Rosyth School
Continual Assessment 1 for 2010
STANDARD SCIENCE
Primary 5

Total Marks: 50

Name: _____

Class: Pr 5_____ Register No. _____ Duration: 1 h 15 min

Date: 4th March 2010 Parent's Signature: _____

Instructions to Pupils:

1. Do not open the booklet until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 Parts, Part I and Part II.
4. For questions 1 to 15 in Part I, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.
5. For questions 16 to 23, give your answers in the spaces given in Part II.

	Maximum	Marks Obtained
Part I	30 marks	
Part II	20 marks	
Total	50 marks	

* This booklet consists of 18 pages. (Pg. 1 to 18)

Part I (30 marks)

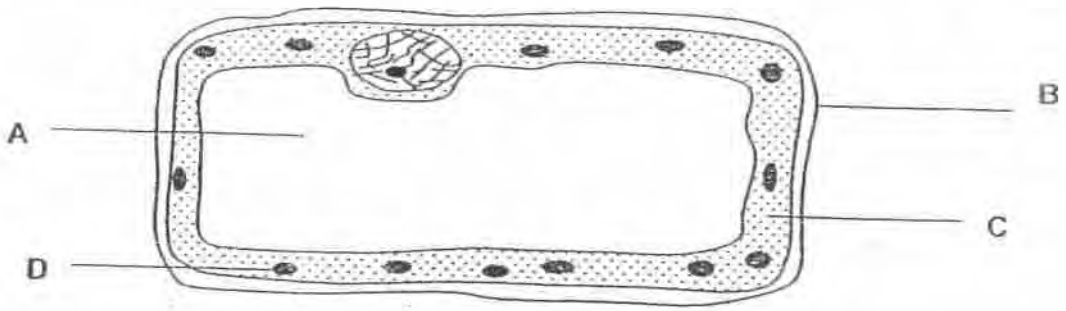
For each question from 1 to 15, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 and 4) on the Optical Answer Sheet.**

1. The table below shows the similarities between a plant cell and an animal cell. Which of the following comparisons is incorrect?

	Part of a cell	Plant cell	Animal cell
(A)	Cell membrane	Absent	Present
(B)	Chloroplasts	Present	Present
(C)	Cell wall	Present	Absent
(D)	Nucleus	Present	Present

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

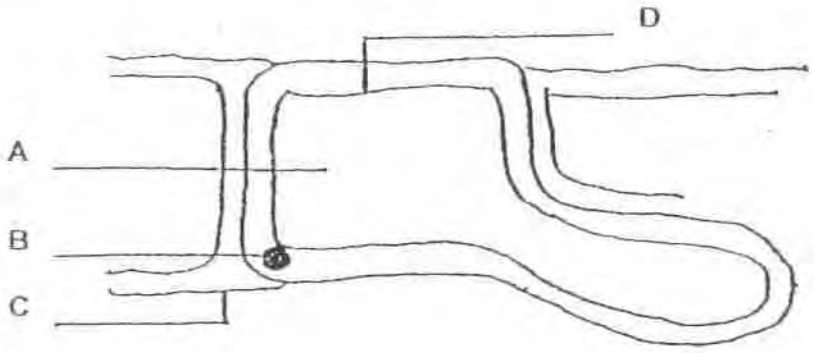
2. A group of students wanted to identify the part of a cell that is a jelly-like substance that mainly contains water and dissolved nutrients.



Which one of the following shows the part that is a jelly-like substance that mainly contains water and dissolved nutrients?

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

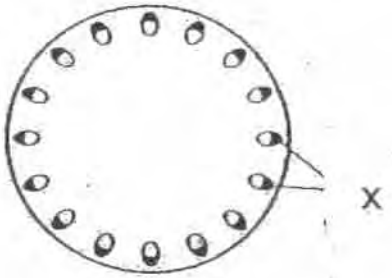
3. Andre drew a cell as shown below.



Which part of the cell controls what enters and exits the cell?

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

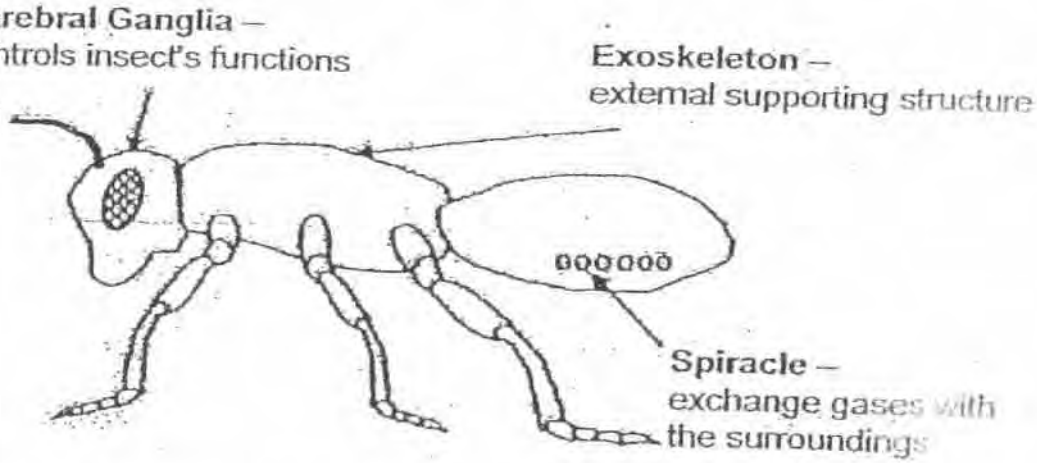
4. The picture below shows the cross section of a stem.



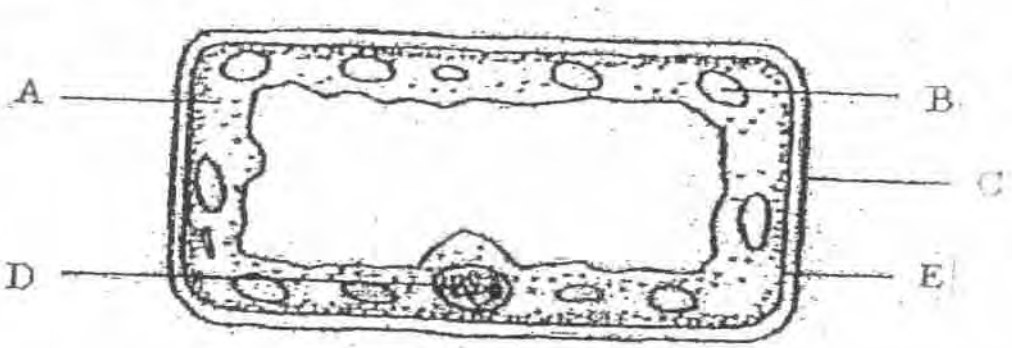
What are the parts marked 'X' responsible for?
The parts marked X are responsible for transporting _____.

(1) water from the soil.
(2) food from the leaves.
(3) oxygen from the leaves.
(4) mineral salts from the soil.

5. Diana came across a Science poster in her school which contained information about an insect shown below.



Which of the following parts of the plant cell below share the same function as that of the insect parts?



	Cerebal Ganglia	Spiracle	Exoskeleton
(1)	D	E	C
(2)	C	E	A
(3)	D	A	B
(4)	A	D	C

6. Abigail wanted to see her skin cells under a microscope. However, the following instructions of what she needs to do are not in the correct order.

A: Peel the sticky tape off
B: Observe the skin cells under the microscope.
C: Stick the sticky tape onto the glass slide.
D: Paste a piece of sticky tape over the skin on her hand.
E: Rub some red food colouring over a patch of skin on her hand.

Put the instructions in order:

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

7. Serene compared the MRT transport system with the plant transport system.
Which part(s) of the plant transport system can be compared with the tracks in the MRT transport system?

A: food
B: food carrying tubes
C: water carrying tubes
D: water and dissolved mineral salts

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

8. Alex prepared an experiment with a celery stalk in four different set-ups as shown in the table below.

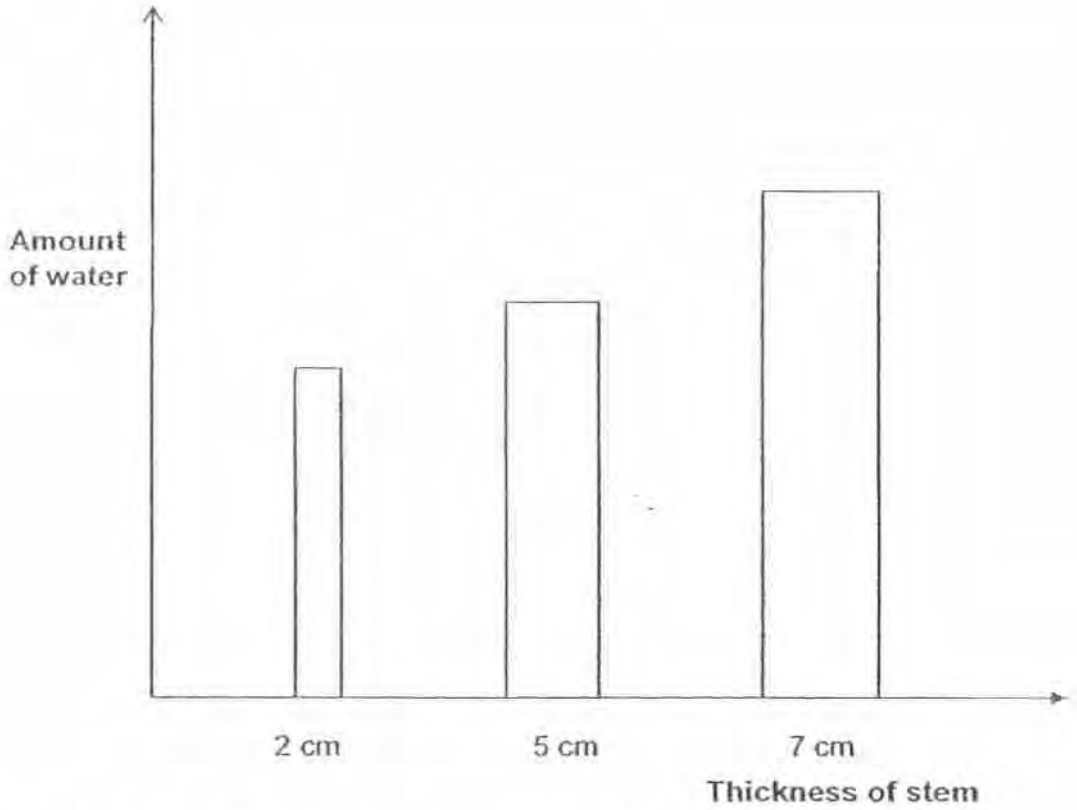
Set-up	Type of liquid	Amount	Temperature of liquid
Set-up P	Orange juice	100 ml	30 °C
Set-up Q	Milk	50 ml	30 °C
Set-up R	Syrup	50 ml	30 °C
Set-up S	Coca Cola	100 ml	30 °C

What is/are the possible aims of his experiment?

A: To find out if the type of liquid will affect the amount of water taken in.
B: To find out if the amount of liquid will affect the amount of water taken in.
C: To find out if the temperature of liquid will affect the amount of water taken in.

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

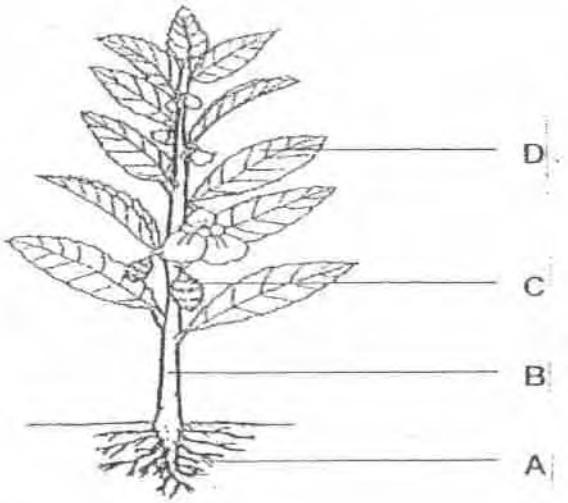
9. Devi carried out an experiment with 3 similar plants. The stems of these plants had different thickness. She placed each plant in a beaker of water. She measured the amount of water taken in by the plant after a day and recorded the results of her experiment in a graph as shown below.



Which one of the following is most probably the reason for the results shown above?

(1) The thicker the stem, the taller the plant.
(2) The thicker the stem, more water is needed by the leaves.
(3) The thicker the stem, the greater the number of water-carrying tubes.
(4) The thicker the stem, the faster the water travels in the water-carrying tubes.

10. The picture below shows a plant.



Part	Function
A	Absorbs mineral salts for the plant.
B	Holds the plant firmly to the ground.
C	Produces seeds for the plant.
D	Makes food for the plant.

Which of the plant parts above are matched with the incorrect functions?

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

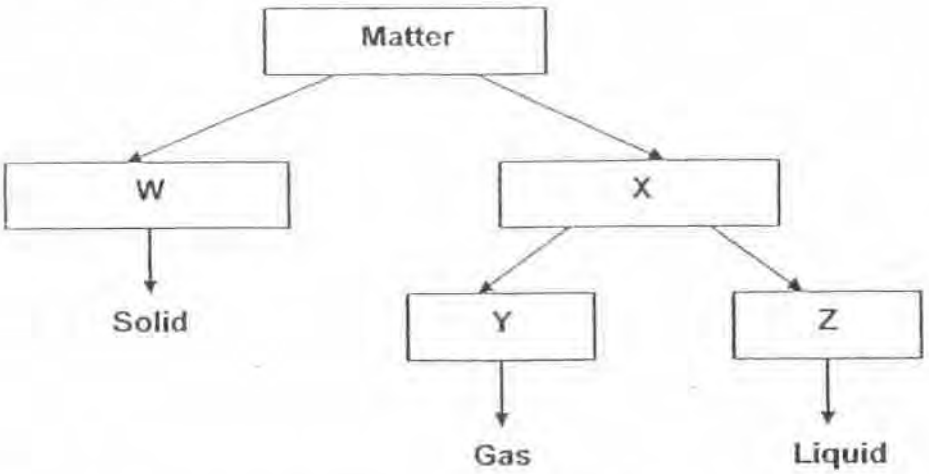
11. Sumin recorded the melting and boiling points of substances P, Q, R and S in the table below.

Substance	Melting Point (°C)	Boiling Point (°C)
P	45	87
Q	63	189
R	-5	28
S	0	100

At 30 °C, which of the following observation(s) Sumin made is/ are correct?

(1) Substance S is in the solid state.
(2) Substance P and Q are in the solid state.
(3) Substances Q and R are in the liquid state.
(4) Substances P, Q and S are in the gaseous state.

12. Look at the chart below.



Which of the following describe W, X, Y and Z respectively?

	W	X	Y	Z
(1)	Has no definite volume	Has definite shape	Has no definite shape	Has definite volume
(2)	Has definite shape	Has no definite shape	Has no definite volume	Has definite volume
(3)	Has no definite shape	Has no definite volume	Has definite volume	Has definite shape
(4)	Has no definite volume	Has no definite shape	Has definite shape	Has definite volume

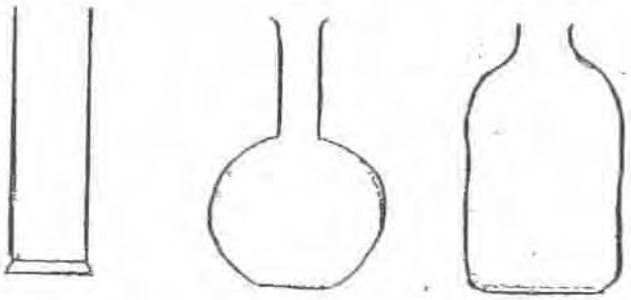
13. Mrs. Lim showed her students a table. The table had information of the masses and volumes of solids X, Y and Z.

Solid	X	Y	Z
Volume (cm^3)	5	10	10
Mass (g)	50	25	25

Based on the information, which of the following statements is correct?

(1) 50g of Z has a smaller volume than 50g of Y.
(2) 50g of Y has a smaller volume than 50g of X.
(3) 50g of Y has the same volume as 50g of Z.
(4) 50g of Z has the same volume as 50g of X.

14. Nancy poured all the orange juice from container A to B and then to C.

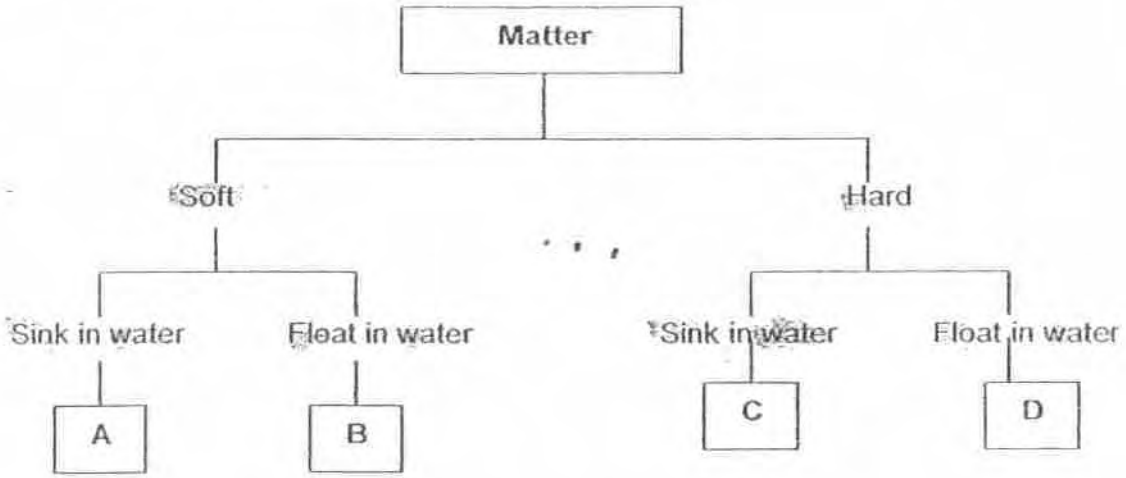


A B C

What happened to the orange juice that was poured into containers B and C?

(1) Its mass changed.
(2) Its shape remained the same.
(3) Its volume remained the same.
(4) It reached the same level in each container.

15. Look at the classification chart below.



In the chart above, where can an iron nail be placed?

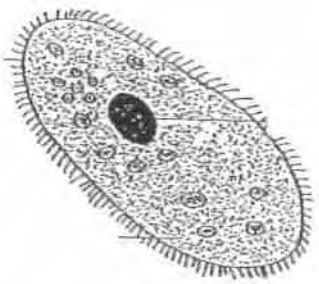
(1) A
(2) B
(3) C
(4) D

End of Part 1

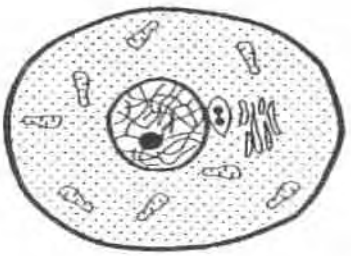
PART II (40 MARKS)

For questions 16 to 23, write your answers in this booklet.

16. Adam saw the 2 cell samples (Sample A and Sample B) under the microscope. He made a drawing of the 2 cell samples as shown below.



Sample A



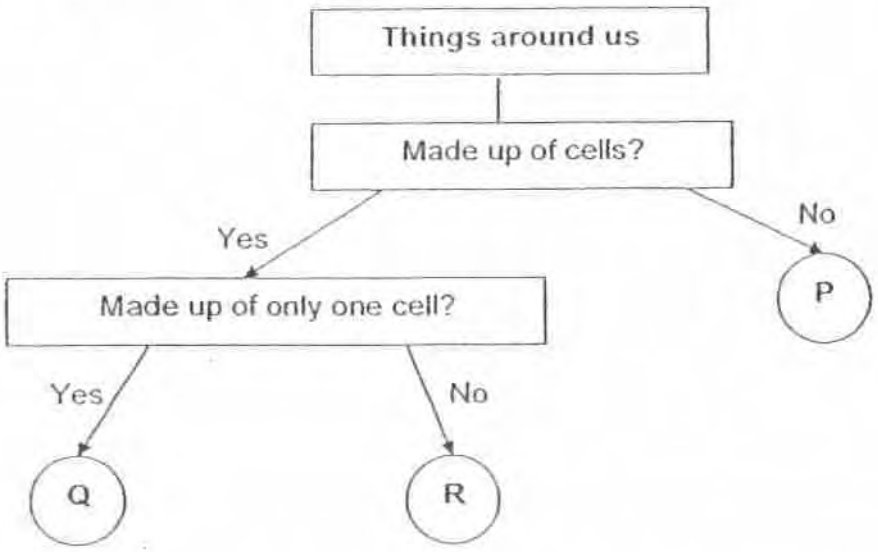
Sample B

Did Adam see plant cells or animal cells? Give a reason for your answer. [1]

_____

_____

17. Look at the chart below.



(a) Which of the following(s) is/are definitely living things? Give a reason to support your choices. [1]

_____

_____

(b) Give an example of Q. [1]

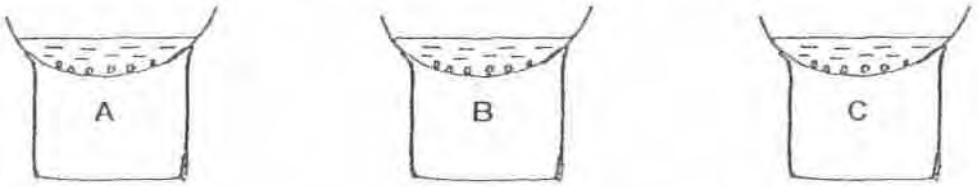
_____

(c) Which group P, Q or R does a human being belong to? Explain your answer. [1]

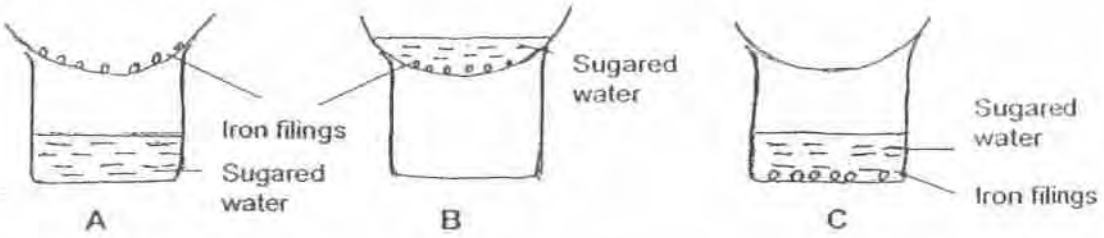
_____

_____

18. Ella did an experiment with three types of materials (A, B and C) as shown below. She mixed sugar and iron filings with 30 ml of water to pour through the materials.



After some time, Ella observed that some changes had taken place as shown below.



(a) Arrange the materials A, B and C according to the size of the pores found in the materials. Begin with the biggest pores. [1]

_____, _____, _____

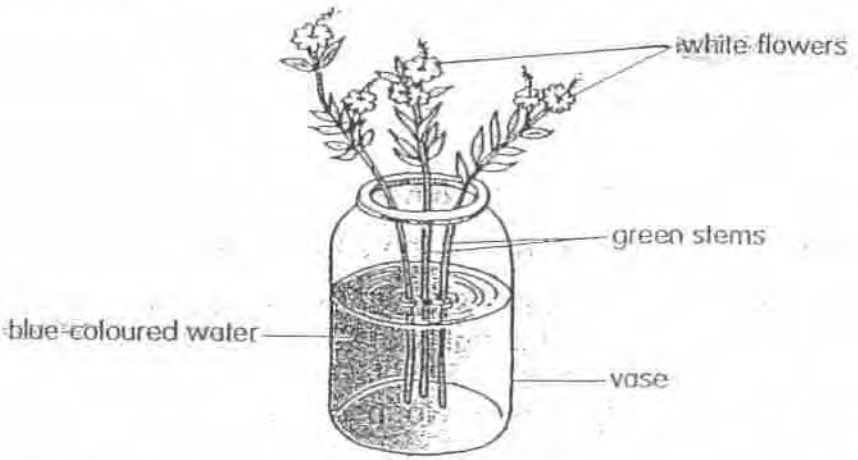
(b) Which material should Ella use to represent the cell membrane found in cells and why? [1]

Material _____

_____

_____

19. Desmond placed 3 white flower stalks into a beaker containing blue coloured ink as shown below. He left the set-up overnight.



(a) What would happen to the flowers after 2 days? [1]

_____

_____

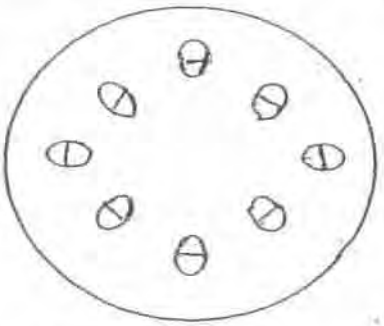
(b) Give a reason for your answer in (a). [1]

_____

_____

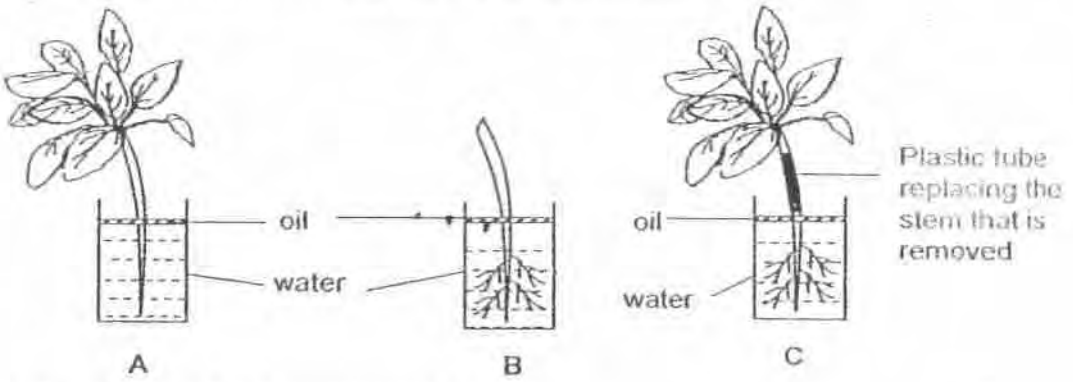
He then cut the stalk of one of the flower stalks and drew a cross-section of it as shown below.

Cross-sectional view of the stalk



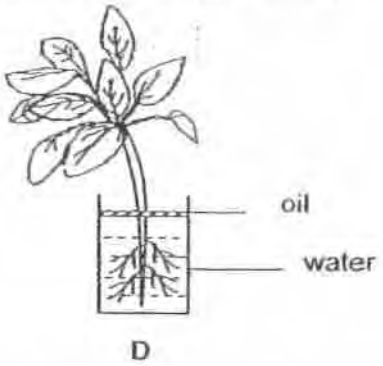
(c) On the cross-sectional diagram, shade all the parts that carry the coloured water up the stem. [1]

20. Azlinda prepared the following set-ups as shown below.



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

She prepared another set-up as shown below.



(b) What is the purpose of set-up D? [1]

(c) State the variable she should measure. [1]

(d) Azlinda said that it is important to keep all the set-ups in the same location. Do you agree with her? Why? [1]

21. Nurul recorded the characteristics of 3 similar types of cells with certain parts removed in 3 beakers A, B and C. She presented the information in a table as shown below.
(X represents the parts that are missing)

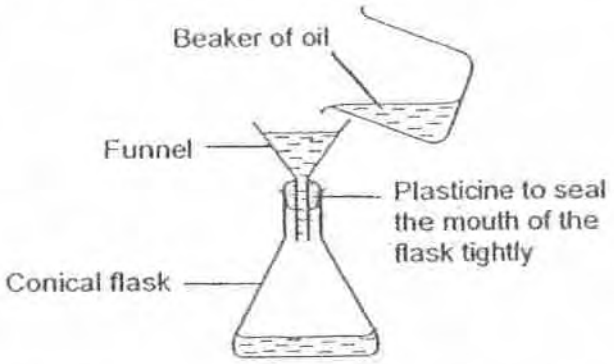
Parts of a cell	Beaker A	Beaker B	Beaker C
Nucleus	√	√	x
Cell wall	X	√	X
Cell membrane	√	√	√
Cytoplasm	√	√	√
Chloroplast	x	x	x

(a) Based on the information above, draw and label a cell in beaker A in the box provided below. [2]

Nurul Azlinda left the beakers with cells in sugared water for an hour. She counted the number of cells in the beginning and after one hour.

(b) In which one of the beakers, A, B or C would the number of cells most probably decrease rapidly? Explain why. [1]

22. Nigel filled up a conical flask with some cooking oil. He then used a funnel to add in more cooking oil into the bottle. He noticed that with the funnel, the cooking oil could not flow in as quickly.



(a) Explain why the cooking oil could not flow in as quickly. [1]

_____

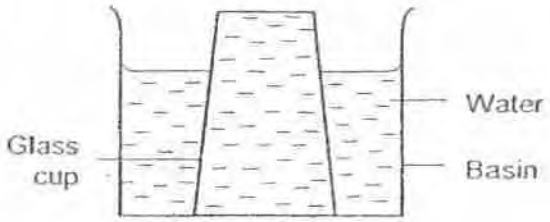
_____

(b) Suggest one thing that Nigel can do to make the cooking oil flow in faster when he uses the funnel. [1]

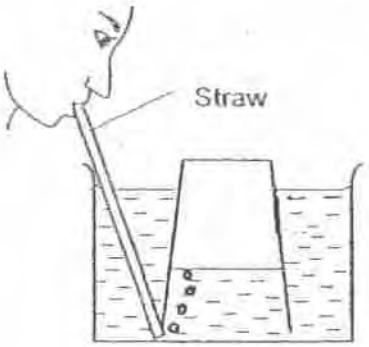
_____

_____

23. David had a set-up as shown below.



David then did something as shown in the diagram below.



His two friends, Mary and Julie said the following:

Mary: David blew air using the straw.

Julie: David drank the water in the glass using the straw.

(a) Who do you agree with? Support your choice. [1]

_____

_____

(b) Based on the above experiment, state one property of air and water. [1]

_____

_____

End of Part II

ANSWER SHEET

EXAM PAPER 2010

SCHOOL : ROSYTH PRIMARY
SUBJECT : PRIMARY 5 SCIENCE

TERM : CA1

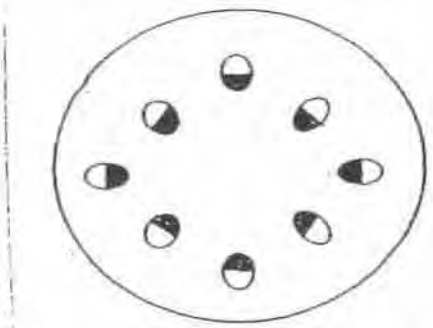
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
1	3	4	2	1	2	2	1	3	3	2	2	3	3	3

16)Adam saw animal cells. Both cells do not have a cell wall.

17)a)Q and R are definitely living things. All living things are made up of cells.
b)Yeast. Amoeba, bacteria, protozoa, paramecium, hydra.
c)A human being belongs to group R. Human beings are made up of cells and have more than one cell.

18)a)C,A,B
b)Material A
Cell membranes are selectively permeable, allowing only certain substances such as food, water and oxygen to enter or exit the cell.

19)a)The flowers would become blue in colour.
b)The blue coloured water travelled up the green stems in the xylem tubes to the white flowers, causing them to turn blue in colour.
c)



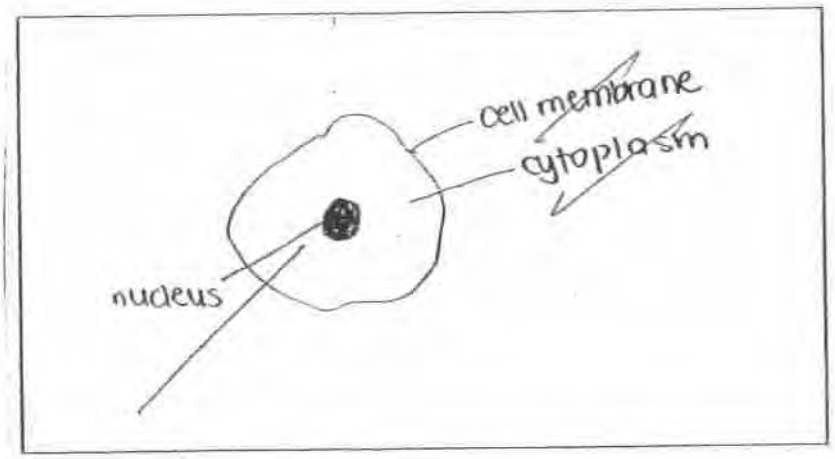
20)a)The aim is to find out if the absence of roots, leaves or stems affects the amount of water absorbed/taken in.

b)It is a control experiment to prove that the roots, leaves and stems affect the amount of water taken in by the plant.

c)She should measure the amount of water left.

d)Yes, the location will affect the amount of water taken in if the plant is left in sunlight, there will be a greater water loss leading to a greater absorption of water.

21)a)



b)The number of cells in beaker C would most probably decrease rapidly. There is no nucleus to divide multiply for reproduction.

22)a)Air occupies space.

b)Nigel can loosen the plasticine so that the air can escape and allow the cooking oil to flow in faster and occupy the space once occupied by the air.

23)a)I agree with Mary. David blew the air into the glass using the straw, and the water level decreased because the air occupied the space once occupied by water in the glass.

b)Air occupies space and water has a definite volume.