METHODIST GIRLS' SCHOOL

Founded in 1887

END-OF-YEAR EXAMINATION 2025
PRIMARY 5
SCIENCE

BOOKLET A

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

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

Name: _____( )

Class: Primary 5._____

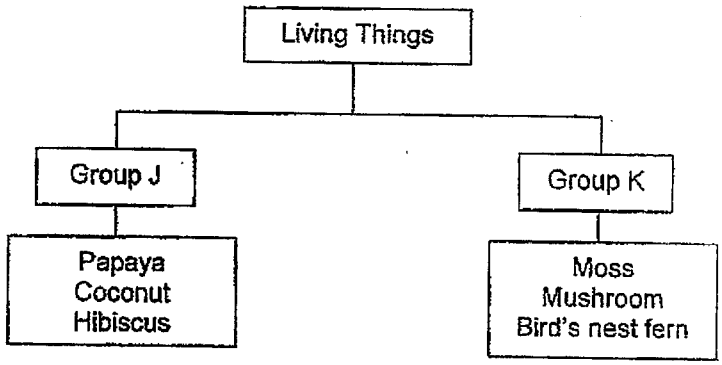
Date: 27 October 2025

This booklet consists of 20 printed pages including this page.

For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

[60 marks]

1 Study the classification chart as shown below carefully.



Which of the following headings correctly represent Groups J and K?

	Group J	Group K
(1)	Flowering plants	Non-flowering plants
(2)	Reproduce from seeds	Reproduce from spores
(3)	Fruit has a few seeds	Fruit has only one seed
(4)	Can make its own food	Cannot make its own food

2 The three animals, A, B and C, belong to three different groups of animals.

A B C

Which of the following characteristics can be used to classify them into three different groups?

(1) how they move
(2) how they breathe
(3) type of body covering
(4) method of reproduction

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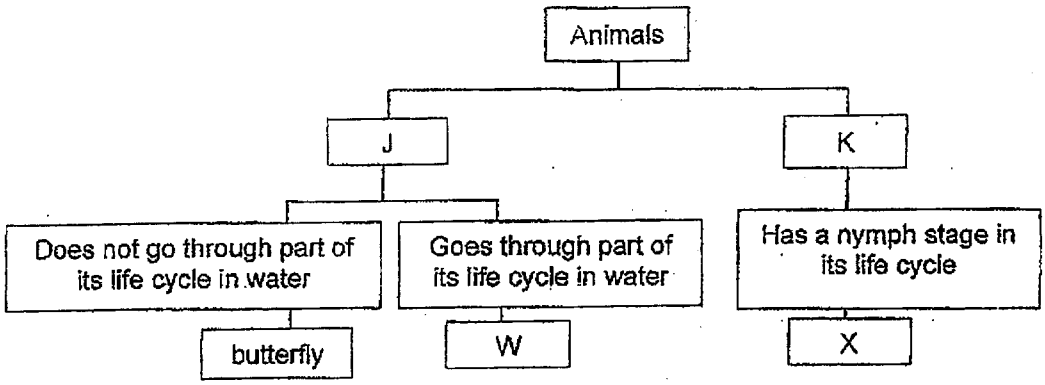
3 The classification table below shows how some animals are classified.



Which of the following best represent J, K, W and X?

	J	K	W	X
(1)	Has a 3-stage life cycle	Has a 4-stage life cycle	beetle	grasshopper
(2)	Has a 4-stage life cycle	Has a 3-stage life cycle	mosquito	cockroach
(3)	Young resembles the adult	Young does not resemble the adult	beetle	cockroach
(4)	Young does not resemble the adult	Young resembles the adult	mosquito	beetle

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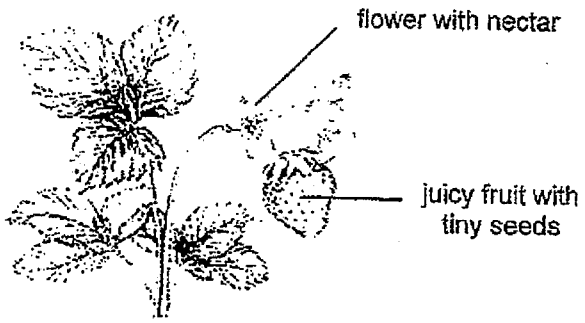
4 Study the diagram below.



Which of the following statements are correct?

A The flower is pollinated by wind.
B Tiny seeds are dispersed by wind.
C The plant is a source of food for some insects.
D Animals eat the fruits and pass out the seeds in the droppings.

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

5 Austin wrote some statements about humans, fish and plants.

A The lungs and gills are part of the circulatory system.
B Oxygen and carbon dioxide are carried by the blood in humans and fish.
C Gaseous exchange takes place at the nose, gills and stomata (tiny openings in leaves)

Which of his statement(s) is/are correct?

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

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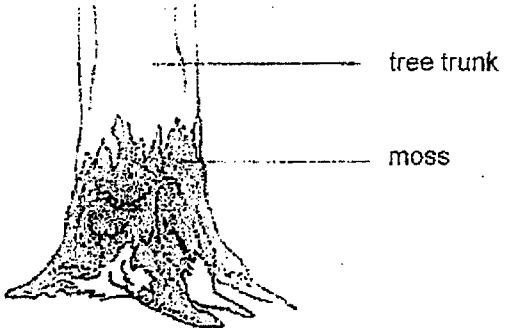
6 Moss is a tiny non-flowering plant. It grows well at the bottom of tree trunks in forests.



Suresh wants to grow moss in his garden. How can he help the moss grow well?

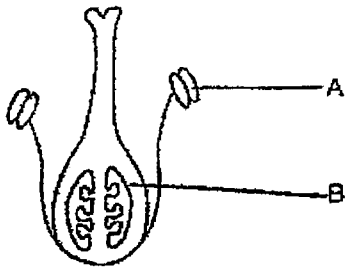
(1) Water the moss regularly.

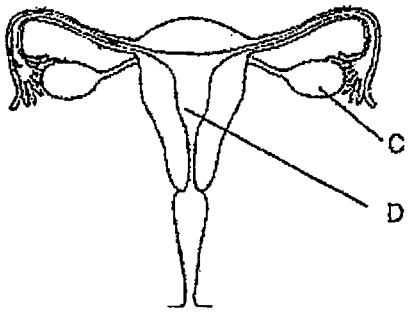
(2) Attract bees to his garden.

(3) Grow the moss under direct sun.

(4) Attract animals to help disperse fruits.

7 Study the diagrams below.





Which of the following matches the function of the different parts correctly?

	Produce female reproductive cells	Produce male reproductive cells
(1)	B & C	A
(2)	B & D	A
(3)	A & C	B
(4)	A & D	B

(Go on to the next page)

8 Jane wants to investigate whether fertiliser Z will help chili plant to grow faster. She has only the items below.

Item	Quantity
Chili plant seeds	10
Fertiliser Z	40 g

She used two identical clear containers with same amount of wet soil for her investigation. Which of the following shows the correct experimental and control set-up?

	Experimental set-up	Control set-up
(1)	5 seeds & 30 g fertiliser Z	10 g of fertilisers Z
(2)	10 g of fertilisers Z	5 seeds & 30 g fertiliser Z
(3)	5 seeds & 20 g of fertiliser Z	5 seeds & 40 g of fertiliser Z
(4)	5 seeds & 40 g of fertiliser Z	5 seeds

9 The table shows the types of gases in air that are taken in and given out by a human.

Gas	Air taken in (%)	Air given out (%)
nitrogen	78	78
oxygen	21	16
carbon dioxide	less than 1	4
water vapour	less than 1	2

Based on the information given, which statement is correct?

(1) Only 3 types of gases enter the respiratory system.

(2) All the oxygen that enters the lungs is absorbed into the blood.

(3) Water vapour is always the least in the air we breathe in and out.

(4) There is more moisture in the air we breathe in than we breathe out.

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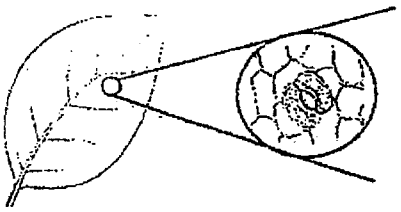
10 The following diagram shows a tiny opening of a leaf which can open and close.



What is likely to happen when the tiny openings become larger?

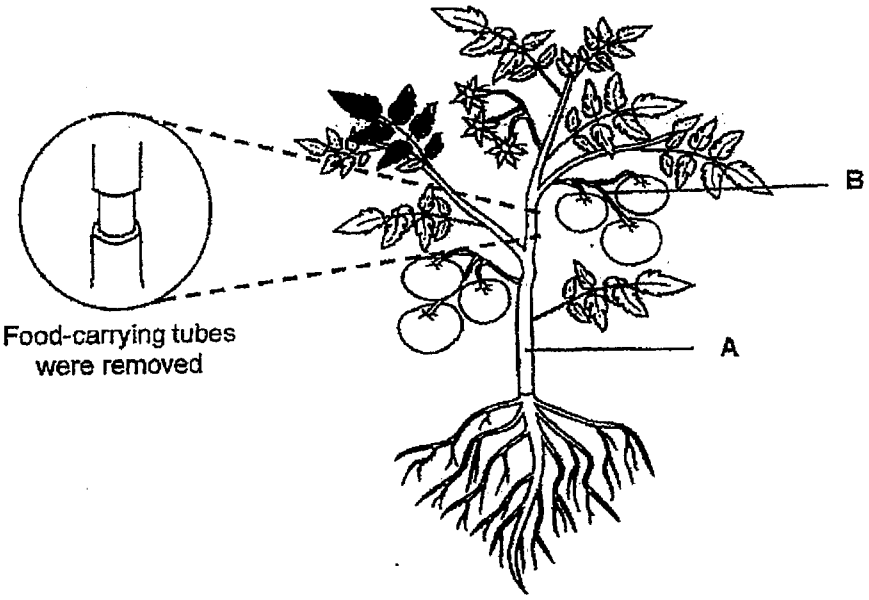
(1) Take in more water

(2) Reduce water loss for the plant

(3) Trap more light to make food faster

(4) Increase in the rate of gaseous exchange

11 Mr Chin removed an outer ring from the stem as shown below so that he could get bigger fruits. The food-carrying tubes were removed while the water-carrying tubes remained in the stem.



What is / are the substance(s) found at A and B?

	Substance(s) found at A	Substance(s) found at B
(1)	sugar only	water only
(2)	water only	sugar and water
(3)	sugar and water	water only
(4)	sugar and water	sugar and water

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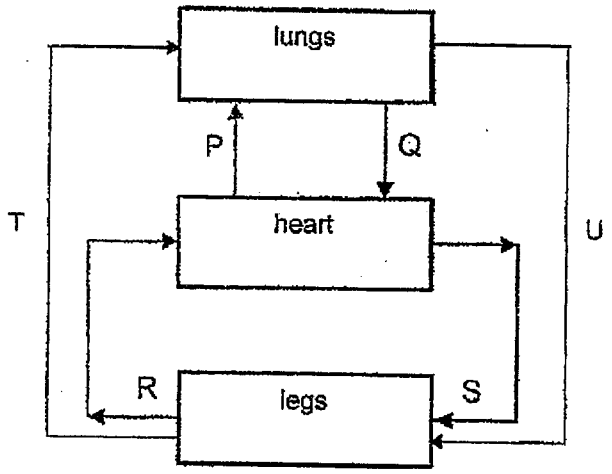
Use the information below to answer Questions **12** and **13**.

12 The diagram shows the direction of blood flow in certain parts of the body but some arrows are incorrect.



Identify the correct sequence of blood flow as we breathe in air.

(1) Q → S → T → Q
(2) U → R → P → Q
(3) Q → S → R → P
(4) U → T → Q → P

13 Which blood vessels contain less oxygen?

(1) Q and S only
(2) Q and U only
(3) T and P only
(4) P and R only

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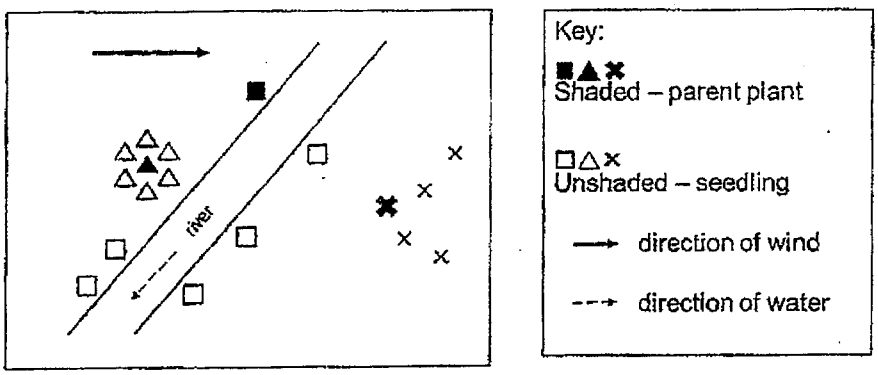
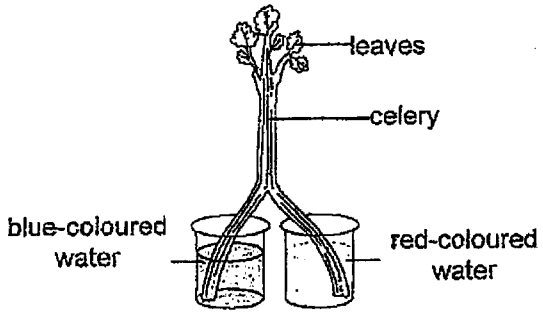
14 The map below shows the seed dispersal pattern of three types of plants, □, △ and ×, growing in an area.



Based on the map, which one of the following describes the characteristics of the fruit or seed of the plants?

	Plant □	Plant △	Plant ×
(1)	fibrous husk	hooks	pod-like structure
(2)	pod-like structure	fibrous husk	wing-like structure
(3)	fibrous husk	pod-like structure	wing-like structure
(4)	wing-like structure	pod-like structure	juicy flesh

15 Joshua cut the stalk of a celery into two equal parts and placed them into two containers with equal amount of water but different coloured dye added as shown.



He observed that the leaves changed colour. Which of the following is the likely reason?

(1) Leaves trapped light and reflected light.

(2) There was no water-carrying tubes in the leaves.

(3) Coloured water was transported up to turn the leaves to purple.

(4) Coloured water was transported to the leaves through separate water-carrying tubes.

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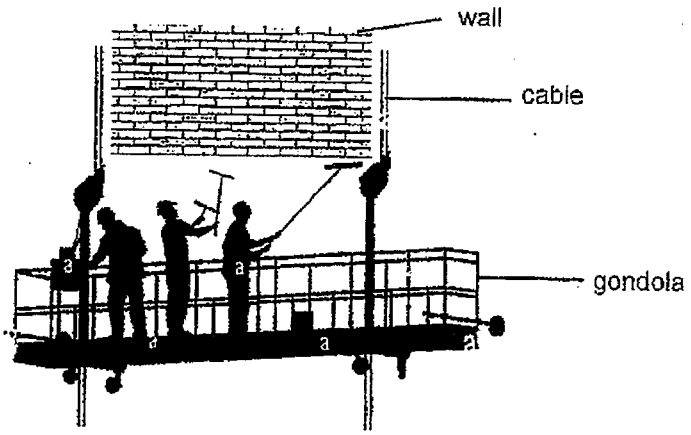
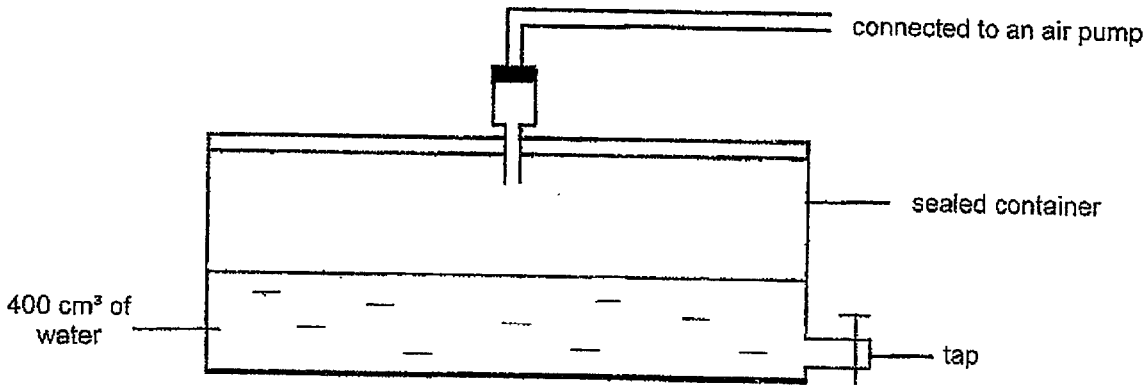
16 Cables are used to hang gondolas from the top of buildings, so that workers can paint the external walls of the buildings.



Which property of the cables help to support the weight of the gondola?

(1) strength
(2) flexibility
(3) waterproof
(4) conductor of electricity

17 Danny conducted an investigation using the set-up shown. The sealed container has a capacity of 1000 cm^3. At the start, there was 400 cm^3 of water in the container.



Danny turned on the tap to release 200 cm^3 of water from the container. Then, he pumped in 300 cm^3 of air into the container.
What was the final volume of water and air in the air-tight container?

	Volume of water (cm^3)	Volume of air (cm^3)
(1)	400	600
(2)	600	900
(3)	200	800
(4)	200	900

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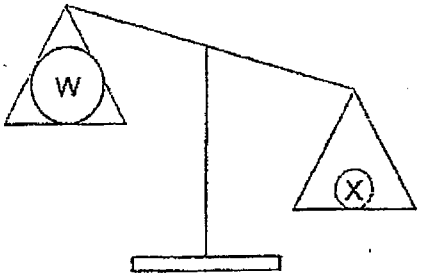
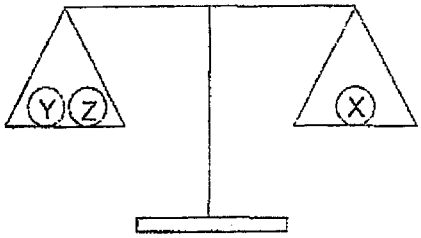
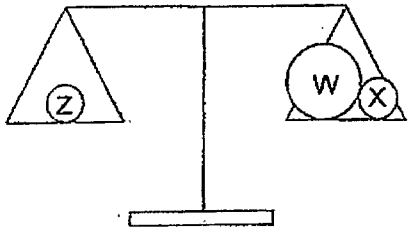
18 Objects W, X, Y and Z are placed on similar balances as shown. Objects W, X, Y and Z have different mass.



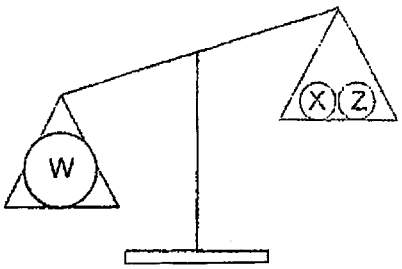


Which of the following observations is correct?

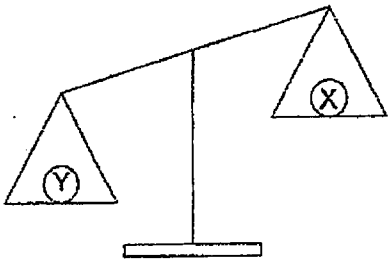
(1)



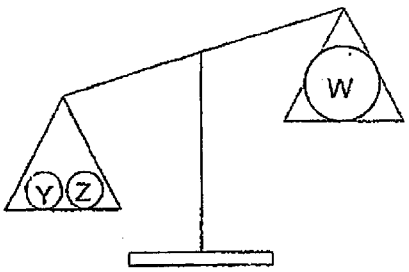
(2)



(3)



(4)



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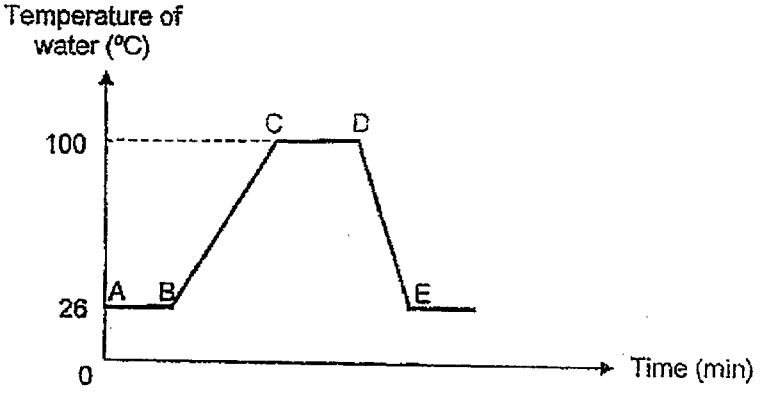
19 Gopal placed a beaker of water on a heating plate. He turned on the heating plate at point B and switched it off at point D. He measured the temperature of water from points A to E and drew a line graph to show the changes in the temperature of water over time.



Based on Gopal's results, which of the following statements are true?

A Evaporation took place at BC only.

B There was heat gain at BC and CD.

C At CD, water can be found in both liquid and gaseous states.

D The volume of water in the beaker at point A is less than at point E.

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

20 The table below shows the melting and boiling points of substances P, Q and R.

Substance	melting point (°C)	boiling point (°C)
P	39	80
Q	15	63
R	46	107

Which of the following correctly describes the state of each substance at 40 °C?

	Substance P	Substance Q	Substance R
(1)	has a definite volume	has a definite volume	can be compressed
(2)	has a definite shape	has a definite shape	cannot be compressed
(3)	cannot be compressed	has a definite volume	has a definite shape
(4)	cannot be compressed	has a definite shape	has a definite volume

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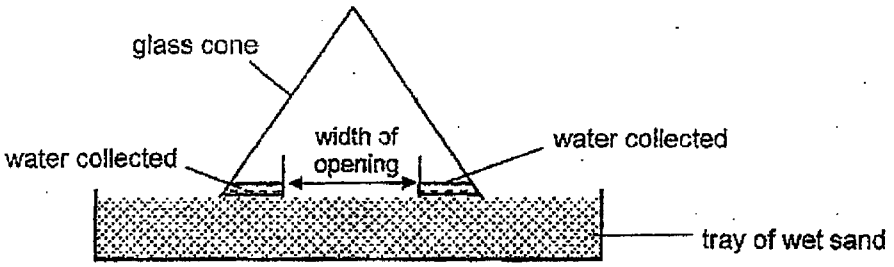
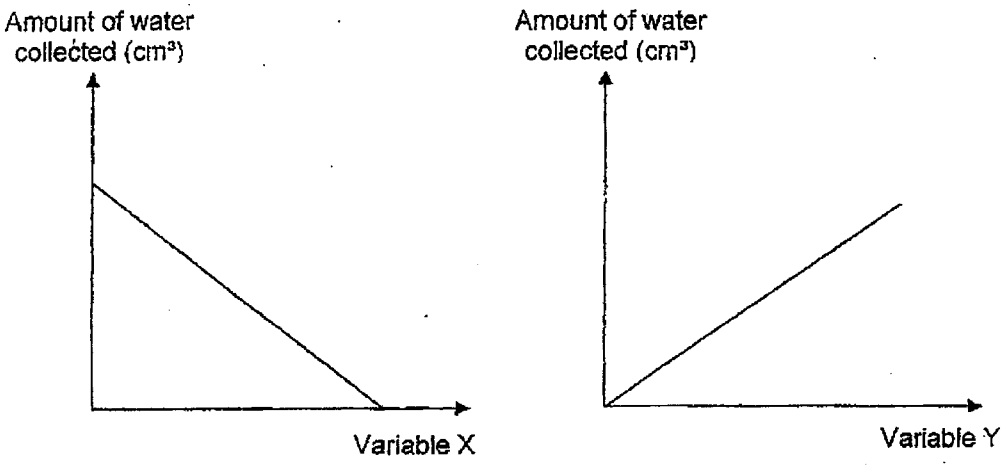
21 Joel left the set-up below under the Sun. The width of the opening at the base of the glass cone is adjustable. After a few hours, he measured the amount of water collected at the base of the glass cone.



He repeated the experiment a few times. Each time, he changed one variable and kept the other variables the same. The results are shown in the graphs below.



Which of the following correctly identified variables X and Y?

	Variable X	Variable Y
(1)	temperature of cone	width of opening of cone
(2)	width of opening of cone	temperature of cone
(3)	amount of wind	temperature of cone
(4)	amount of wet sand	width of opening of cone

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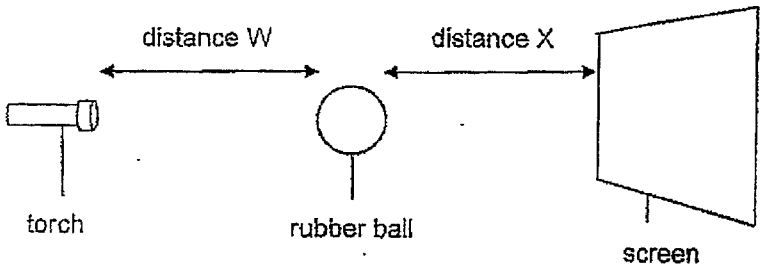
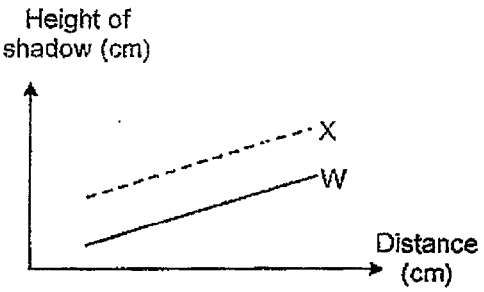
22 Weiming placed a rubber ball between a torch and a screen as shown in the diagram below.

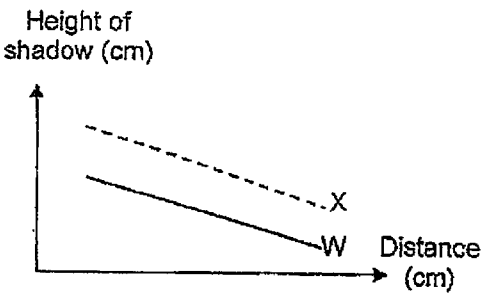


Which of the following graphs correctly shows how changes in distances W and X affect the height of the shadow?

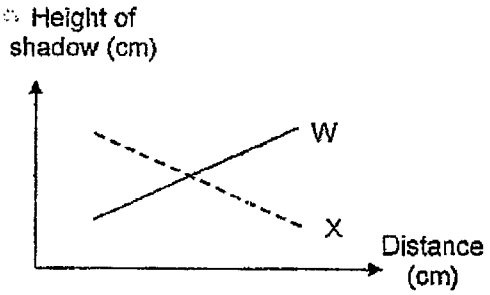
(1)



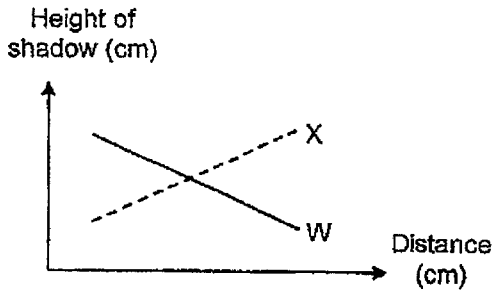
(2)



(3)



(4)



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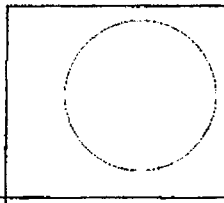
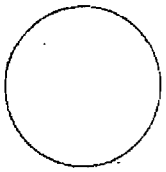
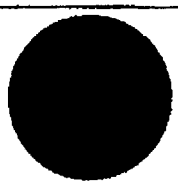
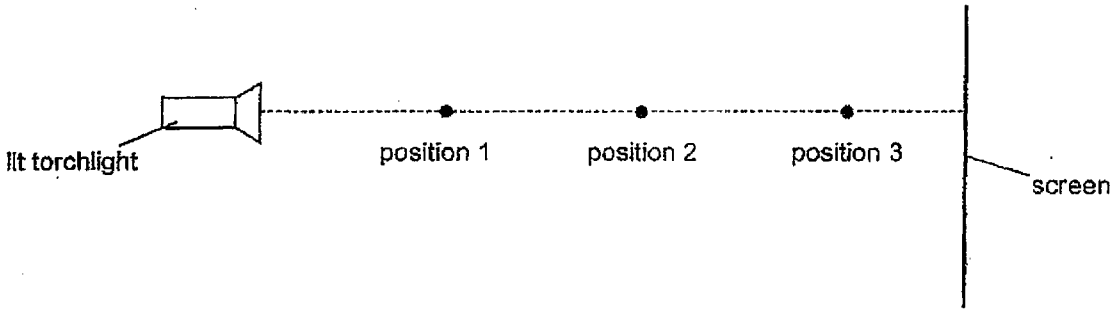
23 Jennifer cut out three circles of the same size and thickness from different materials A, B and C. The properties of the materials are shown below.

			
Material	A	B	C
Property	allows some light to pass through	allows most light to pass through	does not allow light to pass through

She placed the circles at different positions between a torchlight and a screen in the set-up below. Next, she repeated the experiment and changed the positions of the circles.



Which of the following are possible shadows that Jennifer can observe on the screen?

(1) W and Y only
(2) X and Z only
(3) W, X and Y only
(4) X, Y and Z only

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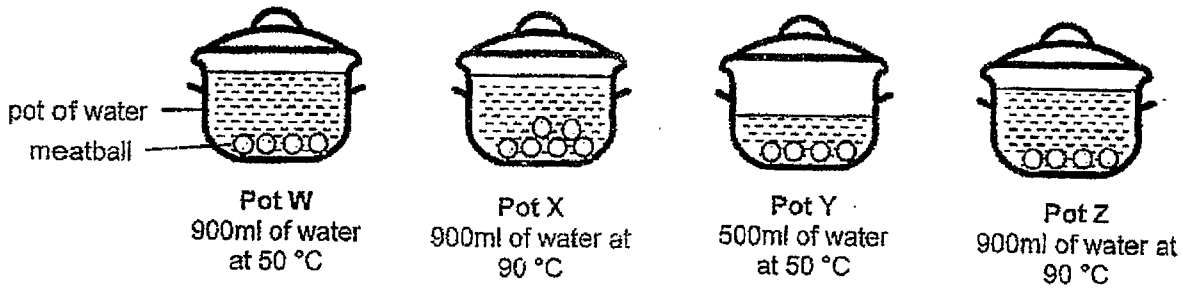
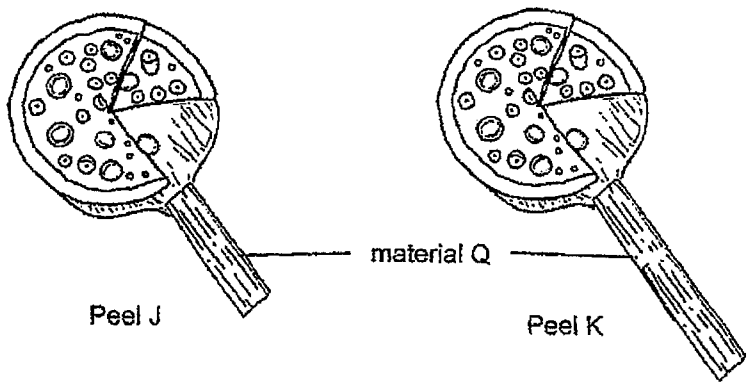
24 Betsy prepared three pots of water and added four similar meatballs to each pot. A meatball sinks when it is uncooked but floats once it is fully cooked.



Which two pots should she choose if she wants to find out if the amount of heat affects the time taken for the meatballs to cook?

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

25 Chef Remy transfers pizzas in and out of an oven using the two pizza peels, J and K, made of the same material Q shown below.



When removing a cooked pizza from the hot oven, Chef Remy uses Peel J and his hand feels hot faster. When he uses Peel K, he is able to remove a cooked pizza with less discomfort. Which of the following best explains why?

(1) Peel K does not conduct heat.

(2) Peel J is a better conductor of heat than Peel K.

(3) Chef Remy's hand loses heat faster to Peel K.

(4) Distance from heat source is further for Peel K.

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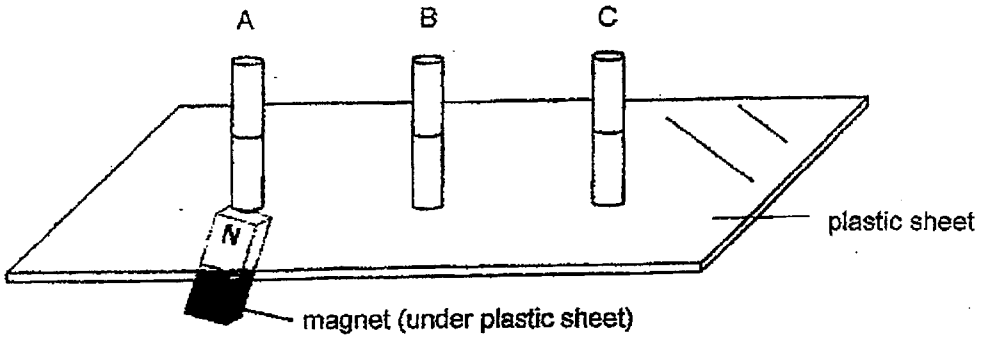
26 Meena placed three metal rods, A, B and C on a clear plastic sheet as shown in the diagram below. The plastic sheet allows magnetism to pass through. She placed a magnet under the plastic sheet and brought it close to rod A before she let go of the magnet.



She repeated her experiment with rods B and C and recorded her observations in the table below.

Rod	Observation
A	Rod A remained upright and the magnet fell to the ground.
B	Rod B remained upright and the magnet stuck to the bottom of the plastic sheet.
C	Rod C toppled over and the magnet fell to the ground.

Which of the following correctly identifies metal rods A, B and C?

	Rod A	Rod B	Rod C
(1)	N S magnet	S N magnet	copper rod
(2)	S N magnet	copper rod	S N magnet
(3)	copper rod	N S magnet	S N magnet
(4)	copper rod	S N magnet	N S magnet

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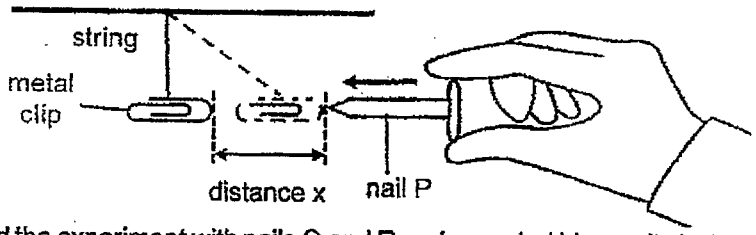
27 Ali conducted an experiment with three magnetised steel nails, P, Q and R. Each steel nail was stroked by a magnet for different number of times. He brought nail P towards a metal clip until it was attracted to the nail, and measured the distance x, as shown below.



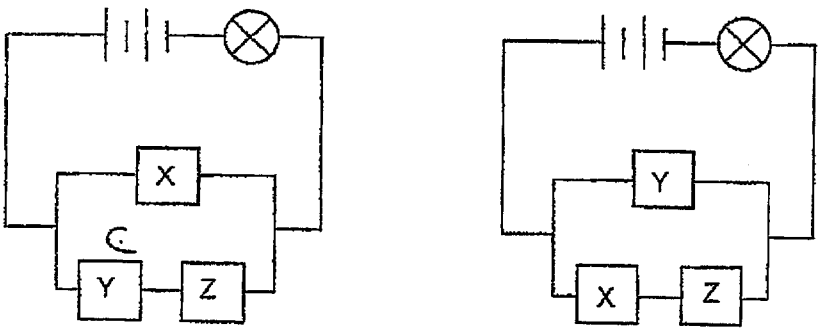
He repeated the experiment with nails Q and R and recorded his results in the table below.

Nail	distance x (cm)
P	4
Q	1
R	7

Which of the following shows the most likely number of times each steel nail was stroked?

	Nail P	Nail Q	Nail R
(1)	30	10	50
(2)	50	10	30
(3)	10	30	50
(4)	50	50	30

28 Mingli used three different materials, X, Y and Z, to set up two circuits, P and Q, as shown below.



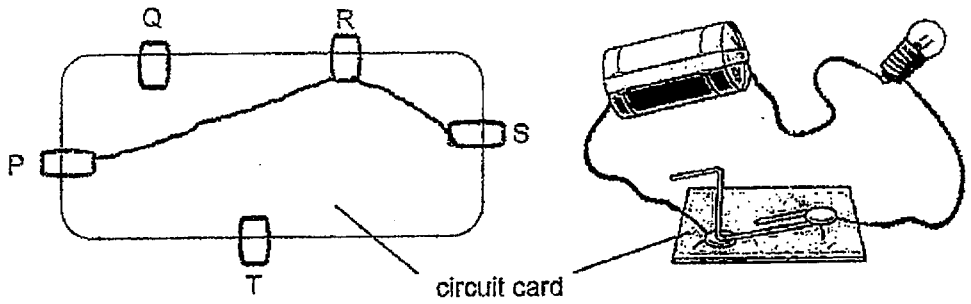
Circuit P **Circuit Q**

She observed that the bulb in Circuit P did not light up but the bulb in Circuit Q lighted up. Which materials, X, Y and/or Z, are conductors of electricity?

(1) X only
(2) Y only
(3) Y and Z only
(4) X, Y and Z

(Go on to the next page)

29 The diagrams below show a circuit tester and how wires in a circuit card are connected.



Which one of the following tables below shows the correct observations when the circuit card is tested with the circuit tester?

(1)

Clips	Did the bulb light up?
P and Q	no
R and S	yes
S and T	yes

(2)

Clips	Did the bulb light up?
Q and R	no
Q and S	yes
P and T	no

(3)

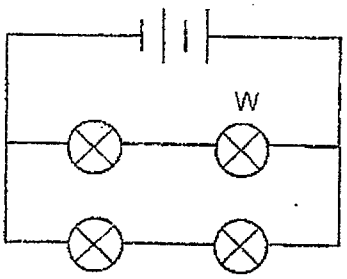
Clips	Did the bulb light up?
P and T	no
Q and S	no
Q and T	yes

(4)

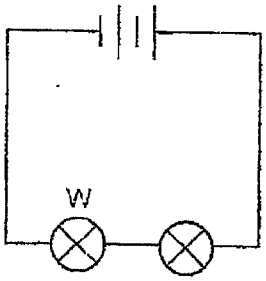
Clips	Did the bulb light up?
Q and S	no
R and T	no
P and S	yes

(Go on to the next page)

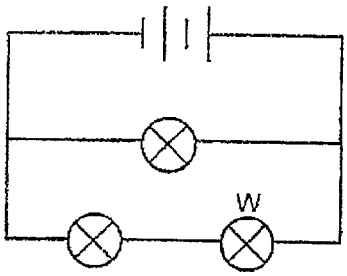
30 Jerry set up four circuits, A, B, C and D, using identical batteries and bulbs in working condition as shown below.



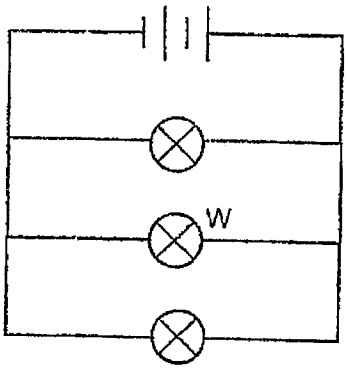
Circuit A



Circuit B



Circuit C



Circuit D

In which circuits will bulb W have the same brightness?

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

End of Booklet A

METHODIST GIRLS' SCHOOL

Founded in 1887

END-OF-YEAR EXAMINATION 2025
PRIMARY 5
SCIENCE

BOOKLET B

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

Name: _____ ( )

Class: Primary 5._____

Date : 27 October 2025

Booklet A	60
Booklet B	40
Total	100
Parent's Signature	

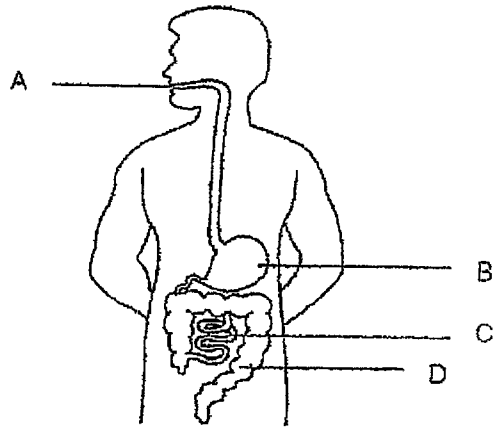
This booklet consists of 13 printed pages including this page.

For questions 31 to 40, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[40 marks]

31 **(a)** State what digestion is. [1]

The diagram shows the human digestive system.



(b) Explain how chewing of food helps to increase the rate of digestion. [1]

(c) The amount of undigested food decreases as it passes through each of the organs, B, C and D. Do you agree? Explain your answer. [2]

From B to C:

From C to D:

4

(Go on to the next page)

32 (a) Draw the life cycle of a flowering plant, using only words and arrows. [1]

Michael investigated the effect of light on the germination of plant P. He placed three seeds in each of two identical containers, R and S, and watered them daily. R was placed in a well-lit room while S was placed in a dark room. Both rooms were kept at the same temperature.

He observed the following on Day 7.

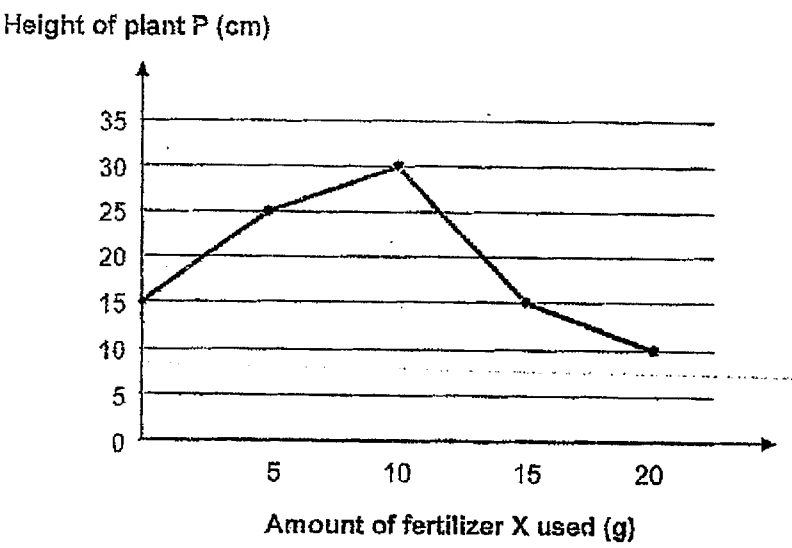
R (well-lit room) S (dark room)

(b) What could Michael conclude from his observation? [1]

(c) Michael later also observed that seed leaves became smaller and even dropped off. Give a reason. [1]

(Go on to the next page)

The line graph showed the effect of fertiliser X on the height of plant P.

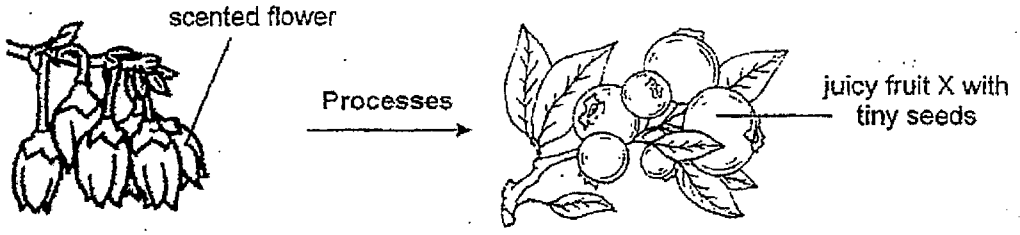


(d) Based on above results, what could Michael conclude about the effectiveness of fertiliser X on the growth of plant P? [2]

5

(Go on to the next page)

33 The diagrams below show parts of plant X.

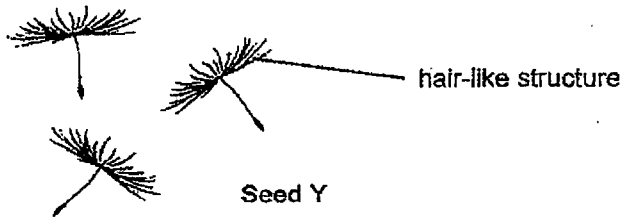


(a) Name two processes that allow plant X to develop its fruits and seeds from flower. [1]

(b) State the part of the flower that the fruit and seed are developed from. [1]

	Fruit	Seeds
Part of the flower		

(c) (i) During windy season, which seed, X or Y, would be carried further away from its parent plant? Explain in terms of the seed's characteristics. [1]



(ii) Explain why it is advantageous for seeds to be dispersed further away from its parent plant. [2]

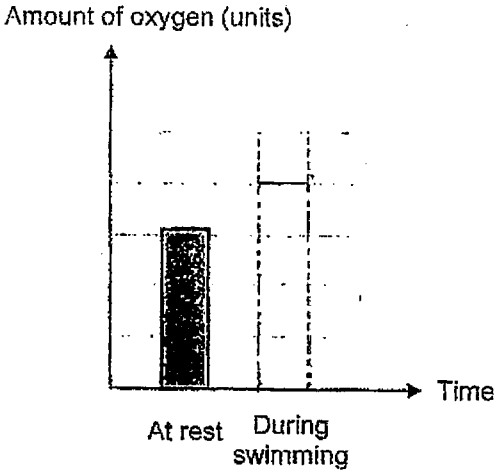
5

(Go on to the next page)

34 John went for a swim in the evening. He realised that his heart rate changed.

(a) How did John's heart rate change? Explain your answer. [2]

(b) Complete the bar graph below to show the amount of oxygen in the blood transported to his leg muscles when he is swimming. [1]



3

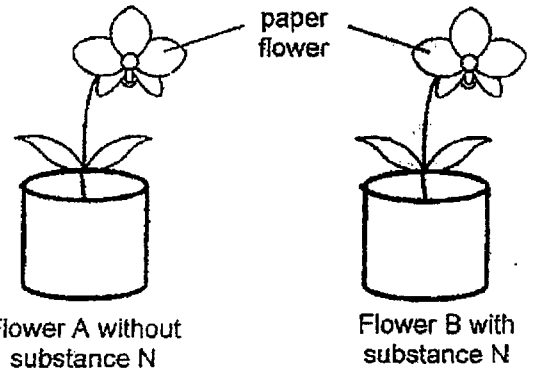
(Go on to the next page)

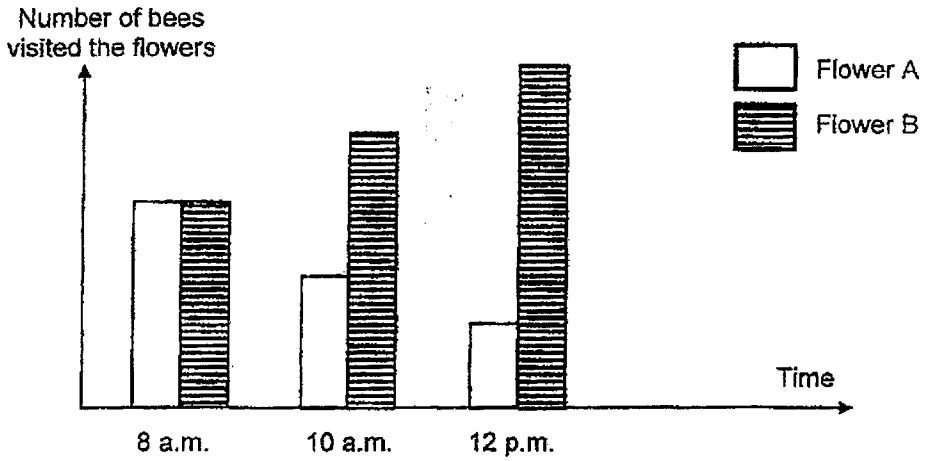
35 Bee has larva and pupa stages.

(a) State two ways a larva is different from a pupa. [1]

Bees are commonly found near flowering plants. Debby wanted to investigate how substance N affected the number of times the bees visited the flowers.

Study her two set-ups below.



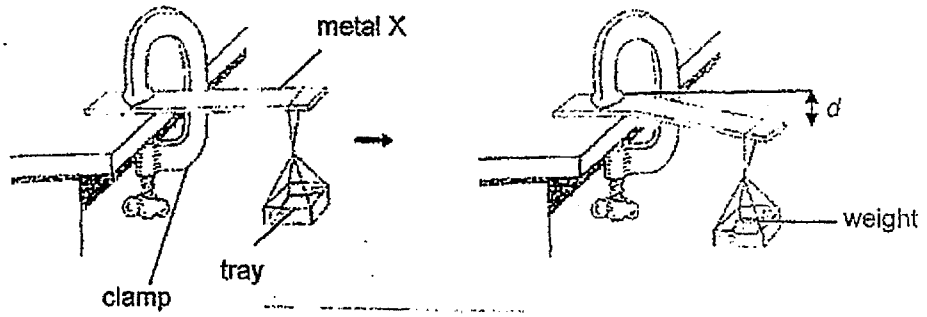


(b) Describe how substance N affected the number of times the bees visited both flowers from 8 a.m. to 12 p.m. [2]

3

(Go on to the next page)

36 Suresh conducted an experiment to test the property of a material. A strip of metal X was clamped at the edge of a table and a tray was hung at the end of the strip. Different amount of weights were then placed in the tray and the distance bent by the strip, *d*, was measured.



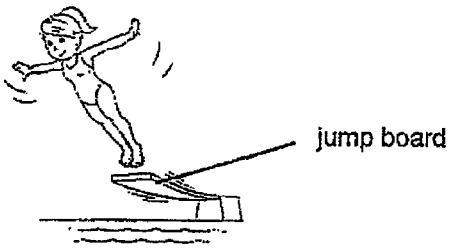
He repeated the experiment with metal Y of the same length and thickness and recorded his results in the table below.

Mass of weight (g)	Distance *d* (cm)	
	Metal X	Metal Y
20	2.0	1.0
30	3.5	2.0
40	5.0	3.0
50	6.5	4.0

(a) State the property of the metals that Suresh was investigating. [1]

(b) Explain how keeping the thickness of each metal strip the same will ensure a fair test. [1]

The picture below shows a jump board which allows Suresh's sister, Riana, to jump many times as high as she could before jumping into the pool.

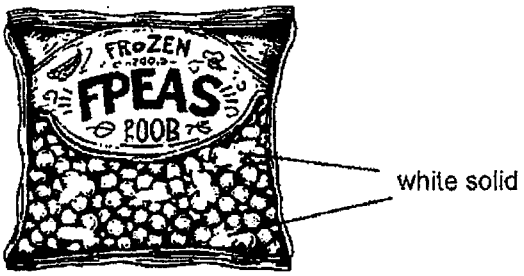


(c) Based on Suresh's results, which metal, X or Y, is more suitable to be used to make the jump board? Explain your answer. [1]

3

37(a) State what freezing is. [1]

Mr Thomas took a packet of frozen vegetables from his freezer and placed it on a table. After some time, he noticed thin layers of white solid forming on the surface of the packet of vegetables.



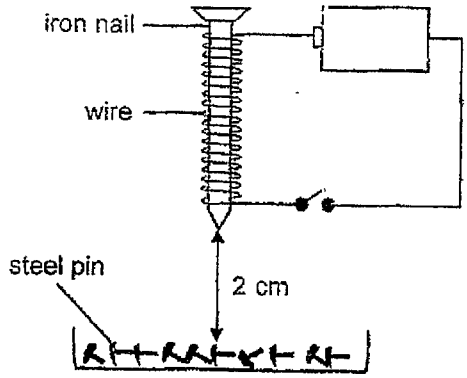
(b) Explain how the white solid was formed. [2]

(c) After some time, the layers of white solid disappeared and the packet was dry. Explain why.[1]

4

(Go on to the next page)

38 Jon set up an experiment connecting an iron nail to an electric circuit and placed it 2 cm above a tray of steel pins as shown in the diagram below. After he closed the switch, he counted the number of steel pins attracted.



He repeated the experiment with different lengths of iron nail and recorded the results in the table below.

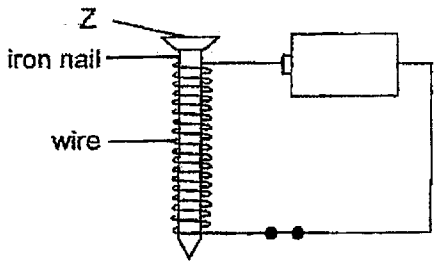
Length of iron nail (cm)	Number of coils of wire round the iron nail	Number of steel pins attracted
3	18	3
4	18	4
5	18	3
6	18	4

(a) Based on the results of Jon's experiment, state the relationship between the length of iron nail and the magnetic strength of the electromagnet. [1]

(b) Without changing the distance between the iron nail and tray of steel pins, state two ways Jon could increase the number of steel pins attracted by the electromagnet. [1]

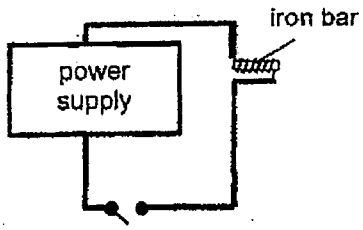
(Go on to the next page)

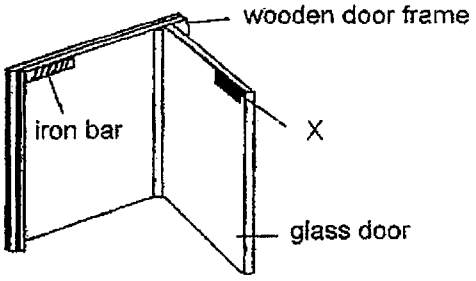
(c)(i) Jon's friend, Susan, labelled one end of the electromagnet as Z. She told him that Z is the south pole.



Describe how Susan could prove that Z is the south pole of the electromagnet. [2]

(ii) Jon installed a door-lock system as shown below. When the switch is closed, part X moves towards the iron bar found under the wooden door frame. This allows the glass door to swing towards the door frame and the door is locked.



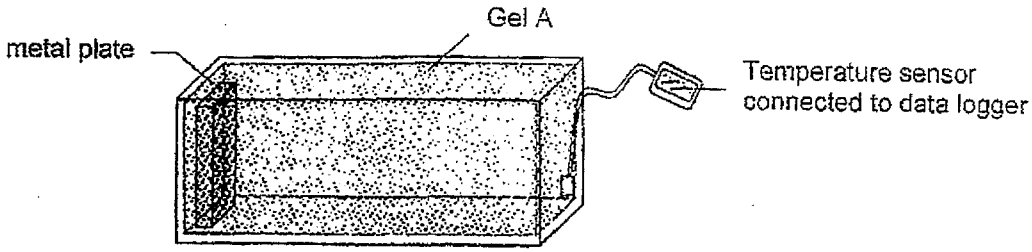


State a property of part X that allows the door-lock system to work as described. Explain your answer. [1]

5

(Go on to the next page)

39 Mike created a set-up using a metal plate and a container of Gel A as shown in the diagram below.



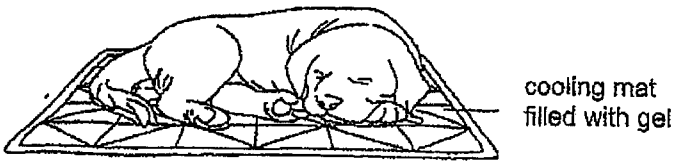
He heated the metal plate to 90 °C and placed it at one end of the container. After 20 minutes, he measured the temperature of Gel A at the other end of the container using a temperature sensor. He repeated the experiment twice using Gel B and C respectively. His data is recorded in the table below.

Gel	Temperature at the start of experiment (°C)	Temperature after 20 minutes (°C)
A	23	50
B	23	85
C	23	60

(a) Besides keeping the starting temperature of the gel the same, what else must Mike ensure the same for the gel? [1]

(b) State a property of heat that is demonstrated in Mike's experiment. [1]

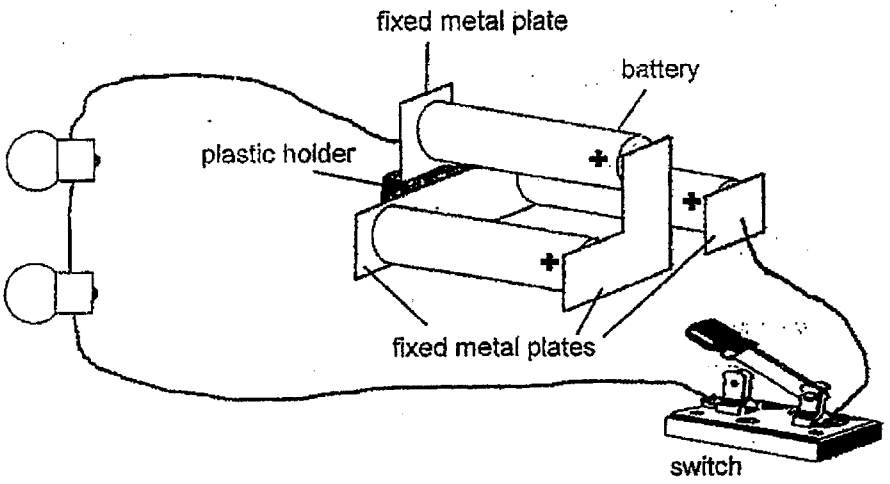
On a hot day, to help his pet dog cool down faster after a walk, Mike placed a cooling mat for it to rest on as shown below.



(c) Based on the results of Mike's experiment, which gel, A, B or C, should the mat be filled with? Explain your answer. [2]

(Go on to the next page)

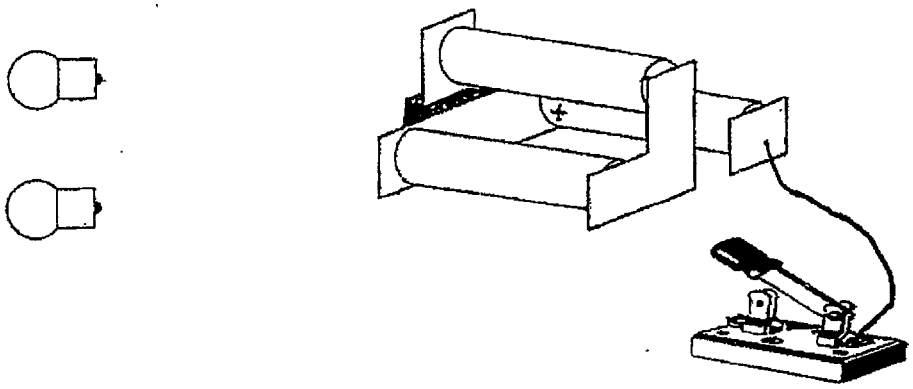
40 Yulin sets up an electric circuit using identical bulbs and batteries as shown below. All the circuit components are working.



(a) When she closed the switch, the bulbs did not light up.

Use a pencil to complete the circuit below:

- correct the mistake(s) in Yulin's circuit
- use '+' to mark the positive terminal of the remaining two batteries
- connect the bulbs such that if one blows, the other will remain lit. [3]



(b) State a disadvantage of connecting the bulbs in the arrangement in (a). [1]

_____

_____

4

End of Paper

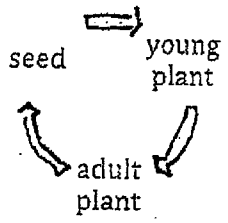
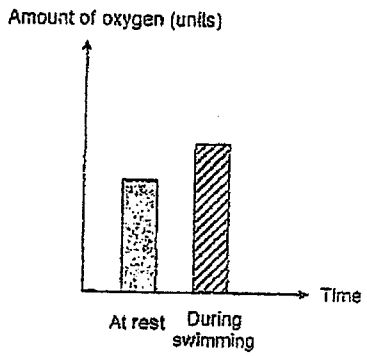
YEAR : 2025
LEVEL : PRIMARY 5
SCHOOL : METHODIST GIRLS' SCHOOL
SUBJECT : SCIENCE
TERM : END OF YEAR EXAMINATION

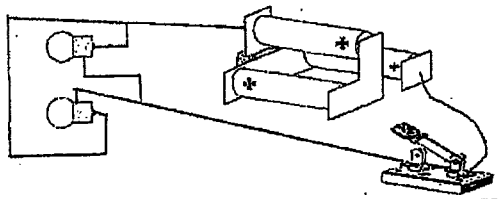
BOOKLET A

Q1	2	Q2	3	Q3	2	Q4	4	Q5	2
Q6	1	Q7	1	Q8	4	Q9	3	Q10	4
Q11	4	Q12	3	Q13	4	Q14	3	Q15	4
Q16	1	Q17	3	Q18	4	Q19	2	Q20	3
Q21	1	Q22	4	Q23	1	Q24	4	Q25	4
Q26	3	Q27	1	Q28	2	Q29	4	Q30	3

Methodist Girls' School (Primary)
P5 Science EOY Examination 2025
Suggested Answers

Section B:

31a	Digestion is the breaking down of food into simpler/simple substances.
31b	Chewing breaks food down into smaller pieces and increases the surface area in contact with the digestive juice.
31c	From B to C: Yes, the amount of undigested food decreased because the food is further digested at C/small intestine. From C to D: No, the amount of undigested food remained the same because the digestion is completed at C/small intestine or there is no digestion at D/large intestine.
32a	
32b	Light is not required for germination.
32c	The food inside the seed leaf is used up by the seedling / young plant before its true leaf appears to make its own food.
32d	As the amount of fertilizer X used increased from 0g to 10g, the height of plant increased. As the amount of fertilizer X increased from 10g to 20g, the height of plant decreased.
33a	Pollination and Fertilisation
33b	Fruit: Ovary Seeds: Ovules
33ci	Seed Y. Seed Y is dispersed by the wind and it can stay afloat longer in the air to be dispersed further away from parent plant.
33cii	It helps reduce overcrowding and competition between parent and young plants for resources like sunlight, water, space and mineral salts.
34a	Increase. He needs more energy. His heart needs to pump blood faster to transport more oxygen and digested food to his legs and arms. At the same time, he needs to remove carbon dioxide faster away from his body.
34b	
35a	Larva eats and moults but pupa does not.

35b	Both flowers had the same number of bees visiting at 8 a.m. From 10 a.m to 12 p.m., the number of bees that visited flower B increased / A decreased.
36a	Flexibility
36b	To ensure that the thickness of each metal strip does not affect the distance/how much the metal strip bends.
36c	Metal X. For the same mass of weight, the distance bent by metal strip X was greater. Metal X is more flexible and allows the user to jump higher.
37a	Freezing is the change in state from liquid to solid at a fixed temperature.
37b	Water vapour from the surrounding air came into contact with the cooler packet of vegetables, and condensed into water droplets. The water droplets froze into the white solid.
37c	The white solid / ice melted into water which evaporated into water vapour.
38a	The length of the iron nail has no effect on / does not affect the strength of the electromagnet.
38b	Increase the number of coils of wire around the iron nail and increase the number of batteries in the circuit.
38ci	She can bring the South pole of a bar magnet to end Z of the electromagnet and observe if they repel each other.
38cii	X is magnetic. It is attracted to the magnetized iron bar / electromagnet.
39a	Amount of gel
39b	Heat flows from a hotter to a colder region.
39c	Gel B. The temperature of the gel after 20 minutes is the highest. This shows that it is the best conductor of heat. The dog will lose heat fastest to the cooling mat.
40a	
40b	It does not save/conserve electricity.

END