

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2004

SA1

Name: _____ ()

Date: _____

Class: Primary 5

SCIENCE

BOOKLET A

30 questions

60 marks

Total time for Booklets A & B : 1h 45 min

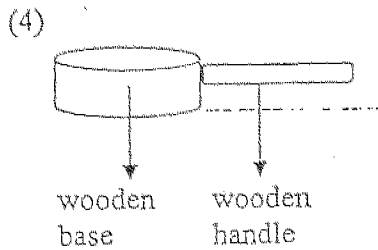
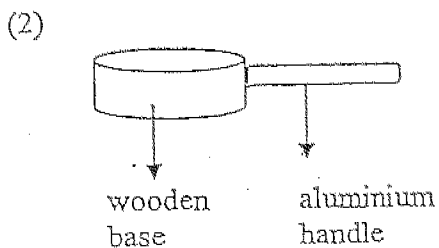
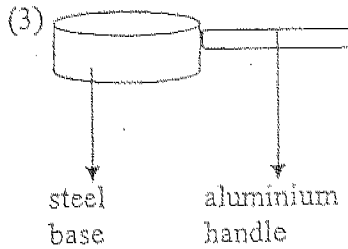
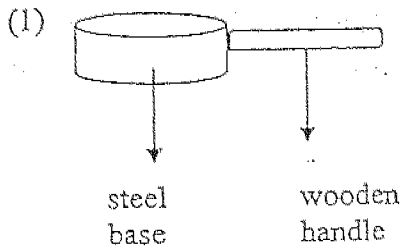
DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

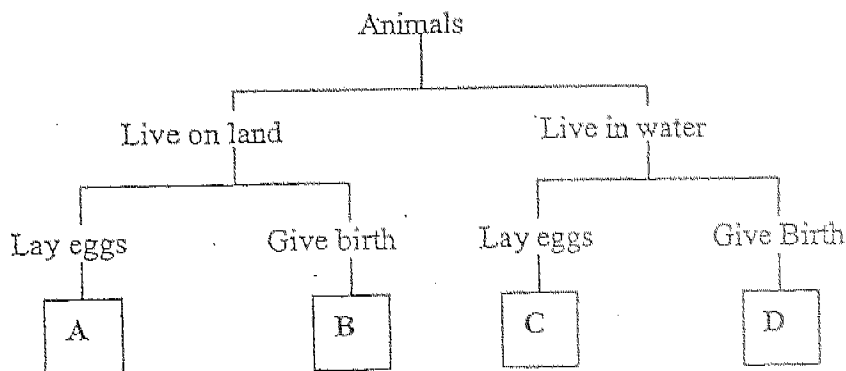
Part 1 (60 marks)

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. The four pans shown below are of the same size. Which one of the pans would be ideal for cooking food in a safe and fast way?

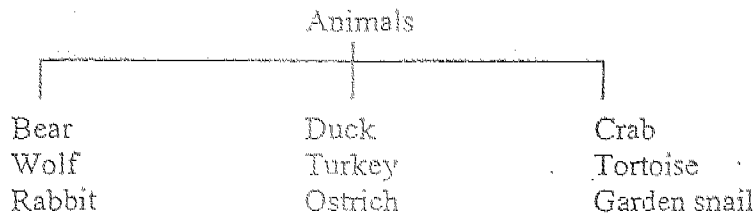


2. Which group of animals below best represents A, B, C and D respectively?



	A	B	C	D
(1) ✗	Chicken	Dog	Whale	Manatees
(2) ✗	Hamster	Mosquito	Guppy	Salmon
(3) ✗	Penguin	Cobra	Toad	Whale
(4) ✓	Penguin	Hamster	Salmon	Guppy

3. Study the classification diagram carefully.



The animals are grouped according to _____

- (1) their habitat
- (2) the way they move
- (3) their feeding habits
- (4) their outer covering

4. Mary classified a bat, a rat and a kangaroo in the same group. In what ways are they similar? They _____

- (A) live in the same place
- (B) eat the same type of food
- (C) have the same body covering
- (D) give birth to their young alive

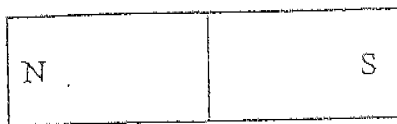
- (1) A and B only
- (2) C and D only
- (3) B and C only
- (4) A and D only

5. Susan wants to test if two magnets have the same strength. What must she do to ensure that it is a fair test? She must make sure that _____

- (A) the magnets are of the same size
- (B) the magnets are of the same shape
- (C) the distance between the paper clips are equal

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

6. Linda brought 3 objects X, Y and Z towards a bar magnet as shown in the diagram below. She placed the ends of each object A and B near the S pole of the bar magnet and recorded her observations in the table below.



Bar magnet

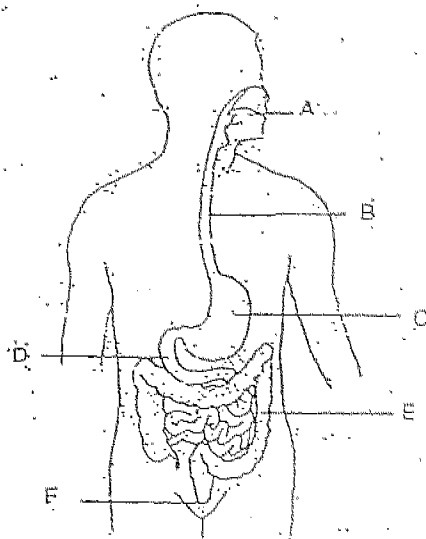


Object

Object	A was brought near the South pole	B was brought near the South pole
X	South pole repelled	South pole was attracted
Y	South pole was attracted	South pole was attracted
Z	South pole remains stationary	South pole remains stationary

Which of the object(s) is/are a magnet?

- (1) Z only
 (2) Y only
 (3) X only
 (4) X and Y only
7. The diagram below shows the digestive system of a human being. In which parts of the system does digestion NOT occur?



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

8. Which one of the following is paired incorrectly?

	Bones	Protects the:
(1)	Skull	Brain
(2)	Ribcage	lungs and heart
(3)	Backbone	spinal cord
(4)	Hip bone	Intestines

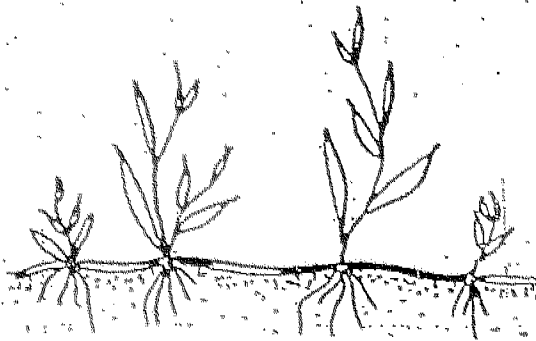
9. Some muscles in our body work without us having control over them. One of these muscles controls _____

- (1) the arm
- (2) the heart beat
- (3) chewing
- (4) kicking a ball

10. The blood vessels in a human body carry blood to all parts of the body. The plant has a similar function. Which part of the plant carries nutrients to the different parts of the plant?

- (1) roots
- (2) leaves
- (3) xylem
- (4) phloem

11. Look at the plant shown below.



Which one of the statements is true about the plant?

- (1) The roots absorb sunlight.
- (2) The stem holds the plant firmly to the ground.
- (3) The plant will die if all the leaves are removed.
- (4) The plant will still survive when the roots are removed.

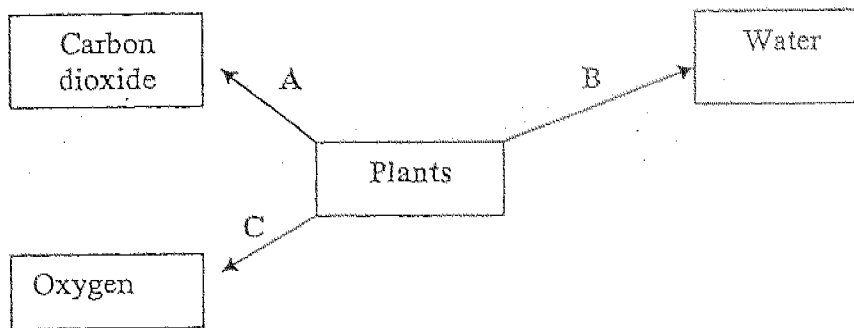
12. May carried different activities and measured her pulse rate for each activity. The results are recorded in the table below.

Activity	Pulse rate/min
A	65
B	80
C	110
D	135

Which one of the following group of activities represents the letters?

	Strolling	Sprinting	Reading a book	Walking briskly
(1)	A	B	C	D
(2)	A	D	B	C
(3)	C	B	A	D
(4)	B	D	A	C

13. Study the concept map given below.

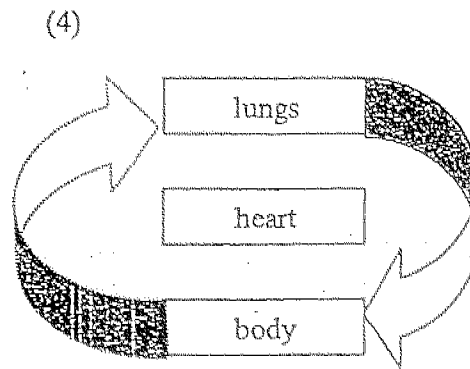
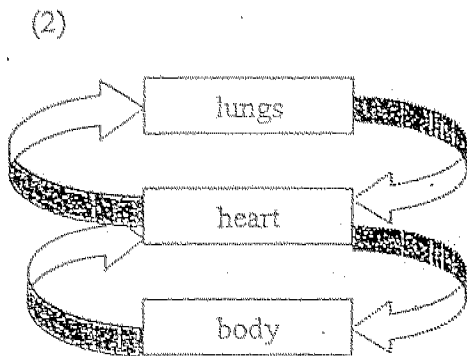
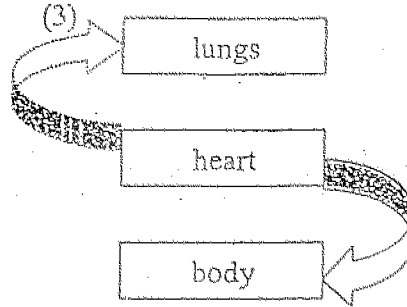
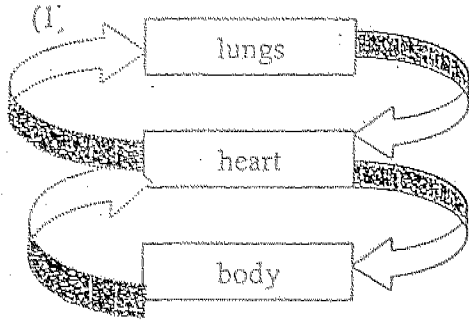


Which one of the following are processes A, B and C?

	A	B	C
(1)	Transpiration	Respiration	Photosynthesis
(2)	Photosynthesis	Respiration	Transpiration
(3)	Respiration	Transpiration	Photosynthesis
(4)	Respiration	Photosynthesis	Transpiration

14. Which one of the following shows the correct circulation of blood in a human being?

Take note:  Oxygenated blood
 Deoxygenated blood

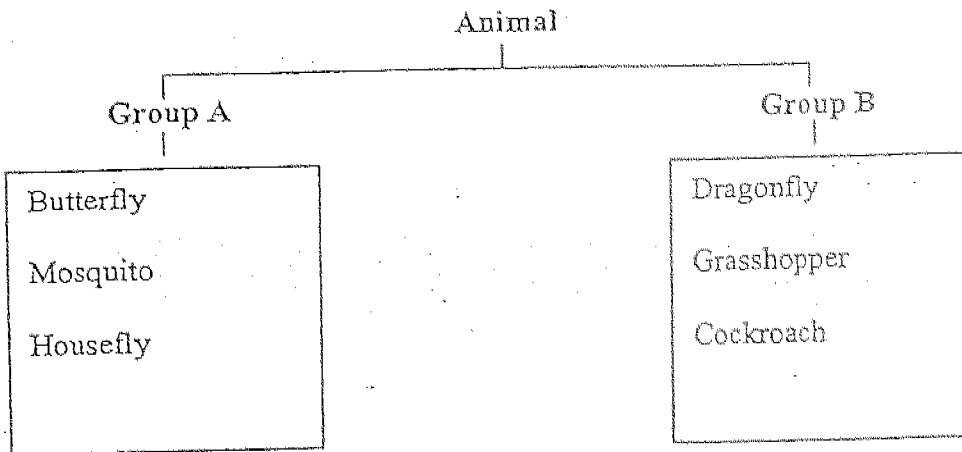


15. May noticed that the _____ grow first when the seed starts to germinate.

- (1) root
- (2) stem

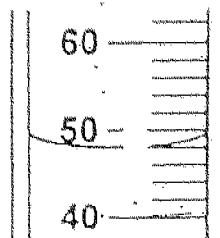
- (3) leaf
- (4) shoot

16. Betty classified some animals into 2 groups as shown below. Which one of the following sets of heading is most suitable for Group A and B?



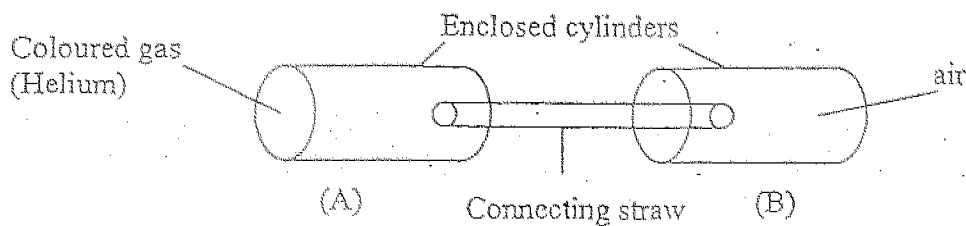
	Group A	Group B
(1)	Insects that can fly	Insects that cannot fly
(2)	Plant eater	Animal Eater
(3)	Insects that lay egg	Insects that give birth to their young
(4)	Insects with 4 stage life cycle	Insects with 3 stage life cycle

17. Peter is reading from the measuring cylinder. How much water does the measuring cylinder contain?



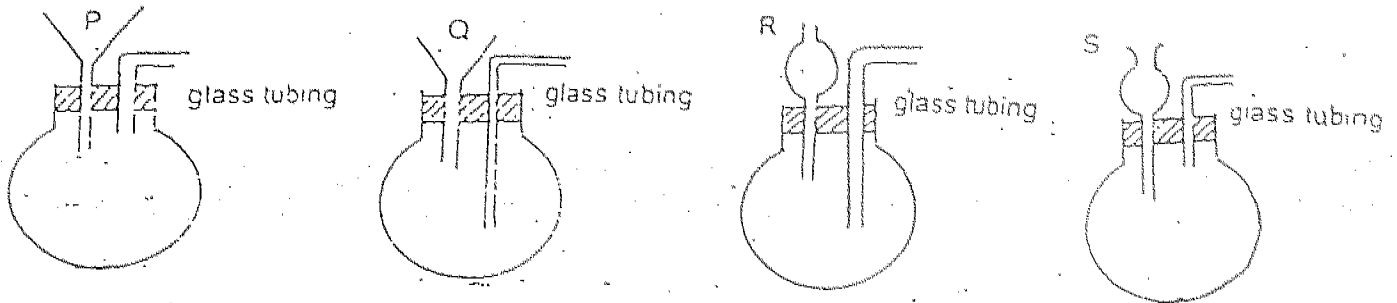
- (1) 48 cm^3 (3) 50 cm^3
 (2) 49 cm^3 (4) 51 cm^3

18. Two enclosed cylinders, A and B are connected by a straw which had openings on both side. One of the cylinders contained air. The other cylinder contained coloured gas (helium) as shown below. What will happen after some time?



- (1) Cylinder A will be filled with helium ONLY and cylinder B will be filled with air ONLY.
 - (2) Cylinder A will be filled with air ONLY and cylinder B will be filled with helium ONLY.
 - (3) Some helium in cylinder A will move to B and some air in cylinder B will move to A.
 - (4) All the helium in A will move to B and it will remain in B as a mixture.
19. A solid with a melting point of 1250°C was used to make a container for melting metals. Which of the following solids can be melted in this container?
- A: Steel – melting point 1540°C
B: Gold – melting point 1063°C
C: Silver – melting point 960°C
D: Copper – melting point 1083°C .
- (1) A only
 - (2) B, C and D only
 - (3) A and C only
 - (4) All of the above

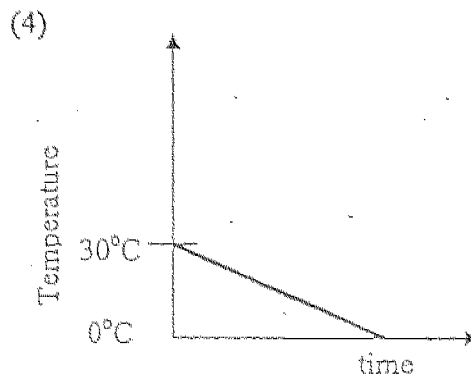
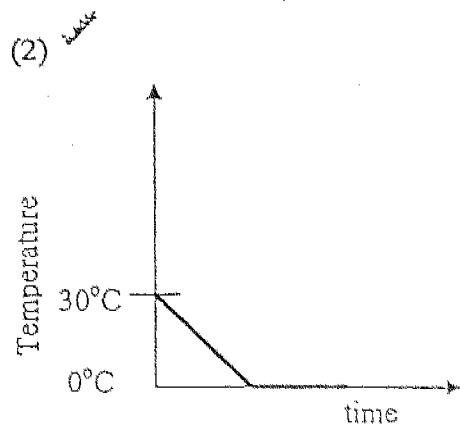
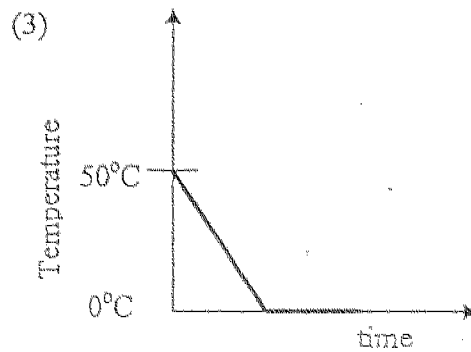
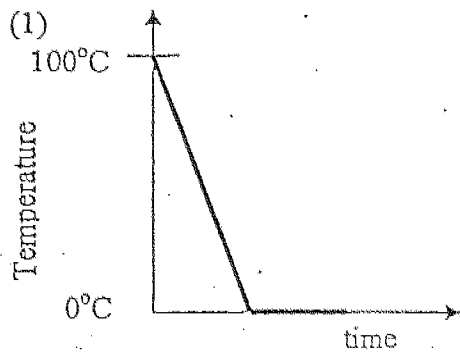
20. Mary set up the experiment as shown below to find out how fast liquid takes to flow down into the flask. She is given 4 funnels, P, Q, R and S. In order to make it a fair test, what are the variables that Mary should keep constant?



- A: The amount of liquid
- B: The type of liquid
- C: The type of glass flasks
- D: The type of the glass tubing

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

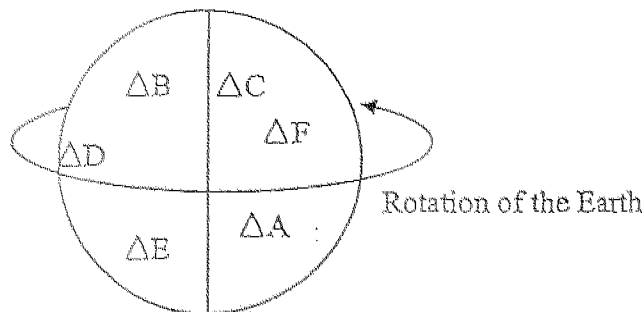
21. Juliana placed a glass of water at room temperature into the freezer for 3 hours. Which one of the following graph best represents the change in the temperature?



22. Which one of the following statements about the Day and Night cycle is true?

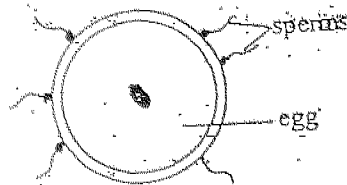
- (1) The revolution of the Earth causes day and night.
- (2) One revolution made by the Earth takes 24 hours.
- (3) One rotation of the Earth on its own axis takes 24 hours.
- (4) The change from day to night follows an irregular pattern.

23. It is now morning in A. Which place is experiencing night now?



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

24. The diagram below is known as the _____ process.

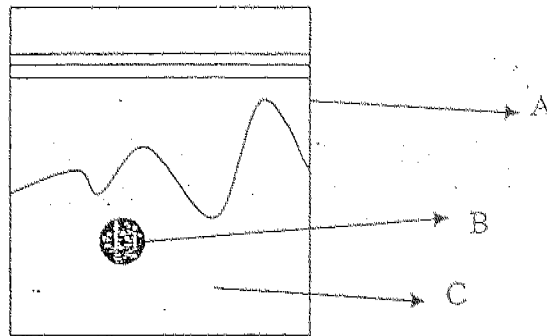


- (1) mating
- (2) fusion
- (3) pollination
- (4) fertilisation

25. Mary has a single cell organism. She learns in her Science lesson that this cell will undergo the binary fission process in order to reproduce. Can you tell her how many cells there will be after 5 generations of cell division?

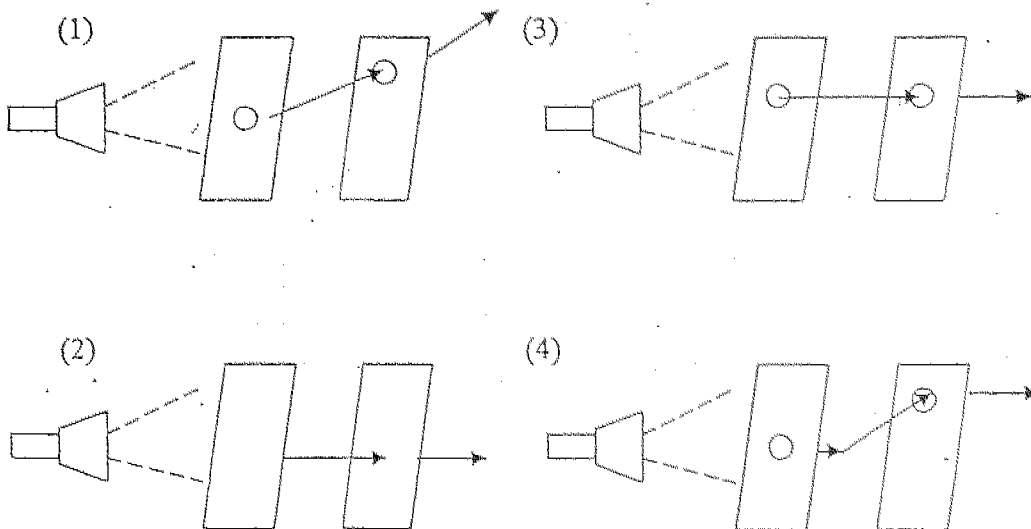
- (1) 5
- (2) 16
- (3) 32
- (4) 64

26. Amanda's teacher wanted to use a model to show the class the different parts of an animal cell. She took a ziplock bag, put in some jelly like substance and a black button. Can you tell what each item represents?

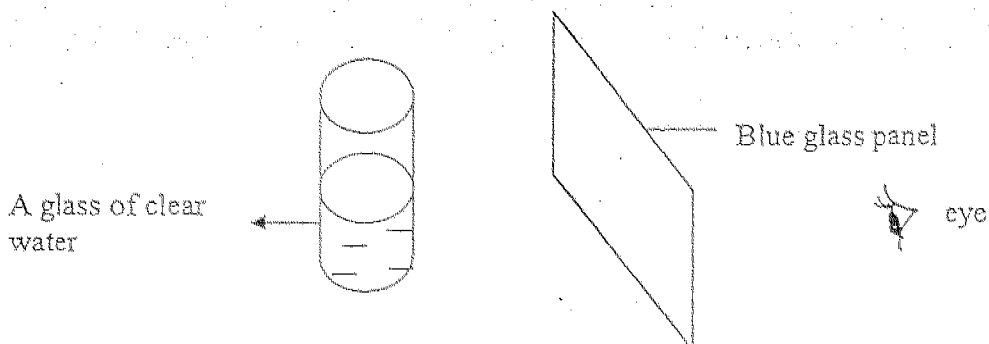


	A	B	C
(1)	Cell Wall	Nucleus	Cytoplasm
(2)	Cell Wall	Cytoplasm	Nucleus
(3)	Cell Membrane	Nucleus	Cytoplasm
(4)	Nucleus	Cell Membrane	Cytoplasm

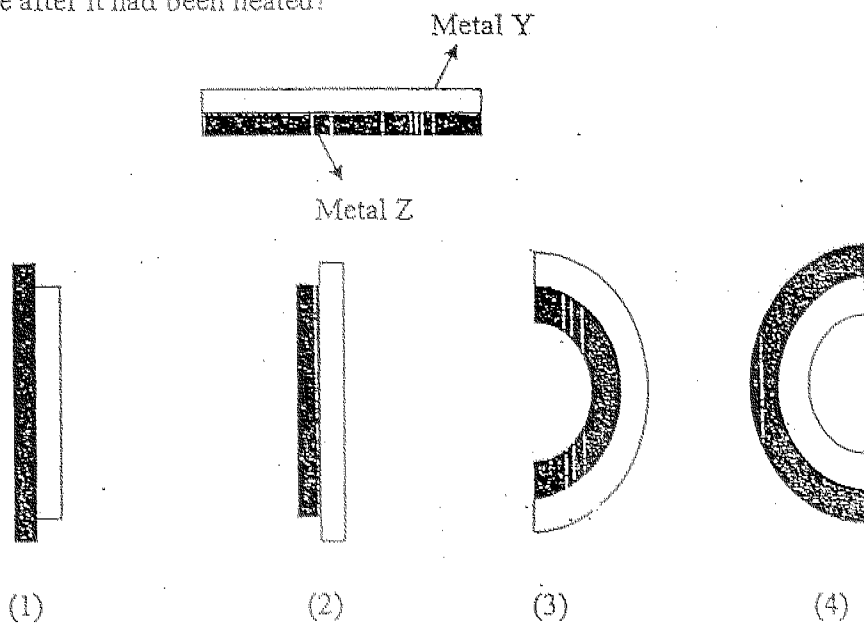
27. Jane shines a torchlight at the papers as shown. Which one of the following shows the correct path of light?



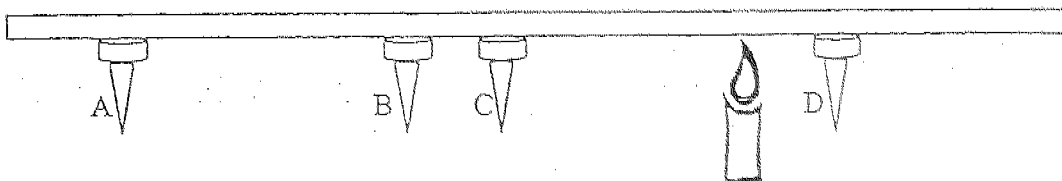
28. Andy conducted the following experiment. He noticed that the glass of water is blue when he looked through the blue glass panel. He suggested four possible reasons. Which one of the following is the correct reason?
The glass _____



- (1) of water reflected the blue colour light.
 - (2) of water absorbed the blue colour light.
 - (3) panel absorbed all other colour lights except blue.
 - (4) panel reflected all other colour light except blue.
29. The metal strip below is made up of two different types of metals. Metal Y and Z are bound together. If Metal Z expands more than Y, how will the strip look like after it had been heated?



30. Four similar nails are stuck onto an iron rod by the same amount of wax as shown below. A candle is placed as shown below. Which one of the followings shows the order at which the nails will drop?



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

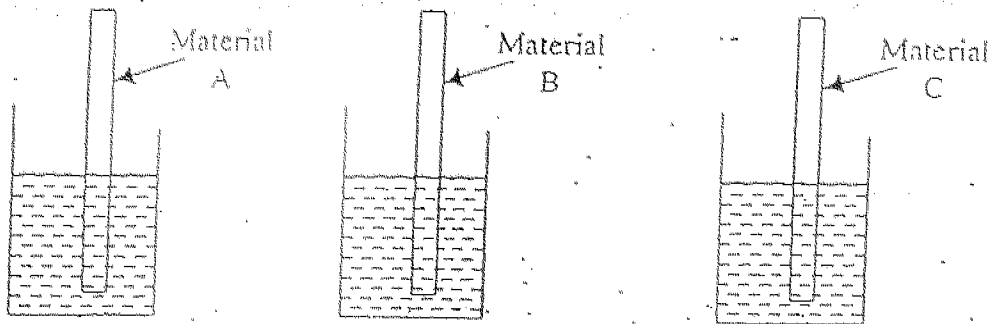
Name: _____ ()

Class: Primary 5

Part II (40 marks)

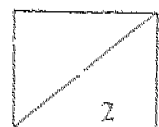
Write your answers to questions 31 and 46 in this booklet.

31. Three rectangle strips were cut from different materials. The mass of the strips were taken at the beginning of the experiment. The strips were then dipped into three similar beakers containing the same amount of water. At regular time interval, the strips were removed and weighed. The observations are shown below.

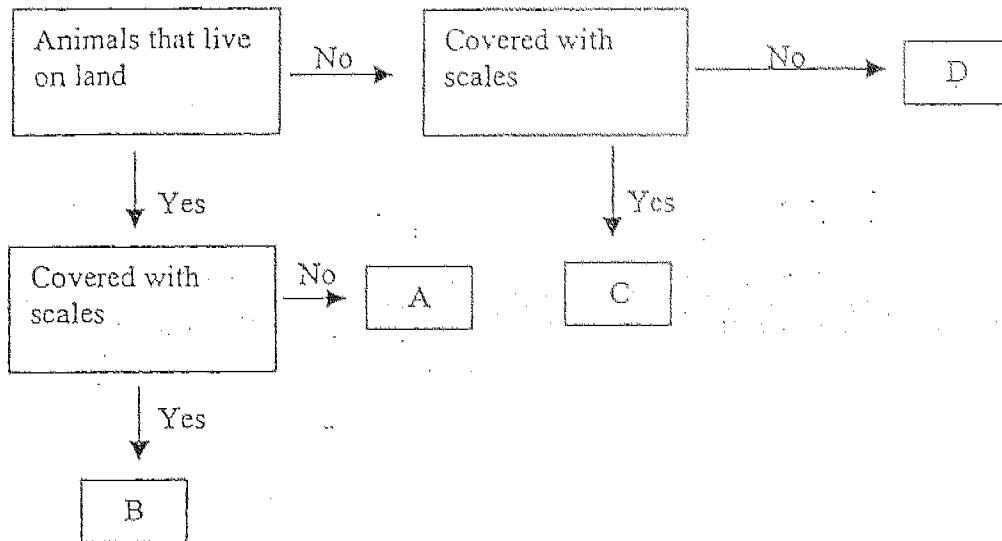


Time (minutes)	Material A (mg)	Material B (mg)	Material C (mg)
0	10	10	10
1	11	12	10
2	11.5	14	10

- (a) Which material best represents a piece of:
- (i) Paper: _____
 - (ii) Plastic: _____
 - (iii) Cloth: _____ (1m)
- (b) What would be the weight of Material C after 10 minutes? (1m)



32. The chart below shows the characteristics of 4 different animals. Refer to the chart below and answer the questions that follow.

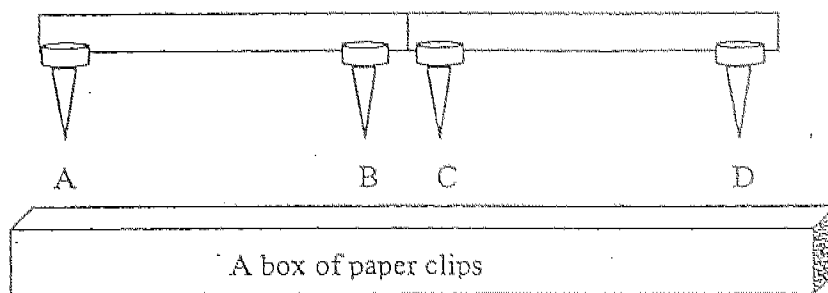


(a) Which two letter/s (A, B, C or D) are likely to represent mammal? (2m)

(b) Name an animal that can be placed in (2m)

(i) Group B : _____ (ii) Group C: _____

33. Four nails labeled A, B, C and D were attracted to a bar magnet as shown below. The set up was then lowered near a box of paper clips.

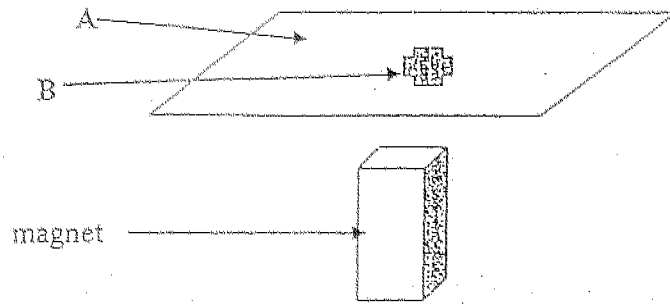


(a) Which nails will have similar magnetic strength? (1m)

(b) Name another method of making the nails a temporary magnet. (1m)



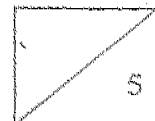
34. In the diagram below, Object B is resting on Object A. The magnet lies directly below them. When the magnet is shifted, Object B moves along.



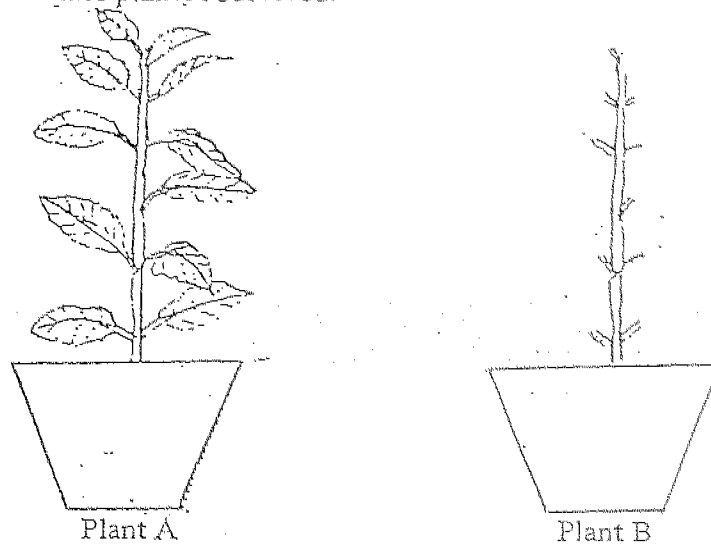
- (a) In order for the above experiment to happen, suggest one possible material for
- (i) Object A: _____ (1m)
- (ii) Object B: _____ (1m)
- (b) What property must Object A possess in order for the above experiment to succeed? (1m)

35. Read the following statements carefully and put a tick in the appropriate boxes. (2m)

		True	False
(a)	Every time you frown you use more than 40 muscles.		
(b)	Our muscles along the gullet have to contract before passing food into the stomach.		
(c)	In order for you to move, the bones and muscles must work together.		
(d)	The knee is an example of ball and socket joint.		



36. Plant A and Plant B as shown in the diagram, were placed under the sun next to each other for several days. Both plants were given the same amount of water. After a few days, plant B died while plant A survived.

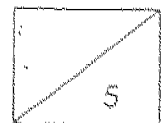


- (a) Observe the above diagram carefully. Write down one comparison between the 2 plants. (1m)

- (b) Explain why Plant A survived while Plant B died. (2m)

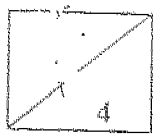
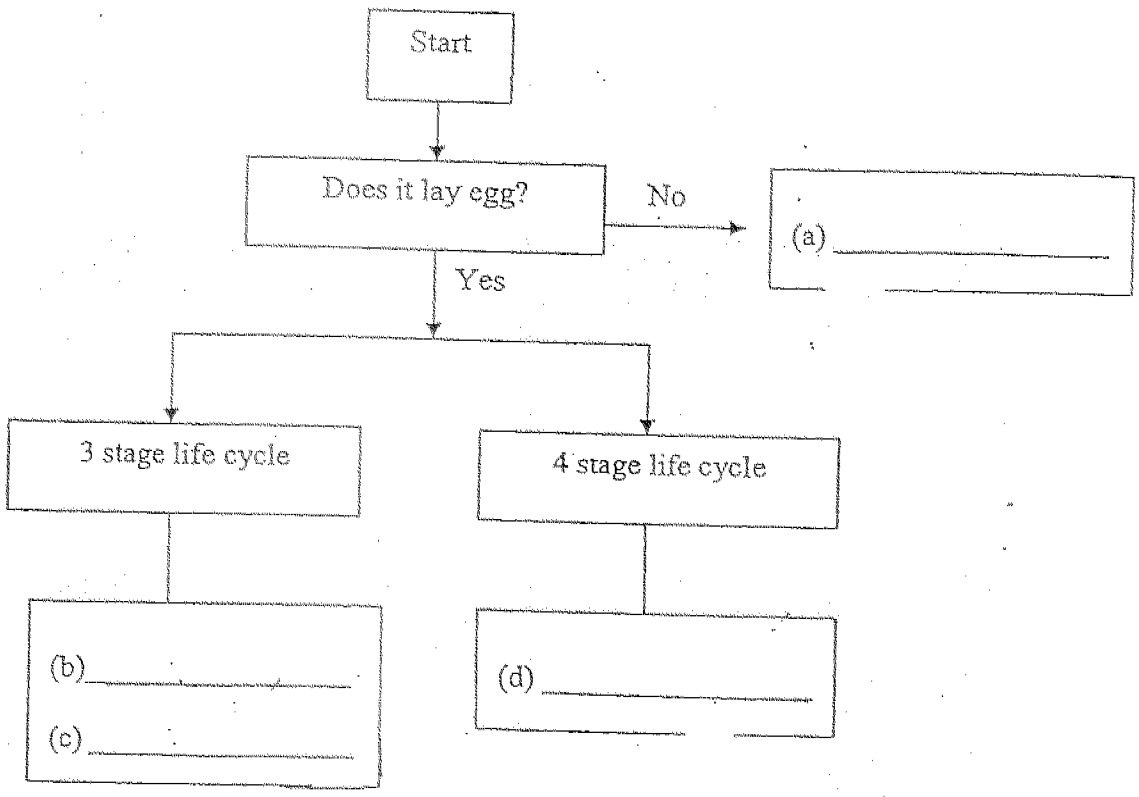
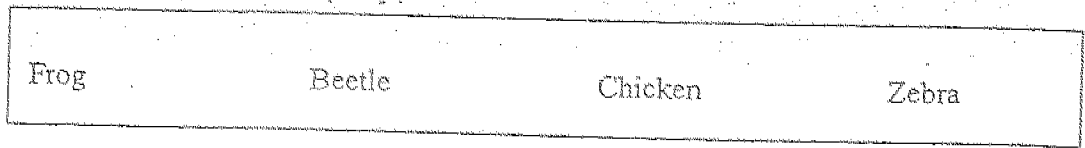
37. John's teacher told him that a person might faint when his/her brain does not get enough oxygen. John cannot understand how oxygen gets to the brain. Help John by numbering the following sentences by writing 1 to 8 in the boxes to show the oxygen enters into our body and travels to the brain. (2m)

(a)	Oxygen dissolves into the blood vessels found in the lungs.	
(b)	Oxygen enters the body through the mouth and nose.	
(c)	The arteries divide into capillaries.	
(d)	Oxygen travels from the lungs to the heart through tiny blood vessels.	
(e)	Heart pumps oxygenated blood to the rest of the body through the arteries.	
(f)	Oxygen enters the windpipe into the lungs.	
(g)	Capillaries releases oxygen to the blood cells.	
(h)	Blood cell carry oxygenated blood to the brain.	

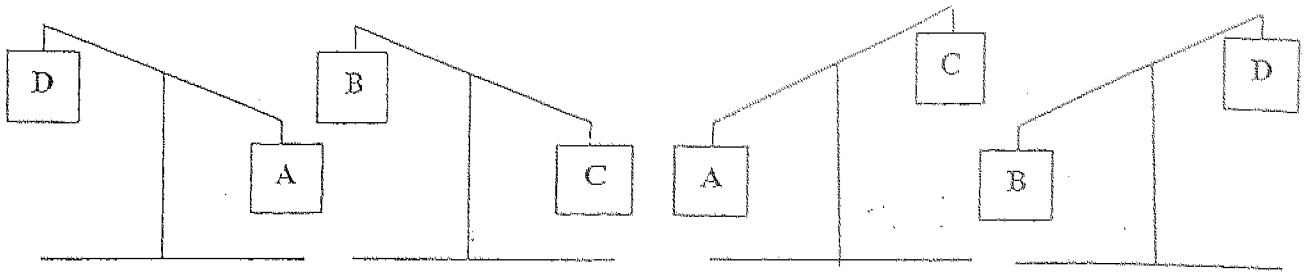


38. In the life cycle of the green bean plant, we know that a flower will eventually develop into a _____ which contains the _____ which will then be able to grow into a young plant. (2m)

39. Study the chart carefully and place the following animal into the correct boxes below. (2m)



40. Study the diagram below and answer the following questions.

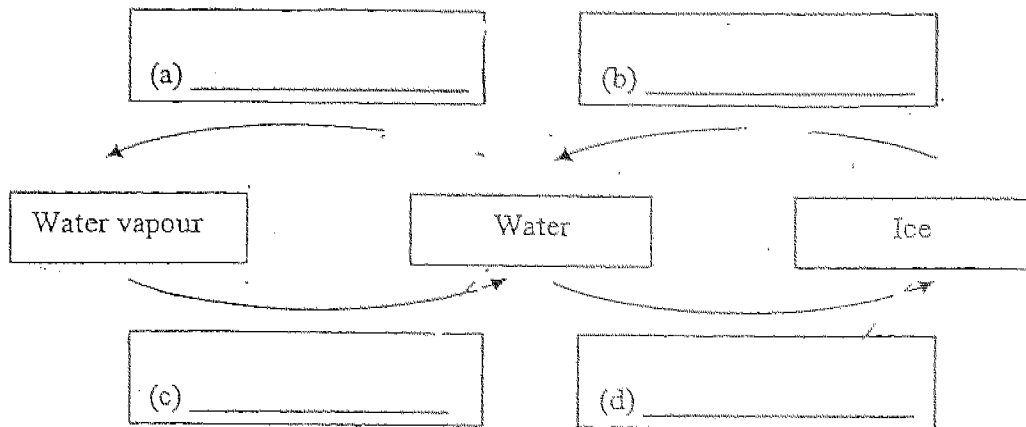


(a) From the diagram, which box is the heaviest? (1m)

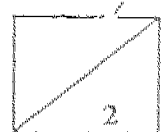
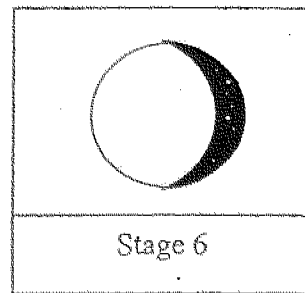
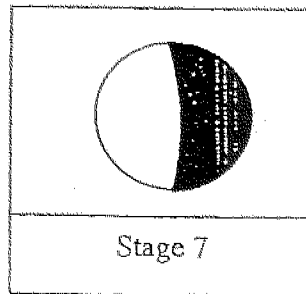
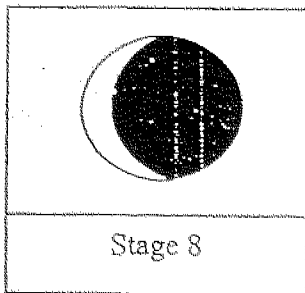
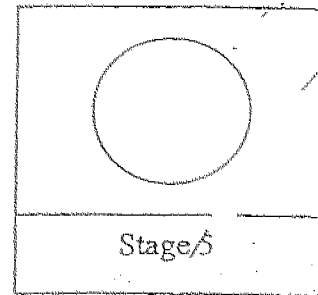
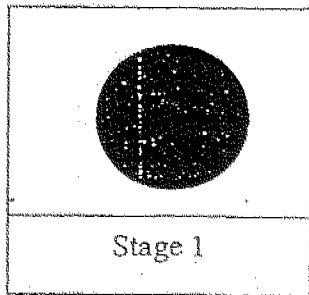
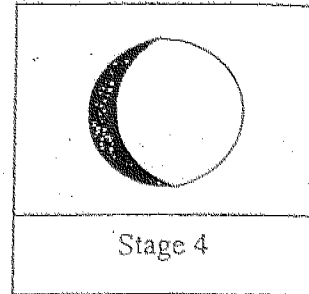
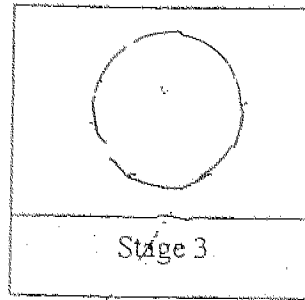
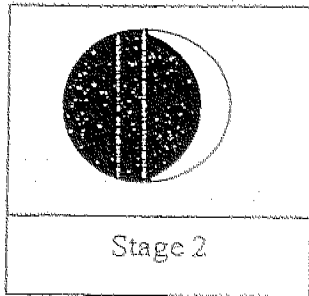
(b) Which is the lightest box? (1m)

(c) State the difference between mass and weight. (1m)

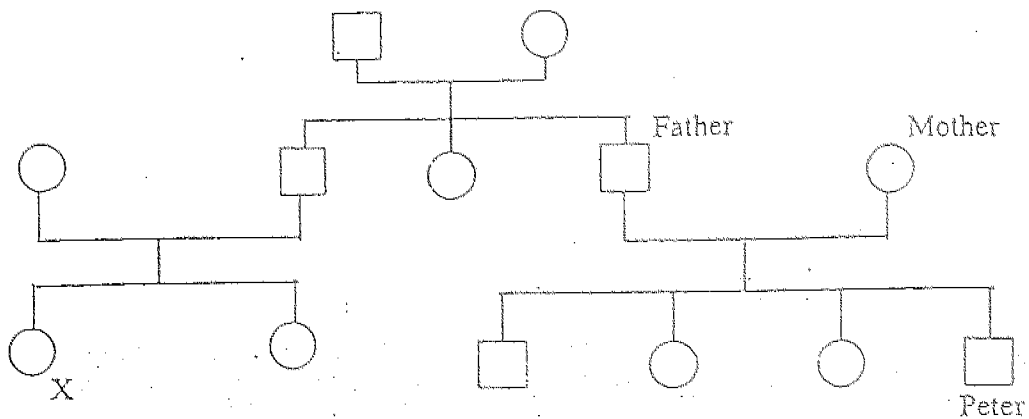
41. The diagram below is a chart that shows how water changes from one state to another. Name the four processes in the correct boxes. (4m)



42 What is the shape of the Moon at stage 3 and 5? Draw them into the boxes provided. (2m)



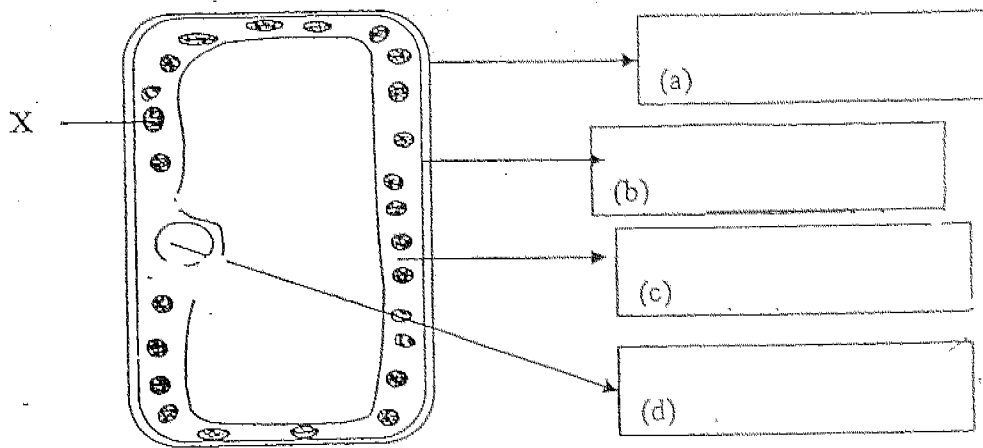
43. Look at Peter's family tree and answer the following questions.



(a) How many uncles does Peter have? (1m)

(b) How many cousins does X have? (1m)

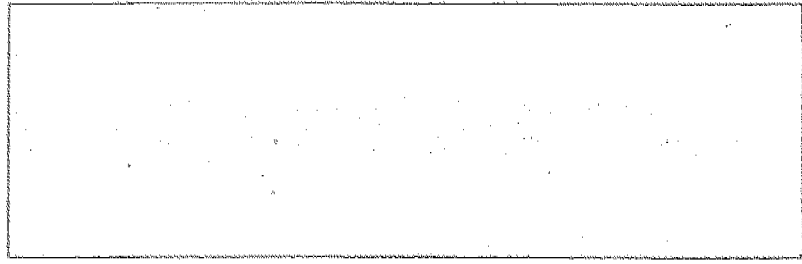
44. Label the parts of the plant cell correctly. (1m)



A Plant Cell

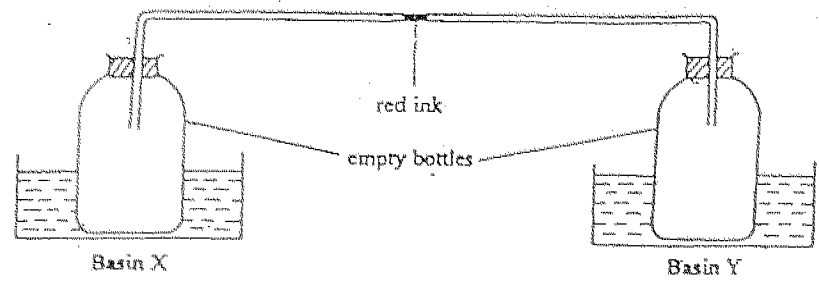
(e) What is the function of the part labeled 'X'? (1m)

45(a) Lina placed three blocks of different shapes as shown below, one directly on top of the other on an overhead projector. Draw in the box provided below, how the image will appear on the screen. (1m)



(b) Lina then push the overhead projector towards the screen. What will happen to the size of the image? (1m)

46. Two identical empty bottles are connected by a glass tubing containing a drop of red ink. The bottles are then placed into two different basin of water each of different temperature.



(a) Put a tick to indicate the direction of the red ink for each of the following sets of temperature for Basins X and Y. (1m)

Temperature of water ($^{\circ}\text{C}$)		Towards X	Towards Y	Did not move
Basin X	Basin Y			
70	70			
100	20			

(b) Based on the experiment, how does the temperature of the water affect the direction of the blue ink? (2m)

SINGAPORE CHINESE GIRLS SCHOOL
2004 P5 SEMESTER ASSESSMENT 1
SCIENCE

SAT

Question	Answer
1	1
2	4
3	4
4	2
5	4
6	3
7	2
8	4
9	2
10	3
11	3
12	4
13	3
14	1
15	1
16	4
17	1
18	3
19	2
20	4
21	2
22	3
23	4
24	4
25	3
26	3
27	3
28	3
29	4
30	4

31) a) i) Material A ii) Material C iii) Material B

b) The weight of Material C would be 10 mg after 10 minutes.

32) a) A and D are likely to represent mammal.

b) i) Cobra ii) Guppy

33) a) A and D, B and C. b) stoking

34) a) i) Plastic ii) Iron

b) Object A must be able to allow magnetic forces to pass through.

35) a) True b) True c) True d) False

36) a) Plant A has leaves but Plant B does not have.

b) Plant B did not have leaves to respire or photosynthesize.

37) 3

1

6

4

5

2

7

8

38) fruit seed

39) a) Zebra b) Frog c) Chicken

d) Beetle

40) a) Box A is the heaviest.

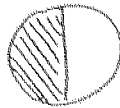
b) Box D is the lightest box.

c) Mass is the measurement of the amount of matter an object contains and weights is the measurement of the pull of gravity on the object.

41) a) Evaporation b) Melting c) Condensation

d) Freezing.

42) Stage 3



Stage 5



43) a) Peter has one uncle

b) X has four cousins.

44) a) Cell wall b) Cell membrane c) Cytoplasm

d) Nucleus

e) "X" contains chlorophyll, a green pigment which traps sunlight to photosynthesize and make food.

45) a)



b) The image will become smaller.

46) a)



b) The red ink will always move towards the basin of water with a lower temperature.