Nan Hua Primary School
Primary 5 Science
Term 1 Weighted Assessment 2022

Marks	
Section A:	/10
Section B:	/10
Total:	**/20**

Name: _____( )

Class: Primary 5/_____

Date: _____

Duration: 30 minutes

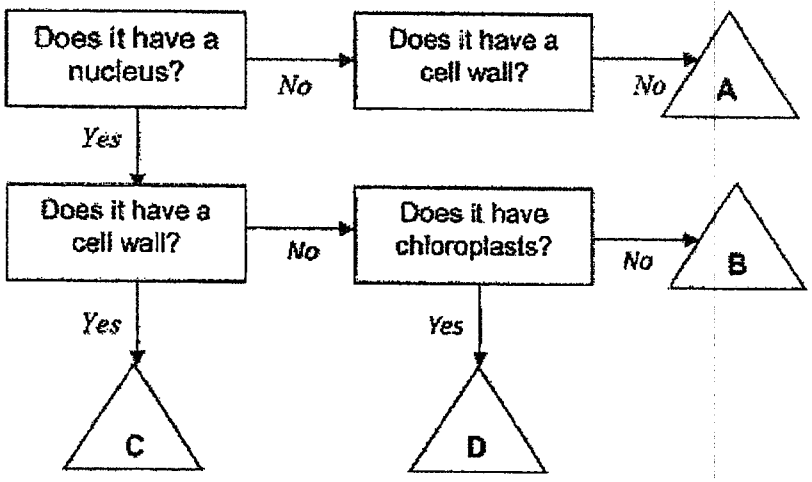
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Parent's Signature

Answer all questions

Section A: (5 x 2 marks = 10 marks)

For each question from 1 to 5, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the bracket provided.

1 The flow chart below shows the differences in cells A, B, C and D.



Based on the flow chart, which cell is most likely taken from a plant?

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

( )

[turn over]

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2 Mel recorded the following statements below.

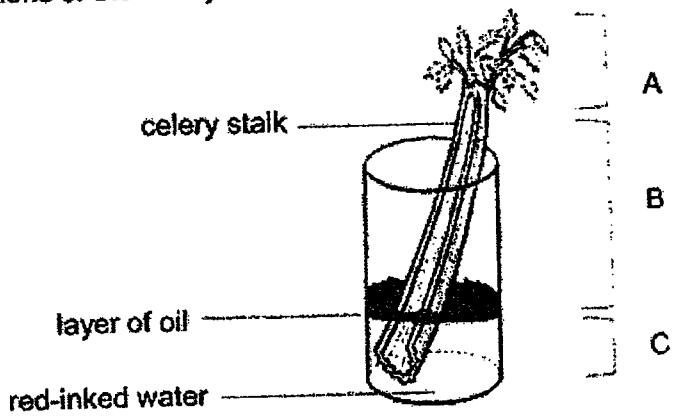
A: A tissue is made up of organs.
B: A cell is the smallest unit of life.
C: Living things are made up of one or more cells.
D: Larger organisms have bigger cells than smaller organisms.

Which of the above statements are true?

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

( )

3 The diagram below shows a celery stalk in a beaker of red-inked water. A, B and C show the 3 sections of the celery stalk.



After three days, there was no more red-inked water remaining in the cup.
Which section(s) of the celery stalk would have turned red?

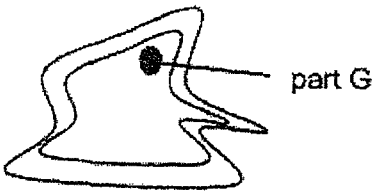
(1) A only
(2) C only
(3) B and C only
(4) All of the above

( )

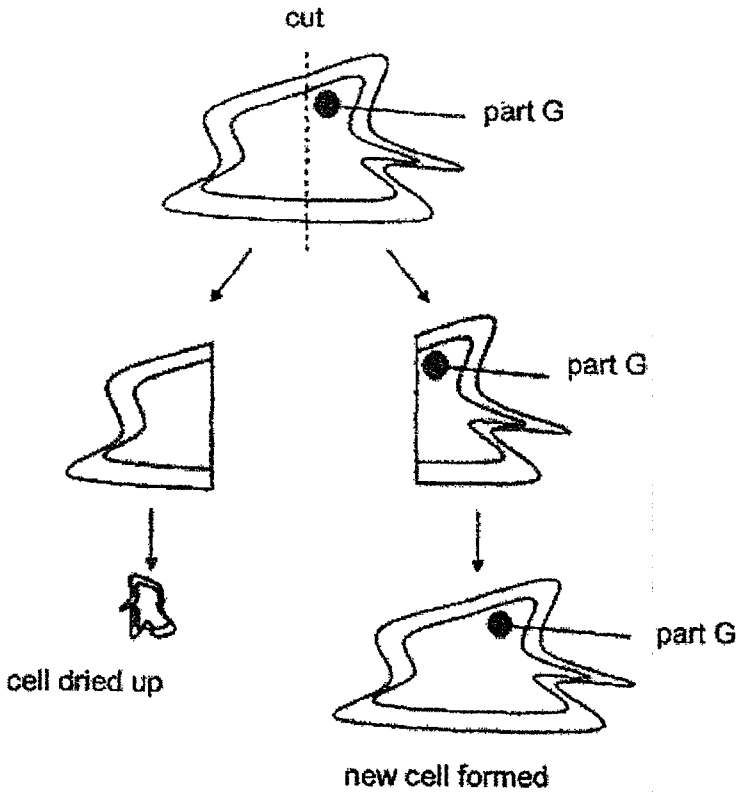
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4 Jane observed cell X under a microscope and drew it as shown below.



Using a special laboratory equipment, she cut the cell into two and found that one half of the cell grew to form a new cell while the other half dried up, as shown below.



From her experiment, what can she conclude about part G?

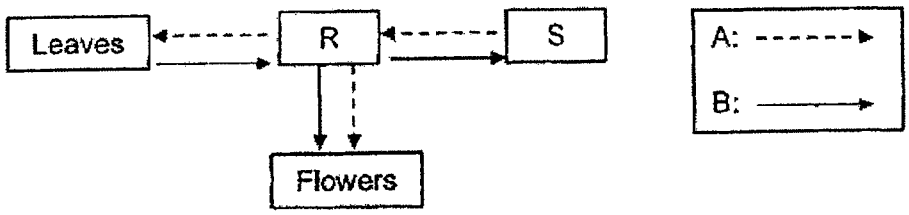
(1) It allows the cell to trap light and make food.
(2) It allows substances to move around within the cell.
(3) It allows the cell to regrow and repair parts of the cell.
(4) It controls the movement of substances in and out of the cell.

( )

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5 The diagram below shows how substances, A and B, are transported in a plant. The arrows represent the movement of the substances. R and S are different parts of the plant.



What do A, B, R and S represent?

	Substance A	Substance B	R	S
(1)	water	food	roots	stem
(2)	water	food	stem	roots
(3)	food	water	roots	stem
(4)	food	water	stem	roots

( )

Total marks for section A	10

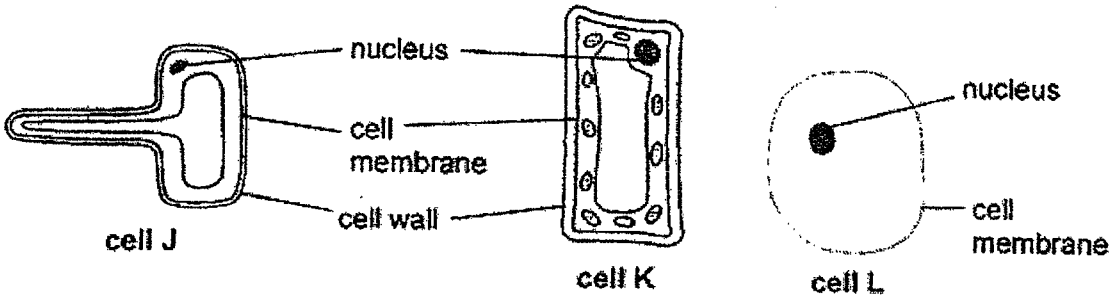
[turn over]

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Section B: Structured questions (10m)

For questions 6 to 8, write your answers in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

6 John conducted an experiment to find out what happens when cells absorb too much water. The diagram below shows the three cells he used.



All three cells were placed in water for 5 minutes to absorb as much water as possible. After 5 minutes, John recorded his observations in the table below.

Cell J placed in water	Cell K placed in water	Cell L placed in water
The cell stiffens but maintains its regular shape.	The cell stiffens but maintains its regular shape.	The cell bursts and loses its shape.

(a) Explain the difference in the observations of cells J, K and L after 5 minutes in water. [1]

(b) Which cell was taken from a leaf? Explain your answer. [1]

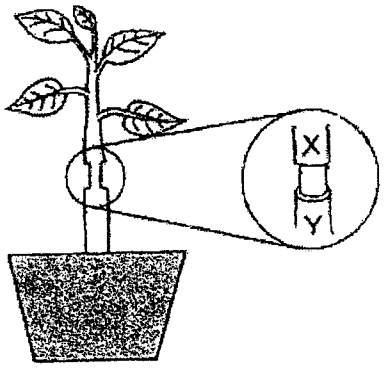
(c) Cells J and K were taken from the same plant?Why did the cells taken from different parts of the same plant have different shapes? [1]

Score	3

[turn over]

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7 Sam cut an outer ring of the stem between positions X and Y of a plant as shown below.



He placed his plant by the window and watered it daily for one week.
After a few days, he noticed that position X was swollen.

(a) Which part of the plant transport system was removed when he cut the outer ring? [1]

(b) Write in the boxes below to state if the following statements about the plant above are 'True' or 'False'. [1]

Statement	True/False
The leaves could not make food.	
The stem could transport water to the leaves.	

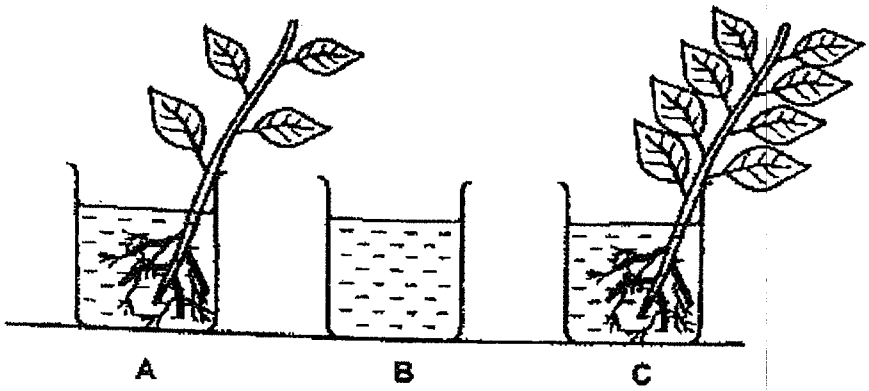
(c) After one week, the plant died. Explain why. [1]

Score	3

[turn over]

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8 Siv wanted to find out how the numbers of leaves in a plant affects the amount of water taken in by the plant. He filled three identical beakers with the same amount of water and placed plants in two of them. He kept the type and height of the plants the same as shown in the diagram below.



He recorded the amount of water in each beaker at the start and end of the experiment.

	Set-up A	Set-up B	Set-up C
Volume of water at the start of the experiment (ml)	1000	1000	1000
Volume of water at the end of the experiment(m)	800	900	600

(a) State the dependant variable (measured) in this experiment. [1]

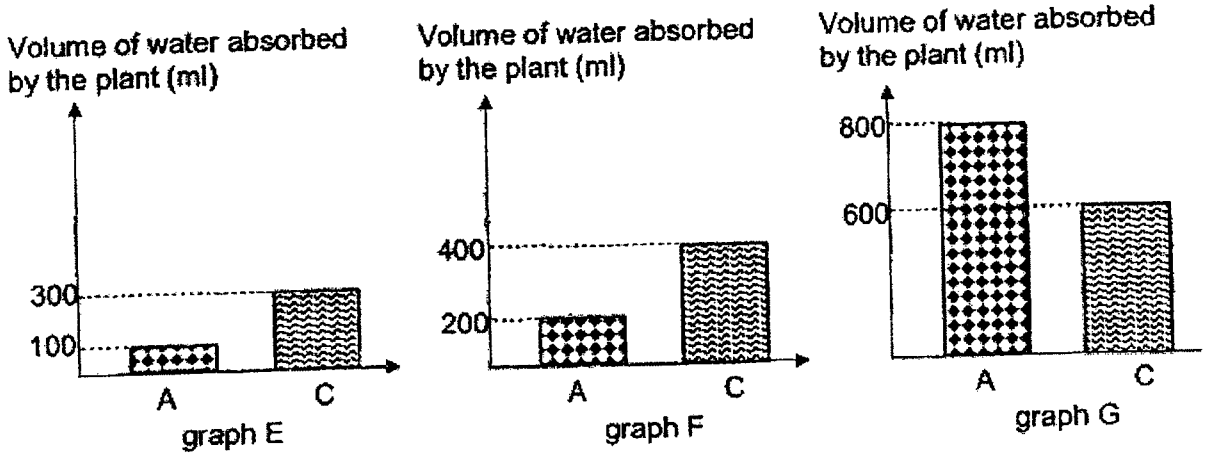
(b) State one other variable he needed to keep constant for the experiment. [1]

(c) Explain the purpose of set-up B. [1]

[turn over]

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Siv plotted a graph to show the amount of water absorbed by the two plants during the experiment.



(d) Based on the information shown in the table on page 7, which graph, E, F or G, correctly represents the volume of water absorbed by the plants in set-ups A and C? [1]

Score	4

~ End of Paper ~

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SCHOOL : NAN HUA PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2022 WA1

SECTION A

Q 1	Q2	Q3	Q4	Q5
3	3	4	3	2

SECTION B

Q6)	a) Cell J and K had cell walls to maintain their shape whereas Cell L burst when it absorbed too much water. b) Cell K was taken from a leaf as it has a cell wall and chloroplasts which trap sunlight to make food. c) Cell J and K have different shapes to perform their different functions efficiently.
Q7)	a) The food – carrying tube b) False True c) Food from the leaves could not be transported to parts of the plant below position X and these parts, including the roots, will not be able to function, causing the plant to die.
Q8)	a) Volume of water at the end of the experiment. b) Location of all 3 set-ups / amount of roots in the plants in A and C. c) So that Sir knows how much water was lost through evaporations and then calculate how much water was taken in by the plant. d) Graph E

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