

SA2

SINGAPORE CHINESE GIRLS' SCHOOL
SECOND SEMESTRAL ASSESSMENT 2005

NAME: _____ ()

DATE: _____

CLASS: PRIMARY 5 _____

SCIENCE
BOOKLET A

30 questions

60 marks

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

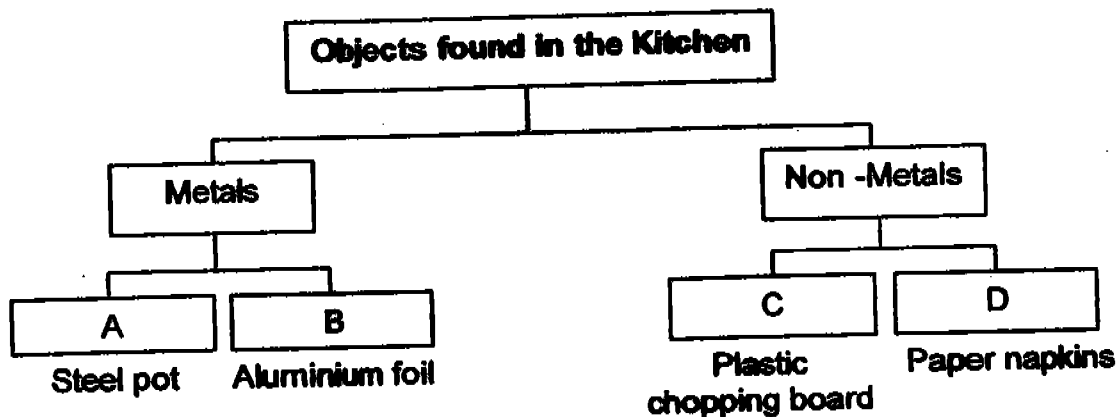
DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

Part 1 (60 marks)

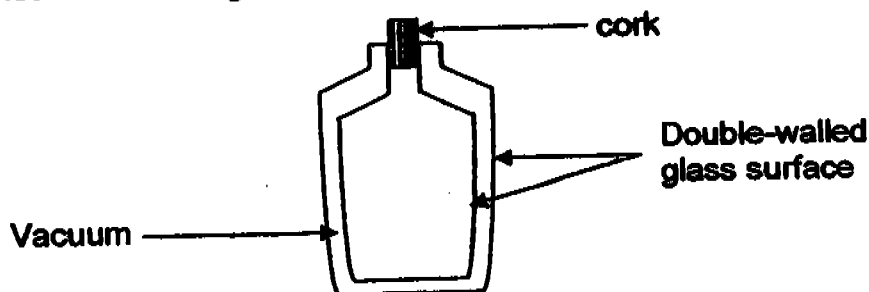
For each question four options are given. One of them is the correct answer. Make your choice, (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Maryanne classified four objects in the kitchen using the classification chart shown below. Which of the following are suitable sub-headings for A, B, C and D.



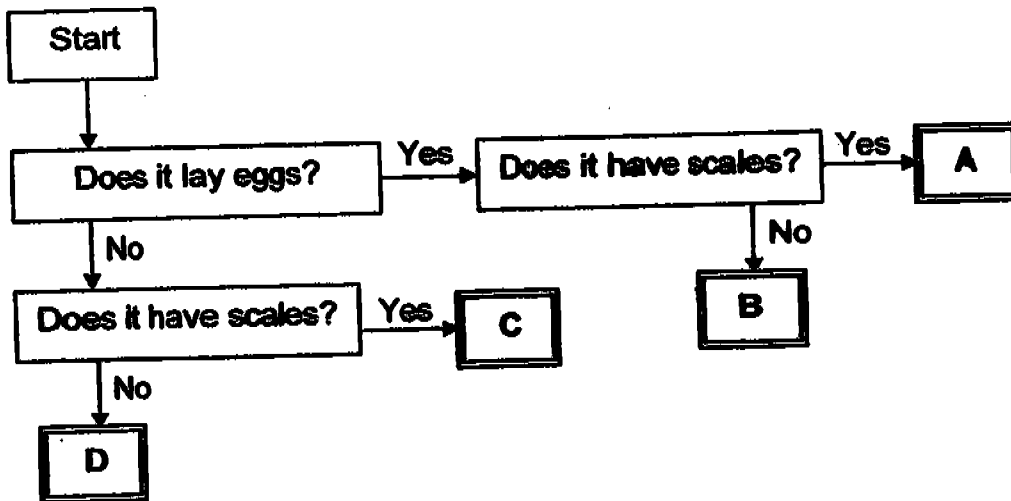
	A	B	C	D
1)	Conduct electricity	Do not conduct electricity	Hard	Soft
2)	Magnetic	Non-magnetic	Waterproof	Non-Waterproof
3)	Do not conduct electricity	Conduct electricity	Translucent	Opaque
4)	Non-magnetic	Magnetic	Good conductor of heat	Good insulator of heat

2. Vacuum flask was invented for keeping hot liquid hot and cold liquid cold. Which one of the following explains why glass is commonly chosen for making the double-walled vessels in the vacuum flask?



- 1) Glass reflects light.
- 2) Glass is fairly strong.
- 3) Glass is a poor conductor of heat.
- 4) Glass is light so it is easier to carry the vacuum flask around.

3. Study the chart below.



Which of the following group of animals best represent A, B, C and D?

	A	B	C	D
X	Snake	Platypus	Snake	Seahorse
X	Seahorse	Eagle	Chameleon	Prawn
X	Crocodile	Platypus	Guppy	Whale
X	Guppy	Platypus	Snake	Prawn

4. Peter was asked to guess what Animal X is. He was given the following clues.

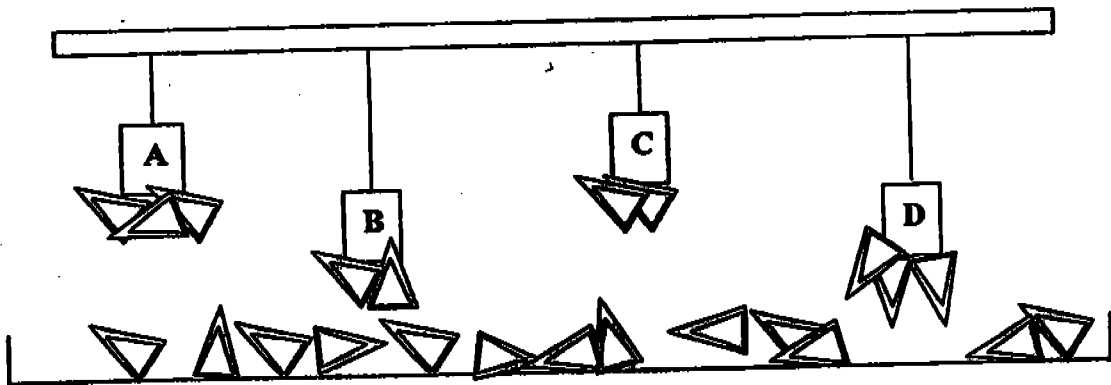
It has six legs.
 It has two feelers.
 It feeds on other animals.
 It blends in with the environment it lives in.

Which one of the following is most likely to be Animal X?

- 1) Spider
- 2) Butterfly
- 3) Grasshopper
- 4) Praying Mantis

3

5. Magnets A, B, C and D are hung on strings of two different lengths. A plastic tray filled with paper clips is placed below the magnets and different numbers of paper clips are attracted to the magnets.



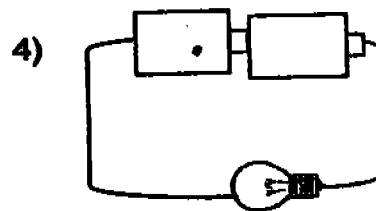
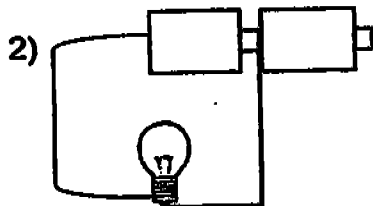
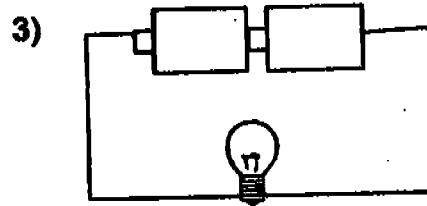
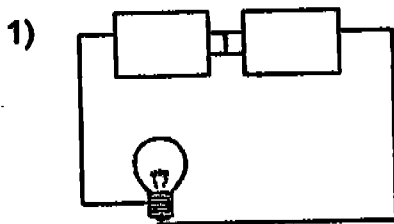
Which one of the following statements about the set up below is false?

- 1) Magnet B is the weakest.
 - 2) Magnet D is stronger than Magnet C.
 - 3) Magnet A is stronger than Magnet C.
 - 4) Magnet D is stronger than Magnet A.
6. Which one of the following statements is incorrect?
- 1) There are two chambers in our heart.
 - 2) All blood vessels are connected to the heart.
 - 3) Veins have walls that are muscular and elastic.
 - 4) The heart pumps by contracting and relaxing its muscles.
7. Jeffery went fishing with his father. He noticed that the fish caught did not survive out of water. Why is this so?
- 1) There is more oxygen in water than on land.
 - 2) The flap covering the gills is closed preventing air from entering.
 - 3) The fish's gills are destroyed when it is hooked on the fishing line.
 - 4) The fish's gills are stuck together once out of water and cannot function.

8. Plants are able to stay cool during hot periods of a day because _____.

- 1) transpiration takes place
- 2) the dead leaves are shed
- 3) the stomata are closed to prevent heat from entering
- 4) there is a constant movement of air as the leaves exchange gases with the surrounding

9. In which of the following circuits will the bulbs light up?



10. Madelene wanted to set up a circuit. She had batteries and a bulb but not any wires. Which of the following could be the best replacement/s for wires?

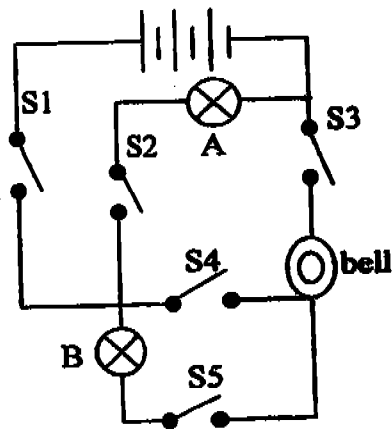
- A: Graphite
- B: Gold Chain
- C: Rubberbands
- D: Strips of cloths.

- 1) A and B only
- 2) B and C only

- 3) A and C only
- 4) C and D only

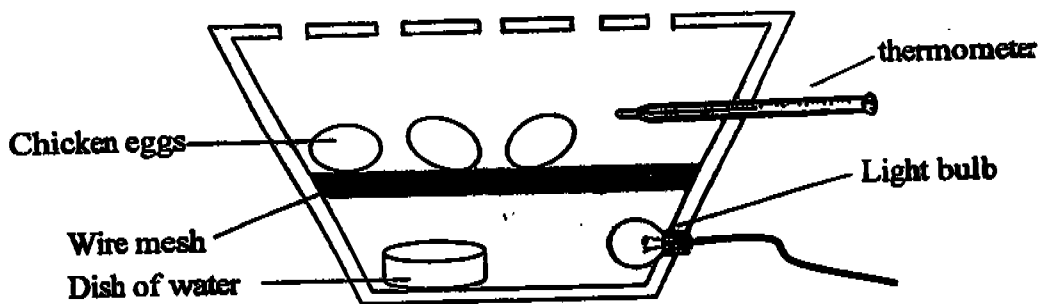
5

11. Which one of the following statements about the circuit below is true?



- 1) When S1, S2 and S4 are closed, the bell will sound.
- 2) When S1, S4 and S3 are closed, only Bulb A will light up.
- 3) When S1, S4 and S3 are closed, only Bulbs A and B will light up.
- 4) When S1, S2, S3 and S5 are closed, Bulbs A and B will light up and the bell will sound.

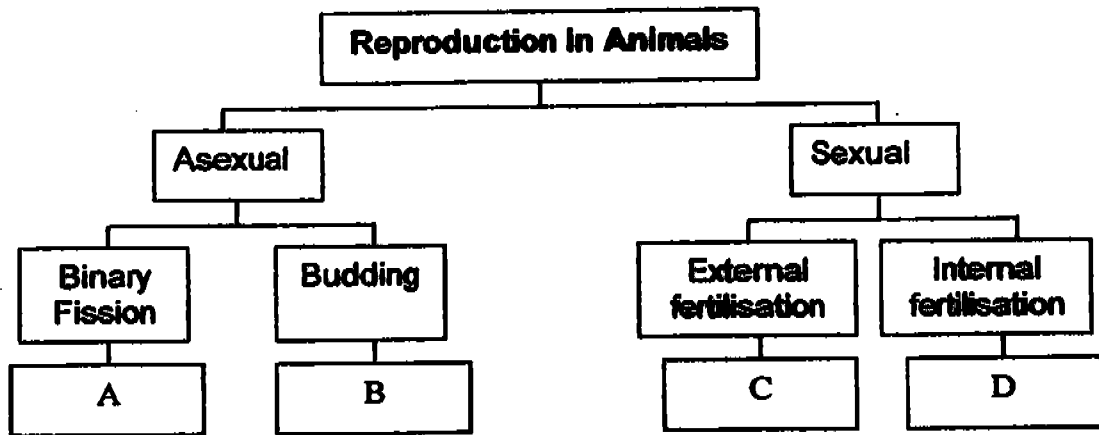
12. Lily wanted to build her own incubator after seeing the incubator below in her friend's house.



Lily told her friend that she would not need the light bulb in the incubator as she would not be checking the incubator at night. Her friend told her that her eggs would not hatch. Why is this so?

- 1) She might break the egg in the dark.
- 2) The eggs need the light from the light bulb to hatch.
- 3) The eggs need the heat from the light bulb to hatch.
- 4) The eggs need the light and heat from the light bulb to hatch.

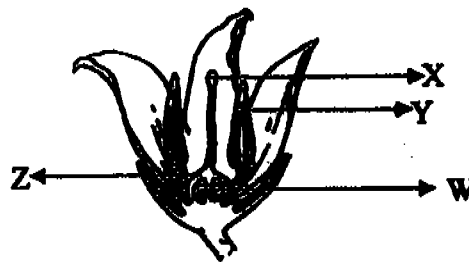
13. Study the chart below.



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

	A	B	C	D
1)	Hydra	Yeast	Salmon	Rabbit
2)	Amoeba	Yeast	Frog	Cat
3)	Yeast	Amoeba	Whale	Frog
4)	Hydra	Amoeba	Frog	Whale

14. Study the diagram below.



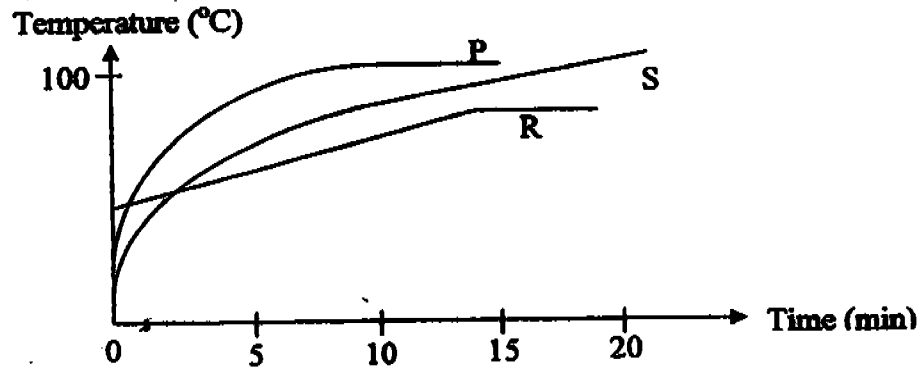
Identify the parts labelled W, X, Y and Z.

	W	X	Y	Z
1)	Anther	Ovule	Stigma	Anther
2)	Ovary	Anther	Ovule	Stigma
3)	Ovule	Stigma	Anther	Ovary
4)	Stigma	Ovary	Ovary	Ovule

15. What happens when fertilisation take place in plants?

- 1) A fruit is formed.
- 2) Pollen grains from the anther are transferred to the stigma.
- 3) A pollen tube is formed after a pollen grain land on a stigma.
- 4) The egg cell in the ovule is fused with the male cell from the pollen grain.

16. Jeremy boiled 3 beakers of liquids, R, S and P. The results are shown in the graph below.



Which of the following statement/s is/are true about the graph?

- A: The liquid in Beaker S took the longest time to boil.
- B: The liquid in Beaker R took more than 10 minutes to boil.
- C: The liquid in Beakers R, S and P boil at the same temperature.
- D: The liquid in Beaker R has a higher initial temperature than the liquid in P and S.

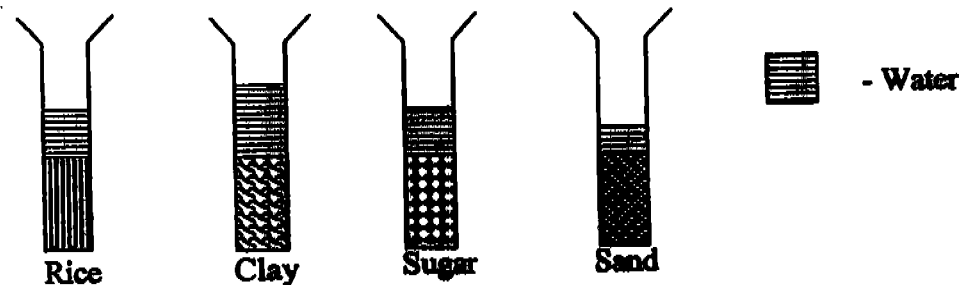
A and B only

B) A, B and C only

A, B and D only

All of the above

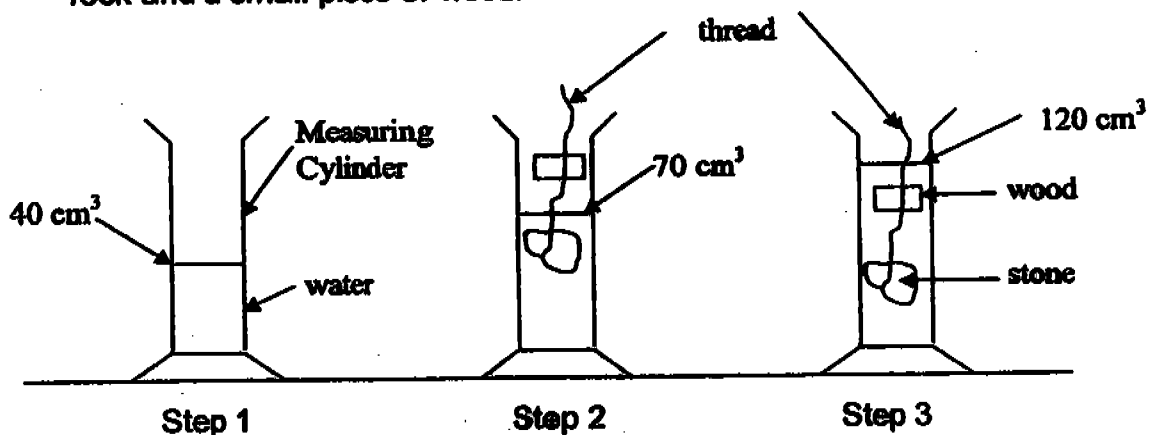
17. Jason put the same amount of sand, clay, rice and sugar into four identical measuring cylinders. He then added the same amount of water into the 4 cylinders. He noticed that the water levels in each of the cylinder is different.



What was he trying to find out in this experiment?

- 1) Which material has the most mass.
- 2) Which material is hardest to expand.
- 3) Which material is hardest to compress.
- 4) Which material has the most amount of air spaces.

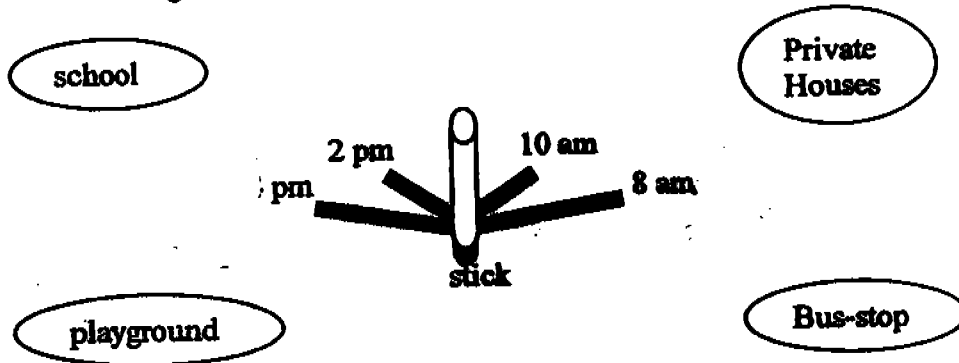
18. The diagram below shows the steps taken to measure the volume of a rock and a small piece of wood.



Which one of the following shows the correct volume for the stone and the piece of wood?

	Volume of stone (cm ³)	Volume of wood (cm ³)
1)	70	120
2)	70	50
3)	30	120
4)	30	50

- 19 Jeremy placed a stick upright in the ground and traced the shadow made by the stick every two hourly from eight o'clock in the morning to four o'clock in the afternoon. The diagram below shows the stick and the tracings of the shadow as seen from above.



Which of the following place is in the north-east direction from the stick?

- | | |
|-------------|-------------------|
| 1) school | 3) playground |
| 2) bus-stop | 4) private houses |
20. The red blood cells in our body are unable to reproduce because they do not have _____.
- | | |
|--------------|------------------|
| 1) nucleus | 3) cytoplasm |
| 2) cell wall | 4) cell membrane |

21. James placed two animal cells A and B in a container of water containing same amount of dissolved substances X and Y.

Before the experiment.

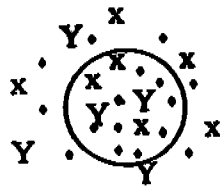


Animal cell A

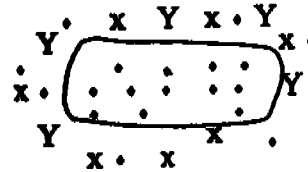


Animal cell B

After placing the cells in water containing dissolved substances X and Y,



Animal cell A



Animal cell B

Key	
x	- Substance X
Y	- Substance Y
.	- water

James made the following conclusions. Which one of the following conclusions is incorrect?

- 1) Water can enter both Animal cells A and B.
- 2) Animal cell A does not allow material to enter easily.
- 3) Substance X and Y are unable to enter Animal cell B.
- 4) Substance X enters Animal cell A more easily as compared to Substance Y.

22. James planted ³ beans and noticed that the roots which appeared first will grow downwards regardless of their orientation as shown below. This is because the roots _____.



- 1) are very heavy
- 2) do not like places that are bright
- 3) do not like the air above the ground
- 4) grow in the direction of the water source

23. A caterpillar and a butterfly look very different. What are the benefits for such differences in the looks?

A: The adult can protect its young.

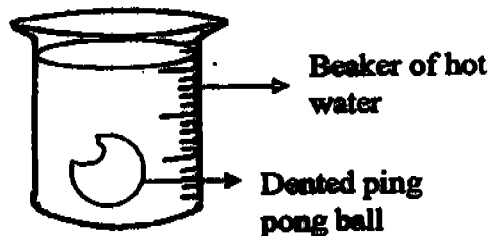
B: The adult will not need to look after its young.

C: They will not have to compete for the same type of food.

- 1) A only
- 2) C only

- 3) A and C only
- 4) B and C only

24. Jeremiah placed a dented ping pong ball into a beaker of hot water as shown. What would he observe after a few minutes?



- 1) Nothing happened.
- 2) The water level decreased.
- 3) The ping pong ball became even more dented.
- 4) The ping pong ball went back into its original shape.

25. Study the setup shown below.

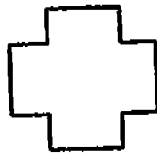


Light source

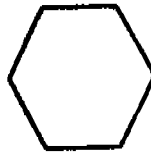


White screen

Three objects, A, B and C were placed in between the white screen and the light source.



Object A



Object B



Object C

The following observations were noted.

 Object A	 Object B	 Object C
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Which of the following explain why the observations were made?

A: Light is a form of energy.

B: The path of light is block by Object A.

C: Object A allows light to pass through while Object B does not.

D: Object B allows all the light to pass through while Object C allows only some light to pass through.

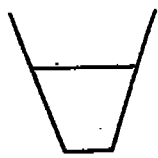
A and B only

B and D only

B and C only

A, B and D only

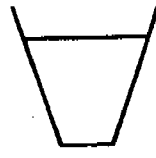
26. John was given four cups of water as shown below. Arrange the cups in descending order in terms of the amount of heat they contain.



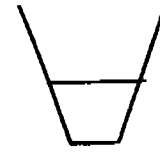
Cup A - 50°C



Cup B - 50°C

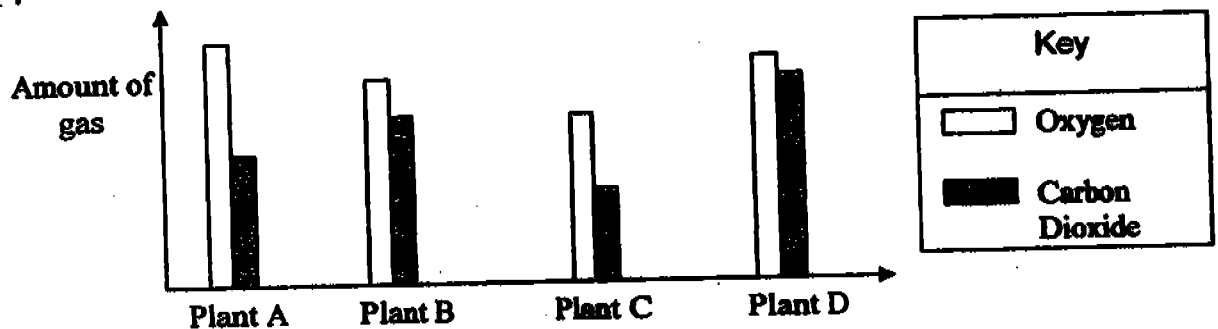


Cup C - 50°C



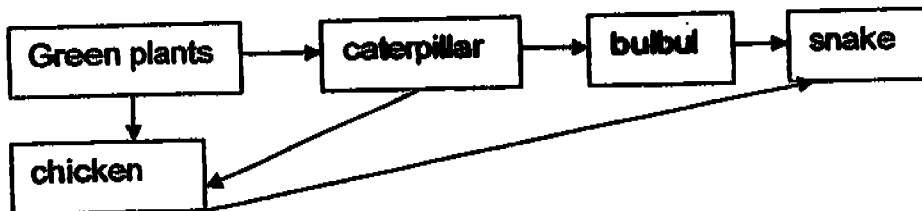
Cup D - 50°C

- 1) B, D, A, C
2) C, D, A, B
3) C, A, D, B
4) none of the above.
27. The diagram below shows the amount of oxygen and carbon dioxide produced in 24 hours by Plants A, B, C and D.



What can you infer based on the information given?

- 1) Plants use more oxygen than carbon dioxide.
2) Plants produce less carbon dioxide than oxygen.
3) During photosynthesis, carbon dioxide is taken in and oxygen is produced.
4) Plants produce oxygen in the presence of sunlight and take in oxygen at night.
28. Study the flow chart below.



Which one of the following statements about the food web is false?

- 1) There is only 1 omnivore.
2) There is only 1 herbivore.
3) There are 3 carnivores in the food web.
4) The green plant is the beginning of the food web

29. What happens when our rate of respiration increases?

- A: More oxygen is needed.
- B: More digested food is needed.
- C: Our rate of breathing increases.
- D: More carbon dioxide is removed.

- 1) A and C
- 2) B and D
- 3) A, C and D
- 4) A, B, C and D

30. Study the diagram below.



Which one of the following equation best represents Process X?

- 1) glucose + carbon dioxide → energy + oxygen + water
- 2) glucose + oxygen → carbon dioxide + energy + water
- 3) sugar + carbon dioxide → glucose + oxygen + energy
- 4) oxygen + glucose → oxygen + water + waste material

Name: _____ ()
Class: Primary 5

Part II (40 marks)

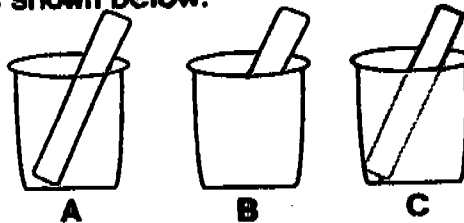
Write your answers to Questions 31 to 46 in this booklet.

31. Big cruise ships are made of steel.

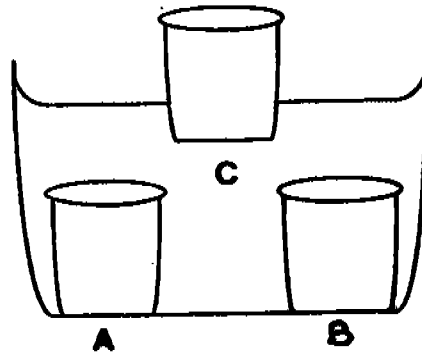
(a) How then are they able to float? (1 mark)

(b) Why is it that when a cruise ship hits a huge rock, it will sink? (2 marks)

32. Ali placed three similar metal rods in the containers, A, B and C made of different materials as shown below.



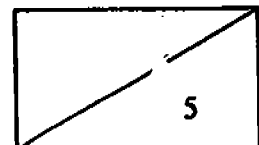
After that, he placed the 3 containers into a trough of water as shown below.



What are the two properties of the material of the container that Ali wants to investigate? (2 marks)

(a) _____

(b) _____



33. Look at the 3 pictures as shown below.



Mouse



Cloud



Bottle

What are 2 characteristics of the pictures that you can use to show that all of them are non-living things? (2 marks)

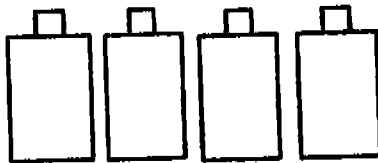
- (a) _____

- (b) _____

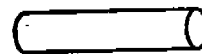
34. Madeline was told to set up an experiment. She was told to make the strongest electromagnet she could using all the apparatus given to her as shown below.



Coiled Wire



Batteries

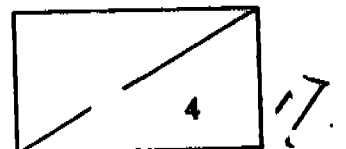
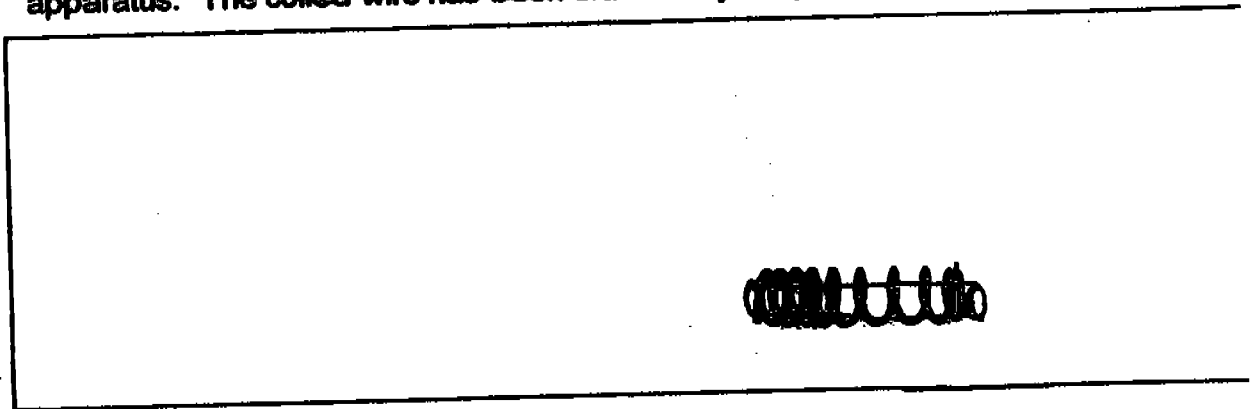


Steel Rod



Wires

Complete the diagram below to show how Madeline should set up the apparatus. The coiled wire has been drawn for you. (2 marks)

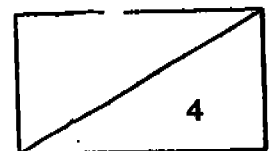


35. Use some wires and all the components given below to draw a parallel and series circuit. (2 marks)



<u>(a) Parallel circuit</u>	<u>(b) Series Circuit</u>

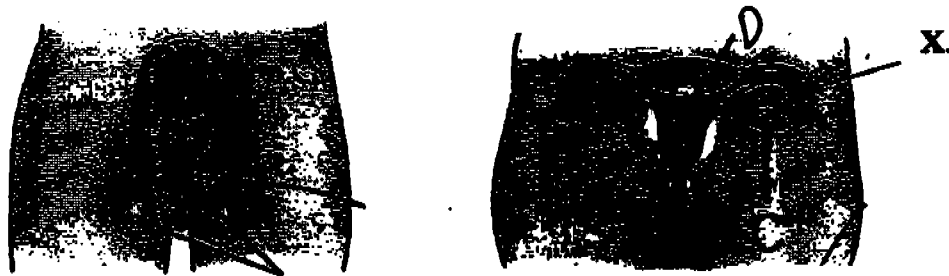
(c) Which of the above circuit you have drawn will enable the light bulb to last longer? Why? (2 marks)



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36. The following diagram shows the reproductive systems in human. Draw a line to each of the following parts. One example of X has been shown to you.

X: Joins the ovary to the womb.



Now, identify the parts below and name them in the picture above as shown in the example given. (2 marks)

- A: The part which ejects the sperms.
- B: The part which produce the sperms.
- C: The part which produce eggs.
- D: The part where the foetus develops.

37. Refer to question 36 and name the parts that perform the different functions listed from A to D. (2 marks)

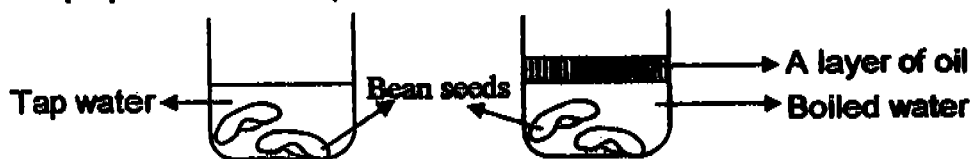
A: _____

B: _____

C: _____

D: _____

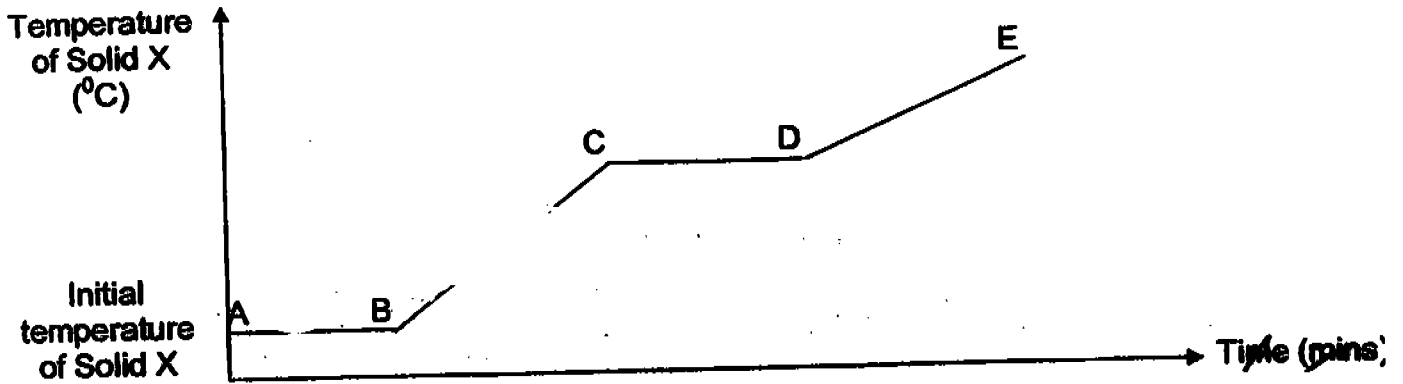
38. Jeremiah prepares two set-ups as shown below and leaves them in the room.



(a) What do you think is the objective of the experiment? (1 mark)

(b) What will Jeremiah observe after 2 days? (1 mark)

39. The following graph is plotted when solid X was heated.

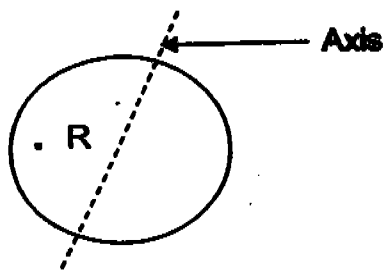


(a) From the graph, at which point was Solid X heated? (1 mark)

(b) What was happening from Point B to C? (1 mark)

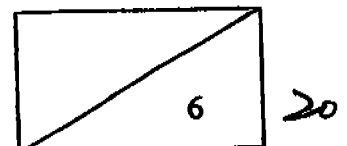
(c) Was Solid X boiling at Point E? Give a reason for your answer. (2 marks)

40. Study the diagram of the Earth as shown below.

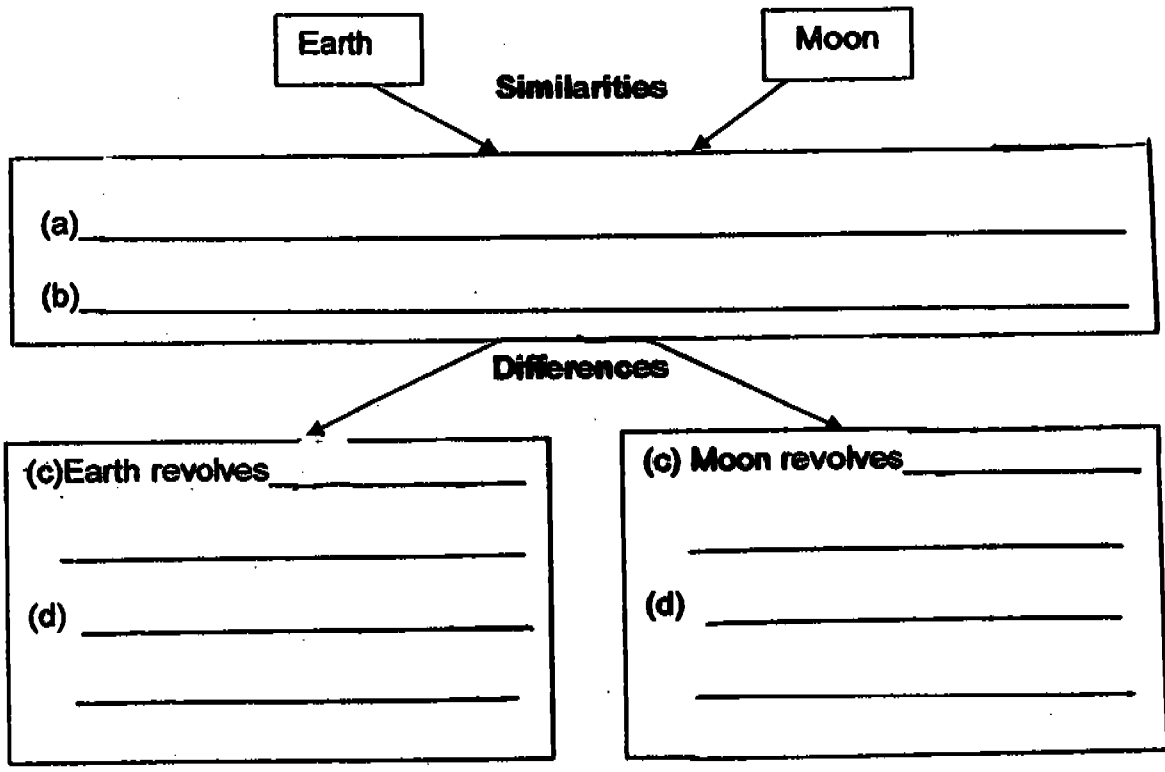


(a) Peter who is at Point R is experiencing night time. Indicate using the letter 'S' in the above diagram, the position of the Sun. (1 mark)

(b) Peter also notices a full moon at Point R. Indicate with the letter 'M' in the above diagram, the position of the Moon. (1 mark)

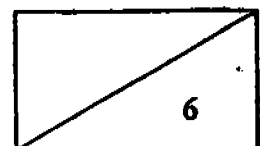


41. List the similarities and differences between the Earth and the Moon using the concept map as shown below. (4 marks)



42. Tick the correct boxes for each of the statements listed below. (2marks)

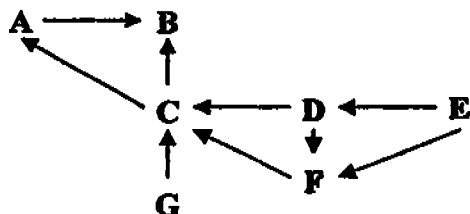
		True	False
(a)	All plant cells have chloroplasts.		
(b)	A cell with a nucleus will live longer than a cell without a nucleus.		
(c)	A tissue is made up of cells that are identical to each other.		
(d)	Yeast and Amoeba are examples of single-cell organisms.		



43. Paul placed some ice on a metal tray. Then he made some hot coffee and placed a metal spoon inside. He noticed that the metal tray was cold, the ice was melting and the metal spoon was hot and made the following statements. Indicate if the statements are true or false. (2 marks)

		True	False
(a)	The heat from the tray and the surrounding caused the ice to melt.		
(b)	The heat from the hot coffee was conducted to the teaspoon.		
(c)	The metal tray felt cold because heat from the ice was conducted to the metal tray.		
(d)	When Paul touched the metal tray, it feels cold because heat was conducted away from his hand.		

44. Study the food web below.



Write out two complete food chains that are linked together to form the above food (2 marks)

Food Chain 1: _____

Food Chain 2: _____

45. Refer to the food web in Question 44 and answer the following question.

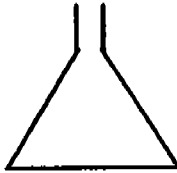
(a) Which letter/s represent/s organisms that is/are herbivorous? (1 mark)

(b) Which letter/s represent/s organism/s that is/are omnivorous? (1 mark)



46. Peter was told to find out the effect of muddy water on the growth of Elodea (a type of submerged water plant). He was given the following:

- 800 ml of clear pond water
- 800ml of muddy pond water
- table lamps
- 300g of Elodea
- flasks.



Flask



Elodea

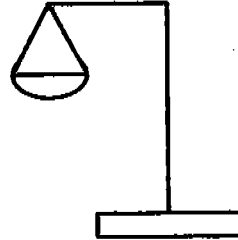
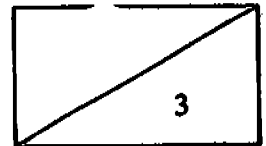


Table lamps

In the boxes below, help Peter to set up a fair test by drawing the 2 set-ups needed. You may make use of the drawings given to help you. Marks will be awarded for clear labelling. (3 marks)

A large rectangular box intended for drawing two experimental setups. The box is currently empty.



Singapore Chinese Girls Primary School

Primary 5 Science SA2 (2005)

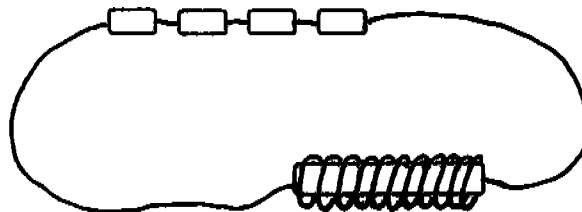
ExamS 2005

Answer Sheets

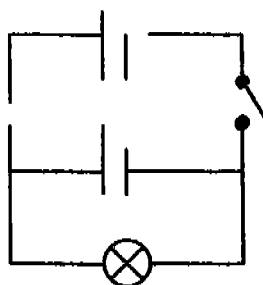
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	3	3	4	4	3	4	1	2	1
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
4	3	2	3	4	2	4	4	3	1
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
2	4	1	4	3	3	2	3	4	2

- 31a. There are hollows(air columns) inside the ship
 31b. There are rooms in a ship which are filled with air. When a ship hit a rock, water flow into these rooms and when a certain mount of them is filled with water, the ship start to sink.
- 32a. It is translucent.
 32b. It floats on water.
- 33a. They cannot move on their own.
 33b. They do not respond to danger.

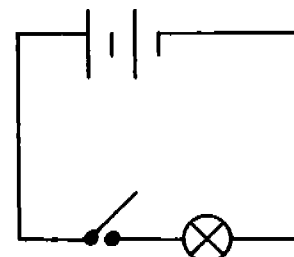
34.



35a.

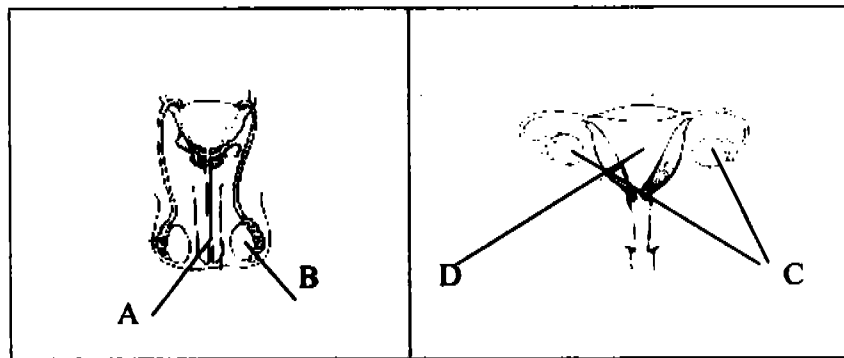


35b)



- 35c. Circuit A. Circuit A uses only 1 battery at a time while Circuit B uses both batteries together.

36

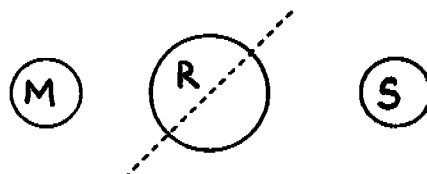


37. A : Penis C : Ovaries
B : Testes D : Womb

- 38a. It is to find out if seeds need air to germinate.
38b. The bean seeds in tap water will germinate but the bean seeds in boiled water will not.

- 39a. Point B
39b. Solid X was gaining heat from the surroundings.
39c. No. Heat is still being gained.

40.



- 41a. They both rotate on their own axis.
41b. Near the sun. / Both obtain light form the sun. OR They are both spherical.
41c. around the sun around the earth
41d. Earth has water Moon does not have water.
- 42a. false
42b. true
42c. true
42d. true
- 43a. true
43b. true
43c. false
43d. true

44. Food chain 1 : E → D → C → A → B

Food chain 2 : E → F → C → B

45a. Letter D

45b. Letter F and C.

