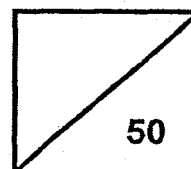




Rosyth School
Continual Assessment 1 for 2018
STANDARD SCIENCE
Primary 5

Total
Marks:



Name: _____

Class: Pr 5 _____

Register No. _____

Duration: 1 h 15 min

Date: 1 March 2018

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 14 in Part I, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.
5. For questions 15 to 20, give your answers in the spaces given in the Part II.

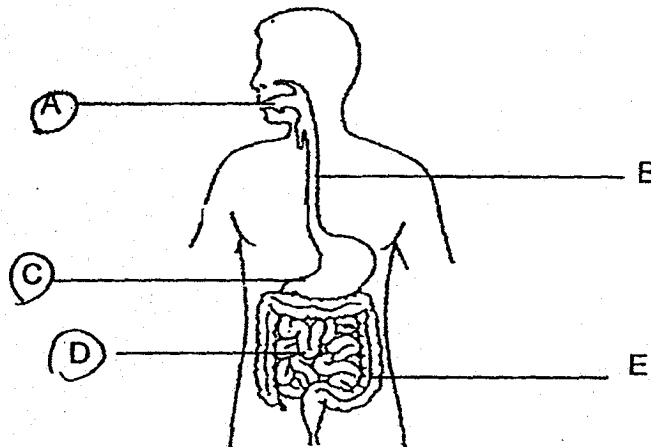
	Maximum	Marks Obtained
Part I	28 marks	
Part II	22 marks	
Total	50 marks	

Rosyth School/Continual Assessment 1/ Standard Science/P5/2018

Part I (28 Marks)

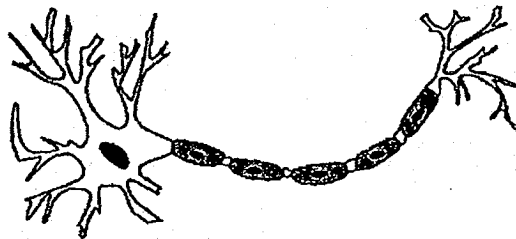
For each question from 1 to 14, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. The diagram below shows the human digestive system.



Which of the following parts, A, B, C, D and E will produce digestive juices?

- (1) C and D only
(2) A, B and C only
(3) A, C and D only
(4) A, C, D and E only
2. Joyce observed the following cell under a microscope and concluded that it is an animal cell.



Based on the diagram above, which of the following characteristic(s) of the cell led Joyce to her conclusion?

- A: It has a nucleus.
B: It does not have a cell wall.
C: It does not have chloroplasts.

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

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3. Jason recorded the following statements as shown below.

A: All things are made up of cells.

B: All cells come from existing cells.

C: Larger organisms have larger cells than smaller organisms.

D: The different shapes of cells determine their different functions.

Which of the above statements are true?

(1) A and B only

(2) A and D only

(3) B and D only

(4) B, C and D only

4. Which of the following substance(s) is/are **not** transported in the stem of a plant?

A: food

B: water

C: oxygen

D: dissolved mineral salts

(1) A only

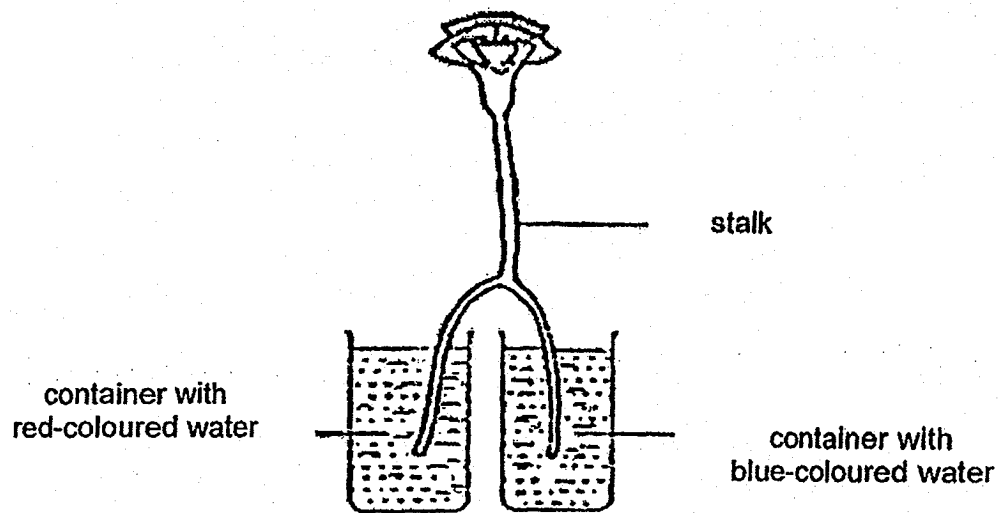
(2) C only

(3) A and C only

(4) A, B and D only

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5. Ali split the stalk of a white flower and placed both ends into two different containers of coloured water as shown below.



After one day, Ali observed that there was a change in the colour of the flower. Based on the given information, which of the following statement(s) is/are true?

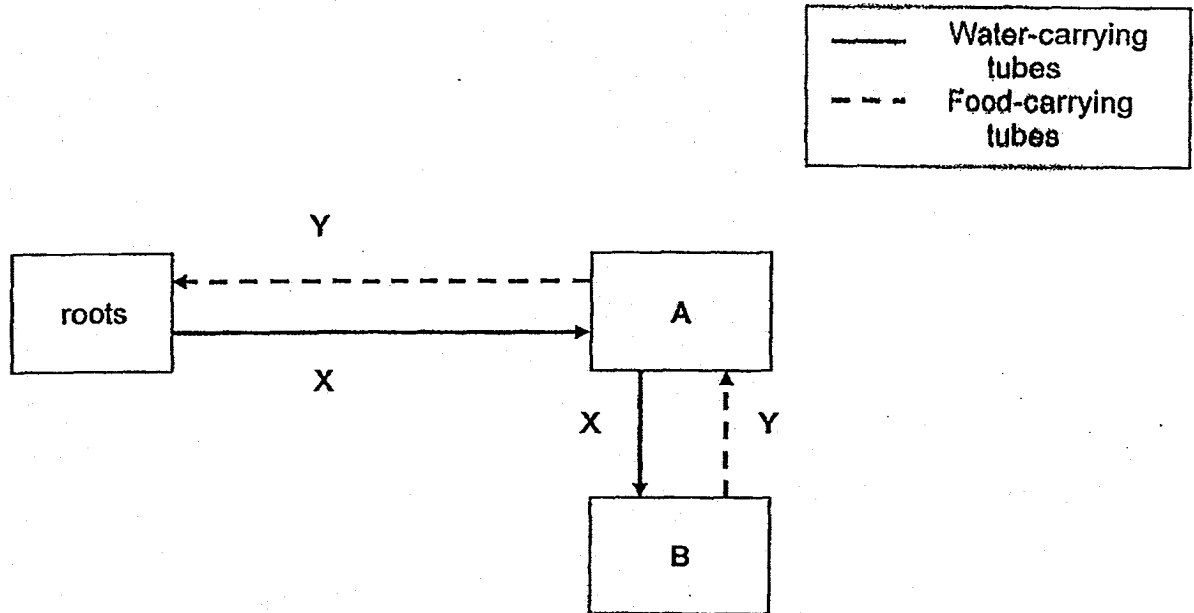
- A: The white flower had turned partially blue and red.
- B: The plant could not take in the coloured water as it had no roots.
- C: The food-carrying tubes transported the coloured water to the flower.
- D: The water-carrying tubes transported the coloured water to the flower.

- (1) D only
- (3) B and C only

- (2) A and B only
- (4) A and D only

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6. Arrows X and Y in the diagram below represent the transportation of substances from one part of a plant to another.

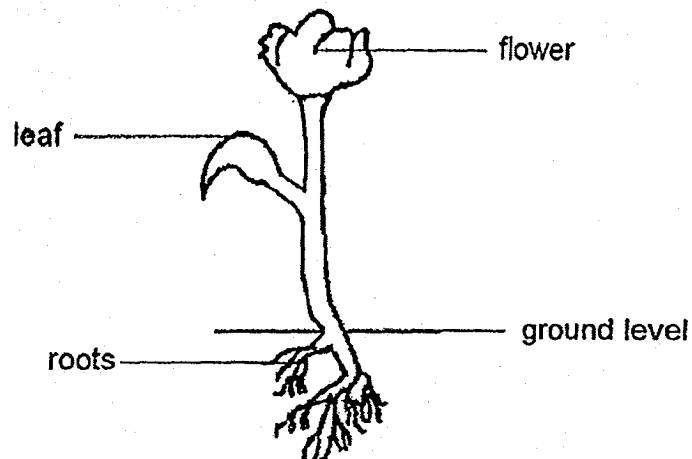


Which one of the following correctly represents A and B ?

	A	B
(1)	leaf	stem
(2)	fruit	leaf
(3)	stem	fruit
(4)	stem	leaf

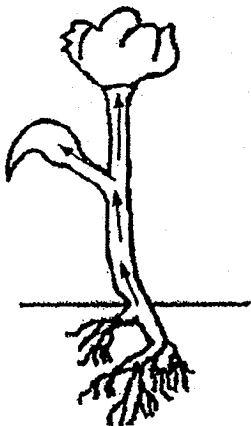
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7. Study the diagram below.

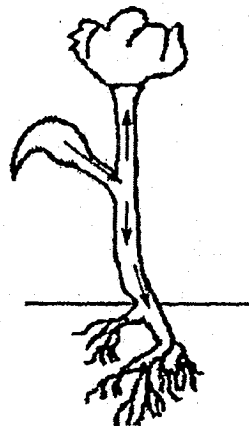


Which diagram shows the correct movement of food in a flowering plant?

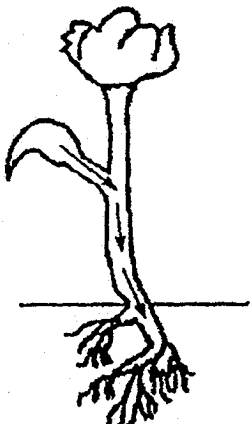
(1)



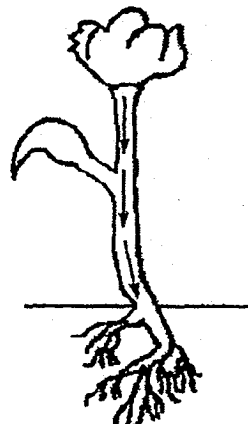
(2)



(3)



(4)



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8. Which one of the following characteristics is used to distinguish birds from mammals?

- | | |
|----------------------------|-----------------------------------|
| (1) Number of legs | (2) Presence of wings |
| (3) Type of body coverings | (4) Number of stages in lifecycle |

9. The diagram below shows the roots of a plant.



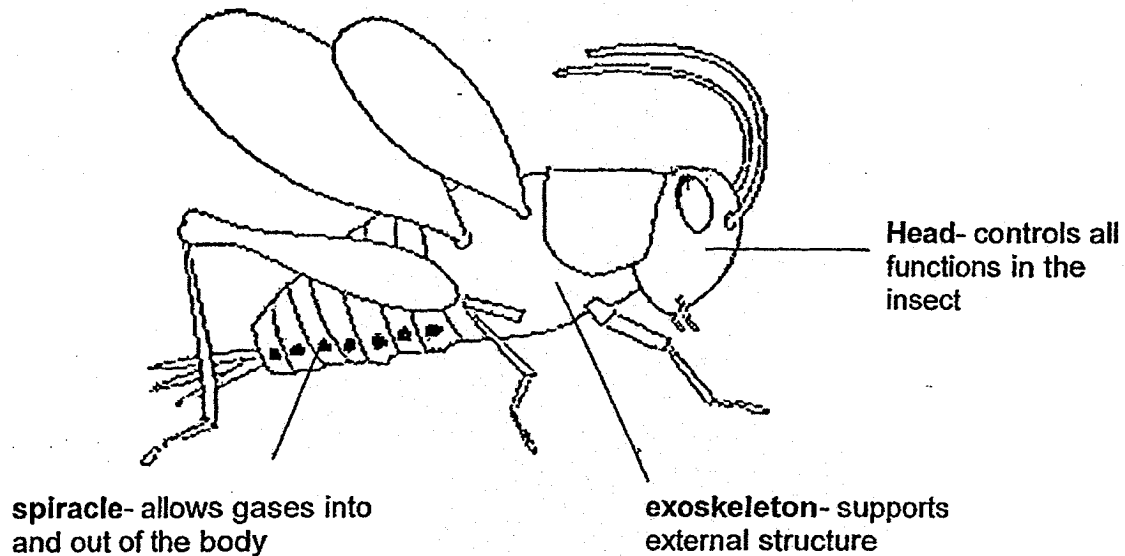
From the diagram, what can you deduce about the function of roots?

- A : To keep the plant upright
- B : To store food for the plant
- C : To hold the plant firmly to the ground
- D : To absorb water and dissolved mineral salts from the soil

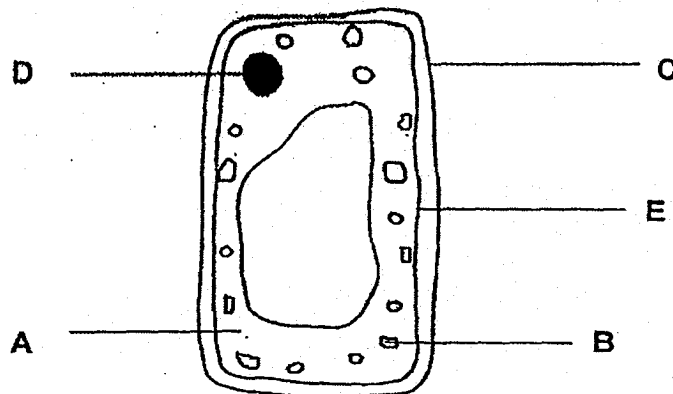
- | | |
|---------------------|-------------------|
| (1) A and B only | (2) B and C only |
| (3) B, C and D only | (4) A, B, C and D |

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10. Jessy came across a Science poster with a picture containing some information of an insect as shown below.



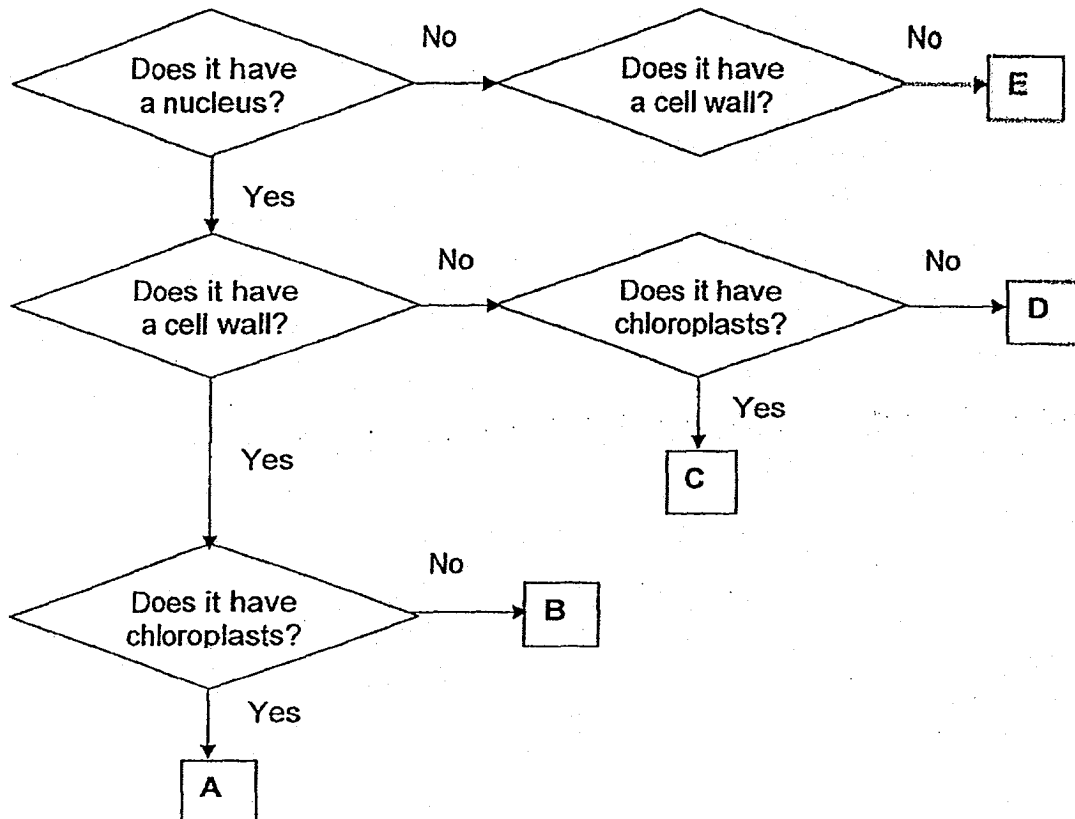
Which of the following parts of the plant cell below are similar in function to the labelled parts of the insect?



	head	spiracle	exoskeleton
(1)	D	E	C
(2)	C	E	A
(3)	D	A	B
(4)	A	D	C

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11. The flow chart below shows the differences between some cells.



Based on the information above, four pupils made the following statements:

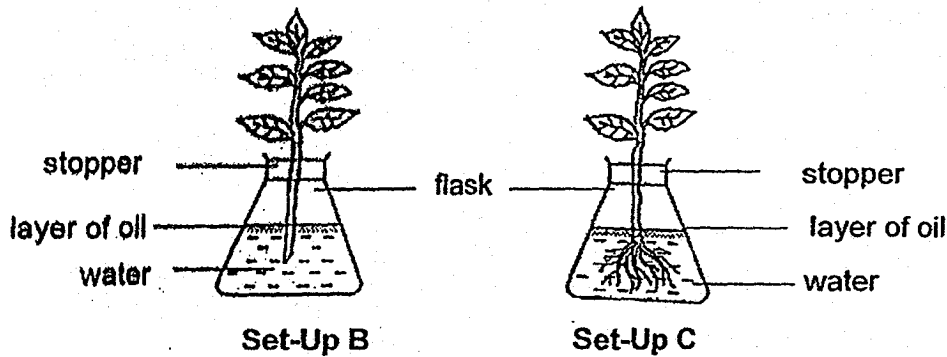
- Alisha : Cells A and B can be plant cells
 Betsy : Cells D and E can be animal cells
 Cathy : Cells A and C are able to photosynthesize
 Danial : Cell E is not a cell as it does not have a nucleus

Which of these pupils(s) made (an) **Incorrect** statement(s)?

- (1) Betsy only
 (2) Danial only
 (3) Alisha and Cathy only
 (4) Betsy and Danial only

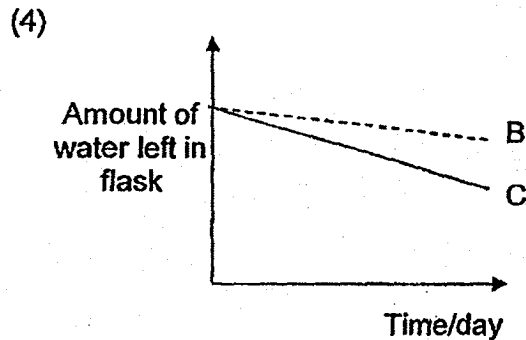
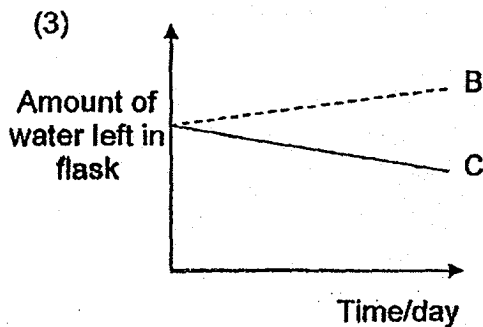
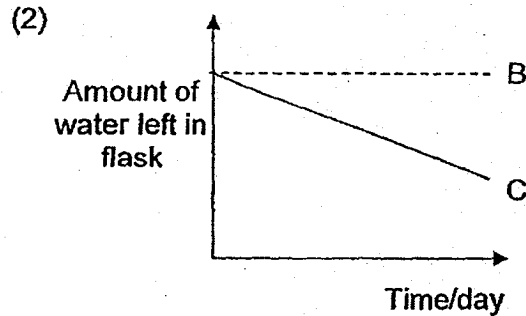
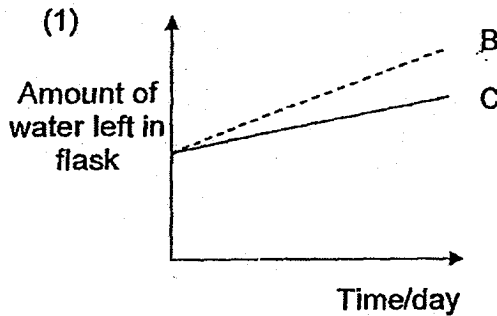
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12. Jerome wanted to find out if the presence of roots would affect the amount of water absorbed by a plant.



He recorded the amount of water in each set-up for five days. Based on the results, he plotted a line graph to represent his findings.

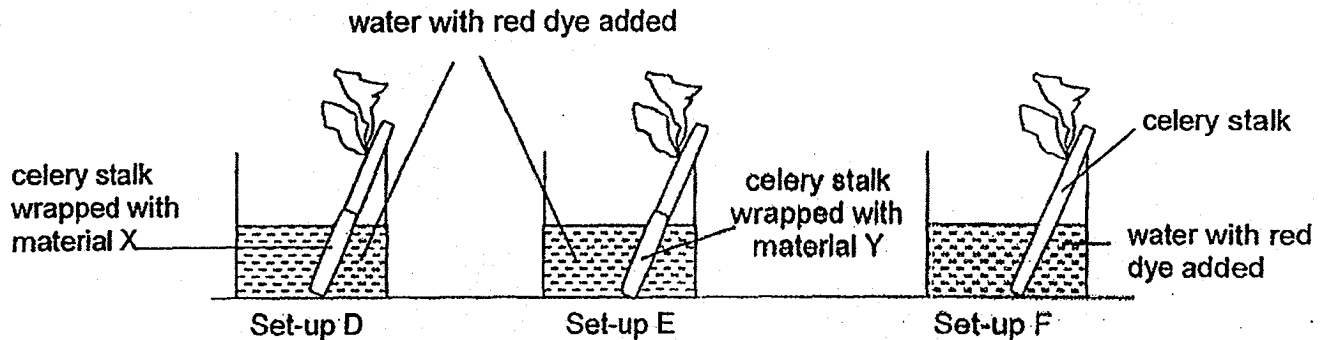
Which of the following graph is likely to represent the result of the experiment?



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13. Max set up an experiment as shown below.

He placed three celery stalks in the beakers of water with red dye added to set-ups, D, E and F. Only the base of the celery stalks in Set-up D and E were wrapped with material X and Y respectively before placing them into the beaker.



5 days later, Max recorded his observations of the 3 celery stalks in the table below.

	Set-up D	Set-up E	Set-up F
Observations	Leaves were yellowish and wilted	Leaves were green and not wilted	Leaves were red and not wilted

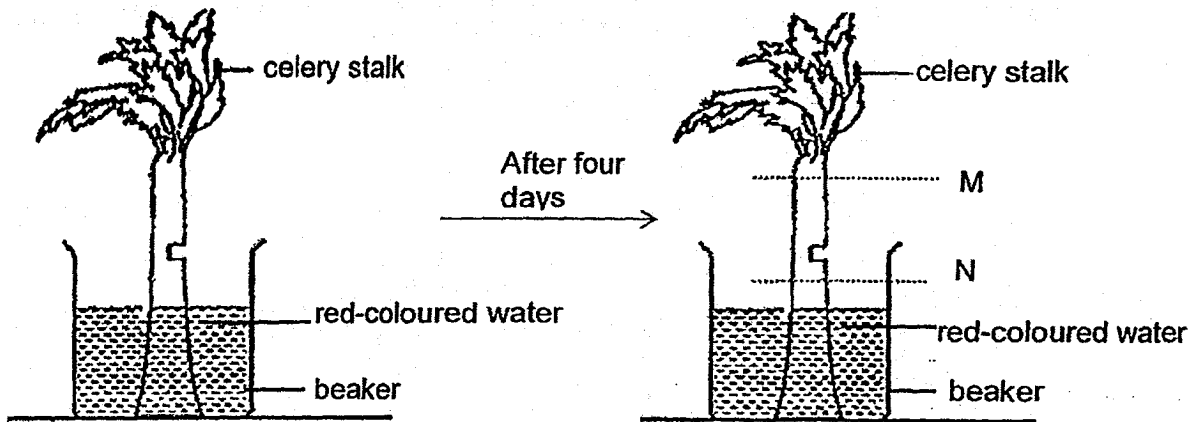
Which of the following statement(s) can be inferred from Max's observations?

- A: Material Y allows only water to pass through.
 B: Material X allows only water to pass through.
 C: Material X does not allow red dye to pass through.

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

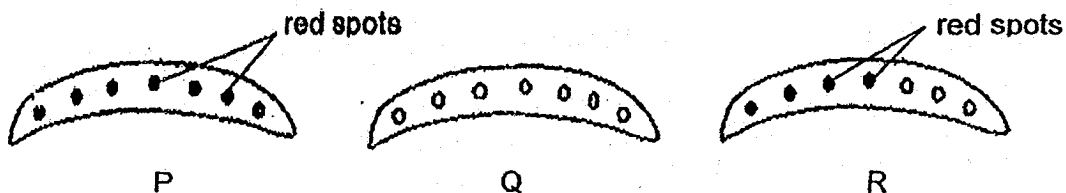
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14. Karen conducted an investigation using the set-up as shown below. She lowered a stalk of a celery plant, with a part cut out, into a beaker containing some red-coloured water and left it for four days.



After four days, she removed the stalk from the beaker and cut two sections at M and N.

Which of the following best matches the observations at sections M and N respectively?



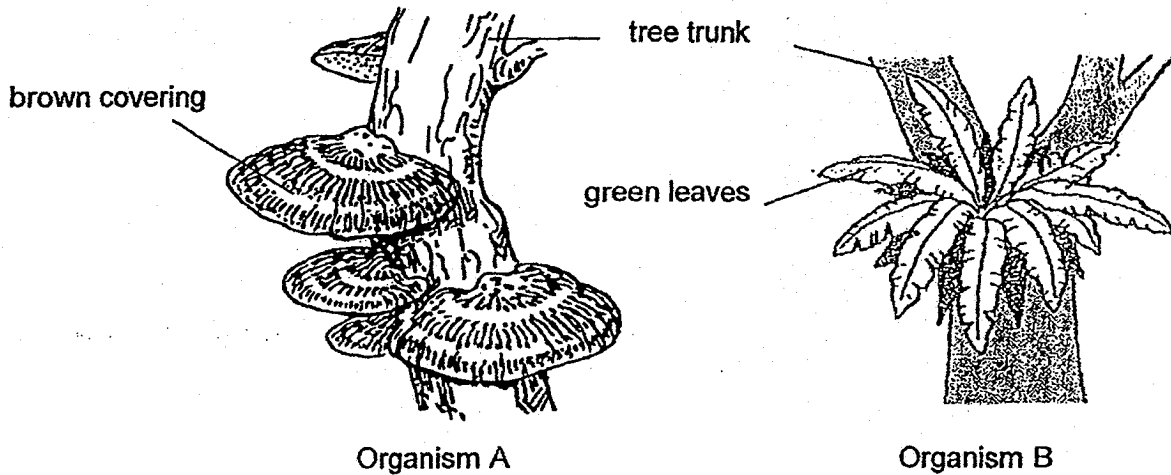
	Position M	Position N
(1)	P	Q
(2)	Q	R
(3)	Q	P
(4)	R	P

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Part II (22 Marks)

For questions 15 to 20, write your answers in this booklet.

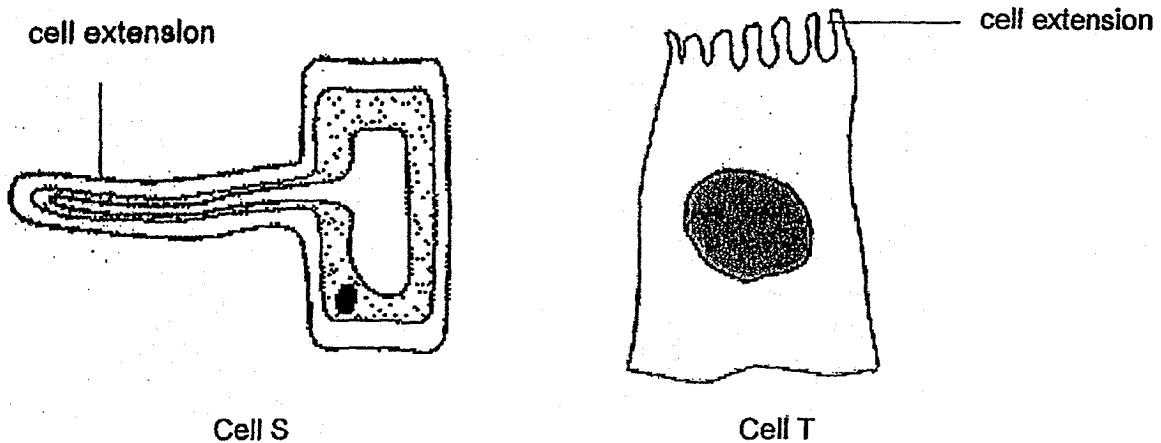
15. Anita made some observations of organisms A and B which were growing on a tree trunk.



Both organisms A and B reproduce by spores but Anita classified organism A as fungi and organism B as plant. Explain why. [2]

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16. The diagrams below show two cells which absorb water. Cell S is a root cell which absorbs water and dissolved mineral salts. Cell T absorbs water from some parts of the digestive system into the blood stream.

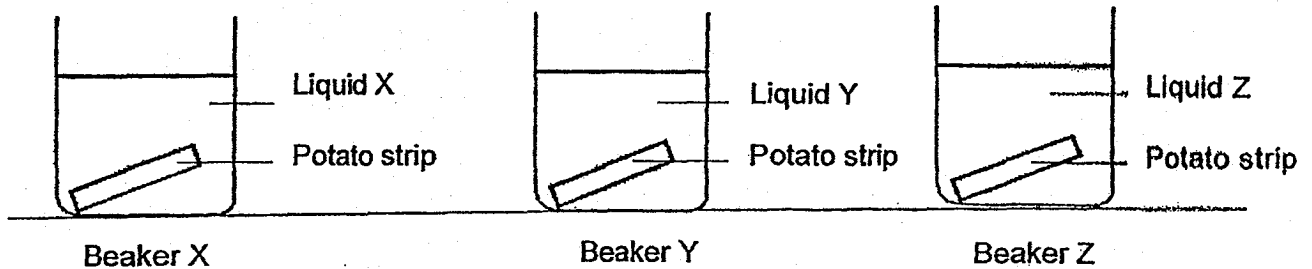


- (a) In which organ of the digestive system can Cell T be found ? [1]

- (b) Based on the diagram, explain how the cells S and T allow water to be absorbed more effectively? [2]

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17. Morris put 3 identical potato strips into 3 different types of liquids as shown in Beakers X, Y and Z below. He wanted to find out how the type of liquid would affect the change in length of the potato strips.



He measured the lengths of the potato strips after 30 minutes and recorded the results in the table as shown below.

Type of liquid used	Length of potato strips (mm)	
	Before experiment	After experiment
X	60	65
Y	60	57
Z	60	55

- (a) State two variables that must be kept constant for Morris to conduct a fair test. [1]

Variable 1 : _____

Variable 2 : _____

- (b) What could have caused the change in length of the potato strips? [2]

Increase in length: _____

Decrease in length: _____

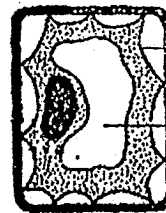
- (c) Which part of the cell is responsible for the results in part (b)? [1]

Question 17 continues on page 16

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- (d) Match all the 3 set-ups to the condition of the cells in the potato strips after the experiment. [1]

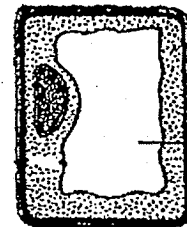
Beaker X



cell membrane

cell sap

Beaker Y



cell membrane

cell sap

Beaker Z

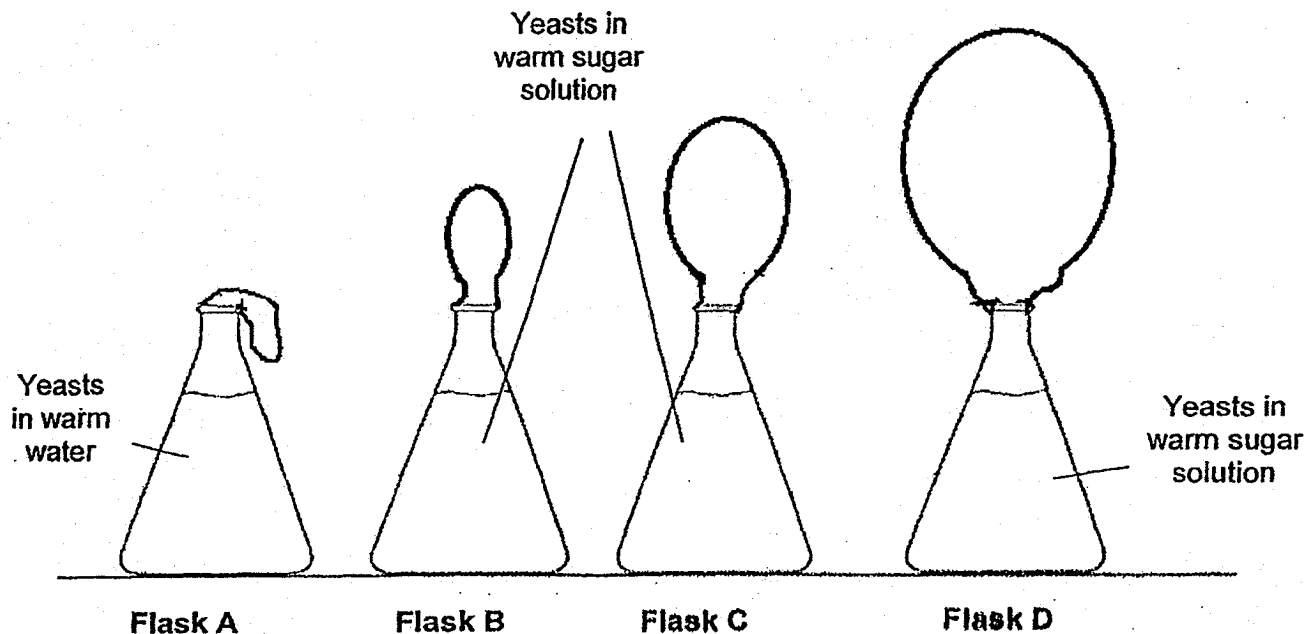


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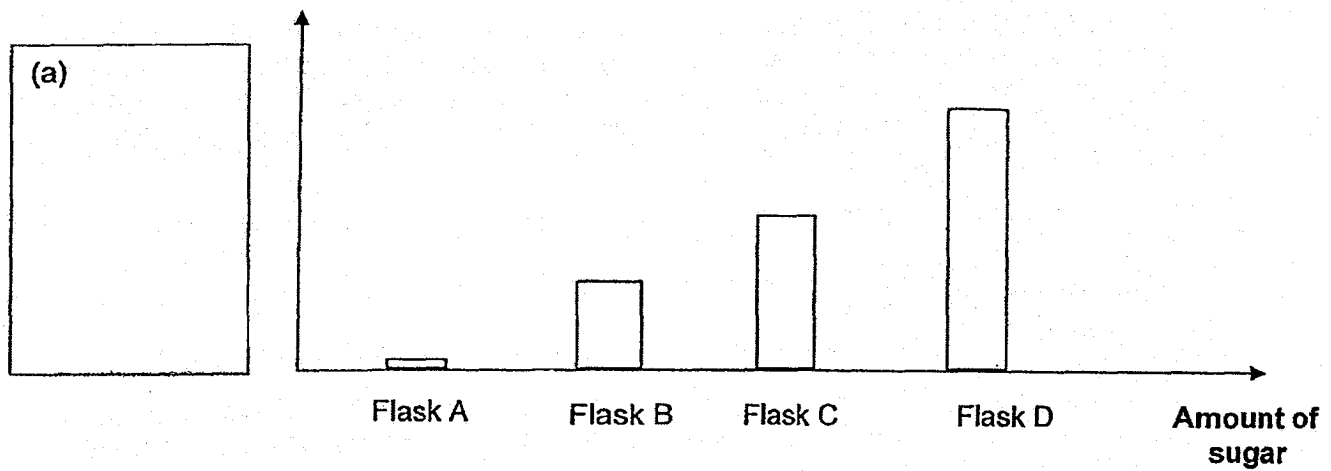
18. John carried out an experiment to test the rate of reproduction of yeast cells. Yeasts are a type of fungus that reproduces in warm sugar solution and releases carbon dioxide during the process. He placed the same amount of yeast cells in each flask containing equal amounts of warm water. He added different amounts of sugar in each flask as shown in the table below.

Flask	A	B	C	D
Amount of sugar (tablespoons)	0	1	2	3

John recorded the yeasts' rate of reproduction by observing the extent to which each balloon inflated. He made the following observations after 30 minutes and the results were recorded on a graph.



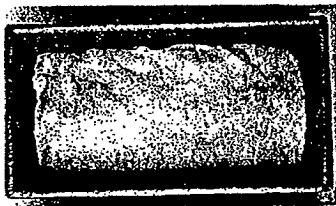
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(a) Based on John's results, label the axis in the box provided in the graph above. [1]

(b) State the aim of John's experiment. [1]

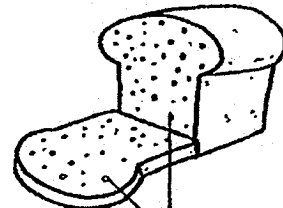
(c) State the relationship between the amount of sugar used and the rate of reproduction of the yeast cells. [1]



Unbaked bread



baked bread which has risen



Air spaces in risen bread

(d) John then decided that he wanted to bake some sweetened bread. Bread rises when yeast is added to it. Based on his results, should he use more or less sugar in order for the bread to rise more? Give a reason to support your answer. [1]

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- (b) Explain why the part(s) of the stem would be swollen in part (a). [2]

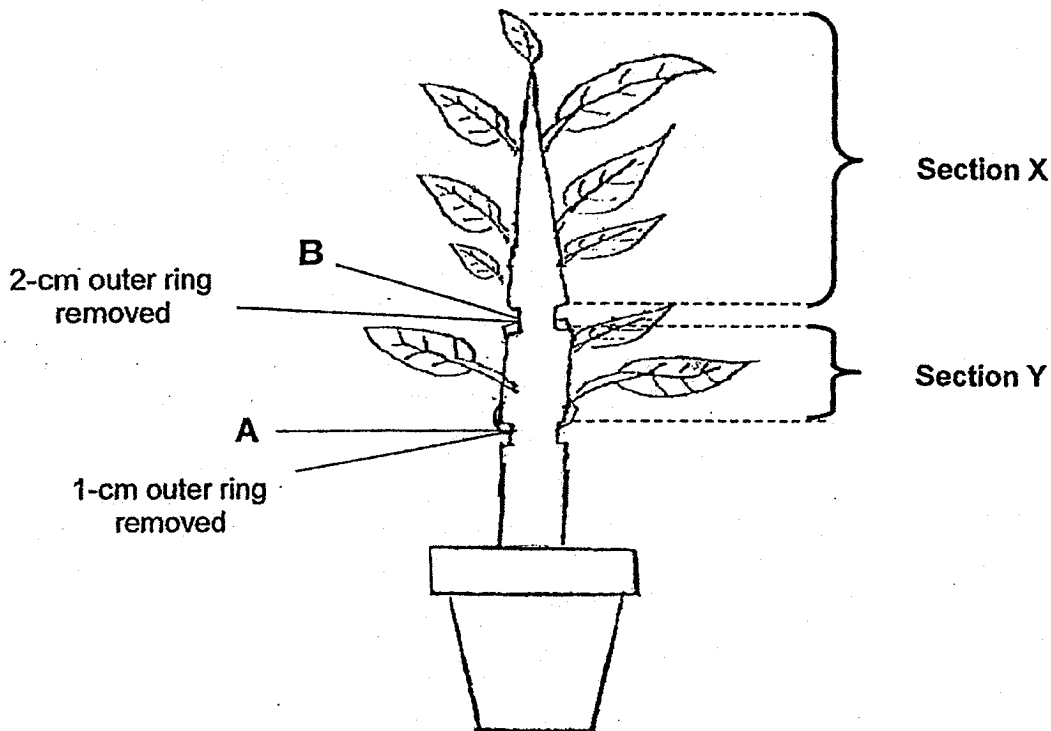
- (c) After 8 days, Celine noticed that the leaves at section X turned yellow and withered while the leaves at section Y remained green. Suggest the possible reasons why this happened. [2]

Section X:

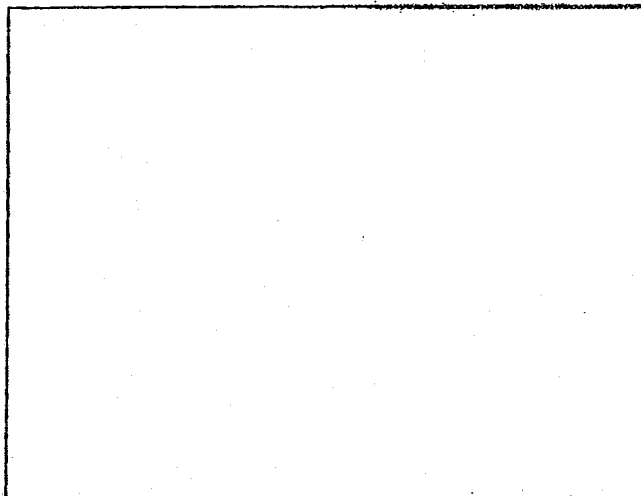
Section Y:

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19. Celine carried out an experiment on a plant. She made a 1-cm thick outer ring from the plant at A, thus removing only the food-carrying tubes of the stem at A, She also made another outer ring which was 2-cm thick at B that removed both food and water-carrying tubes.

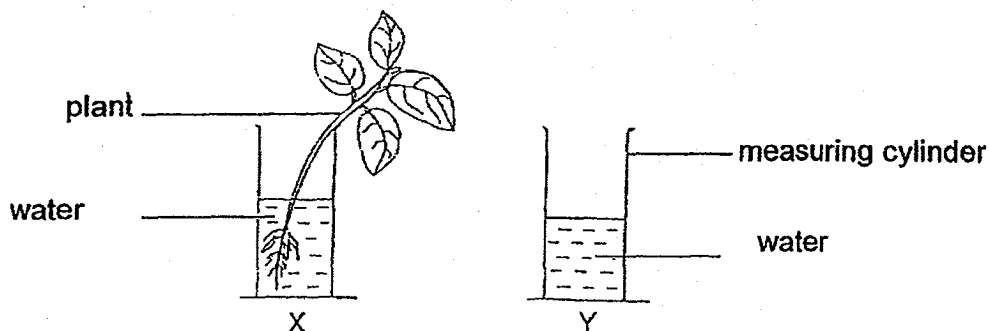


- (a) Draw the observation Celine would make of the stem at section Y and label the swollen part(s) of the stem. [1]



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20. Sammy wanted to find out the volume of water taken in by a plant. He placed a plant in a measuring cylinder X and set up another measuring cylinder Y as shown in the diagram below.



The measuring cylinders X and Y were left at the same location in the open for a week. The table below shows the volume of water in X and Y on Day 1 and Day 7 of the experiment.

Measuring cylinder	Volume of water (cm ³)	
	Day 1	Day 7
X	1000	850
Y	1000	950

- (a) What was the purpose of set-up Y? [1]

- (b) Sammy's friend advised him that set-up Y was not necessary. Without set-up Y, what could Sammy do to set-up X to obtain more accurate results? [1]

- (c) Explain your answer in part (b). [1]

End of Paper

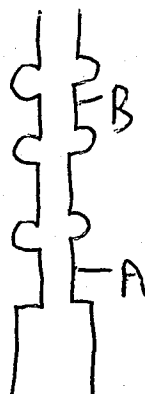
SCHOOL : ROSYTH PRIMARY SCHOOL
 LEVEL : PRIMARY 5
 SUBJECT : SCIENCE
 TERM : 2018 CA1

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	3	2	4	4	2	3	3	1
Q 11	Q12	Q13	Q14						
2	4	3	4						

SECTION B

Q15)	Organism A is a fungi because it feeds on dead or alive plants or animals.
Q16)	a) Large intestine. b) The cell extensions increases surface area of the cell and help to absorb more water faster rate.
Q17)	a) Variable 1 : Same amount of liquid in the beakers. Variable 2 : Same length of the potato strips. b) Increase in length: absorb more water. Decrease in length: substance left the cell. c) Cell membrane. d) 
Q18)	a) Size of the balloon b) To find out if adding more sugar to the yeast, will affect the amount of carbon dioxide released.

	c)The more the amount of sugar being used, the more reproduction of the yeast cells. d)More sugar / more carbon dioxide / air is produced thus the bread will rise.
Q19)	a)  b)Since the food carrying tube id removed, the food at section X transported by the food carry tube will accumulate at section Y causing the stem to be swollen. c)Section X : Water cannot reach the leaves at X hence there is water supply and cannot make if food. Section Y : Plant still receive water and make food.
Q20)	a)To compare and confirm that the volume of water taken in by the plant is the only variable that affects the amount of water absorbed. b)Put a layer of oil on the top of set-up X. c)To prevent any water from evaporating.