MARIS STELLA HIGH SCHOOL (PRIMARY)

TERM 2 WEIGHTED ASSESSMENT

P5 SCIENCE

9 MAY 2023

BOOKLET A

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers on the Optical Answer Sheet (OAS) provided.

Name: _____ ( )

Class: 5 _____

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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 (OAS).

(14 x 2 marks)

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1 Which statement shows the similarity between non-flowering plants and fungi?

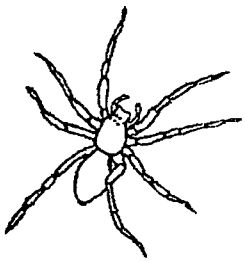
(1) Both cannot make food.

(2) Both can grow in the dark.

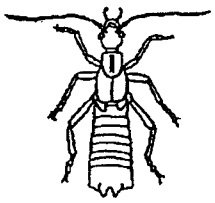
(3) Both reproduce by spores.

(4) Both do not respond to changes.

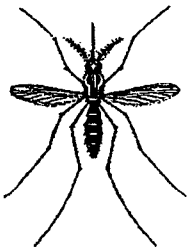
2 Study the animals below.



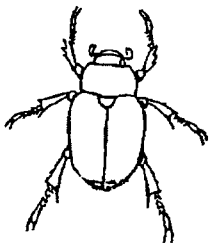
Animal A



Animal B



Animal C



Animal D

Which of the animals are insects?

(1) A and C only

(2) B and D only

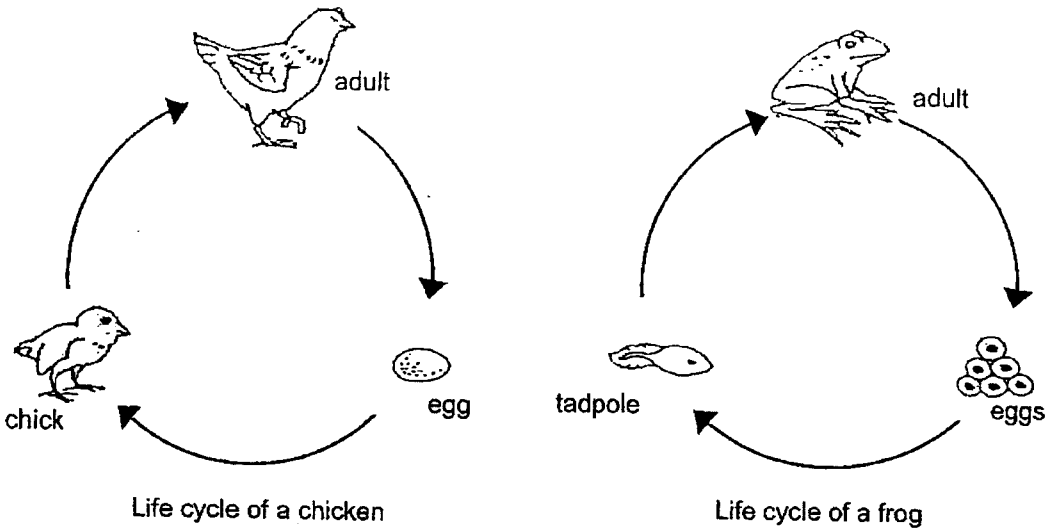
(3) A, B and D only

(4) B, C and D only

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3 The diagram below shows the life cycles of a chicken and a frog.



Based on the life cycles above, which of the following statements is correct?

(1) Both life cycles consist of three stages.
(2) Both life cycles start from the egg stage.
(3) A chicken takes a longer time to complete its life cycle than a frog.
(4) The life cycle of a frog has a larval stage but not the life cycle of a chicken.

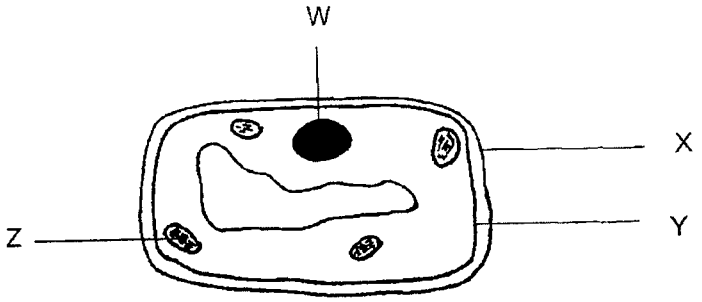
4 Which of the following statements is correct?

(1) All cells have a cell membrane.
(2) The nucleus is the smallest unit of life.
(3) Animals are made up of cells but plants are not.
(4) A larger animal has bigger cells compared to a smaller animal.

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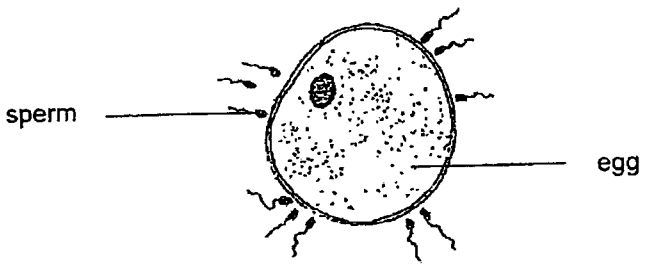
5 The picture below shows a cell.



Which part of the cell uses sunlight to make food?

(1) W
(2) X
(3) Y
(4) Z

6 A process in human reproduction is as shown.



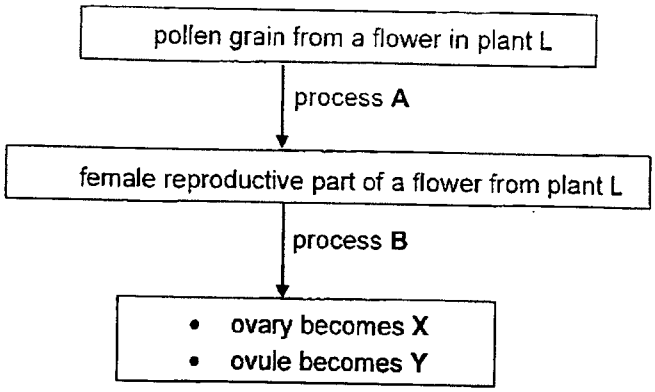
Which statement about human reproduction is correct?

(1) The process is called pollination.
(2) The sperms are produced in the penis.
(3) The fertilised egg is produced in the ovary.
(4) Fusion of a sperm and an egg results in a fertilised egg.

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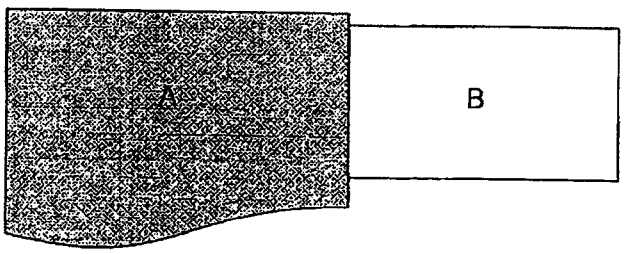
7 Study the flow chart below.



Which of the following correctly identifies processes A and B and X and Y?

	Process A	Process B	X	Y
(1)	pollination	fertilisation	seed	fruit
(2)	pollination	fertilisation	fruit	seed
(3)	fertilisation	pollination	fruit	seed
(4)	dispersal	pollination	fruit	seed

8 Two metal blocks, A and B, of different temperatures are in contact with each other. Heat flows from A to B.



Which statement explains why heat flows from A to B?

(1) A has more mass than B.

(2) A is at a higher temperature than B.

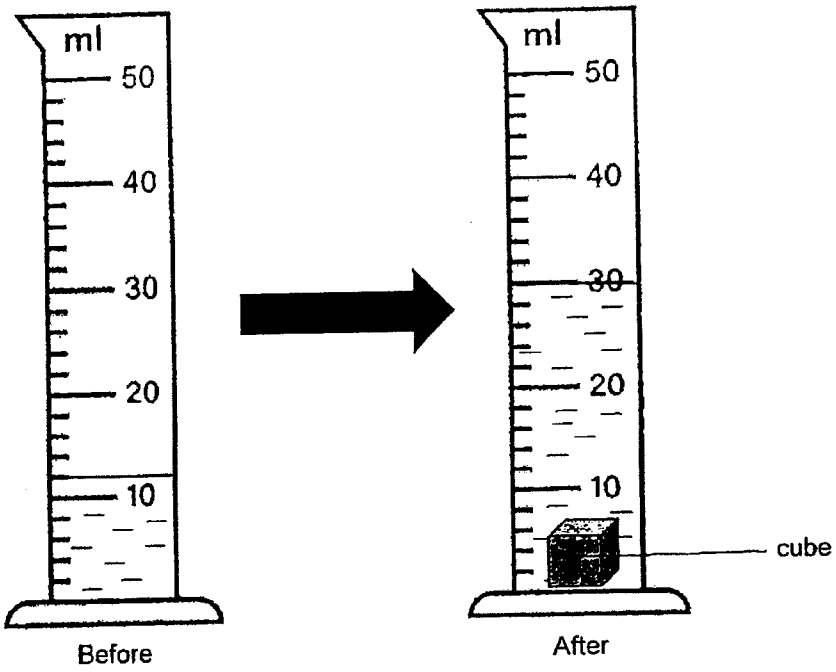
(3) A is a better conductor of heat than B.

(4) A and B are good conductors of heat.

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9 A solid cube is placed in a measuring cylinder filled with some water.



What is the volume of the cube?

(1) 12 cm^3

(2) 18 cm^3

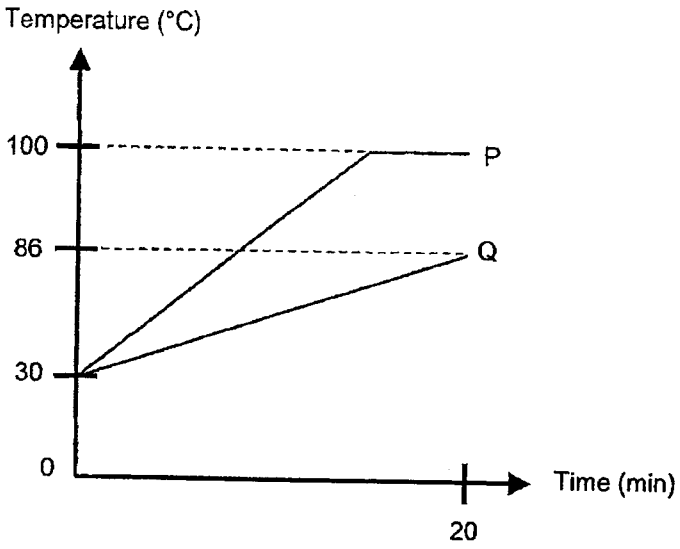
(3) 19 cm^3

(4) 30 cm^3

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10 Hai Seng boiled the same amount of water in two similar kettles, P and Q, made of different materials. He measured the temperature of the water in the two kettles over 20 minutes and recorded his results in a graph below.



Based on the graph, which of the following statements is correct?

(1) The temperature of water increased faster in P.

(2) The water in P had a higher starting temperature.

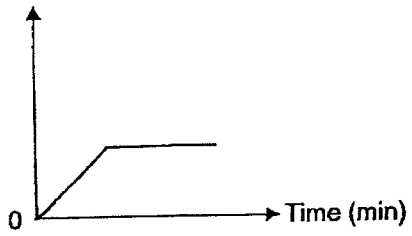
(3) Material used to make Q is a better conductor of heat.

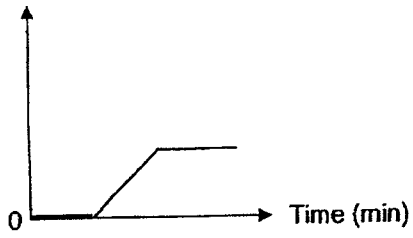
(4) The boiling point of water is 86 °C in Q and 100 °C in P.

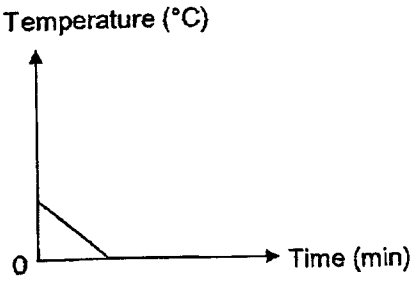
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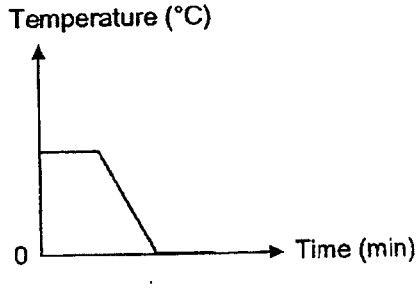
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11 An ice cube was taken out of the freezer and left on a table top until it had completely melted. Which of the following graphs shows how the temperature of the ice cube changed with time?

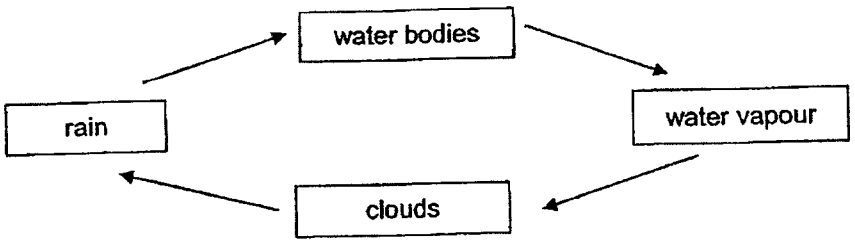
(1)


(2)


(3)


(4)


12 The diagram below shows the water cycle.



In which of the stage(s) does water exist in the liquid state?

(1) water bodies only
(2) rain and water bodies only
(3) water vapour and clouds only
(4) rain, water bodies and clouds only

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13 Four identical cups, A, B, C and D, are filled with the same amount of water at different temperatures. They are placed in rooms of different temperatures as shown in the table below.

Cup	Temperature of room (°C)	Temperature of water in the cup (°C)
A	10	28
B	20	28
C	28	20
D	28	10

Which cup will have the most water droplets on its outer surface after 30 seconds?

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

14 The table below shows the state of four different substances, W, X, Y and Z, at different temperatures.

Substance	State of substance at		
	30°C	50°C	110°C
W	liquid	liquid	gas
X	solid	solid	liquid
Y	solid	liquid	liquid
Z	liquid	gas	gas

Which substance has the highest melting point?

(1) W
(2) X
(3) Y
(4) Z

END OF BOOKLET A

Go on to Booklet B

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MARIS STELLA HIGH SCHOOL (PRIMARY)

TERM 2 WEIGHTED ASSESSMENT

P5 SCIENCE

9 MAY 2023

BOOKLET B

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Use a dark blue or black ballpoint pen to write your answers in the space provided for each question.
5. Do not use correction fluid/tape or highlighters.

Booklet A:	**/ 28**
Booklet B:	**/ 22**
Grand Total:	**/ 50**

Parent's Signature:_____

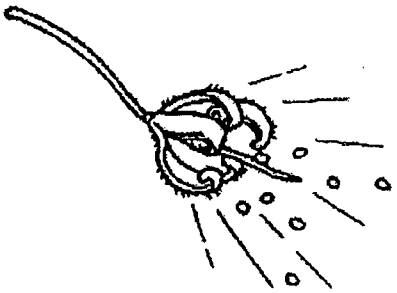
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Class: 5 _____

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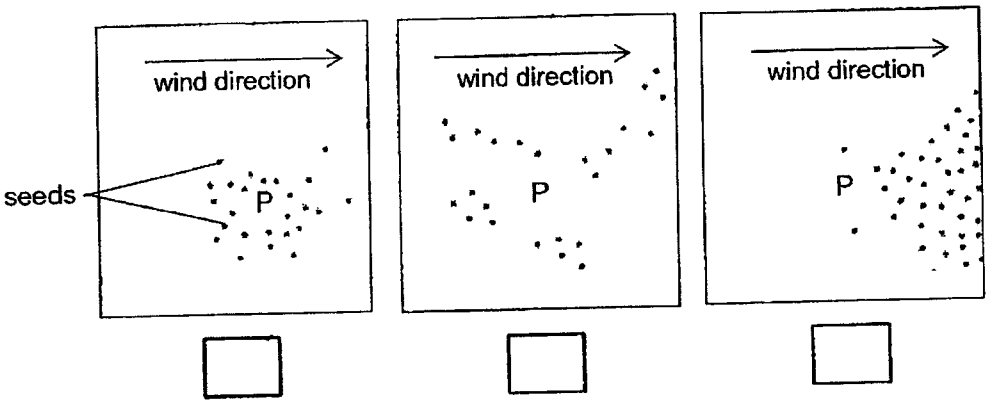
For questions 15 to 20, write your answers in this booklet. The number of marks available is shown in brackets [ ] at the end of each question or part question. (22 marks)

15 The diagram shows a fruit of plant P.



Study the three dispersal patterns below.

(a) Which of the following shows the dispersal pattern of plant P? Tick (✓) the correct box. [1]



(b) State one advantage of the dispersal method used by P to disperse its seeds. [1]

_____

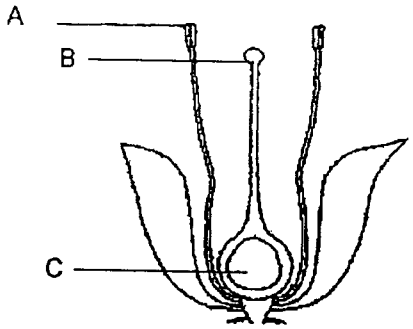
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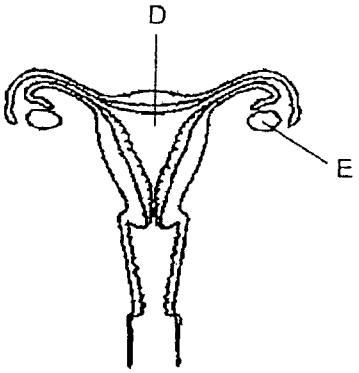
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The diagram below shows the reproductive system of a flowering plant and a human.



flower



female reproductive system

(c) Which parts, A, B, C, D and E, produce reproductive cells? [1]

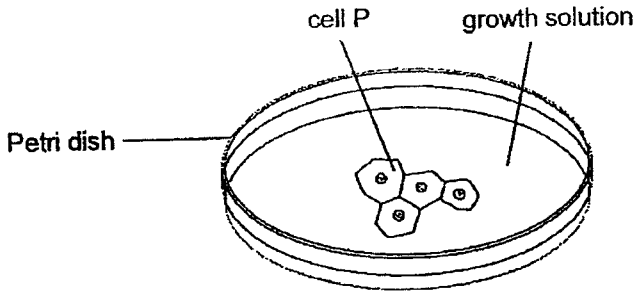
(d) How is sexual reproduction similar in flowering plants and humans? [1]

2

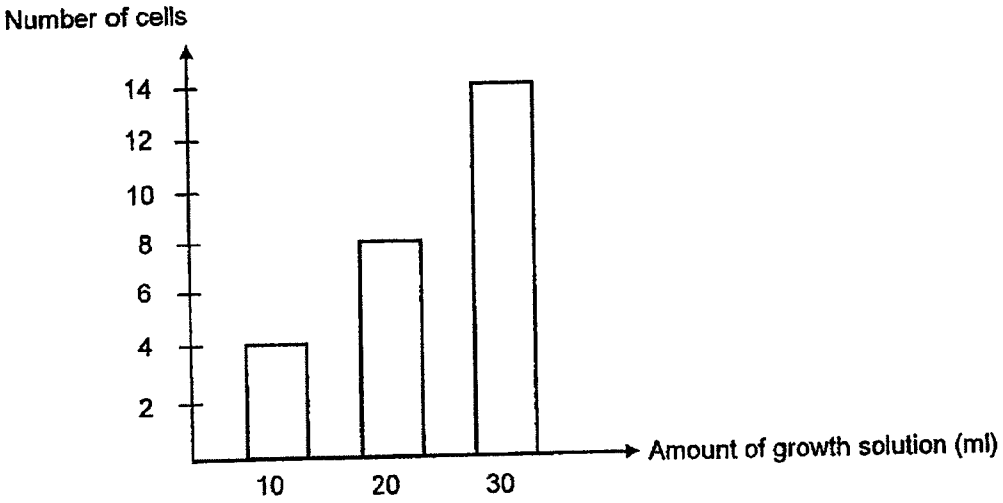
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16 Jackson prepared 3 Petri dishes with different amounts of growth solution. He placed four identical cell P in each Petri dish. After a few hours, he counted the number of cells in the Petri dishes.



The results are shown below.



(a) State the relationship between the amount of growth solution and the number of cells. [1]

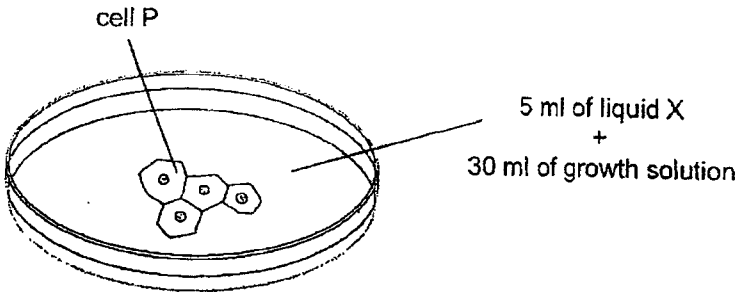
(b) Cell P is taken from an animal.
Name a cell part that cell P does not have but is present in a plant cell. [1]

2

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Jackson wanted to find out if liquid X is able to enter cell P. He prepared another set-up as shown below. He placed four cell P in a Petri dish containing 5 ml of liquid X and 30 ml of growth solution.



(c) Describe how Jackson should prepare the control set-up in order to compare the results of his investigation. [1]

After 1 hour, liquid X could be found in the cytoplasm of cell P.

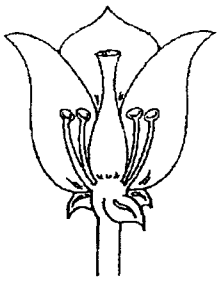
(d) What can Jackson conclude about the cell membrane of cell P? [1]

	2

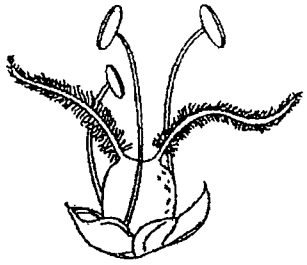
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17 The diagram below shows two flowers, P and Q, from different plants.



Flower P



Flower Q

(a) Based on your observations, identify how flowers P and Q are likely to be pollinated. [2]

Flower P: _____ - pollinated

Flower Q: _____ - pollinated

(b) What is pollination? [1]

_____

_____

(c) State one possible characteristic flower P could have to increase its chances of pollination. [1]

_____

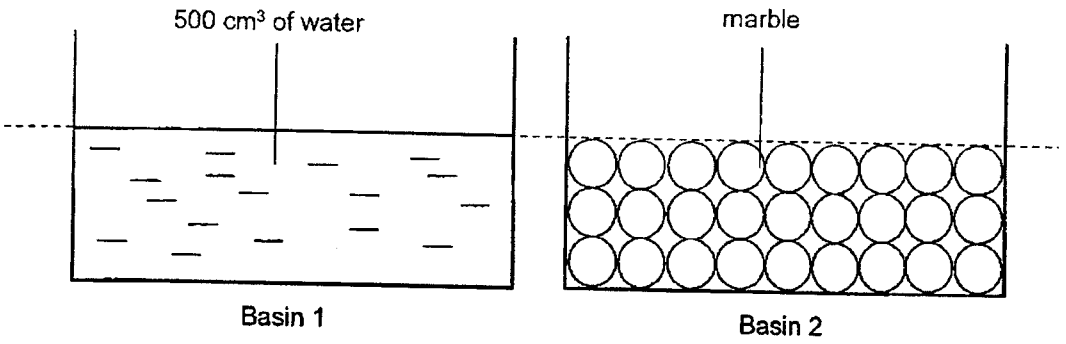
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	4

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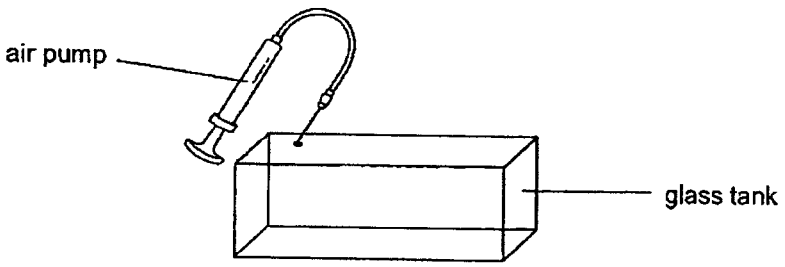
18 Study the diagram below. The water and marbles are placed in identical basins.



(a) In terms of the properties of matter, state a difference between water and marble. [1]

(b) Raj said that there is 500 cm³ of marbles in Basin 2. Do you agree? Explain. [1]

The glass tank is filled with 500 cm³ of air. 20 cm³ of air was pumped into the glass tank.



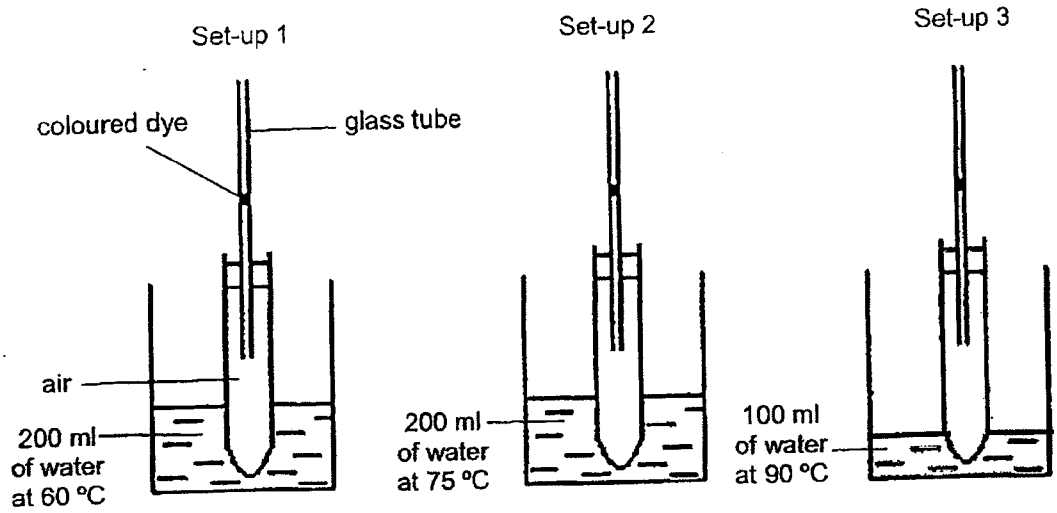
(c) What is the final volume of air in the glass tank? [1]

3

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19 Mei Ling learnt that air expands when heated. She hypothesised that air expands more when there is more heat. She set up the experiment below to find out if her hypothesis is correct. The diagram below shows the set-ups at the start of the experiment.



(a) Mei Ling did not conduct a fair test.
Suggest one change to the experimental set-up to make the experiment fair. [1]

_____

_____

(b) After ensuring that her experiment is fair, what should Mei Ling expect to observe in order to prove that her hypothesis is correct? [1]

_____

_____

(c) What can Mei Ling do to obtain more reliable results for her experiment? [1]

_____

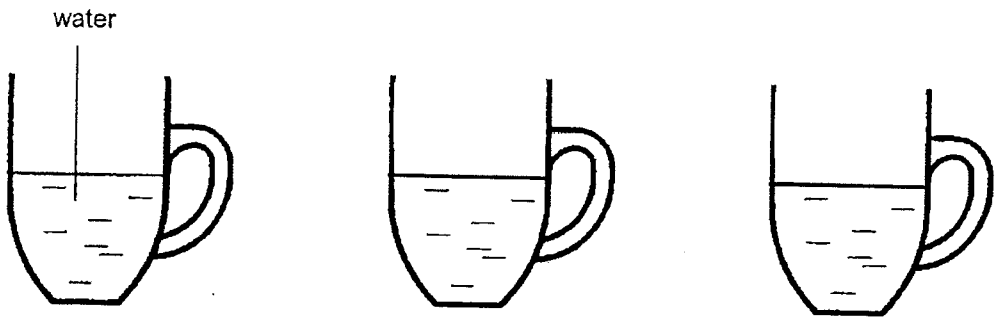
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	3

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20 The diagram shows three identical cups filled with same amount of water at different temperatures placed in the classroom.



(a) In which cup, A, B or C, will water evaporate the slowest? [1]

_____

(b) Explain your answer in **(a)**. [1]

_____

_____

After some time, water droplets were observed on the inner surface of cup C.

(c) Explain how the water droplets formed. [2]

_____

_____

_____

END OF BOOKLET B

	4

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SCHOOL : MARIS STELLA HIGH SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2023 WA2

CONTACT :

SECTION A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	4	1	1	4	4	2	2	2	1

Q11	Q12	Q13	Q14
2	4	4	2

SECTION B

Q15a	First box ✔
Q15b	The fruit can disperse its seeds on its own.
Q15c	A, C, E
Q15d	Both involve the fusion of male and female reproductive cells.
Q16a	As amount of growth solution increases, number of cells increases.
Q16b	Cell wall
Q16c	Control set-up should have 4 cell P and 30 ml of growth solution.
Q16d	Cell P allowed liquid X to enter the cell.
Q17a	P: animal pollinated Q: wind pollinated
Q17b	Pollination is the transfer of pollen grains from the anther to the stigma.
Q17c	Brightly coloured petals.
Q18a	Water has no definite shape while marble has definite shape.
Q18b	No, there are air spaces that take up space in Basin 2.
Q18c	500 cm^3
Q19a	Mei Ling should add 100 ml of 90°C water to set-up 3.
Q19b	Set-up 3 has the coloured dye at the highest level.
Q19c	Repeat the experiment three times.
Q20a	A

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Q20b	Water gained heat to evaporate. As cup A has the lowest temperature, it will take the longest time to evaporate.
Q20c	Warmer water vapour in the cup lost heat and condensed on the cooler inner surface of the cup.

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