PEI CHUN PUBLIC SCHOOL

PRIMARY 4

END-OF-YEAR EXAMINATION 2024

SCIENCE

(BOOKLET A)

Additional Materials: Optical Answer Sheet (OAS)

Total Time for Booklets A and B: 1 h 45 min

Name: ______________________ (   )

Class: Primary 4 /(   )______________

Date: 24 October 2024

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 **15** printed pages including the cover page.

Section A (28 × 2 marks)
For questions 1 to 28, choose the most suitable answer and shade its number (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1 The diagram shows two types of fungi.

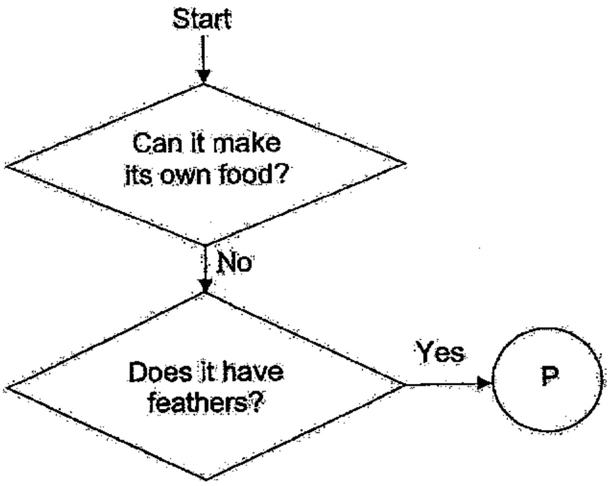

bracket fungus


mushroom

Which statement is true of fungi?

(1) They are flowering plants.
(2) They reproduce by spores.
(3) They make food on their own.
(4) They are non-flowering plants.

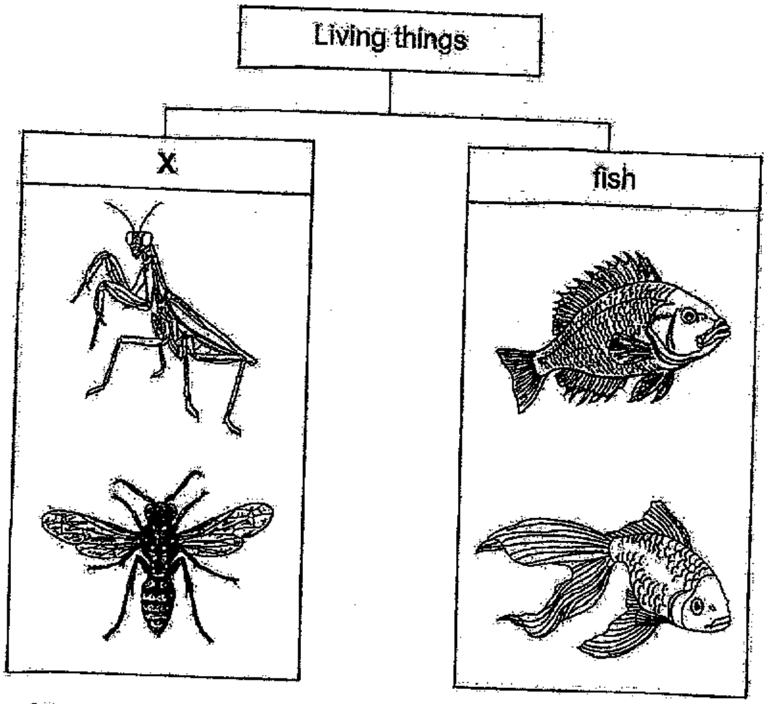
2 Study the diagram below.



What could P be?

(1) bird
(2) plant
(3) insect
(4) mammal

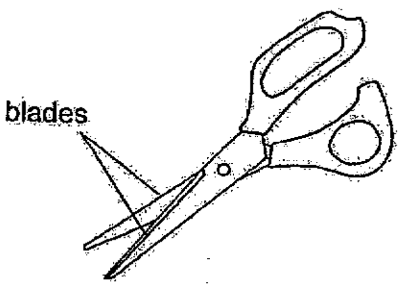
3 The table shows how some living things can be grouped.



Which one of the following is the most suitable heading for group X?

(1) insects
(2) reptiles
(3) mammals
(4) amphibians

4 The diagram shows a pair of scissors.

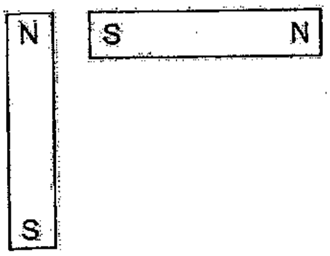


Metal is used to make the blades of the scissors because metal ________________.

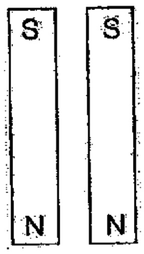
(1) can reflect light
(2) does not break easily
(3) can bend without breaking
(4) does not allow light to pass through

5 In which one of the following will the two magnets move towards each other?

(1)



(2)



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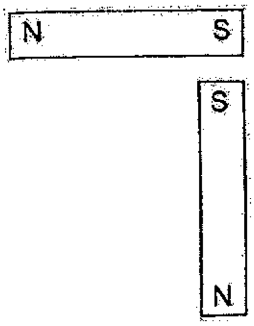
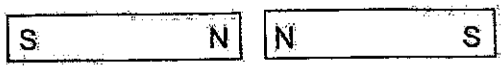
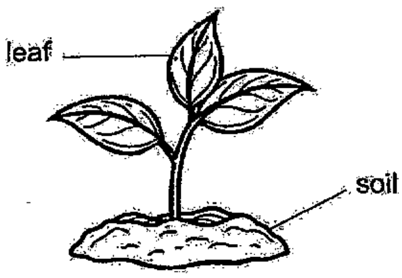


(4)



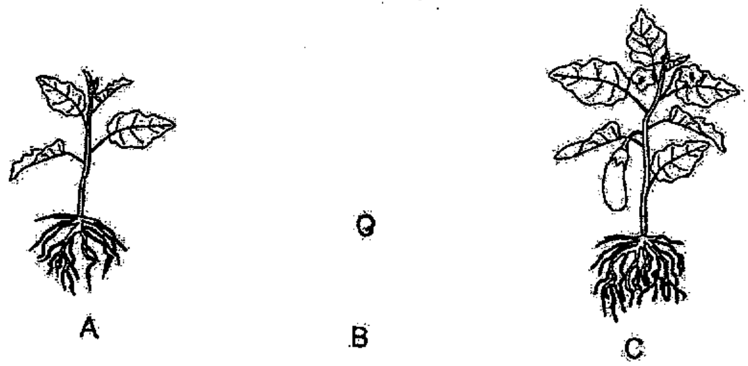
6 The diagram below shows a young plant.



The leaf helps the plant to ______________.

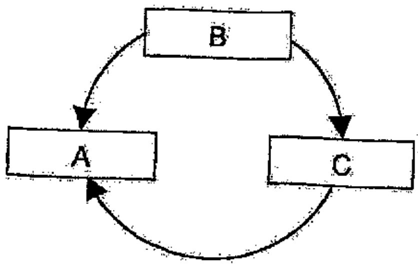
(1) make food
(2) absorb soil
(3) absorb water
(4) hold on to the soil

7 A, B and C are stages in the life cycle of a plant.

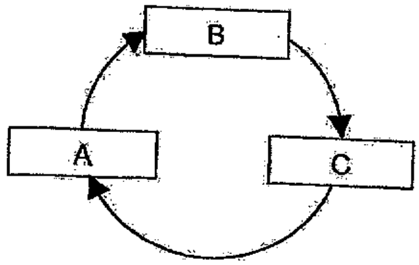


Which of the following shows the correct life cycle of the plant?

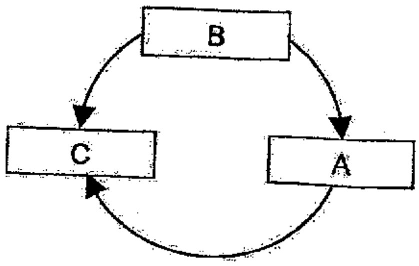
(1)



(2)



(3)



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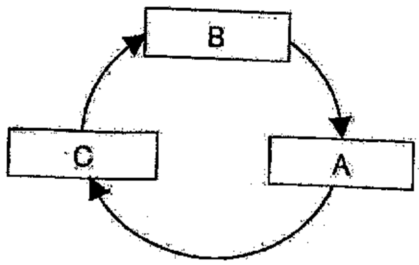
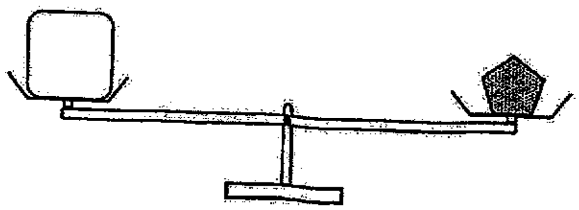


8 Study the diagram below.



Both objects have the same ________.

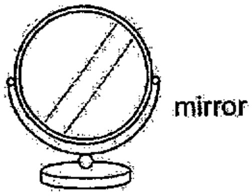
(1) size
(2) mass
(3) shape
(4) volume

9 Which one of the following is a source of light?

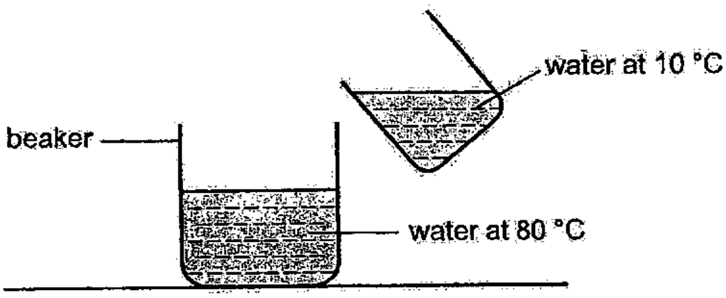
(1) 

(2) 

(3) 

(4) 

10 Sundar mixed some hot water at 80 °C with cold water at 10 °C.



What is a possible final temperature of the water in the beaker?

(1)	90 °C	(2)	80 °C
(3)	60 °C	(4)	10 °C

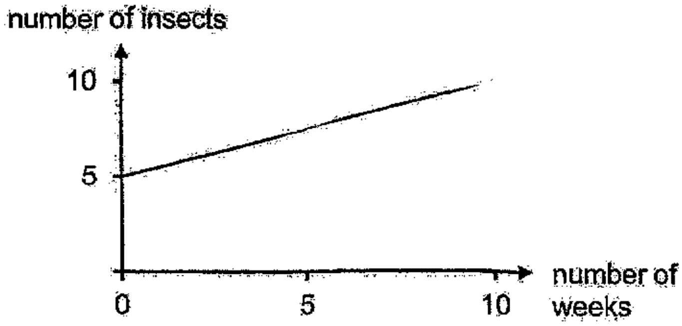
11 A lizard will drop its tail and move away when it is touched.

This shows that the lizard is a living thing because it can _______________.

(1) grow
(2) breathe
(3) respond
(4) reproduce

12 Jane placed five insects in a jar containing food and water. She poked some small holes in the lid of the jar.

The graph below shows the number of insects in the jar over 10 weeks.



What of the following explains the change in the number of insects over the 10 weeks?

(1) The insects grew.
(2) Some insects died.
(3) The insects reproduced.
(4) The insects took in food and water.

13 Three students made the following statements about a fern.

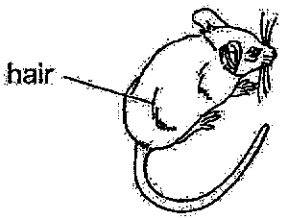
Which of the students is/are correct?

(1) Ben only
(2) Ben and Caili only
(3) Alex and Caili only
(4) Alex, Ben and Caili

14 The table shows how animals can be grouped.

	Produces milk for its young	Does not produce milk for its young
Has a tail	P	Q
Does not have a tail	R	S

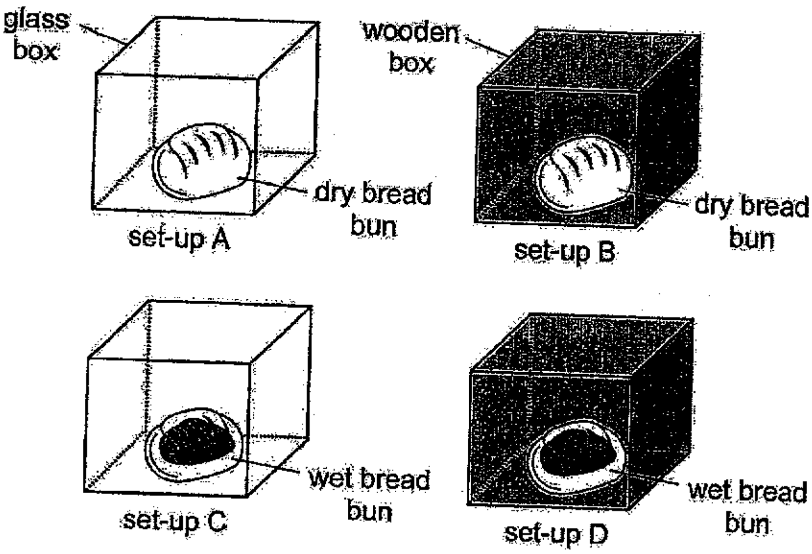
The diagram shows animal X.



Which group does animal X belong to?

(1) P
(2) Q
(3) R
(4) S

15 Peter conducted an experiment in a well-lit room with four identical bread buns as shown below. He sprinkled water on the buns in set-ups C and D.



After one week, Pete observed that mould was growing on the buns in set-ups C and D, but not on the buns in set-ups A and B.

What can Pete conclude from his experiment?

(1) Mould does not need light to grow.
(2) Mould does not need water to grow.
(3) Mould needs light and water to grow.
(4) Mould does not need light and water to grow.

16 The table gives information on four leaves, W, X, Y and Z, based on two characteristics. A tick (✓) shows that the leaf has the characteristic.

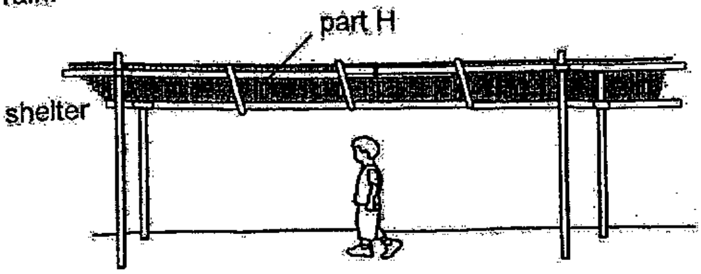
	W	X	Y	Z
Heart-shaped	✓		✓	
Has straight edge	✓			✓

The diagram below shows a leaf.

Which of the following is most likely to be the leaf?

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

17 A shelter was set up along a walkway to protect passers-by from falling objects and the rain.



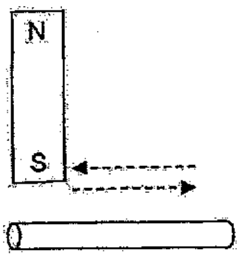
Which of the following materials is most suitable for making part H?

	Material	Property	
		Strong	Waterproof
(1)	A	yes	no
(2)	B	no	yes
(3)	C	no	no
(4)	D	yes	yes

18 Zachary tried to magnetise four rods, made of different materials, with the same magnet as shown in the diagrams below. The rods are of the same length and thickness.

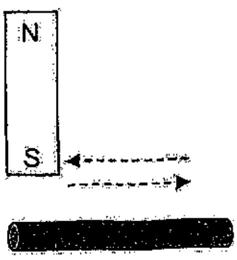
Which set-up will result in the rod being magnetised?

(1)



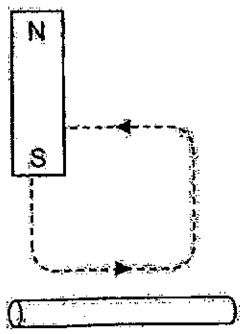
steel rod

(2)



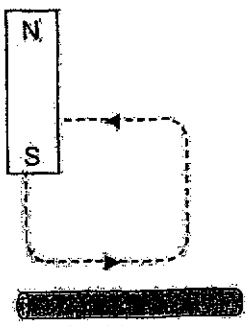
plastic rod

(3)



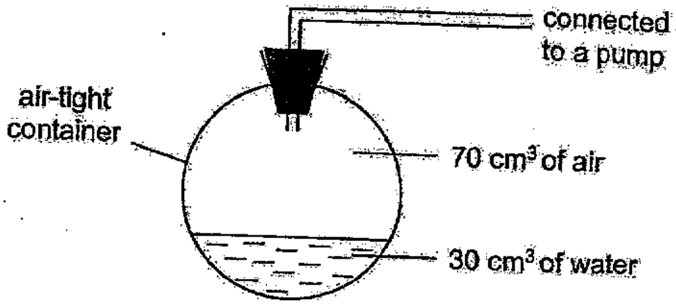
steel rod

(4)



plastic rod

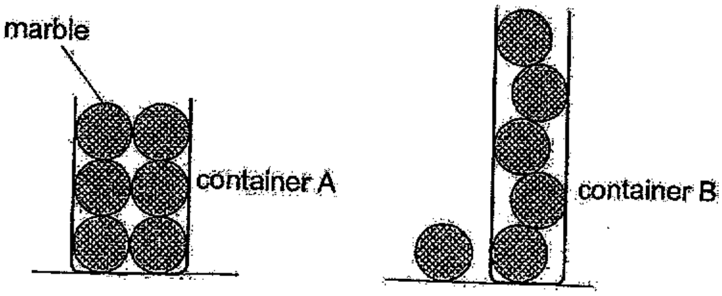
19 Study the set-up below. The volume of the container is 100 cm^3.



Using the pump, 20 cm^3 of water and 10 cm^3 of air are added into the container. What is the final volume of the air in the container?

(1) 50 cm^3
(2) 60 cm^3
(3) 70 cm^3
(4) 80 cm^3

20 Glen has two glass containers, A and B, of the same capacity. He placed six identical marbles into container A as shown below. When he poured the marbles into container B, he observed that not all the marbles could fit into it.



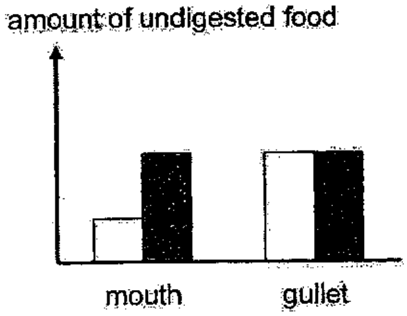
Which of the following best explains why six marbles could fit into container A but not container B?

(1) Marbles have mass.
(2) Marbles occupy space.
(3) Marbles have a definite shape.
(4) Marbles cannot be compressed.

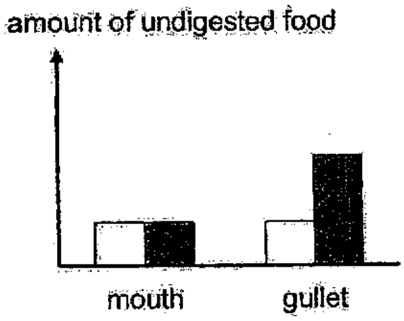
21 Which of the following graphs correctly shows the amount of undigested food entering and leaving two of the organs in the digestive system after a meal?

Key	☐ entering the organ	■ leaving the organ

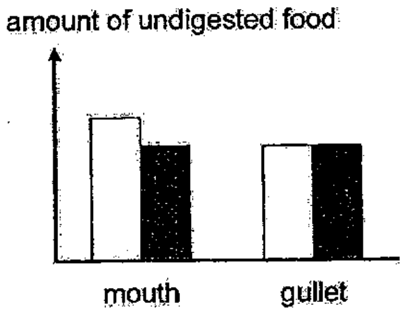
(1)



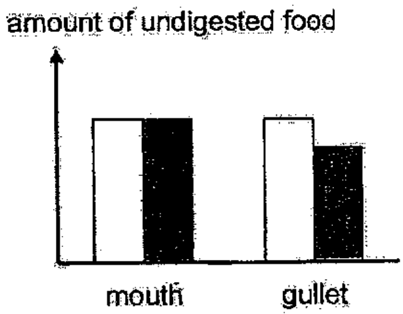
(2)



(3)



(4)



22 The diagram below shows a human body system.

What is the function of this system?

(1) takes air into and out of the body
(2) supports the body and gives it shape
(3) breaks down food into simpler substances
(4) transports digested food to all parts of the body

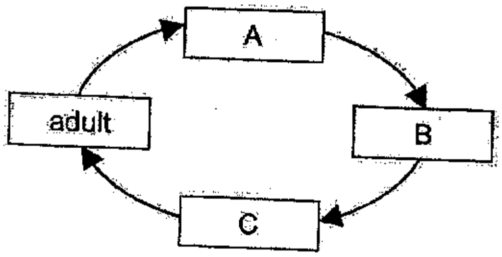
23 The graph below shows the number of days that animal R spends in each stage of its life cycle.

Stage	Number of days spent at the stage
egg	10
pupa	8
adult	12
larva	15

At which stage of its life cycle would animal R be on the 20th day after the egg is laid?

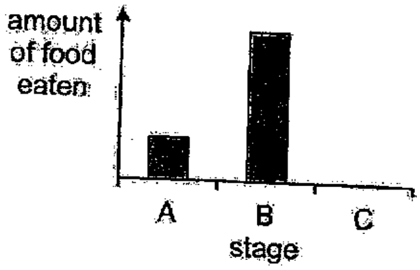
(1) egg
(2) pupa
(3) adult
(4) larva

24 The diagram below shows the life cycle of a butterfly.

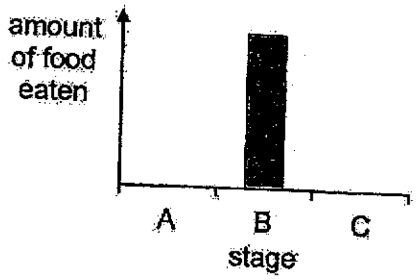


Which graph correctly shows the amount of food the butterfly eats at stages A, B and C of its life cycle?

(1)



(2)



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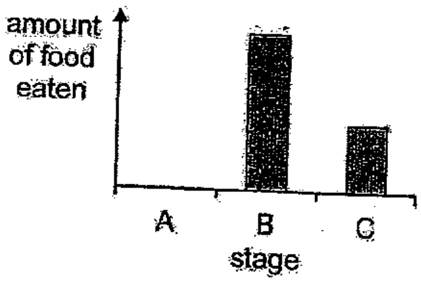
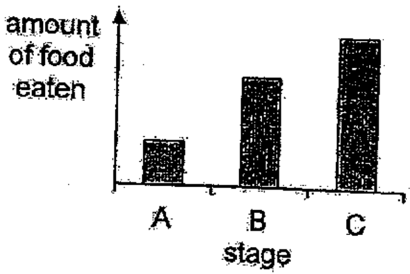
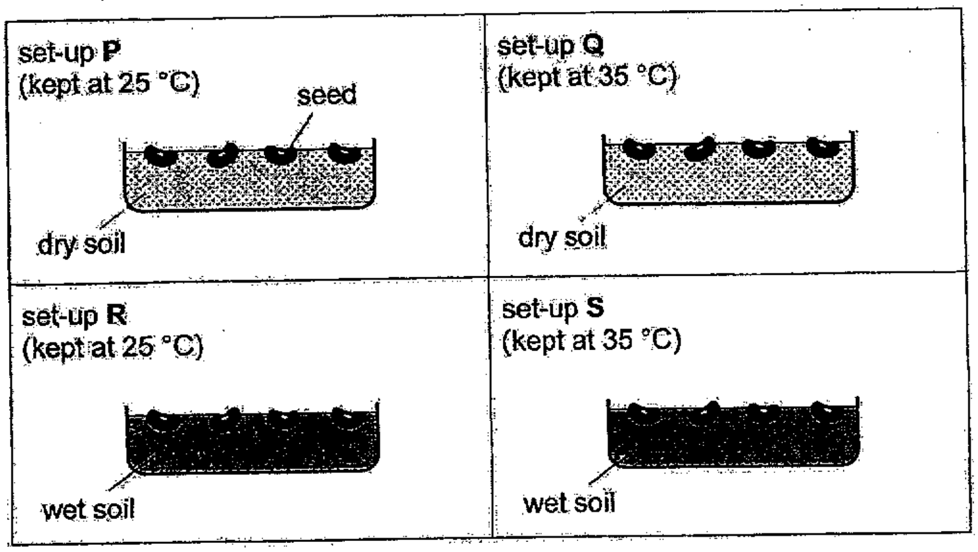


(4)



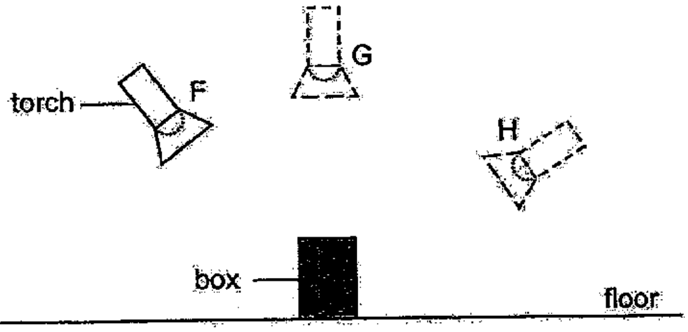
25 Hui Fang wanted to find out if water is needed for seeds to grow.



Which two set-ups should she use for a fair test?

(1) P and Q
(2) P and R
(3) Q and R
(4) R and S

26 Tiffany shone a torch at a cardboard box in a dark room. She held the torch at positions F, G and H and measured the length of the shadow formed on the floor for each position.



Which of the following shows the correct order of the positions based on the lengths of the shadow formed?

	shortest shadow	⟶	**longest shadow**
(1)	F	H	G
(2)	G	F	H
(3)	G	H	F
(4)	H	F	G

27 Shi Jia poured different volumes of water at different temperatures into three identical beakers, A, B and C.

Beaker	Volume of water (ml)	Temperature (°C)
A	200	50
B	100	50
C	200	80

Which of the following statements is true?

(1) The water in beakers A and B have the same amount of heat.
(2) The water in beakers A and C have the same amount of heat.
(3) The water in beaker A has more heat than the water in beaker B.
(4) The water in beaker A has more heat than the water in beaker C.

28 Ravi wanted to find out if fertilisers X and Y help plant M to grow faster. He placed four pots of plant M in the same area in his garden. The diagram below shows the four pots of plants after four weeks.

Type of fertiliser added	no fertiliser	fertiliser X	fertiliser Y	fertilisers X and Y
Plant at the start				
Plant after four weeks				

What can Ravi conclude about the effect of fertilisers X and Y on the growth of plant M?

(1) Only fertiliser X helps plant M to grow faster.
(2) Only fertiliser Y helps plant M to grow faster.
(3) Both fertilisers X and Y help plant M to grow faster.
(4) Both fertilisers X and Y do not help plant M to grow faster.

End of Section A

PEI CHUN PUBLIC SCHOOL

PRIMARY 4

END-OF-YEAR EXAMINATION 2024

SCIENCE

(BOOKLET B)

Total Time for Booklets A and B: 1 h 45 min

Name: ______________________ ( )

Class: Primary 4 /( ) ______________________

Date: 24 October 2024

Science Teacher: ______________________

Parent's Signature: ______________________

SECTION A	/ 56
SECTION B	/ 44
TOTAL	/ 100

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 **16** printed pages including the cover page.

Section B (44 marks)
For questions 29 to 41, write your answers in the spaces provided.

29 Lily observed and grouped some things as shown in the table.

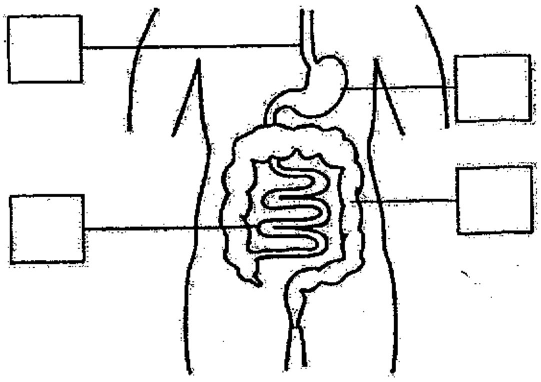
F	G
lion tree yeast	pen chair dress

What are the suitable headings for **F** and **G**?

(a) **Group F:** ______________________ [1]

(b) **Group G:** ______________________ [1]

30 **(a)** The diagram shows part of the human digestive system. Tick (✓) one box to show where the small intestine is. [1]



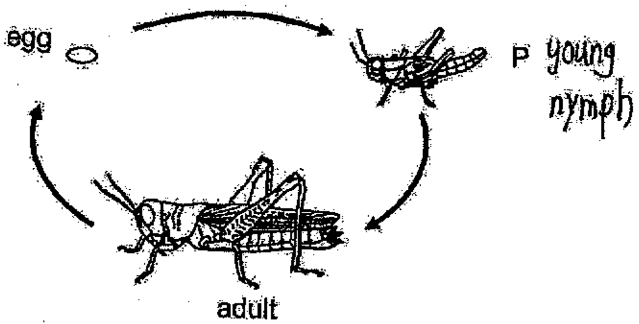
(b) Fill in the blank using the following helping words. [1]

large intestine	stomach	small intestine	mouth

Water is absorbed by the body from the undigested food in the ______________________.

SCORE	

31 The diagram below shows the stages in the life cycle of a grasshopper.



(a) Name stage P. [1]

____

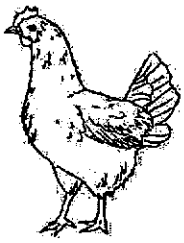
(b) Draw a line to match each statement to the correct animal. [2]

This animal has a similar life cycle as the grasshopper. •

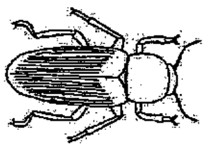
This animal lays eggs in the water. •

• 

mosquito

• 

chicken

• 

beetle

SCORE	

32 The diagram below shows a beaker of water.

(a) Circle the correct state of water. [1]

solid / liquid / gas

(b) Fill in the blanks using the correct words in the box.

gas	decreases	liquid
increases	remains unchanged	solid

(i) When the water loses heat, its temperature

_______________________. [1]

(ii) The beaker of water is put over a hot stove. After some time, the water will change its state to _______________________. [1]

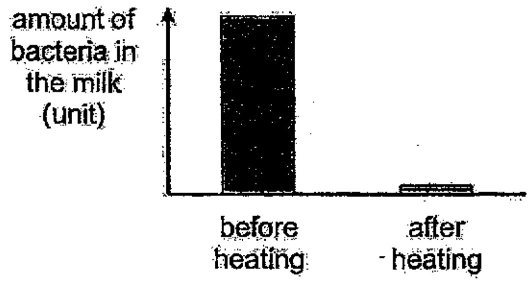
SCORE	

33 Bacteria E can be found naturally in milk. It causes milk to turn bad when it is present in large numbers.

(a) Bacteria are living things. Tick (✓) all the condition(s) needed for bacteria to stay alive. [1]

☐ air	☐ food
☐ light	☐ water

(b) June heated some milk at 75 °C for a short while. She measured the amount of bacteria E in the milk before and after heating. Her results are shown below.



State how heating the milk affected the bacteria E in it. [1]

____

____

(c) June conducted an experiment to find out how quickly bacteria E can reproduce in milk when it is kept at different temperatures. Her results are shown below.

Temperature at which the milk is kept (°C)	**Amount of bacteria E present (unit)**	
	At the start of the experiment	**6 hours later**
5	10	25
15	10	480
30	10	1200

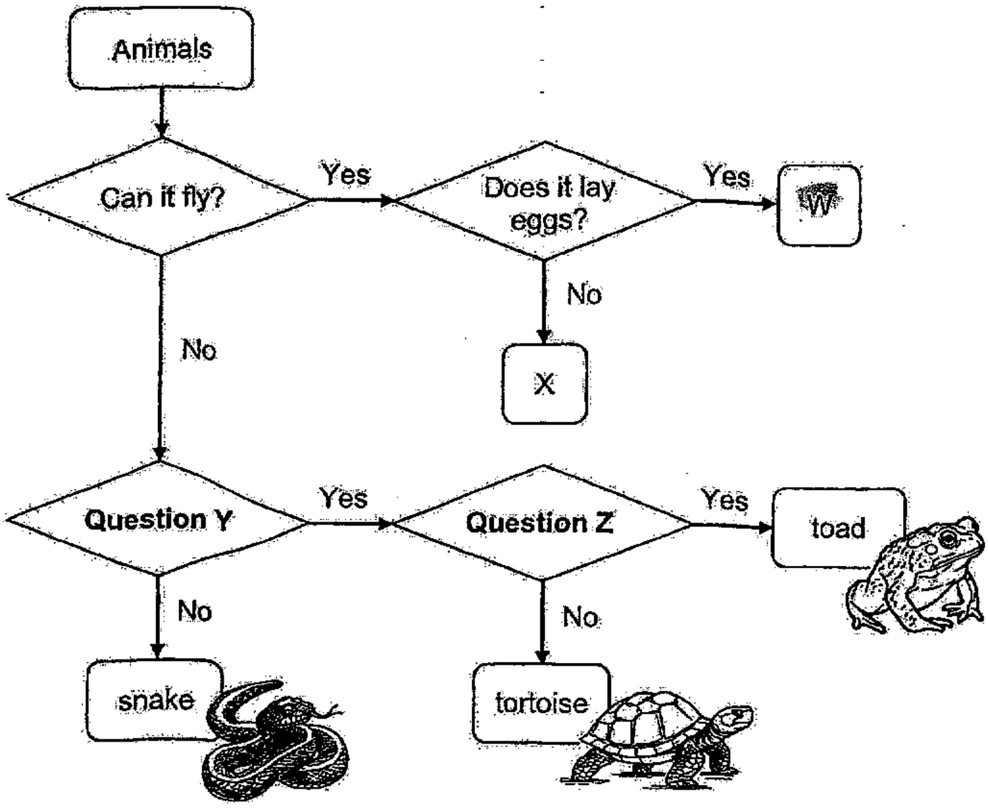
June's refrigerator has a temperature of 3 °C. Based on her results, explain why she should keep the milk in the refrigerator to prevent it from turning bad quickly. [1]

____

____

SCORE	

34 Some animals were classified as shown below.



(a) Based on the flowchart, state a similarity between animals W and X. [1]

____

____

(b) Circle the correct answer. [1]

A toad is a/an (*reptile* / *mammal* / *amphibian*).

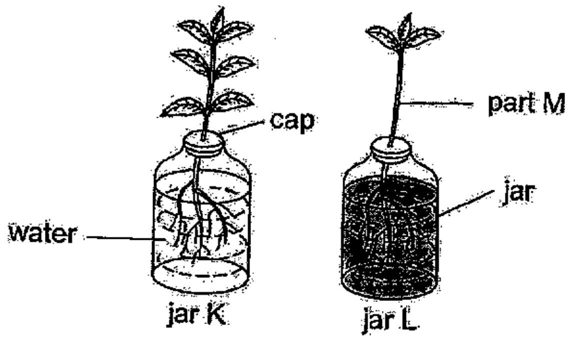
(c) What are questions Y and Z? [2]
Tick (✓) in the correct boxes.

	Question Y	**Question Z**
Does it have legs?		
Does it have scales?		
Does it have a shell?		
Can it breathe through its skin?		

SCORE	

(d) Which of the following animals could animal X be?
Tick (✓) in the correct box(es). [1]

35 Bala conducted an experiment to find out if the number of leaves on a plant would affect the amount of water taken in by the plant. He placed two similar plants in two identical jars, K and L as shown below. Both jars contained the same amount of water.



(a) Bala compared the amount of water left in the jars after two days. He concluded that the more leaves a plant has, the more water it takes in.

Circle the correct answer below. [1]

The amount of water left in jar K was

(*more than* / *the same as* / *less than*) the amount of water left in jar L.

(b) Other than water, state another substance taken in by the roots [1]

____

(c) (i) Name part M of the plant. [1]

____

(ii) State the function of part M. [1]

____

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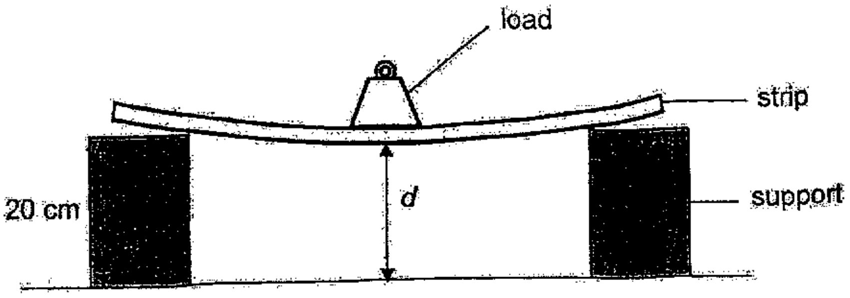
SCORE	

36 Fu Sheng set up an experiment as shown below to compare the flexibility of two strips, Q and R, which are made of different materials.



For each strip, he added a load of 1 kg and measured the distance *d*. His results are shown below.

Strip	Mass of load (kg)	Distance *d* (cm)
Q	1	15
R	1	19

(a) Based on his results, what could Fu Sheng conclude about the strips Q and R? [1]

___

___

(b) Fu Sheng wanted to conduct another experiment using the same set-up. He wanted to find out how the thickness of a strip affects distance *d*.

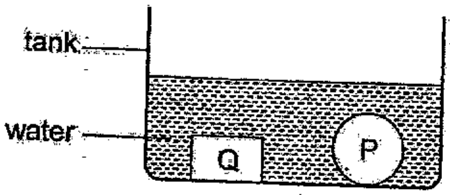
To conduct a fair experiment, which of the following variables should be changed or kept the same? Tick (✓) the correct boxes. [2]

Variable	To be changed	To be kept the same
mass of load		
length of strip		
material of strip		
thickness of strip		

measure

SCORE	

(c) Fu Sheng broke off a small piece from strip Q and placed it into a tank of water with ball P. The diagram below shows his observations.



Can Fu Cheng conclude that ball P and strip Q were made of the same material? Give a reason for your answer. [1]

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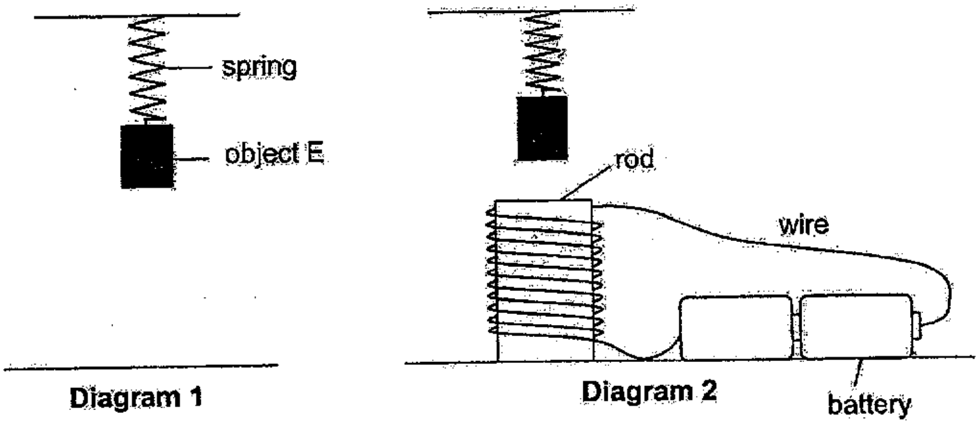
SCORE	

37 Huiqi hung object E on a spring as shown in diagram 1. Diagram 2 shows what she observed when she placed an electromagnet under it.



(a) What could object E be? [1]

____

(b) Explain why object E moved up when the electromagnet was placed under it. [1]

____

____

(c) Without changing the rod and its position, suggest one change that Huiqi can make to her electromagnet to make object E move up more. Give a reason for your answer. [2]

____

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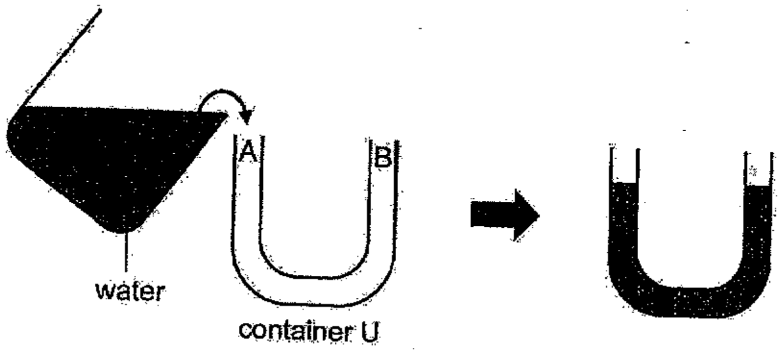
SCORE	

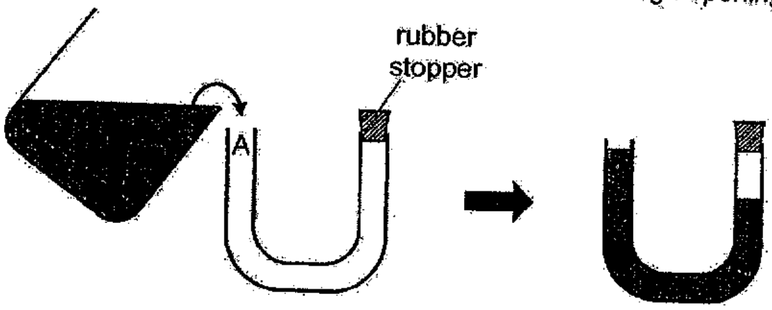
38 Marcus poured some water into container U as shown. Container U has two openings, A and B. He observed that the water levels in both sides of the container were the same.



(a) State a property of water that allows it to flow into container U. [1]

____

(b) Marcus removed the water from container U and covered opening B with a rubber stopper. The diagram below shows what he observed when he poured the same amount of water back into container U through opening A.



Explain why the water level in the side with the rubber stopper was lower. [2]

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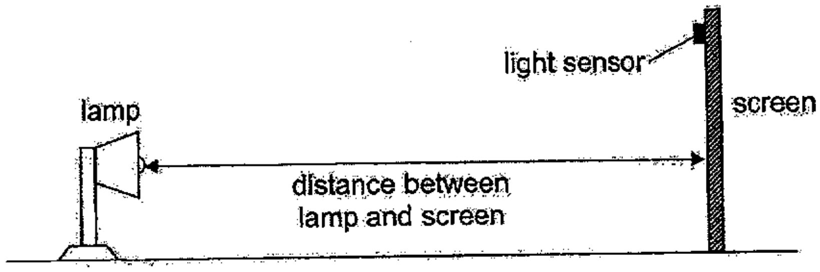
SCORE	

39 Hassan set up the following experiment in a dark room. A light sensor was attached on the screen. He placed the screen at different distances from the lamp and recorded the amount of light detected by the light sensor.



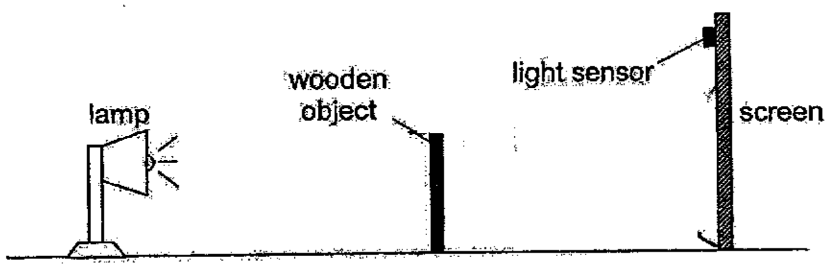
The table below shows his results.

Distance between the lamp and the screen (cm)	Light sensor reading (unit)
20	105
40	50
60	28

(a) Circle the correct answer. [1]

As the distance between the lamp and screen increases, the light sensor reading (*decreases* / *remains the same* / *increases*).

(b) Hassan placed a wooden object between the lamp and the screen as shown below.



He moved one of the items slowly. He observed that the shadow of the object on the screen became smaller and the light sensor reading increased.

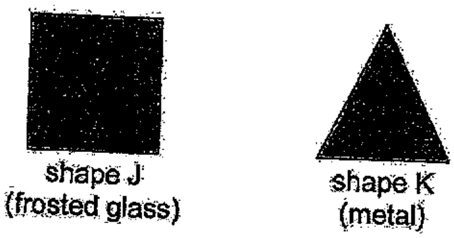
Which item (*lamp, object or screen*) did he move and in which direction? [1]

____

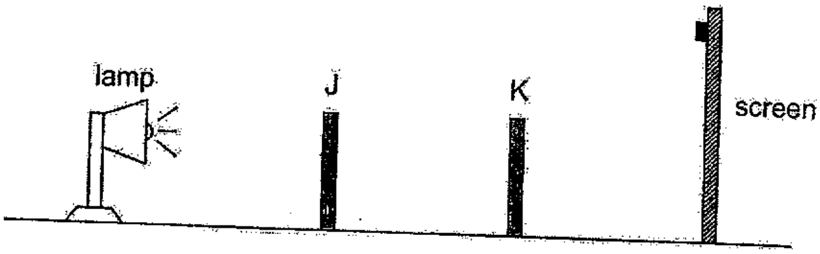
____

SCORE	

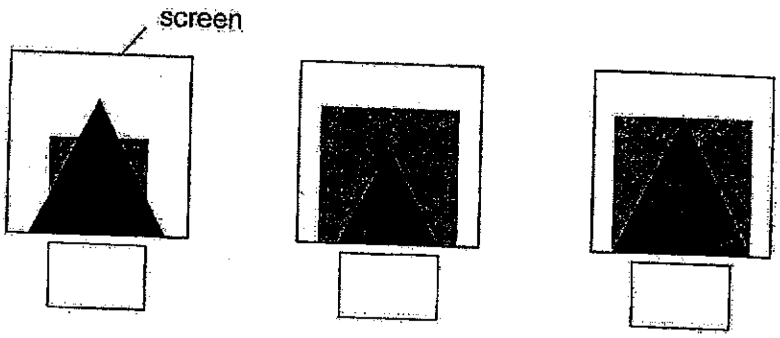
(c) Hassan has two shapes, J and K, made of different materials.



He placed the shapes between the lamp and the screen as shown below.



(i) Which of the following correctly shows the shadows formed on the screen? Tick (✓) the correct answer. [1]



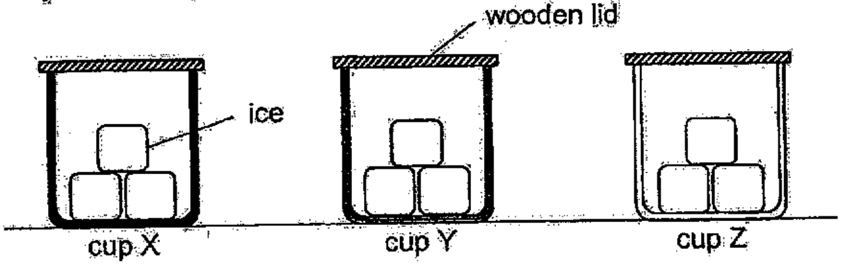
(ii) Hassan observed that the shadow formed by object K was darker than that of object J. Explain why this is so. [1]

____

____

SCORE	

40 Vincent conducted an experiment with three cups, X, Y and Z, made of different materials. The cups were of the same size and thickness. He placed the same amount of ice cubes in the cups and measured the time taken for the ice to melt completely in each cup.



His results are shown below.

Cup	Time taken for ice to melt completely (min)
X	21
Y	10
Z	17

(a) Explain why the ice in the cups melted. [1]

____

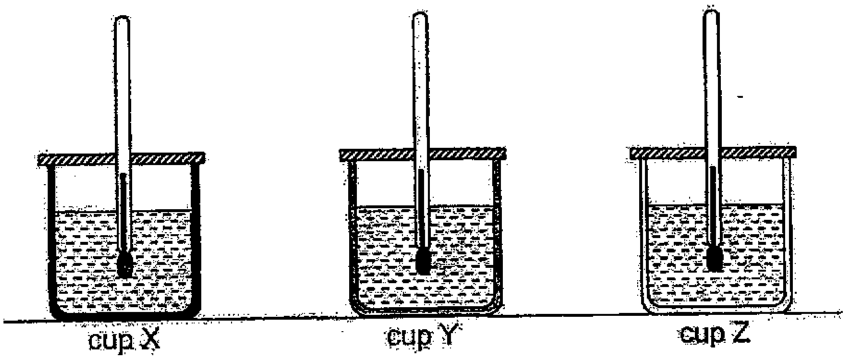
____

(b) Based on his experiment, which cup, X, Y or Z, is made of the best conductor of heat? Explain your answer. [1]

____

____

(c) Vincent conducted another experiment with cups X, Y and Z. He filled the cups with the same amount of cold water and left them in the same room. He measured the temperatures of the water in the cups at different times.



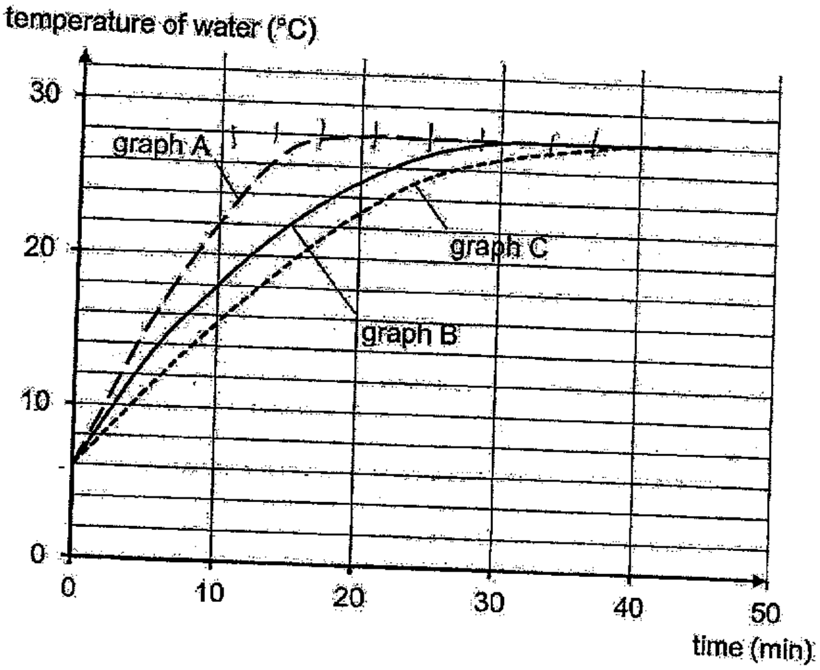
SCORE	

(i) State what temperature is. [1]

____

____

(ii) His results are shown below.



Which graph, A, B or C, shows the temperature change of the water in cup X? [1]

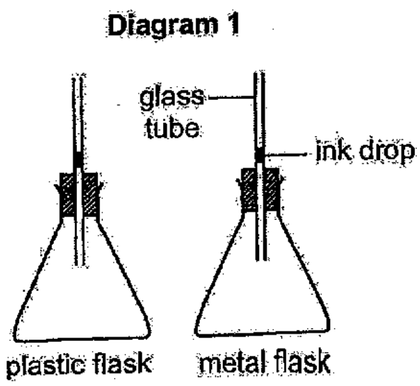
Graph ____________

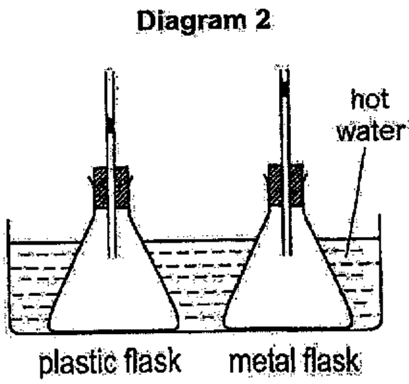
(iii) Based on the graphs, state the room temperature. [1]

____

SCORE	

41 Sunil conducted an experiment using two similar flasks made of plastic and metal as shown in diagram 1. Diagram 2 shows what he observed after the two flasks were placed in a basin of hot water for a short while.





Explain why the ink drop in the glass tube for the plastic flask was lower than that for the metal flask. [2]

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End of Section B

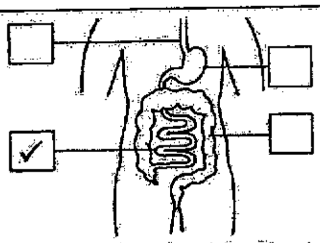
SCORE	

SCHOOL : PEI CHUN PRIMARY SCHOOL
LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2024 SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	1	1	2	1	1	4	2	3	3
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
3	3	2	1	1	4	4	3	1	3
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
3	4	4	2	2	2	3	2		

Pei Chun Public School
Primary 4 Science
End-of-Year Examination 2024

Name: ______________________________ (   )   Class: Primary 4 / (   )

No.	Suggested Answers
29 (a) (b)	Group F: living thing Group G: non-living things
30 (a)	
(b)	Water is absorbed by the body from the undigested food in the large intestine.
31 (a) (b)	Stage P is the nymph / young stage. This animal has a similar life cycle as the grasshopper. – chicken This animal lays eggs in the water. – mosquito
32 (a)	The beaker of water is in liquid state.
(b)(i) (ii)	When the water loses heat, its temperature decreases. The beaker of water is put over a hot stove. After some time, the water will change its state to gas.
33 (a)	*Concepts: - Living things need air, food and water to stay alive.* *- Bacteria do not make their own food, thus they do not need light.*
	Bacteria needs air, food and water to stay alive.
(b)	*Observation (graph): There was less bacteria E in the milk after heating.*
	Heating removed most of the bacteria E from the milk. / **Heating reduced the amount of bacteria** E in the milk.
(c)	*Aim of experiment: "To find out how quickly bacteria E can **reproduce** in milk when it is kept at different temperatures."* *Observations (table): - Bacteria E **reproduced** at 5 °C, 15 °C and 30 °C.* *- Bacteria E **reproduced** the slowest / least at 5 °C*
	Bacteria E reproduced the slowest at 5 °C and the temperature of June's refrigerator is slightly lower.
34 (a)	Both W and X can **fly**.
(b)	A toad is an amphibian.

(c) *Concepts: - An amphibian has moist skin and breathes through its skin in water.*
- A reptile has scales and breathes through lungs. (snake and tortoise)

Question Y – Does it have legs?
Question Z – Can it breathe through its skin?

(d) *Observation (flowchart): X can fly and does not lay eggs.*
Concepts: Most mammals give birth and birds lay eggs.

The bat is a mammal. It can fly and gives birth to its young.

35 (a) *"He concluded that the more leaves a plant has, the more water it takes in."*

Observation: Plant in jar K has more leaves.
Inference: Plant in jar K will take in more water.

The amount of water left in jar K was less than the amount of water left in jar L.

(b) *Concept: The roots take in water and mineral salts for the plant.*

*Do **NOT** use the term "nutrients", which is vague. Food is also considered as nutrients for the plant.*

Mineral salts

(c) (i) Part M is the stem. (ii) The stem holds the plant upright.

36 (a) *Aim of experiment: "to **compare the flexibility** of two strips, Q and R"*

Concept: The flexibility of a material is its ability to bend without breaking.
Observations: - When the material bends more, distance d will be shorter.
- Q has a shorter distance d than R. (Q bent more than R)

Strip Q is more flexible than strip R. / Strip Q bends more easily than strip R.

(b) *Aim of experiment: "to find out how the **thickness of a strip** affects **distance d**"*

*Changed variable = **thickness of strip***
*Measured variable = **distance d** (results of the experiment)*

Variable	To be changed	To be kept the same
mass of load		✓
length of strip		✓
material of strip		✓
thickness of strip	✓	

To conduct a fair test, we need to ensure that only one variable is changed and the other variables are kept the same.

(c) *Concept: The material of an object affects the ability of the object to float or sink in water.*

No. There are **many** different **materials that sink** in water.

37 (a)	*Observation: Object E moved away from the electromagnet.* *Concept: Like poles of two magnets repel.*
	Object E is a **magnet**.
(b)	*Concept: Like poles of two magnets repel.*
	Like poles of the electromagnet and object E **were facing each other**, so they **repelled.**
(c)	*Concept: We can increase the strength of an electromagnet by increasing the number of turns of wire around the magnetic object and the number of batteries.* *Do **NOT** write "increase the number of coils of wire". (A coil of wire is made up of many turns of wire.)*
	Suggestion: She can **add another battery** to the electromagnet. / She can **increase the number of turns of wire** around the rod. *Explanation:* The **electromagnet will be stronger.** There will be stronger repulsion between the electromagnet and object E, pushing object E further up.
38 (a)	*Concept: Liquid takes the shape of its container as it does not have a definite shape.*
	Water does not have a fixed / definite shape.
(b)	*Concept: Matter occupies space.* *Observations:* *- Without the rubber stopper, the air in the container could escape through openings A and B when water was poured in.* *- When the opening B was covered, some of air in the container was trapped.*
	Air was trapped in the side of **the container** with the rubber stopper. The **air occupied / took up space,** so water could not move up to occupy the space.
39 (a)	As the distance between the lamp and screen increases, the light sensor reading decreases.
(b)	*Observations: - "shadow of the object on the screen became smaller"* *- "light sensor reading increased"* *For the **light sensor reading to increase,** we need to **decrease the distance between the lamp and screen.** (Refer to the results of Hassan's experiment)* *To make the shadow smaller, we can **move the lamp away from the object** and the **screen.** However, the distance between the lamp and the screen will increase and the **light sensor reading will decrease.***
	Move the screen closer to the object / lamp.
(c)(i)	 *Object J is nearer to the lamp, so it will form a bigger shadow on the screen.*

(ii)	*Concepts: - A shadow is formed when light is blocked.* *- Different materials allow different amount of light to pass through.*
	Object K (metal) does not allow light to pass through, but object J (frosted glass) allowed some light to pass through. / Object K blocked more light than object J.
40 (a)	*Concept: Heat flows from an object of a higher temperature to an object of lower temperature. (The ice has a lower temperature than the surroundings.)*
	The ice **gained heat from the surroundings** / surrounding air / cups.
(b)	*Concept: A good conductor allows heat to flow through it quickly.* *Observations (table):* *The time taken for the ice to melt completely was the shortest for cup Y.* *The best conductor of heat will conduct heat the fastest from the surrounding air to the ice in the cup. Thus, the ice in that cup will melt the fastest.* *You chose the cup based on the results of the experiment, so you should refer to the results in the explanation of your choice.* *Check your answer after writing. Do **NOT** write "Cup Y. It melted the fastest." "It" refers to the cup. The ice melted, not the cup.*
	Cup Y. The **ice** in cup Y took the **shortest time to melt completely**. / The **ice** in cup Y **melted the fastest**. / The **ice** in cup Y **gained heat the fastest** from the surroundings.
(c)(i)	Temperature is a measure / measurement of how hot or cold an object is.
	Observation: The ice in cup X melted the slowest. *Inference: Cup X is made of the poorest conductor of heat.* ***The water in cup X would gain heat the slowest from the surroundings.** The temperature of the water would increase the slowest and it would take the longest time to reach room temperature.*
(ii) (iii)	Graph C 28 °C
41	*Concept: Matter gains heat and expands.* *Observations: - There was air in both flasks.* *- The ink drop for both flasks moved up. The air in both flasks expanded.* *- **The ink drop moved up less for the plastic flask.***
	Plastic is a $\boxed{\text{poorer}}$ conductor of heat than metal. The **air in the plastic flask gained heat $\boxed{\text{slower}}$ from the hot water and expanded $\boxed{\text{less}}$.** Thus, the ink drop was pushed up less by the expanded air. / Plastic is a poorer conductor of heat than metal. The plastic flask conducted heat slower from the hot water to the air in the flask. The air expanded less and the ink drop was pushed up less.