SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2014
PRIMARY 4 SCIENCE

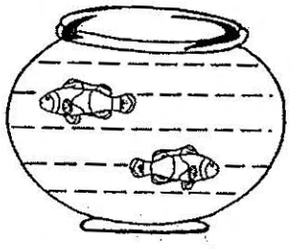
Name: _____ ( ) Date: _____

Class: 4 Duration: 1 hr 25 min

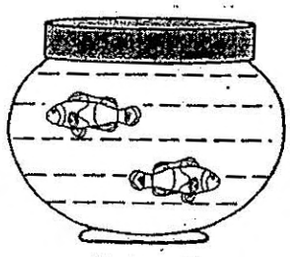
Part I (50 marks)

For each question from 1 to 25, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) on the Optical Answer Sheet provided.

1. Peter bought some fish and placed them into 2 separate fishbowls as shown below. He placed a lid on the fishbowl in Setup B. He fed the fish in both setups.



Setup A

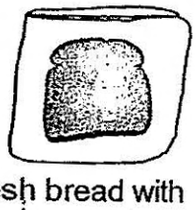


Setup B

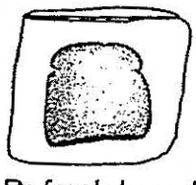
What was the aim of his experiment? He wanted to find out whether animals needed _____.

1) air to survive
2) food to survive
3) sunlight to survive
4) warmth to survive

2. Ginny conducted an experiment to find out the conditions in which bread mould grow best. She made the following setups as shown below.



A: fresh bread with no water added



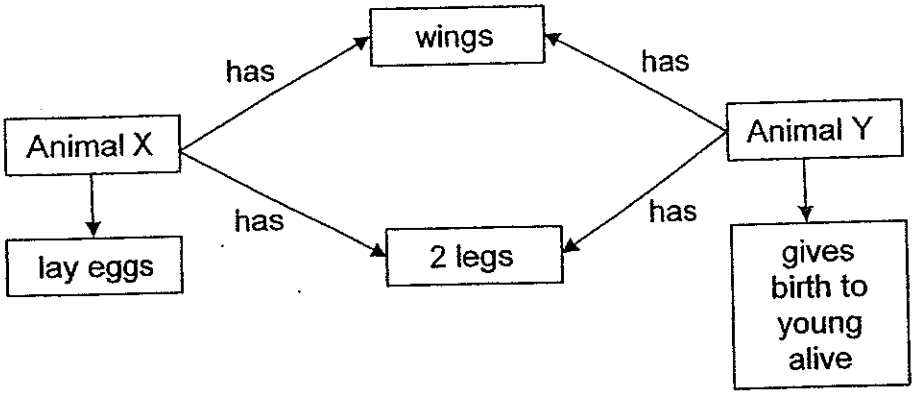
B: fresh bread with water added

C: toasted bread

Ginny left the bread in 3 bags and sealed them. She left the bread inside the bags for 7 days. Arrange the set-ups in order beginning with the one which would have the most mould growing on it.

1) A, B, C
2) A, C, B
3) B, A, C
4) C, A, B

3. Study the diagram below.

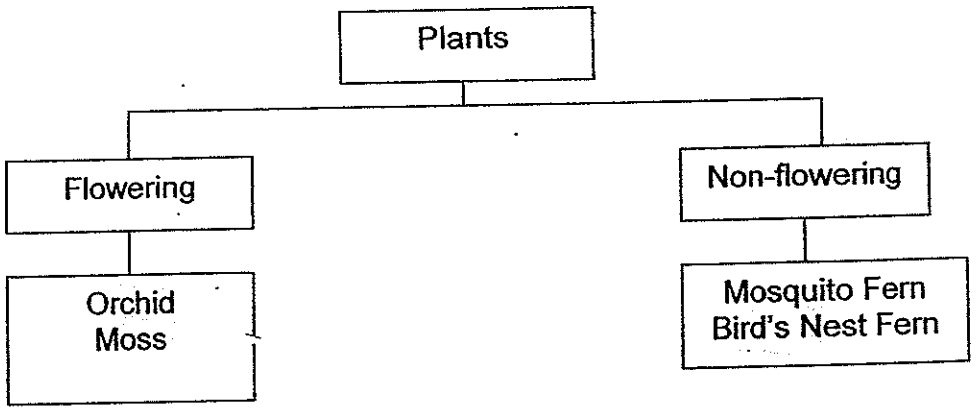


Which of the following conclusions could be made from the information given above?

A) Animal X can fly.
B) Animal X can be a bird.
C) Animal Y can be a fish.
D) Animal Y cannot be an insect.

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

4. Study the classification table below.



Which of the following plants have been classified wrongly?

1) Moss
2) Orchid
3) Mosquito Fern
4) Bird's Nest Fern

5. Study the classification table below.

Group A	Group B	Group C
Paper	Key	Silk scarf
Cotton Socks	Ceramic bowl	Leather bag
Wooden chair	Metal spoon	Wool jacket

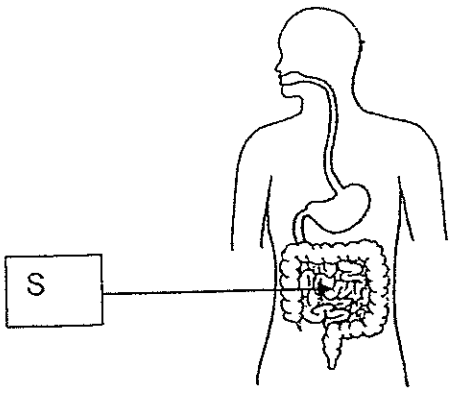
In which group would you put a silver coin and a balloon?

	Silver coin	Balloon
1)	Group A	Group B
2)	Group B	Group A
3)	Group C	Group A
4)	Group B	Group C

6. Which of the following body systems is **NOT** correctly matched to its function?

	Body Systems	Function
1)	Circulatory	Pumps blood to the other parts of the body
2)	Respiratory	Transports oxygen and carbon dioxide throughout the body
3)	Skeletal	Gives the body its shape and protects the important organs
4)	Digestive	Breaks down the food we eat into simpler substances

7. Study the diagram of the digestive system below.



What may happen if food passes through Part S too quickly?

1) The food will not be digested at all.
2) The waste from the body will not be removed.
3) Less digested food will be absorbed into the blood.
4) Less water will be removed from the food by the body.

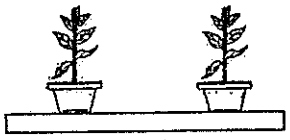
8. What of the following about plant roots is **incorrect**?

A: Roots make food for the plant.
B: Roots hold the plant firmly to the ground.
C: Roots take in water and mineral salts for the plants.
D: Roots transport water to the leaves and mineral salts to the other parts of the plant.

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

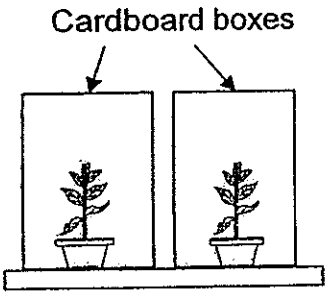
9. May wants to find out whether plants grow better in the dark or in the light. Which set-up must she use?

1)



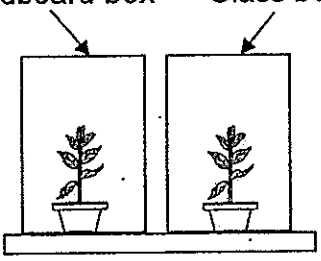
In the garden

3)



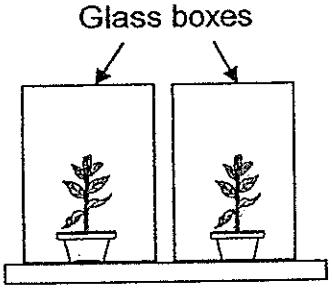
In a cupboard

2)



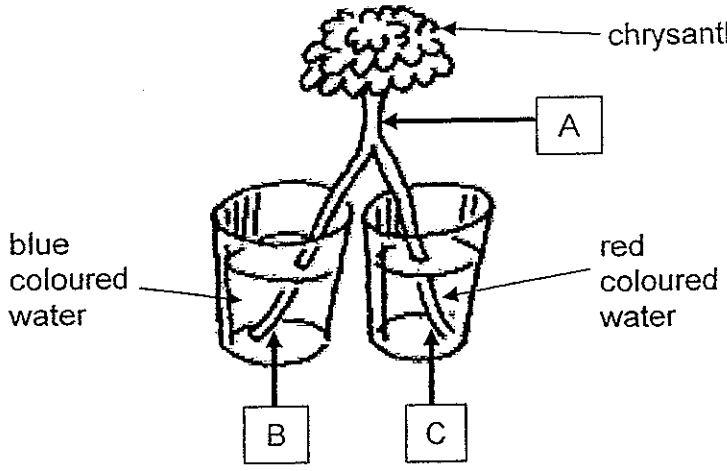
In the garden

4)



In a cupboard

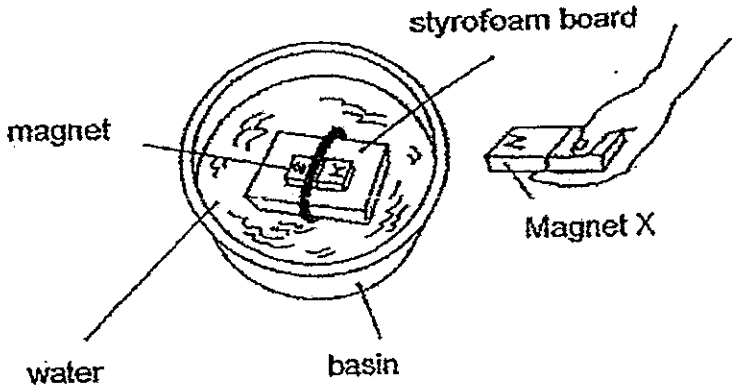
10. Hans cut part of the stalk of a chrysanthemum and placed each part into 2 cups of coloured water as shown below.



Which of the following will Hans observe after 1 day?

	Water-carrying tubes			Food-carrying tubes		
	A	B	C	A	B	C
1)	Blue	Red	Purple	White	Blue	Red
2)	White	White	White	Purple	Blue	Red
3)	Purple	Blue	Red	White	White	White
4)	White	Blue	Red	Purple	White	White

11. A bar magnet is placed on a styrofoam board and left to float in a basin of water. It always comes to rest with the North-seeking pole facing the North as shown in diagram below.



What will happen to the styrofoam board if another magnet, X, is placed near the North-seeking pole of the bar magnet on the stryofoam board?

1) The styrofoam board will sink.
2) The styrofoam board will not move.
3) The styrofoam board will move towards Magnet X.
4) The styrofoam board will move away from Magnet X.

12. Wendy conducted an experiment using 4 rod magnets. She took one of the magnets and brought it near some paper clips. She recorded the number of paper clips attracted to the different parts of the magnet in the table shown below. She then made some markings on the magnet and labelled them.

Part	No. of Paper Clips Attracted
A	3
B	0
C	6
D	4

Which of the following rod magnet was the one Wendy took?

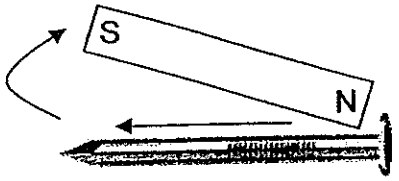
1) A C D B

2) B A D C

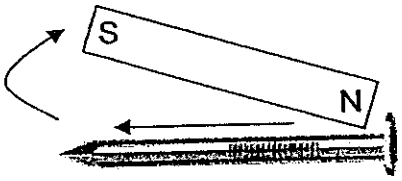
3) C D B A

4) C D A B

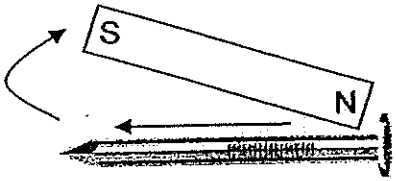
13. A nail can be made into a temporary magnet by the stroking method as shown below. Which of the following nail/s can be magnetised?



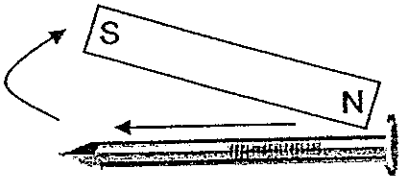
Iron Nail



Copper Nail



Steel Nail

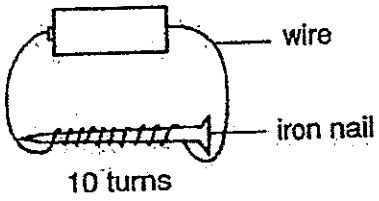


Aluminium Nail

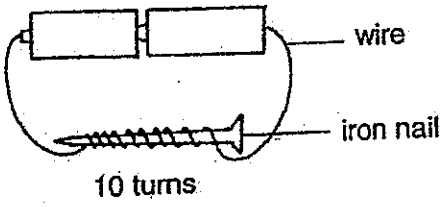
1) Copper only
2) Iron and Steel only
3) Copper and Aluminium only
4) Copper, Steel and Aluminium only

14. Which of the following electromagnets is the strongest?

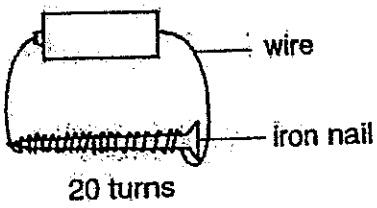
(1) 1 battery



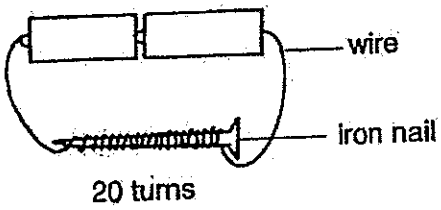
(2) 2 batteries



(3) 1 battery



(4) 2 batteries



Use the information in the table below to answer Questions 15 and 16.

Animal	Lays Eggs	3-stage life cycle	Young moults
W	✓	✓	✓
X	✓	✓	
Y			
Z	✓		✓

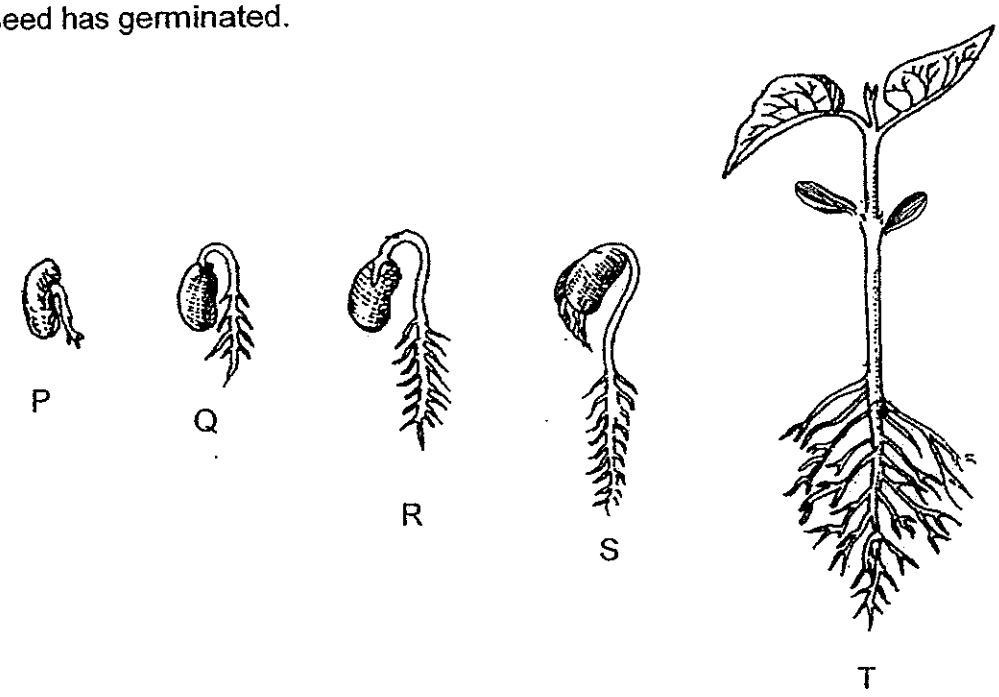
15. Which of the following animals could be a frog?

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

16. Based on the table above, which of the following statements is/are **correct**?

1) Animal W could be a cockroach.
2) Animal X could be a grasshopper.
3) Animal Y could be a penguin.
4) Animal Z could be a goldfish.

17. The diagram below shows a few stages of the growth of a baby plant after the seed has germinated.



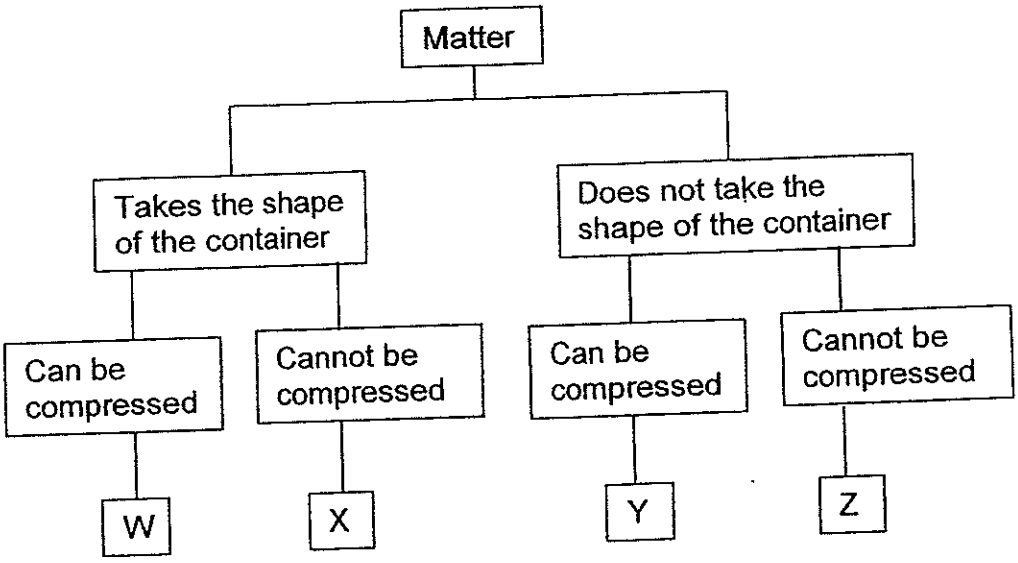
The table below shows the mass of the seed leaves as it progresses from stage P to stage T.

Stage	Mass of Seed leaves
P	0.48g
Q	0.35g
R	0.28g
S	0.24g
T	0.15g

Which of the following statements best explains why the mass of the seed leaves decreases from Stages P to T?

1) The leaves made food for the baby plant.
2) The leaves provided food for the baby plant.
3) The seed leaves made food for the baby plant.
4) The seed leaves provided food for the baby plant.

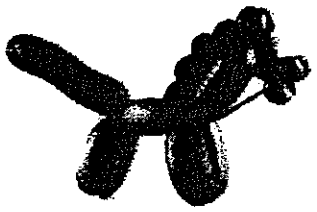
18. Study the classification chart below.



Which category should water be classified under?

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

19. Roy twisted an inflated balloon into the shape of a horse.



Which property/properties of air allowed Roy to shape the balloon?

A) Air cannot be seen.
B) Air has definite mass.
C) Air can be compressed.
D) Air has no definite shape.

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

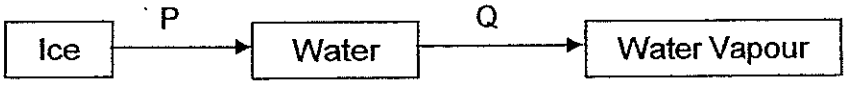
20. Ali pumped different amounts of air into 4 containers of different volume. The table below shows the data.

Container	Volume of container (cm^3)	Amount of air pumped into container (cm^3)
A	200	200
B	200	300
C	200	400
D	200	500

Which container is the heaviest?

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

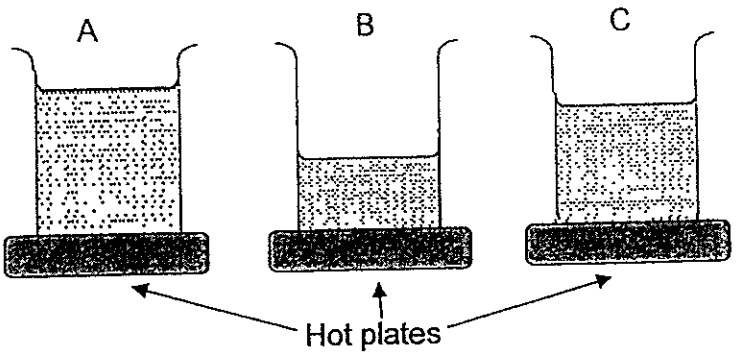
21. Water can exist in different states of matter.



What are processes P and Q?

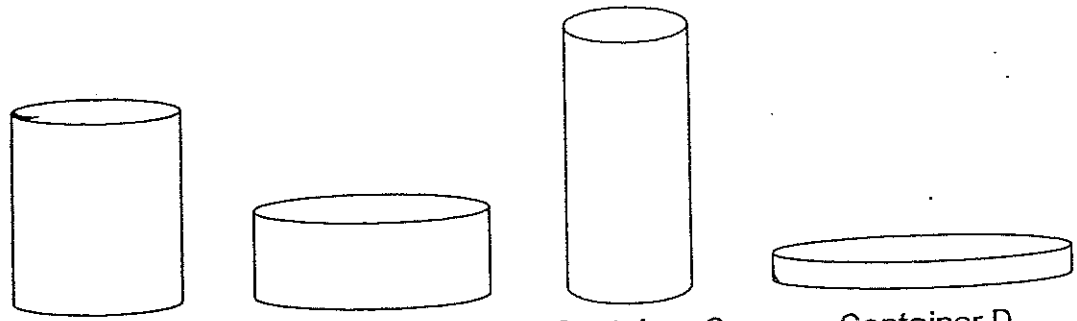
	P	Q
1)	Melting	Freezing
2)	Melting	Boiling
3)	Freezing	Boiling
4)	Freezing	Melting

22. The water in each of the 3 containers shown below is heated until it boils. What could the temperature of the water in each beaker be when it's boiling?



	Container A	Container B	Container C
1)	120°C	70°C	100°C
2)	100°C	100°C	100°C
3)	100°C	120°C	70°C
4)	70°C	100°C	120°C

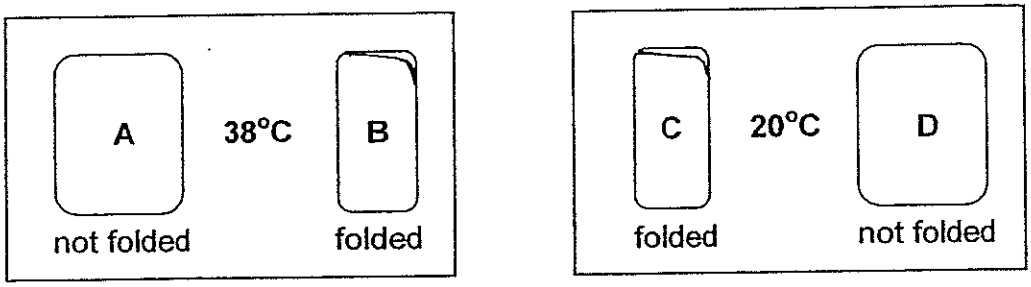
23. Rachel conducted an experiment to test if the exposed surface area of water affects the rate of evaporation. She conducted the experiment using water at room temperature.



In order to conduct a fair test, which of the following must be done?

1) The containers must be of the same shape.
2) The containers must be of the same thickness.
3) The water must be of the same volume at the end.
4) The water must be of the same volume at the start.

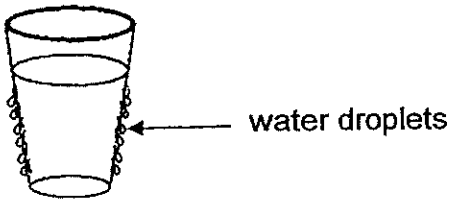
24. 4 similar towels are washed together and placed on the tables of 2 different rooms to dry.

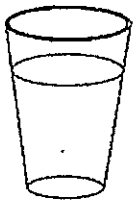


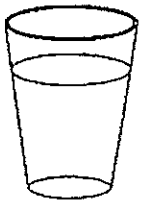
Which towel will dry the fastest?

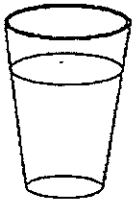
1) A
2) B
3) C
4) D

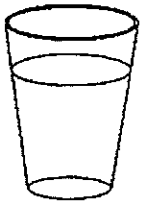
25. Susie placed 4 cups in a room with temperature of 30°C. On which of the following cups A, B, C and D will water droplets form on the outer surface as shown below?



1) 
Cup A filled with water of 80°C

3) 
Cup C filled with water of 5°C

2) 
Cup B filled with water of 30°C

4) 
Cup D filled with water of 65°C

SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2014
PRIMARY 4 SCIENCE

Name:_____ ( )
Class: 4 SY

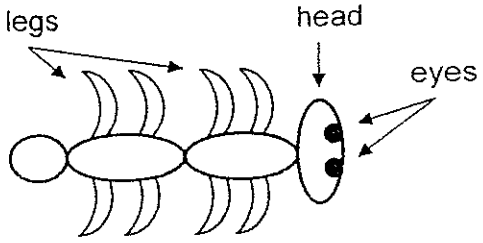
Date:
Duration: 1 hr 25 min

Written Paper (Part I)		50
Written Paper (Part II)		30
Total		80
Percentage		%

Parent's Signature

Part II (30 marks)
Read and answer Questions 26 to 35.

26. Mabel found a creature in her garden. She drew a picture of it as shown below.



a) Mabel concluded that the creature is **not** an insect. List 2 characteristics of insects that the creature does not have. (2m)

(i) _____

(ii) _____

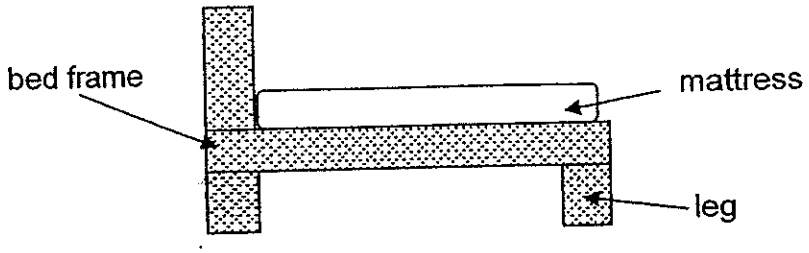
b) Mabel then placed the creature in a container and sealed it with a cap. She did not feed the creature as well. After one week, the creature died. What does this tell you about the creature? (1m)

_____

_____

3

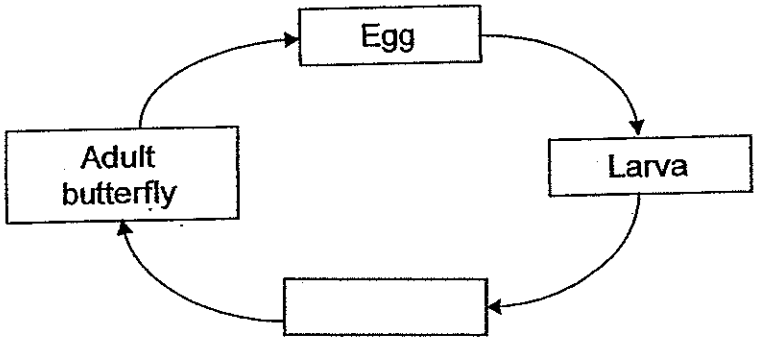
27. The figure below shows a baby cot.



Which of the following are the **main** properties of the materials that are required when making the bed? **Put ONE tick ✓only for each part** in the appropriate boxes below. (3m)

Parts of Bed	Flexible	Opaque	Strong	Can Float
Leg				
Mattress				
Bed frame				

28. a) Complete the life cycle of a butterfly. (1m)



b) State one difference between the life cycles of a butterfly and a cockroach. (1m)

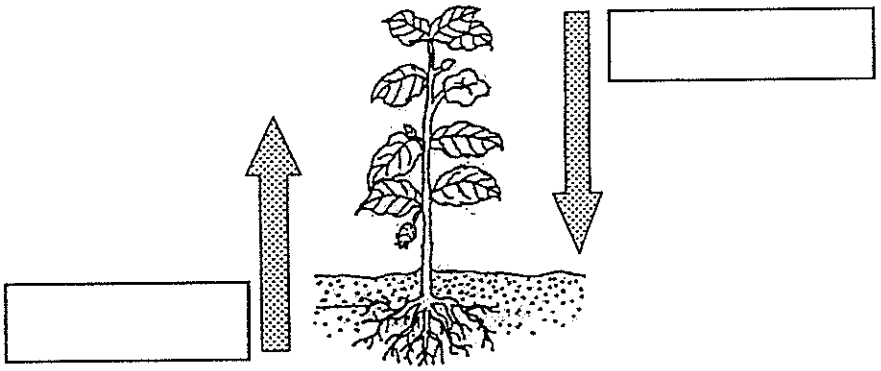
_____

_____

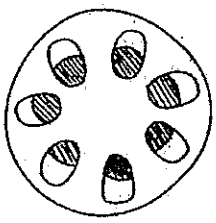
5

29. The plant transport system carries food and water within the plant.

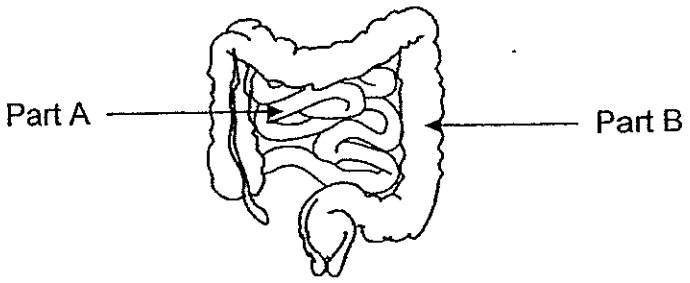
a) Fill in Food or Water in the appropriate boxes. (2m)



b) In the following cross section of a stem, shade the parts where the water carrying tubes are. (1m)



30. The diagram below shows part of the digestive system.



Joseph observed that his stools (what he passes out) is watery. Which part of the digestive system, A or B, is not functioning well?

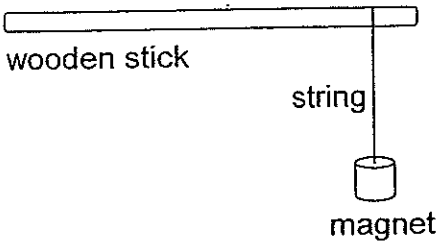
a)_____. (1m)

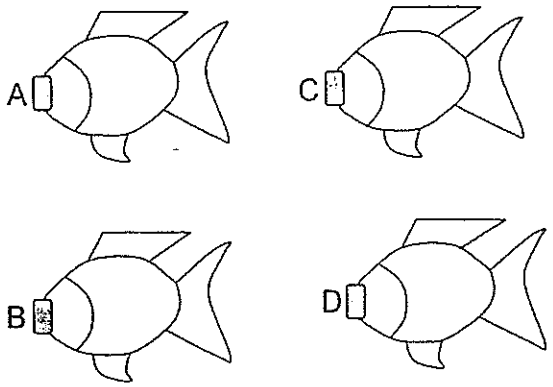
b) Explain your answer in (a). (1m)

_____

5

31. Kumar wanted to create his own fishing game. He made 4 similar fishes out of cardboard and attached 4 metal bars to the fishes.





When playing the game, Kumar made some observations as shown in the table.

Bar	Observation
A	Was not attracted to the magnet, fish could not be picked up
B	Was attracted to the magnet, fish was lifted but dropped with a slight touch
C	Was attracted to the magnet, fish was lifted and remained attached
D	Was not attracted to the magnet, fish could not be picked up

a) Based on his observations, Kumar cannot determine whether Bars B and C are magnets or magnetic metals. What is the best way to test whether the metal bars are magnets? (1m)

_____

_____

b) If Bars B and C are magnets, which one is stronger? (1m)

_____

c) If Bars B and C are **not** magnets, they can be made of materials such as

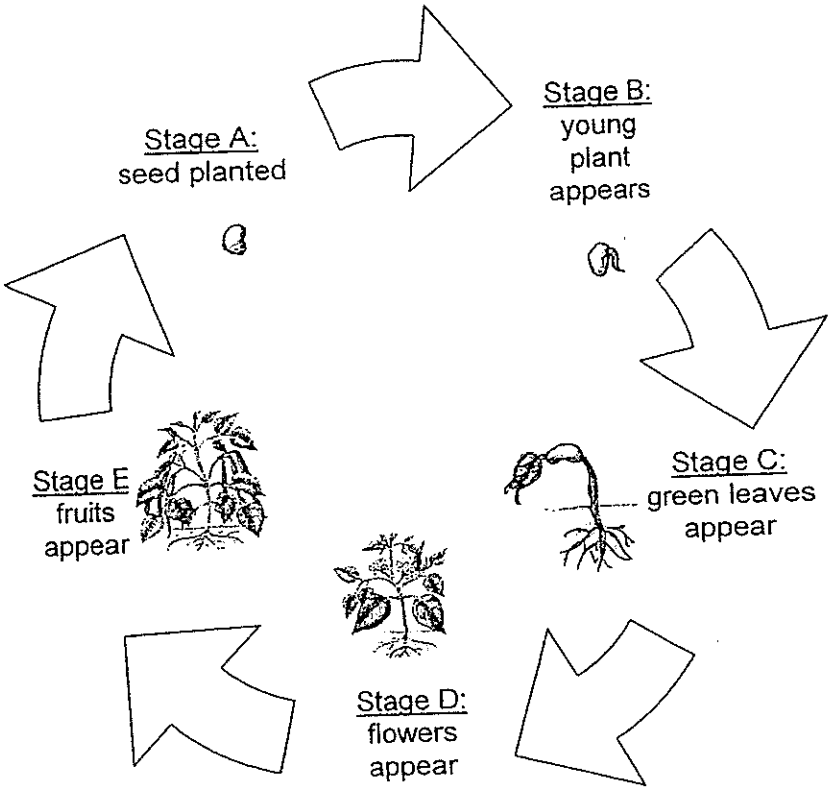
_____ and _____. (1m)

d) Bars A and D could be made of _____ and

_____. (1m)

4

32. The diagram below shows the growth of a plant.



a) When a plant goes from Stage A to Stage B, what is the process called? (1m)

_____

b) At Stage C, what is the function of the leaves? (1m)

_____

c) At which stage does the plant become an adult plant? (1m)

_____

d) How do non-flowering plants like ferns reproduce? (1m)

_____

4

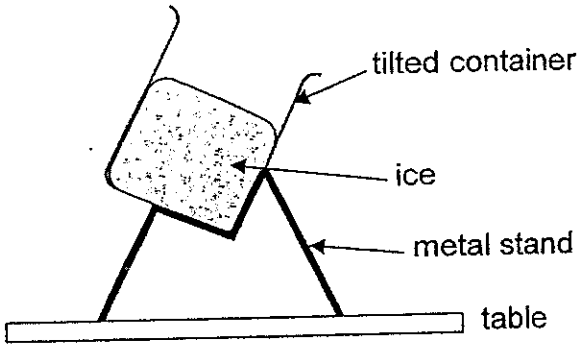
33. May Lin conducted some experiments involving water and recorded her observations. Some of statements are true but some are false.

Write **'T'** (true) or **'F'** (false) in the boxes provided below. (3m)

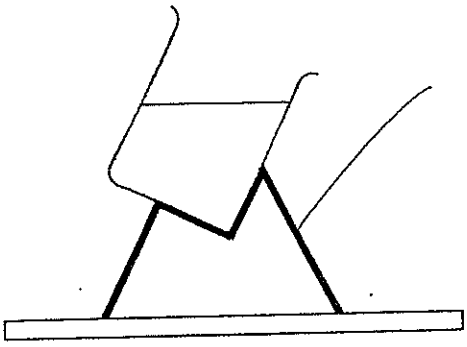
	Statements	T or F
a)	The boiling point of water is 100°C.	
b)	At 0°C, water can exist both as a solid and a liquid.	
c)	When water is cooled to 0°C, it changes to ice.	
d)	When water is boiled and left to cool in a room with a temperature of 28°C, its final temperature can be 15°C.	
e)	Water vapour is water in its gaseous state.	
f)	When ice melts, it changes from the solid state to the liquid state.	

3

34. Sarah took a container and poured some water into it. She put the container into the freezer and the water became ice. She then placed the container on a metal stand in a tilted manner as shown in the diagram.



a) After 30 minutes, the ice has melted. **Draw** in the water level in the tilted container. (1m)



b) What was the change of state that took place when the ice melted? (1m)

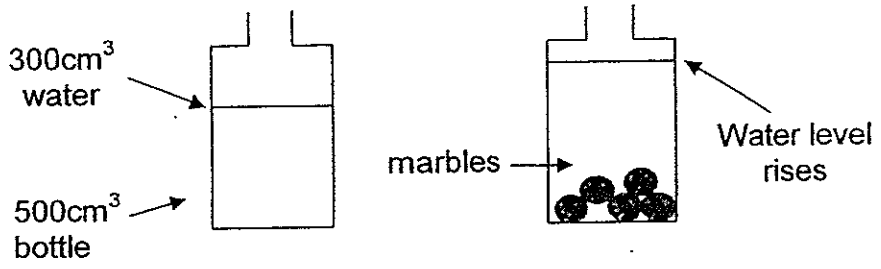
c) If the water in the container was left untouched for 3 days, would the water level increase, decrease or remain the same? Explain your answer. (1m)

_____

_____

3

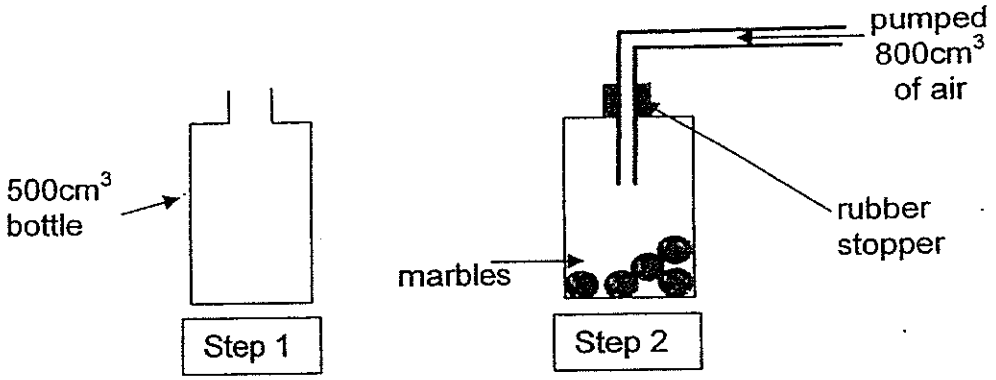
35. Peter conducted an experiment. He poured 300cm^3 of water into a 500cm^3 bottle. He then placed 5 marbles into the bottle as shown below.



a) Why did the water level rise? (1m)

_____

b) Samy conducted a similar experiment. He took the same 500cm^3 bottle and placed the 5 marbles into it. He then sealed the bottle with a rubber stopper and inserted a tube through the rubber stopper and pumped 800cm^3 of air into it.



i) After Step 2, what is the volume of air in the bottle if the volume of the 5 marbles is 100cm^3? (1m)

_____

ii) What does Samy's experiment tell you about air? (1m)

_____

END OF PAPER

3

Exam Paper 2014 Answer Sheet

School: SINGAPORE CHINESE GIRLS' SCHOOL
Subject: PRIMARY 4 SCIENCE
Term: SA1

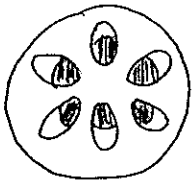
1)	1	6)	2	11)	4	16)	1	21)	2
2)	3	7)	3	12)	3	17)	4	22)	2
3)	2	8)	1	13)	2	18)	2	23)	4
4)	1	9)	2	14)	4	19)	4	24)	1
5)	2	10)	3	15)	2	20)	4	25)	3

26. (a) i. It does not have six legs.
ii. It does not have three body parts.
(b) It is a living thing which needs air, food and water to survive.

27. Leg: Strong; Mattress: Flexible; Bed frame: Strong

28. (a) Pupa
(b) The butterfly has a four-stage life cycle while the cockroach has a three-stage life cycle.

29. (a) Downward arrow: Food; Upward arrow: Water
(b)



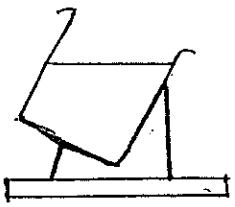
30. (a) B
(b) Part B removes water from the undigested food.

31. (a) See if they repel, if they repel, they are metal.
(b) C
(c) Cobalt and steel
(d) Gold and silver

32. (a) Germination
(b) Help the plant to make food.
(c) D
(d) They reproduce by spores.

33. (a) T; (b) T; (c) T; (d) F; (e) T; (f) T

34. (a)



(b) Solid to liquid
(c) It will decrease. Some of the water may have evaporated into the thin air.

35. (a) The marble had volume and took up space in the bottle.
(b) i. 400cm^3
ii. Air has no definite volume and can be compressed.