



RAFFLES GIRLS' PRIMARY SCHOOL

WEIGHTED ASSESSMENT (2)

2021

Your Score	15
Parent's signature	

Name : _____ Index No.: _____ Class: P5 _____ Date: _____

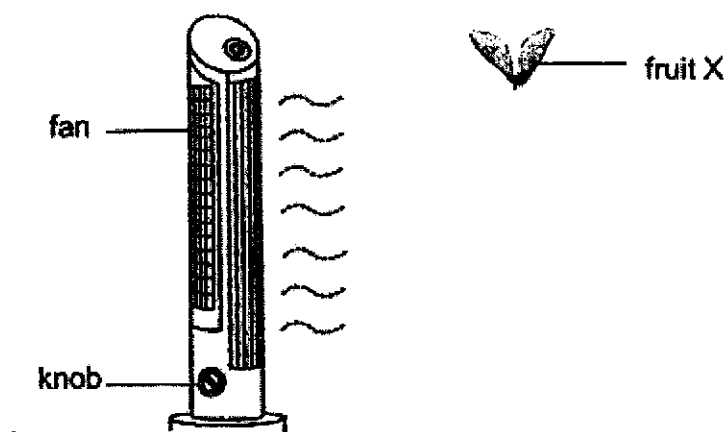
SCIENCE

Duration: 30 min

For questions 1 to 3, write your answers clearly in the spaces provided.

The number of marks is shown in brackets [] at the end of each question or part question.

1. Sam set up an experiment to find out if the speed of wind affects the distance moved by fruit X as shown below. The speed of wind of the fan can be adjusted from the slowest to the fastest by turning the knob from 1 to 5.



Sam recorded the results in the table below.

Knob of the fan	Distance moved by fruit X (cm)
1	50
2	103
3	147
4	188
5	210

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(a) The following are the variables listed by Sam.

Identify the correct independent variable, dependent variable and constant variables in Sam's experiment by putting a tick (✓) in the correct boxes in the table below. [2]

Variables	Independent Variable	Dependent Variable	Constant Variables
Speed of wind			
Distance moved by fruit X			
Location of experiment			
Time taken for fruit X to reach the ground			
Height at which the fruit X was released			

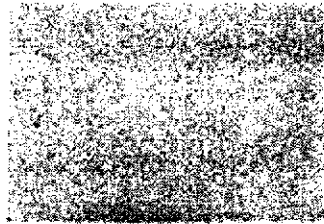
(b) Based on his results above, state how the wind speed affected the distance moved by fruit X. [1]

(c) Explain why fruit X needs to be dispersed far away from the parent plant. [1]

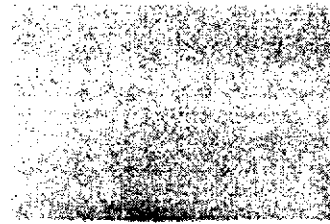
(d) Name the physical characteristic of fruit X which helps in its dispersal. [1]

Score	5
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2. David has two identical pieces of paper, A and B, as shown below.

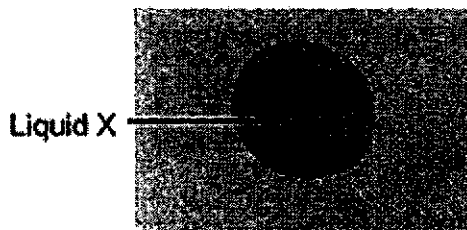


Paper A

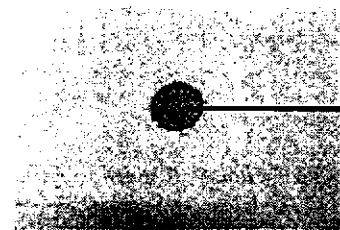


Paper B

He placed one drop of liquid X and Liquid Y on papers A and B respectively as shown in the diagram below. (refer to powerpoint slide shown on the screen)



Paper A

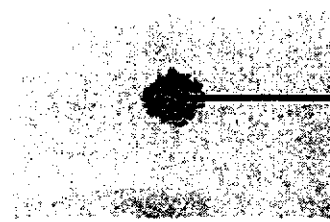


Paper B

After three minutes, he made the following observations as shown below. (refer to powerpoint slide shown on the screen)



Paper A



Paper B

(a) Based on David's observation above, which liquid, X or Y, disappeared first? [1]

Liquid _____

(b) Explain your answer in (a). [2]

Score	3
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David carried out another experiment to find out the melting and boiling points of liquids X and Y. He recorded the results in the table below.

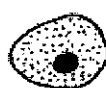
Liquids	Melting Point ($^{\circ}\text{C}$)	Boiling Point ($^{\circ}\text{C}$)
<input type="text"/>	- 114	78.5
<input type="text"/>	- 95	102

(c) Based on David's observation of liquids X and Y, complete the result table above by writing X and Y in the correct box. [1]

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

Score	<input type="text" value="2"/>
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3. The diagram below shows two cells, A and B, observed under a microscope.

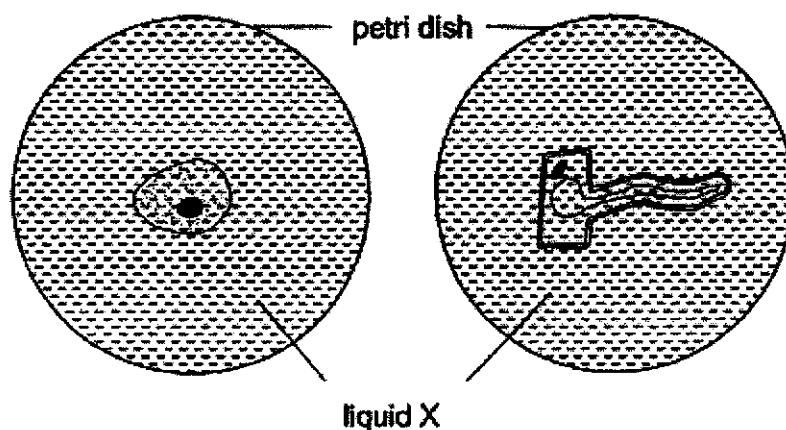


cell A

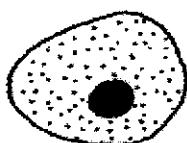


cell B

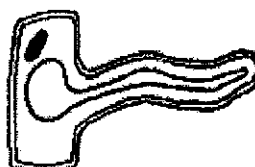
Next, cells A and B were placed on two identical petri dishes filled with the same amount of liquid X.



The diagram below shows the change in cells A and B observed under the microscope half an hour later.



cell A



cell B

- (a) Based on the diagrams above, what could be observed of cells A and B after half an hour? [1]

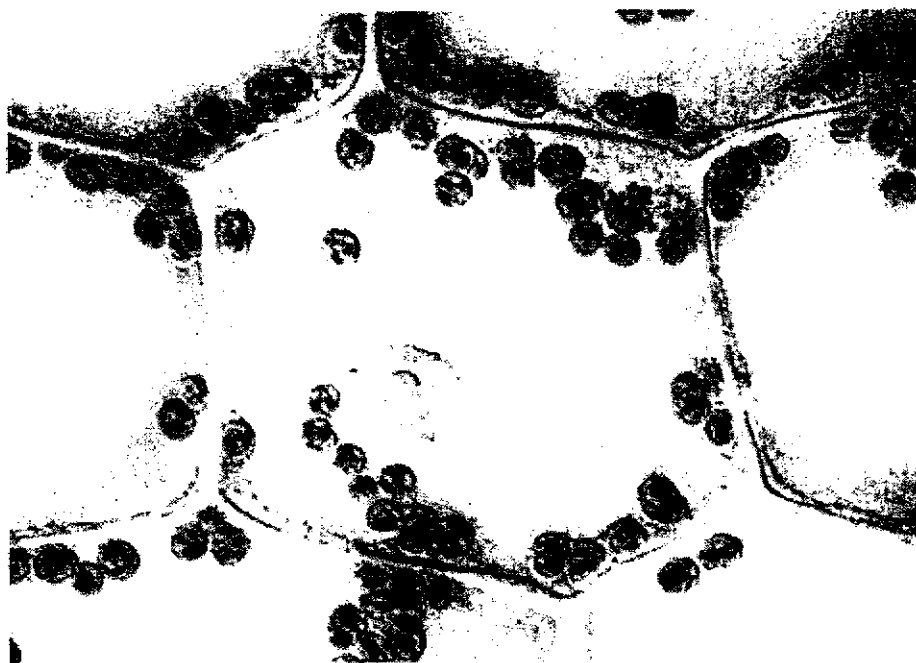
Score	1
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- (b) Cells A and B were left in the same petri dish in liquid X for a few more hours. One of the cells burst. Identify the cell and explain why it burst. [2]

The diagram below shows cells C viewed under a microscope. (*refer to powerpoint slide shown on the screen*)



- (c) (i) Name the group of organism that has cell C. [1]

- (ii) Which part of the organism identified in (c)(i) can cells C be found? Explain your answer clearly. [1]

END OF PAPER

Score	4
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SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL
 LEVEL : PRIMARY 5
 SUBJECT : SCIENCE
 TERM : 2021 WEIGHTED ASSESSMENT (2)

Q1)	a)			
	Variables	Independent Variable	Dependent Variable	Constant Variables
	Speed of wind	√		
	Distance moved by fruit X		√	
	Location of experiment			√
	Time taken for fruit X to reach the ground			
	Height at which the fruit X was released			√
	b) As the wind speed increases, the distance moved by fruit X increases. c) To prevent overcrowding and competition for water, sunlight, space and nutrients between fruit X and its parent plant. d) Wing-like structures.			
Q2)	a) Liquid X			
	b) Liquid X gained heat from the surrounding and evaporated faster			
	c)			
	Liquids	Melting Point (°C)	Boiling Point (°C)	

	<table border="1"><tbody><tr><td>X</td><td>-114</td><td>78.5</td></tr><tr><td>Y</td><td>-95</td><td>102</td></tr></tbody></table>	X	-114	78.5	Y	-95	102
X	-114	78.5					
Y	-95	102					
	<p>d) Liquid X evaporated faster than liquid Y. Hence liquid X has a lower boiling point than liquid X.</p>						
Q3)	<p>a) They have increased in size</p> <p>b) Cell A burst. It does not have a cell wall. The cell wall protects / supports the cell.</p> <p>c) i) Plant</p> <p>ii) It is most likely taken from a leaf. It has chloroplast which contain chlorophyll for leaves to trap light for photosynthesis.</p>						