PEI CHUN PUBLIC SCHOOL

PRIMARY 6

TERM 2 WEIGHTED ASSESSMENT 2025

SCIENCE

(BOOKLET A)

Additional Materials: Optical Answer Sheet (OAS)

Total Time for Booklets A and B: 1 h 10 min

Name: _____ ( )

Class: Primary 6 /( ) _____

Date: 15 May 2025

Science Teacher: _____

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.

This booklet consists of **9** printed pages including the cover page.

Section A (16 × 2 marks)

For questions 1 to 16, choose the most suitable answer and shade its number (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1 The table below shows three characteristics, A, B and C, of some animals. A tick (✓) shows that the characteristic is present.

Animal	Characteristics		
	A	B	C
eagle	✓	✓	✓
snake		✓	
butterfly		✓	✓

What do A, B and C represent?

	A	B	C
(1)	has wings	has scales	has legs
(2)	has wings	lays eggs	has scales
(3)	has feathers	has wings	has legs
(4)	has feathers	lays eggs	has wings

2 Which of the following is **not** a form of response to changes?

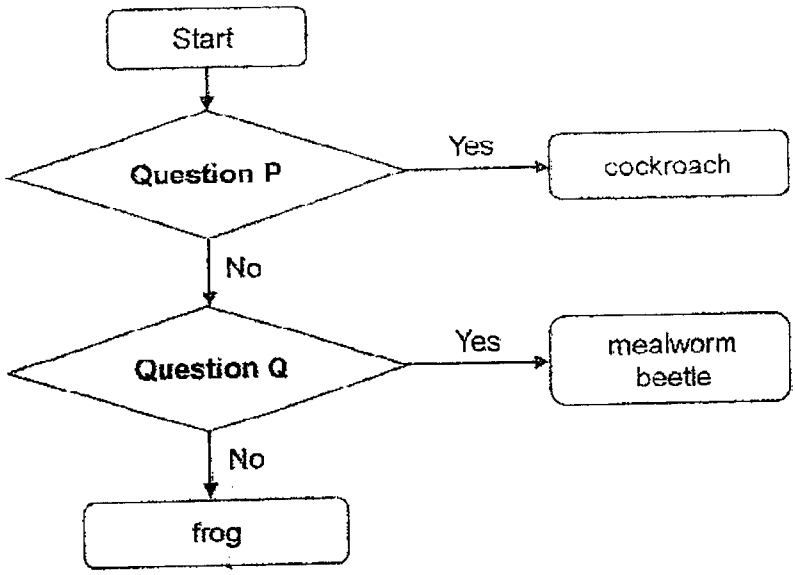
(1) A child grew taller over a year.

(2) A snail hid in its shell when touched.

(3) A pufferfish inflated its body when threatened.

(4) A frog jumped into a pond when a snake approached.

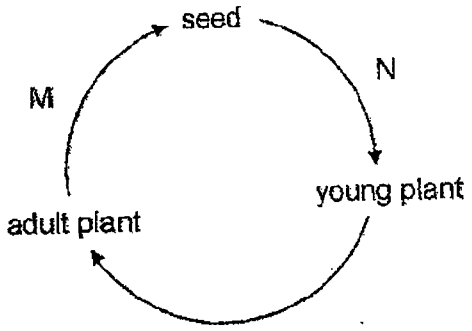
3 Three animals are classified in the flowchart shown below.



What are questions P and Q?

	Question P	Question Q
(1)	Does it have a 3-stage life cycle?	Does the adult have wings?
(2)	Does it have a 4-stage life cycle?	Does the adult have wings?
(3)	Does the young look like the adult?	Does it have a 3-stage life cycle?
(4)	Does the young look like the adult?	Does it have a 4-stage life cycle?

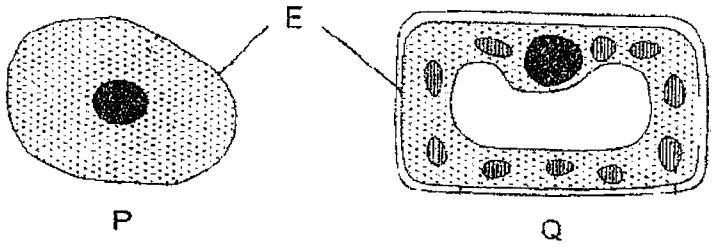
4 The diagram below shows the life cycle of a flowering plant.



Which of the following is correct?

	Process(es) at M	Process(es) at N
(1)	fertilisation	pollination
(2)	pollination and fertilisation	dispersal and germination
(3)	dispersal	pollination and germination
(4)	pollination and germination	fertilisation and dispersal

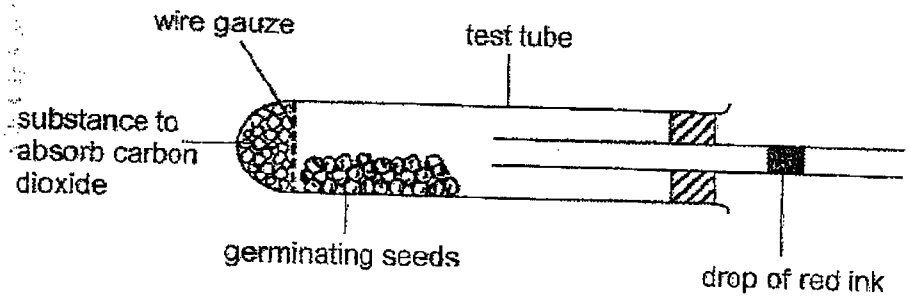
5 The diagram below shows two cells, P and Q.



Which of the following is correct?

	Plant cell	Function of E
(1)	P	controls movement of substances in and out of the cell
(2)	P	gives the cell a shape
(3)	Q	controls movement of substances in and out of the cell
(4)	Q	gives the cell a shape

6 An experiment was set up as shown below.



What would happen to the drop of red ink after a while and what was the reason?

	Direction in which the drop of red ink moved	Reason
(1)	←	The germinating seeds took in oxygen.
(2)	→	The germinating seeds gave out oxygen.
(3)	←	The germinating seeds took in carbon dioxide.
(4)	→	The germinating seeds gave out carbon dioxide.

7 A student made three statements about sexual reproduction in plants and animals.

A The fertilised egg is found in the ovary.

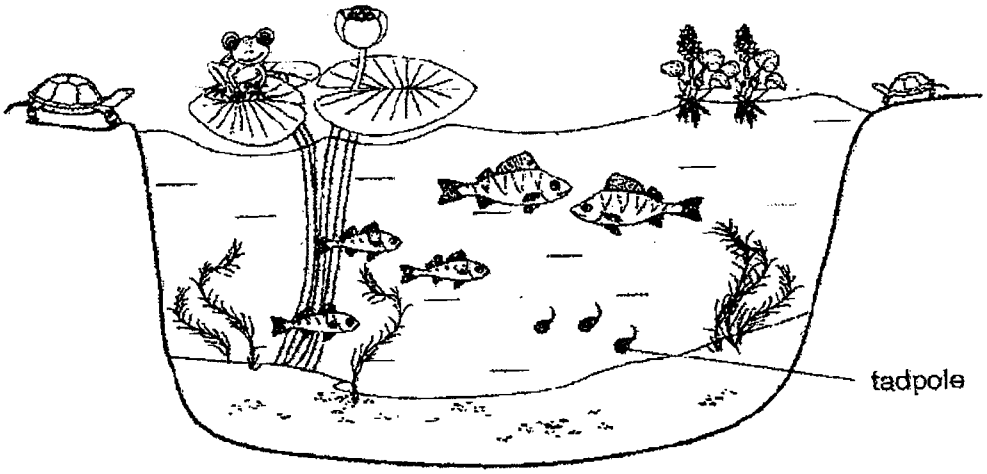
B Reproductive cells are produced in the anthers.

C Fertilisation occurs in the female reproductive part.

Which of the following is correct?

	Plants	Humans
(1)	B	A, C
(2)	A, C	A
(3)	A, B, C	A, C
(4)	A, B, C	C

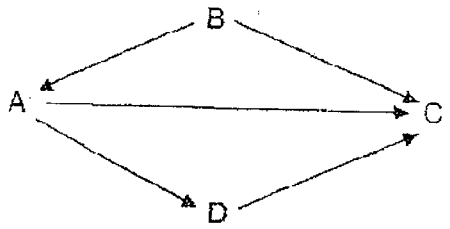
8 The diagram below shows a pond habitat with some living things.



Based on the diagram above, how many populations of producers and consumers can be found in this habitat?

	Producers	Consumers
(1)	three	three
(2)	three	four
(3)	four	three
(4)	eleven	eleven

9 The diagram below shows a food web in a habitat.

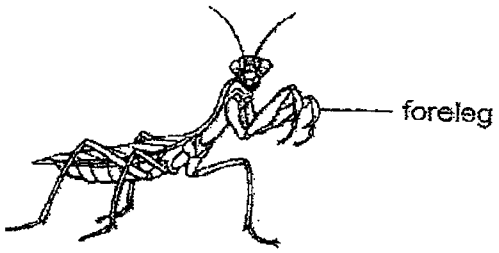


A large number of organism E was introduced into the habitat. E only feeds on one type of organism in this habitat. After some time, all the other organisms decreased in number.

Which organism did E feed on?

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

10 The diagram shows an insect with several adaptations which help to protect it from predators.

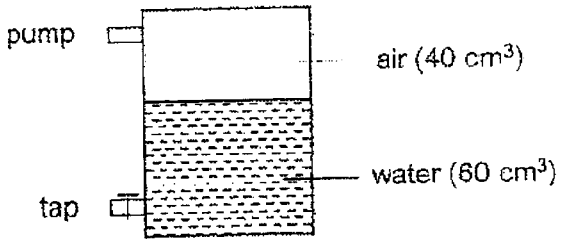


A It spreads its forelegs to appear bigger.
B It has feelers which help it to detect danger.
C It fans its wings to appear more threatening.

Which of the adaptations are structural adaptations?

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

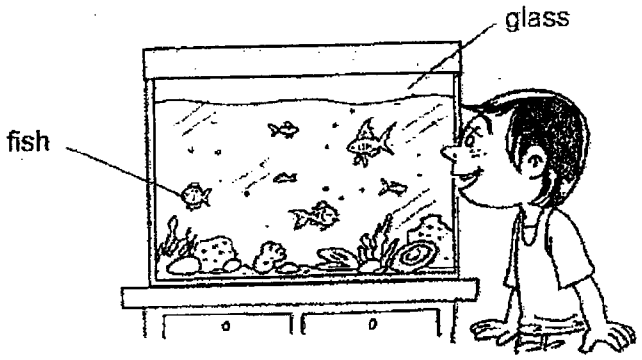
11 The diagram shows a sealed container which holds 60 cm^3 of water and 40 cm^3 of air as shown below. 30 cm^3 of water was removed from the container through the tap and 20 cm^3 of air was then pumped in using the pump.



What would be the final volume of air in the container?

(1) 20 cm^3
(2) 60 cm^3
(3) 70 cm^3
(4) 80 cm^3

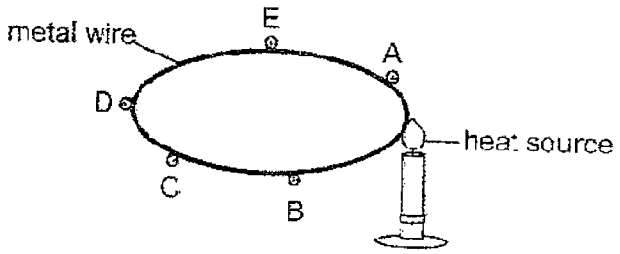
12 Alex looks into a fish tank as shown.



Which statement explains why he can see the glass?

(1) Light is reflected from the fish.
(2) No light passes through the fish.
(3) Light passes through the glass easily.
(4) Some light is reflected from the glass.

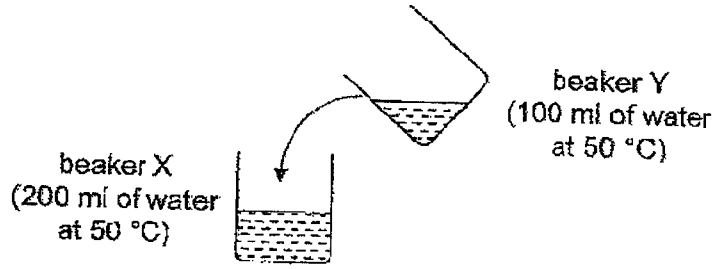
13 Jamus attached 5 identical drops of wax on an oval-shaped metal wire. The metal wire was heated by a heat source for five minutes.



Which of the following shows the order that the drops of wax would drop off the metal wire?

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

14 Shriya had two beakers of water of different volumes but at the same temperature as shown below. She added all the water from beaker Y into beaker X.



The volume of water in beaker X increased to 300 ml. She measured the temperature of the water immediately.

Which of the following correctly describes the water in beaker X?

	Temperature of water	Amount of heat in water
(1)	increased	increased
(2)	increased	remained the same
(3)	remained the same	increased
(4)	remained the same	remained the same

15 Substance P is a solid at 30 °C and a liquid at 100 °C.

Which of the following is possible?

	Melting point of P (°C)	Boiling point of P (°C)
(1)	20	110
(2)	20	90
(3)	50	110
(4)	50	90

16 Mary made two puddles on the floor as shown below with the same volume of liquids Y and Z.

liquid Y liquid Z

The diagram below shows the puddles after an hour.

liquid Y liquid Z

Which of the following can Mary conclude from her experiment?

(1) The size of the puddle affects the rate of evaporation.

(2) The liquids from puddle Y and puddle Z evaporated at the same rate.

(3) The liquid from puddle Y evaporated at a faster rate than the liquid from puddle Z.

(4) The greater the surface area of the puddle, the faster the rate of evaporation.

End of Section A

PEI CHUN PUBLIC SCHOOL

PRIMARY 6

TERM 2 WEIGHTED ASSESSMENT 2025

SCIENCE

(BOOKLET B)

Total Time for Booklets A and B: 1 h 10 min

Name: _____ ( )

Class: Primary 6 /( ) _____

Date: 15 May 2025

Science Teacher: _____

Parent's Signature: _____

SECTION A	/32
SECTION B	/28
TOTAL	/60

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. Write your answers in this booklet.

This booklet consists of 11 printed pages including the cover page.

Section B (28 marks)
For questions 17 to 24, write your answers in the spaces provided.

17 Sean wanted to find out about conditions that affect the breeding of mosquitoes.

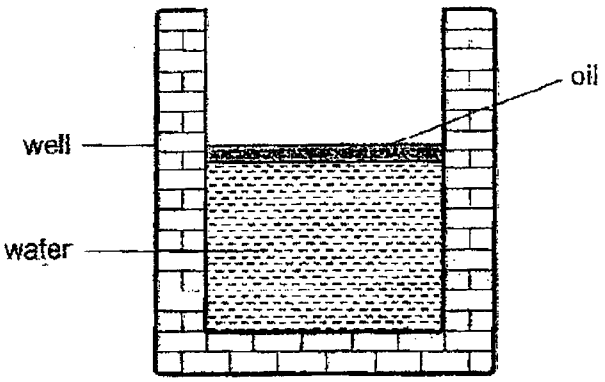
He conducted an experiment and recorded the number of mosquito eggs that hatched in a day out of 30 eggs at different temperatures. He repeated the experiment two more times.

His results are as shown.

Temperature (°C)	Number of eggs hatched		
	1st experiment	2nd experiment	3rd experiment
21	15	16	12
27	28	26	29
35	6	2	4

(a) Based on his results, what can Sean conclude about the effect of temperature on the number of mosquito eggs hatched? [2]

(b) Sean sprayed some oil on stagnant water in a well as shown below.



Explain how this reduces the breeding of mosquitoes. [1]

SCORE

18 Diagram 1 shows the fruit of plant E and its seeds. Diagram 2 shows plant E and its surrounding area. The seeds dispersed from plant E may fall in any of the two areas, A and B.

Diagram 1

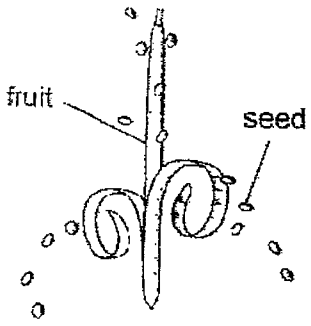
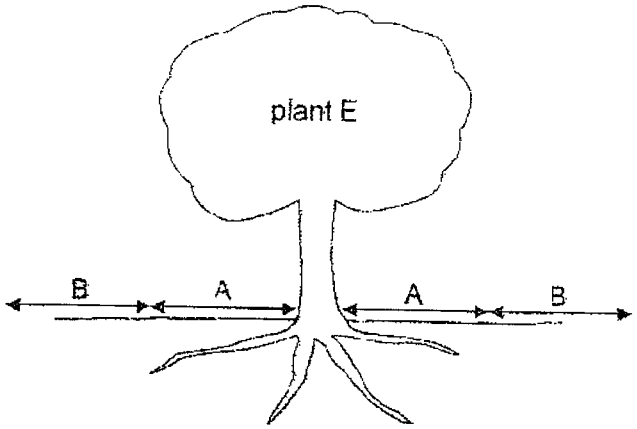


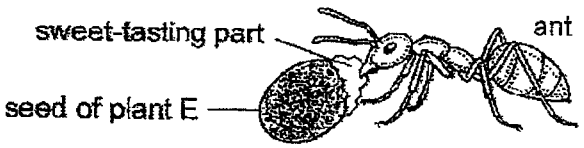
Diagram 2



(a) State the dispersal method for the fruits of plant E. [1]

(b) An equal number of seeds fall in areas A and B. However, there are fewer young plants E growing in area A than in area B. Explain why this is so. [1]

(c) The seed of plant E has a fleshy and sweet-tasting part attached to it as shown in the diagram below.

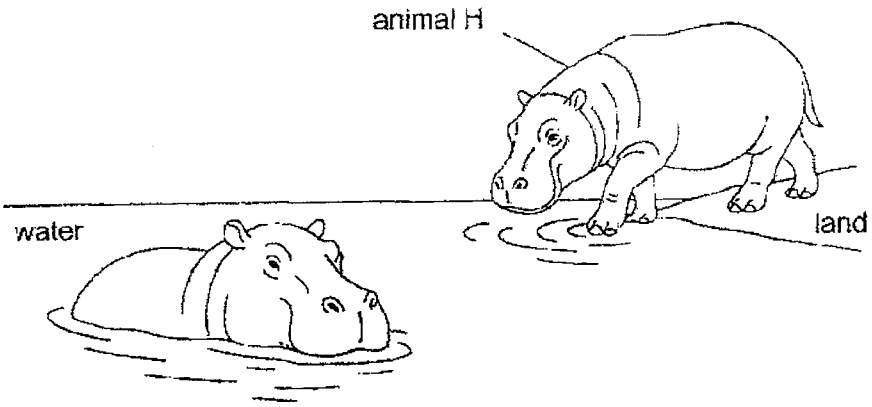


Ants will often carry the seeds of plant E back to their underground nest, which is a distance away from plant E. After feeding on the sweet-tasting part on the seed, the ant will move the seed to the waste pile in the nest. Ant droppings can be found in the waste pile.

Explain how these actions of the ants help in the reproduction of plant E. [2]

SCORE	

19 Animal H is a mammal that lives in a hot place. It has predators that live on land and in water.



(a) During the day, animal H spends most of its time in the water. Suggest a benefit for animal H to stay in the water in the day. [1]

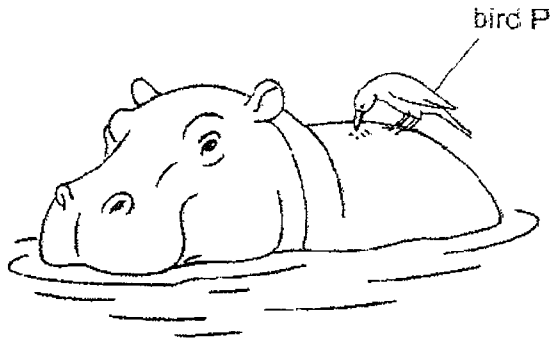
(b) Animal H's nostrils are located near the top of its head as shown below.

Suggest an advantage of the position of the nostrils for the survival of animal H when it is in the water. [1]

SCORE	

(c) Small insects that feed on blood are usually found on the bodies of large mammals. Bird P preys on these small insects.

Bird P perches on the back of animal H and pecks at it as shown below.



(i) Explain how bird P would benefit from its relationship with animal H. [1]

(ii) Explain how animal H would benefit from its relationship with bird P. [1]

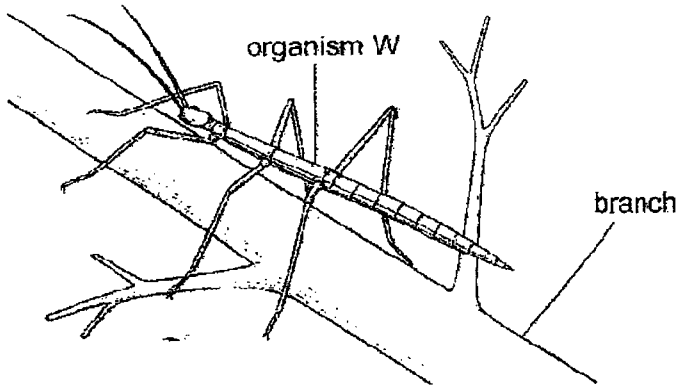
SCORE

20 Joanna made the following observations of organisms, V, W, X, Y and Z.

- Both V and W are plant eaters.
- X is only the predator of Y.
- V and W are the prey of Y.
- Z gets its energy directly from the Sun.

(a) Draw a food web to show the food relationships among all the organisms above. [2]

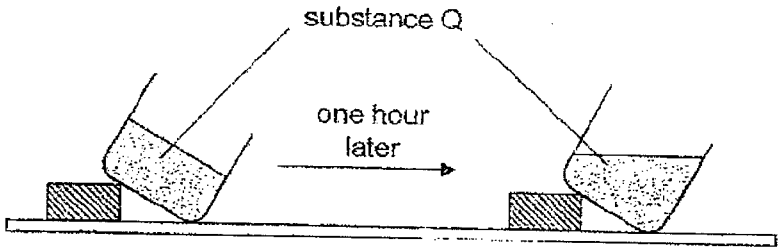
(b) Organism W, which is brown in colour, frequently rests on a branch as shown below.



How does the appearance of organism W help in its survival? [1]

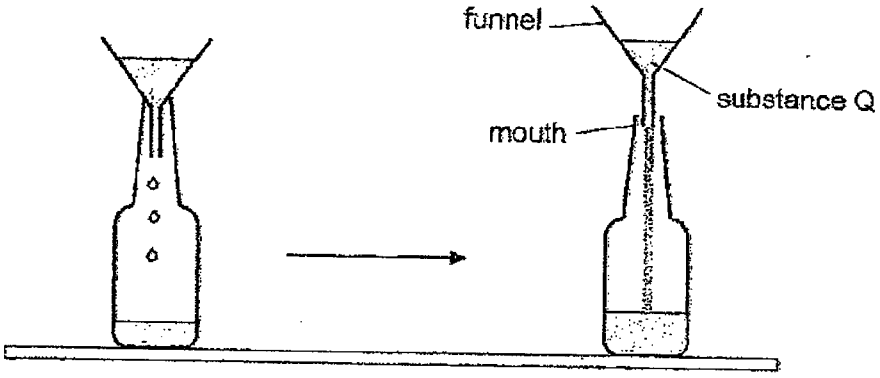
SCORE

21 A beaker containing substance Q was left on a table. After one hour, the shape of substance Q changed as shown below.



(a) What is the state of matter of substance Q at the start of the experiment? [1]

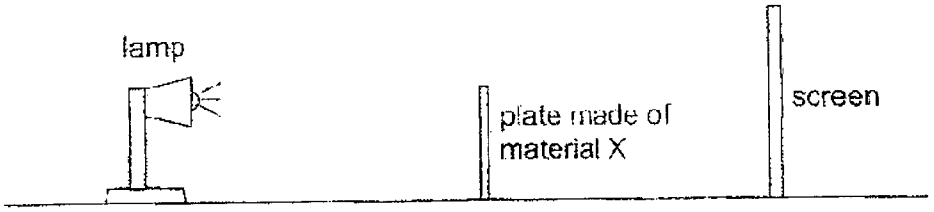
(b) Fahrid used a funnel to fill a bottle with substance Q as shown below. Substance Q dripped slowly into the bottle at first.



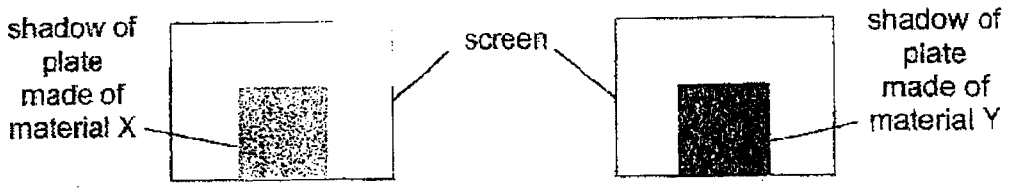
When he lifted the funnel slightly above the mouth of the bottle, he observed that substance Q flowed into the bottle at a faster rate. Explain his observation. [2]

SCORE

22 Jacey has two similar plates made of materials X and Y. He shone a lamp on the plate made of material X and observed the shadow formed on the screen.



He then repeated the experiment with the plate made of material Y. The diagram below shows the shadows formed on the screen.

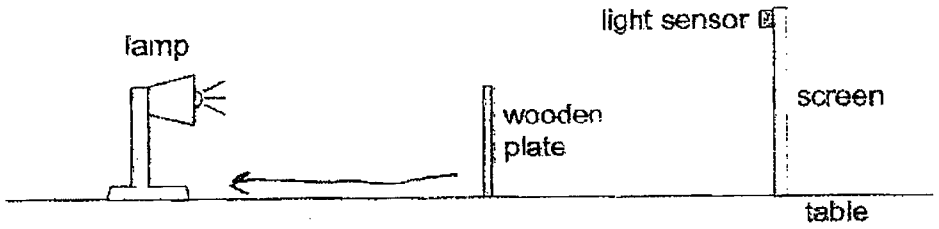


(a) Based on his observations, state a property of materials X and Y. [1]

Material X: _____

Material Y: _____

(b) Jacey set up another experiment as shown. The light sensor on the screen gave a reading of 30 units.



As Jacey moved an object along the surface of the table, the reading on the light sensor remained at 30 units and then dropped to 0 units suddenly.

(i) Which object (*lamp, wooden plate or screen*) did Jacey move and in which direction? [1]

_____

_____

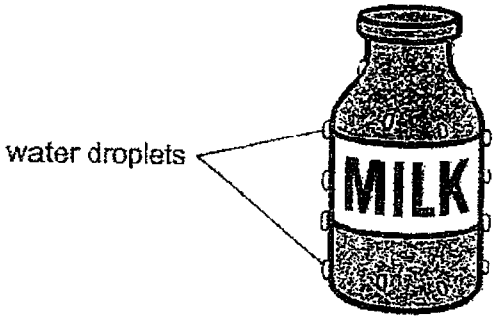
(ii) Suggest why the reading on the light sensor dropped to 0 units. [1]

_____

_____

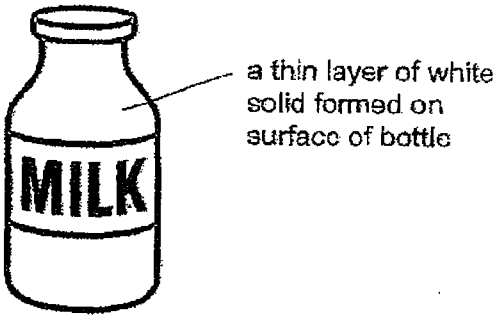
SCORE	

23
24 Joy took out a bottle of milk from the refrigerator and placed it on a table. A few minutes later, she observed that there were water droplets on the bottle of milk as shown in the diagram below.



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

(b) Joy placed another bottle of milk from the freezer onto the table. After a short time, a thin layer of white solid was formed on the surface of the bottle.

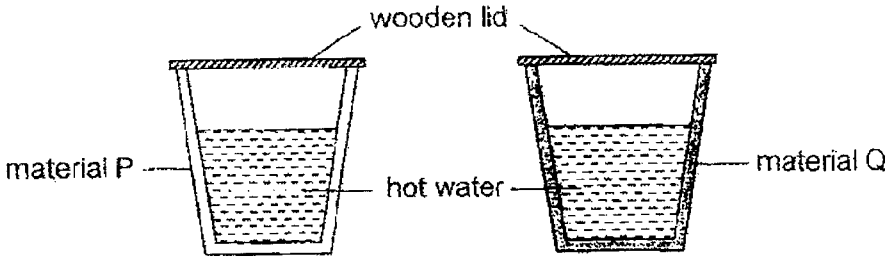


(i) Explain how the white solid was formed. [1]

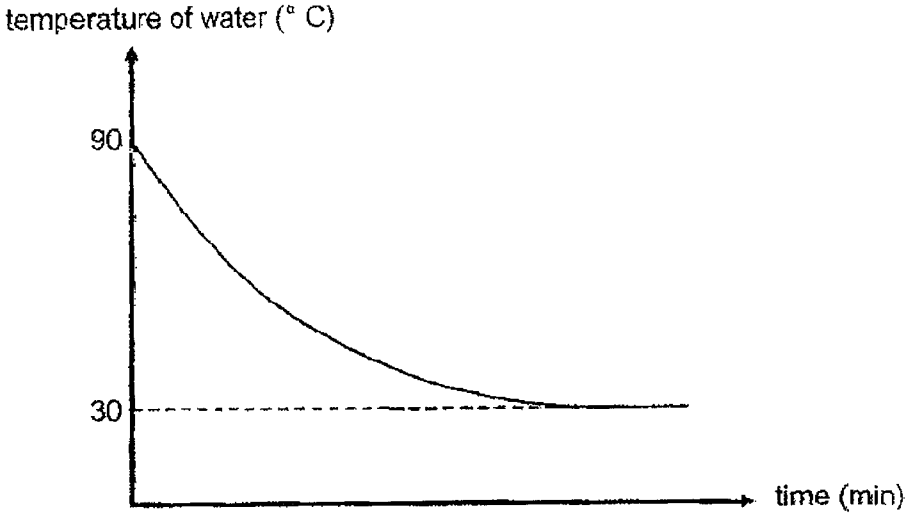
(ii) The white solid cannot be seen after a while. Explain why. [1]

SCORE	

24 Yimei conducted an experiment to find out which material, P or Q, is a better conductor of heat. She poured the same volume of hot water at 90 °C into two similar cups, made of materials P and Q.



Yimei placed the cups on a table in the classroom and measured the temperatures of the water in the cups at different times. Her results for the cup made of material P is shown below.



(a) Explain why the temperature of the water in the cup made of material P decreased with time. [1]

(b) Based on her results, Yimei concluded that material Q is a better conductor of heat than material P.

Using a pencil, draw a line **on the graph above** to show how the temperature of the water in the cup made of material Q changed with time. [1]

SCORE	

(c) Give a reason how each of the following actions helps make her experiment a fair test. [2]

(i) placing the cups at the same place

_____

_____

(ii) using cups of the same size and shape

_____

_____

End of Section B

SCORE	

YEAR : 2025
LEVEL : PRIMARY 6
SCHOOL : PEI CHUN PUBLIC SCHOOL
SUBJECT : SCIENCE
TERM : TERM 2 WEIGHTED ASSESSMENT

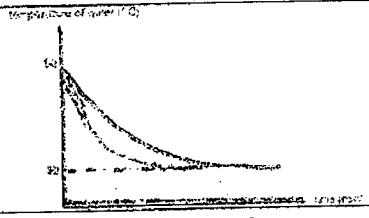
(BOOKLET A)

Q1	4	Q2	1	Q3	4	Q4	2	Q5	3
Q6	1	Q7	4	Q8	1	Q9	2	Q10	2
Q11	3	Q12	4	Q13	2	Q14	3	Q15	3
Q16	3								

(BOOKLET B)

a17a. 1st point : As the temperature increases (from 21°C) to 27°C the number of egg hatched increases.
2nd point : As the temperatue increases (from 27°C) to 35°C, the number of egg hatched decreases.

Q17	a)	1st point : increases, increases. 2nd point : increases, decreases.
	b)	The layer of oil prevented the larvae from taking in oxygen.
Q18	a)	Explosive action / Splitting of fruit
	b)	The seedlings will need to compete more for space, sunlight, water and nutrients with the parent plant.
	c)	1st point : The ant's waste will provide food for the young seedlings.. 2nd point : The ant did not eat the seed, which allowed the seed to germinate.
Q19	a)	Animal H can keep itself cool as it is hot in the day.
	b)	It can breathe through its nostrils without its entire head.
	c)	i) Bird P can feed on the small insects on Animal H. ii) Bird P can remove the small insect on animal H.
Q20	a)	Z -> V & W -> Y -> X
	b)	Organism W can blend in with its surroundings so that it is not easily spotted by its predators.
Q21	a)	Solid
	b)	1st point : The air in the bottle was able to escape through the mouth of the bottle. 2nd point : Substance Q was able to enter the bottle to occupy the space previously occupied by the air.
Q22	a)	Plate X allows some light to pass through it. Plate Y does not allow light to pass through it.
	b)	i) Jacey moved the wooden plate towards the lamp. ii) The wooden plate blocked all the light from reaching the light sensor.
Q23	a)	Warm water vapour in the surrounding air came into contact with the colder outer surface of the bottle, lost heat and condensed into water droplets.
	b)	The water droplets lost heat to the bottle of milk and froze into ice.

Q23	a)	Warm water vapour in the surrounding air came into contact with the colder outer surface of the bottle, lost heat and condensed into water droplets.
	b)i	The water droplets lost heat to the bottle of milk and froze into ice.
	b)ii	The ice gained heat from the surroundings and melted.
Q24	a)	The water in Cup P lost heat to the surroundings
	b)	
	c)i	Placing the cups at the same place. To ensure that the temperature of the surroundings will be the same.
	ii	Using the cups of the same size and shape. To ensure that the exposed surface area of the cup is the same.

END