

SINGAPORE CHINESE GIRLS' SCHOOL
SECOND SEMESTRAL ASSESSMENT 2004

SIA 2

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 from 1 to 30, 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 Study the table and answer the question below.

Metal box	Styrofoam box	Glass box	Paper box
Unbreakable	Good conductor of heat	Magnetic	Poor conductor of heat
Hard	Waterproof	Heavy	Lightweight
Poor conductor of heat	Lightweight	Breakable	Not waterproof

Which one of the boxes above is described correctly?

- 1) Metal box
- 2) Paper box
- 3) Glass box
- 4) Styrofoam box

2 Study the classification below.

Habitat A	Habitat B	Habitat C	Habitat D
Shark	Caterpillar	Duck	Elephant
Stingray	Beetle	Toad	Giraffe
Jellyfish	Swan	Mudskipper	Rhinoceros
Whale	Centipede	Turtle	Lion

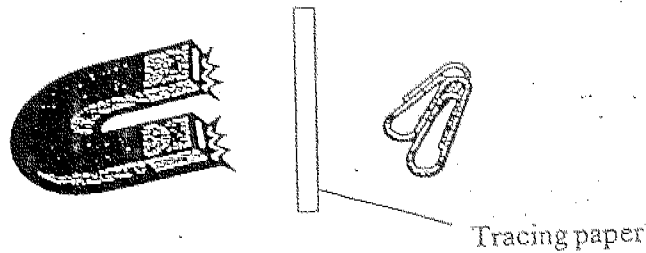
Which one of the habitats has an animal that is classified incorrectly?

- 1) Habitat A
- 2) Habitat B
- 3) Habitat C
- 4) Habitat D

3 Refer to the classification table in Q2. How many mammals are there?

- 1) 5
- 2) 6
- 3) 3
- 4) 4

4. What would happen to the paper clips?

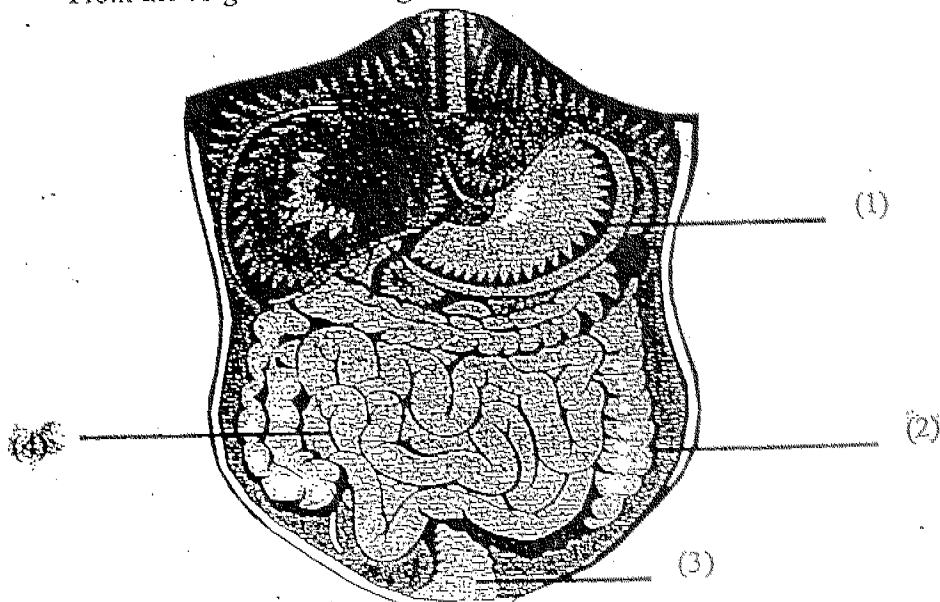


- 1) The paper clips would be attracted to the magnet.
- 2) Nothing would happen because the paper clips are not a magnetic material.
- 3) Nothing would happen because the magnet is not strong enough to attract the paper clip.
- 4) Nothing would happen because the tracing paper prevents magnetic force from passing through.

5. Which one of the following food items takes the longest to digest?

- 1) Steak
- 2) Apple
- 3) Porridge
- 4) French fries

6. From the diagram of the digestive tract, water is removed from part _____.



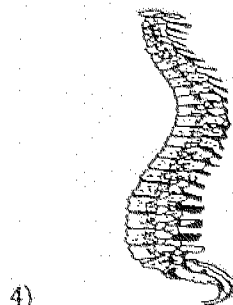
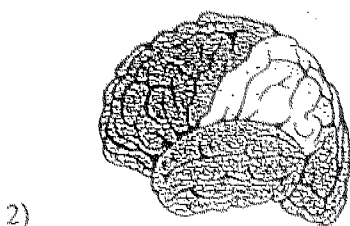
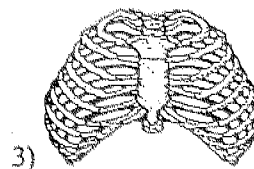
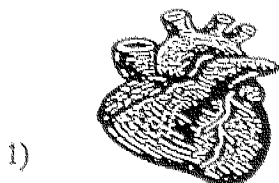
7. A stalk of white rose was placed in a beaker containing 500 ml of dark blue water. It was left in a room with no direct sunlight. What would you observe after 3 days?

- 1) The petals and leaves remain white and there would be no more water left.
- 2) The petals and leaves would turn blue and there would be no more water left.
- 3) The petals and leaves would turn blue and the water level in the beaker would decrease.
- 4) The petals and leaves remain white and the water level in the beaker would decrease.

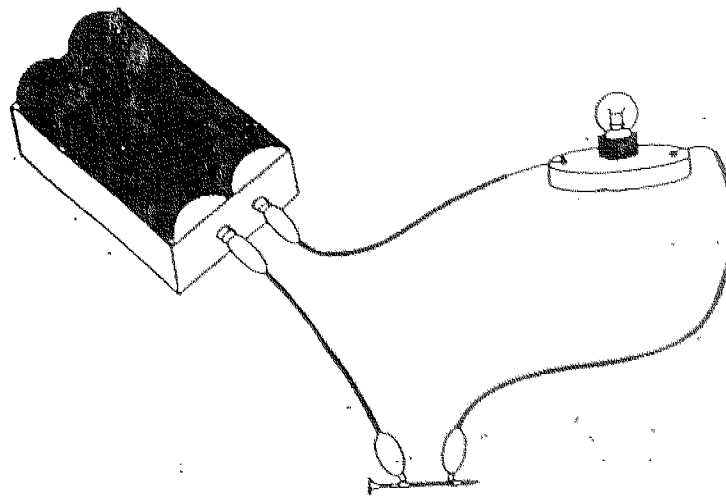
8. Which one of the following best describes the flow of water in the plant?

- 1) The phloem vessels transport water from the roots of the plant to all parts of the plant.
- 2) The phloem vessels transport water from the petals and leaves to all parts of the plant.
- 3) The xylem vessels transport water from the roots of the plant to all parts of the plant.
- 4) The xylem vessels transport water from the petals and leaves to all parts of the plant.

9. Which one of diagrams is part of the circulatory system?



10.



A nail was connected to the circuit tester as seen in the diagram above. Zaidi later substituted the nail with another object. The result of the experiment was different. What one of the following could be a likely substitute /s for the nail?

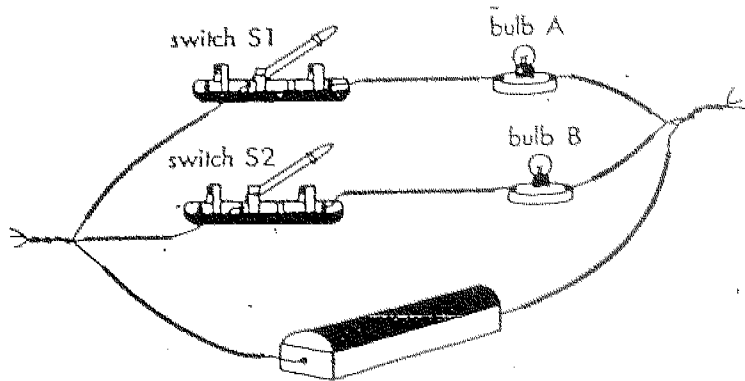
Which

- A: Plastic
- B: Rubber
- C: Copper
- D: Carbon
- E: Aluminium

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

- 3) A, B, C and D only
- 4) All of the above are possible

11. Study the circuit and answer Q11 and Q12.



A circuit was set up as shown. Which bulb/s lighted up when switch S1 was opened and switch S2 was closed?

- 1) Bulb A only
- 2) Bulb B only

- 3) Both A and B
- 4) None lighted up

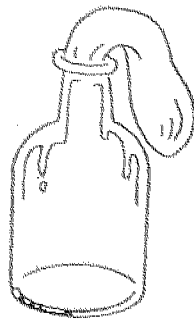
12. John added another battery to the circuit. What would happen to the bulb when switch S1 is opened and S2 is closed?

- 1) There would be no change.
- 2) Both bulbs would be brighter.
- 3) Only bulb A would be lighted and it would be brighter than before.
- 4) Only bulb B would be lighted and it would be brighter than before.

13. John created a classification table that compares the life cycle of a cockroach and a butterfly. Which of the following does not give the correct comparison?

	Characteristics	Butterfly	Cockroach
1)	Resemble the parent when young.	No	Yes
2)	There are 3 stages in its life cycle.	No	Yes
3)	Eat for part of its life cycle.	Yes	Yes
4)	The young moults before becoming an adult.	Yes	No

14. What would you do to inflate the balloon as seen in the diagram below?



- 1) Heat up the bottle on a stove.
- 2) Wrap a towel around the bottle.
- 3) Put the bottle in a pail of cold water.
- 4) Nothing can be done to inflate the balloon.

15. Study the table below.

Group A	Group B	Group C	Group D
Salt	Diesel oil	Hydrogen	Star
Paper cup	Condensed milk	Helium	Moon
Brick	Melted ice cream	Water vapour	Rain
Ice	Lime juice	Carbon monoxide	Soil

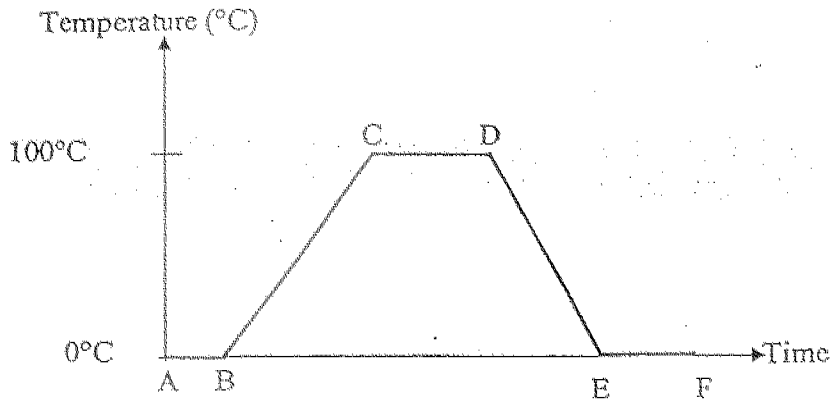
Each of the above items was grouped according to the state of matter they were in. Which one of the above groups has an item that has been classified wrongly?

Group ____

- 1) A
2) B
3) C
4) D
16. Benjamin, Julian, Jack and Peter wanted to have a competition to find out whose towel will dry fastest in the sun. They decided to use towels of the same material and size. Benjamin rolled up his towel tightly and hung it up on the clothesline. His towel looked like a round bundle on the clothesline. Julian squeezed his towel dry, opened it up fully before hanging it up. Jack squeezed his towel dry, rolled it up like Benjamin's and hung it up. Peter simply placed his dripping wet towel on the clothesline. Whose towel will dry first?

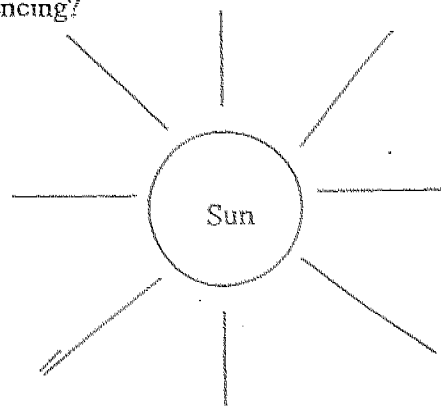
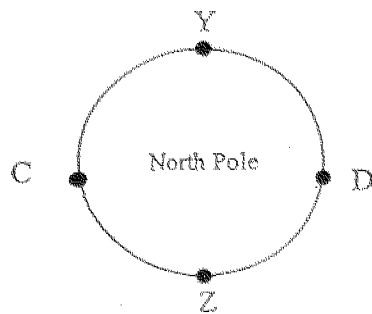
- 1) Jack
2) Peter
3) Julian
4) Benjamin

17. Jenny performed an experiment to find out how ice cubes respond to different amount of heat. The graph below shows the changes to the temperature of the water. Which one of the following in the table below showed the different processes that had taken place in different stages?



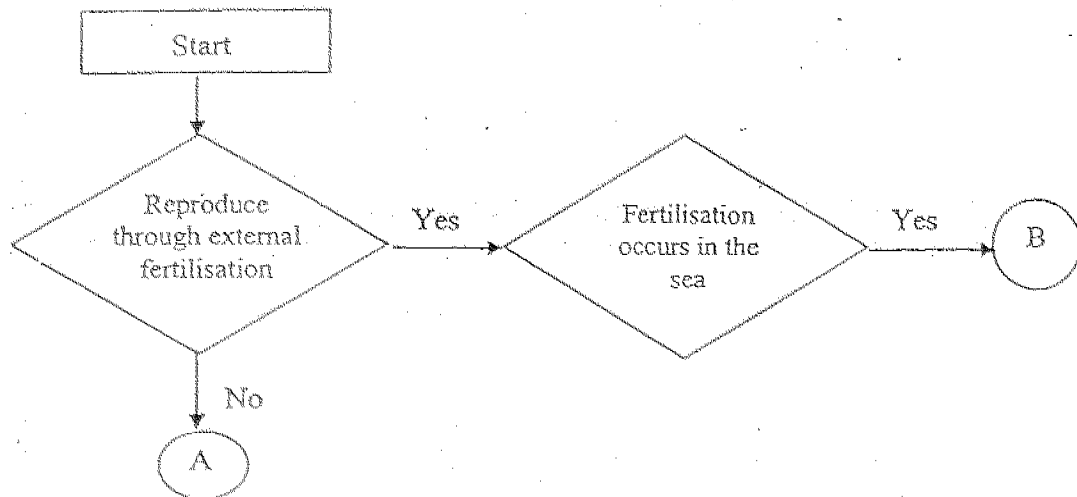
	A to B	C to D	E to F
1)	melting	boiling	melting
2)	freezing	boiling	freezing
3)	freezing	boiling	melting
4)	melting	boiling	freezing

18. The diagram below shows the Earth viewed from the top. If C and D, Y and Z are places on the Earth that are directly opposite to one another, what time of the day are the people at C, D, Y and Z experiencing?



	C	D	Y	Z
1)	Night	Day	Dusk	Dawn
2)	Day	Night	Dawn	Dusk
3)	Dawn	Dusk	Night	Day
4)	Dusk	Dawn	Day	Night

21. Peter studied the following flowchart and gave different examples that fit the characteristics of A and B in the table below. Which one of the following is correct?

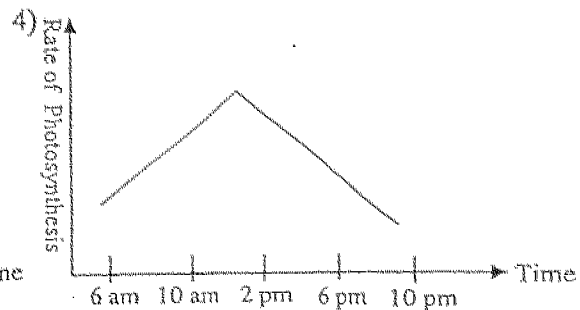
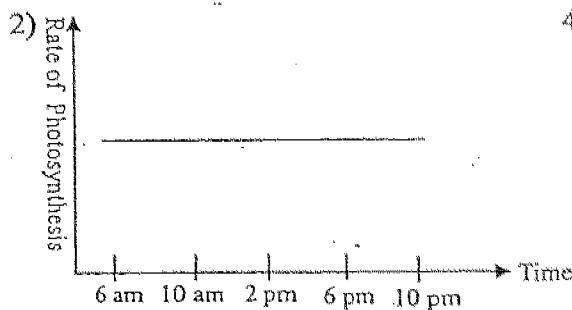
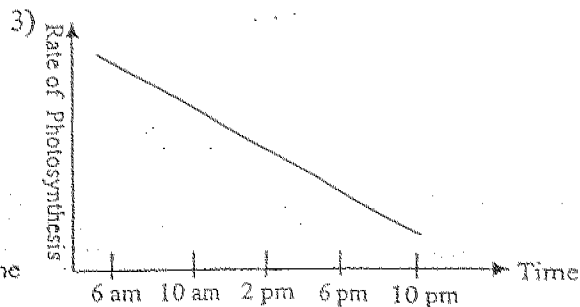
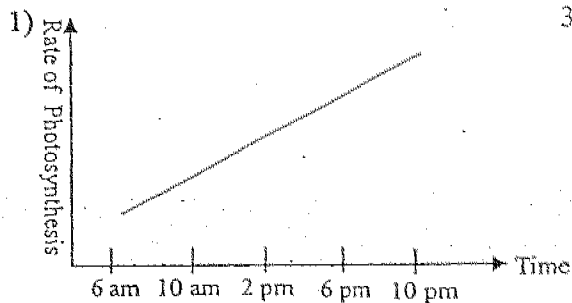


	A	B
1)	Chicken	Lobster
2)	Monkey	Dolphin
3)	Whale	Platypus
4)	Dog	Whale

22. James was told some characteristics of cells. Which one of the following is not a characteristic of cells?

- 1) Plants and animals have different cell structures.
- 2) The nucleus can be likened to the brain of the cell.
- 3) All cells reproduce itself through a process known as budding.
- 4) Cells are building blocks of life and are found in all living things.

28. Which one of the following graphs best illustrates the rate of photosynthesis at different times of the day?



29. Which of the following are needed during respiration?

- A: water
- B: glucose

- C: oxygen
- D: carbon dioxide

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

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

30. Which of the following about respiration is / are true?

- A: Respiration takes place in plants only at night.
- B: Respiration is a process that release energy stored in food.
- C: Cells use the energy that is produced to carry out life processes.

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

- 3) B and C only
- 4) All of the above

Name: _____ () Class: Primary 5

Part II (40 marks)

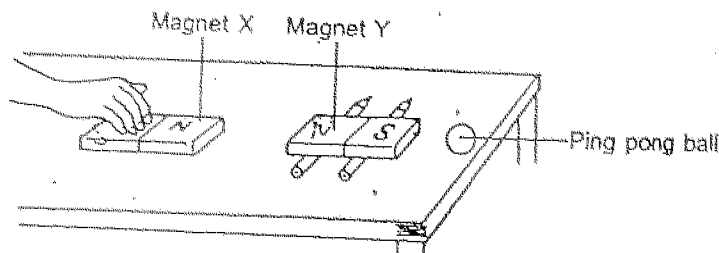
Write your answers from questions 31 to 46 in this booklet.

31. Classify the animals in the table below according to their animal group. (2m)

Butterfly	Elephant	Cat
Flamingo	Shark	Whale

Bird	Insect	Amphibian	Fish	Mammal	Reptile
Parrot	Beetle	Newt	Mackerel	Deer	Iguana

32. An experiment was set up as shown below.

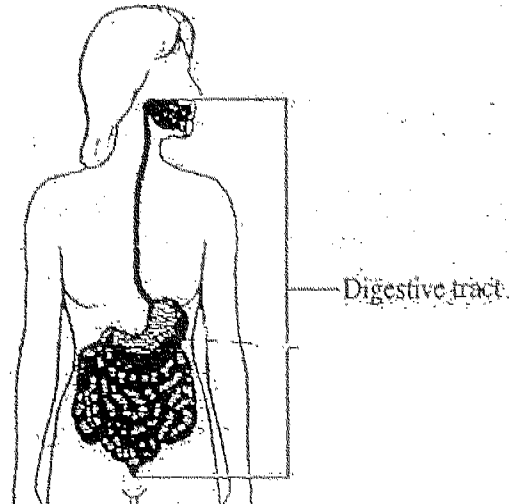


a. What would happen to the ball when the two magnets are brought together? (1m)

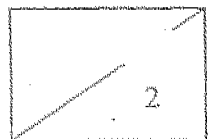
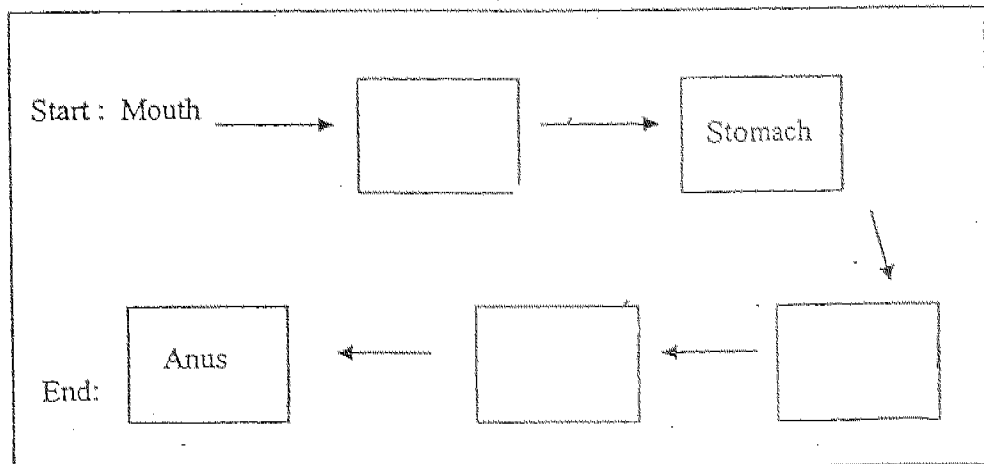
b. Explain your answer in (a). (2m)



33a. Draw an arrow and label an organ that produces digestive juice/juices. (1m)



b. In the box below, complete a simple flowchart to show the digestive tract. (1 m)



34a. What is the difference between the two joints found in our body? (1m)



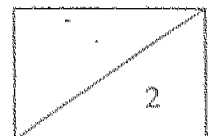
Joint A



Joint B

b. Read the statements below. Write 'T' for True and 'F' for False in the answer space provided. (1m)

(i)	The heart is an involuntary muscular organ.	
(ii)	All living things have a muscular system.	



35 Observe the leaves.



Leaf A

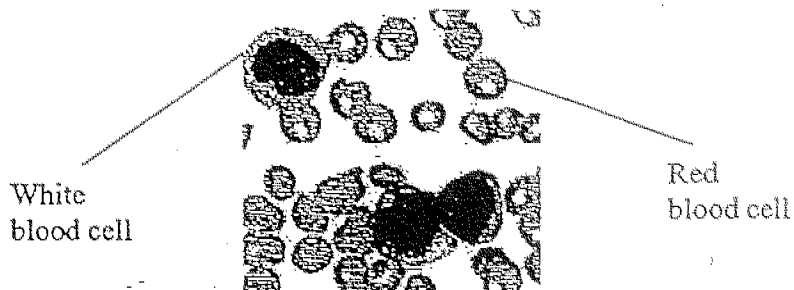


Leaf B

a. List one difference between Leaf A and Leaf B. (1 m)

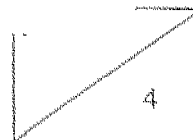
b. State one function of a leaf in a plant. (1 m)

36 The diagram below shows red blood cells and white blood cells.



(i) Name 2 substances that can be found in a red blood cell. (1m)

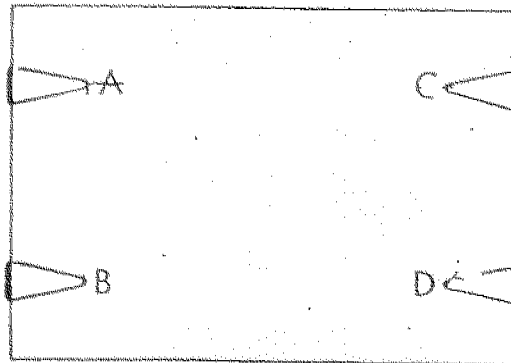
(ii) What is the function of white blood cells? (1m)



37. A circuit card was made as shown below. Tom tested to see which pair of clips would light the bulb up in the circuit tester. The results were as follows:

Clips Tested	Results
A and B	Bulb lit up.
A and C	Bulb lit up.
A and D	Bulb did not light up.
B and C	Bulb lit up.
B and D	Bulb did not light up.
C and D	Bulb did not light up.

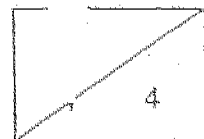
- a. Draw 2 lines to show how Tom joined the wires to the clip. (2m)



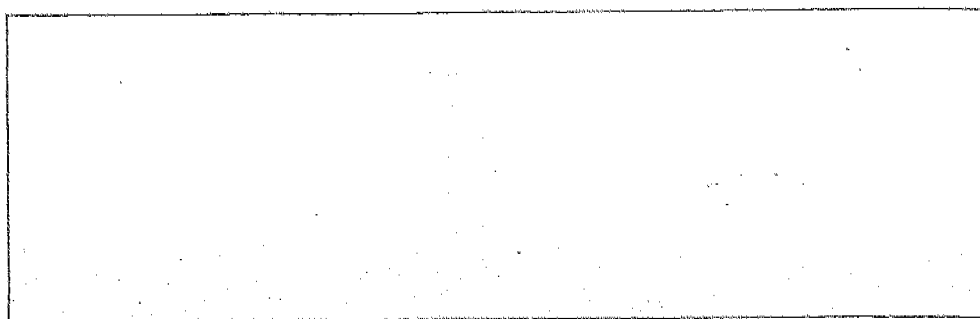
- b. List 2 ways to conserve energy. (2m)

(i) _____

(ii) _____

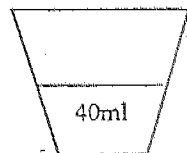


38a. Draw the life cycle of a mealworm beetle in the box provided below. (2m)



b. State one main difference between the life cycle of a mealworm beetle and a cockroach. (1m)

39. A stone was placed in a beaker of water. The following height was shown below.



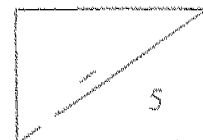
Before



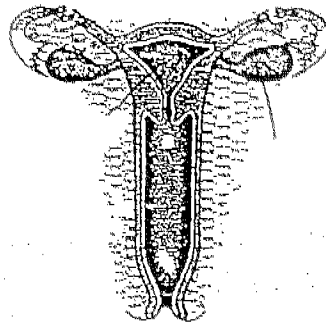
After

a. What is the volume of the stone? (1m)

b. What does the experiment described above tell you about matter? (1m)

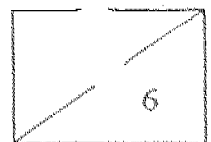
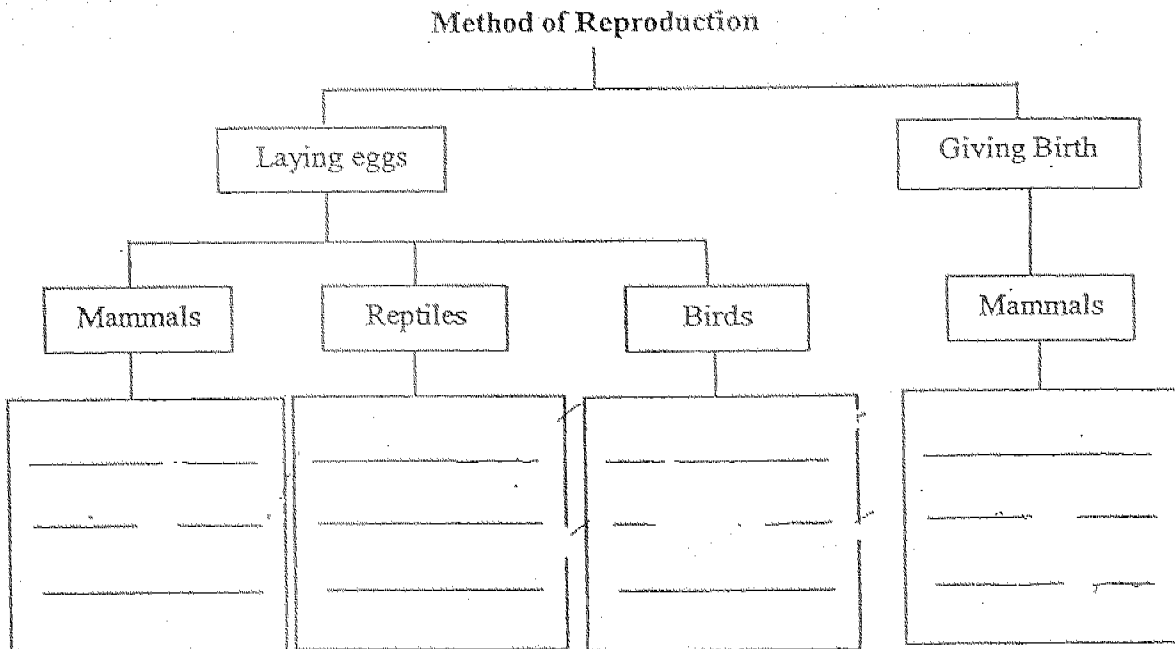


40. The diagram below shows a female reproductive system. Label the part(s) of the system that produces the egg, X and the part that develops the fertilised egg, Y. (2m)

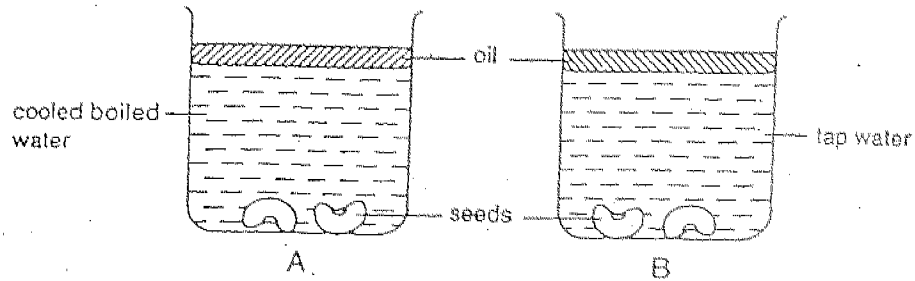


41. Study the chart below. Below are names of some animals. Place them under the correct heading. (4m)

Platypus	Ostrich	Crocodile	Donkey
Whale	Cobra	Dog	Parrot

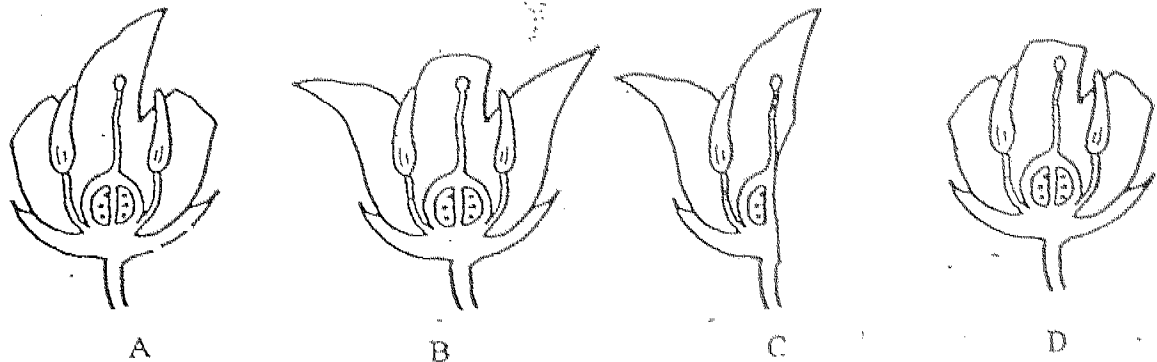


42. Michelle set up an experiment as shown below. Two days later, she noticed that only the seeds in beaker B germinated.



Why is it so? (2m)

43. The following flowers have been fertilised. However, while trimming the bushes, Mr Long, the gardener, accidentally trimmed off part of the flowers as shown below.

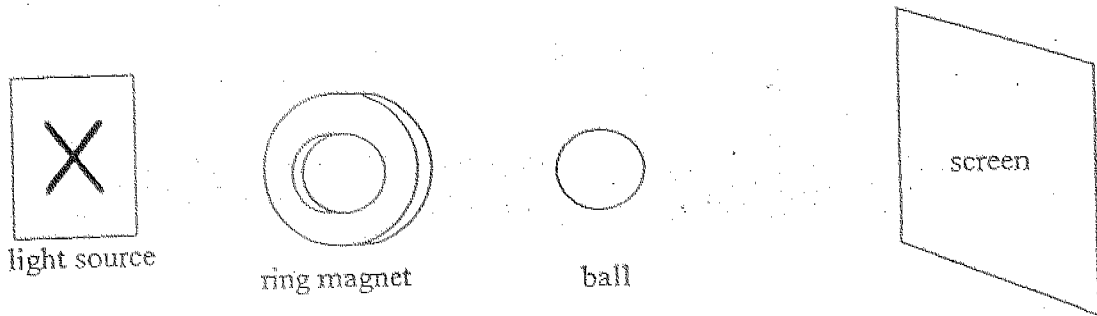


- a. Which one of the flowers has the least possibility of developing into a fruit? (1m)

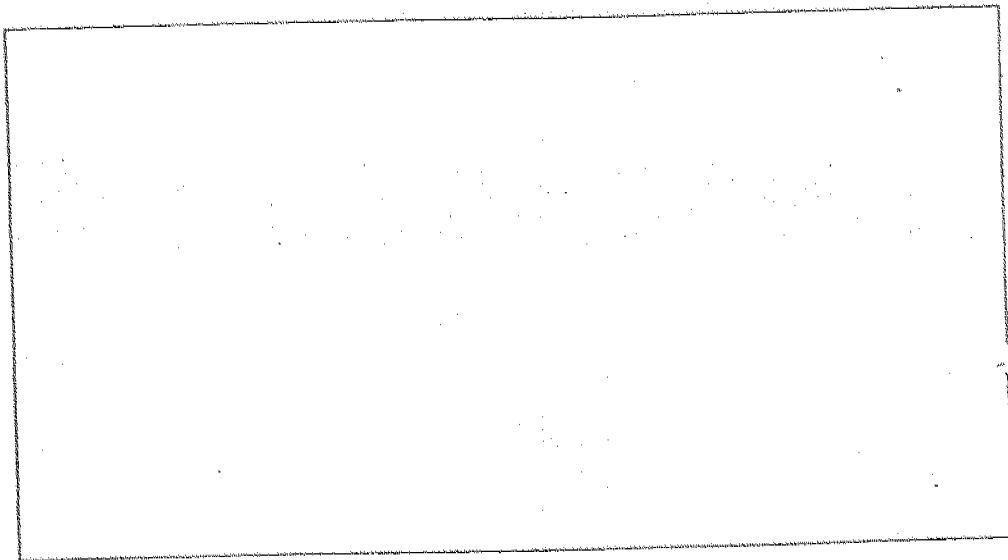
- b. Give a reason for your answer in (a) above. (1m)



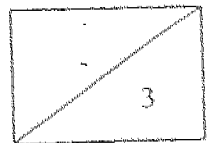
44. Jeremiah performed an experiment using the set-up shown below. The diameter of the ball is the same as the diameter of the hole in the ring magnet. The ball is placed such that it blocks the hole of the ring magnet exactly.



- a. Draw the shadow formed on the screen in the box provided below. (2m)

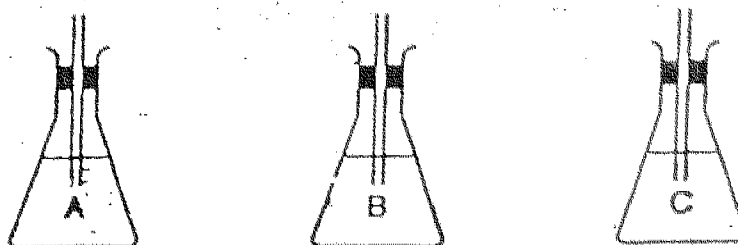


- b. What can be done to the light source to make the image on the screen smaller?(1m)

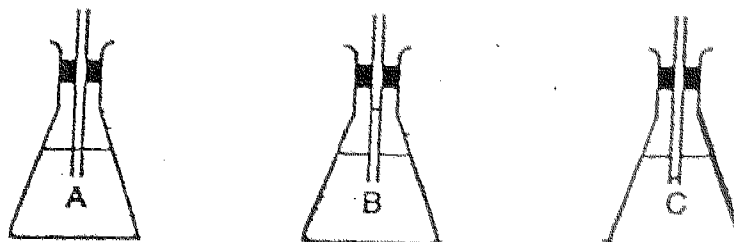


45. Judith placed 3 flasks, A, B and C with the same water level at room temperature before an experiment as shown below. After some time, she placed each flask into 3 different containers of water at different temperature. At the end of the experiment, she noticed that the water level of the glass tube in the different flasks were different as shown below. Put a tick in the table below to indicate which flask has been placed into the different containers. (2m)

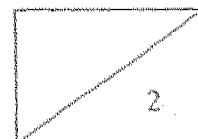
Before the Experiment :



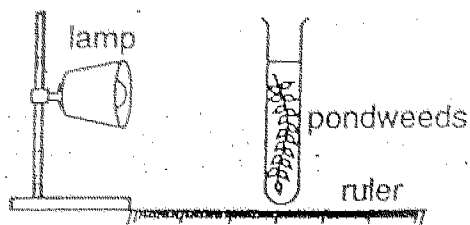
After the Experiment



Container of water	Flask A	Flask B	Flask C
at 2°C			
at 70°C			
at 30°C			



46. Marianne wants to find out the effect of light on some pondweeds. She placed the same amount of pondweeds into 4 test tubes filled with pond water. Next, she placed a lamp at different distance from the test tube as shown below. She counted the number of bubbles produced in one minute at the different distances. She conducted the experiment 3 times and took the average.

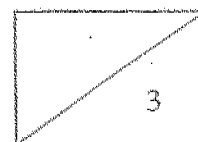


Her results are tabulated in the table below.

Distance of lamp from pondweeds (cm)	40	30	20	10
Average number of bubbles per minute	10	15	22	31

- a. What can you conclude from the results tabulated? (2m)

- b. Name the gas produced by the pondweeds. (1m)



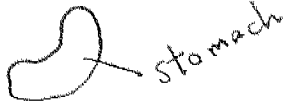
SINGAPORE CHINESE GIRLS SCHOOL
2004 PS SEMESTER ASSESSMENT 2
SCIENCE

SA2

Question	Answer
1	2
2	2
3	1
4	1
5	1
6	2
7	3
8	3
9	1
10	1
11	2
12	4
13	4
14	1
15	4
16	3
17	4
18	1
19	4
20	3
21	1
22	3
23	1
24	4
25	4
26	2
27	4
28	4
29	2
30	3

31) Flamingo Butterfly ----- Shark Cat -----
Elephant
Whale

32) a) The ball could roll off the table.
b) The magnets repel as they are positioned with their like poles together.

33) a)  stomach b) Gullet
Large intestine Small intestine

34) a) Joint A - ball and socket joint.
Joint B - hinge joint.

b) i) T ii) F

35) a) Leaf A has an entire edge while Leaf B has a jagged edge.
b) It receives sunlight to make food for the plant.

