RED SWASTIKA SCHOOL

SCIENCE
2019 SEMESTRAL EXAMINATION 2
PRIMARY 4

Name : _____( )

Class : Primary 4 /_____

Date : 29 October 2019

BOOKLET A

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

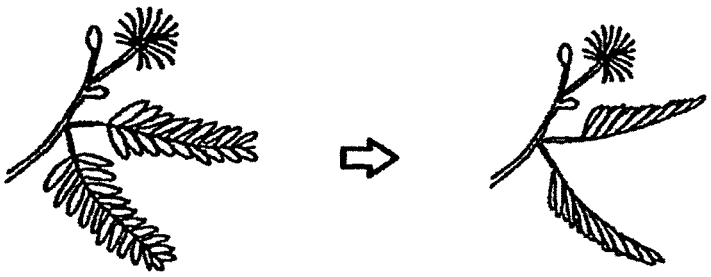
Booklet A: 28 questions (56 marks)

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 18
   b. Questions 1 to 28

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

1. The leaves of a plant close when touched.



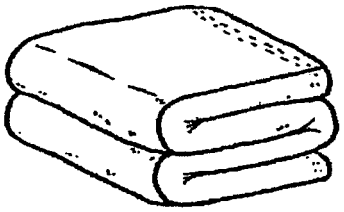
before touching **after touching**

This shows that the plant is a living thing because it can _____.

(1) grow
(2) breathe
(3) respond
(4) reproduce

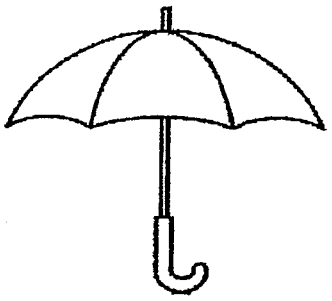
2. Which of the following objects is not made of waterproof material?

(1)



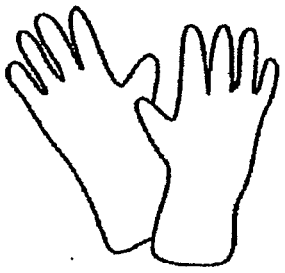
cotton towel

(2)



plastic umbrella

(3)



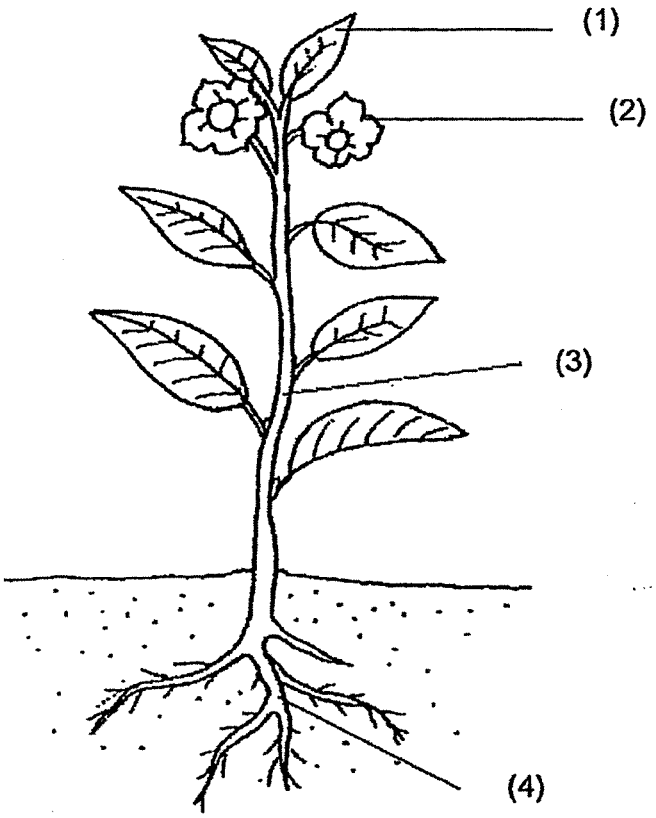
rubber gloves

(4)



metal spoon

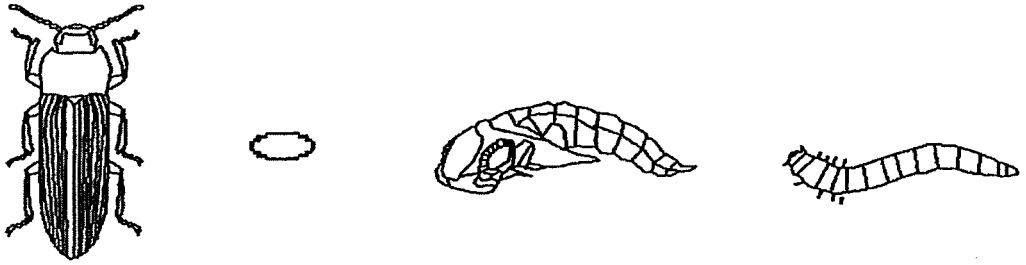
3. The diagram below shows a plant.
Which part, (1), (2), (3) or (4), are the roots?



4. In which part of the digestive system is food absorbed into the blood?

(1) mouth
(2) stomach
(3) small intestine
(4) large intestine

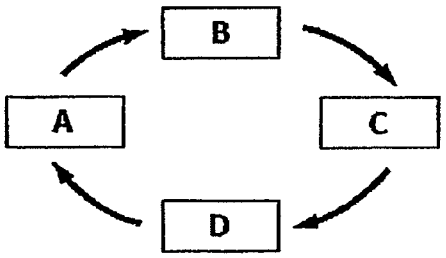
5. A, B, C and D are the various stages in the life cycle of a mealworm beetle.



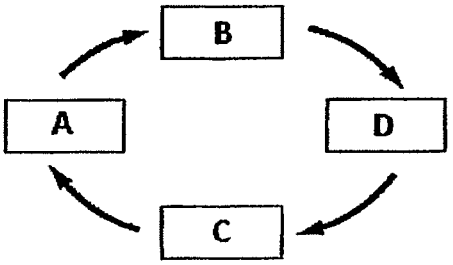
A B C D

Which of the following correctly shows the life cycle of a mealworm beetle?

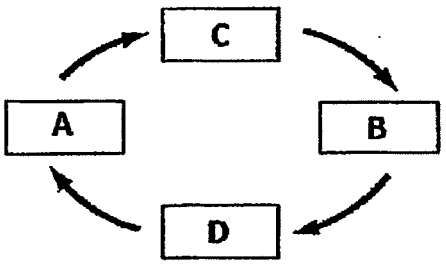
(1)



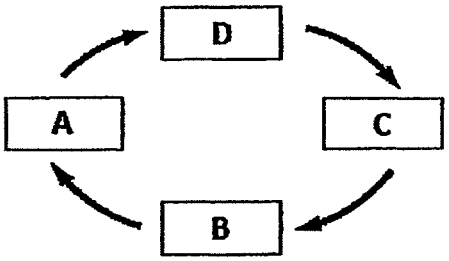
(2)



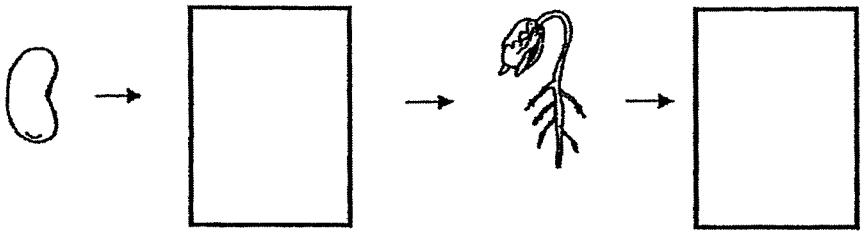
(3)



(4)

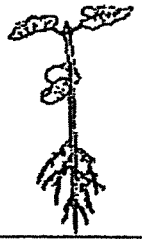


6. The diagram below shows the growth of a young plant with two missing stages P and Q.



P Q

Which one of the following shows the correct stages for P and Q?

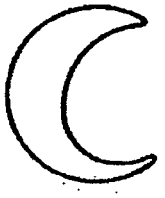
	P	Q
(1)		
(2)		
(3)		
(4)		

7. Which one of the following properties is true for both air and a pencil?

(1) They can be seen.
(2) They take up space.
(3) They have definite shape.
(4) They have definite volume.

8. Which one of the following is a source of light?

(1)



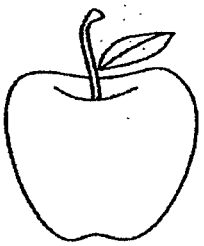
the moon

(2)



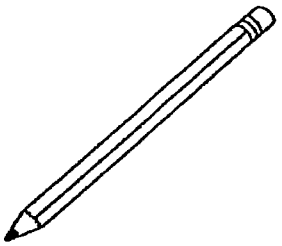
a fire

(3)



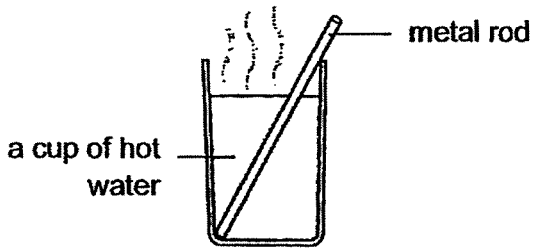
an apple

(4)



a pencil

9. Ronald places a metal rod in a cup of hot water.



The metal rod becomes hotter after a while. Which one of the following explains this?

(1) The cup loses heat to the hot water.
(2) The rod loses heat to the hot water.
(3) The hot water gains heat from the rod.
(4) The rod gains heat from the hot water.

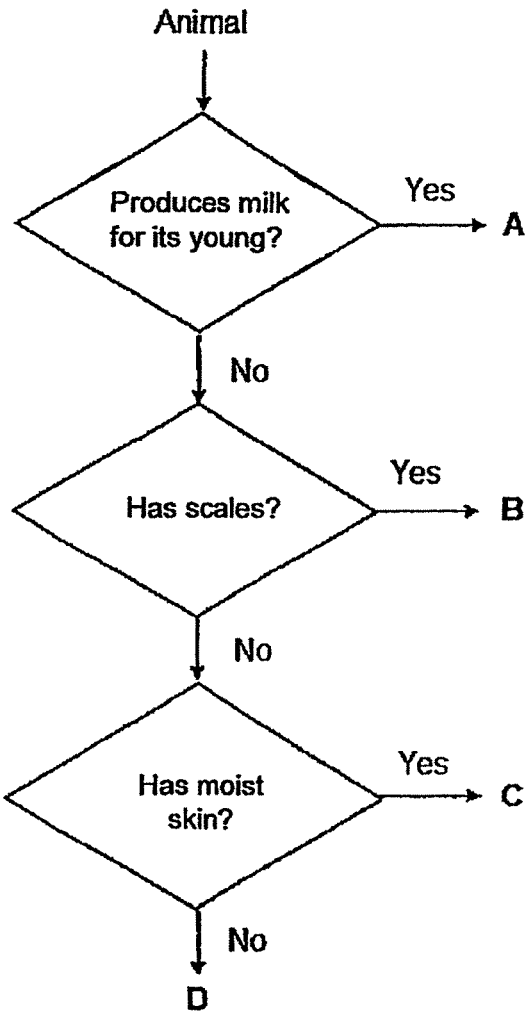
10. The diagram shows a magnet brought near a glass block.



What will happen to the glass block?

(1) It will not move.
(2) It will move up.
(3) It will move to the right.
(4) It will move to the left.

11. Study the flow chart below.



Which one of the following best represents A, B, C and D?

	A	B	C	D
(1)	mammal	fish	amphibian	insect
(2)	bird	insect	mammal	amphibian
(3)	amphibian	mammal	insect	fish
(4)	mammal	amphibian	insect	bird

12. Devi wanted to find out if moisture is needed for bread mould to grow. The table below shows the information of the two set-ups prepared by Devi.

Condition	Set-up A	Set-up B
Type of bread	white bread	wholemeal bread
Amount of water poured on bread	0ml	5ml
Location where the set-up was placed	on dining table	on dining table
Type of plastic bag	allows light to pass through	allows light to pass through

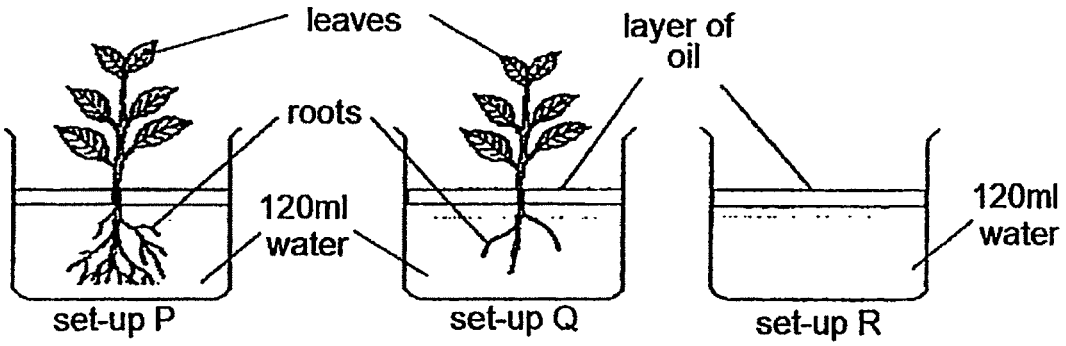
Her teacher told her that her experiment was unfair. Which of the following best explains why Devi's experiment was unfair?

(1) Water was not added to set-up A.
(2) The type of bread used in both set-ups was different.
(3) The type of plastic bag in both set-ups was the same.
(4) Both set-ups were placed in the same place.

13. Which of the following body systems matches its function?

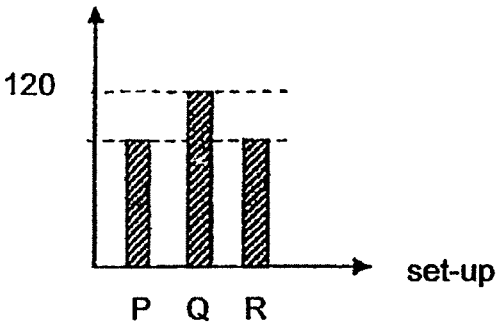
	Systems	Functions
(1)	Skeletal	breaks down food into simpler substances
(2)	Digestive	helps different parts of the body move
(3)	Respiratory	supports the body
(4)	Circulatory	carries substances to all parts of the body

14. Jack set up the experiment as shown below.

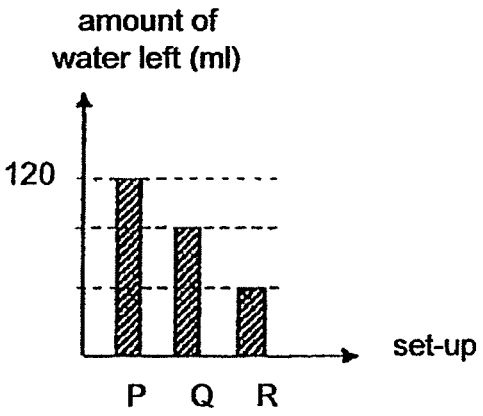


He left the set-ups near a window for three days.
Which one of the following graphs most likely shows the amount of water left in each set-up after three days?

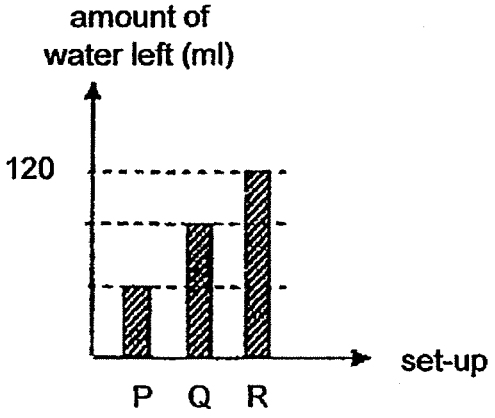
(1)



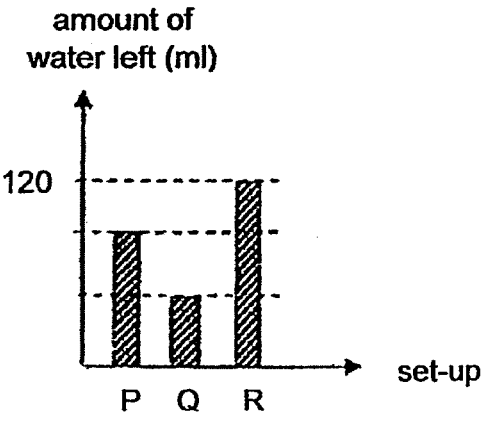
(2)



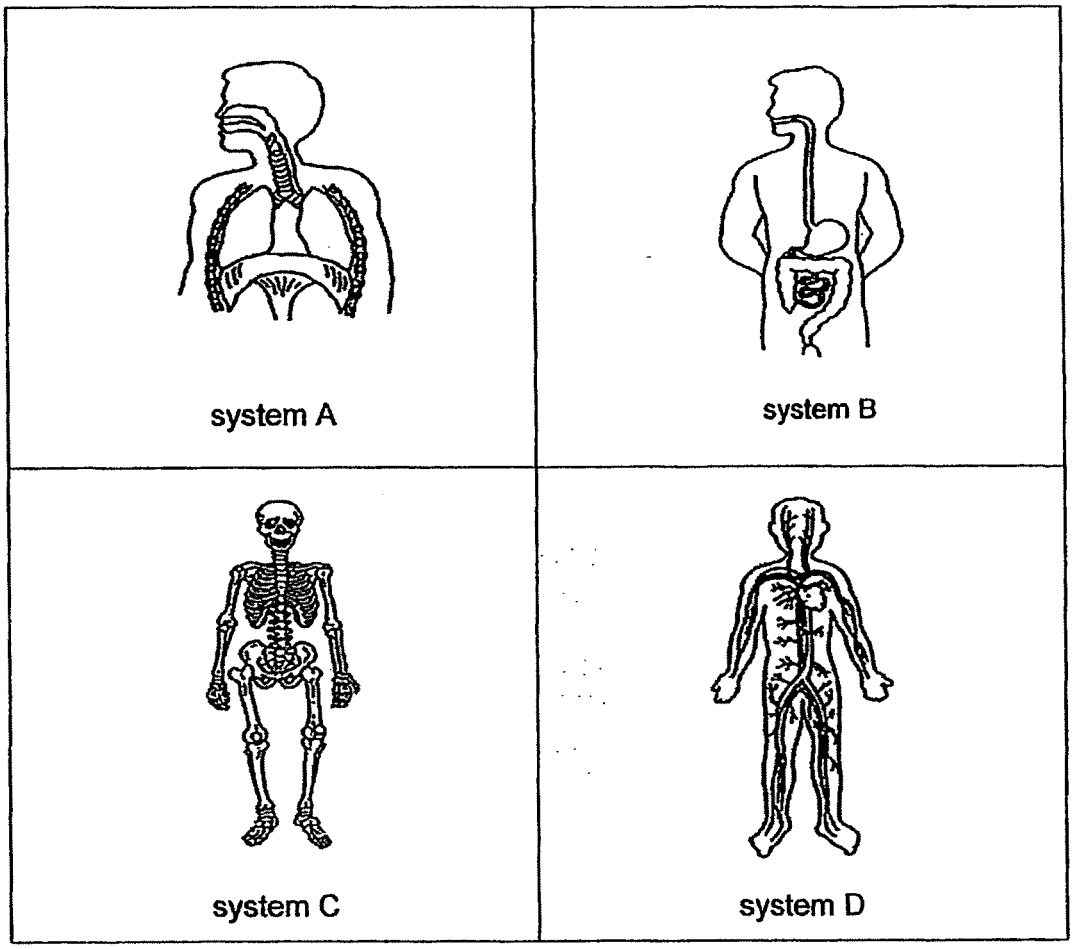
(3)



(4)



15. Study the human systems below.



Which two human systems work together to enable all parts of the body to get digested food?

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

16. How is an adult mosquito and its young similar?

A: They have six legs.

B: They have a pair of wings.

C: The young looks like the adult.

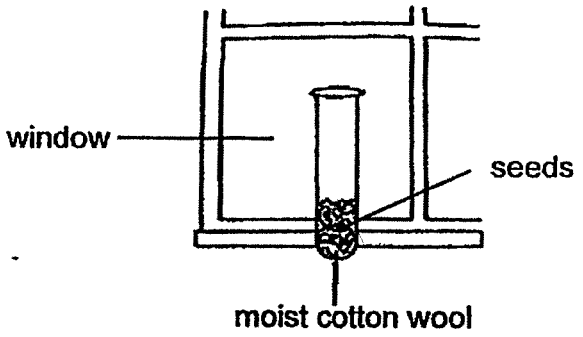
(1) A only

(2) A and B only

(3) B and C only

(4) A, B and C

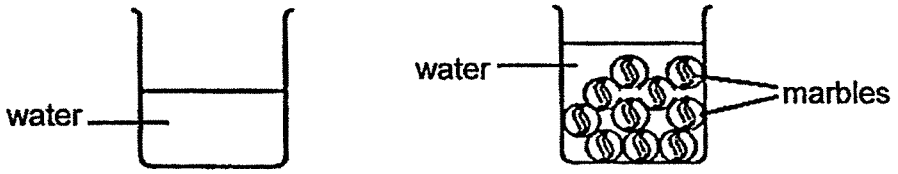
17. Rebecca sets up an experiment to find out if warmth is needed for seeds to germinate. She puts five seeds onto some moist cotton wool in a test tube and places the test tube near a window in a room.



Which one of the following should she use as the control set-up to prove that it is the presence of warmth that causes the seed to germinate?

	Number of seeds	Condition of cotton wool	Location of test tube
(1)	5	dry	near window
(2)	5	dry	dark room
(3)	3	moist	refrigerator
(4)	5	moist	refrigerator

18. Salmah filled a beaker with water as shown below. She then placed some marbles into the water one at a time. She observed that the water level in the beaker increased.



Which one of the following could she conclude from her experiment?

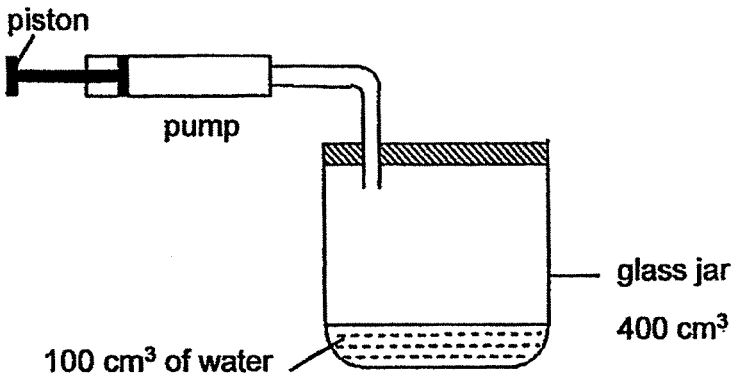
(1) Marbles have mass.

(2) Water has a fixed shape.

(3) Marbles occupy space.

(4) Water has no fixed volume.

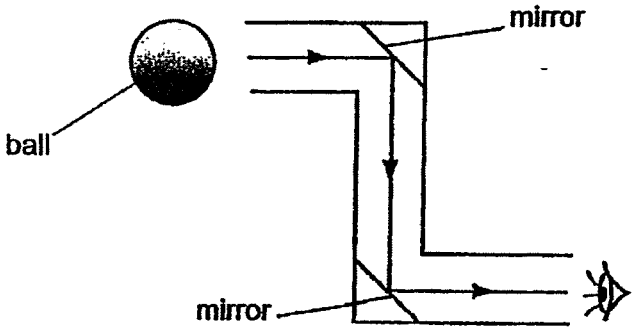
19. Aminah had a glass jar with a capacity of 400 cm^3. She fitted a pump to the jar. When the piston is completely pushed in, 50 cm^3 of air is pumped into the jar.



What will be the volume of air in the glass jar when the piston is pushed in?

(1) 50 cm^3
(2) 300 cm^3
(3) 350 cm^3
(4) 450 cm^3

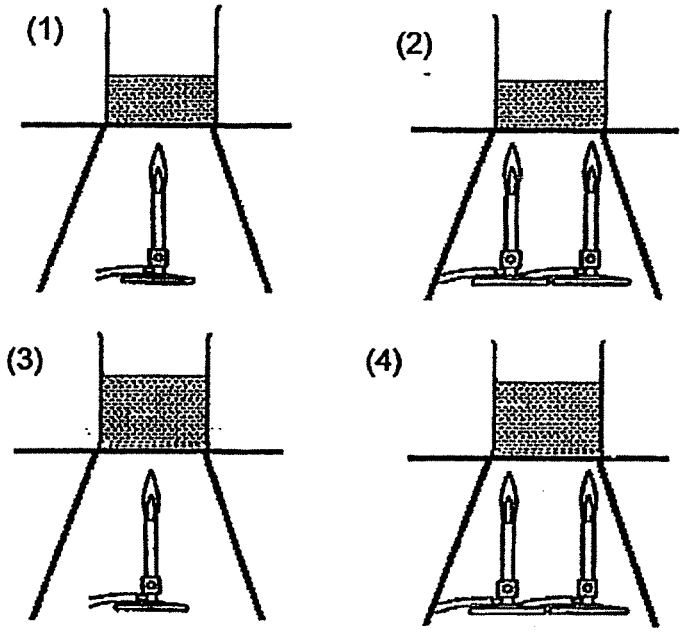
20. The diagram below shows a periscope.



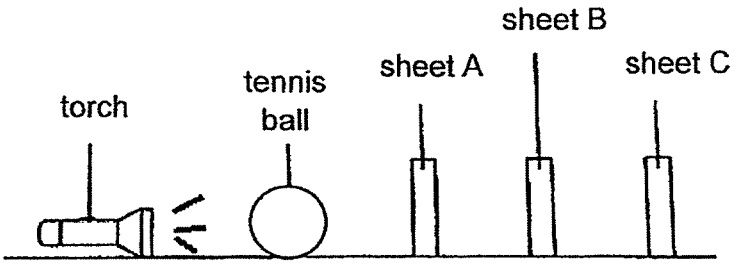
A periscope is an instrument that uses mirrors to allow people to look at things from a different position. Which of the following statements correctly describe why we can see the ball through a periscope?

(1) The ball is a light source.
(2) The mirror can reflect light.
(3) The ball can form a shadow.
(4) Light does not travel in a straight line.

21. Four beakers with different amounts of water in them are heated using bunsen burners as shown in the diagrams below. In which beaker will the water boil first?



22. Dillon had three sheets, A, B and C, made of different materials. He arranged the three sheets, a torch and a tennis ball in a dark room as shown below.



When Dillon turned the torch on, he saw the shadow of the ball on sheet C only. Which of the following materials are A, B and C likely to be?

	Sheet A	Sheet B	Sheet C
(1)	aluminium foil	clear glass	cardboard
(2)	clear plastic	clear glass	cardboard
(3)	aluminium foil	clear plastic	clear glass
(4)	clear glass	aluminium foil	clear plastic

23. Which of the following statements is/are true about heat and temperature?

A : Heat and temperature are forms of energy.

B : Heat flows from a warmer to a cooler place.

C: Temperature of an object decreases when it gains heat.

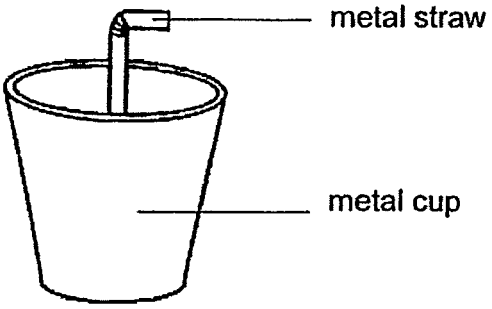
(1) A only

(2) B only

(3) B and C only

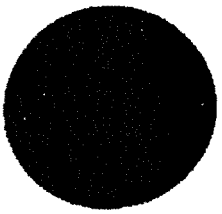
(4) A, B and C

24. Look at the set-up below.

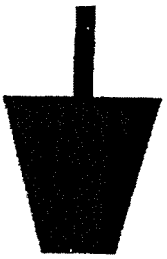


The set-up is placed between a torch and a screen in different positions. Which of the following cannot be a shadow of the set-up?

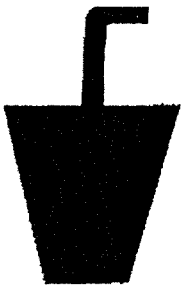
(1)



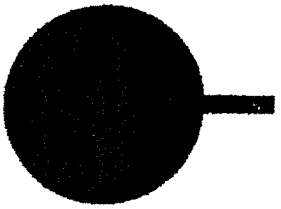
(2)



(3)

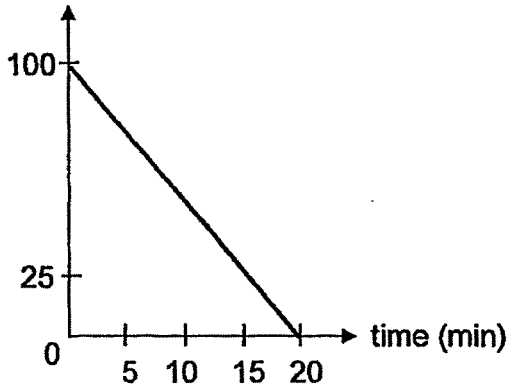


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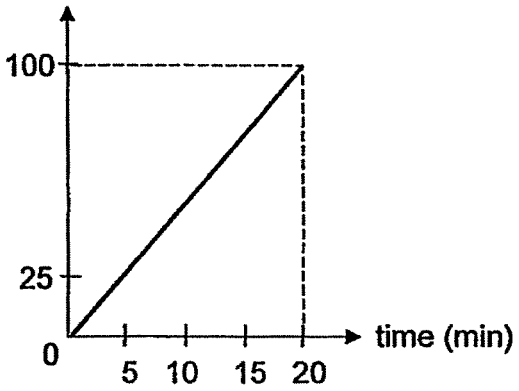


25. John left some water at 100°C to cool in a room for 20 minutes. Which one of the following graphs shows the likely temperature of the water during the 20 minutes?

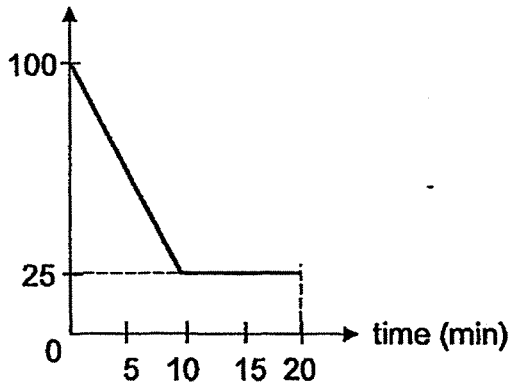
(1)



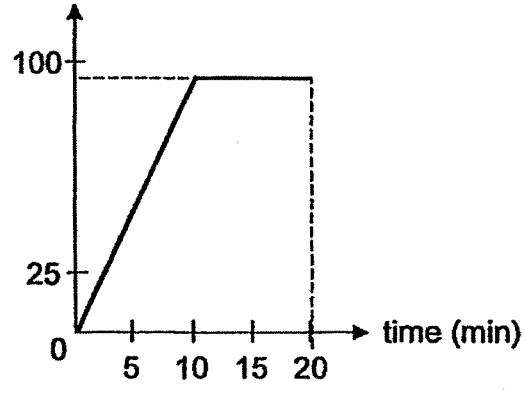
(2)



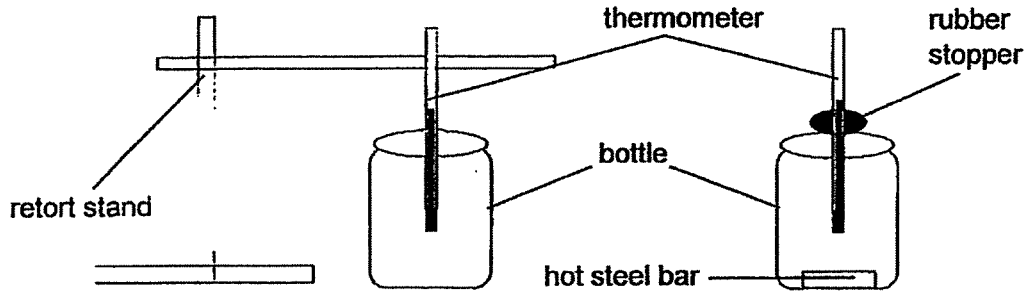
(3)



(4)



26. Kay set up the experiment as shown. He first measured the temperature of the air inside the bottle. Next, he placed a hot steel bar into the bottle and sealed the bottle with a rubber stopper.

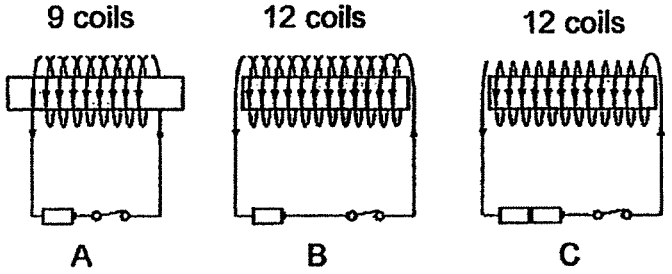


After three minutes, Kay observed that the temperature of the air in the bottle has increased.

Which of the following correctly explains why the temperature of the air in the bottle rose?

(1) Air is a good conductor of heat.
(2) The thermometer is a good conductor of heat.
(3) The air in the bottle gained heat from the hot steel bar.
(4) The air in the bottle gained heat from the surrounding air.

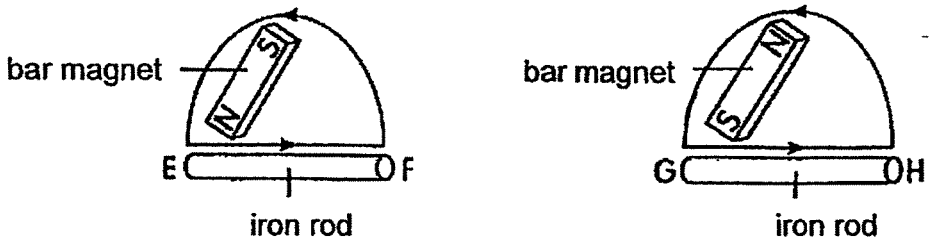
27. Three set-ups were used to magnetise three identical iron rods as shown below.



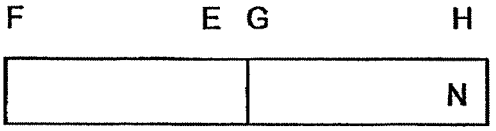
Which of the following shows the possible number of paper clips attracted by the iron rod in each set-up?

	Set-up A	Set-up B	Set-up C
(1)	10	5	3
(2)	5	10	3
(3)	3	5	10
(4)	5	3	10

28. Two iron rods were each stroked with a bar magnet as shown below.



After the iron rods were magnetised, pole E and G of the iron rod attracted each other when both iron rods were placed near each other as shown in the diagram below. Pole H is the North pole.



Which of the following correctly shows the poles at part E, F and G of the iron rods?

	E	F	G
(1)	north pole	south pole	south pole
(2)	north pole	north pole	south pole
(3)	south pole	south pole	north pole
(4)	south pole	north pole	north pole

END OF BOOKLET A

RED SWASTIKA SCHOOL

SCIENCE
2019 SEMESTRAL EXAMINATION 2
PRIMARY 4

Name : _____ ( )

Class : Primary 4/_____

Date : 29 October 2019

BOOKLET B

13 Questions
44 Marks

In this booklet, you should have the following:
a. Page 19 to Page 30
b. Questions 29 to 41

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		54
BOOKLET B		44
TOTAL		98

Parent's Signature : _____

Answer all the questions in the spaces provided

29. Abel observed and grouped some things as shown in the table.

X	Y
elephant	rock
cockroach	cloth
mushroom	table

What are the suitable headings for X and Y? (2m)

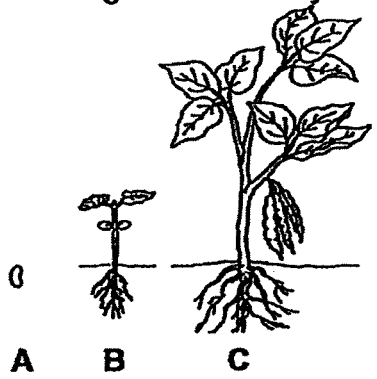
Group **X**: _____

Group **Y**: _____

30. Fill in the correct parts of a plant in the table. (2m)

Functions of plant parts	Plant parts
It holds the plant upright.	
It holds the plant firmly to the ground.	

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



Choose the correct words from the box to answer the question below.

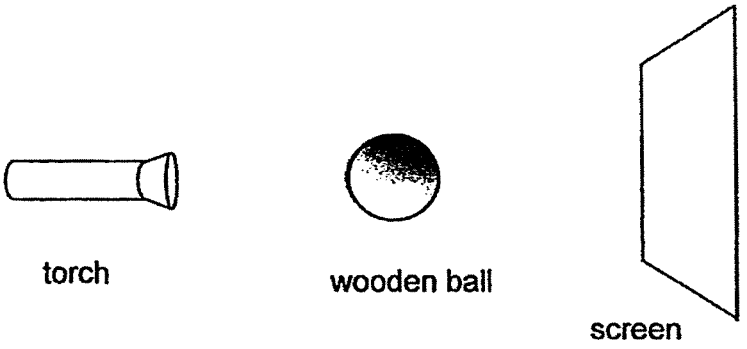
egg	seed	young plant	adult plant

Name the stages **A** and B in the life cycle of the plant. (2m)

A : _____ B: _____

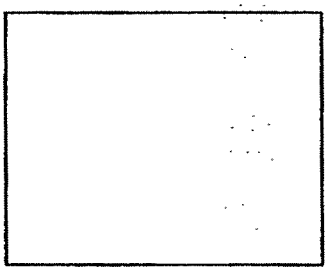
6

32. Sharul shines a torch on a ball and a shadow is formed on a screen.

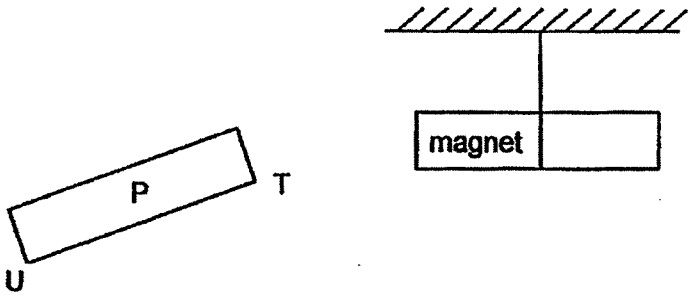


(a) A shadow is formed when light is _____ by an object. (1m)

(b) Draw the shadow of the wooden ball that is formed on the screen. (1m)



33. When end T of object P is brought near a magnet as shown, the magnet moves away.

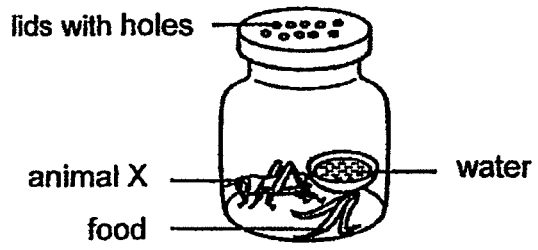


(a) This shows that object P is a _____ (1m)

(b) When end U is brought near to the magnet, it _____ the magnet. (1m)

4

34. Mrs Lee set up the following experiment in the classroom and left the four set-ups untouched for two weeks.



Set-up A



Set-up B



Set-up C



Set-up D

(a) In which set-up would animal X most likely survive after two weeks? (1m)

_____

(b) Explain your answer in (a). (1m)

_____

_____

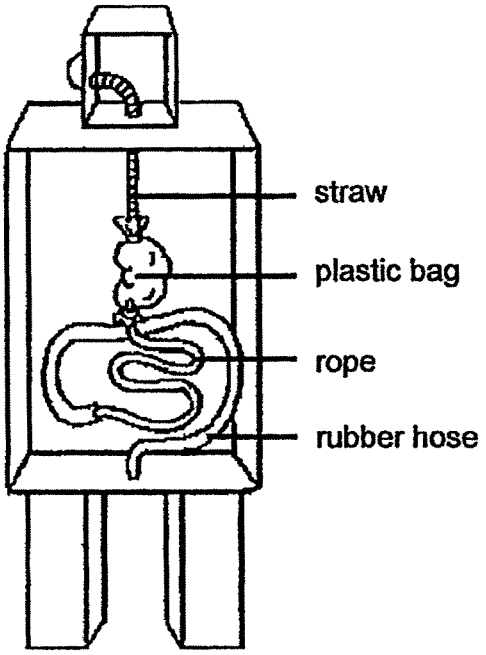
(c) What are two things that Mrs Lee can do to set-up D so that animal X can survive longer? (2m)

(i) _____

(ii) _____

4

35. For the Science Carnival, Fatimah created a model of a human body system out of scrap materials as shown in the diagram below.



(a) Which body system did she make? (1m)

_____

(b) Based on the answer in part (a), which organs in the system do the straw and rope shown in the diagram represent? (2m)

Straw: _____

Rope: _____

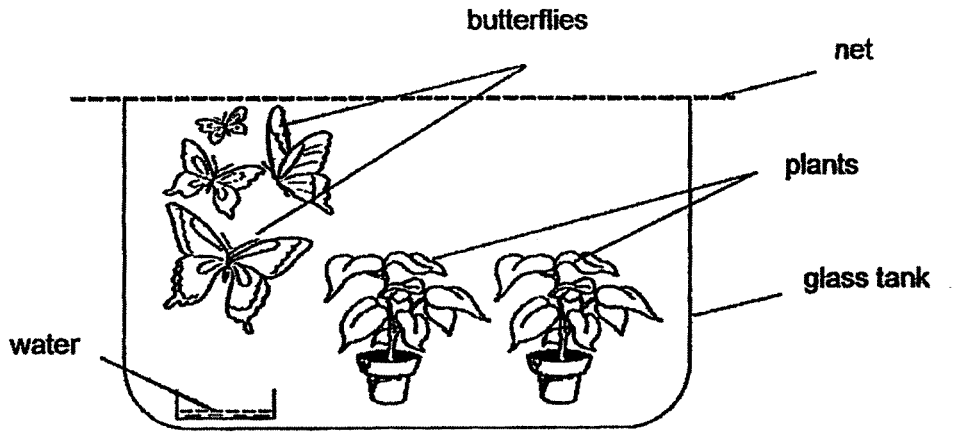
(c) Describe what takes place in the organ represented by the rubber hose. (1m)

_____

_____

4

36. Tim kept some butterflies and plants in a glass tank. He covered the tank with a net. No new organisms were added to the tank.



He observed what happened inside the tank for two weeks and recorded his observations in the table below.

Duration	Observations
Day 1	There were many tiny eggs on the underside of the leaves.
Day 5	The eggs hatched into green organisms, which started eating the leaves. They were growing in size.
Day 9	The green organisms stopped moving and eating. A brown covering grew over each organism.
Day 13	The number of butterflies in the tank increased.

(a) Name the stage of the life cycle which the green organisms are in. (1m)

_____

(b) If Tim removes only the plants in day 5, but left the green organisms in the tank, what would happen to the number of green organisms after some time? Give a reason for your answer. (2m)

_____

_____

(c) Why were there more butterflies on day 13? (1m)

_____

4

37. Brandon pushed cup A into a basin of water as shown in diagram 1. He found it difficult to push the cup into the water. At the end of the experiment, the cup was pushed into the water as shown in diagram 2.

Before Experiment

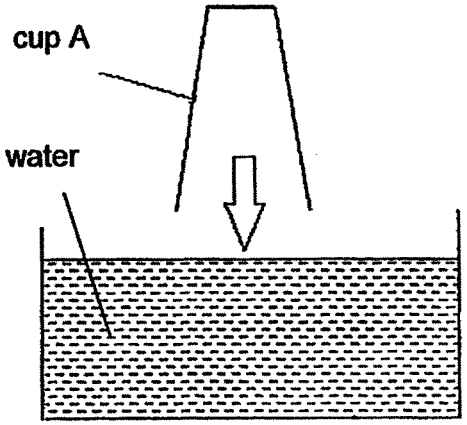


Diagram 1

After Experiment

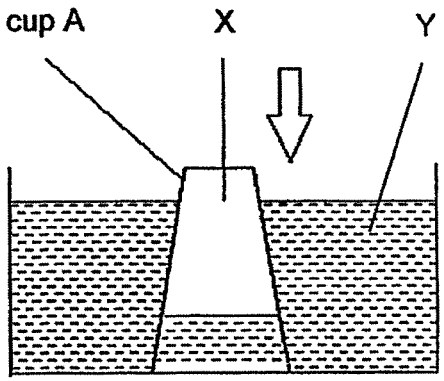


Diagram 2

(a) Based on diagram 2, identify the state of matter for part X and part Y. (2m)

X: _____

Y: _____

(b) Explain why only a little water entered cup A as shown in diagram 2. (1m)

_____

_____

3

37. Brandon then poked a hole on the base of cup A and pushed it into the basin of water again. He realised that the water was able to fill up more of the cup as shown in diagram 3 below.

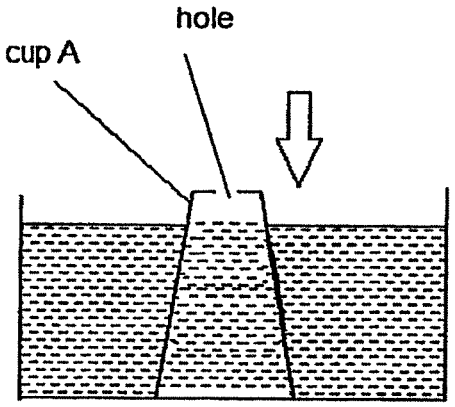


Diagram 3

(c) Explain why Brandon was able to fill cup A with more water as shown in diagram 3. (2m)

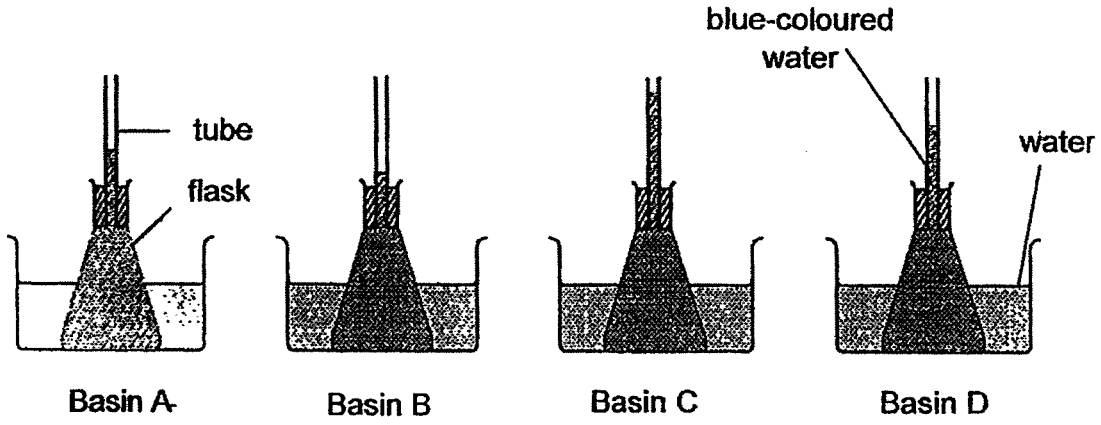
_____

_____

2

38. Study the experiment shown. The flasks were each filled with an equal amount of blue-coloured water. The flasks were placed into four different basins at the same time for 10 minutes. The basins contain water of different temperatures, ranging from 40°C to 80°C.

The diagram below shows the set-up and the levels to which the water rose in the tubes at the end of 10 minutes.



(a) Which basin, A, B, C or D, contained water at the highest temperature of 80°C? (1m)

_____

(b) Explain the answer for part (a). (2m)

_____

_____

_____

(c) A student wants to make the water level in the tube for basin B rise higher. To achieve his aim, what can the student do to the water in the basin? (1m)

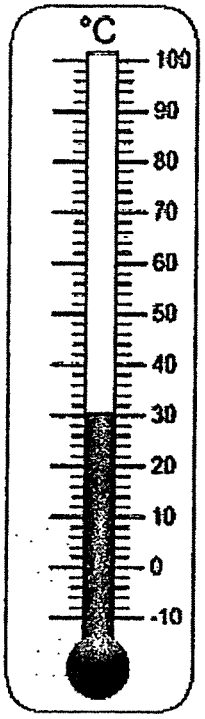
_____

(d) At the end of one day, what will happen to the temperature of water in all the basins? (1m)

_____

5

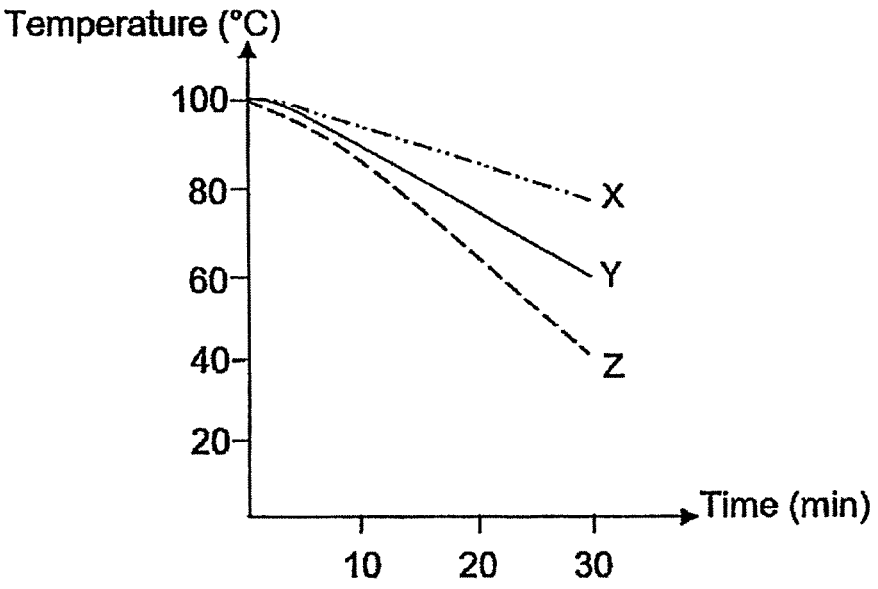
39. Observe the thermometer below carefully. Write the temperature in the box below. (1m)



(a)

1

39. Three containers made of different materials, X, Y and Z, were filled with boiling water and left on a table for 30 minutes. The graph shows the change in the water temperature inside each container over time.



(b) Based on the graph, arrange the following materials, X, Y and Z from the best conductor of heat to the poorest conductor of heat. (1m)

[ ] , [ ] , [ ]

best conductor poorest conductor

(c) Based on the graph, which material X, Y or Z, is most suitable for making a container to prevent ice-cream from melting quickly? (1m)

_____

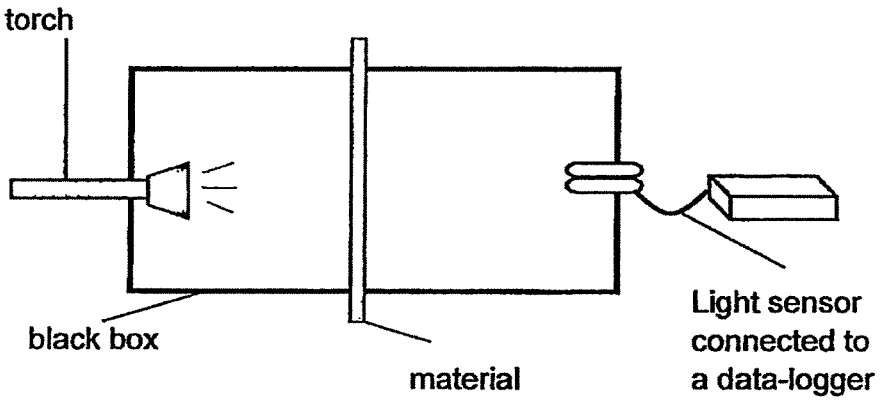
(d) Explain the answer in part (c). (2m)

_____

_____

4

40. Hera conducted an experiment as shown below. She placed three different materials, A, B and C in between a lit torch and a data logger one at a time.



Using a light sensor, she measured the amount of light that could pass through the material and recorded the results in the table below.

	Amount of light that passed through each material (units of light)
Material A	695
Material B	0
Material C	315

(a) Based on the results, classify materials, A, B and C, under the appropriate headings below. (1m)

Allows most light to pass through	**Allows some light to pass through**	**Does not allow light to pass through**

(b) Based on the table, which material, A, B or C, most likely represents cardboard? (1m)

2

40(c) Which material, A, B or C, is most suitable to make a pair of sunglasses used to protect our eyes from the sunlight? (1m)

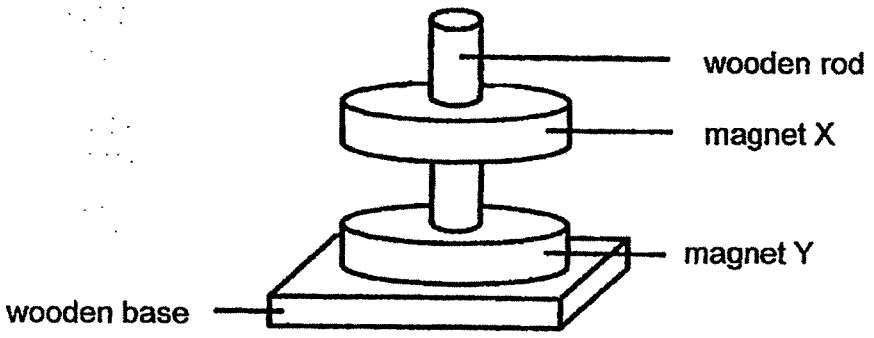
_____

(d) Explain your answer for part (c). (2m)

_____

_____

41. Joel set up an experiment as shown below. He made magnet X float above magnet Y.



Explain how Joel made magnet X float above magnet Y. (2m)

_____

_____

END OF BOOKLET B

PLEASE CHECK YOUR ANSWER

5

SCHOOL : RED SWASTIKA PRIMARY SCHOOL

LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2019 SA2

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	1	4	3	2	3	2	2	4	1

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	2	4	3	4	1	4	3	3	2

Q 21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
2	2	2	4	3	3	3	1

SECTION B

Q29)	Group X : living things Group Y : Non living things
Q30)	stem roots
Q31)	A: seed B: young
Q32)	a)blocked b) 

Q33)	a)magnet b)attracts
Q34)	a)X in A will most likely survive after two weeks b)All living things need air, food and water to survive and only set up A has all three tings. c)i)Poke holes in the lid ii)Add food.
Q35)	a)Digestive system b)Straw : gullet Rope : small intestine c)Water from undigested food is absorbed.
Q36)	a)larva b)The number will decrease, there no food for the green organisms. c)The green organisms were larvae then they turned into pupae, and the green organisms became butterflies.
Q37)	a)X: gas Y: liquid b)Air took up space in the cup and prevented water from entering the cup. c)Air in the cup escaped. The water occupied space previously occupies by the cup.
Q38)	a)C. b)The blue-coloured water gains the most heat and expanded the most. c)Pour hotter water into basin B. d)The water will drop room temperature.

Q39)	a)30℃ b)Z , Y , X c)X d)X is the poorest conductor of heat so it gained heat from the surroundings the slowest, preventing the ice-cream from melting quickly.
Q40)	a)A , C , B b)B c)C d)C allows the user to see clearly at the same time, prevents the least sunlight to enter our eyes.
Q41)	Joel placed the like poles of magnet X and Y face each other Thus, like poles will repel and this allows magnet X to float above magnet.