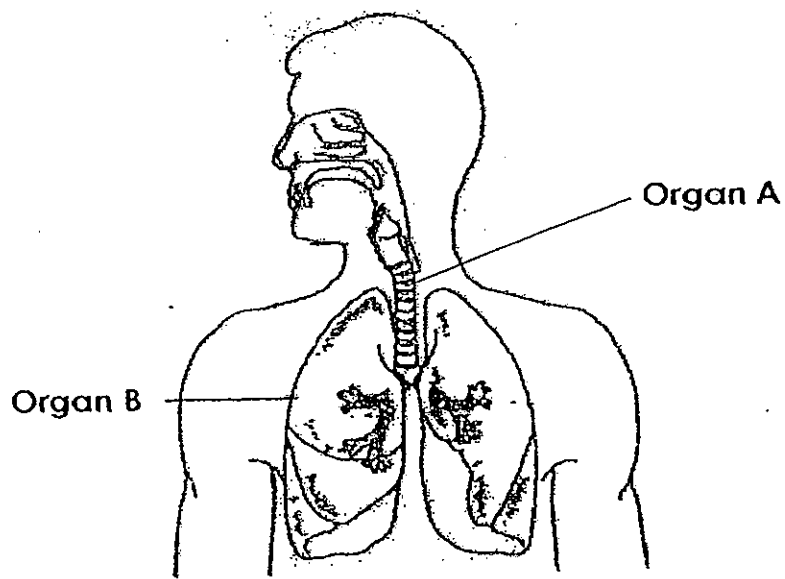
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- d) Name **one** common characteristic between the animals, R and S. (1m)

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33. The diagram below shows a human system.



(a) Name organ A and organ B. (1m)

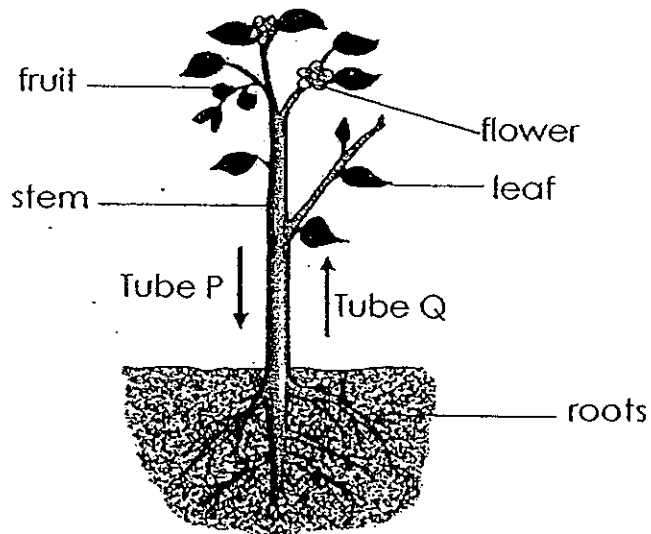
Organ A: \_\_\_\_\_

Organ B: \_\_\_\_\_

(b) What is the main function of this system? (1m)

\_\_\_\_\_

34. The diagram below shows the movement of some substances in tubes found in a plant and the different parts of the plant.



- (a) Identify the tubes by writing Tube P or Tube Q, in the boxes below. (1m)

Tube	Function
i)	Carries water
ii)	Carries food

- (b) The plant did not receive water for many days. What changes in the leaves can be observed before the plant die? (1m)

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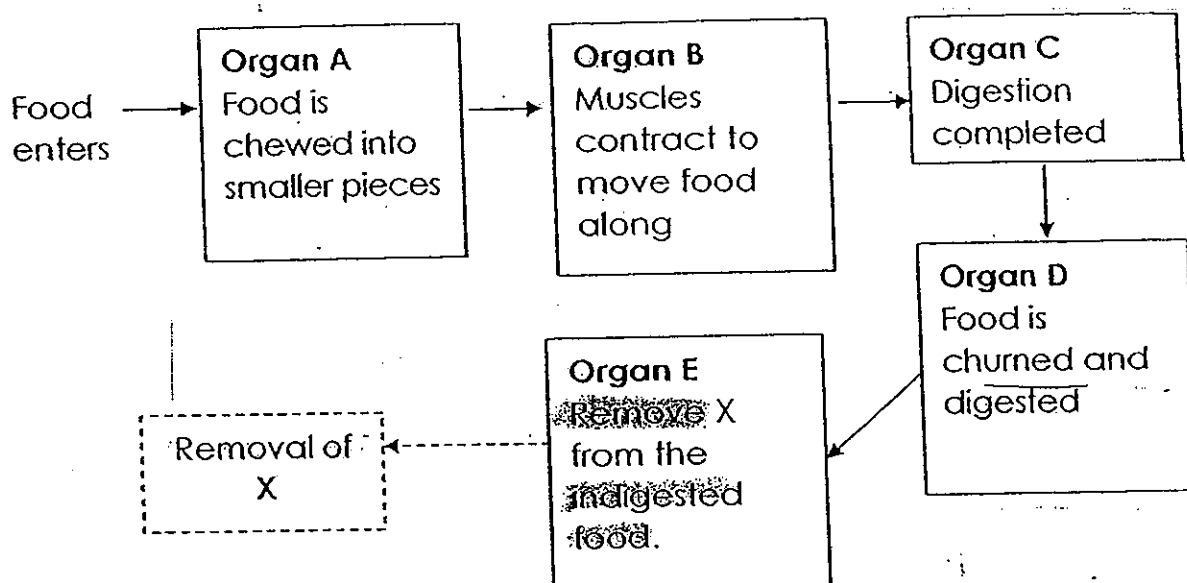
- (c) Explain your answer in (b). (1m)

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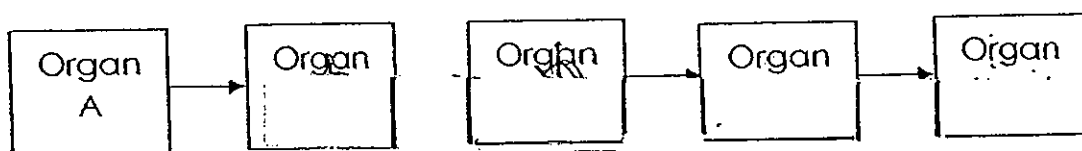


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35. The flowchart below shows the processes occurring in the human digestive system. There is an error in the flowchart.



- (a) Rearrange the organs in the correct order in the digestive system. (1m)



- (b) Identify the organs below. (1m)

- (i) Organ B: \_\_\_\_\_
- (ii) Organ E: \_\_\_\_\_

- (c) X is removed from Organ E. What is X? (1m)

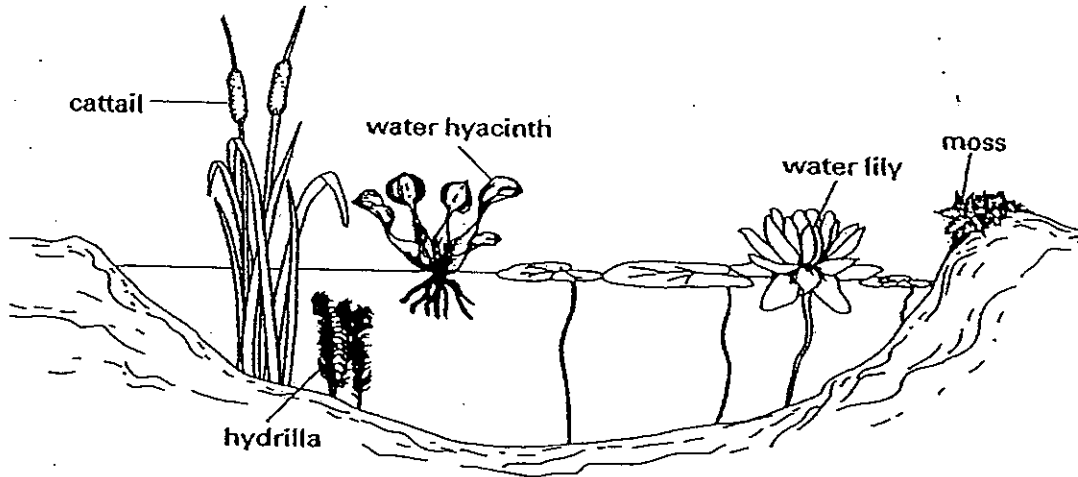
\_\_\_\_\_

- (d) Name the organ in the digestive system that absorbs nutrients for transfer to other parts of the body? (1m)

\_\_\_\_\_



36. The diagram below shows the plants in a pond.



Complete the table below.

(3m) :

Plants				
Water Plants			Land Plants	
	Partially submerged Plants	Submerged Plants	Flowering Plants	Non-flowering Plants
Water hyacinth				

37. The table below shows the characteristics of 4 different mammals.

Characteristics	Mammal E	Mammal F	Mammal G	Mammal H
Has hair	yes	yes	yes	yes
Lays eggs	no	no	no	yes
Feeds its young with milk	yes	yes	yes	yes
Has a beak	no	no	no	yes

- a) From the table above, tick (✓) the statement(s) that best describe(s) a mammal.

( 2 m )

☐

It has a beak.

☐

It has hair.

☐

It lays eggs.

☐

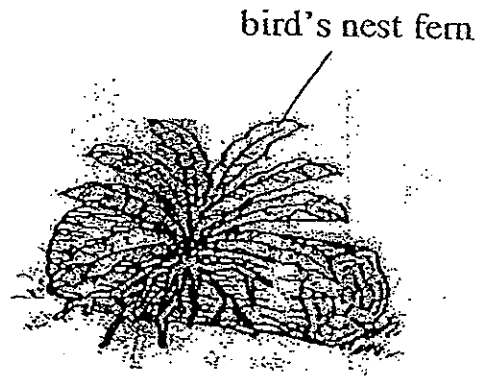
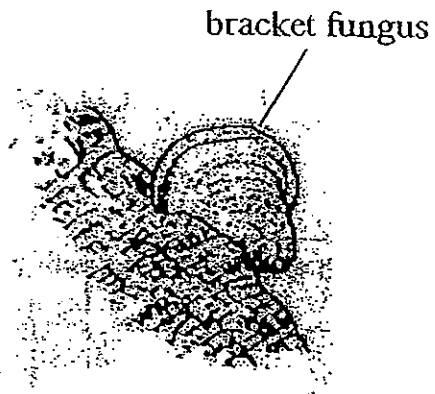
It feeds its young with milk.

- b) Based on the characteristics given in the table above, what can Mammal H be?

( 1 m )

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38. Look at the diagrams below carefully.



Based on what you can see in the diagrams, write one similarity and one difference between the two living things.  
(Do not compare colour, shape and size.) ( 2 m )

Similarity : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Difference : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

39. Meiling carried out an experiment in the Science laboratory with 4 stalks of roses cut from the same plant. She sprayed chemicals P, Q, R and S on each flower and recorded the results of her experiment in the table below.

Variables	Beaker A	Beaker B	Beaker C	Beaker D
Number of stalks of roses	1	1	1	1
Type of chemical	P	Q	R	S
Amount of water (ml)	400	400	400	400
Number of days the roses stayed fresh	7	5	6	3

- (a) What was Meiling trying to find out from her experiment? (1m)

\_\_\_\_\_

- (b) Did Meiling conduct a fair test? Give a reason for your answer.

(1m)

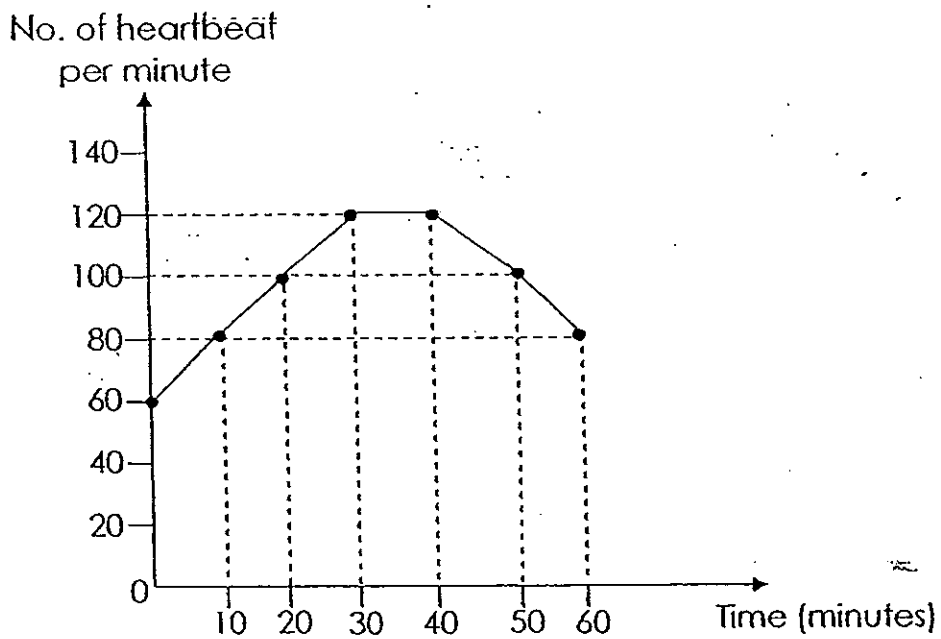
\_\_\_\_\_

- (c) Besides using beakers similar in size and material, state two other variables which she must keep the same. (1m)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

40. The graph below shows Peter's heartbeat rate over a period of 60 minutes.



- (a) Describe Peter's heartbeat rate in the first 30 minutes. (1m)

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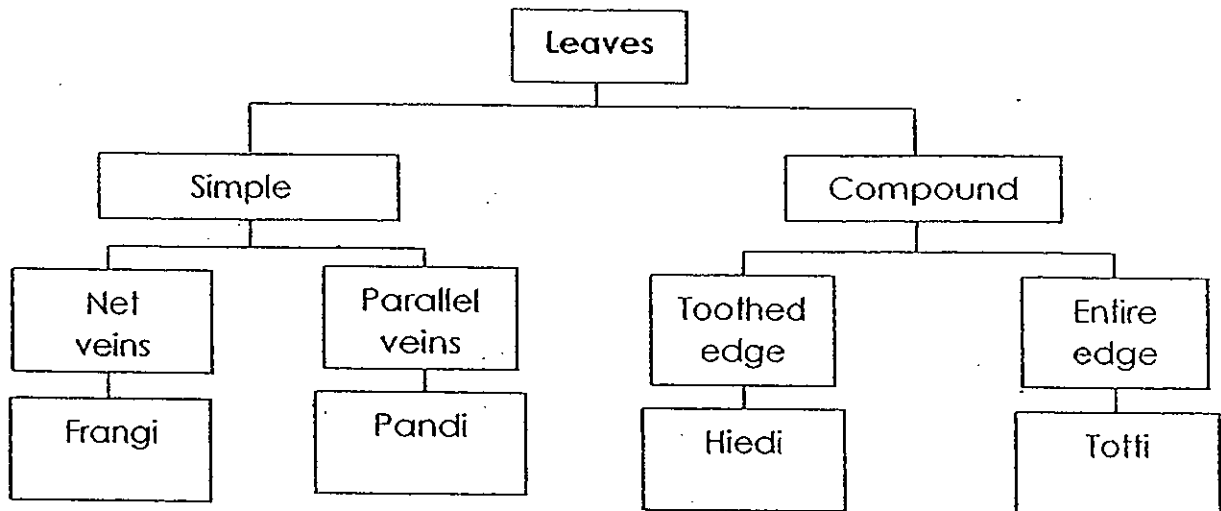
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- (b) What is Peter's heartbeat rate at the 20<sup>th</sup> minute? (1m)

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41. Shaun was given three leaves to identify with the help of the classification chart below.



Observe the three leaves carefully and help Shaun to identify them as Frangi, Pandi, Hiedi or Totti. (3m)



Leaf P



Leaf Q



Leaf R

(a) Leaf P: \_\_\_\_\_

(b) Leaf Q: \_\_\_\_\_

(c) Leaf R: \_\_\_\_\_

42. Classify the following things into systems or non-systems in the boxes below.



telephone



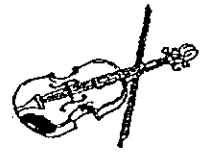
seahorse



newspaper



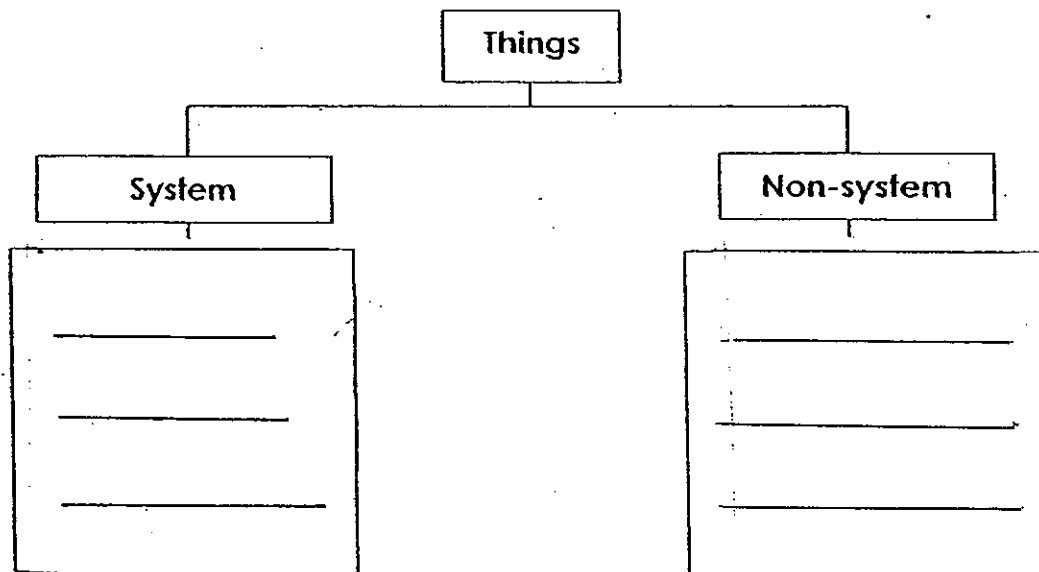
key



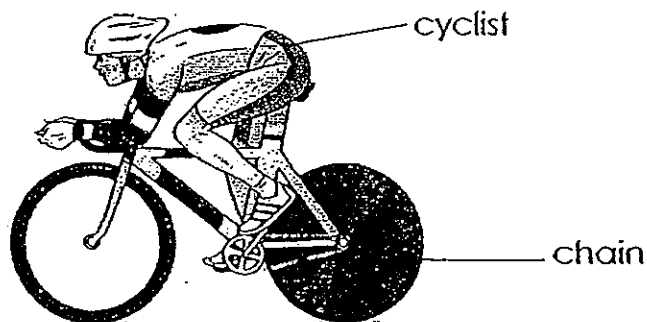
violin

(a) Complete the classification chart below.

(2m)



(b) The picture of a cyclist on a bicycle is shown below. The cyclist riding on the bicycle is a system where different parts work together for the bicycle to move.

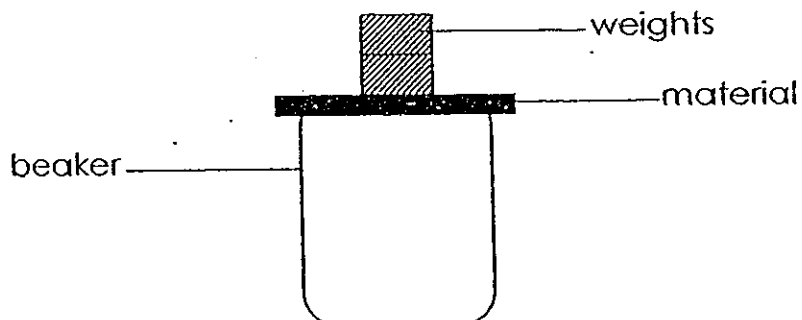


What will happen if the chain is removed?

(1m)

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43. Mary conducted an experiment with the materials, W, X, Y and Z, as described below.  
She placed a sheet of material over a beaker and added some weights over it until it broke.



The table below shows the results of her experiment.

Materials	Maximum weight it can hold
W	40kg
X	20kg
Y	130kg
Z	90kg

- (a) Arrange the materials according to their strength from the strongest to the weakest. (1m)

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- (b) Mary wanted to make a stool to support the weight of an adult.  
Which material, W, X, Y or Z is most suitable for making the stool? (1m)

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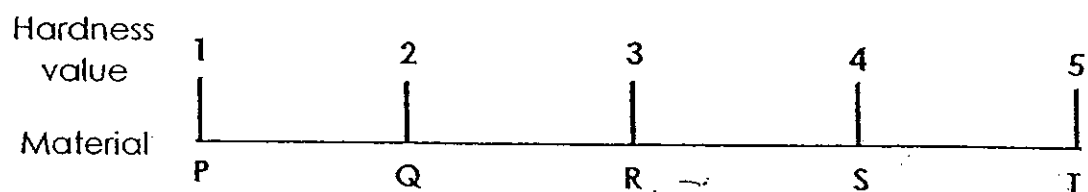
- (c) Give a reason for your answer in (b). (1m)

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44. The hardness of different materials is shown below. A higher value means a higher degree of hardness.



Based on the above information; state whether each of the following statements is 'True', 'False' or 'Not possible to tell'. Put a tick (✓) in the correct column. (2m)

Statement	True	False	Not possible to tell
a) S is able to leave a scratch on R.			
b) R can cause deeper scratches on P than T.			
c) S is a stronger material than Q.			
d) R is the best material to be used to make a shower sponge.			



# Ans

## EXAM PAPER 2010

**SCHOOL : TAO NAN PRIMARY**  
**SUBJECT : PRIMARY 3 SCIENCE**

**TERM : SA2**

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

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

31)a)Jars B and C.      b)Jars A and C

32)a)Animals have feathers but animal I does not have.

b)Animal P.

c)It lives in water and it have gills.

d)They do not live in water.

33)a)A: wind pipe.      B: lungs.

b)When you breath in, you take in oxygen and carbon dioxide come out of you lungs.

34)a)i)tube Q    ii)tube P

b)The leaves will dry up.

c)The leaves does not have water for the plant to make food.

35)a)A→B→D→C→E

b)i) gullet    ii)large intestine

c)X is water

d)Small intestine.

36)float      cattail water Lily      hydrilla      -----      mass

37)a)It has hair,      It feeds its young with milk

b)Mammal H can be a platypus

38)Similarity: They grow on anything dead or alive.

Difference: Bird's nest fern has leaves while bracket fungus has no leaves.

39)a)Meiling was trying to find out which chemical is the best for the roses to stay fresh the longer.

b)Yes. There is only one changed variables in her experiment.

c)i)Number of stalls of roses.

ii)Amount of water.

40)a)It increase.

b)Peter's hear beat rate is at 100.

41)a)Totti

b)Hiedi

c)Frangi

42)a)System

Telephone

Seahorse

Violin

Non-system

newspaper

key

b)The cyclist will not be able to pedal the bicycle.

43)a)Y,Z,W,X

b)Y

c)Material Y is the strongest among the others.

44)a)T   b)F   c)Not   d)Not