HENRY PARK PRIMARY SCHOOL

2024 END OF YEAR EXAMINATION

SCIENCE

PRIMARY FIVE

BOOKLET A

Name: _____ (.)

Class: Primary 5 ( )

28 QUESTIONS

56 MARKS

TOTAL TIME FOR BOOKLETS A & B: 1 HOUR 45 MINUTES

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

Marks for Booklet A: _____ / 56

Parent's Signature: _____

Sections	Marks
A	/ 56
B	/ 44
Total	/ 100

Booklet A

For each question from 1 to 28, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the **Optical Answer Sheet.**

(56 marks)

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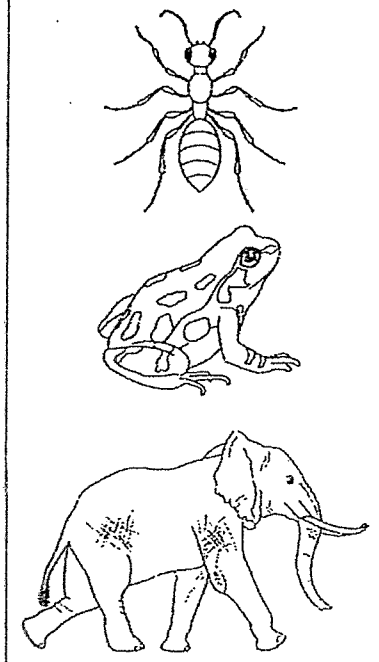
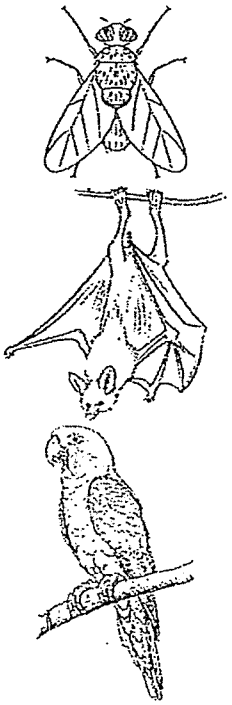
1 Study the classification chart below.

Group M	Group N
	

How are the animals in groups M and N classified?

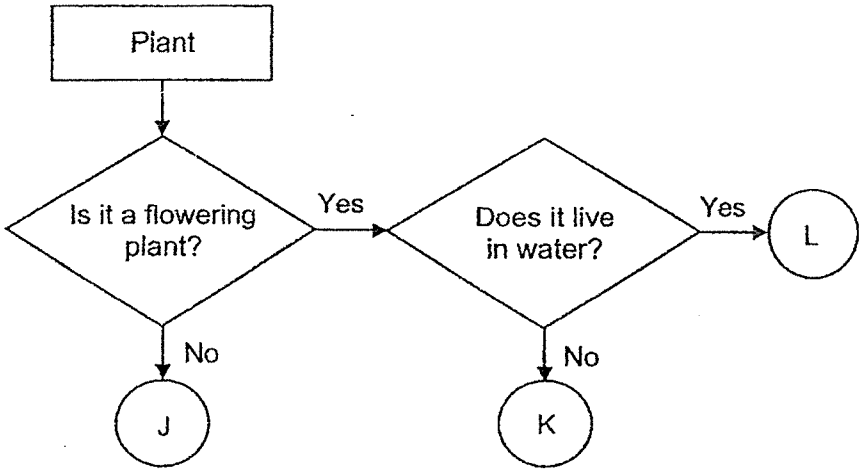
(1) number of legs

(2) presence of wings

(3) type of outer covering

(4) the way they reproduce

2 Study the flowchart below.



Based on the flowchart above, which one of the following statements is likely to be correct?

(1) Plant L lives on land.

(2) Plant J can bear fruits.

(3) Plants K and L reproduce by seeds.

(4) Plants K and L reproduce by spores.

3 Alex wanted to find out whether seeds can germinate without light.
The table below shows the conditions that were provided to four seeds, A, B, C and D, of the same type of plant.

Seed	Water	Air	Light	Temperature (°C)
A	present	present	present	29
B	absent	present	present	15
C	present	present	absent	29
D	present	absent	absent	15

Which two seeds should he use?

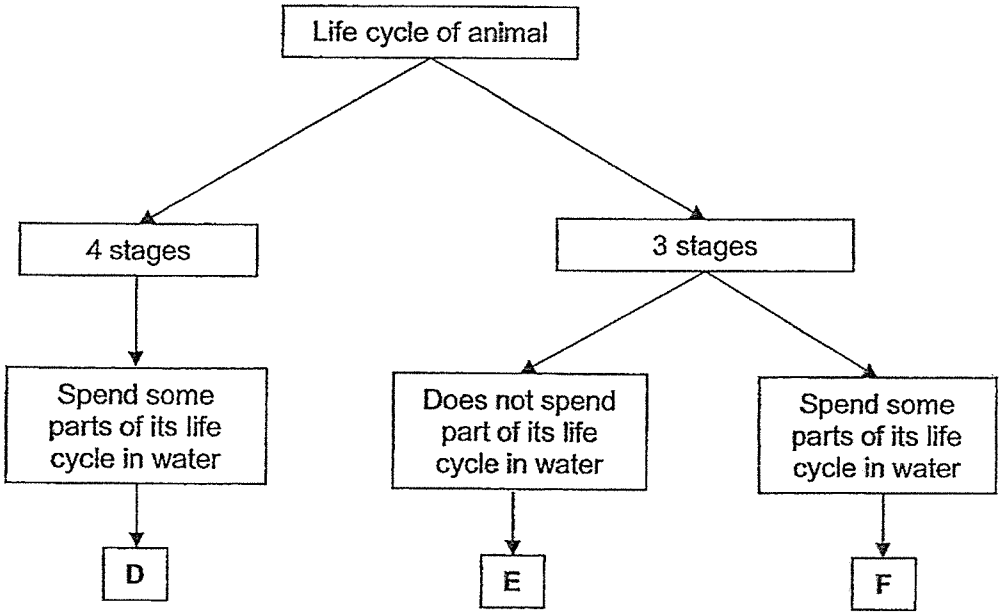
(1) A and D

(2) A and C

(3) B and C

(4) B and D

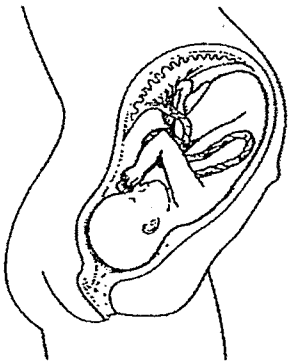
4 Study the diagram below.



Which one of the following represents animals D, E and F?

	Animal D	Animal E	Animal F
(1)	frog	mosquito	butterfly
(2)	mosquito	grasshopper	frog
(3)	mosquito	butterfly	grasshopper
(4)	cockroach	mosquito	frog

5 The diagram below shows a baby developing inside its mother.



Which of the following statements are correct about a developing baby?

A It develops from a fertilized egg.

B It contains genetic information from the female parent only.

C It is formed when the male and female reproductive cells fuse.

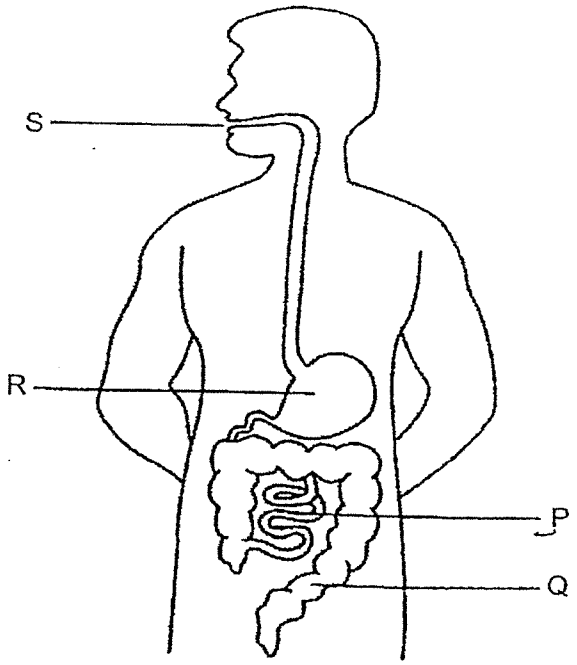
(1) A and B only

(2) B and C only

(3) A and C only

(4) A, B and C

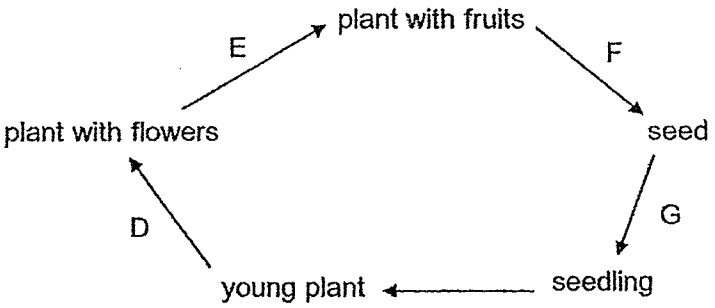
6 The diagram shows the human digestive system.



Which of the parts, P, Q, R or S contain(s) the most amount of digested food when digestion is completed?

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

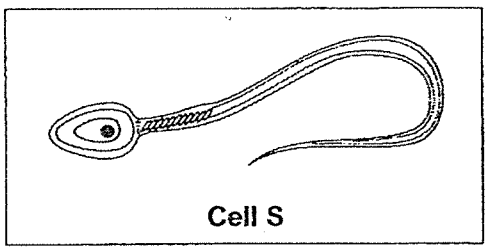
7 The diagram below shows the developmental stages of a flowering plant.

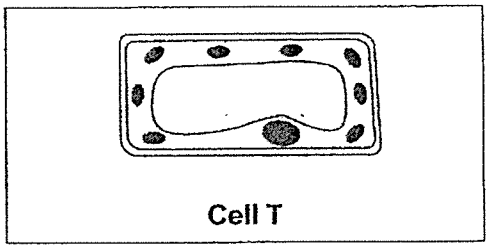


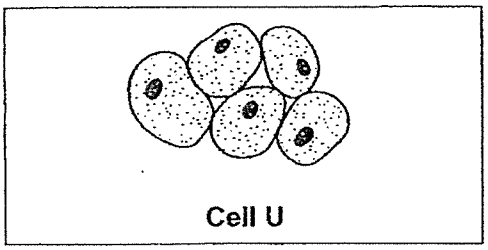
Where do the processes of pollination, fertilisation and germination take place?

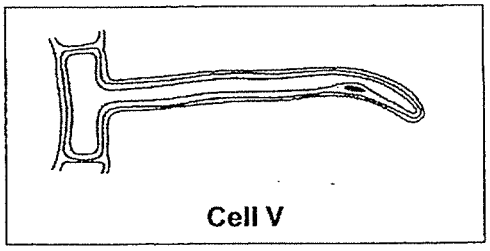
	Pollination	Fertilisation	Germination
(1)	E	E	G
(2)	D	E	G
(3)	E	E	F
(4)	D	F	G

8 The diagrams show four types of cell, S, T, U, and V.


Cell S


Cell T


Cell U


Cell V

Which two of the cells are likely to be plant cells?

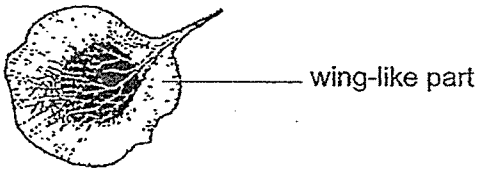
(1) S and T

(2) T and U

(3) U and S

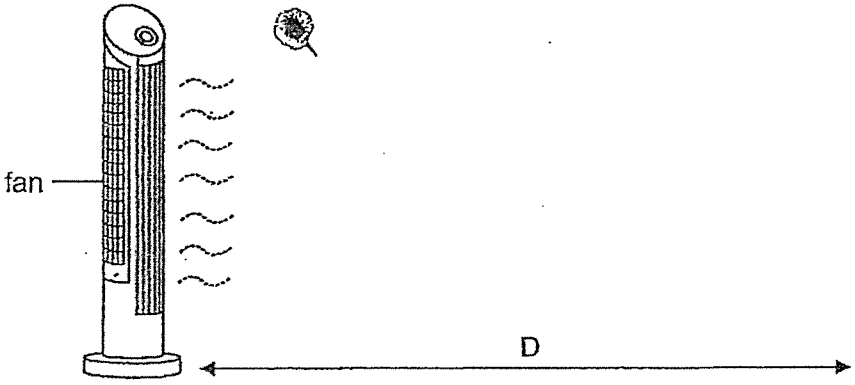
(4) V and T

9 Mei Ling conducted an experiment by dropping seed W from a height and measured the distance, D, it travels. The diagram shows seed W.



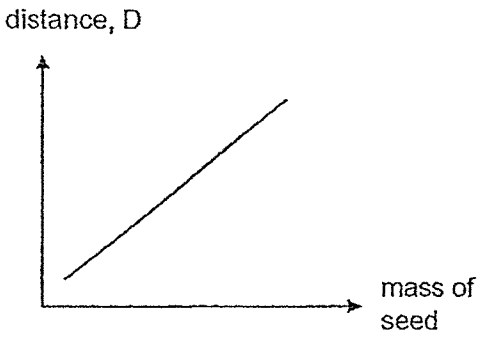
Seed W

The diagram below shows her experimental set-up.

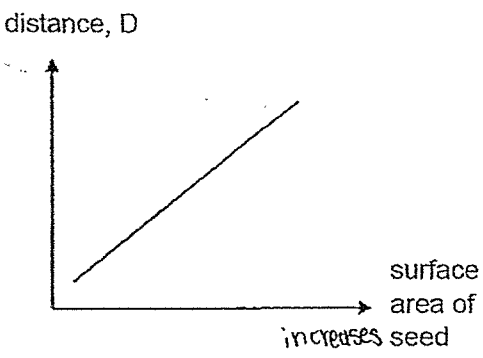


Which of the following graphs could most likely be the results recorded by Mei Ling?

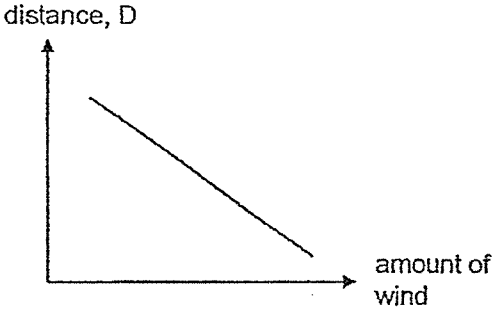
(1)



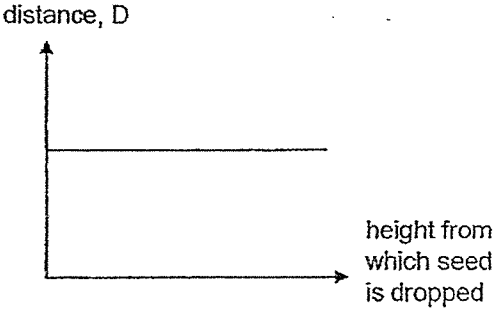
(2)



(3)



(4)



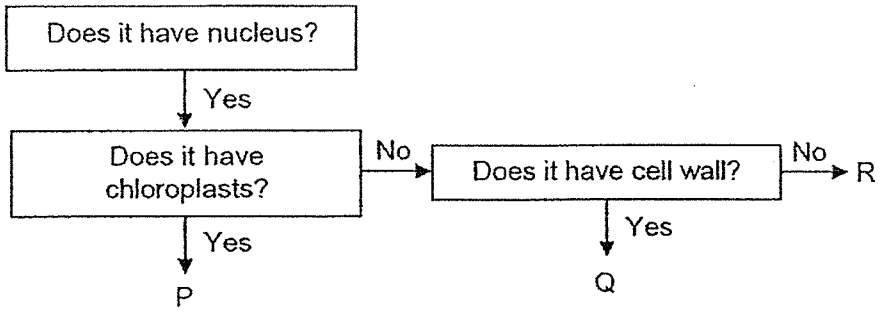
10 Linda drew up a table to compare reproduction in flowering plants and humans.

	Flowering Plants	Humans
Female reproductive cell	egg	X
Organ that produces male reproductive cells	anther	Y
Process of male reproductive cell fusing with female reproductive cell	fertilisation	Z

Which of the following correctly represents X, Y and Z?

	X	Y	Z
(1)	egg	testes	pollination
(2)	egg	testes	fertilisation
(3)	ovary	penis	pollination
(4)	ovary	anther	fertilisation

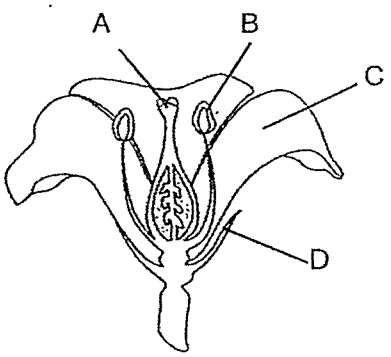
11 The diagram shows a flow chart describing three types of cells, P, Q and R.



Which of the following best represents where cells P, Q and R can be found?

	P	Q	R
(1)	leaf of plant	root of plant	skin of human
(2)	leaf of plant	flower of plant	stem of plant
(3)	stem of plant	skin of human	root of plant
(4)	stem of plant	flower of plant	root of plant

12 Sally conducted an experiment to find out which part of a flower helps to form a fruit. She removed one part of the flower below and transferred some pollens from another flower of the same type to the remaining parts of the flower.

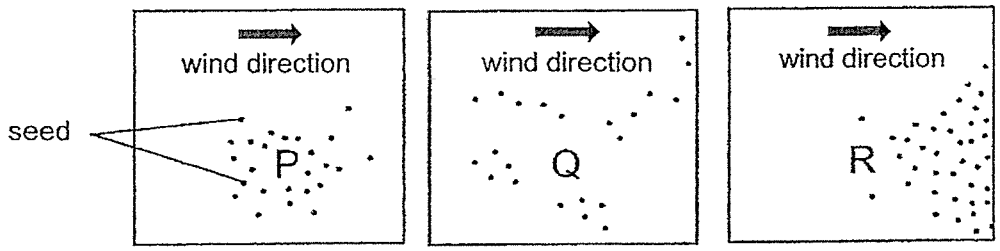


After some time, the flower formed a fruit.

Which part of the flower, A, B, C or D did she remove?

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

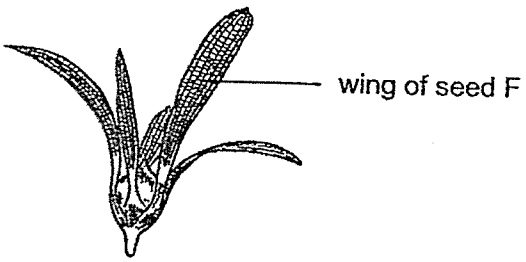
13 Study the dispersal of seeds by plants, P, Q and R.



How were their seeds dispersed?

	P	Q	R
(1)	wind	explosive action	animal
(2)	explosive action	wind	animal
(3)	explosive action	animal	wind
(4)	animal	explosive action	wind

14 Ben found seed F in his garden.
He observed that seed F has wings that help it to be dispersed by wind.
He wanted to find out how the mass of the seed affect the distance the seed travelled.



He collected three similar seeds and conducted his experiment in his garden.
Which of the following(s) should be kept the same to ensure a fair test?

A mass of seed

B length of wings

C number of wings

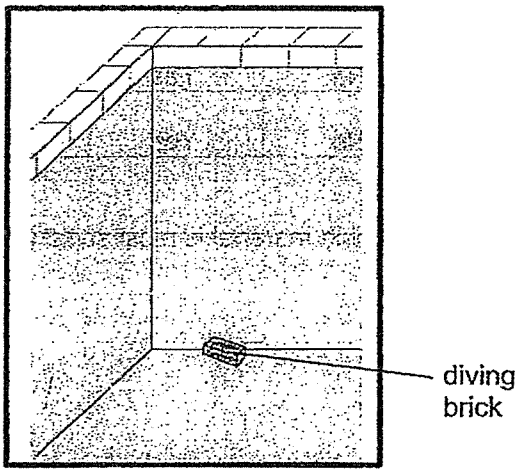
(1) B only

(2) A and B only

(3) B and C only

(4) A and C only

15 Diving bricks are placed at the bottom of swimming pools.
Swimmers practise diving by swimming to the bottom of the pool to pick up the diving bricks.



Based on the information provided, what properties should the diving bricks have?

A strong
B waterproof
C ability to sink
D allow light to pass through

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

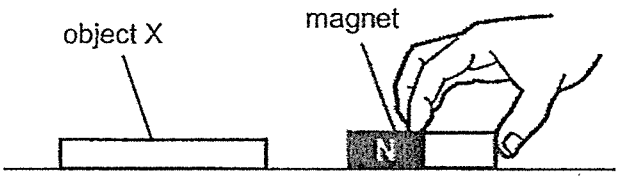
16 The properties of different types of materials are shown in the chart below.

Property	Material W	Material X	Material Y	Material Z
Does it break easily?	No	Yes	Yes	No
Does it absorb water?	No	Yes	No	Yes

Based on the properties given, which material is most suitable for making school bags?

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

17 Germaine brought both poles of a magnet near object X.
She then recorded the type of interaction observed between the magnet and object X.
She repeated the experiment with objects Y and Z.



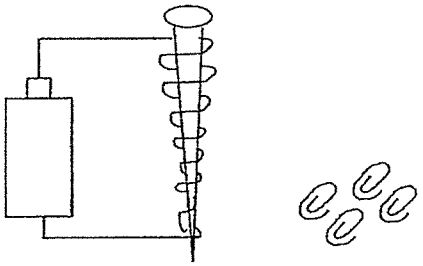
Her observations are recorded in the table below.

	Type of interaction with magnet		
Objects	Attract	Repel	No movement
X			✓
Y	✓	✓	
Z	✓		

Which of the following statements is correct about objects X, Y and Z?

(1) Object Y is a magnet. ✓
(2) Objects Y and Z are magnets.
(3) Objects X and Z are not made of metals.
(4) Objects X, Y and Z are made of magnetic materials.

18 Nigel turned a nail into an electromagnet using the set-up shown below.
He then brought paper clips to test the strength of the electromagnet.
He did this each time there is a change in the number of batteries and coils.



The table below shows the result.

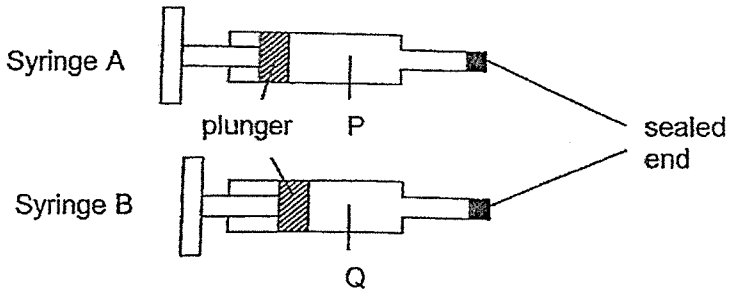
Number of coils	Number of batteries	Number of paper clips attracted
20	4	13
40	4	26
20	6	X
20	8	34
40	6	48

What is the value of X in the table shown above?

(1) 12
(2) 23
(3) 36
(4) 44

19 Two syringes, A and B, contain the same amount of substances P and Q respectively.

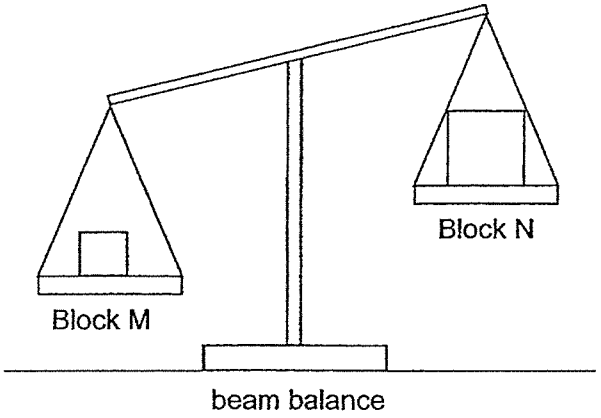
The plunger in the syringe A could not be pushed in while the plunger in syringe B could be pushed in slightly as shown in the diagram below.



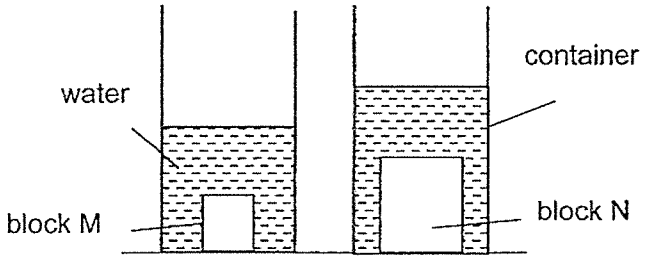
Which of the following substances are most likely to be P and Q?

	P	Q
(1)	air	water
(2)	water	oil
(3)	oil	water
(4)	water	air

20 Cassie placed two plastic blocks, M and N, on a beam balance as shown below.



She then placed the two plastic blocks, M and N, into two similar containers containing the same amount of water as shown below.



What can Cassie conclude based on her observations in the set-ups above?

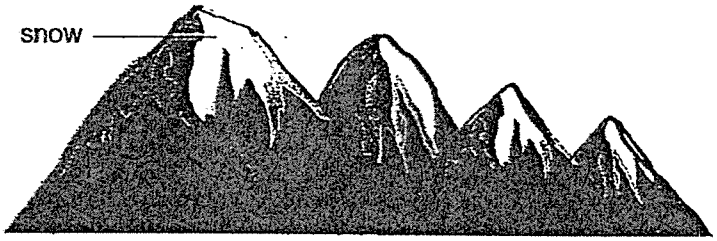
(1) Objects with greater mass will always have greater volume.

(2) Smaller objects can have greater volume than bigger objects.

(3) Smaller objects will always have lighter mass than bigger objects.

(4) Objects with greater mass can have smaller volume than bigger objects.

21 The diagram below shows some snowcapped mountains. Some processes take place on the mountains for snow to form.



Which one of the following is correct?

A Water vapour in the air loses heat to form water droplets.

B Water droplets change into snow.

C Snow on mountains changes into water.

D Water changes into ice.

(1)

	A	B	C	D
melting	✓			
freezing				✓
condensing		✓		
evaporating			✓	

(2)

	A	B	C	D
melting			✓	
freezing	✓	✓		
condensing				✓
evaporating				

(3)

	A	B	C	D
melting		✓		
freezing				✓
condensing			✓	
evaporating	✓			

(4)

	A	B	C	D
melting			✓	
freezing		✓		✓
condensing	✓			
evaporating				

22 Lucas placed two plates in an air-conditioned room of 23°C and went off to play. Both plates were of similar size but made of different materials.

Plate A

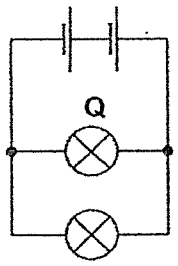
Plate B

When Lucas returned and touched the plates, plate A felt colder to the touch than plate B.

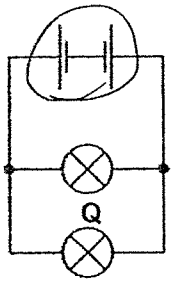
Which one of the following is most likely the reason why Lucas felt that plate A was colder than plate B?

(1) Plate A lost more heat to Lucas' hand than plate B.
(2) Plate A lost more heat to the surroundings than plate B.
(3) Plate A gained more heat from Lucas' hand than plate B.
(4) Plate A gained more heat from the surroundings than plate B.

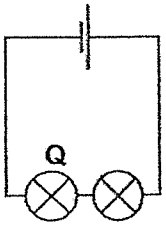
23 Study the circuits shown below.



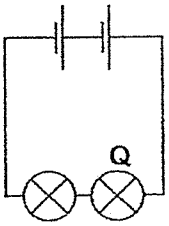
D



E



F

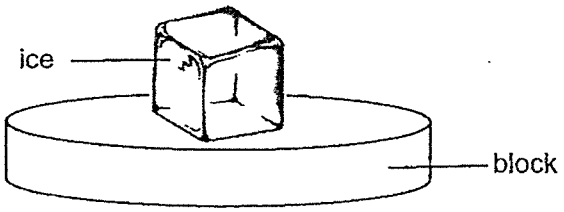


G

In which circuit, is the bulb Q the dimmest?

(1) D
(2) E
(3) F
(4) G

24 Ian wanted to find out how the material of the block affects the time take for an ice cube to melt completely. He set up the experiment as shown below.



The table below shows the state of the ice cube at regular intervals on the four blocks.

Block	State of ice		
	2 min later	5 min later	8 min later
P	solid	solid	solid
Q	solid	solid	liquid
R	solid	liquid	liquid
S	liquid	liquid	liquid

Based on the results above, which one of the following statements is correct?

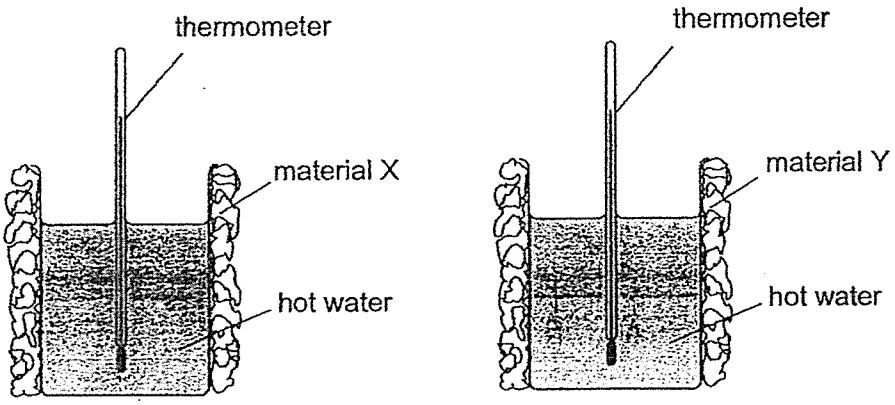
(1) S is the best conductor of heat.

(2) R is the poorest conductor of heat.

(3) P is a better conductor of heat than Q.

(4) Q is a better conductor of heat than S.

25 David wanted to find out which material, X or Y, helps to keep hot water warm for a longer period of time. He wrapped one glass beaker with material X and another similar glass beaker with material Y.



He measured the temperature of the hot water every 5 minute over a fixed period of time and recorded it in the table below.

	Temperature of water (°C)		
Beaker	**At the start**	**After 5 min**	**After 10 min**
with material X	80	70	65
with material Y	80	65	50

Based on the information given, which of the following are likely to be correct?

A

Better conductor of heat	Variable changed	Variable measured
Y	type of material	time taken for temperature of water to reach 65°C

B

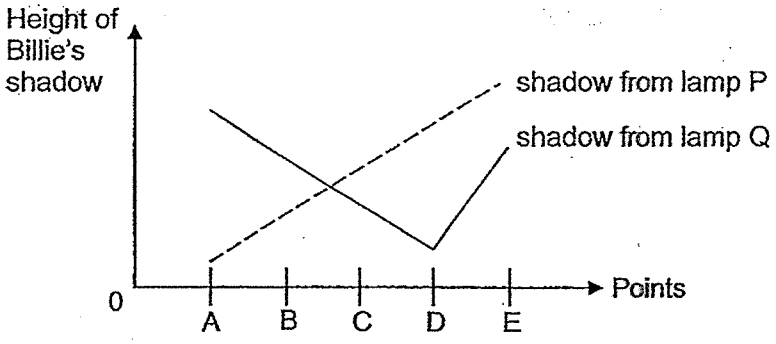
Poorer conductor of heat	Variable changed	Variable measured
X	type of material	temperature of water after 10 minutes

C

Poorer conductor of heat	Variable changed	Variable measured
X	temperature of water after 10 minutes	type of material

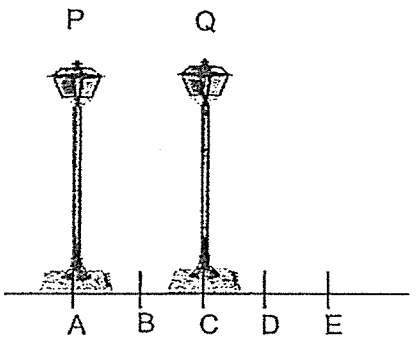
(1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

26 Two streetlamps, P and Q, were placed at different positions along a straight path. Billie noticed two shadows of herself as she walked from points A to E.

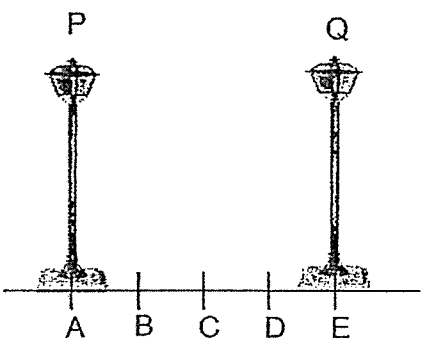


Based on the graph, which one of the following diagrams correctly shows the positions of lamps P and Q?

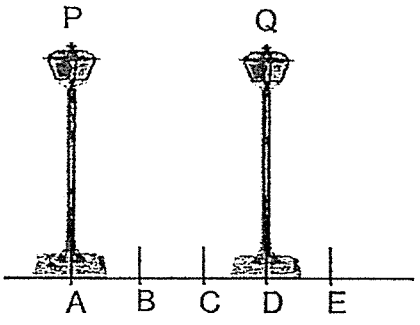
(1)



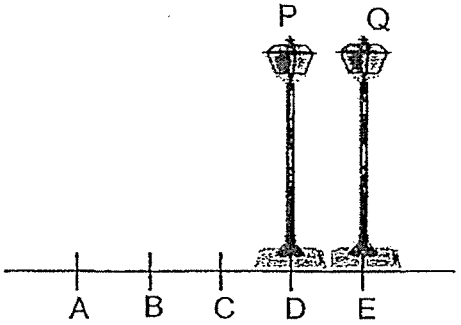
(2)



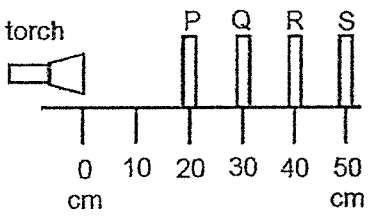
(3)



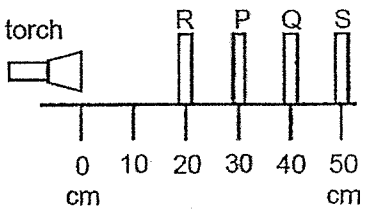
(4)



27 An experiment was conducted to investigate if light can pass through four different materials, P, Q, R and S. Each material was of the same thickness.
The materials were arranged in two different set-ups, X and Y, as shown below.



Set-up X



Set-up Y

The distance travelled by light for each set-up was measured and recorded in the table below.

Set-up	Distance travelled by the light (cm)
X	30
Y	40

Which of the following correctly describes P, Q, R and S?

A P and R allow light to pass through

B S allows some light to pass through

C Q does not allow light to pass through

(1) A and B only

(2) B and C only

(3) A and C only

(4) A, B and C

28 Four metal pins A, B, C and D were fixed onto a wooden board as shown below. Figure 2 shows two batteries and a bulb connected to two wires X and Y.

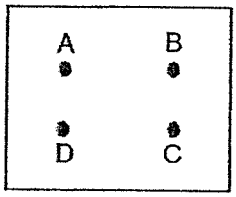


Figure 1

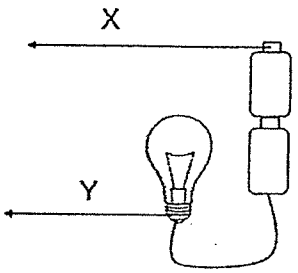


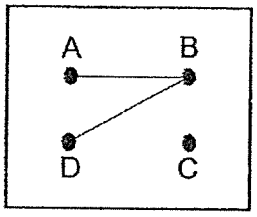
Figure 2

Ravi connected some but not all the pins with wires. He then connected X and Y across different pairs of pins. He recorded his results in the table below.

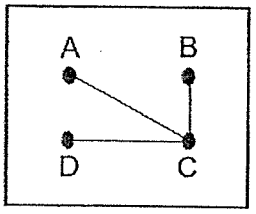
Pin connected to X	Pin connected to Y	Did the bulb light up?
A	B	Yes
B	C	No
C	D	No
D	A	Yes

Which one of the following correctly shows the connections tested by Ravi?

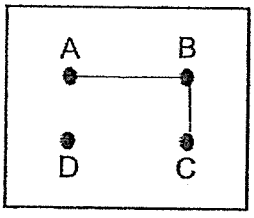
(1)



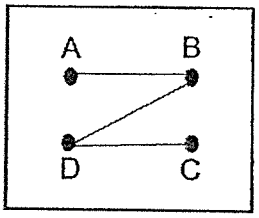
(2)



(3)



(4)



End of Booklet A

HENRY PARK PRIMARY SCHOOL

2024 END OF YEAR EXAMINATION

SCIENCE

PRIMARY FIVE

BOOKLET B

Name: _____ ( )

Class: Primary 5 ( )

12 QUESTIONS

44 MARKS

TOTAL TIME FOR BOOKLETS A & B: 1 HOUR 45 MINUTES

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

Marks for Booklet B: _____ / 44

Booklet B

Write your answers to questions 29 to 40 in the spaces given.
The number of marks available is shown in the [ ] at the end of each question or part question.

(44 marks)

---

29 The table below shows how plants and fungi are classified according to some characteristics.

Characteristics	Fungi	Flowering plants	Non-flowering plants
Does it make its own food?	Z	Yes	Yes
Question W	Yes	No	Yes
Does it have leaves and roots?	No	Yes	Yes

State what W and Z represent in the boxes below. [2]

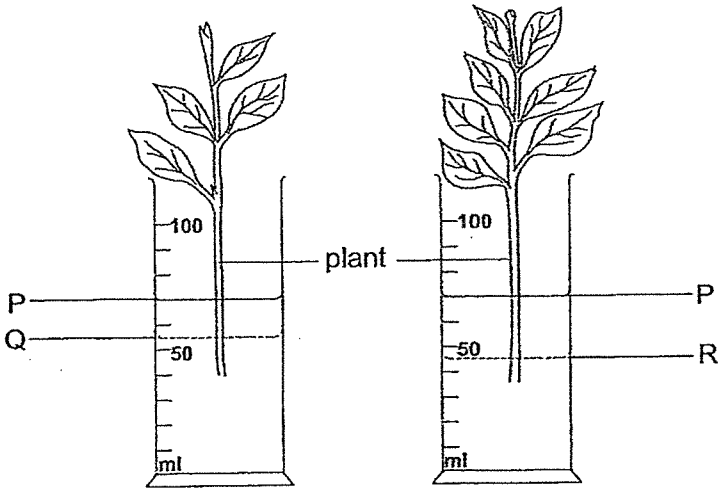
Question W	Z

Please do not write in the margin.

30 Cassie set up an experiment as shown below.

P shows the water level in the set-ups at the start of the experiment.

Q and R show water level at the end of the experiment.



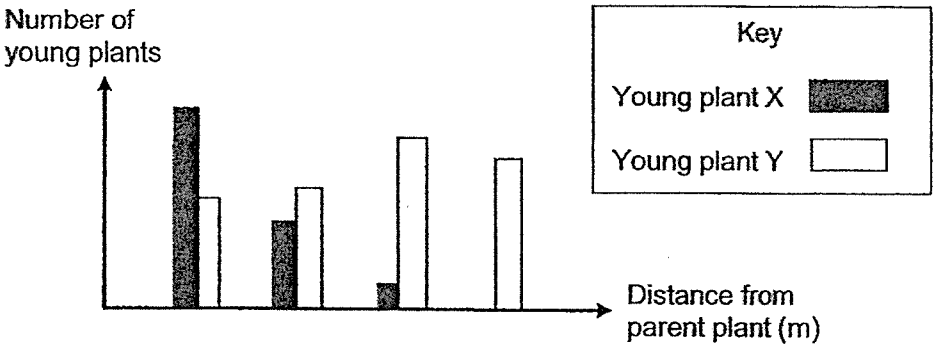
(a) State the variable that caused the difference between water levels Q and R. [1]

(b) Suggest one change that could be made to the above set-ups so that all the water lost is only taken in by the plants. [2]

Explain your answer.

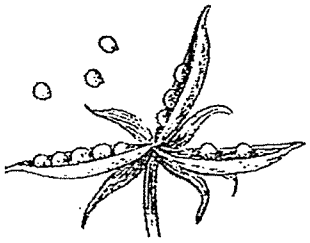
Please do not write in the margin.

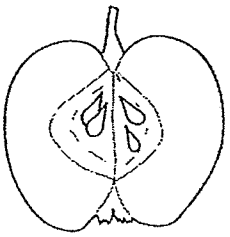
31 Bruno counted the number of two different types of young plants, X and Y at various distances from their parent plants in his garden. He recorded his findings in the graph below.



(a) Which one of the fruits below is likely to be the fruit of plant X?

Tick (✓) in the box provided for your answer. [1]

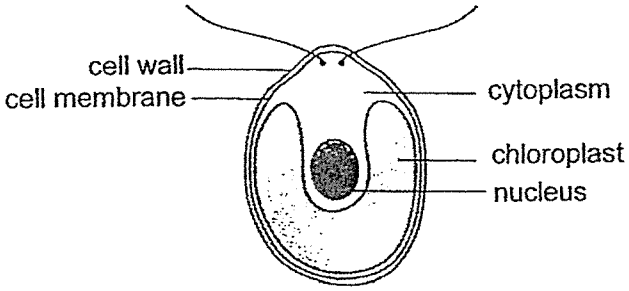




(b) Explain your answer in (a). [2]

(c) State one advantage in the method of dispersal for plant Y. [1]

32 The diagram shows a single-celled organism which lives in a pond.



(a) Name one part inside the organism that [2]

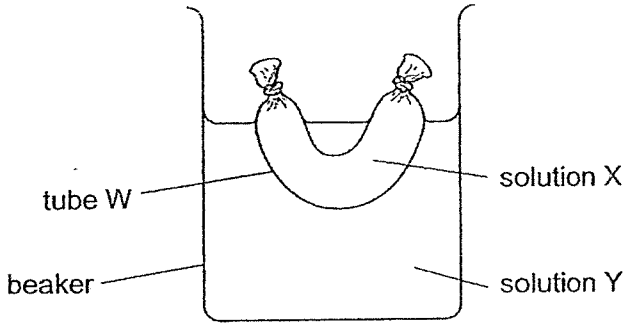
(i) shows that it is more likely to be a plant cell than an animal cell

_____

(ii) looks different from that found in a typical plant cell

_____

Tube W contains solution X. It was placed in a beaker filled with solution Y. It was observed that solution X could not move out of tube W, but solution Y could enter tube W.



(b) Based on the above set-up, which part of a cell has a similar function as tube W? [1]

Give a reason for your answer.

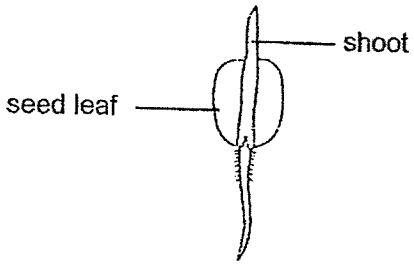
_____

_____

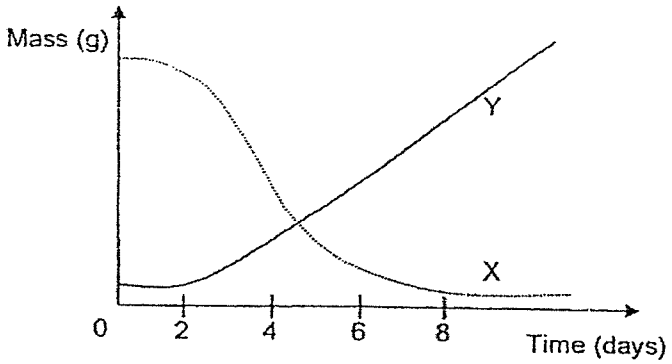
Please do not write in the margin.

33 (a) Why do living things reproduce? [1]

Siti carried out an experiment on a seed growing into a young plant as shown below.



In the graph below, the two curves show changes in the mass of the seed leaf and the shoot of the young plant during the experiment.

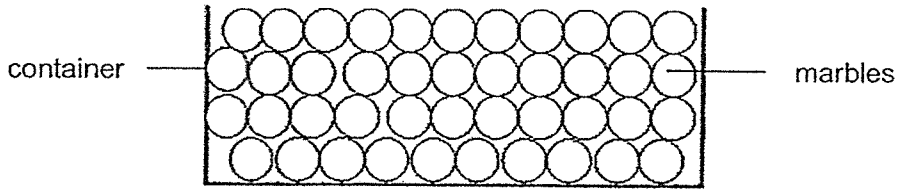


(b) Which curve, X or Y, shows how the mass of the seed leaf changes during the experiment? [1]

Explain your answer.

Please do not write in the margin.

34 Tommy filled a container with some marbles. The total volume of the marbles is 150 cm^3.



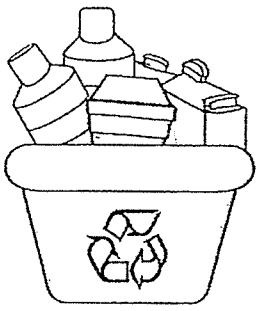
(a) What state(s) of matter make up the content in the container? [1]

(b) Tick (✓) the box that shows the most likely volume of the container. [1]

Volume of Container	Tick (✓) the correct volume
Less than 150 cm^3	
Is equals to 150 cm^3	
More than 150 cm^3	

(c) Explain your answer in (b). [1]

Martin wanted to dispose some milk cartons into the recycling bin as shown in the diagram below. Unfortunately, the bin was full.



Martin decided to flatten the milk cartons.

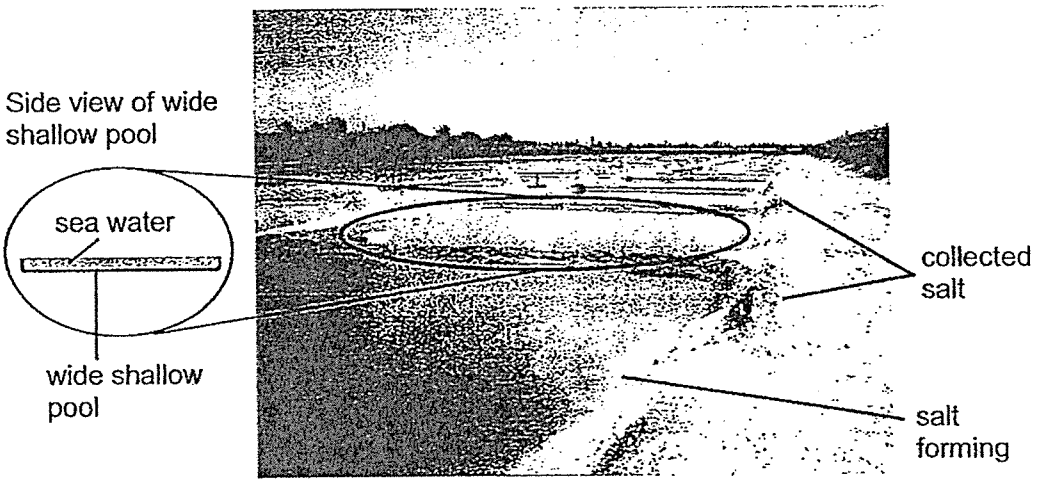
He was able to dispose all the milk cartons into the bin after they were flattened.

(d) Explain why. [1]

Please do not write in the margin.

Please do not write in the margin.

35 Salt is harvested from the ocean. First, sea water from the ocean is collected in wide shallow pools, as shown below. Next, through a slow process, salt starts to form in the shallow pools.



(a) Describe the process of obtaining salt from sea water. [2]

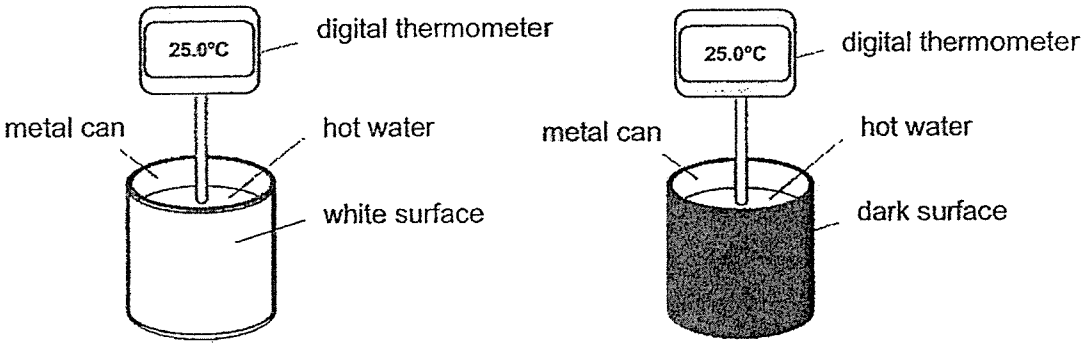
(b) Why is sea water collected in wide shallow pools? [1]

(c) Why is it important to ensure that the sea water that is used is not dirty? [1]

Country W does not have suitable weather all year round to harvest salt.

(d) Based on the process that you have identified in (a), suggest another way salt can be harvested in Country W. Explain your answer. [1]

36 Minho conducted an experiment using two identical air-tight containers, A and B, as shown. Container A had a white surface while container B had a dark surface. In each container, he poured the same amount of water with a temperature of 25°C. Them he placed the containers under the sun.



Container A Container B

(a) Based on the set-ups above, state the independent variable and dependent variable for the experiment. [2]

Independent variable: _____

Dependent variable: _____

When hot water is poured into both cans, Minho measured the temperature of the water in each can every three minutes.The table below shows the results.

Time (min)	Temperature of water (°C)	
	White surface can	Dark surface can
0	25	25
3	27	30
6	29	34
9	32	39
12	34	44
15	36	48

(b) State the relationship between the colour of the surface and the temperature of the water over 15 minutes. [1]

_____

_____

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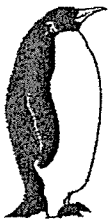
Question 36 continued

(c) Bird P lives in a very cold environment.

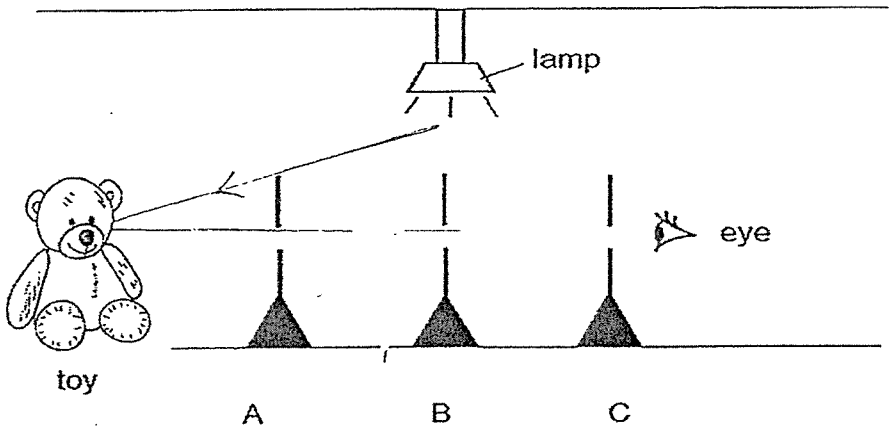


Bird P

(c) Bird P usually stands with its back facing the sun.
Based on the results of Minho's experiment, suggest a reason for bird P's behaviour. [2]

Please do not write in the margin.

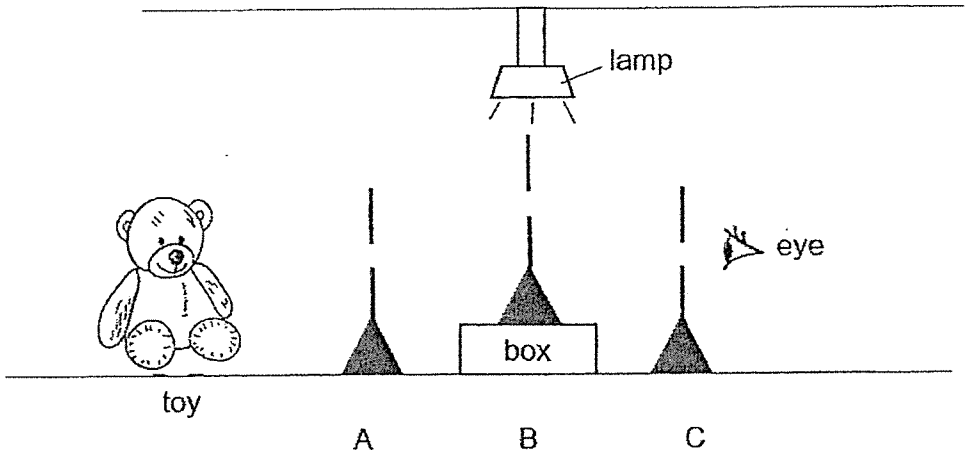
37 Jamal poked holes in the middle of sheets A, B and C. He placed these sheets between him and a toy as shown below.



He then looked through sheet C.

(a) Using a pencil and a ruler, draw the path of light which enabled him to see the toy. [1]

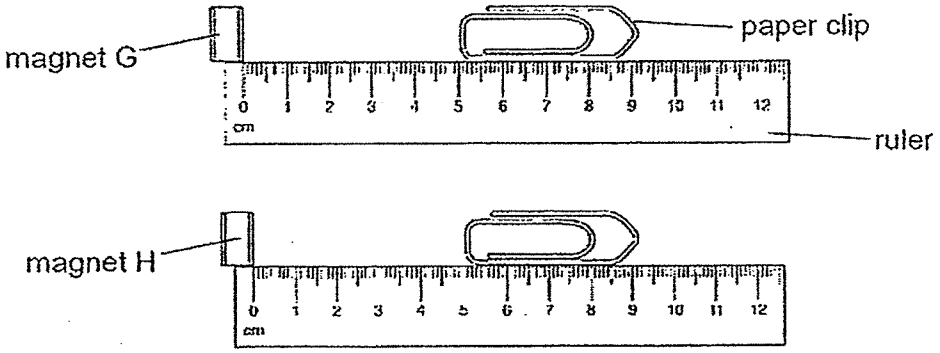
Jamal then placed a box under sheet B and looked through sheet C as shown below.



(b) He was still able to see the toy clearly. Give a reason for this. [1]

(c) Jamal changed the bulb of the lamp. The new bulb gave out blue-coloured light. What would be the colour of the shadow of the toy observed? [1]

38 Latha was investigating the strength of different magnets. She used a paper clip, a ruler and two magnets. The diagrams show the experimental set-ups.



(a) Name the material the paper clip is made of. [1]

_____

At the end of the experiment, Latha concluded that magnet G is stronger than magnet H.

(b) Explain how Latha arrived at her conclusion. [2]

_____

_____

_____

Study the experimental set-ups shown above.

(c) Suggest one way Latha ensured her experiment was a fair test. [1]

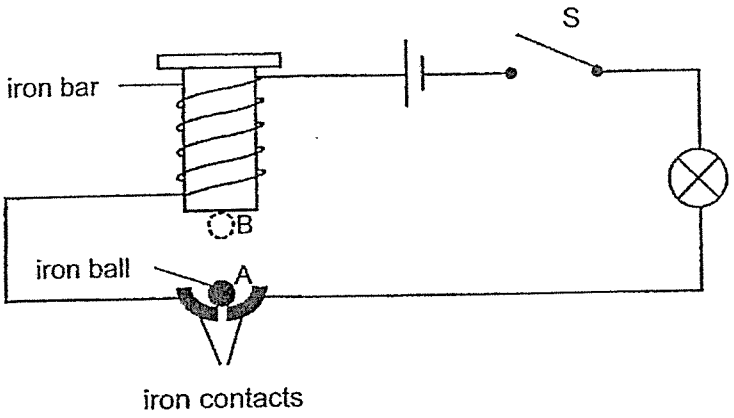
_____

_____

_____

Please do not write in the margin.

39 Ahmad set up an electric circuit as shown below.



When Ahmad closed the switch S, he noted the iron ball moved up and down between points A and B, and the light bulb turned on and off repeatedly.

In the diagram, the iron ball was resting on two contacts.

(a) Explain why the bulb lit up when the iron ball was at point A. [1]

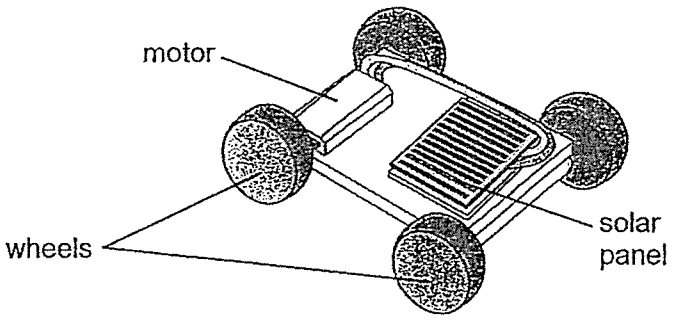
(b) When the iron ball was at point A, it was attracted by the iron bar. [1]
Explain why.

(c) What would happen to the iron ball when it was at point B? [2]
Give a reason for your answer.

Please do not write in the margin.

Please do not write in the margin.

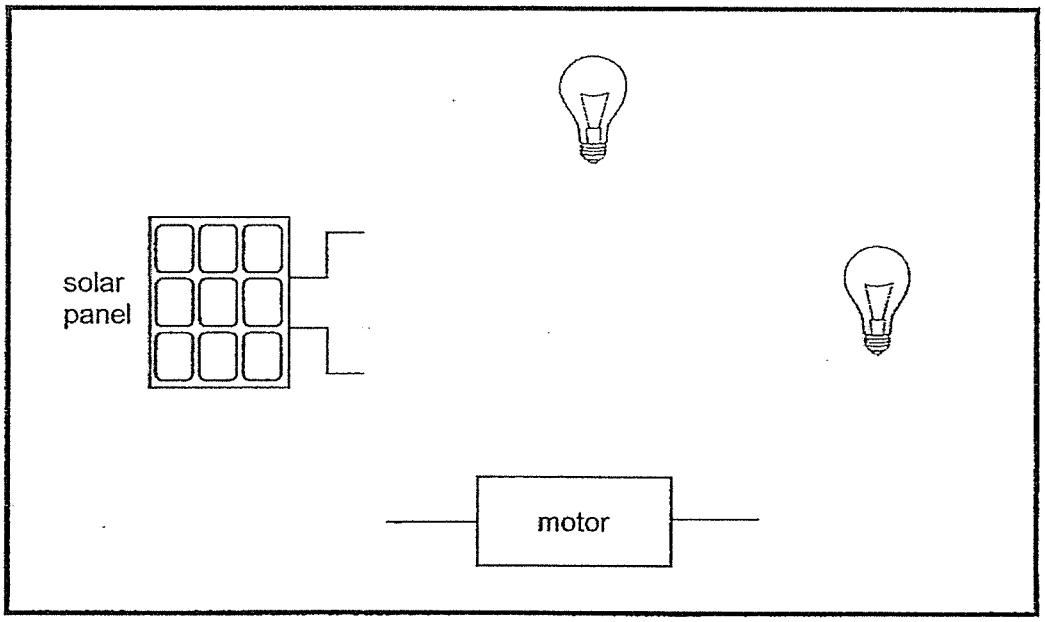
40 Dany built a toy car as shown.



Dany added two light bulbs to the toy car so that the bulbs worked as described below.

- After the second bulb was added, both bulbs became dimmer.
- Both bulbs will light up once the toy car starts moving.

(a) The diagram below shows part of Dany's circuit. Complete the circuit so that it will work as described. [3]



(b) What should be done to the circuit if Dany wanted it to work as described below. [2]

(i)	bulbs light up only when he wants them to	
(ii)	if one bulb blows, the other still remains lit	

End of Booklet B

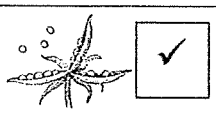
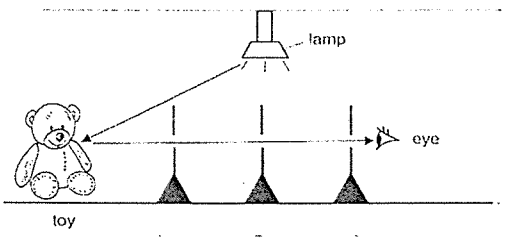
Please do not write in the margin.

Name: _____

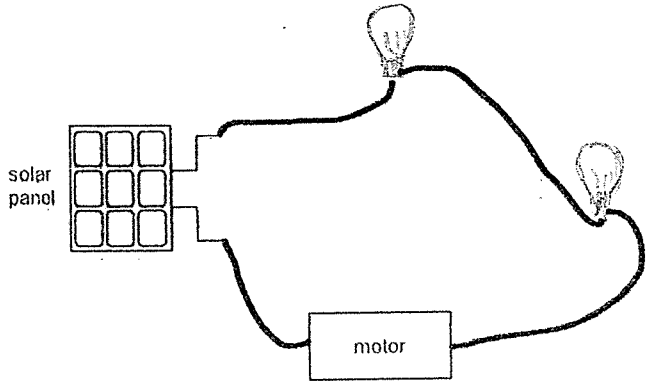
Henry Park (SA2)

Primary 5 Science EOY 2024 Henry Park SA2

Correction Sheet

Qn	Answer
29	**Question W** – Does it reproduce from spores? / Does it produce/have spores? Z - No
30	**a)** Number of leaves / Amount of leaves **b)** Pour oil at the water surface (in both set-ups) / Cover the opening of the container / measuring cylinder This will prevent water from evaporating (from the surface)
31	**a)**  **b)** Fruit of plant X is dispersed by splitting so more seeds are nearer the parent plant. **c)** It reduces competition for water, space and light.
32	**(a)** (i) cell wall / chloroplast (ii) chloroplast **(b)** Cell membrane as it controls the movement of substances in and out of a cell.
33	**(a)** To ensure the continuity of their kind **(b)** X. Seed leaf provides food for the young plant so the mass of the seed leaf decreases.
34	**(a)** Solid, gas **(b)** More than 150 cm^3 **(c)** Air will fill in the empty spaces between the marbles. So the volume of air will add on to the volume of the marbles. **(d)** The milk cartons are flattened to remove the air in them so that there will not occupy so much space in the bin.
35	**(a)** The seawater or water evaporates leaving the salt behind. **(b)** It increases the exposed surface area. **(c)** When water evaporates, the dirt remains with the salt. **(d)** Heat the seawater so that the water can evaporate faster.
36	**(a)** IV: Colour of surface/can DV: Temperature of water **(b)** The darker the surface, the faster the increase in the temperature of water **(c)** Bird P will gain more heat/gain heat faster to keep itself warm.
37	(a)  (b) Sheet B allows most light to pass through/ Sheet B is transparent. (c) Black

Name: ___ . . ____ ____

38	(a) Steel/Iron/Nickel/Cobalt (b) She compared the furthest distances from which magnets are able to attract the paper clip. She observed that magnet G is able to attract the paper clip from a further distance. (c) Both magnets were placed at the same position/paper clip used is the same.
39	(a) The circuit is closed and electricity is able to flow through (b) Circuit is closed, the iron becomes an electromagnet (c) The iron ball falls off. The circuit is open and the iron bar loses its magnetism.
40	(a)  (b) (i) add a switch (ii) Connect the bulbs in parallel.

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

2

END