



## 2022 PRIMARY 5 WEIGHTED ASSESSMENT 2

Name : \_\_\_\_\_ ( )

Date: 27 July 2022

Class : Primary 5 ( )

Duration: 40 minutes

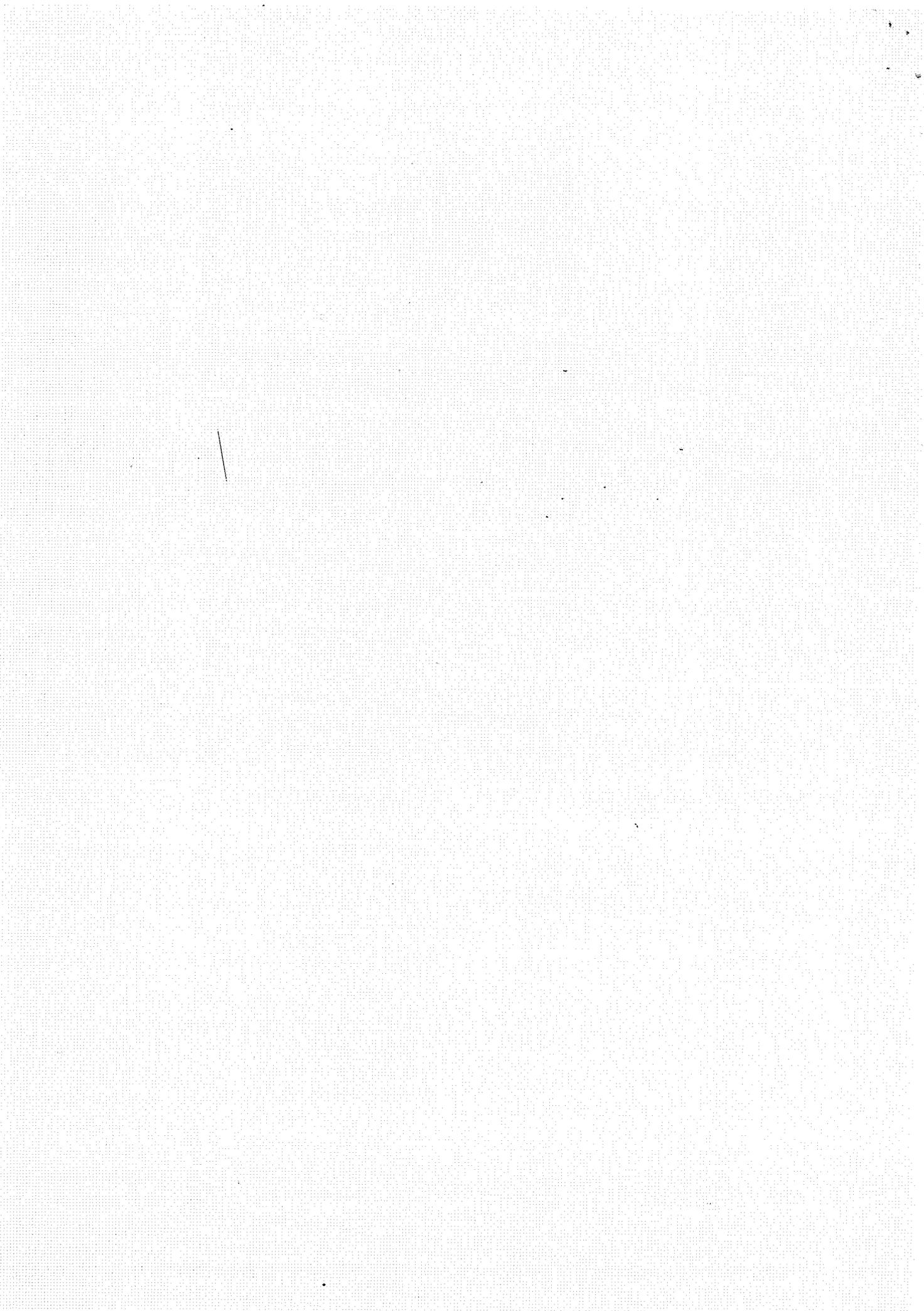
Parent's Signature : \_\_\_\_\_

# SCIENCE

### INSTRUCTIONS TO CANDIDATES

- (a) Write your name, class and register number.
- (b) Do not turn over this page until you are told to do so.
- (c) Follow all instructions carefully.
- (d) Answer all questions.
- (e) Write all your answers in the booklet.

Section A	16
Section B	14
Total	30



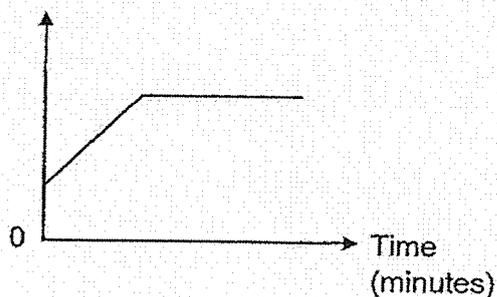
**Section A (8 x 2 marks)**

For each question from 1 to 8, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write it in the brackets provided.

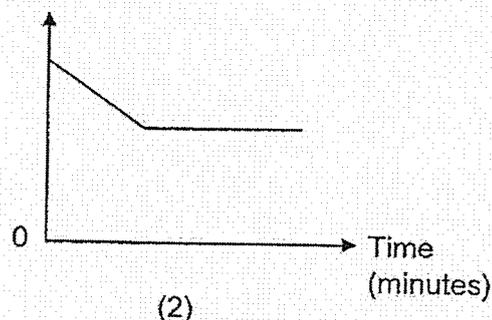
(16 marks)

1. Which graph below shows how the breathing rate changed when a man rested after a soccer match?

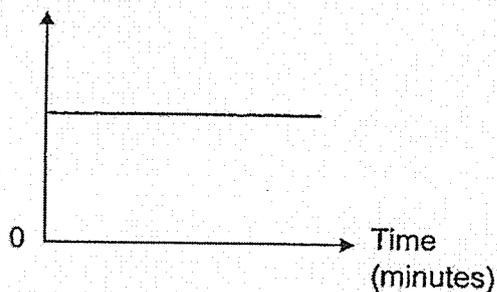
Breathing rate  
(breaths per minute)



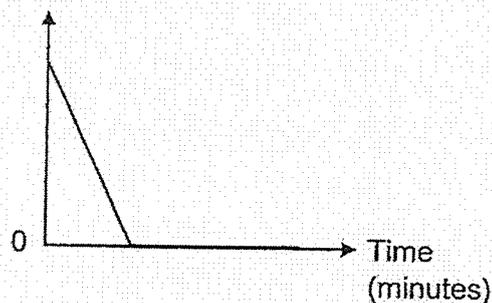
Breathing rate  
(breaths per minute)



Breathing rate  
(breaths per minute)

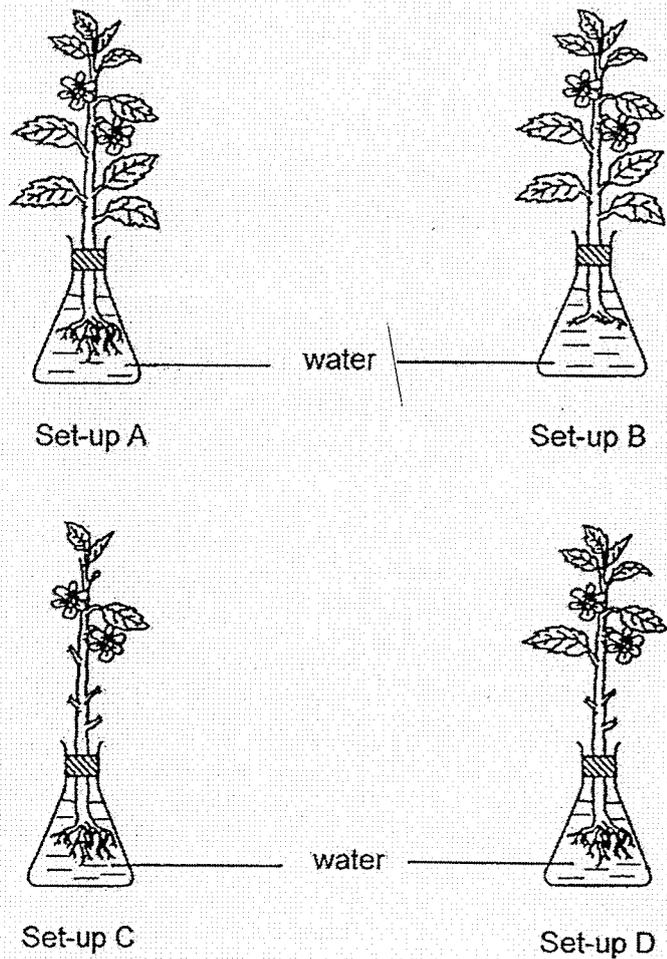


Breathing rate  
(breaths per minute)



( )

2. Ganesh wants to find out how the number of leaves on a plant would affect the amount of water absorbed by the roots. He placed the same type of plants in identical set-ups as shown below.

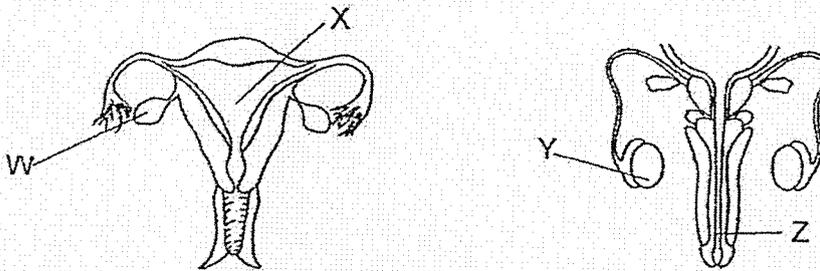


Which of the following set-ups should Ganesh use?

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

( )

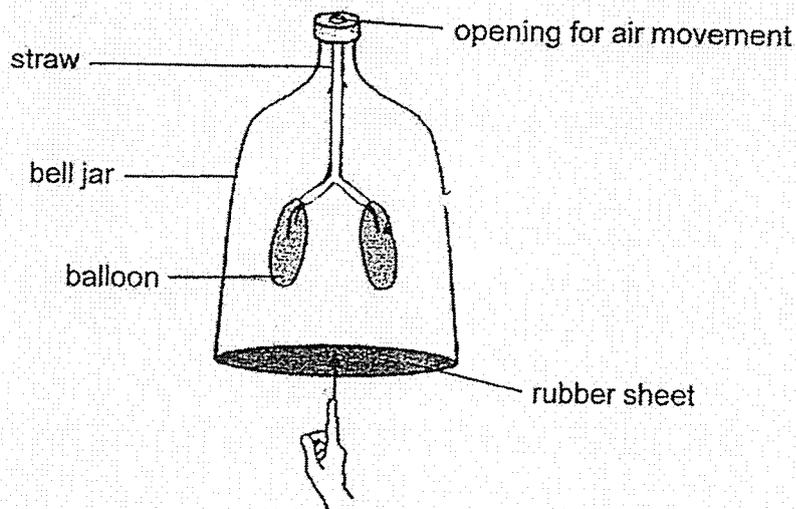
3. The diagrams below show the human reproductive systems.



Which of the following statements about the parts W, X, Y or Z is correct?

- (1) Part W produces sperms.
- (2) Part Y produces one egg at a time.
- (3) Part Z produces one sperm at a time.
- (4) Part X provides a place for the fertilised egg to develop. ( )

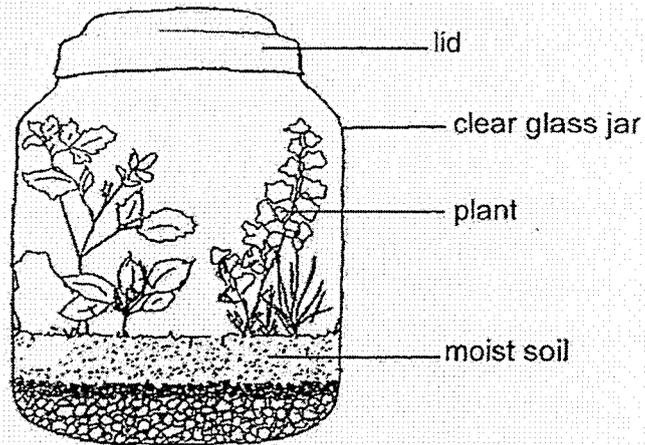
4. David constructs a model to represent the respiratory system of the human body for his school project.



When the rubber sheet is pushed up as shown in the diagram, what will happen to the balloons?

- (1) The balloons will inflate as air is sucked into the straw.
- (2) The balloons will deflate as air is sucked into the straw.
- (3) The balloons will inflate as air is pushed out of the straw.
- (4) The balloons will deflate as air is pushed out of the straw. ( )

5. The diagram below shows a terrarium. It is observed that the plants in the glass jar survive well when placed next to a window, without adding water or removing the lid.



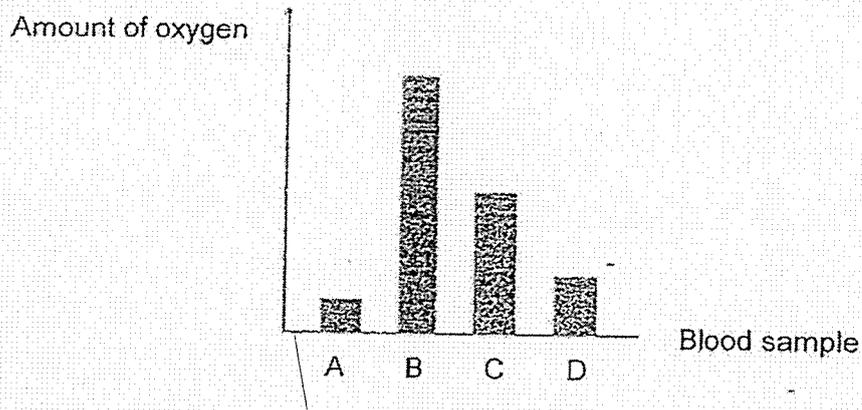
Which of the following process(es) is/are taking place in the glass jar that help the plants to get a continuous supply of water?

- (1) Evaporation only
  - (2) Condensation only
  - (3) Evaporation and condensation only
  - (4) Boiling, evaporation and condensation only ( )
6. John conducted an experiment on substance P to determine its melting point and boiling point. He found that it was a solid at  $68^{\circ}\text{C}$  and a gas at  $155^{\circ}\text{C}$ . Which of the following is a possible melting point and boiling point of P?

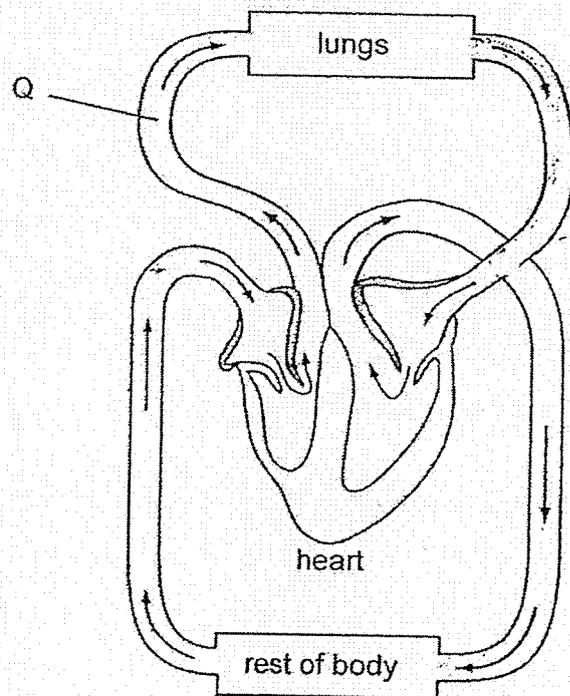
	Melting point of P ( $^{\circ}\text{C}$ )	Boiling point of P ( $^{\circ}\text{C}$ )
(1)	45	135
(2)	45	160
(3)	80	135
(4)	80	160

( )

7. A doctor did a blood test for a patient. The graph below shows the amount of oxygen in blood samples taken at the same time from four different blood vessels of the patient.



The diagram below shows how blood is circulated in a human body.

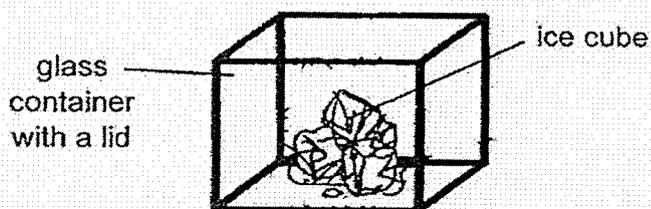


Which blood sample (A, B, C or D) was most likely taken from Q of the circulatory system above?

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

( )

8. Mary removed some ice cubes at  $0^{\circ}\text{C}$  from the freezer. She placed them into a sealed transparent glass container as shown below. The glass container was then left at room temperature of  $30^{\circ}\text{C}$ .



Which of the following correctly describes the temperature of the air in the container and the ice cubes only during the melting process?

	Temperature	
	Air in the container	Ice cubes
(1)	decreases	increases
(2)	decreases	decreases
(3)	increases	remains the same
(4)	decreases	remains the same

( )

–End of Section A–

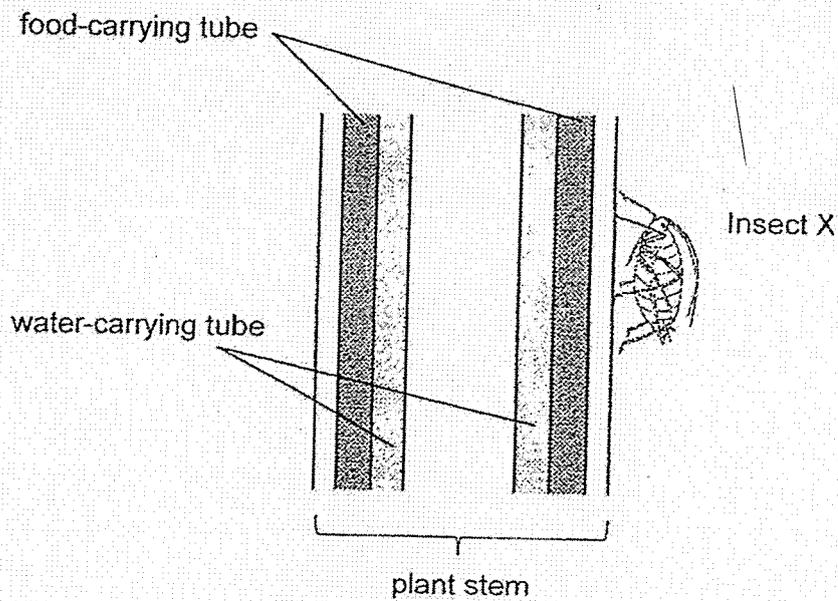
**Section B (14 marks)**

For questions 9 to 13, write your answers clearly in this booklet.

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

(14 marks)

9. Insect X has a special mouthpiece to pierce through plant stems for feeding.



Explain why the growth of the plant roots may be affected when many insects X feed on the plant. [2]

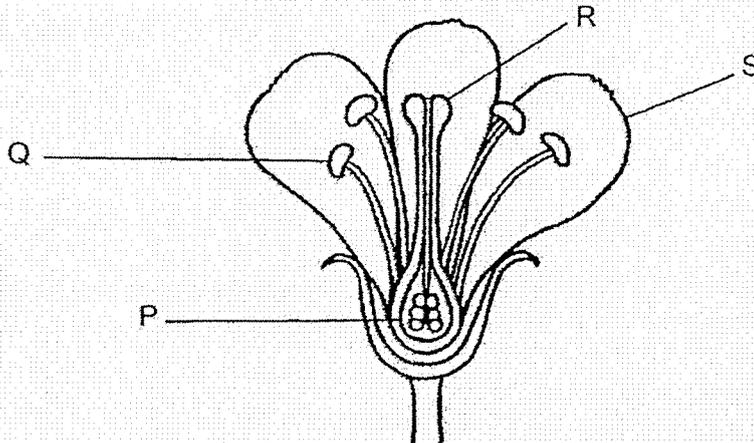
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Score	2
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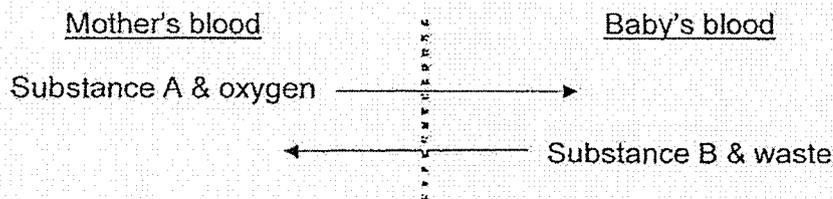
10. The diagram below shows parts of a flower, P, Q, R and S.



(a) Using the above diagram, complete the table below by filling in the correct parts of the flower, P, Q, R or S. [1]

Parts of the flower	Functions
i) _____	Similar to the human testis
ii) _____	Similar to the human ovary

(b) Below shows a diagram of a membrane that separates the mother's blood and the baby's blood, and the flow of substances when the baby is in the mother's womb.

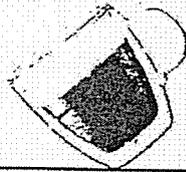


Based on the above information, identify substance A and substance B in the table below. (Do not state "water".) [1]

Substance A	(i)
Substance B	(ii)

Score	2
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11. Tiffany was drinking a cup of warm coffee outside her house in the cold winter. She left her cup of coffee outside and went into her house to answer an important phone call. Tiffany returned one hour later and discovered that she could tilt the cup as shown below without the coffee spilling.



What had happened to the coffee? Explain your answer.

[2]

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12. Olivia measured her heart rate when she carried out different activities.

(a) Tick the activity in the table below that would have the highest heart rate. [1]

Activity	Tick '✓'
slow walk home	
sound sleep	
game of badminton	
relaxed chit-chat with a neighbour	

(b) Explain your answer in part (a).

[2]

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(c) What could Olivia do to improve the reliability of her readings?

[1]

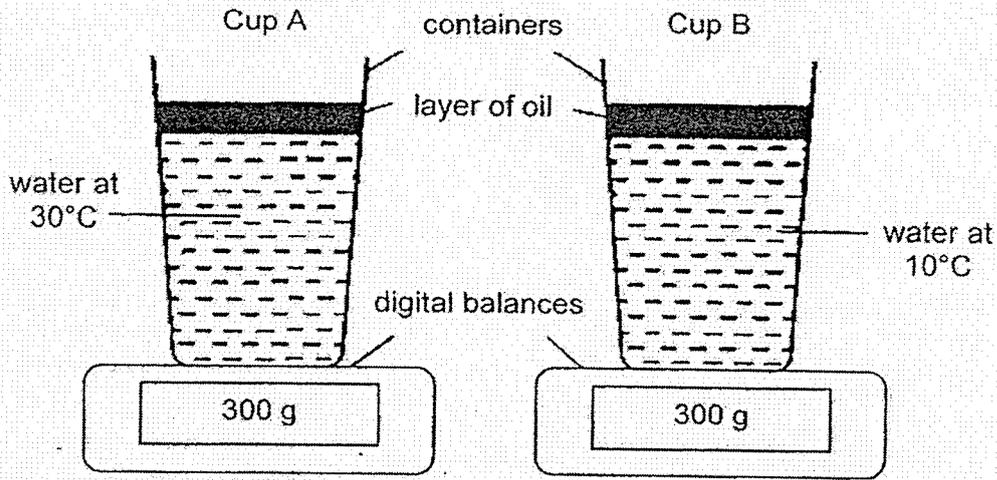
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Score	6
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13. Fatimah placed two cups, A and B, with the same amount of water on a digital balance each. They were placed at room temperature of 30°C.



After ten minutes, the reading for cup A remained the same at 300 g while the reading for cup B increased to 303 g.

- (a) Why was a layer of oil added to the water in each cup? [1]

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- (b) Why is there an increase in the reading for cup B? [2]

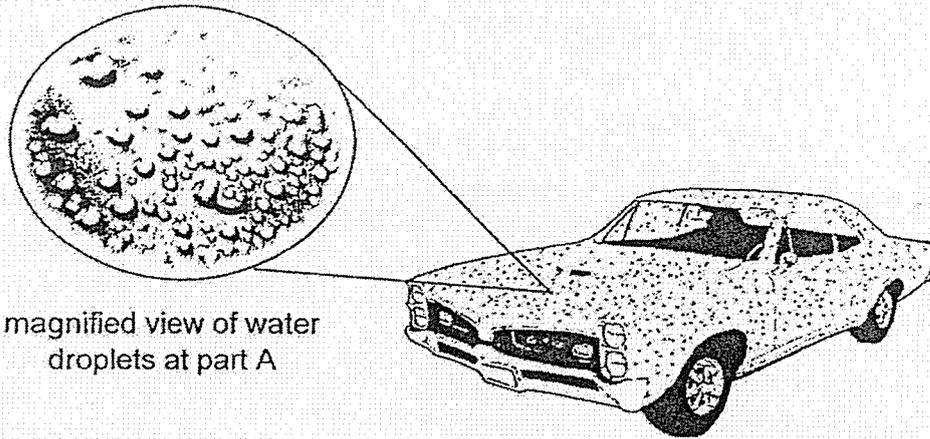
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Score	3
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Mr Lim leaves home for work every morning at around 7.00 a.m. He observes that his car is usually covered with many tiny water droplets.



magnified view of water droplets at part A

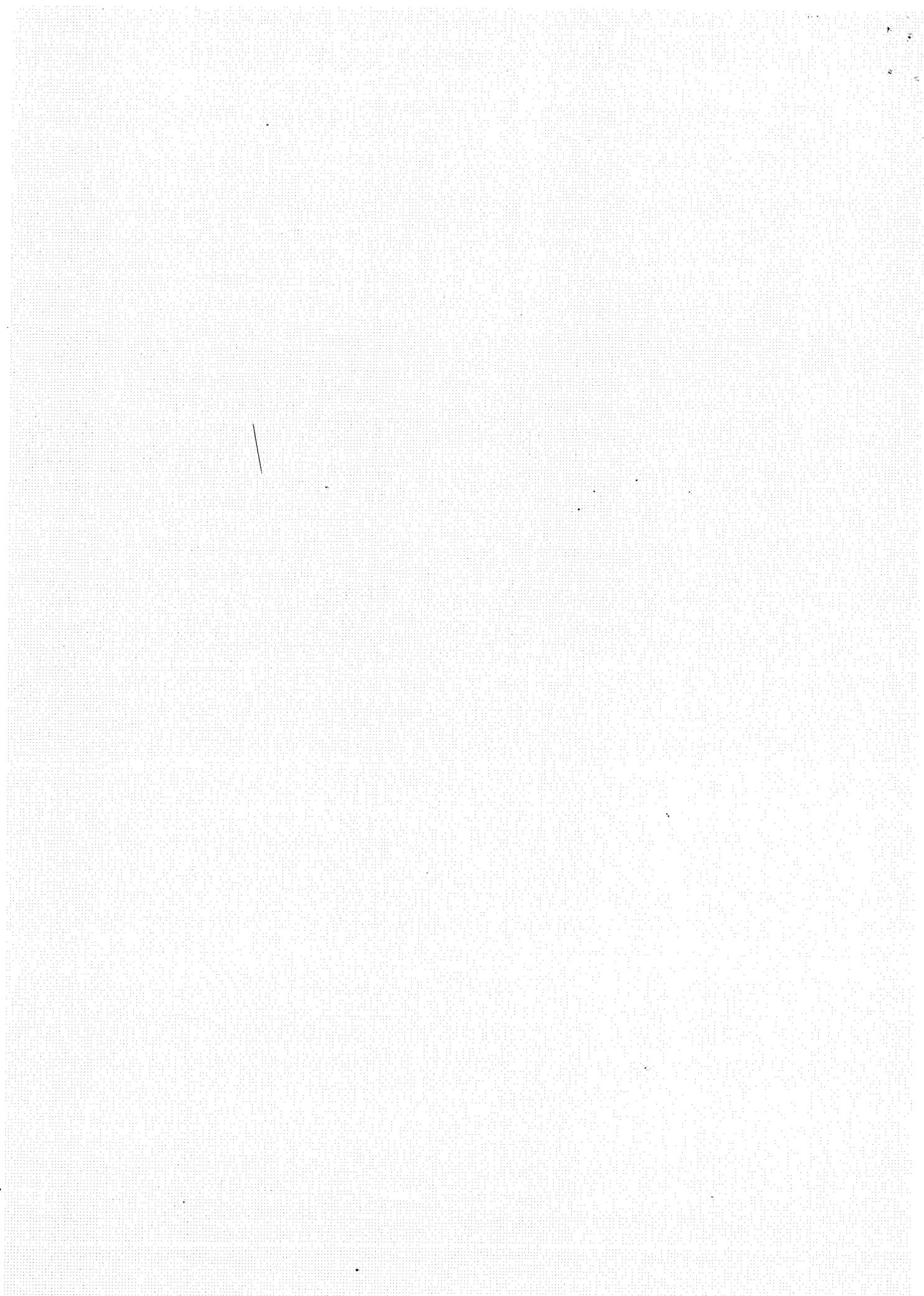
(c) Explain why the water droplets at part A of the car disappears shortly after the engine is started. [1]

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– End of Paper –

Score	1
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## ANSWER KEY

**YEAR** : 2022  
**LEVEL** : Primary 5  
**SCHOOL** : Tao Nan School  
**SUBJECT** : SCIENCE  
**TERM** : WA2

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

Q9	Insect X feeds on the food-carrying tube, food cannot be transported to the roots, roots will die without food thus not growing well.
Q10	(a) (i) Q (ii) P (b)(i) digested food (ii) carbon dioxide
Q11	The warm coffee lose heat to the surrounding and froze.
Q12	(a) Tick : game of badminton (b) Game of badminton needs more energy than the rest of the activity so Olivia's heart needs to pump faster to transport more digested food, oxygen and water to all parts of the body to release more energy, hence when playing badminton, the heart rate will increase more. (c) repeat all the activities she had done again, and measure her heart rate again for at least two to three time to improve reliability of readings.
Q13	(a) To make sure there is no evaporation. (b) The water vapour in the surrounding came in contact with the cooler surface of cup B, and lost heat can condensed to form ting water droplets on the cooler surface of cup B, causing an increase of mass to cup B. (c) Starting the engine produces heat, so when the water droplets on the car gain heat from the engine, they will evaporate as water vapour.

