RAFFLES GIRLS' PRIMARY SCHOOL

WEIGHTED ASSESSMENT (2)

2021

Your Score	/ 15
Parent's signature	

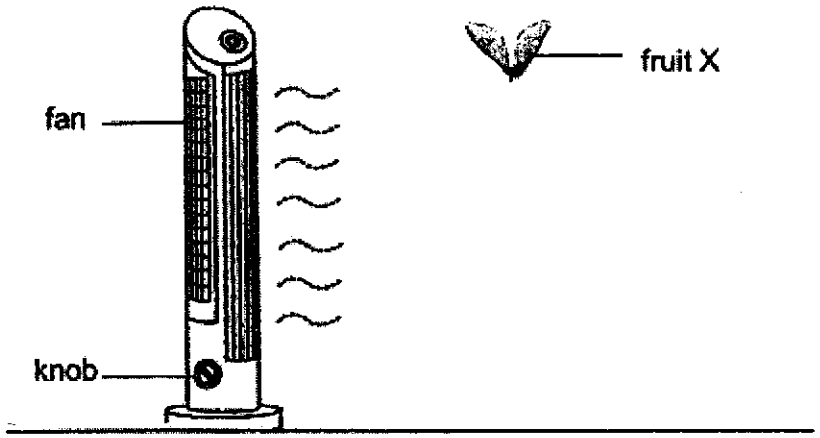
Name : _____ **Index No.:** ____ **Class: P5**___ **Date:**_____

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]

_____

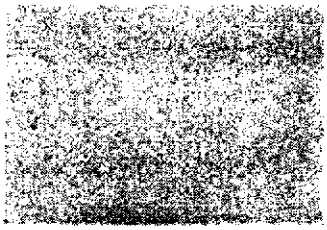
_____

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

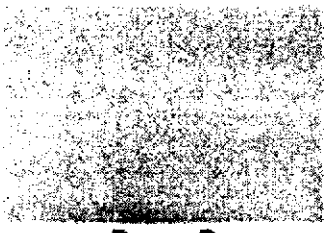
_____

Score	/5

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

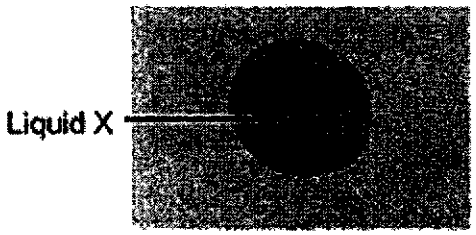


Paper A

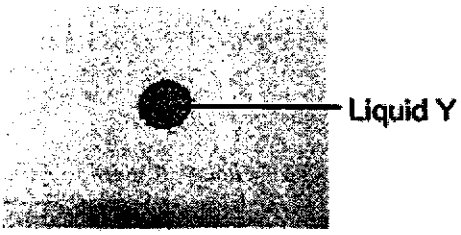


Paper B

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)*

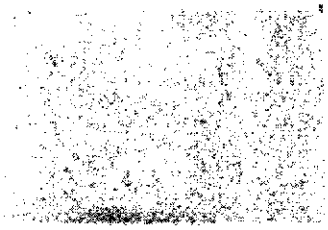


Paper A

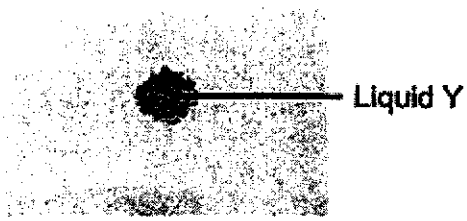


Paper B

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 (°C)	Boiling Point (°C)
☐	- 114	78.5
☐	- 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]

_____

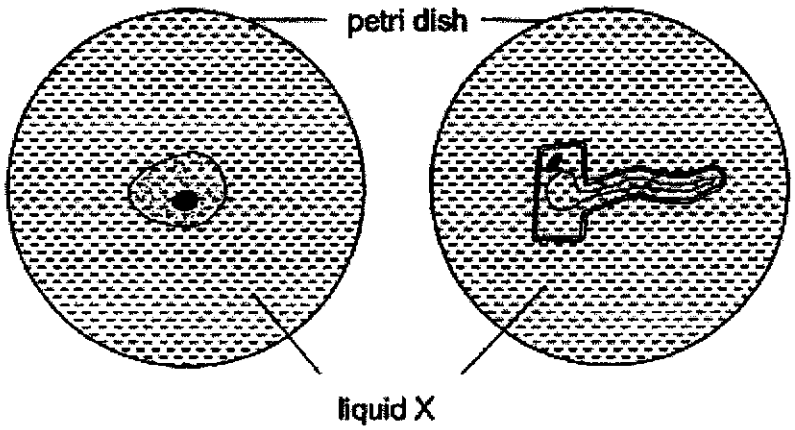
_____

Score	/ 2

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

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)

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