Name: _____( )

Class: Primary 5 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Primary 5
End Year Assessment

SCIENCE

BOOKLET A

23 October 2024

Total Time for Booklets A and B: 50 minutes

28 questions
56 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

This booklet consists of 18 printed pages.

Downloaded from SingaKids.com

Section A (28 x 2 marks = 56 marks)
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 provided.

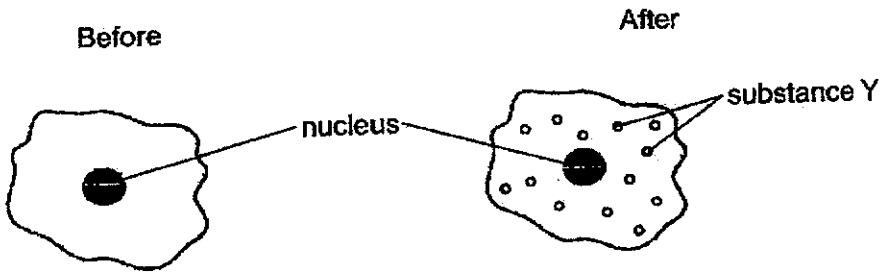
1. Study the table below. A tick (✓) indicates the presence of the cell part.

	Cell X	Cell Y	Cell Z
cell wall	✓	✓	
chloroplast		✓	
nucleus	✓	✓	✓

Where are cells X, Y and Z likely to be found?

	Cell X	Cell Y	Cell Z
(1)	cheek	leaf	root
(2)	root	leaf	cheek
(3)	root	cheek	leaf
(4)	leaf	root	cheek

2. Alison observed some animal cells placed under a microscope before and after placing them into a liquid containing substance Y. Her observations are shown below.

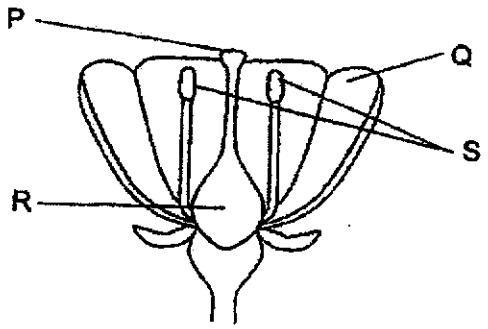


Which cell part allowed substance Y to enter the cell?

(1) nucleus
(2) cell wall
(3) cytoplasm
(4) cell membrane

Downloaded from SingaKids.com

3. Nathan conducted an experiment using two flowers A and B from the same plant. One of the flowers is shown in the diagram below.



He removed some parts from flowers A and B. After some time, he recorded which flower could develop into a fruit.

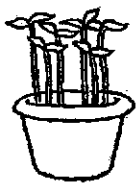
Flower	Presence of fruit
A	yes
B	no

Which of the following shows the correct parts of the flowers that have been removed?

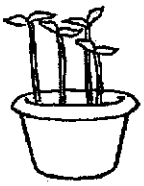
	Parts removed	
	Flower A	Flower B
(1)	P and Q	R and S
(2)	P and R	Q and S
(3)	R and S	Q and R
(4)	Q and S	P and R

Downloaded from SingaKids.com

4. Ravi wanted to find out if the number of young plants in each pot affect their height. He prepared pots X and Y as shown below. He recorded the changes in the height of the young plants as they developed.



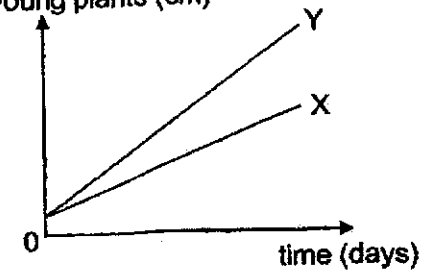
Pot X



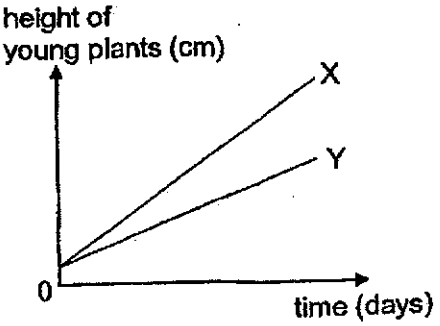
Pot Y

Which of the following graphs correctly shows the changes in the height of the young plants?

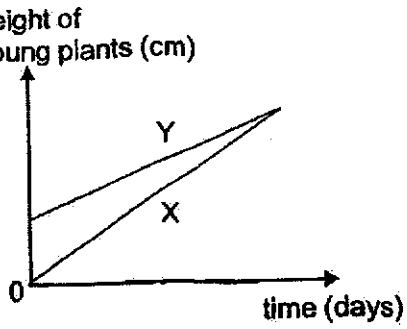
(1)



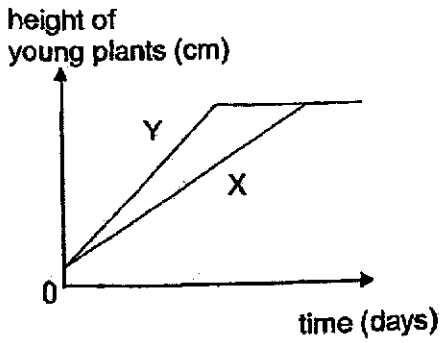
(2)



(3)

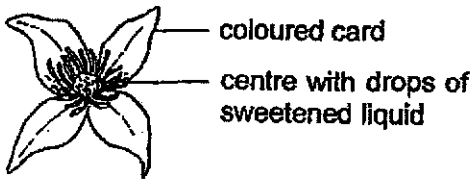


(4)



Downloaded from SingaKids.com

5. Yanni wanted to find out if the colour of flowers affects the number of butterflies visiting them. She prepared a paper flower using red paper and dripped 10 drops of sweetened liquid on it as shown below.



Which of the variables should she keep constant when she prepares another set-up to compare her results?

A size of flower
B colour of the flower
C number of butterflies visiting the flower
D number of drops of sweetened liquid on the flower

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

6. The diagram below shows a turtle and a frog.



turtle frog

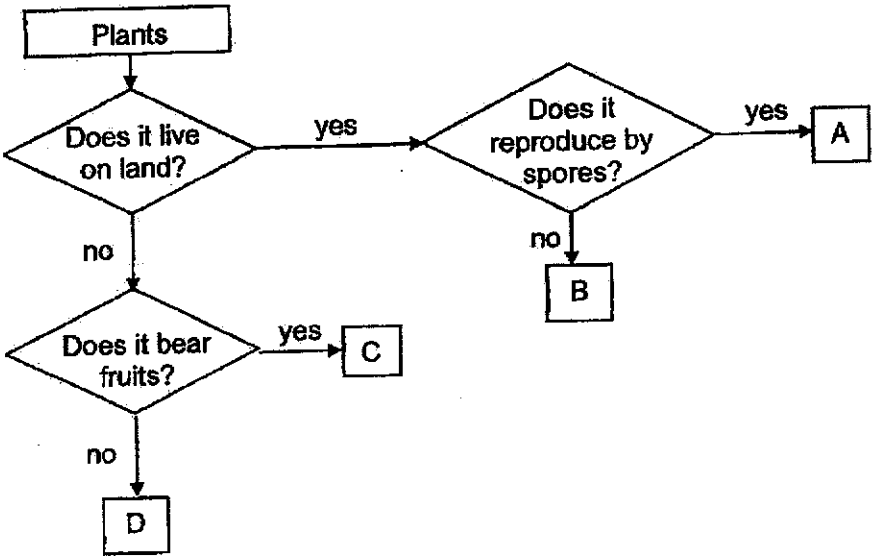
Which of the following statements is / are true of the turtle and the frog?

A Both have lungs.
B Both are amphibians.
C Both can move on land and in water.
D Both reproduce by laying eggs in water.

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

Downloaded from SingaKids.com

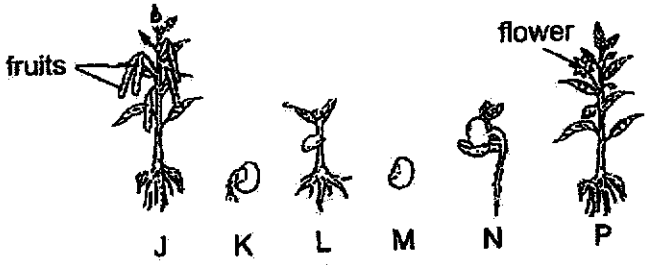
7. Study the flow chart below.



Which of the following statements is true?

(1) Plants A and D are flowering plants.
(2) Plants B and C are flowering plants.
(3) Plants A and C are non-flowering plants.
(4) Plants B and D are non-flowering plants.

8. The diagram below shows the different stages in the life cycle of a plant.



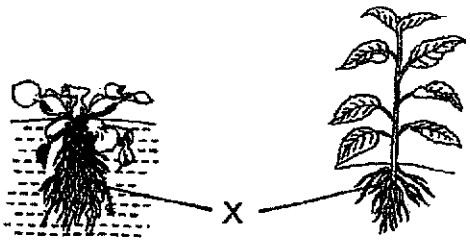
Which one of the following shows the correct order of the life cycle of the plant?

(1) J, P, M, K, N, L
(2) M, N, K, L, P, J
(3) P, J, M, K, L, N
(4) L, P, J, M, K, N

( )

Downloaded from SingaKids.com

9. The diagrams below shows two plants S and T.



plant S
floats on water

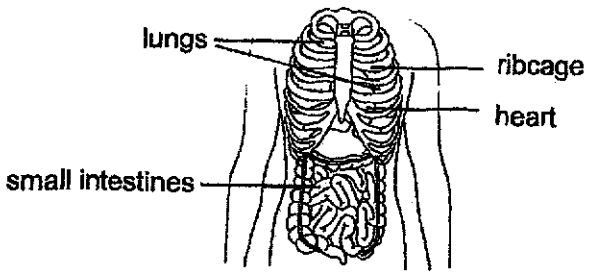
plant T
grows on soil

Which of the following statements is / are true of part X for plant S and T?

A Part X keeps the plants upright.
B Part X absorbs water for the plants.
C Part X holds the plant firmly to the soil.
D Part X absorbs mineral salts for the plants.

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

10. The diagram below shows some parts of a human body.



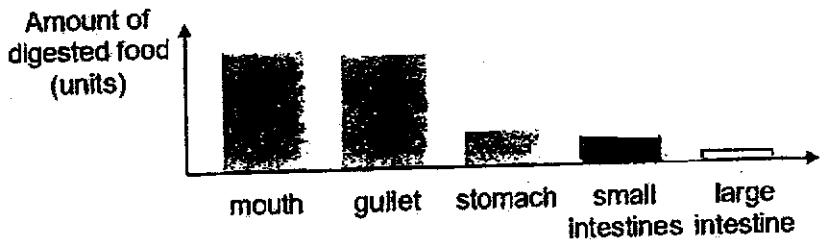
Which of the following correctly identifies the function of the parts above and the human system that it belongs to?

	Part	System	Function
(1)	lungs	circulatory	pumps blood to all parts of the body
(2)	ribcage	skeletal	protects the organs within it
(3)	heart	respirator	absorbs oxygen and removes carbon dioxide
(4)	small intestines	muscular	allows for movement of limbs

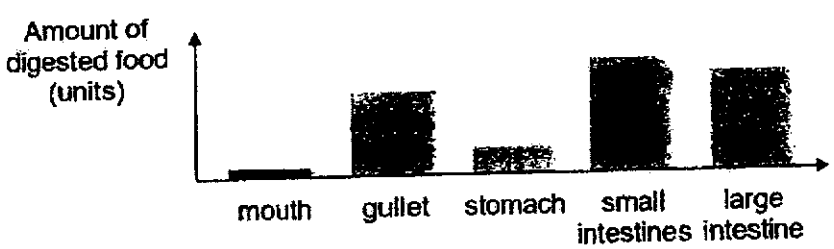
Downloaded from SingaKids.com

11. Which of the following graphs below correctly shows the amount of food digested in each part of the digestive system after a meal?

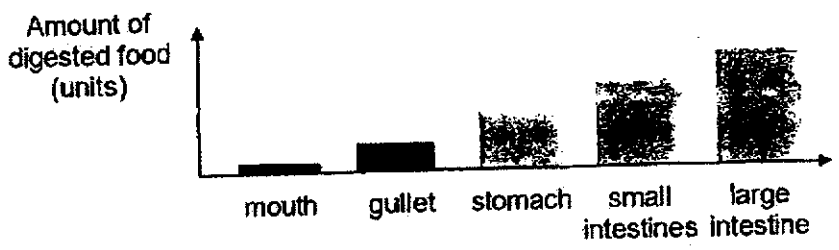
(1)



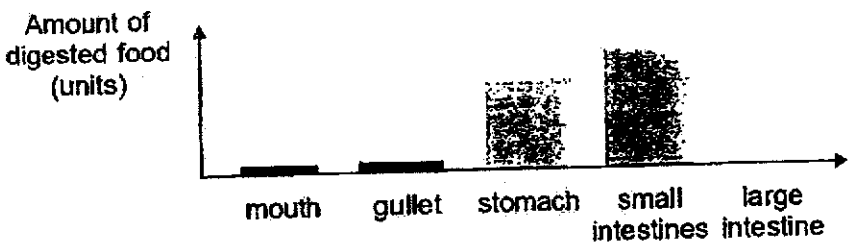
(2)



(3)



(4)



Downloaded from SingaKids.com

12. The diagram below shows a boy inflating a balloon.



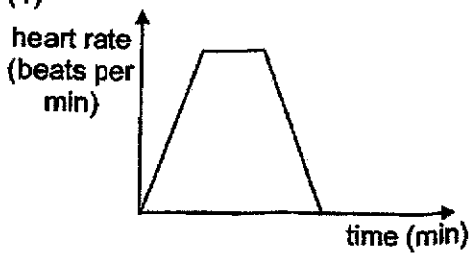
Which of the following correctly describes what happens to his ribcage, diaphragm and chest when he blows into the balloon once?

	Ribcage	Diaphragm	Chest
(1)	Move in and downwards	Move upwards	Smaller
(2)	Move in and downwards	Move downwards	Bigger
(3)	Move out and upwards	Move downwards	Bigger
(4)	Move out and upwards	Move upwards	Smaller

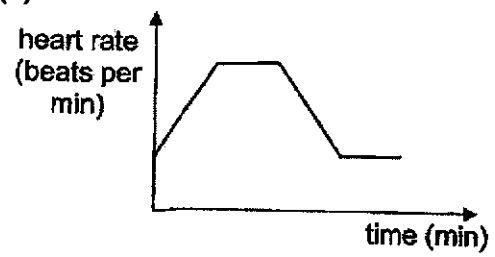
13. Harriet walked briskly for 5 minutes then jogged for 10 minutes before resting on a bench for some time.

Which of the following graphs below correctly shows the changes in her heart rate during the activities above?

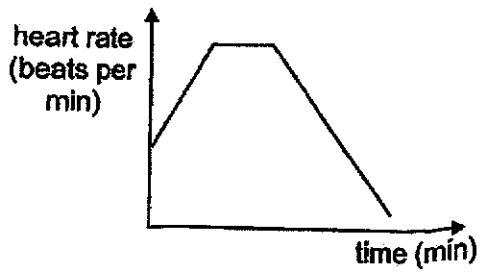
(1)



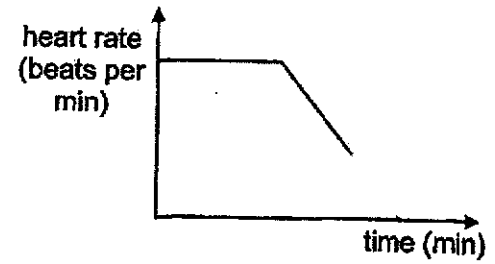
(2)



(3)

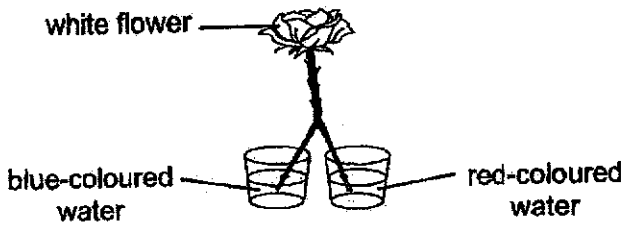


(4)



Downloaded from SingaKids.com

14. The diagram below shows a stalk of white flower cut into two equal parts and placed into two containers with different coloured water.



After some time, it was observed that some parts of the flower turned blue, some turned red, while the rest remained white.

Which of the following statements is / are true?

A The food made by the plant was blue and red in colour.

B No food-carrying tubes are found in the flower parts that remained white.

C The water-carrying tubes transported the different coloured water separately to different parts of the flower.

D The water-carrying tubes were damaged so it could not transport the food to the flower parts that remained white.

(1) C only

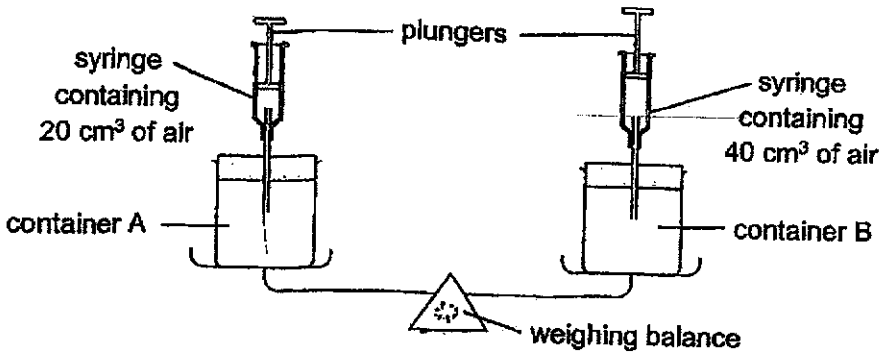
(2) A and B only

(3) A and D only

(4) B, C and D only

Downloaded from SingaKids.com

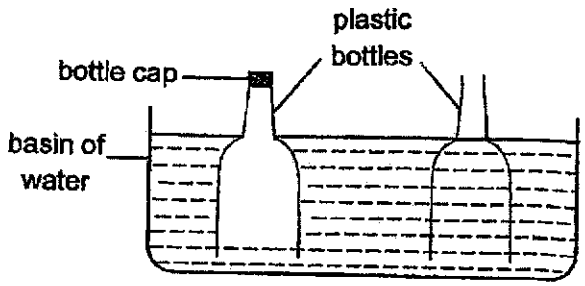
15. Study the diagram below.



Which of the following shows the correct observation when both plungers are pushed down at the same time?

(1) The weighing balance remained balanced.
(2) The plungers cannot be pushed down completely.
(3) The weighing balance tilts upwards at container A.
(4) The weighing balance tilts downwards at container A.

16. The diagram shows what happened when two plastic bottles were cut in half and pushed into a basin of water at the same time.

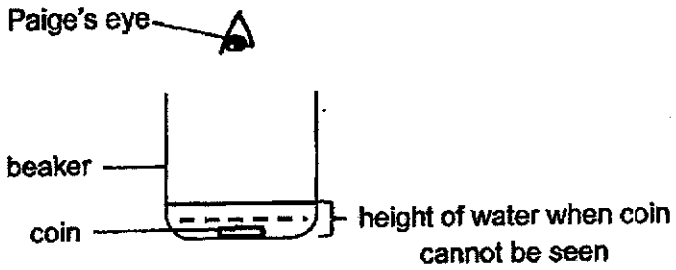


What can be concluded from the observation above?

(1) Air has mass.
(2) Air occupies space.
(3) Water has a definite shape.
(4) Water has a definite volume.

Downloaded from SingaKids.com

17. Paige placed a coin at the bottom of a beaker as shown in the diagram below. She then poured water from pond D into the beaker until she is unable to see the coin.



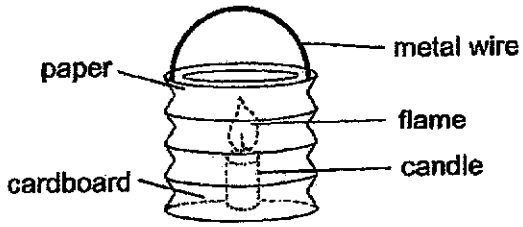
She measured the height of the water in the beaker and recorded it in a table. Paige repeated the same experiment using water samples from ponds E, F and G. Her results are shown in the table below.

Pond	D	E	F	G
Height of water in beaker (cm)	9	13	16	2

Based on her results above, which pond had the clearest water?

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

18. Ashley made a paper lantern and lit the candle as shown below.

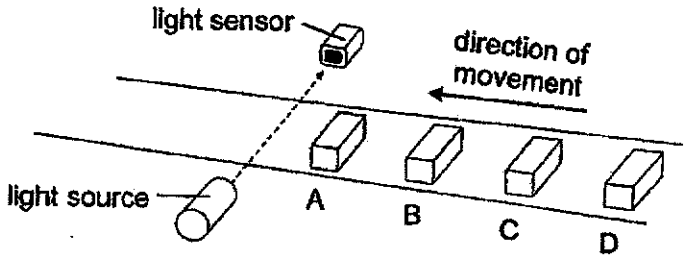


Which of the following correctly shows the reason why the materials were chosen to make the parts of a lantern?

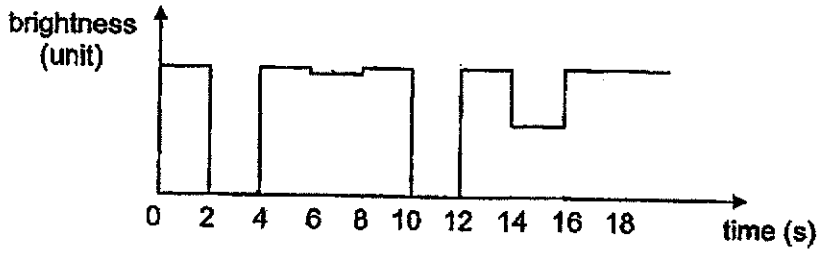
	Paper	Metal wire
(1)	It is flexible.	It has a high melting point.
(2)	It is opaque.	It is a good conductor of heat.
(3)	It absorbs water.	It is strong.
(4)	It is a poor conductor of heat.	It is a good conductor of electricity.

Downloaded from SingaKids.com

19. Four similar sized blocks A, B, C and D made from different materials were placed on a conveyor belt as shown below. The blocks were placed at equal distances apart.



The graph below shows the changes in the amount of light detected by the light sensor as the objects moved along the conveyor belt.

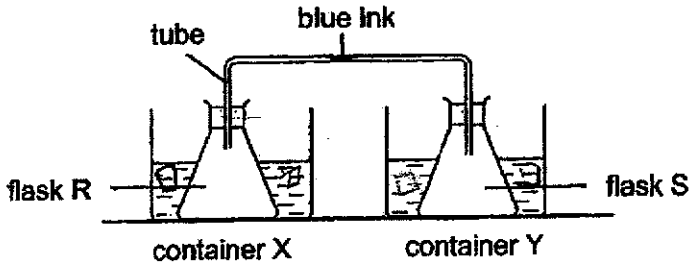


Which of the following correctly states what materials the objects are possibly made of?

	A	B	C	D
(1)	frosted glass	steel	clear plastic	wood
(2)	steel	frosted glass	wood	clear plastic
(3)	steel	wood	clear plastic	frosted glass
(4)	wood	clear plastic	steel	frosted glass

Downloaded from SingaKids.com

20. Kai Ting set up the following experiment.



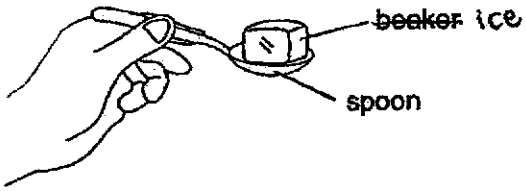
After five minutes, she noted that the drop of blue ink moved towards container X and away from container Y.

What could Kai Ting have done to the set-up above to produce the observed result?

A Heated container X
B Heated container Y
C Added ice cubes to container X
D Added ice cubes to container Y

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

21. Mark held a metal spoon with a cube of ice as shown below. After some time, he felt that the spoon was cold.

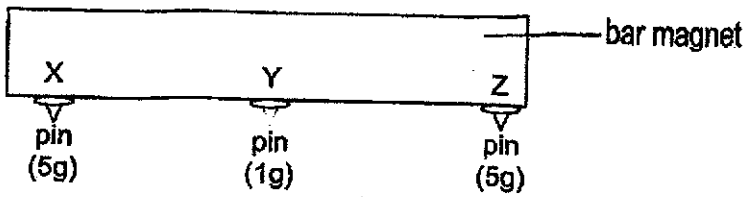


Which of the following correctly explains why Mark felt that the spoon was cold?

(1) The spoon gained heat from the ice and lost heat to his fingers.
(2) The spoon gained heat from his fingers and lost heat to the ice.
(3) The ice gained heat from the spoon and the spoon lost heat to his fingers.
(4) The ice lost heat to the spoon and his fingers gained coldness from the spoon.

Downloaded from SingaKids.com

22. Ben placed a pin at each point X, Y and Z of a bar magnet as shown below. He replaced each pin with a heavier pin, until he found the heaviest pin that could be attached without dropping. The results are as shown below.

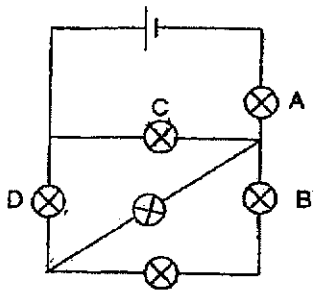


Which of the following can be concluded from the results?

A Z is the South pole.
B The pin is made of a magnetic material.
C Magnetism is the strongest at the poles.
D A freely suspended magnet always faces the North-South direction.

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

23. When one bulb was fused in the circuit, the rest of the bulbs continued to light up.



Which bulb was fused?

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

Downloaded from SingaKids.com

24. Four metal pins A, B, C and D were fixed on a wooden board as shown in Figure 1 below. Figure 2 shows a circuit tester.

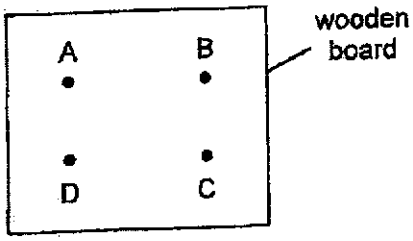


Figure 1

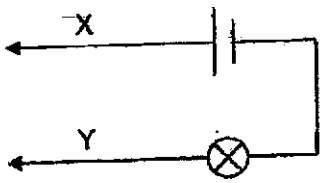


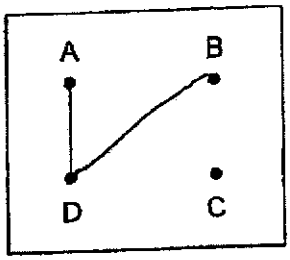
Figure 2

Rani connected some pins on the board in Figure 1 with wires. She then connected X and Y across different pairs of pins and recorded her results in the table below.

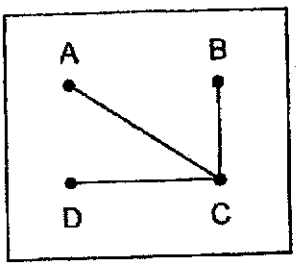
Metal pins	Did the bulb light up?
A and B	yes
B and C	no
C and D	no
D and A	yes

Which of the following shows the correct connections of the wires on the board?

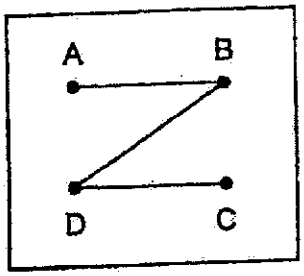
(1)



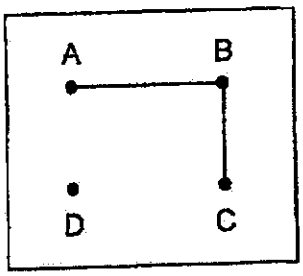
(2)



(3)

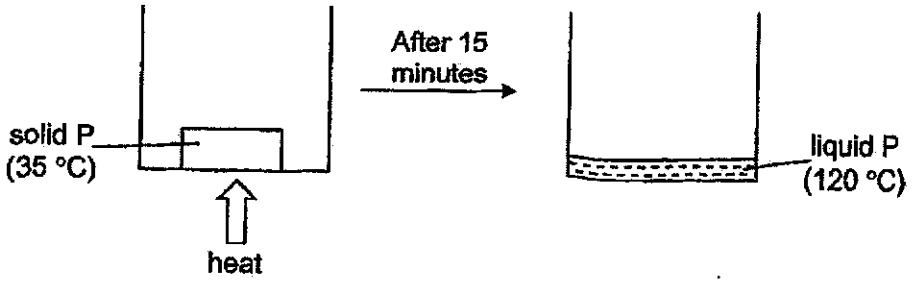


(4)



Downloaded from SingaKids.com

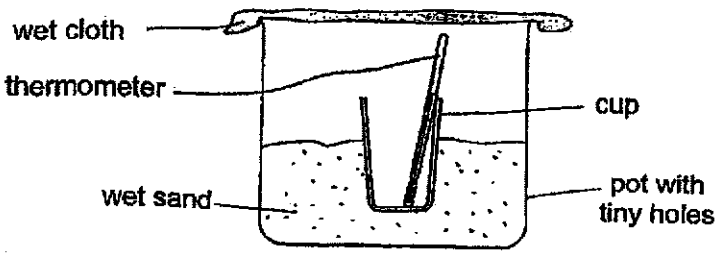
25. P is a solid at 35 °C. After 15 minutes of heating, P reached a temperature of 120 °C.



Which of the following is possible?

	Melting point of substance P (°C)	Boiling point of substance P (°C)
(1)	30	115
(2)	35	120
(3)	40	130
(4)	45	100

26. Study the diagram below.



The set-up was placed in a dry place and the temperature of air in the cup was recorded in the table below.

Time (min)	Temperature (°C)
0	30
10	29
20	27

The decrease in temperature of the air in the cup was mainly due to _____.

(1) water in the wet sand evaporating
(2) sand acting as a poor conductor of heat
(3) water vapour condensing on the wet cloth
(4) thermometer gaining heat from the air in the cup

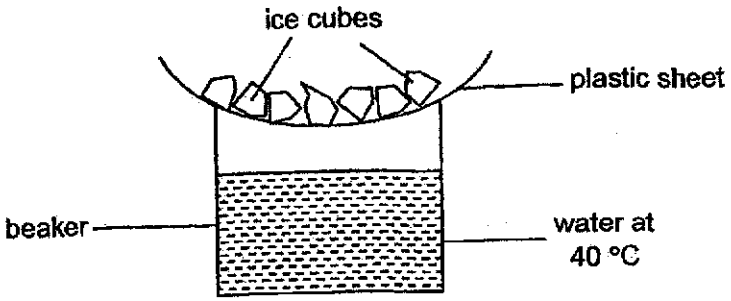
Downloaded from SingaKids.com

27. Which of the following statements are true about the water cycle?

A Evaporation takes place only in the day.
B The sun provides heat for water to evaporate.
C Water from the pond evaporates to become clouds.
D Plants and animals contribute to the water cycle as they give out water vapour.

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

28. Study the set-up below. Some water droplets were formed below the plastic sheet after some time.



What of the following change will allow more water droplets to form?

(1) Add more water at 40 °C to the beaker.
(2) Replace the plastic sheet with aluminium foil.
(3) Add some ice cubes into the beaker of water.
(4) Remove the ice cubes above the plastic sheet.

~End of Booklet A~

Downloaded from SingaKids.com

Name : _____ ( )

Class : Primary 5 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Primary 5
End Year Assessment

SCIENCE

BOOKLET B

23 October 2024

Booklet A	56
Booklet B	44
Total	100

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

13 questions
44 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

This paper consists of 15 printed pages.

_____

Parent's Signature/Date

Downloaded from SingaKids.com

Section B (44 marks)
For questions 29 to 41, write your answers in this booklet.
The number of marks available is shown in the brackets at the end of each question or part question.

29. Emily observed the characteristics of three different animals W, X and Y. The table below shows her observations. A tick (✓) indicates the presence of that characteristic.

	W	X	Y
Lays eggs	✓		
Has feathers	✓		
Has hair			✓
Can fly	✓	✓	✓
Has 3 body parts		✓	

(a) Based on the table above, Emily concluded that animal Y is a bird as it can fly. Do you agree with her? Give a reason for your answer. [1]

_____

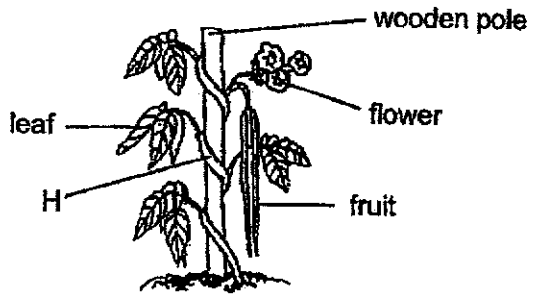
_____

(b) State a possible group of animals that X could belong to. [1]

_____

Downloaded from SingaKids.com

30. The diagram below shows a plant growing in a garden.



plant

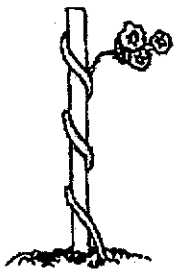
(a) State the substances transported in part H. [1]

(b) Other than transporting the substances stated in (a), what is another function of part H? [1]

Rozanah conducted an experiment using two similar plants A and B. She removed the flowers and fruits from plant A and removed the leaves and fruits from plant B as shown below.



plant A with leaves only



plant B with flowers only

(c) She noted that one of the plants died after some time. Which plant A or B died first? Give a reason for your answer. [1]

Downloaded from SingaKids.com

31. (a) State the function of the human respiratory system. Include in your answer the gases involved. [1]

The table below shows the breathing rates of Ben and John during a 10-minute exercise.

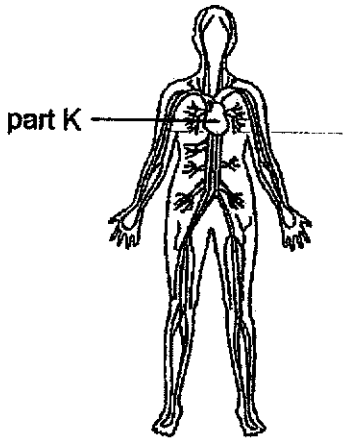
Time (min)	Breathing rate (breaths per minute)	
	Ben	John
0	12	18
2	15	23
4	18	29
6	21	33
8	26	37
10	32	42

(b) Ben exercises five times a week, but John only exercises once a month. What can be concluded about the effect that frequent exercise has on a person's breathing rate during exercise? [1]

(c) Other than repeating the same experiment on Ben and John to get an average of their breathing rates, what else could be done to make the experiment results more reliable? [1]

Downloaded from SingaKids.com

32. The diagram below shows a system in the human body.



(a) Other than part K above, name the other two parts of this system. [1]

_____

(b) Describe how oxygen in the environment passes through part K to reach the arms of a person. [2]

_____

_____

_____

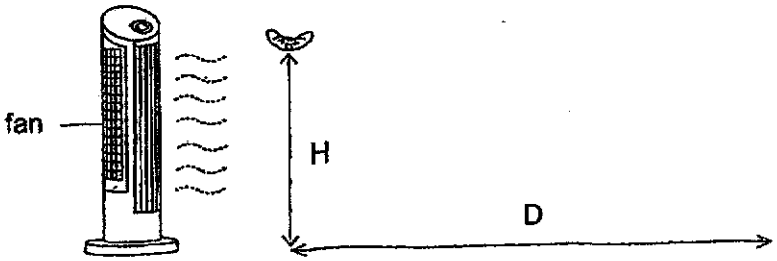
_____

Downloaded from SingaKids.com

33. Evan wanted to find out how the height at which seed T is dropped affects the distance it travels. Seed T has a wingspan of 4 cm as shown below.



He dropped seed T from a height (H) in front of a fan and measured the distance (D) travelled by the seed as shown below.



He repeated the experiment by dropping seed T from different heights and recorded the results in the table below.

H (cm)	150	120	90	60
D (cm)	58	49	36	22

(a) Based on the results, explain why it is an advantage for seed T to be found on taller trees. [1]

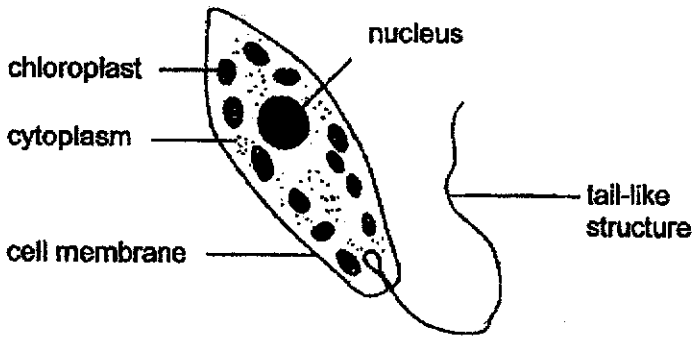
(b) Why did Evan use the same seed throughout the experiment? [1]

(c) Evan wanted to find out if the length of the wingspan of seed T affects the distance it travels. List 2 changes to be made to the above experiment to achieve his aim. [1]

Downloaded from SingaKids.com

(d) Why is it important for plants to disperse their seeds? [1]

34. Organism P is made up of one cell and lives in the pond. It has a tail-like structure which enables movement.



Organism P

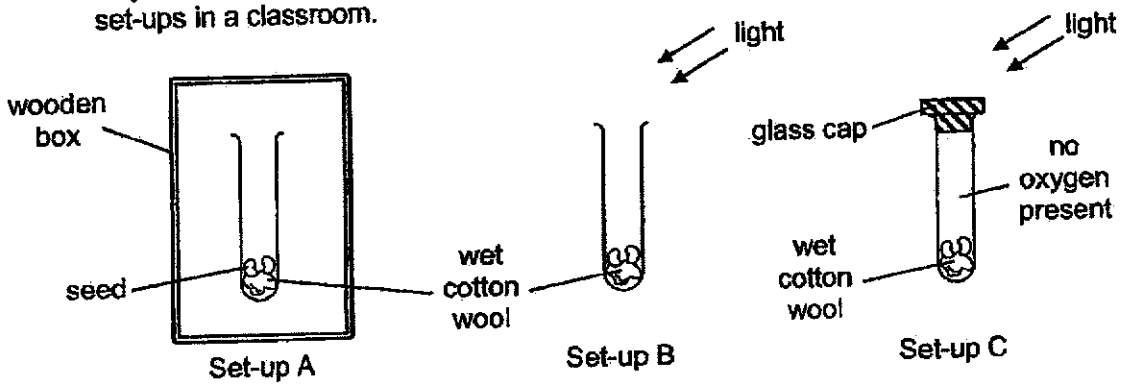
(a) Organism P constantly moves to areas which are brightly lit. Suggest why organism P behaves this way. [1]

(b) Darius classifies organism P as an animal cell as it is able to move. Do you agree? Explain your answer. [1]

(c) State a function of the nucleus. [1]

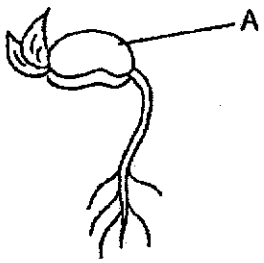
Downloaded from SingaKids.com

35. Roy wanted to investigate the conditions that affect germination. He placed three set-ups in a classroom.



(a) In which set-ups will the seeds germinate? Explain your answer. [2]

The diagram shows a seed after it has germinated.



(b) State the function of part A. [1]

Downloaded from SingaKids.com

36. When Raelyn added a ball of plasticine to a beaker of water, the water level rose to level X as shown in diagram 1.

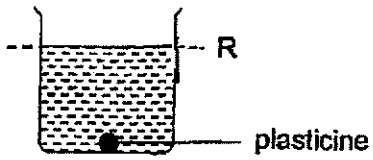


diagram 1

(a) Which property of matter allows the above observation to be made? [1]

_____

She removed the ball of plasticine from the beaker of water and reshaped it. She then placed it back to the same beaker of water.

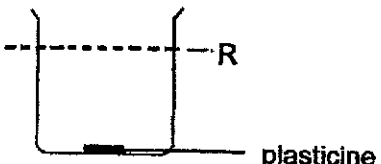
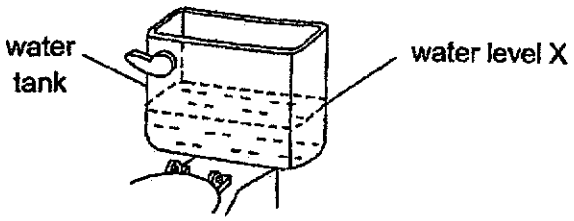


diagram 2

(b) In diagram, 2, draw the final water level after the plasticine was placed in the beaker. [1]

The diagram below shows a water tank used for flushing a toilet bowl.



After flushing, water enters and re-fills the tank. The tank will stop filling when the water reaches level X. To reduce the amount of water used to flush the toilet bowl, Raelyn placed a sealed plastic bottle filled completely with pebbles into the water tank.

(c) Explain how this would help to reduce the amount of water used to flush the toilet bowl. [2]

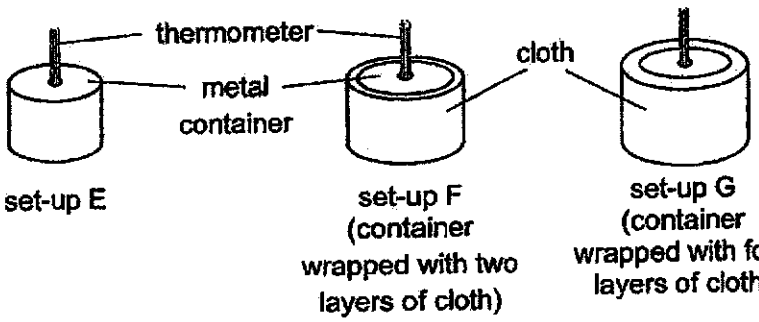
_____

_____

_____

Downloaded from SingaKids.com

37. William conducted an experiment using three metal containers as shown below.



He poured 250 ml of hot water into each container and measured the changes in temperature of the water over 30 minutes. The table below shows his results.

Time (min)	Temperature of water in set-up (°C)		
	E	F	G
0	60	60	60
5	52	54	58
10	44	48	56
15	37	42	54
20	31	37	52
25	27	32	50
30	27	27	48

(a) Based on the graph above, state the room temperature. [1]

_____

(b) What is the aim of his experiment? [1]

_____

_____

(c) What is the purpose of set-up E? [1]

_____

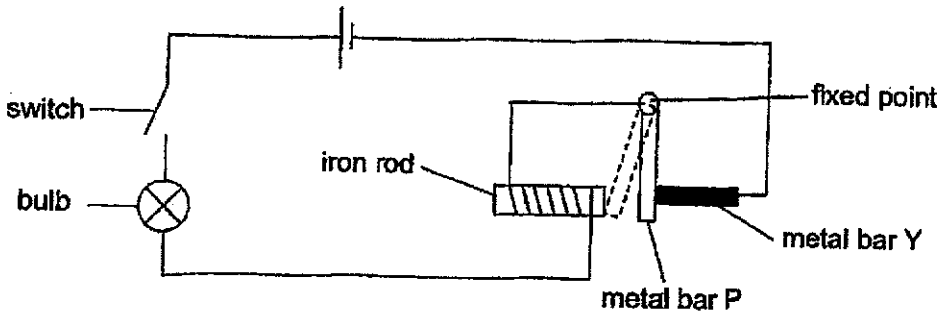
_____

_____

Downloaded from SingaKids.com

(d) William repeated his experiment using similar glass containers. He observed that the time taken for the water to cool down increased. Explain why this is so. [2]

38. Study the circuit below. Metal bar P is able to swing around the fixed point.



(a) Explain why metal bar P moved away from metal bar Y and touched the iron rod when the switch was closed. [2]

Metal bar P was then replaced with metal bar Q made of a different material. When the switch was closed, the bulb lit up but metal bar Q did not move at all.

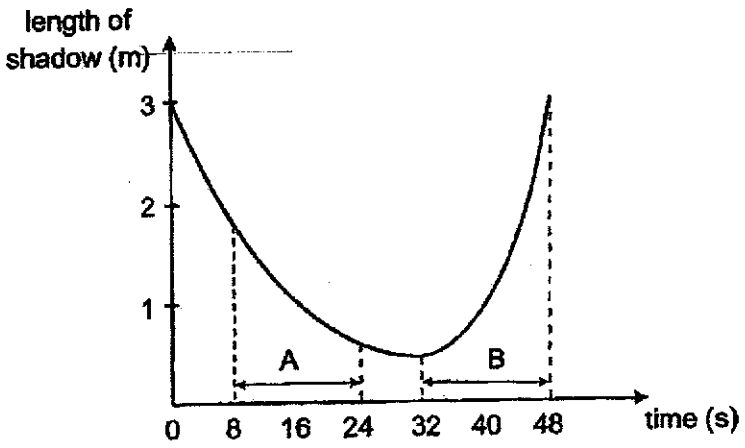
(b) Based on the above observation, state two properties of the material of metal bar Q. [1]

Property 1: _____

Property 2: _____

Downloaded from SingaKids.com

39. The graph below shows how the length of Ravi's shadow changes over a period of time as he walks in a straight line near a street lamp at night.



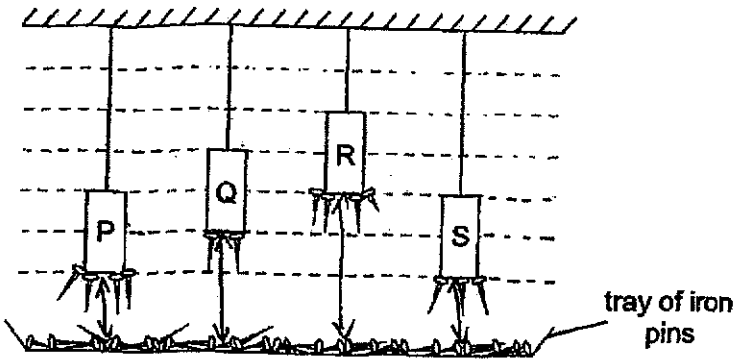
(a) State how shadows are formed. [1]

(b) Is Ravi walking towards or away from the street lamp during the period A shown in the graph above? Give a reason for your answer. [1]

(c) Ravi was walking faster during period B compared to period A. Do you agree? Explain your answer. [1]

Downloaded from SingaKids.com

40. Zane hung four magnets P, Q, R and S above a tray of identical iron pins. The results were shown in the diagram below.

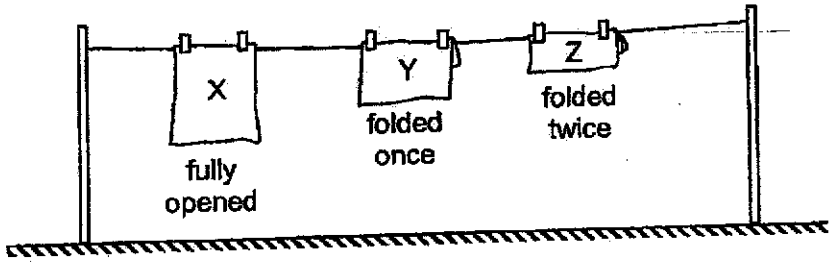


(a) Based on the results, name the magnet with the strongest magnetism. Explain your answer. [2]

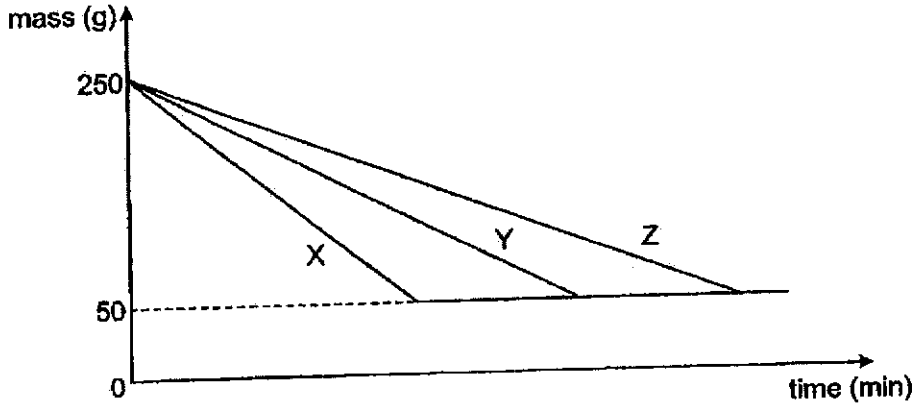
(b) Zane concluded that magnet Q has the weakest magnetism. Do you agree? Explain your answer. [1]

Downloaded from SingaKids.com

41. Kendra wanted to find out if the exposed surface area affects the rate of evaporation of water. She soaked three identical towels with the same amount of water, measured their mass and hung them to dry as shown below.



The graph below shows the changes in the mass of the towels over time.



(a) Based on the results, state the relationship between exposed surface area of towel and rate of evaporation of water. [1]

(b) Using the graph, how would Kendra be able to tell if the towel is completely dried? [1]

(c) List one other factor that Kendra should keep constant in her experiment. [1]

2

Downloaded from SingaKids.com

Kendra washed some plates. She placed the wet plates on top of one another as shown in Figure 1 and left them to dry.

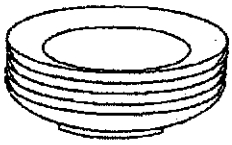


Figure 1

Her mother told her that the plates would dry faster if she placed them on a rack as shown in Figure 2.

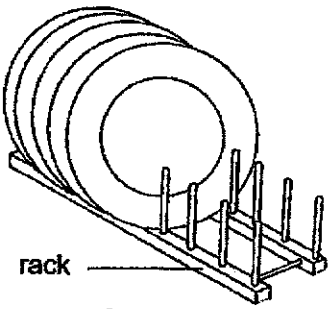


Figure 2

(d) Explain why the plates in Figure 2 would dry faster. [2]

_____

_____

_____

~ End of paper ~

Downloaded from SingaKids.com

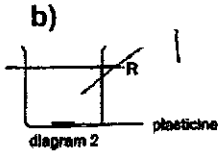
Downloaded from SingaKids.com

SCHOOL : CHIJ PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2024 SA2

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

Q29)	a) No, animal Y has hair and only mammals have hair. Y is a mammal and not a bird. b) Insects c)
Q30)	a) Water and food. b) It helps the plant to climb up the support so that more light can be absorbed by the leaves. c) Plant B died first. Plant B has no leaves to trop sunlight and make food for the plant without food, Plant B will die first.
Q31)	a) The human respiratory system allows gaseous exchange to take place with the surroundings. Oxygen will be taken into the body and carbon dioxide will be removed from our body. b) A person exercises frequently will have lower breathing rate during exercise. c) Repeat the experiment on other people and take the overage results.

Downloaded from SingaKids.com

Q32)	a) Blood and blood vessels. b) The nose will breathe in air from the surroundings which will travel down the windpipe and enter the lungs. Oxygen will be absorbed into the bloodstream. The heart will pump the blood rich in oxygen to the arms of a person.
Q33)	a) When seeds are dropped from taller trees, they stay in the air longer wind can carry them further away from the parent plant. b) So that mass of seed is the same, only I changes variable which is H. c) Make the height where seed T is dropped be the same, make the wingspan of seed T different after each drop. d) To reduce overcrowding and reduce competition between the young and parent plants over basic need space light and water.
Q34)	a)P has chloroplasts and the will trap the light to make food. b)No, animal cells do not have chloroplasts. c)The nucleus contains genetic information that can be passed down from one generation to another.
Q35)	a) The seeds in B and A will germinate. B has everything the seeds need to germinate which are oxygen, water and warmth C ahs no oxygen. b) It provides food for the young plant.
Q36)	a) Matter has volume and occupies space. b)  diagram 2 b) The plastic bottle with pebbles has volume and occupies space. It will replace the space that was previously taken up by the water. Less water will be used to reach water level X.
Q37)	a)27°C b)To find out how the number of cloth wrapped around the container affect the temperature of the hot water over 30 minutes. c)E is a control set-up. It is to show that any changes to the temperature of water is solely due to the layers of cloth.

Downloaded from SingaKids.com

	c) Glass is a poorer conductor of heat than metal. It will conduct heat from the hot water to the surroundings slower. The time taken will increase.
Q38)	a) When the switch is closed, the circuit will become a closed circuit, electric current flow through. The iron rod will be magnetised and attract P. b) 1)conductor of electricity 2)Non-magnetic material.
Q39)	a) Light travels in a straight line, when it is blocked by an opaque or translucent object, a shadow is formed. b) His shadow is decreasing he is walking towards the lamp. c) His shadow increased faster over the same period of time.
Q40)	a) R, R is the furthest away from the tray of iron pins and attracted the most number of pins. R has the strongest magnetism. P also attracted same number of pins as R but P is nearer to the tray. b) No, magnet Q attracted least number of pins but it is not nearest to the tray.
Q41)	a) When the expose surface area of water increases, the rate of evaporation will increase. b) The towel is completely dried when the towel is 50 grams. c) Surrounding temperature. d) The exposed surface area of the plates in contact with the surrounding is higher. The water on the surroundings and evaporate faster.

Downloaded from SingaKids.com

Downloaded from SingaKids.com