PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SEMESTRAL ASSESSMENT

PRIMARY 3
SCIENCE
(BOOKLET A)

26th OCT 2023

Name: _____ ( )

Class: Responsibility _____

Total time for Booklets A and B: 1 h 30 min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

This booklet consists of 14 printed pages, excluding the cover page.

For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice and shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

(48 marks)

1 Which one of the following is <u>not</u> a characteristic of all living things?

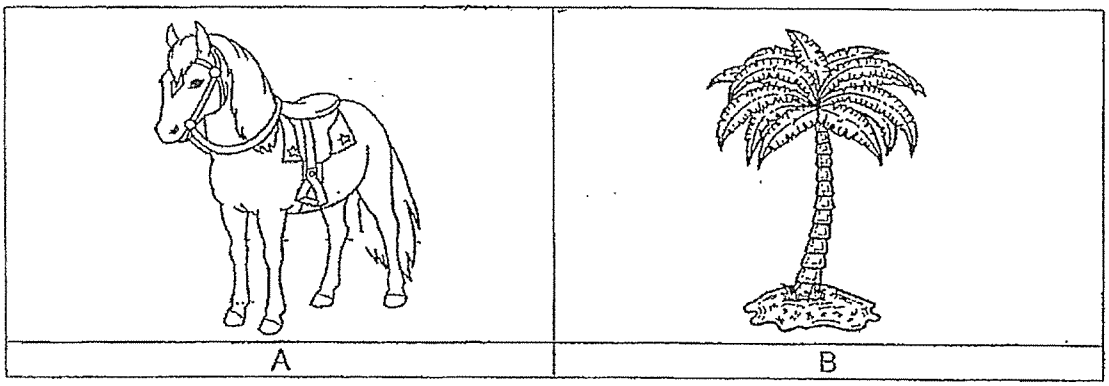
(1) They can grow.

(2) They give birth to young alive.

(3) They can respond to changes.

(4) They need air, food and water to survive.

2 Study the diagrams below.



Which of the following statements is correct?

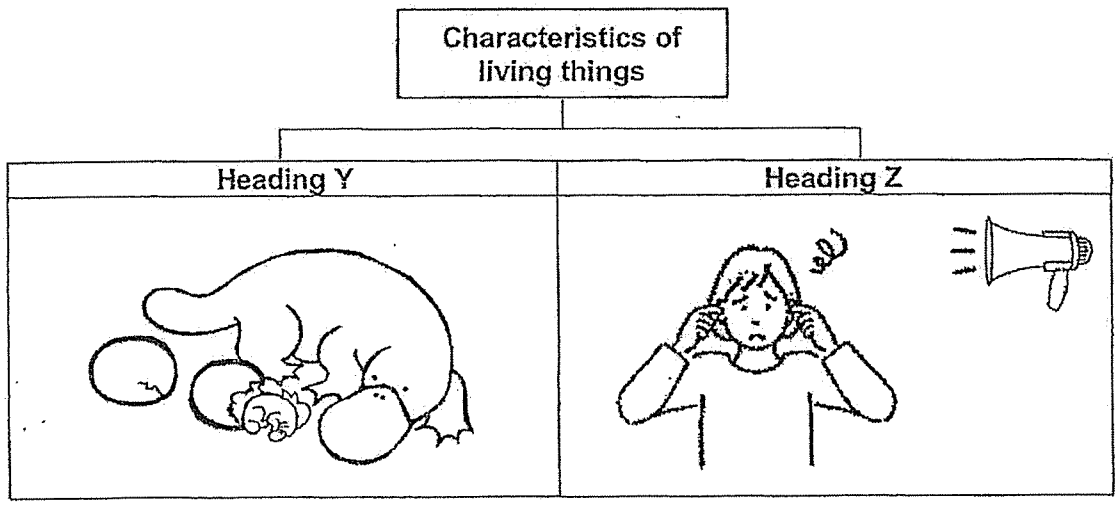
(1) B can grow but A cannot grow.

(2) Both A and B can make its own food.

(3) A can reproduce but B cannot reproduce.

(4) Both A and B need air, food and water to survive.

3 Study the classification table below.



Based on the classification table above, which of the headings below are correct?

	Heading Y	Heading Z
(1)	Can reproduce	Can respond to changes
(2)	Need air, food and water to survive	Can grow
(3)	Can make its own food	Can reproduce
(4)	Can respond to changes	Need air, food and water to survive

4 Which one of the following is a characteristic of all insects?

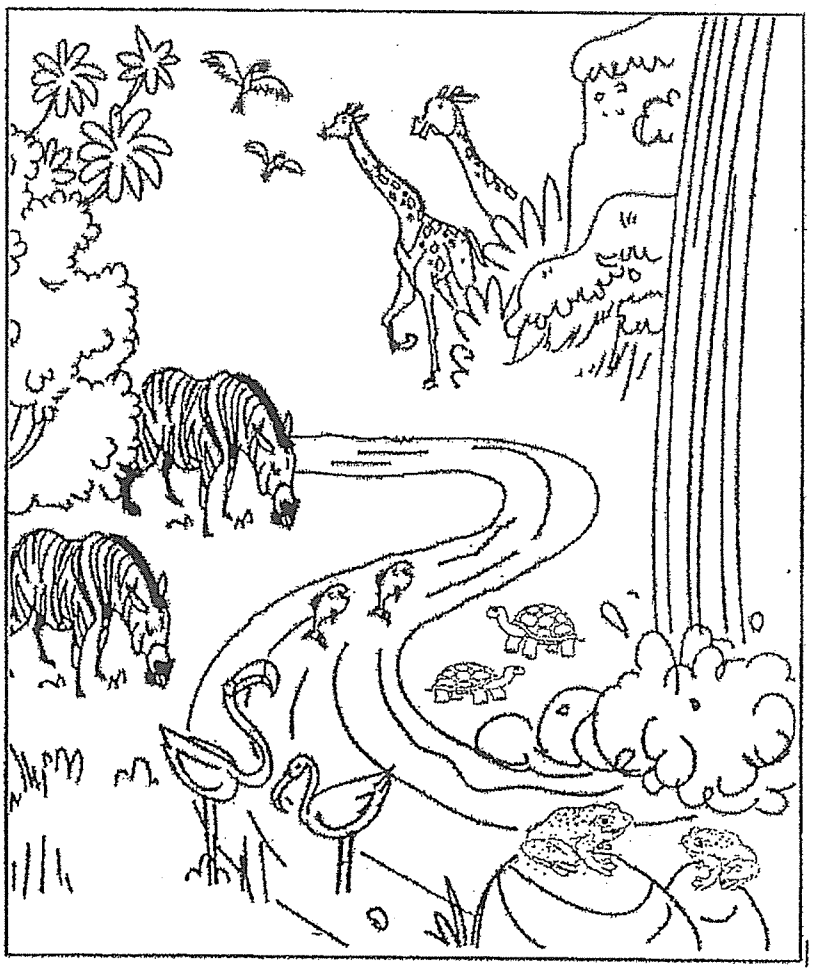
(1) They have a tail.

(2) They have wings.

(3) They have six legs.

(4) They have feathers.

5 Study the picture below.



How many animal classification groups can you find in the above picture?

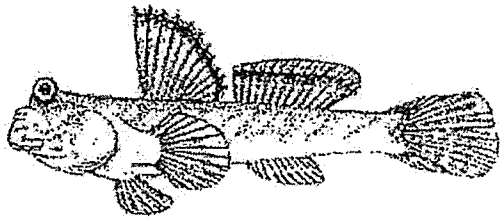
(1) 5

(2) 6

(3) 3

(4) 4

6 The diagram below shows Animal K.



Which of the following statements below is not correct about the animal group that animal K belongs to?

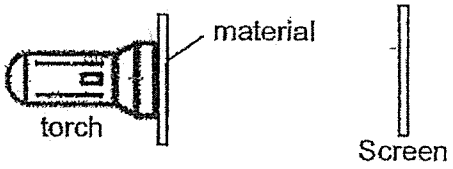
(1) All of them have fins.

(2) Most of them have scales.

(3) Most of them can breathe through gills.

(4) All of them can live on land and in water.

7 Alice wanted to conduct an experiment to find out which material allows most amount of light to pass through. She placed different material, one at a time, in front of the torchlight as shown below.

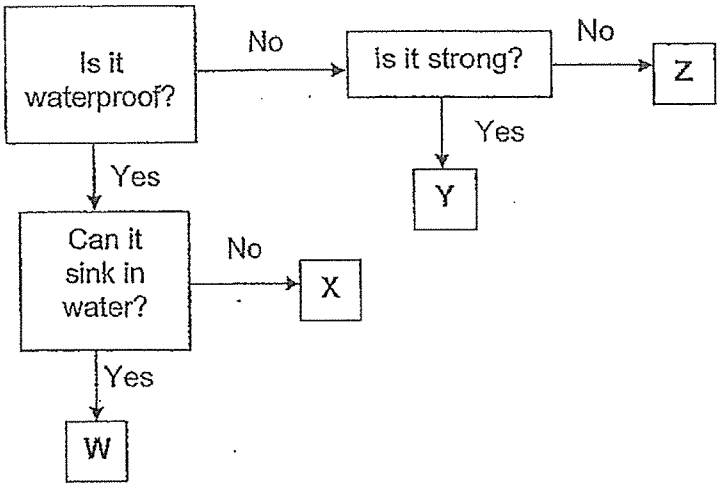


Materials	Observation
Metal	Bright light patch on the screen
Glass	Bright light patch on the screen
Rubber	No light patch on the screen
Ceramic	No light patch on the screen

Which material is not correctly matched to its observation recorded in the table above?

(1) Metal
(2) Glass
(3) Rubber
(4) Ceramic

8 Study the flow chart below carefully.

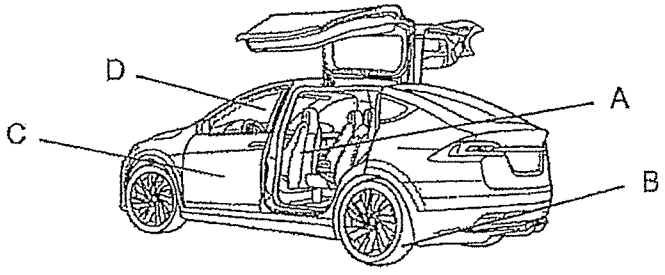


Peri has a toy duck and she likes to play with it when she bathes. She likes to squeeze the floating duck to make a squeaking sound and throws it around.

Which of the following materials **W, X, Y** or **Z** is suitable to make the toy duck?

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

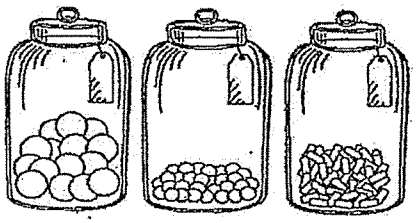
9. Study the diagram of a car below.



Which of the materials below is <u>not</u> used to make parts of the car labelled above?

(1) A: fabric
(2) B: rubber
(3) C: metal
(4) D: wood

10 Alan looked at the food in the glass jars.



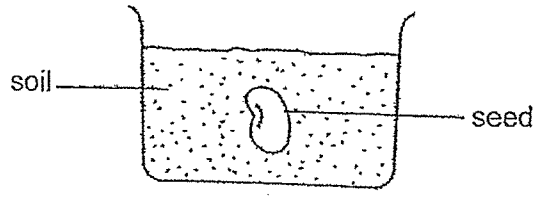
Why was Alan able to see the amount of food left inside the jars?
The jars are _____.

(1) rigid
(2) strong
(3) waterproof
(4) transparent

11 Which of the following shows the correct stages of life cycle of a plant?

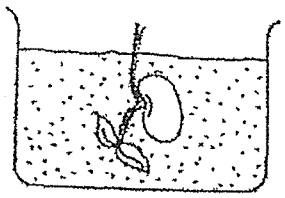
(1) young, adult, egg
(2) seed, adult, nymph
(3) adult, seed, young
(4) egg, nymph, adult

12 Katie placed a seed in a container of soil as shown below. She watered the soil daily.

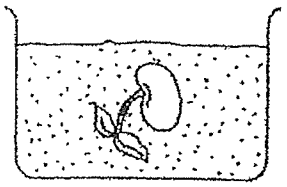


Which one of the following diagrams shows what Katie would observe after some time?

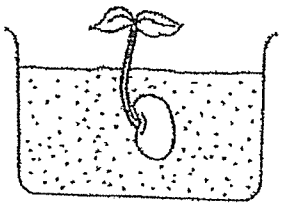
(1)



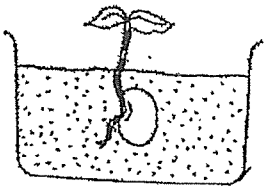
(2)



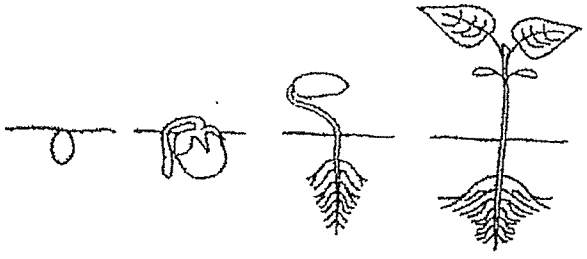
(3)



(4)



13 The diagram below shows the stages **A**, **B**, **C** and **D** of seed germination.



Light is needed at _____.

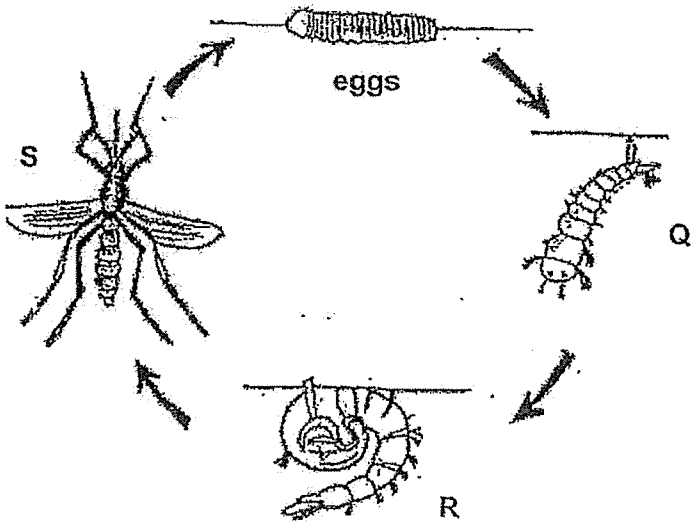
(1) A only

(2) D only

(3) C and D only

(4) A, B and C only

14 Q, R and S are the stages in the life cycle of a mosquito.



Which of the following statements is correct?

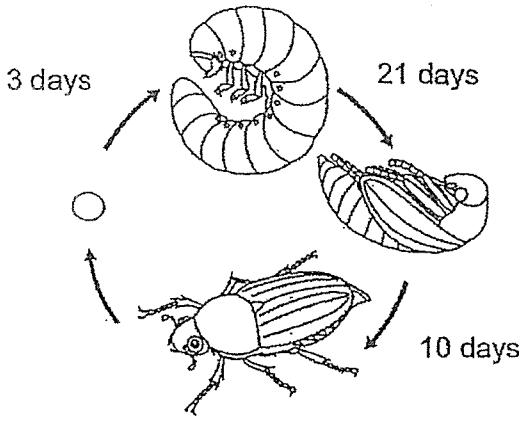
(1) Mosquito at stage Q does not eat.

(2) Mosquito at stage S lays eggs on land.

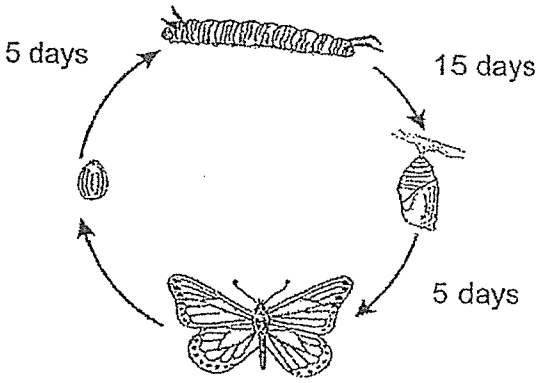
(3) Mosquito at stage Q is called a wriggler.

(4) Mosquito at stage R eats a lot and moults many times.

15 The diagram below shows the life cycle of insects K and L.



Insect K



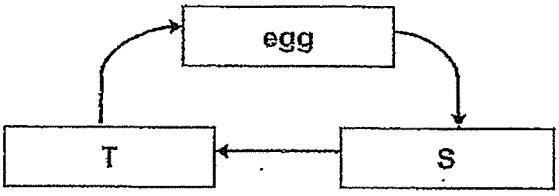
Insect L

Based on the information above only, which of the following statement(s) about the insect K and L is/are correct?

A The adult of L has six legs but the adult of K does not.
B The young of K resembles its adult but the young of L does not.
C The larva of K takes a longer time to become an adult than L.
D The egg of L takes a shorter time to become an adult than K.

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

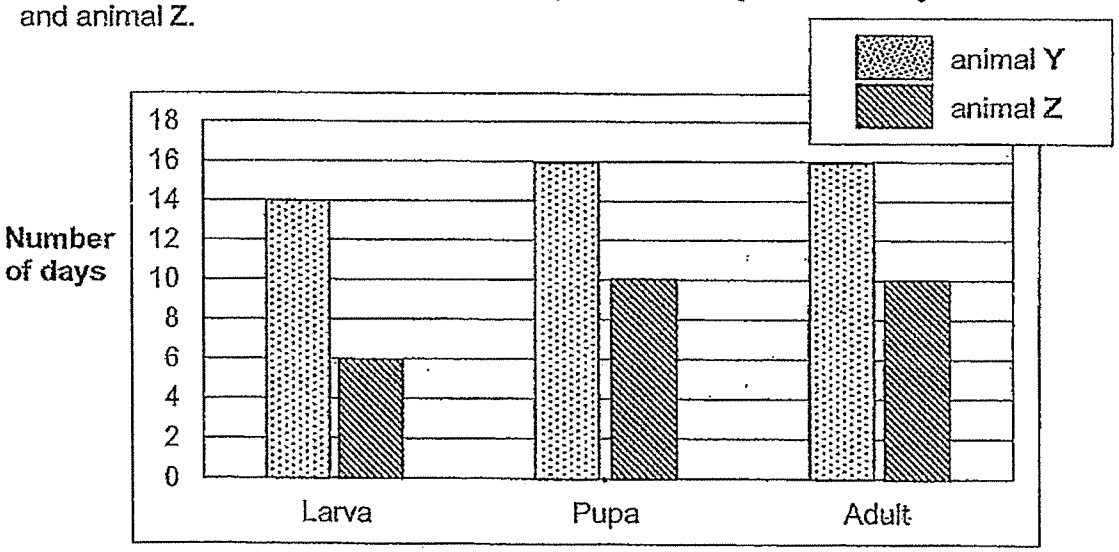
16 The diagram below shows the stages in the life cycle of a frog.



Which of the following correctly describes the organisms at stages S and T?

	Stage S	Stage T
(1)	has a tail	has 4 legs
(2)	able to swim	unable to swim
(3)	breathes through skin	breathes through gills
(4)	lives on land and in water	lives on land

17 The graph below shows the number of days in each stage of the life cycle of animal Y and animal Z.



Stages of a life cycle

At which stage would animal Y and animal Z be on the 20th day after the eggs hatched?

	animal Y	animal Z
(1)	Larva	Pupa
(2)	Larva	Larva
(3)	Pupa	Adult
(4)	Pupa	Pupa

18 Four students used the following methods to test if the metal Bar G shown below is a magnet.

Alice: Bring Bar G to one end of a magnet and if the magnet attracts it, then Bar G is a magnet.

Ben: Bring Bar G to one end of a magnet and if the magnet repels it, then Bar G is a magnet.

Clara: Suspend Bar G with a string and if it rests in the East-West direction, then Bar G is a magnet.

Diana: Suspend Bar G with a string and if it rests in the North-South direction, then Bar G is a magnet.

Which tests will help to identify if Bar G is a magnet?

(1) Alice and Ben only

(2) Ben and Diana only

(3) Clara and Diana only

(4) Alice, Clara and Diana only

19 Gina placed one pole of a magnet close to four different objects A, B, C and D. She observed what happened between each object and the magnet. She then recorded her observation by placing a tick (✓) in the appropriate boxes in the table below.

Object	Attracted to the magnet	Repelled by the magnet	Neither attracted nor repelled by the magnet
A		✓	
B			✓
C	✓		
D	✓	✓	

Which object A, B, C or D is a magnetic material but <u>not</u> a magnet?

(1) A

(2) B

(3) C

(4) D

20 At first David placed a steel nail as shown in the diagram A below. David then moved the magnet from the other end of ruler towards the steel nail. The steel nail was attracted to the magnet as shown in the diagram B.

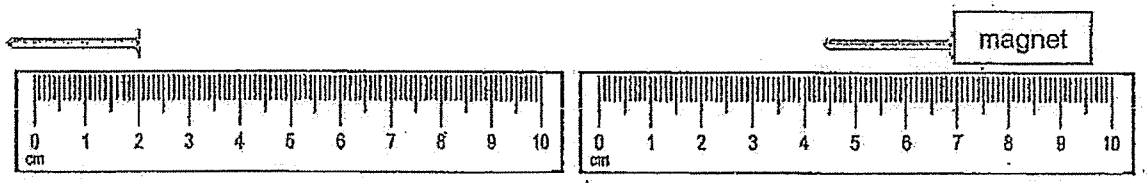


Diagram A Diagram B

What is the distance moved by the steel nail?

(1) 1 cm

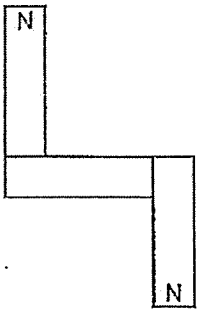
(2) 2 cm

(3) 5 cm

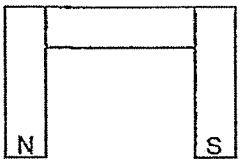
(4) 7 cm

21 Christy conducted an experiment with some magnets to see how they attract to each other. Which of the following magnets arrangements is possible?

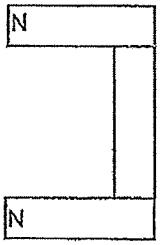
(1)



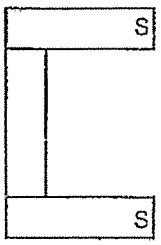
(2)



(3)



(4)



22 Which of the following objects make use of magnets?

J Scrap iron crane
K Refriqerator door
L Door-stopper
M Aluminium spoon

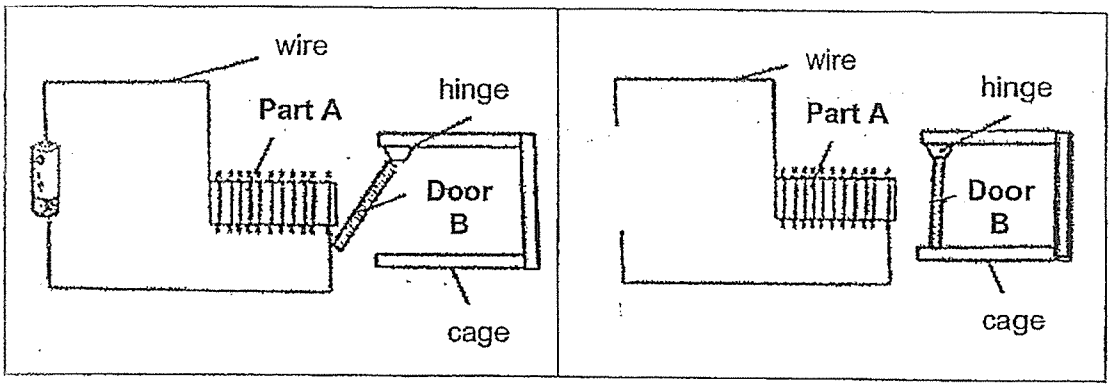
(1) J and K only

(2) K and M only

(3) J, L and M only

(4) J, K and L only

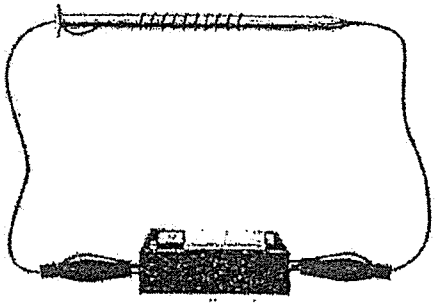
23 Mr Tan tried to open the door of a cage using an electromagnet as shown in the diagram below. When electricity was passed through the wire around Part A, Door B was attracted by Part A and swung opened. When the battery was removed, Door B closed.



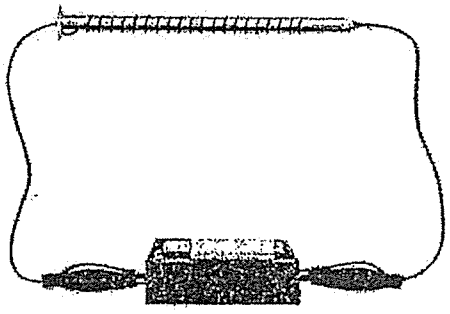
Which of the following shows the correct materials used to make **Part A** and **Door B**?

	Part A	**Door B**
(1)	Iron	Aluminum
(2)	Wood	Steel
(3)	Steel	Iron
(4)	Steel	Ceramic

24 Alice set up the following experiment to make an electromagnet using a battery and a wire coiled around the iron nail. She increased the number of coils around the iron nail and counted the number of steel clips that were attracted to it. Then, she recorded the results in the table below.



Before



After

Which of the following table was Alice likely to get at the end of the experiment if she had successfully carried it out?

(1)

Number of coils	10	20	30	40
Number of steel clips attracted	5	5	5	5

(2)

Number of coils	10	20	30	40
Number of steel clips attracted	1	3	5	8

(3)

Number of coils	10	20	30	40
Number of steel clips attracted	5	3	2	1

(4)

Number of coils	10	20	30	40
Number of steel clips attracted	0	2	4	2

PEI HWA PRESBYTERIAN PRIMARY SCHOOL

SEMESTRAL ASSESSMENT

PRIMARY 3

SCIENCE

(BOOKLET B)

26th OCT 2023

Name: _____ ( )

Class: Responsibility _____

Parent's Signature

Total time for Booklets A and B: 1 h 30 min

INSTRUCTIONS TO CANDIDATES

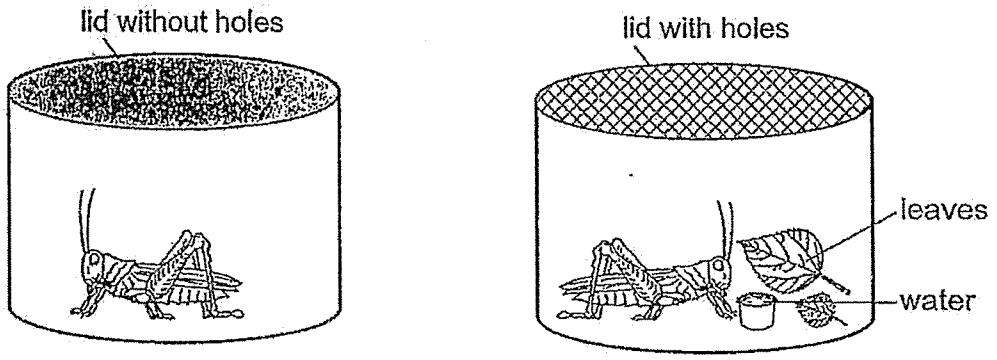
1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write all your answers in this booklet.

Marks (Booklet A) :	48
Marks (Booklet B) :	32
Total Marks (Booklets A & B) :	80

This booklet consists of 12 printed pages, excluding the cover page.

Write your answers to the questions 25 to 33 in the spaces provided.
The number of marks available is shown in brackets [ ] at the end of each question or part question. **(32 marks)**

25 Yiming kept grasshoppers in two similar containers for a few days as shown below.



(a) Which grasshopper in container A or B will likely be able to survive after a few days? [1]

Container : _____

(b) Give a reason for your answer in part (a). [1]

_____

_____

(c) Yiming knocked on one of the containers and he observed the grasshopper moved. What characteristics of living things did the grasshopper show? [1]

_____

_____

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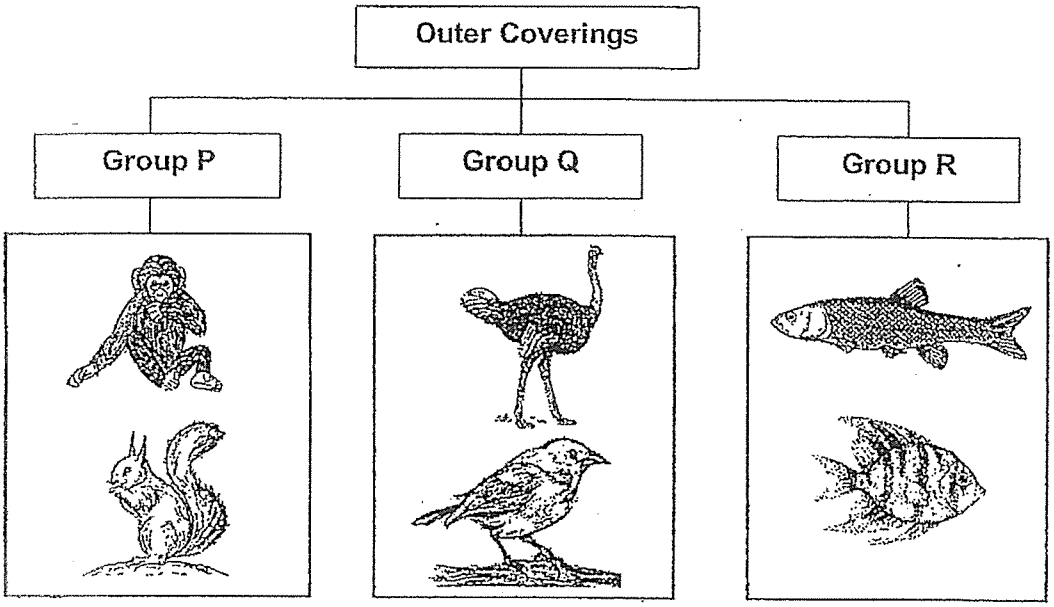
PLEASE DO NOT WRITE IN THIS MARGIN

26 Study the classification table below.



(a) Name the types of outer coverings for animal group P and R. [1]

Group P: _____

Group R: _____

(b) How does the outer covering of the animals in **Group Q** help them? [1]

_____

(c) In which group would you place a bat? [1]

Group _____

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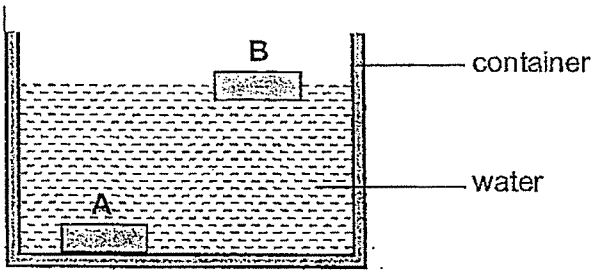
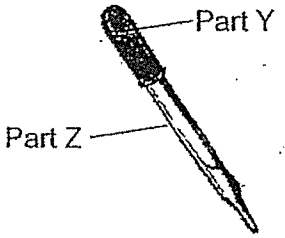
27 Mr Loh placed two objects made of different materials, A and B into a container of water as shown in the diagram below. The objects are of the same shape and size.



He wants to use one of the materials to make a toy boat as shown below.

(a) Which material, A or B, is more suitable to be used to make the toy boat? Give a reason for your answer. [1]

(b) The object below is a dropper.



Write down the physical properties of materials that make them suitable to make the Part Y and Part Z of the dropper. [1]

	Material	Physical Property
Part Y	Rubber	
Part Z	Glass	

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PLEASE DO NOT WRITE IN THIS MARGIN

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28 The table below shows the physical properties of 3 different materials, S, T and U.

A tick (✓) in the box indicate that the material has the physical property.

Properties	Material		
	S	T	U
Flexible	✓	✓	
Able to absorb water	✓		
Transparent		✓	✓

(a) List all the properties of Material T. [1]

_____

(b) Circle which is the most possible Material for T below. [1]

(ceramic / glass / plastic

(c) State one difference between the properties of Material S and Material T. [1]

_____

_____

(d) Which of the material, S, T or U, is most suitable to make a fish tank?
Based on the information in the table, give a reason for your answer. [1]

_____

_____

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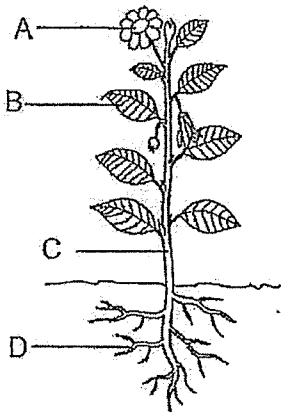
29 (a) Study the diagram below.



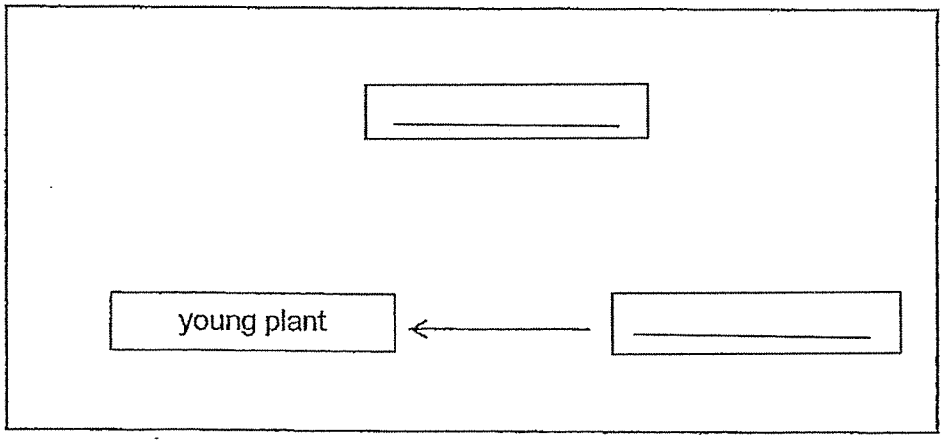
Name the following parts of the plant correctly. [2]

A	
B	
C	
D	

(b) Which part of the plant above is <u>not</u> found in the young stage? [1]

Part _____

(c) Draw arrows and fill in the blanks below to complete the life cycle of a plant. [1]



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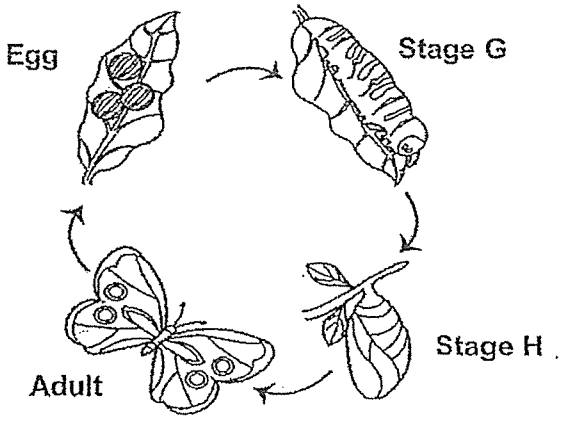
30 The diagram below shows the life cycle of a butterfly.



(a) Name the stages **G** and **H**. [1]

Stage **G:** _____ Stage **H:** _____

(b) Name one other animal that has the same number of stages as the life cycle of a butterfly. [1]

_____

(c) State one similarity between the young at Stage H and its egg stage. [1]

_____

_____

(d) State one difference between the young at Stage G and its adult stage. [1]

_____

_____

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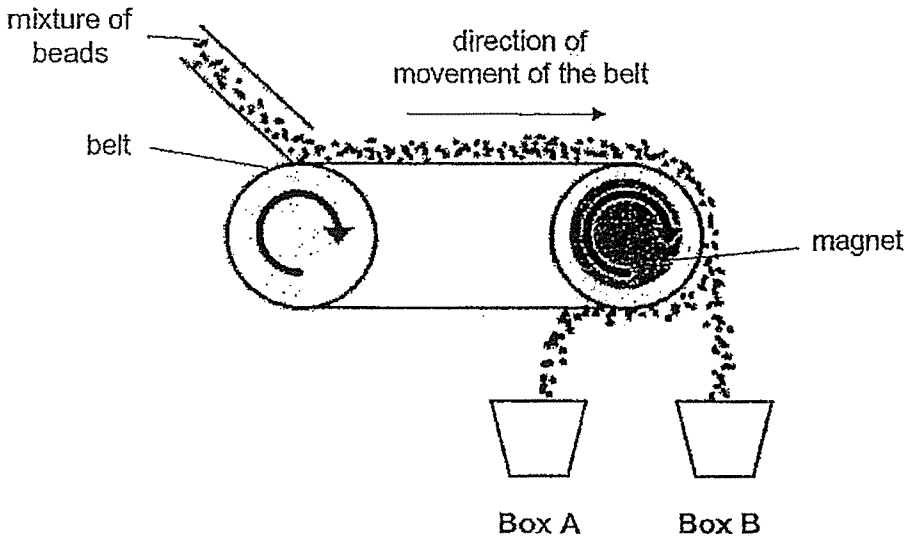
31 The diagram below shows a way to separate a mixture of magnetic and non-magnetic beads. A mixture of these beads is poured onto a moving belt. A magnet is present in one of the rollers as shown below.



(a) The table below shows the magnetic and non-magnetic beads being sorted out. Put a tick (✓) under the correct column to identify whether the beads will drop into Box A or Box B. [2]

Beads	Box A	Box B
Glass		
Steel		
Aluminium		
Cotton		

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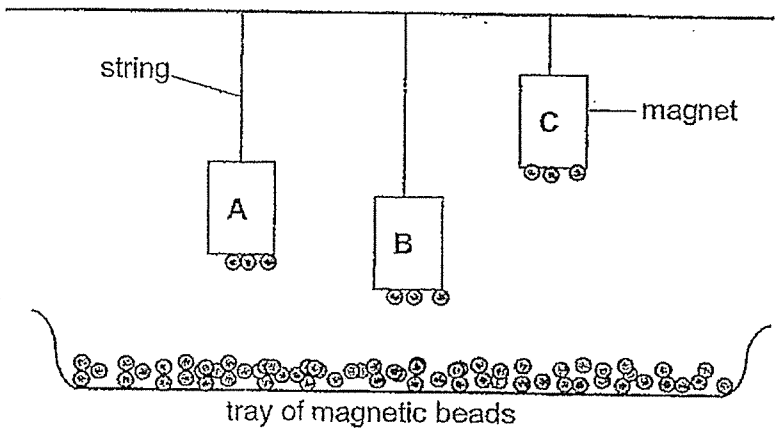
Jane set up the experiment as shown in the diagram below. She hung three similar magnets at a different height until they attracted some magnetic beads.



(b) Arrange the magnets according to their magnetism, starting from the magnet that has strongest magnetism. [1]

Strongest ⟶ Weakest

(c) Without changing the materials of the objects used in the set-up, what can Jane do to make Magnet C attracts more magnetic beads? [1]

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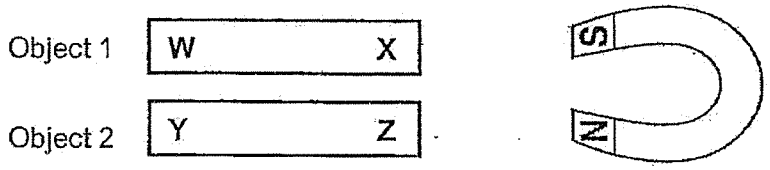
32 The table below shows what happens when the ends of Object 1 and 2 were brought near to the North pole and South pole of a horseshoe magnet respectively.



	Object 1		Object 2	
Poles of horseshoe magnet	**W**	**X**	**Y**	**Z**
North	repel	attract	attract	attract
South	attract	repel	attract	attract

(a) Based on the information given in the table above, what are objects 1 and 2? Circle your answers below. [1]

Object 1: (magnetic material / non-magnetic material / magnet)

Object 2: (magnetic material / non-magnetic material / magnet)

(b) From the above activity, state one property of magnets. [1]

_____

_____

(c) Name one example of a metal that can be used to make Objects 1 and 2. [1]

_____

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Diagram 1 below shows the horseshoe magnet and a toy train.

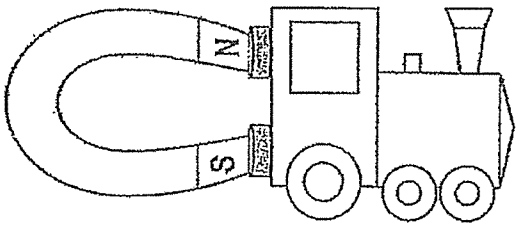

Diagram 1

When the horseshoe magnet was rotated, the toy train moved away from the magnet as shown in Diagram 2.

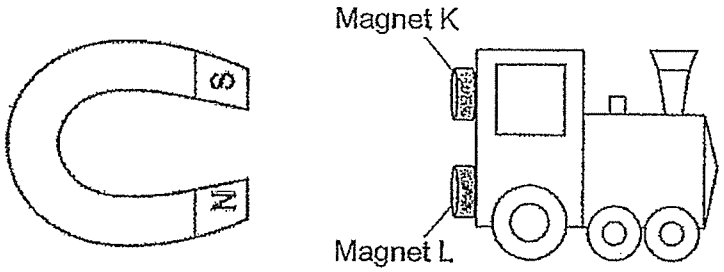

Diagram 2

(d) Name the poles of the magnets K and L . [1]

Magnet K : _____

Magnet L : _____

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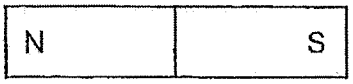
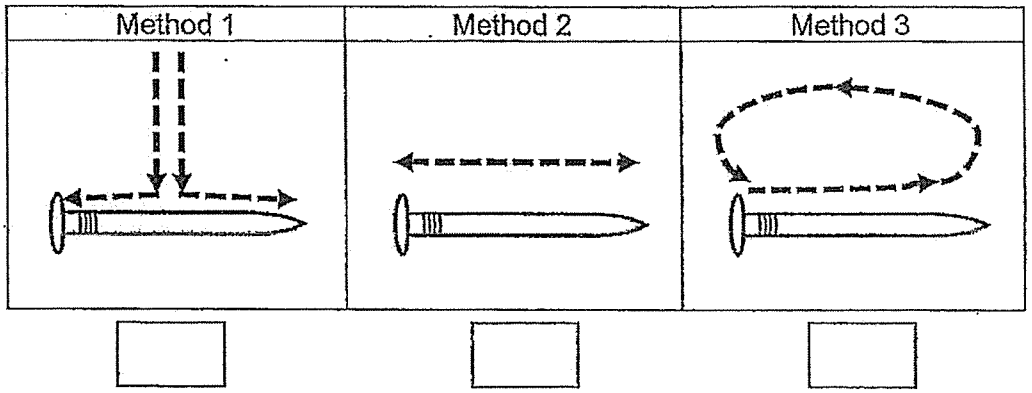
33 Gladys has a bar magnet and some iron nails. She wanted to make use of these objects to make some temporary magnets using the stroke method.



Bar magnet

Iron nails

(a) Put a tick (✓) in the box below that shows the correct way of stroking the iron nail. [1]



(b) Gladys stroked the iron nail 15 times with the bar magnet and it could attract 3 steel clips. What could she do to make the same iron nail attract more steel clips? [1]

_____

_____

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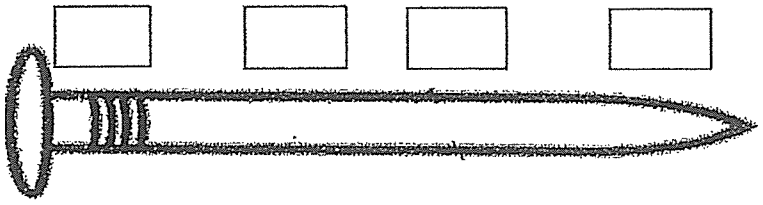
(c) After stroking the iron nail, Gladys brought it near to a tray of steel pins. She observed and recorded the number of steel pins that were attracted to different parts of the iron nail in the table below.

Part	Number of steel pins attracted to the iron nail
A	2
B	6
C	6
D	1

Based on the data recorded in the table above, label the different parts of the iron nail with **A**, **B**, **C** and **D**. [1]



(d) When Gladys placed the nail into another tray of pins. None of the pins was attracted by the nail. Name a possible material that is used to make these pins. [1]

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SCHOOL : PEI HWA PRESBYTERIAN PRIMARY SCHOOL
LEVEL : PRIMARY 3
SUBJECT : SCIENCE
TERM : 2023 SA2

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	4	1	3	1	4	1	2	4	4
Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
3	4	2	3	3	3	3	2	3	3
Q 21	Q22	Q23	Q24						
2	4/1	3	2						

SECTION B

Q25)

(a) Container : B

(b) Container B has air, food and water for the grasshopper.

(c) The grasshopper responds to changes around it.

Q26)

(a) Group P : fur Group R : scales

(b) To keep them warm

(c) Group P

Q27)

(a) B. B is a floating material and suitable for making a toy boat.

(b)

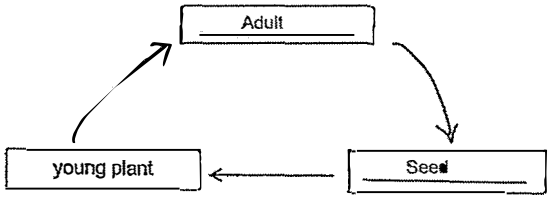
	Material	Physical Property
Part Y	Rubber	Flexibility
Part Z	Glass	Transparent

Q28)

(a) It is flexible and transparent.

(b) Circle "plastic"

(c) S is able to absorb water T is unable to absorb water.

	(d) U is waterproof, transparent and not flexible.
Q29)	(a) A → Flower, B → leaves, C → stem, D → roots (b) Part A (c) 
Q30)	(a) Stage G : larva Stage H : Pupa (b) mosquito (c) Both stage H and the egg are on a branch. (d) The adult can fly but stage G cannot fly.
Q31)	(a) (b) C, A, B (c) Lower magnet C to the tray of magnetic beads
Q32)	(a) Object 1 : Magnet Object 2 : magnetic material (b) Like poles repel and unlike poles attract (c) iron (d) Magnet K : South Magnet L : North
Q33)	(a) (b) Stroke the iron nail 30 times (c) B, D, A, C (d) Ceramic

Beads	Box A	Box B
Glass		✓
Steel	✓	
Aluminium		✓
Cotton		✓