RAFFLES GIRLS' PRIMARY SCHOOL

WEIGHTED ASSESSMENT (2)

2021

Your Score	/ 15
Parent's signature	

Name : _____ Index No.: ____ Class: P5____ Date: 22 July ____

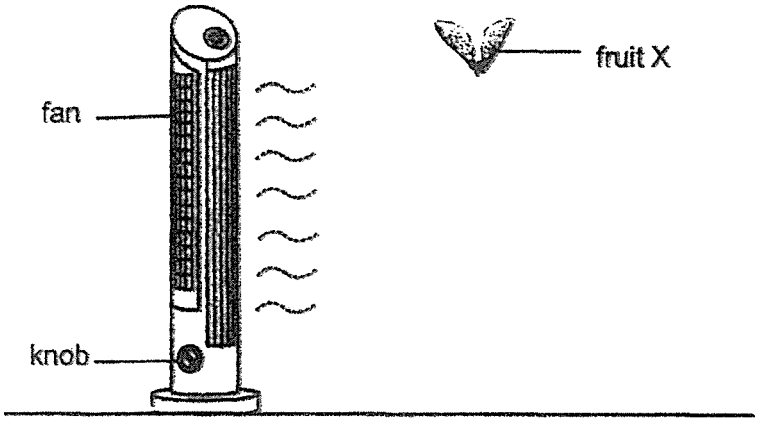
SCIENCE

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]

_____

_____

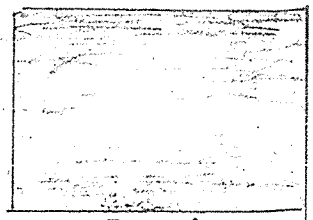
(d) Name the physical characteristics of fruit X which helps in its dispersal. [1]

_____

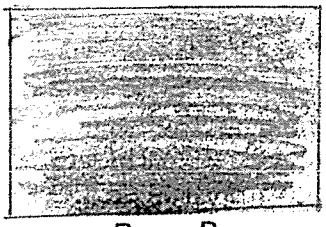
_____

Score	5

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

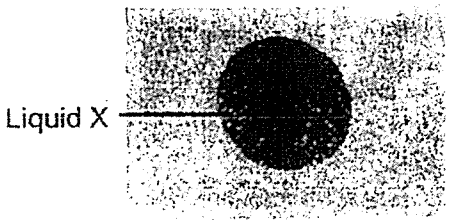


Paper A

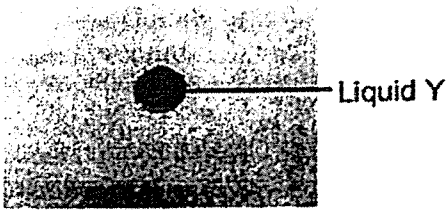


Paper B

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)*

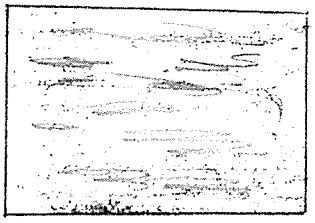


Paper A

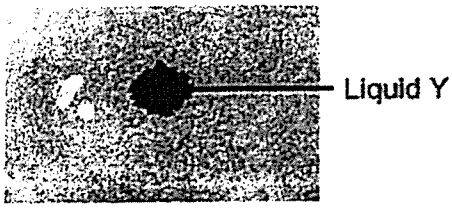


Paper B

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]

_____

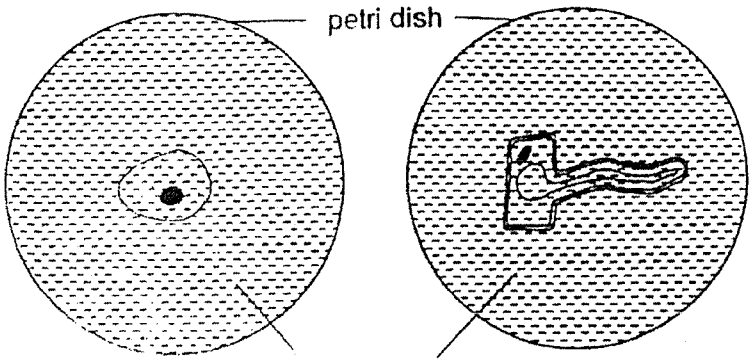
_____

Score	/ 2

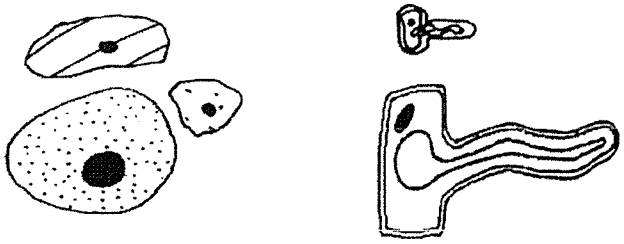
3. The diagram below shows two cells, A and B, observed under a microscope.

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

ANSWER KEY

YEAR : 2021
LEVEL : PRIMARY 5
SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : WEIGHTED ASSESSMENT 2

Q1

a)

Independent Variable	Dependent Variable	Constant Variable
✔		
	✔	
		✔
		✔

b) The faster the wind speed, the longer the distance moved by fruit X.

c) To prevent overcrowding and competition between the parent plants and other young plants for sunlight, space, water and minerals.

d) It has a wing-like structure to allow it to float in air and be carried to a further place.

Q2

a) Liquid X

b) The liquid X gained heat and evaporated into water vapour after three minutes. But Liquid Y did not evaporate after three minutes, so Liquid X disappeared first.

c)

X
Y

d) X evaporates faster than Y, so it means that it will have a lower boiling point.

Q3

a) They become bigger

b) Cell A. It does not have a cell wall to protect it. Without cell wall, the cell would have no protection, therefore it would burst.

c)

i)	Plants
ii)	Leaf. Cell C has chloroplasts that contain chlorophyll, a green pigment, that traps light to make food for the plant and to give the leaf its green colour

END