RED SWASTIKA SCHOOL

SCIENCE
2025 END-OF-YEAR EXAMINATION
PRIMARY 6

Name : _____ ( )

Class : Primary 6/ _____

Date : 20 August 2025

BOOKLET A

Total time for Booklets A & B: 1h 45 min

Booklet A: 28 questions (56 marks)

Note:

1. **Do not open the booklet until you are told to do so.**
2. **Read carefully the instructions given at the beginning of each part of the booklet.**
3. **Do not waste time. If the question is too difficult for you, go on to the next question.**
4. **Check your answers thoroughly and make sure you attempt every question.**
5. **In this booklet, you should have the following:**
   a. **Page 1 to Page 20**
   b. **Questions 1 to 28**

For Questions 1 to 28, choose the most suitable answer and shade its number in the OAS provided.

1 Which of the following organisms can make its own food?

(1) fern
(2) yeast
(3) mould
(4) mushroom

2 Which of the following characteristic(s) is/are found in insects, but not in other animals?

A They lay eggs.
B They have wings.
C They can live on land only.
D They have three pairs of legs.

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

3 In a class discussion, three students made statements about human reproduction.

Adib: The fertilised egg developed in the female's stomach.

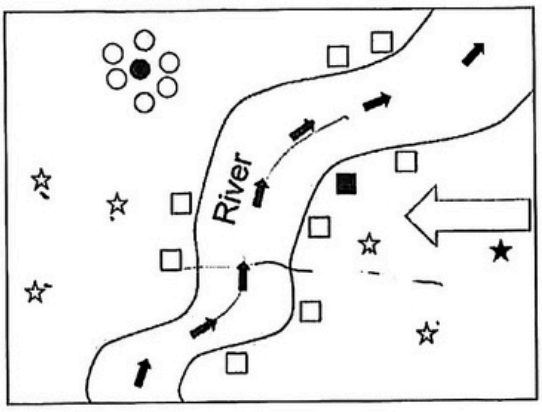
Bixia: Only a fertilised egg will develop into a young organism.

Chitra: Fertilisation takes place inside a female's body.

Which of the following students made correct statements about human reproduction?

(1) Adib and Bixia
(2) Adib and Chitra
(3) Bixia and Chitra
(4) Adib, Bixia and Chitra

4 The diagram shows dispersal pattern of three plants.



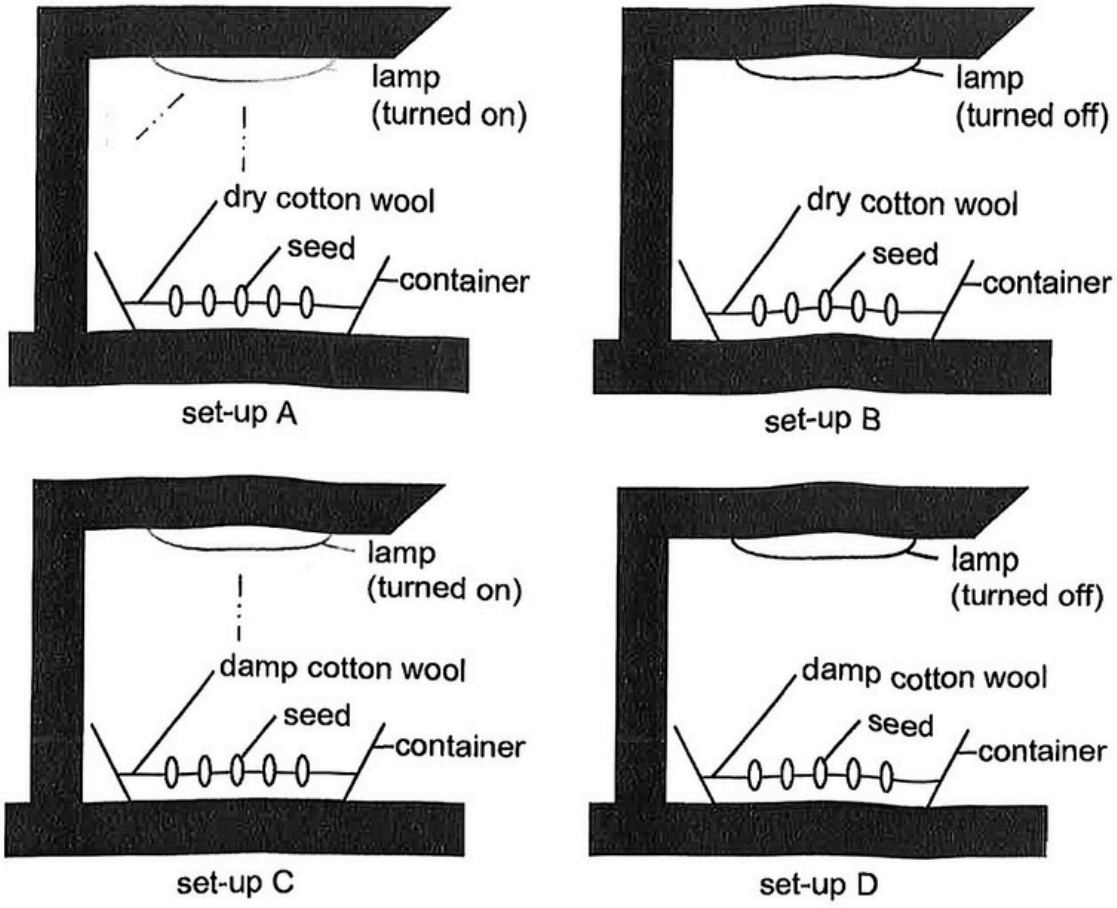
Key	
⇦	wind direction
↑	water direction
★ ● ■	Parent Plant
☆ ○ □	Seedling

Which of the following shows the most likely dispersal method for each plant?

	★	●	■
(1)	wind	splitting	animal
(2)	splitting	animal	water
(3)	wind	water	animal
(4)	wind	splitting	water

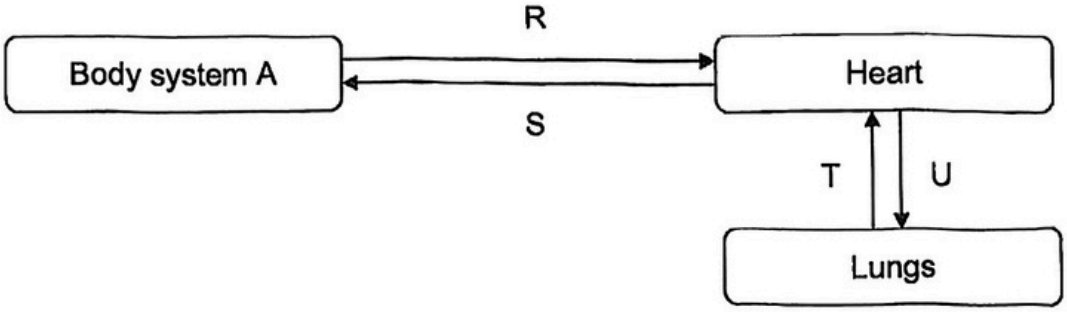
5 Lemuel wants to investigate if the presence of light will affect germination. He placed two identical containers in a dark room for his investigation.

Which two set-ups should he use?



	Experimental set-up	Control set-up
(1)	A	B
(2)	A	D
(3)	C	B
(4)	C	D

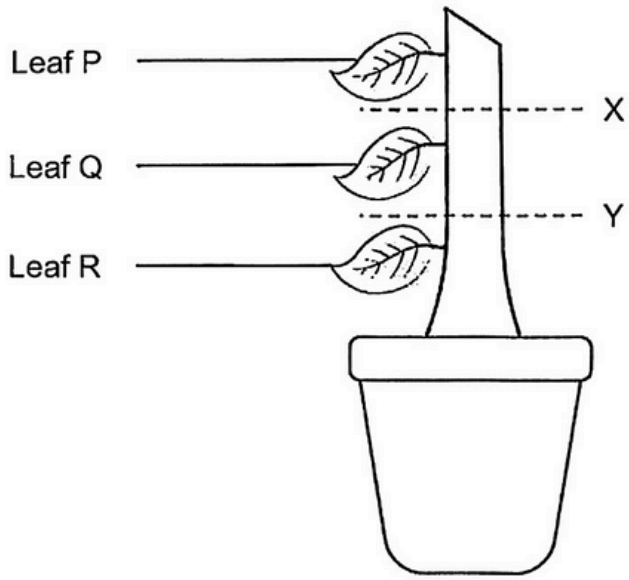
6 The diagram below shows the direction of blood flow in a human body. R, S, T and U are the blood vessels. Blood flowing through R is rich in digested food.



Which two arrows represent blood rich in oxygen?

(1) . R and S
(2) R and U
(3) T and S
(4) T and U

7 Two rings were cut and removed from the stem of a plant at parts X and Y as shown below. The plant was placed near an open window and watered daily. After a week, only leaves P and Q turned brown and withered.



The table below shows the possible type(s) of tube(s) removed at parts X and Y.

	Type of tubes removed	
	Part X	**Part Y**
(A)	food-carrying and water-carrying	food-carrying and water-carrying
(B)	food-carrying	food-carrying and water-carrying
(C)	food-carrying and water-carrying	food-carrying
(D)	food-carrying	food-carrying

Which of the following could lead to leaves P and Q turning brown and withered?

(1) A only

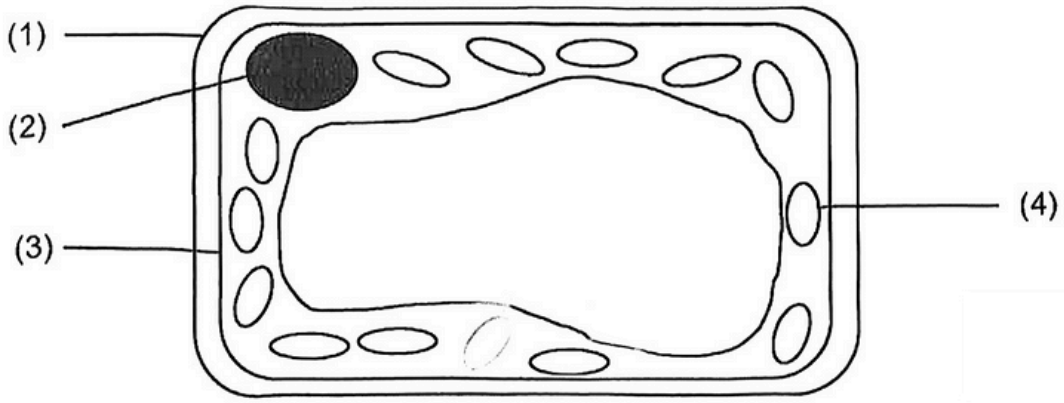
(2) A and B only

(3) C and D only

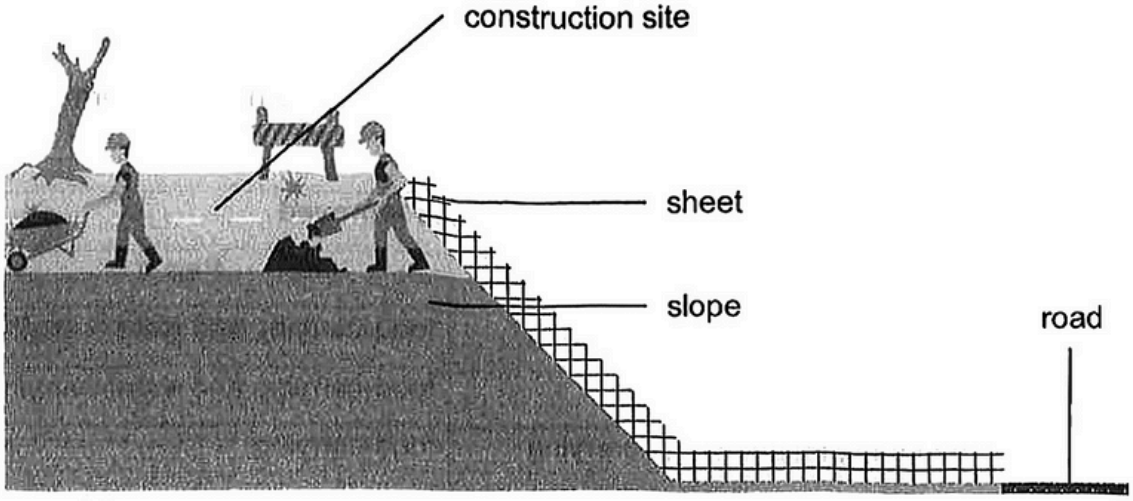
(4) B, C and D only

8 The diagram shows a leaf cell with parts labelled 1 to 4.

Which part supports and gives the leaf cell its shape?



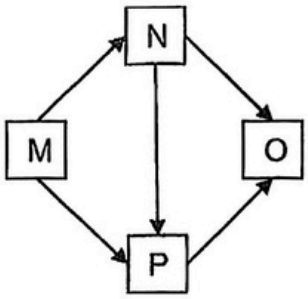
9 Trees and other plants were removed from a part of the slope at a construction site. A sheet was then spread over the slope as shown.



What is the purpose of the sheet?

(1) It keeps the soil warm for plant regrowth.
(2) It protects the soil from drying out in the heat.
(3) It provides shelter for small animals living on the slope.
(4) It prevents rainwater from washing soil down the slope onto the road.

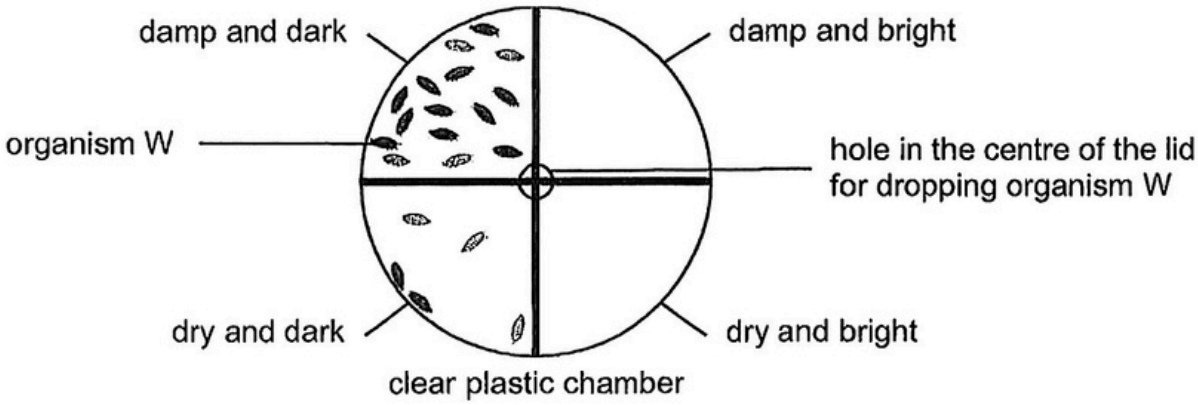
10 Study the food web below.



Which of the following is correct?

(1) P preys on M and N.
(2) O is the only predator.
(3) M is the only food producer.
(4) N is an animal-and-plant eater.

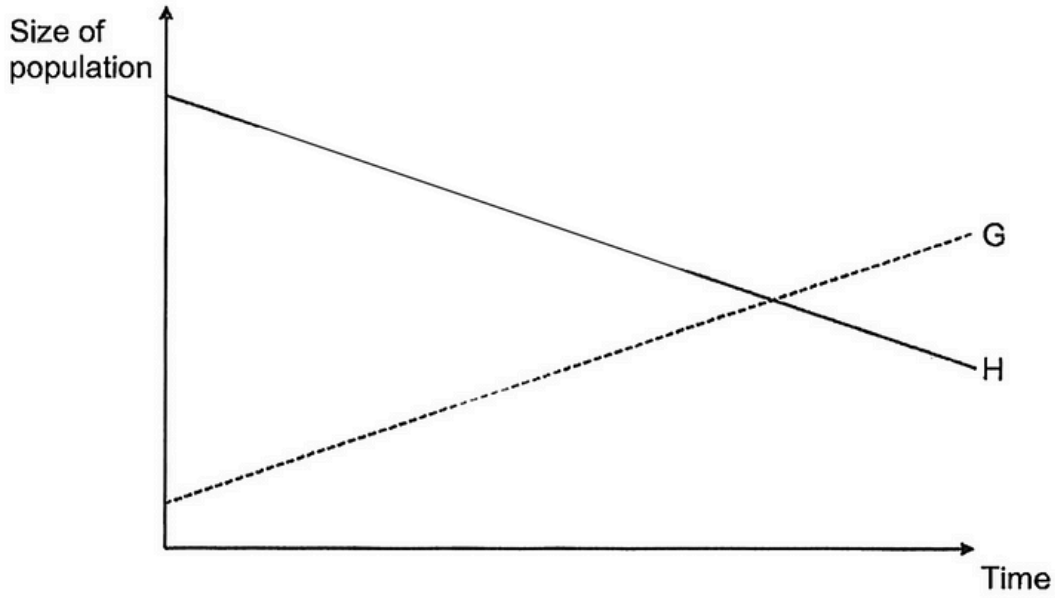
11 Dan set up a clear plastic chamber divided into four equal sections with different conditions. He placed a group of 20 organism W in the centre of the chamber through a hole on the lid. They were allowed to move freely for 10 minutes. His observation after 10 minutes is shown below.



Which statement can be concluded from his observation?

(1) Organism W is active at night.
(2) Organism W prefers a damp environment.
(3) Organism W prefers a dark and dry environment.
(4) Organism W prefers a dark and damp environment.

12 A population of animal R was released into a pond that contained animals G and H. The graph below shows how the population of animals G and H were affected over time after animal R was released.



Which of the following could be possible reason(s) for the changes?

(A) Animal R is the prey of animal G.
(B) Animal R competes with animal H for food.
(C) Animal R brought in a disease that affects only H.
(D) Animal R offers protection for H against other predators.

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

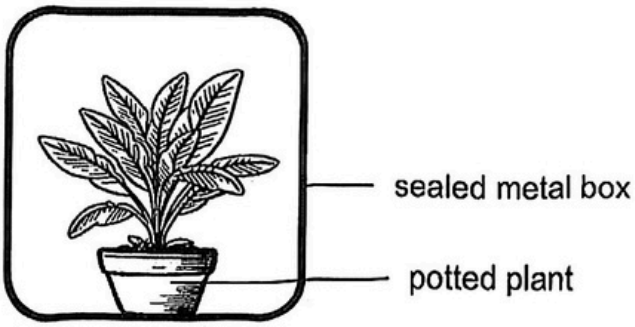
13 Baobei compared the different ways plants and animals obtain their food.

	Plants	Animals
(A)	Need carbon dioxide to make food	Need oxygen to make food
(B)	Make their own food through photosynthesis	Depend on plants only for food
(C)	Depend on Sun's energy directly to make food	Depend on the Sun's energy indirectly for food

Which difference(s) is/are wrong?

(1) A only
(2) A and B only
(3) B and C only
(4) All of the above

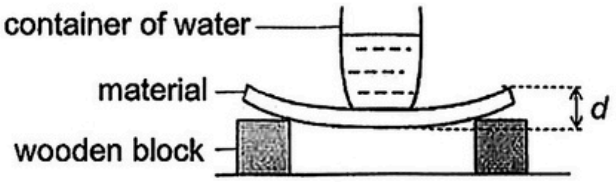
14 While moving to a new house, Sarah packed a healthy potted plant in a sealed metal box as shown below. The metal box does not allow light to pass through.



She then placed the entire box in the garden and forgot about it. Which of the following correctly shows the changes in the amount of gases inside the metal box after three hours?

	Oxygen	Carbon dioxide	Water vapour
(1)	increases	decreases	decreases
(2)	increases	decreases	increases
(3)	decreases	increases	decreases
(4)	decreases	increases	increases

15 Yanxi set up an experiment to compare the flexibility of three materials, X, Y and Z.



She added some water into the container and measured the distance, *d*, between the highest and lowest points of each material.

Which variable(s) must be kept the same for Yanxi's experiment to be a fair test?

A : type of material
B : thickness of the material
C : amount of water added into the container
D : distance between the highest and lowest points of the material

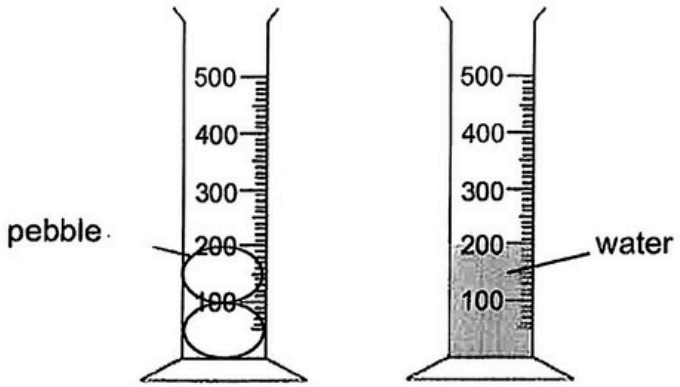
(1) B only
(2) A and D only
(3) B and C only
(4) A, C and D only

16 Substance X is a solid at 4°C and a gas at 90°C.

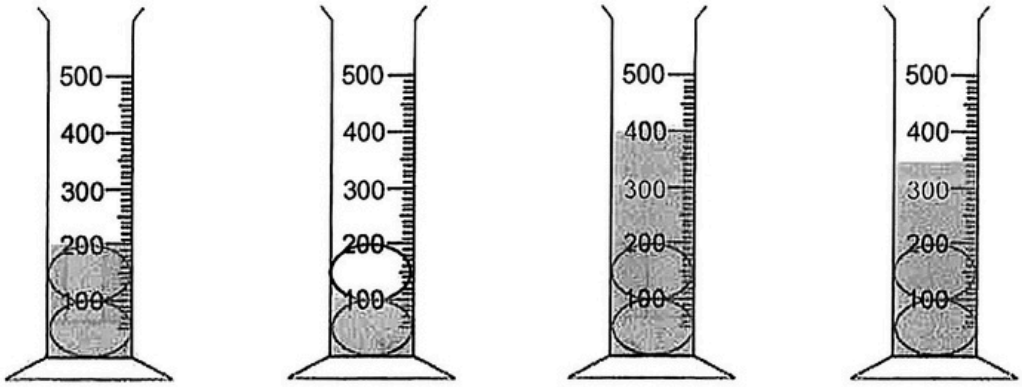
Which of the following are the melting and boiling points of substance X?

	Melting Point (°C)	Boiling Point (°C)
(1)	0	100
(2)	2	70
(3)	8	110
(4)	6	80

17 Allan filled a 500ml measuring cylinder with 200ml of water and another 500ml measuring cylinder with pebbles as shown below.

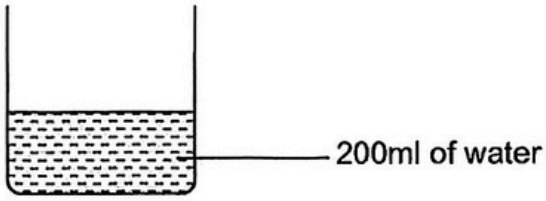


He then transferred the water into the measuring cylinder with the pebbles.
Which of the following would be the likely water level in the measuring cylinder?



(1) (2) (3) (4)

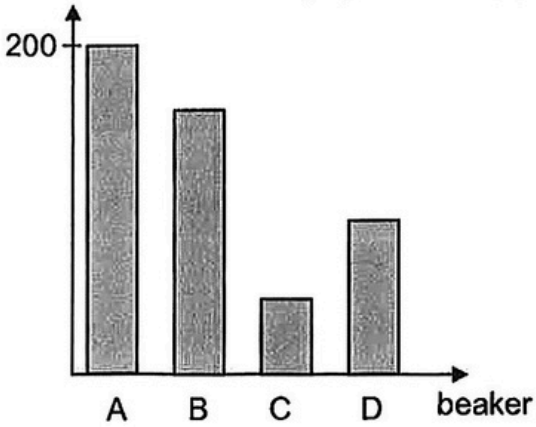
18 Four identical beakers, A, B, C and D, with 200ml of water each are shown in the picture below. They are placed under different conditions as seen in the table below.



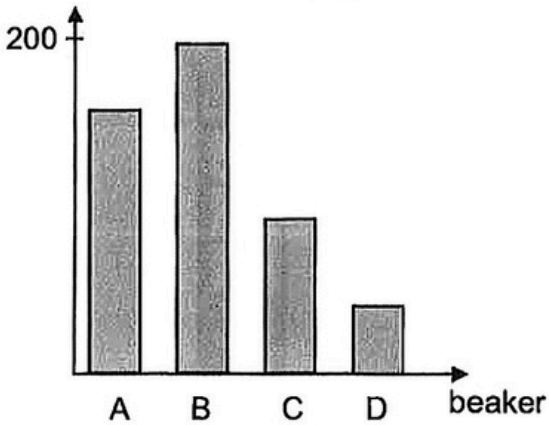
beaker	A	B	C	D
condition at location	sunny and windy	sunny and not windy	cloudy and not windy	cloudy and windy

Which of the following bar graphs correctly shows the volume of water left in each beaker at the end of one day?

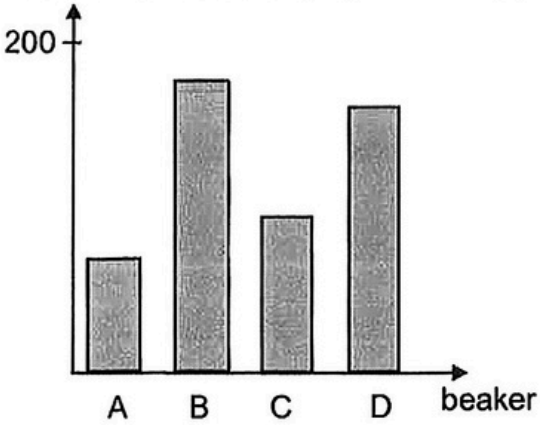
(1)



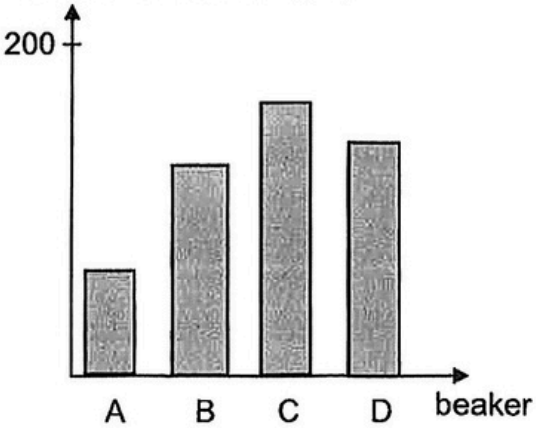
(2)



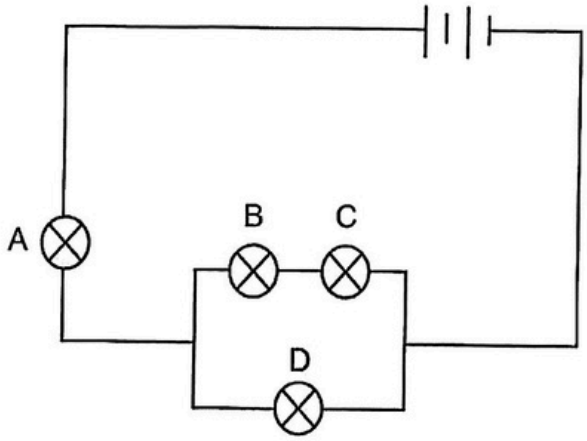
(3)



(4)



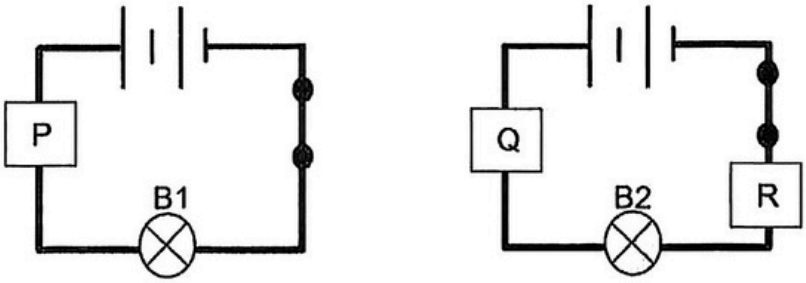
19 Study the circuit below.



Which of the following correctly states the number of bulb(s) that would still be lit when one bulb is blown?

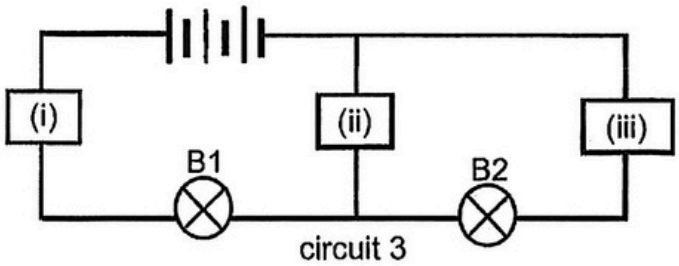
	Bulb that is blown	Number of bulb(s) still lit
(1)	A	1
(2)	B	2
(3)	C	3
(4)	D	0

20 Kristy set up circuits 1 and 2 as shown. She observed that only bulb B2 lit up when the switches were closed.



circuit 1 circuit 2

She then rearranged the components to form circuit 3 as shown.



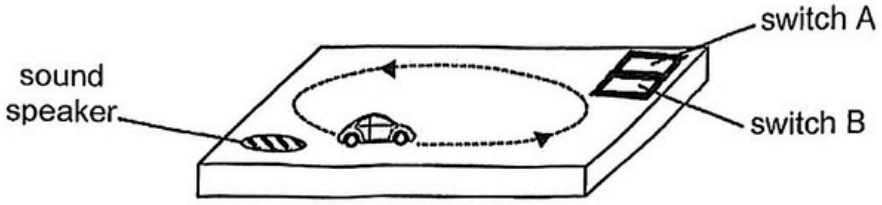
circuit 3

This time, she observed that only bulb B1 lit up.

Based on her observations, which of the following correctly shows the positions of P, Q and R in circuit 3?

	Position of the objects in circuit 3		
	(i)	**(ii)**	**(iii)**
(1)	P	Q	R
(2)	Q	P	R
(3)	R	P	Q
(4)	Q	R	P

21 Zenny has a toy set that works on batteries as shown in the diagram below.

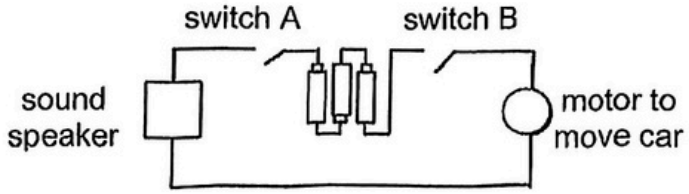


The following table shows what Zenny would observe when he turns on either switch or both switches.

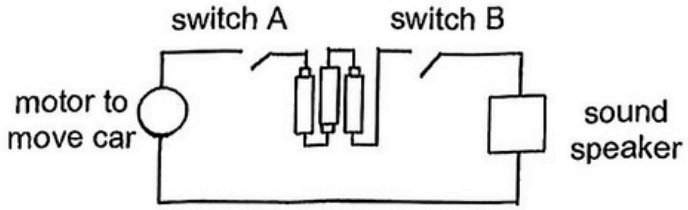
Switch on	Observation
A only	There was music only.
B only	The car moved in a circular path only.
A and B	There was music and the car moved in a circular path.

Which of the following is the most possible electric circuit set-up for the toy?

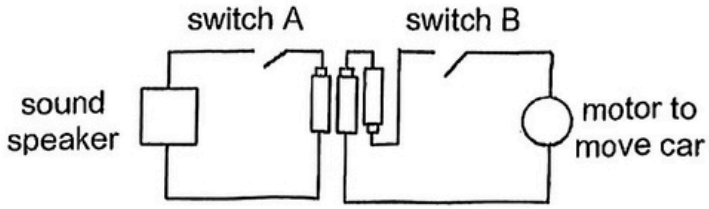
(1)



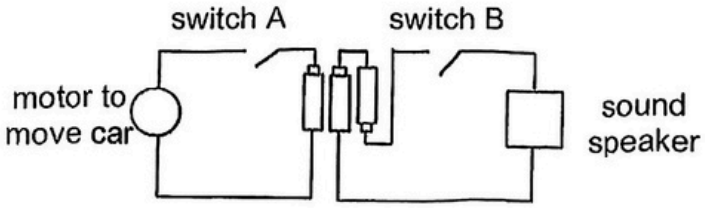
(2)



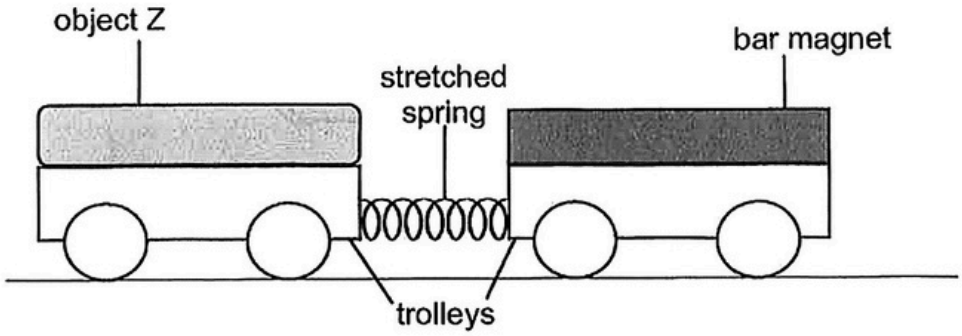
(3)



(4)



22 Two trolleys were attached together with a spring as shown below.



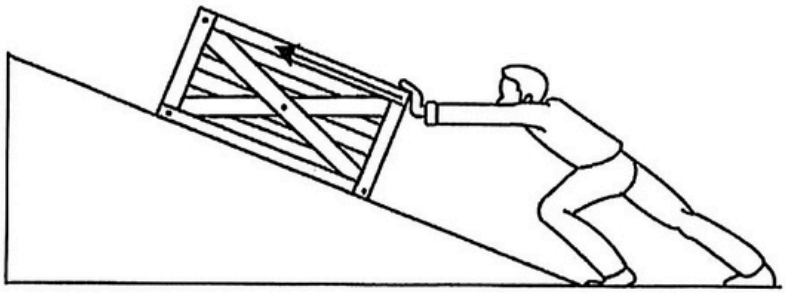
An object Z was secured onto one of the trolleys and a bar magnet was attached onto the other trolley. Both trolleys moved away from each other and caused the spring to stretch.

What could object Z be?

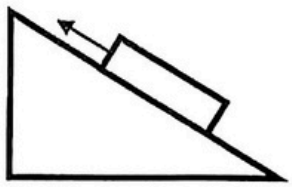
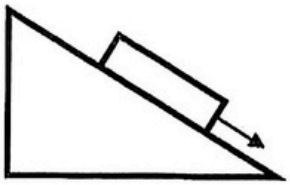
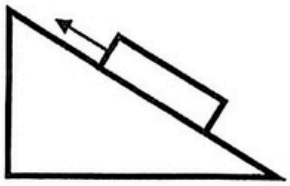
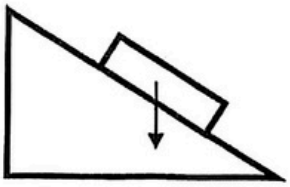
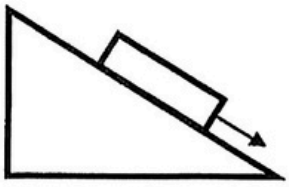
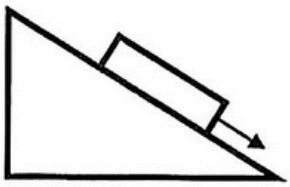
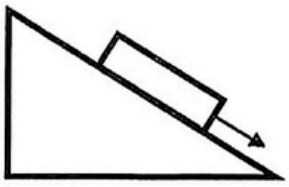
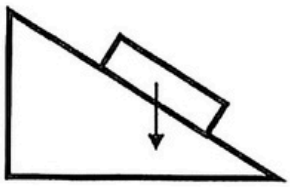
A: steel bar
B: magnet
C: aluminium bar

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

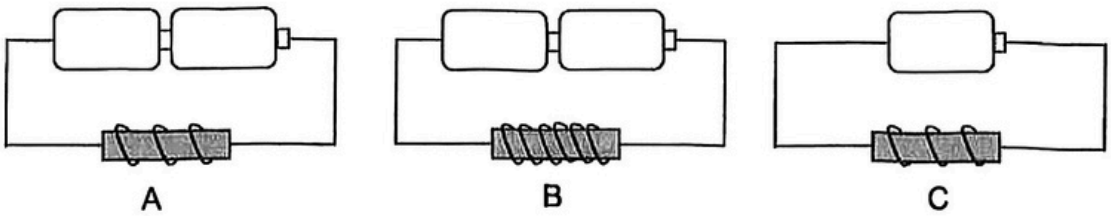
23 A box was being pushed up a ramp as shown.



Which of the following correctly identifies the forces acting on the box?

	Frictional force	Gravitational force
(1)		
(2)		
(3)		
(4)		

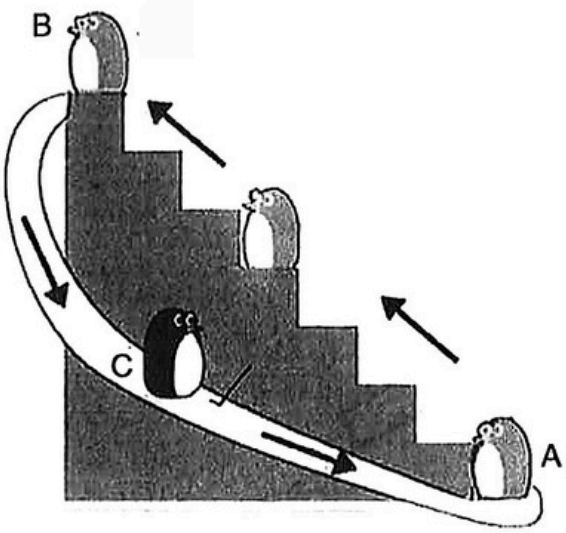
24 Shanon set up three electromagnets, A, B and C, as shown below.



Which of the following shows the correct order of the strength of the electromagnets, starting from the strongest to the weakest?

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

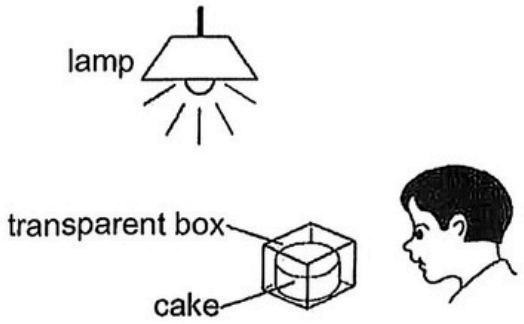
25 The diagram below shows how a toy penguin moves from point, A, B to C, when the toy is switched on. The toy penguin continues its movement until it is switched off.



At which point(s) A, B or C did gravitational force act on the toy penguin?

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

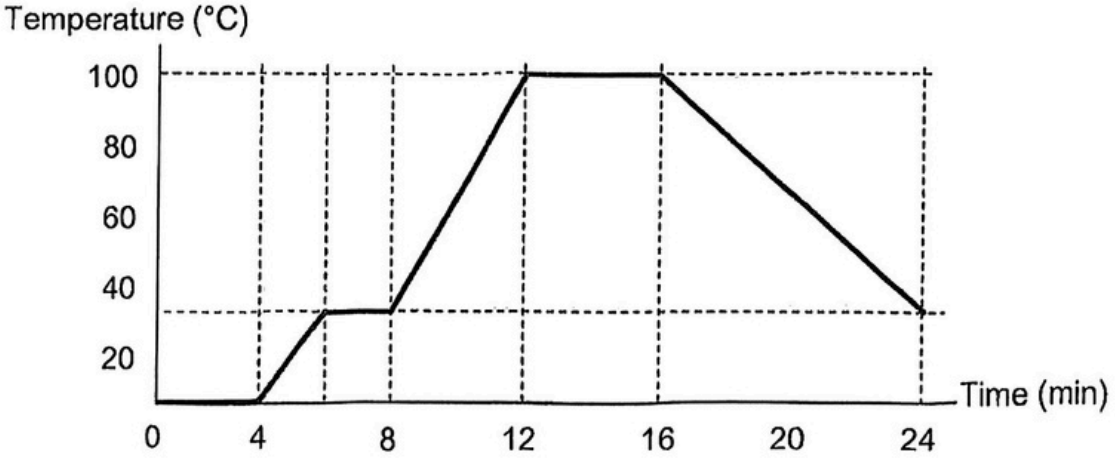
26 The diagram below shows a cake placed in a transparent box.



Which of the following best explains why the boy can see the cake?

(1) The cake reflects light into the boy's eyes.
(2) The lamp gives off light that enters the boy's eyes.
(3) Light travels from the boy's eyes to the transparent box.
(4) The transparent box gives off light that enters the boy's eyes.

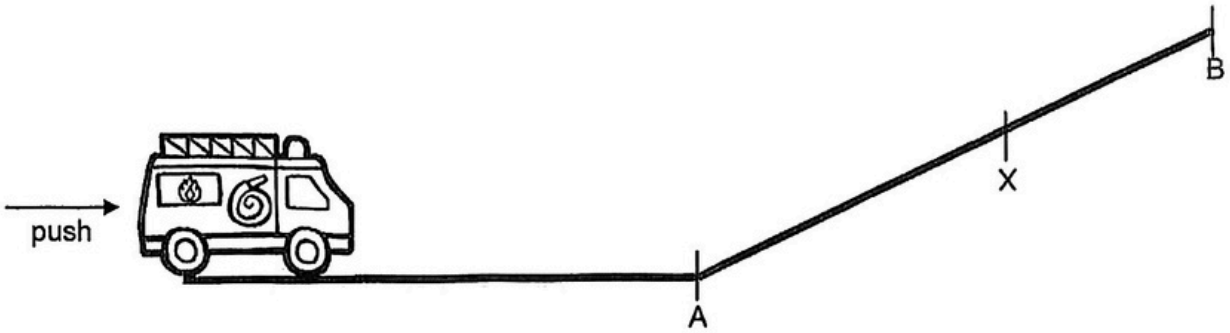
27 Caroline prepared a set-up which consisted of a small beaker filled completely with ice cubes. The graph below shows the change in temperature of the beaker of ice cubes over time as they were placed in a room with a temperature of 30°C.



Based on the graph above, what could Caroline possibly have done to her set-up at the 8th and 16th minute respectively?

	8th minute	16th minute
(1)	tap water was added into the beaker	two ice cubes were added into the beaker
(2)	tap water was added into the beaker	a heat source was added
(3)	a heat source was added	a heat source was removed
(4)	a heat source was added	more heat was added

28 A toy truck was pushed towards a plank, AB, causing it to move up the plank. It stopped at X then rolled back down the plank.



Which of the following statements about the movement of the toy truck is correct?

(1) The toy truck rolled down from X because it lost its kinetic energy.

(2) The toy truck stopped at X because it lost all its gravitational potential energy.

(3) The toy truck rolled down from X as its gravitational potential energy was converted into kinetic energy.

(4) The toy truck stopped at X because all its kinetic energy was converted into sound energy and heat energy.

慈学校

恭寬信敏

RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

SCIENCE
2025 END-OF-YEAR EXAMINATION
PRIMARY 6

Name : _____ ( )

Class : Primary 6/ _____

Date : 20 August 2025

BOOKLET B

12 Questions
44 Marks

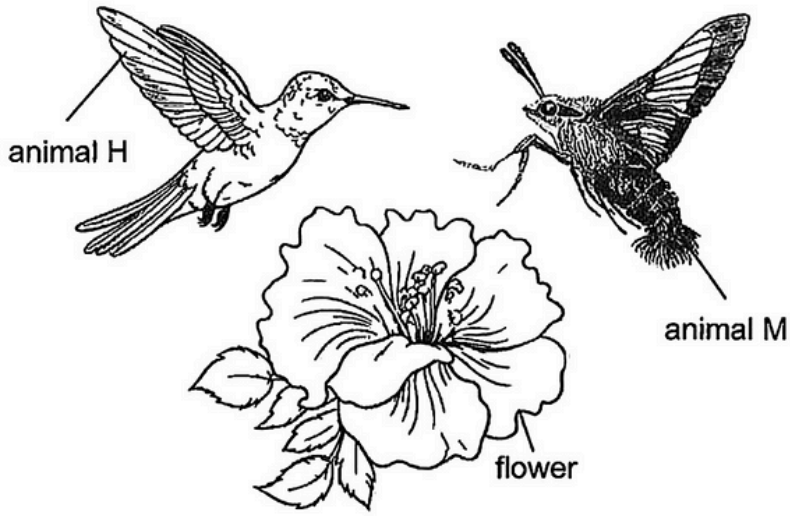
In this booklet, you should have the following:
a. Page 21 to Page 37
b. Questions 29 to 40

	MARKS OBTAINED	POSSIBLE
BOOKLET A		56
BOOKLET B		44
TOTAL		100

Parent's Signature: _____

Answer all the questions in the spaces provided.

29 The diagram shows animals H and M around a flower. Animal M is known for its resemblance in physical appearance to animal H.



(a) Based on the diagram above, classify animals H and M and state one characteristic that helped you to classify each animal. (2m)

	Animal H	Animal M
Animal group:		
Characteristic:		

(b) Both animals H and M feed on nectar which is a sugary liquid secreted deep within the flowers. Based on your observation, how is animal H adapted to obtain food? (1m)

_____

_____

(c) Animal M is eaten by animals that are in the same group as H. Why is it an advantage for animal M to look like animal H? (1m)

_____

_____

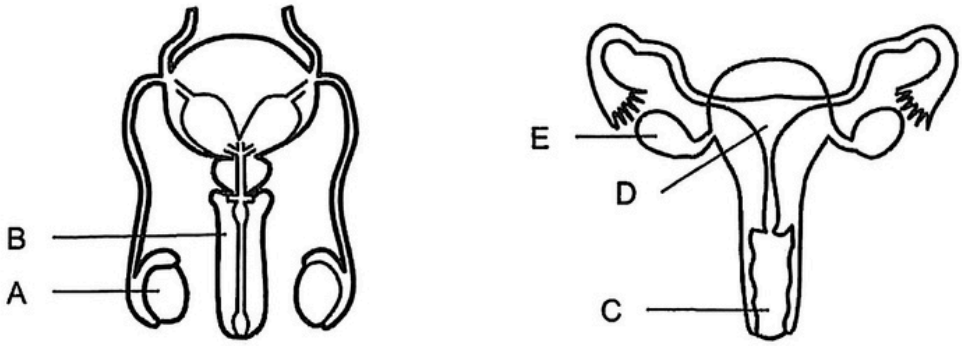
4

30 The diagram below shows the flower of plant M.

flower of plant M

Part P produces pollen grains while part N secretes nectar.

The diagram below shows parts of the human reproductive system.



(a) Which part (A, B, C, D or E) in the human reproductive system is similar in function to Part P of the flower? (1m)

_____

(b) Animal F is known to feed on nectar and fruit of plant M. Based on the information above, explain how animal F helps plant M with pollination. (2m)

_____

_____

_____

3

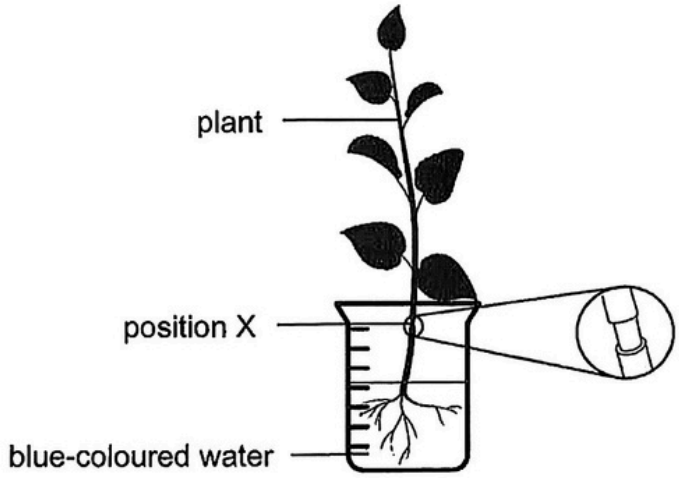
In addition to animal F and plant M, a scientist made the following observations of organisms R, S and T.

- F feeds on nectar and fruit of M
- T feeds on M.
- F are eaten by R.
- R builds their nests on M.
- S eats both R and T.

(c) Draw a food web in the space below to show the relationships among all the organisms (F, M, R, S and T) above. (2m)

2

31 Pam placed a plant in a beaker containing some blue-coloured water. She wanted to find out if removing the food-carrying tube would affect the growth of the plant. She removed only the food-carrying tubes in the outer ring of the plant at position X as shown below.



(a) Will the leaves turn blue after 24 hours? Explain how. (1m)

_____

_____

(b) The plant was placed near an open window. Pam ensured that the plant had enough water throughout, but it still died after a week. Explain why. (2m)

_____

_____

_____

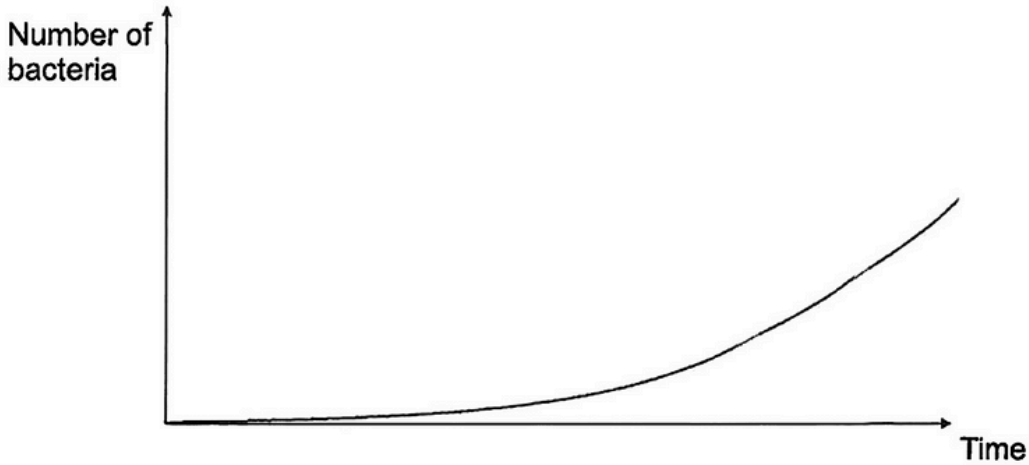
(c) State a difference between the plant transport system and human circulatory system, in terms of how food and water are transported. (1m)

_____

_____

4

32 The graph shows the number of bacterial cells over time.



(a) Based on the graph, state a characteristic of living things that the bacteria show. (1m)

_____

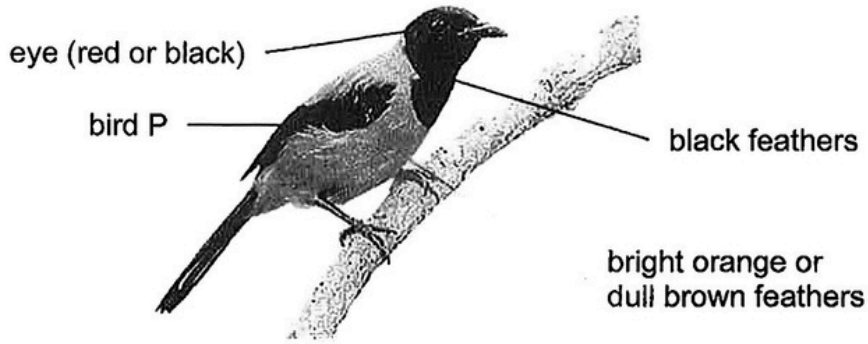
Bacteria are important decomposers that grow on dead plants and animals. Bacteria break them down into simpler substances and return nutrients to the environment.

(b) Name another group of decomposers. (1m)

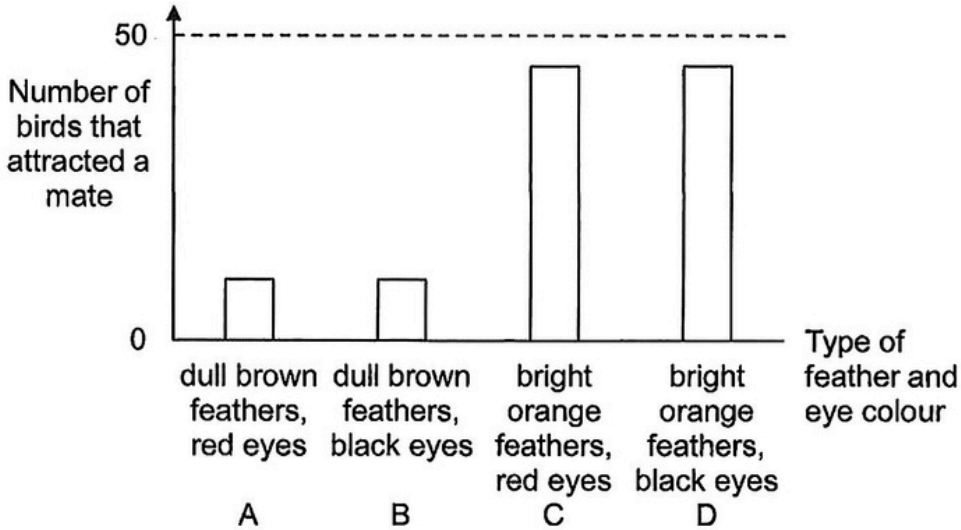
_____

2

33 Bird P has bright orange or dull brown feathers on its back and belly, with black feathers on its wings, tail, and head. Its eyes can be either red or black.



Robin observed 50 birds P for each type of feather and eye colour. For each type (A, B, C and D), she counted the number of birds that attracted a mate.



Robin thinks that the feather colour would affect the ability of bird P to attract a mate.

(a) Which two types (A, B, C or D) did he use to arrive at this conclusion? Explain your answer. (2m)

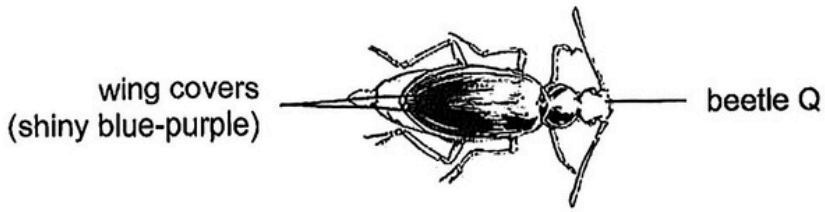
_____

_____

_____

2

Bird P eats a type of beetle, Q, which is poisonous. The poison does not affect bird P but is harmful to other organisms.



bird P

(b) Explain how the ability of bird P to eat beetle Q impacts its survival. (1m)

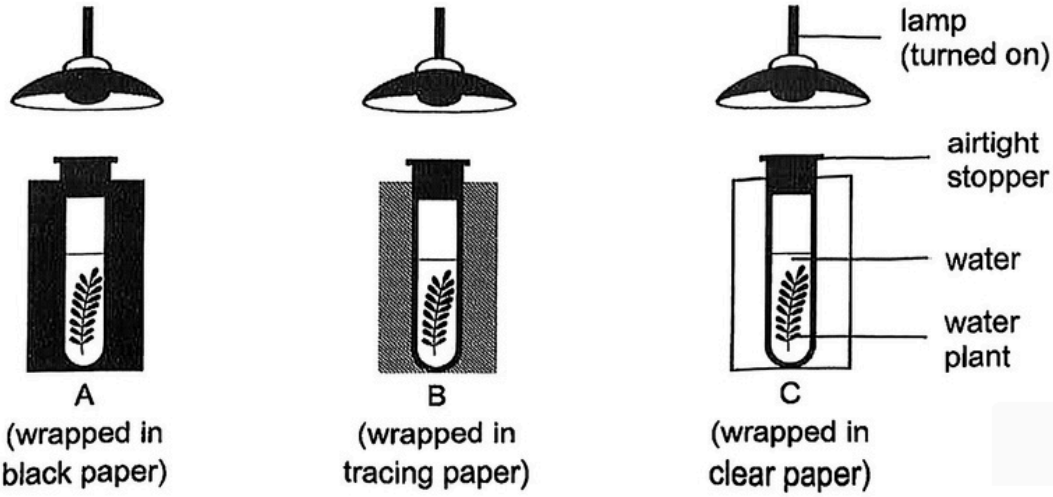
p

Robin examined beetle Q and observed that it has shiny blue-purple wing covers that stand out against their yellow and dark-coloured body.

(c) Based on this information, what might be another advantage of having bright orange feathers for its predator, bird P? (1m)

2

34 Sirius conducted an experiment using three test tubes as shown below. The experiment was conducted in a dark room with the lamp as the only source of light.



At the beginning of the experiment, a drop of liquid H was added to each tube. When liquid H is mixed with water, the colour of water changes according to the amount of carbon dioxide present.

Amount of carbon dioxide present	**low**	**normal**	**high**
Colour of water	purple	red	yellow

(a) Based on the information above, predict the colour of water for set-ups A and C after a few hours. The colour of water for set-up B has been given in the table below. (1m)

Set-up	**Colour of water**
A	
B	red
C	

(b) Explain your prediction in (a) for Set-up C. (2m)

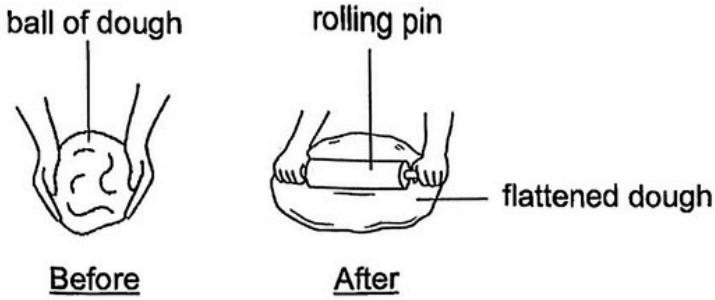
_____

_____

_____

3

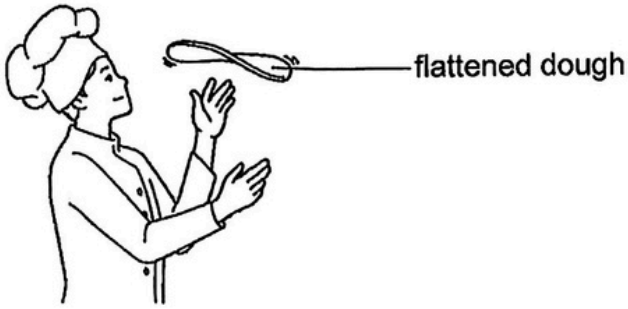
35 A chef prepared a ball of dough to make a pizza. He took a rolling pin to flatten the ball of dough as shown in the diagram below.



(a) State the effect of the force exerted by the rolling pin on the ball of dough. (1m)

_____

The chef then tossed the flattened dough into the air to stretch the dough further.



(b) Explain, in terms of forces, how the flattened dough was able to move up into the air when the chef tossed it. (1m)

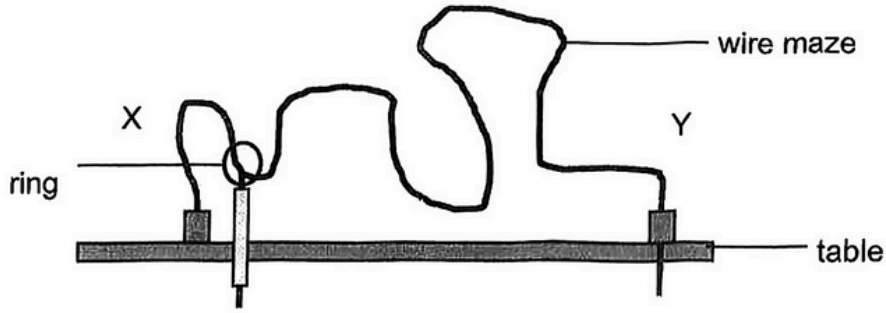
_____

_____

2

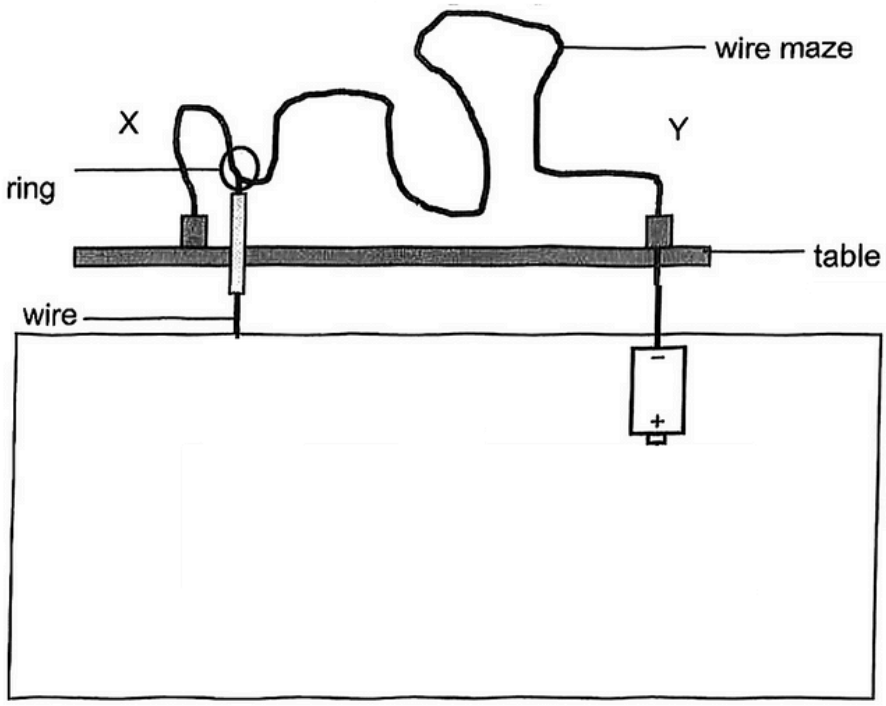
36 Eddie designed a steady hand game as shown in the diagram below. The ring is connected to a bulb and a buzzer.

To win, a player must move the ring from end X to end Y of the wire maze without the ring touching the wire maze. If the ring touches the wire maze, the bulb lights up and the buzzer will make a sound.



(a) In the diagram below, complete the circuit below such that the buzzer will continue to work even if the bulb fuses.

Use the symbol (B) for the buzzer and ⊗ for the bulb (2m)



2

(b) Suggest a material that the wire maze is made of. (1m)

_____

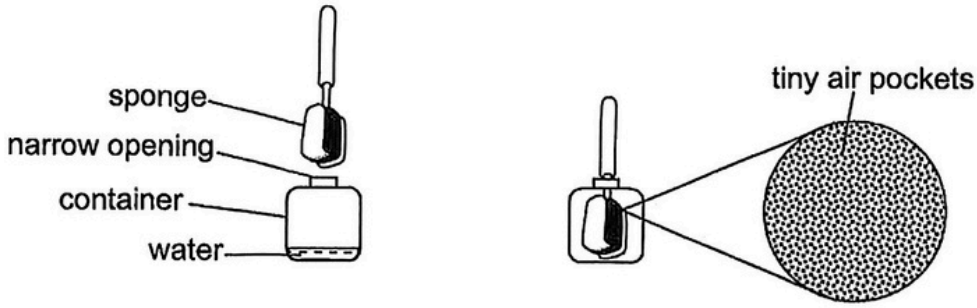
(c) How will the brightness of the bulb be affected if one more battery is connected in series? (1m)

_____

_____

2

37 A bottle brush has a sponge which is designed to clean the inner surfaces of containers. The sponge is made of a flexible material which can be easily inserted into the narrow opening of a container as shown below.



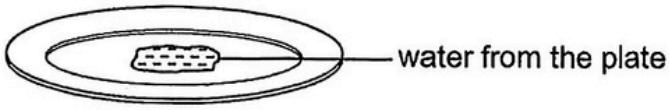
A closer observation reveals the sponge is a material filled with numerous tiny air pockets.

(a) State the property of matter that allowed the bottle brush to be pushed into the water bottle. (1m)

_____

_____

When the bottle brush was taken out after washing, water was squeezed out from the sponge onto the plate as shown below.



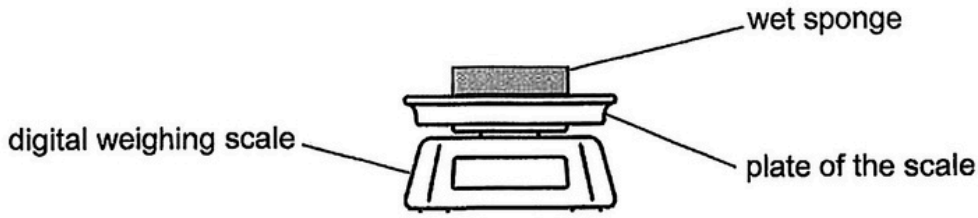
(b) State a property of liquid observed as water was moved from the container to the plate. (1m)

_____

_____

2

Another sponge was used to absorb the water from the plate. The sponge was then placed on the plate of a digital weighing scale as shown below.



(c) The mass of the sponge decreased after many hours. Explain how this happened. (2m)

_____

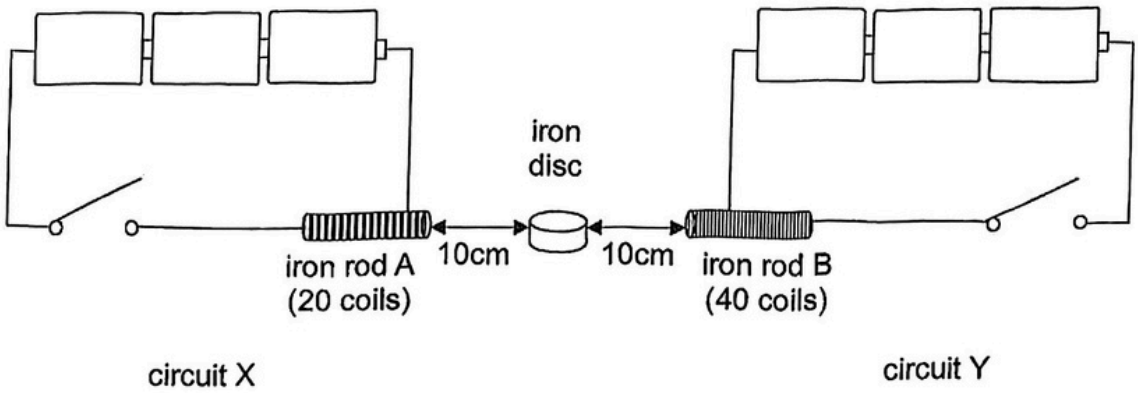
_____

(d) Without doing anything to the sponge, state one method which could speed up the observation in (c). (1m)

_____

3

38 Mandy set up two circuits, X and Y, using identical batteries, wires and iron rods as shown in the diagram below. An iron disc was placed between the two iron rods, A and B.



Mandy observed that the iron disc moved towards iron rod B when the switches in circuits X and Y were closed.

(a) Explain Mandy's observation. (2m)

_____

_____

_____

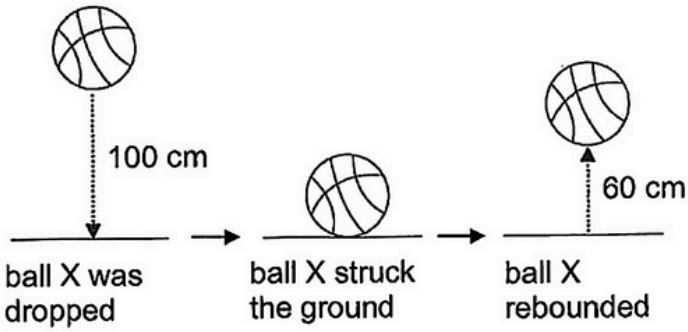
(b) Without adding or changing the electrical components in both circuits and the iron disc, suggest two changes Mandy can make to circuit X so that the iron disc moves towards rod A. (2m)

_____

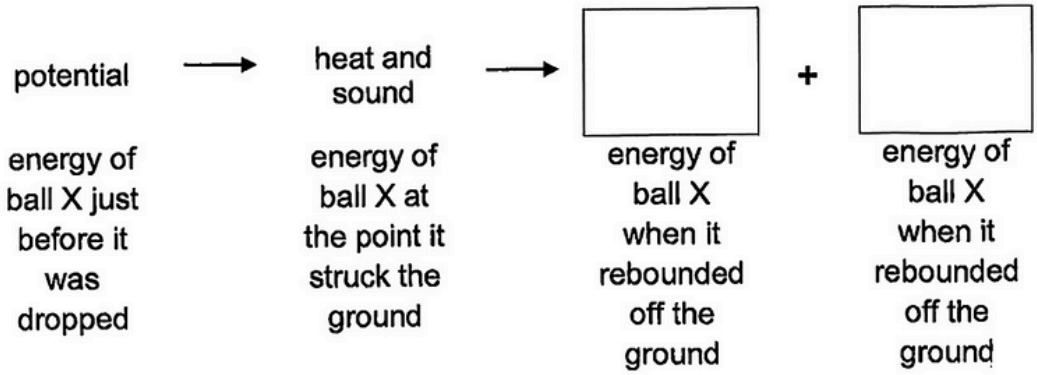
_____

4

39 Tom dropped ball X from a height of 100 cm and observed that it bounced up to 60 cm after hitting the ground as shown below.



(a) State the energy conversion from the moment ball X was dropped to the moment it rebounded off the ground. (1m)



Tom dropped ball X and another ball, Y, from the same height of 100 cm. He used a sound sensor to record the sound made when each ball struck the ground. Both balls X and Y had the same shape and size and were made from an identical material.

Ball	Mass (g)	Sound level (unit)
X	550	25
Y	750	35

(b) Using energy conversion, explain why ball Y made a louder sound when it struck the ground. (2m)

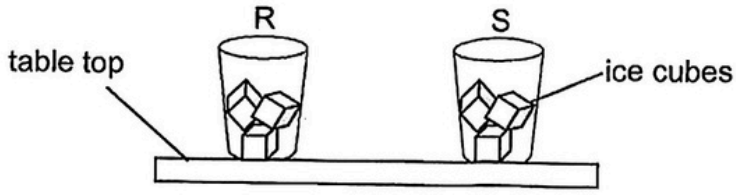
_____

_____

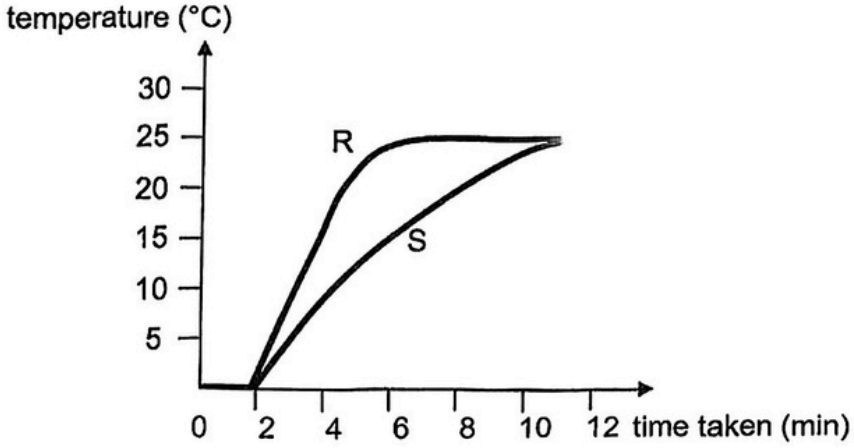
_____

3

40 An experiment with two empty cups made of different materials, R and S, were placed on a table in the kitchen as shown below. An equal number of ice cubes were added into each cup at the same time.



The line graph below shows the results of the time taken for the ice cubes to melt completely in each cup.



(a) State what melting means. (1m)

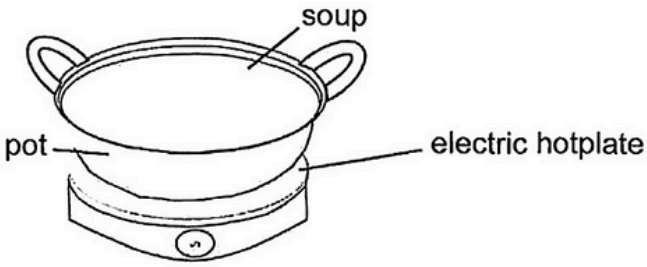
_____

(b) Based on the graph above, state the room temperature. (1m)

_____

2

A family was having steamboat for dinner. The steamboat needs a pot to heat up the soup on an electric hotplate as shown below.



(c) Based on the line graph, which material, R or S, would you choose to make the pot? Explain why. (2m)

_____

_____

_____

End of Paper

2

RED SWASTIKA SCHOOL
P6 SCIENCE Prelim 2025
Correction Template

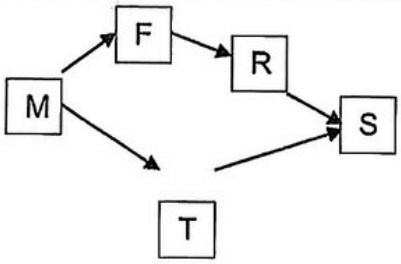
Section A: Multiple Choice Questions (MCQ) (56 marks)

28 Questions, 2 marks each

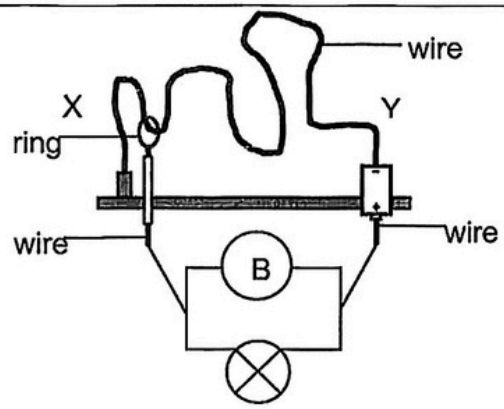
1. (1)	6. (3)	11. (4)	16. (4)	21. (3)	26. (1)
2. (2)	7. (2)	12. (4)	17. (4)	22. (1)	27. (3)
3. (3)	8. (1)	13. (2)	18. (4)	23. (4)	28. (3)
4. (1)	9. (4)	14. (4)	19. (2)	24. (2)	
5. (4)	10. (3)	15. (3)	20. (4)	25. (4)	

Section B: Open-ended Questions (44 marks)

<table>
<tr><th>Qn.</th><th>Answer</th></tr>
<tr><td>29a</td><td>
<table>
<tr><th></th><th>Animal H</th><th>Animal M</th></tr>
<tr><td>Animal group:</td><td>Birds</td><td>Insects</td></tr>
<tr><td>Characteristic:</td><td>It has feathers.
<u>OR</u>
It has a beak.</td><td>It has six legs.
<u>OR</u>
It has a pair of feelers.</td></tr>
</table>
</td></tr>
<tr><td>29b</td><td>Animal H (POR) has a long, thin beak (O) that help it reach the nectar deep within the flowers (C).</td></tr>
<tr><td>29c</td><td>Because the predator of animal M is birds, it is beneficial to animal M (POR) to look similar to their predators (O) to help it escape from its predators (C). more easily</td></tr>
</table>

30a	A (Testis)
30b	When animal F (POR) Feed on the nectar secreted by plant M (C), some pollen grains from part P (anthe) will stick to its body (C). The pollen grains are then brushed off onto the stigma of another flower that animal F visits (C), thereby facilitating pollination.
30c	
31a	Yes. The roots absorbed the blue-coloured water (C) which was then transported by the water carrying tubes (in the stem) to the leaves (C), hence colouring them blue.
31b	As the food-carrying tubes are removed, food made by the leaves **above** X cannot be transported to the roots (O). Soon, the roots will die (C) due to lack of food and cannot absorb water (C) for the plant.
31c	The plant transports food and water in seperate (food-carrying and water-carrying) tubes, but the human body transports digested food and water through (the bloodstream via) blood vessels (Cp, C). OR The plant transports food from the leaves and water (absorbed) from the roots, but the human body transports digested food and water (absorbed) from the digestive system (Cp, C).
32a	Living things reproduce.
32b	Fungi

33a	A and C OR B and D. To ensure a fair test, he should choose to compare two types that only have one changes varible which is the feather colour (C).
33b	By eating beetle Q which is harmful to other organisms, bird P (POR) has more food to eat due to less competition (Cp, C) and hence, bird P is more likely to survive. OR Other predators that eat bird P which has eaten the poisonous beetles may die (C), causing a decrease in the population of the bird P's predators eventually (Cp, C) and hence, bird P is more likely to survive.
33c	Its bright orange feathers serve to warn its potential predators that it could be harmful that it is not worth eating (C), hence reducing the chance of being prey (Cp, C).
34a	A: **yellow** ,C: **purple**
34b	Set-up C (POR) will have the lowest level of carbon dioxide because there is greatest amount of light that can pass through the clear **paper wrapping the tube** for the plant to photosynthesise (O, Cp). Therefore, **photosynthesis** occurs at the higest rate (Cp, C), using up the most carbon dioxide, resulting in the lowest amount of carbon dioxide present in the water.
35a	The force exerted by the rolling pin changed the shape of the dough (C).

35b	The push force exerted by the chef (POR) was greater than the weight of the dough / gravitational force acting on the dough (Cp, C)
36a	 Bulb and buzzer are connected in parallel, from the wire to the battery.
36b	Metal or any examples of metal / graphite
36c	The brightness will increase.
37a	Air can be compressed.
37b	Water/Liquid has an indefinite shape.
37c	The water in the wet sponge (POR) gained heat from the surrounding (C) and evaporated into water vapour (C) that escapes into the surrounding which reduced the mass of the sponge.
37d	- Place it under a hot sun - Place it in a windy environment
38a	When both circuits are closed, rod A and B (POR) become electromagnets (C). As rod B has more coils of wire around it (O, Cp), it has greater magnetic strength (Cp, C). So, rod B attracts the iron disc with a greater force (Cp, C).
38b	- Increase the number of coils (around rod A). - Move (circuit X) closer to the iron disc.

39a	Potential energy → Heat energy + Sound energy → Potential energy + kinetic energy
39b	Basketball Y (POR) has a greater mass (O, Cp). Therefore, Basketball Y had more potential energy which is converted to more kinetic energy (Cp, C), which is in turn converted to more sound energy (Cp, C) (when it struck the ground).
40a	Melting is a process when a solid gains heat and turns into liquid at a fixed temperature. OR Melting is a process when ice gains heat and turns into water at 0°C.
40b	25°C
40c	Material R. The temperature of material R rose faster than material S. (Cp, O) This shows material R gained heat faster than material S. (Cp, C)