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. Some animals have been classified into two groups as shown below. ~~Which of the following are suitable headings for the two groups?~~

give birth / lay eggs

Group A	Group B
Kangaroo	Platypus
Guppy	Alligator
Wolf	Praying mantis

Which one of the following characteristics of the animals was used to classify them?

1) Number of legs
2) Reproduction method
3) The way they move
4) Type of outer covering

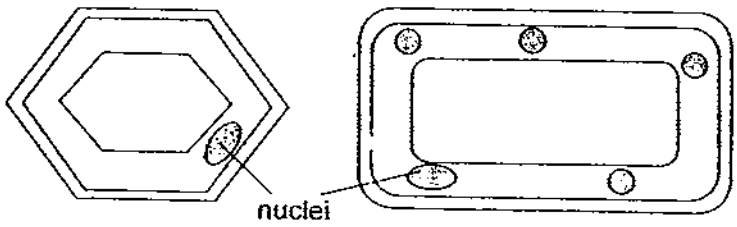
2. Which one of the following organs belongs to the human digestive system?

1) Lungs
2) Stomata
3) Gullet
4) Ribcage

3. Katherine wrote the following statements about the human body system. Which one is **incorrect**?

1) Arteries belong to the circulatory system.
2) The human skeleton gives our body its shape.
3) Windpipe and gullet are part of the digestive system.
4) Saliva is produced in the mouth to aid digestion of food.

4. Timothy was given 2 cell samples, Cell A and Cell B, as shown below. He came to the conclusion that they were plant cells.



Which of the following supports his conclusion?

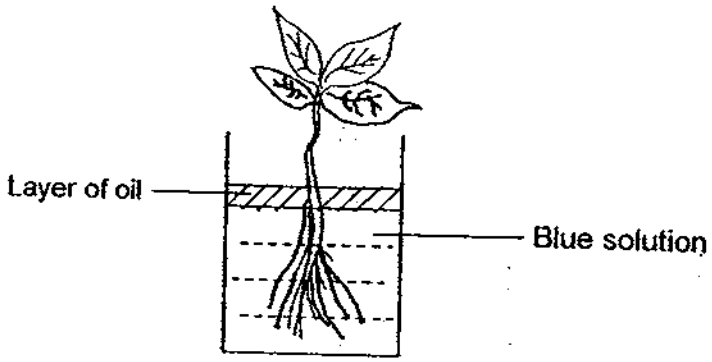
1) Presence of nuclei
2) Presence of chloroplasts
3) Presence of cell wall
4) Presence of cell membrane×

5. Which of the following statements are true of a human baby?

A: Its cells live forever.
B: It has many kinds of cells of different shapes.
C: The nuclei in its cells contain genetic materials.

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

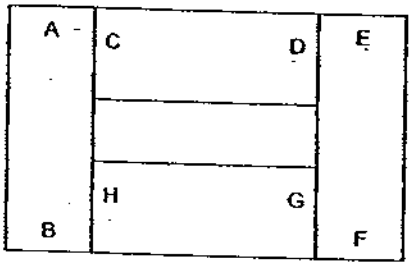
6. Evangelique did the following set-up and left it for 1 week.



Which of the following would she observe after 1 week?

	Water level	Colour of leaves
1)	increased	mostly green
2)	increased	mostly blue
3)	decreased	mostly green
4)	decreased	mostly blue

7. Susan arranged some magnets as shown below.



Which of the following shows the possible arrangements of the poles of the magnets?

	A	D	F	H
1)	N	S	S	N
2)	S	S	S	S
3)	N	S	N	N
4)	S	N	N	S

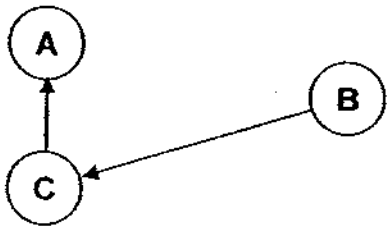
8. All the following gives off light on their own except _____

1) firefly
2) wood
3) bonfire
4) lightning

9. Which of the following statements does **NOT** show a use of light energy?

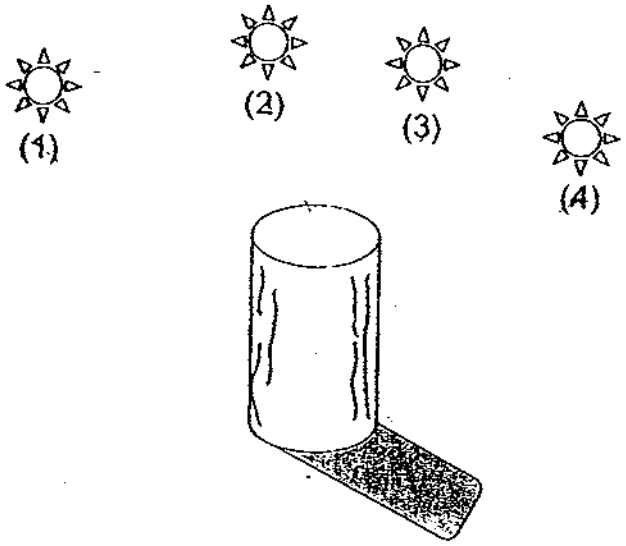
1) A boy watching a movie.
2) Plants trap sunlight to make food.
3) Boiling a pot of water over the flame of a stove.
4) A motorist gives a left turn signal before making the turn.

10. In the diagram below, the path of light is indicated by the arrows. What does A, B and C represent?

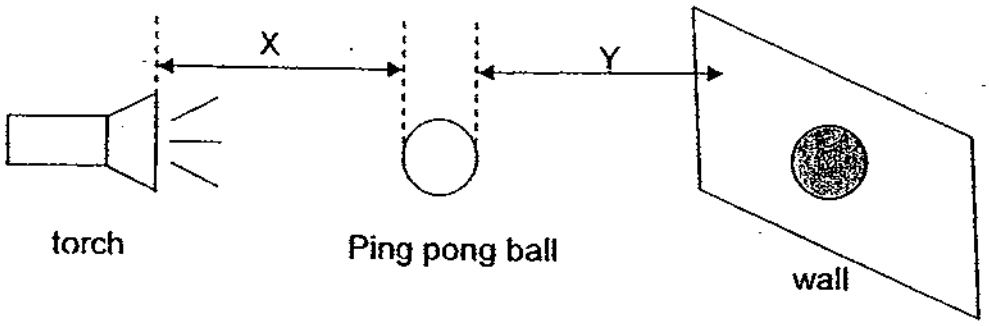


	A	B	C
1)	Object	Eyes	Light Source
2)	Eyes	Light Source	Object
3)	Light Source	Object	Eyes
4)	Light Source	Eyes	Object

11. The picture below shows a log and its shadow. Which position is the Sun likely to be for such a shadow to form?



12. Christopher carried out the experiment below and cast a shadow on the wall. He repeated the experiment with the torch at different distances from the ball (X), and the ball at different distances from the wall (Y). The table below shows the distances X and Y which he experimented on and the corresponding shadows.



Distance X	Distance Y	Shadows
5 cm	20 cm	A
10 cm	10 cm	B
10 cm	15 cm	C
25 cm	10 cm	D

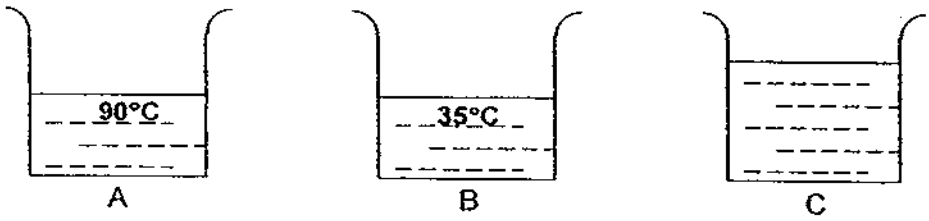
Arrange the size of the shadows in ascending order.

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

13. Which of the following recorded temperatures is correct?

	Susan's body	Water boiling	Surrounding air at noon (in S'pore)	Ice cream in a cone
1)	10°C	29°C	100°C	37°C
2)	100°C	37°C	10°C	29°C
3)	37°C	100°C	29°C	-2°C
4)	29°C	10°C	37°C	100°C

Study the diagram below carefully and answer Questions 14 and 15.



14. Patrick poured the liquids from Beakers A and B into Beaker C. Which of the following will most likely be the temperature of the liquid in Beaker C?

1) 25°C
2) 40°C
3) 65°C
4) 125°C

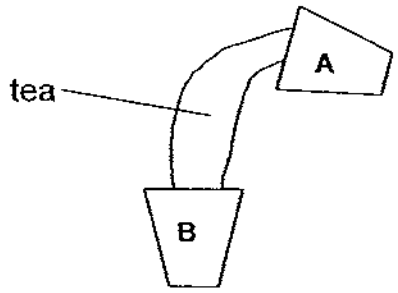
15. Patrick was given 4 different thermometers to use to measure the temperature of the liquid in Beaker C. The temperature range of each thermometer is shown below.

Thermometer	Temperature range
A	30°C - 45°C
B	85°C – 130°C
C	0°C – 50°C
D	20°C - 90°C

Which thermometers should he use?

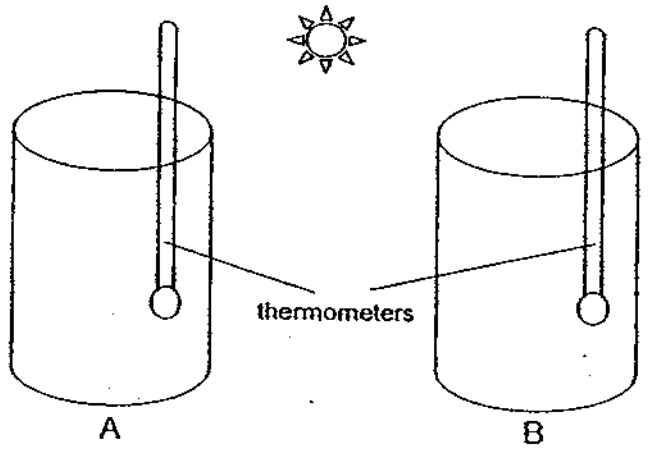
1) A
2) B
3) C
4) D

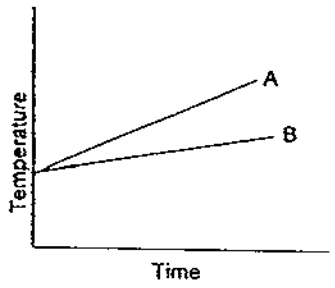
16. Sarah observed an Indian man selling 'Teh Tarik' (milk tea) pouring the tea from Mug A to Mug B at a height as shown below. Her friend explained that it was to cool the tea faster. Which of the following best explains how this was achieved?

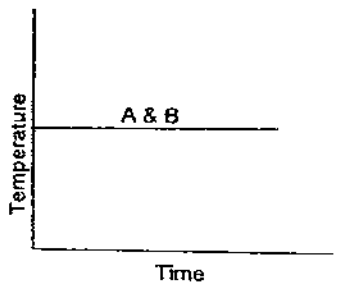


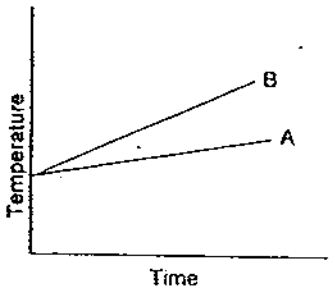
1) Mug A loses heat to Mug B.
2) Hot tea loses heat to Mugs A and B.
3) Mug A loses heat to the surrounding air.
4) Hot tea loses heat to the surrounding air.

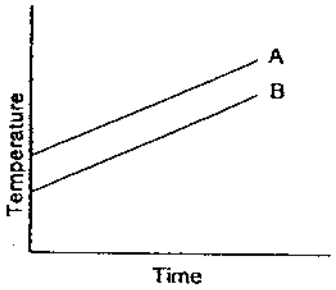
17. Sally recalled from one of her Science lessons that dark colours absorb heat better than light colours. She decided to conduct an experiment to prove this point. She used two cans, A and B. Can A was painted white while Can B was painted black. Both cans were at room temperature before the start of the experiment. The cans were placed in the middle of a field and the temperature of each can was recorded over 30 minutes. She then plotted graphs using the data that she had collected. Which one of the following graphs shows the correct temperature changes of Cans A and B?



1)


2)


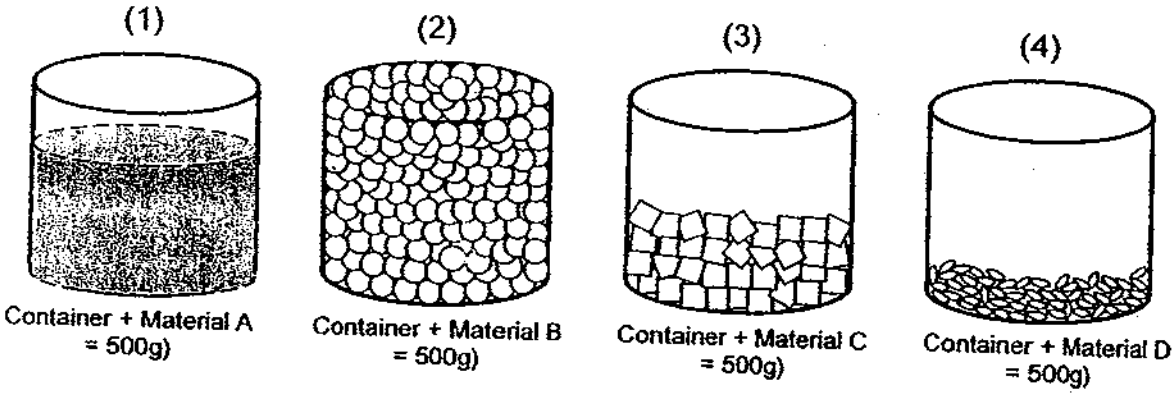
3)


4)


18. Which of the following are classified under the correct states of matter at room temperature?

	Solid	Liquid	Gas
1)	Butter	Nitrogen	Alcohol
2)	Oxygen	Sugar	Petroleum
3)	Oxygen	Alcohol	Butter
4)	Sugar	Petroleum	Nitrogen

19. Kathleen had 4 similar cylindrical containers containing different materials, each with a mass of 500g as shown below. If all the containers were filled to the top, which container would be heaviest?



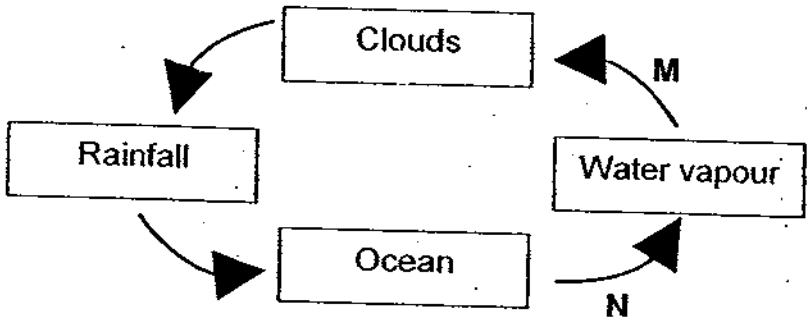
20. Study the table below.

Group R	Group S	Group T
Snow	Rain	Steam
Iceberg	Water vapour	Morning dew
Ice cube	Water droplets	Oxygen

Which of the following items have been **wrongly** classified?

1) Snow and Iceberg
2) Snow and Morning dew
3) Iceberg and Water vapour
4) Water vapour and Morning dew

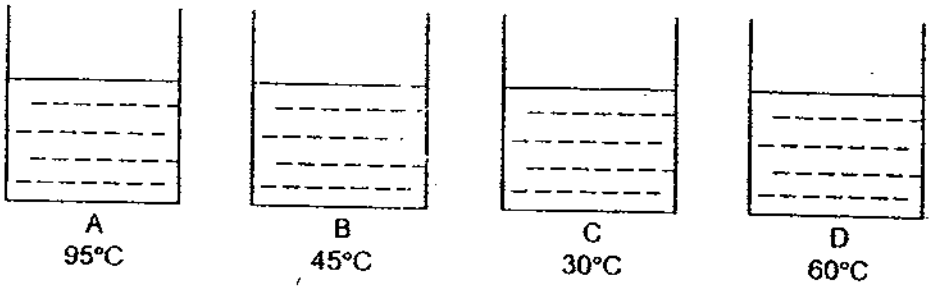
21. Study the water cycle below.



Which of the following represents the processes, M and N, respectively?

	M	N
1)	Evaporation	Melting
2)	Evaporation	Condensation
3)	Condensation	Evaporation
4)	Freezing	Condensation

22. Ryan was given 4 beakers of water, each containing the same amount of water but different temperatures.



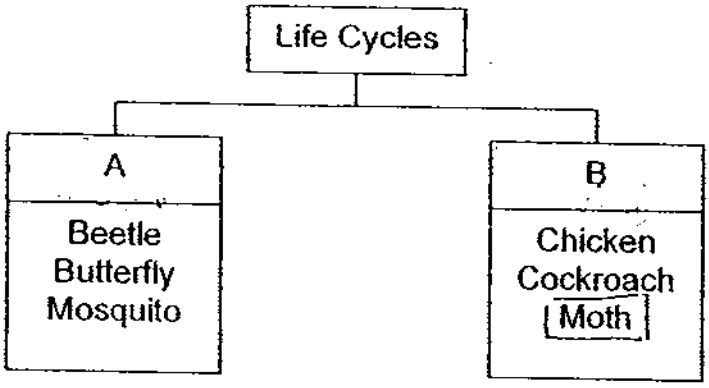
Arrange the 4 beakers based on their rate of evaporation, from the fastest to the slowest.

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

23. Which of the following statements about the life cycle of a butterfly is true?

1) A caterpillar moults as it grows.
2) A caterpillar is in the pupa stage.
3) A butterfly lays its eggs in water.
4) The life cycle of butterfly consists of 3 stages.

24. Study the classification chart below.



Which one of the following is **wrongly** classified?

1) Moth
2) Beetle
3) Chicken
4) Mosquito

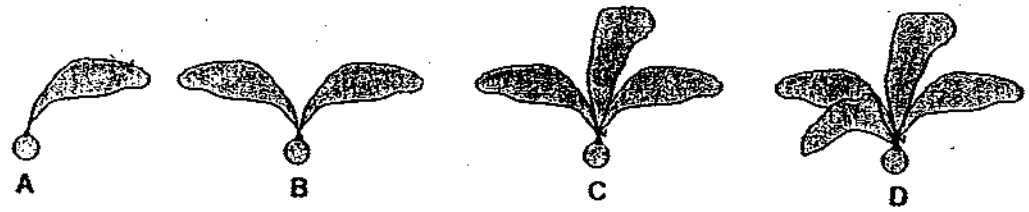
25. Read the following statements carefully.

A: The shoot appears.
B: The root appears.
C: The seedling grows into an adult plant.
D: The seed absorbs water.

Arrange the statements in the order in which a seed germinates.

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

26. Look at the fruits below.



Which of the following best depicts the distance each fruit travels when dispersed if the total weight of each fruit is the same?

	Furthest distance travelled during dispersal			
	A	B	C	D
1)	8 km	4 km	15 km	12 km
2)	12 km	8km	12 km	15 km
3)	4 km	8 km	12 km	15 km
4)	4 km	8 km	15 km	12 km

27. Study the table below carefully.

Fruits	Size	Weight	Characteristics
A	large	2 kg	sweet-tasting, has fibrous husk
B	medium	1 kg	brightly coloured, sweet-tasting
C	small	0.6 kg	looks like a pod, has many seeds
D	small	0.3 kg	dull coloured, has hooks

Which of the above fruits are most likely to be dispersed by animals?

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

Study the table below carefully and answer Questions 28 and 29.

Flower	Petals		Smell
	Size	Colour	
A	Large	White	Unscented
B	Small	White	Unscented
C	Large	Brightly coloured	Scented
D	Small	Brightly coloured	Unscented

28. Which flower is most likely to be visited by the **least** number of insects?

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

29. Joseph wants to classify the above 4 flowers into 2 groups, A and B, based on the information given in the table above. Which of the following are possible headings?

	Group A	Group B
1)	Wind-pollinated	Insect-pollinated
2)	Self-pollination	Cross-pollination
3)	Female flowers	Male flowers
4)	Bear sweet fruits	Bear non-sweet fruits

30. Which one of the following **cannot** be inherited?

1) Colour of hair
2) Length of toenails
3) Colour of iris
4) Length of eyelashes

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2009

NAME: _____( ) DATE: _____

CLASS: PRIMARY 5

	Marks Obtained	Total Marks
Booklet A		60
Booklet B		40
Total		100

Parent's Signature

_____

SCIENCE

BOOKLET B

14 questions

40 marks

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

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

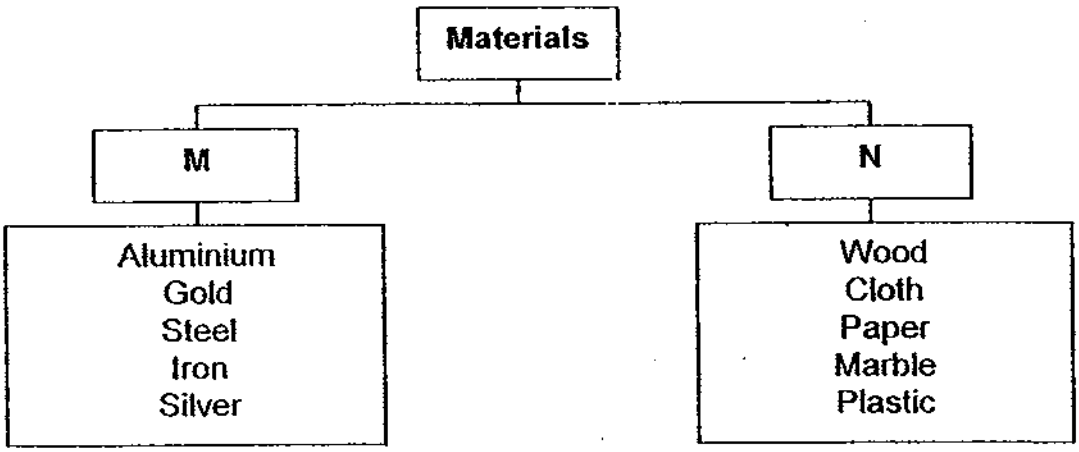
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Name:_____( ) Class: Pr 5

Part 2 (40 marks)

Answer all the following questions.

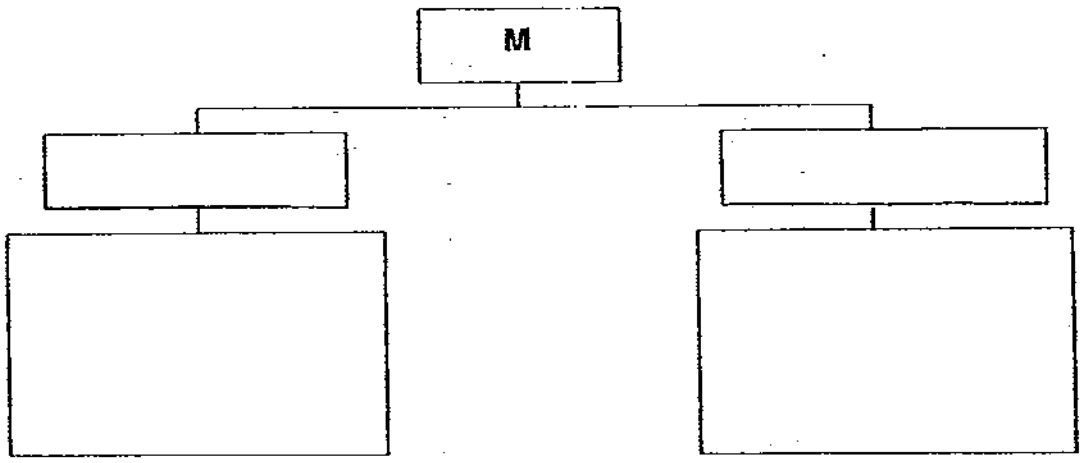
31. Study the classification chart below.



a) Suggest a suitable heading for Groups M and N. (2m)

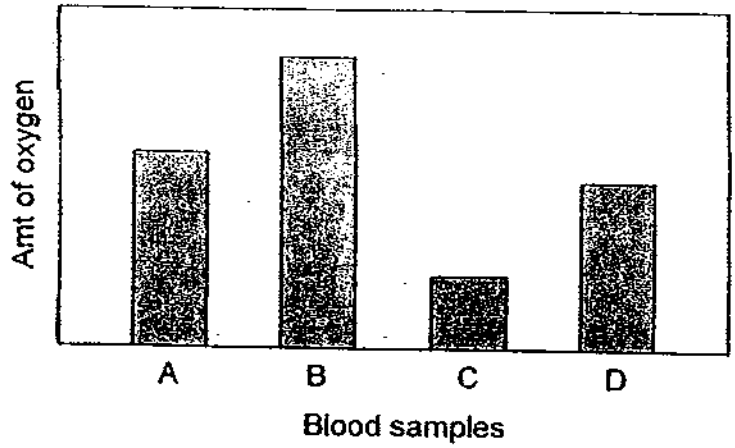
M	
N	

b) Complete the classification chart below for the materials in group M, giving appropriate sub-headings. (2m)

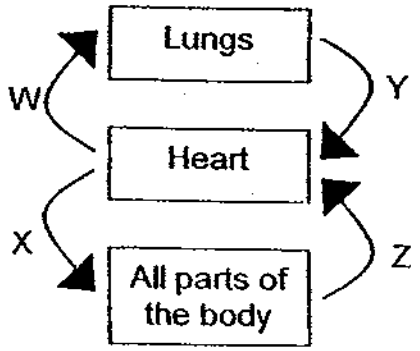


4

32. The bar chart below shows the amount of oxygen in four blood samples taken from different blood vessels in the human circulatory system.



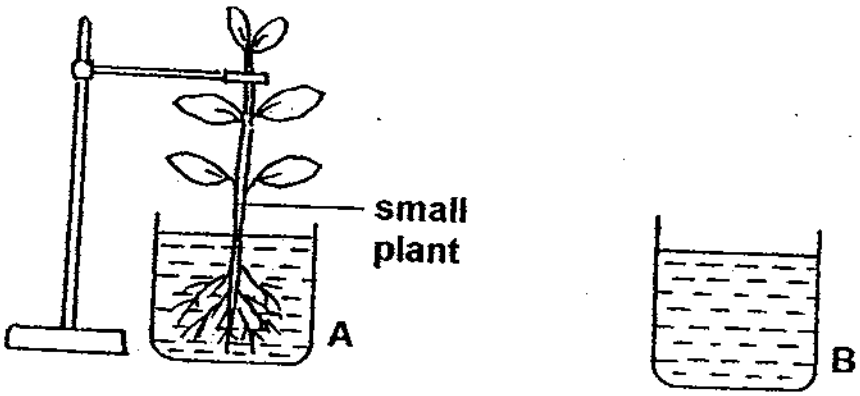
a) Which sample is most likely to be taken from the blood vessel which carries blood from the heart to the lungs? Explain your answer. (2m)



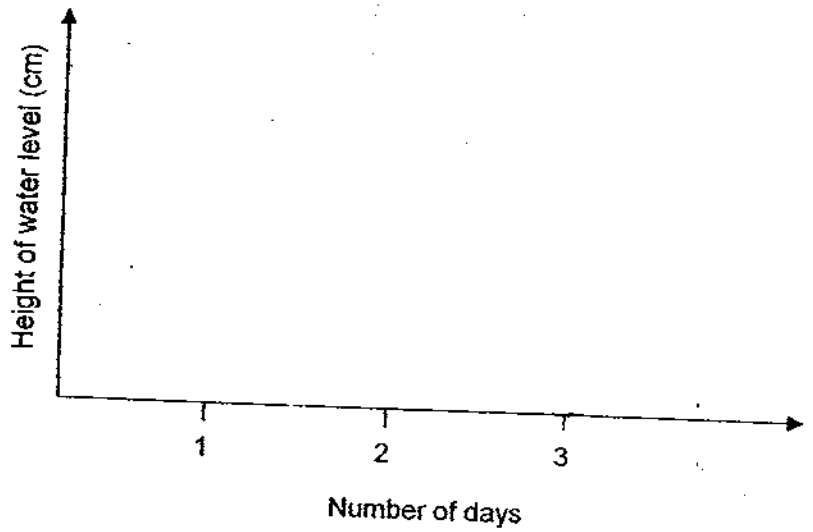
b) Based on the above diagram, which blood vessel, W, X, Y or Z, could blood sample B be taken from? (1m)

3

33. A group of pupils took 2 identical beakers and labelled them as A and B respectively. They poured 300cm^3 of water into each beaker and placed a small plant into Beaker A. They then left both beakers in a shady place for 3 days.



a) In the diagram below, draw 2 graphs to show the changes in the water levels in beakers A and B. **Label** the graphs, A and B, respectively. (2m)

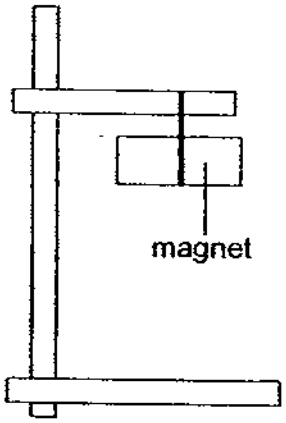


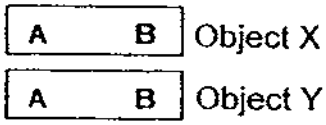
b) Explain what could have caused the changes in the water levels in beakers A and B. (2m)

Beaker A	
Beaker B	

4

34. A magnet was hung from a retort stand. Yasmin then brought both ends of 2 objects, X and Y, close to the magnet. She recorded her observations in the table below.



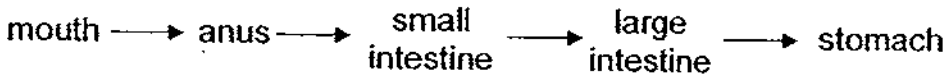


Objects	End A	End B
X	Repelled	Attracted
Y	Attracted	Attracted

a) Based on the results, Yasmin concluded that neither one of the objects is a magnet. Do you agree with her? Explain your answer. (2m)

b) Give an example of the material that Object Y may be made of. (1m)

35. Jason drew the flowchart below to show the flow of food in a human digestive system.

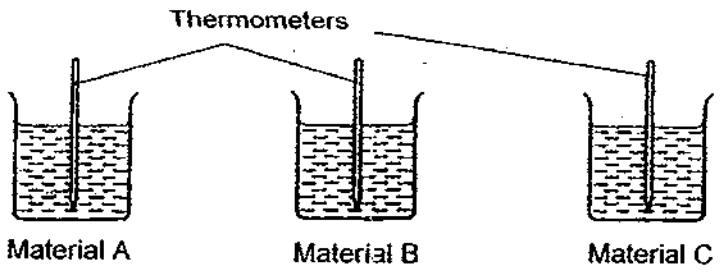


a) Which two organs have been wrongly placed? (1m)

b) Jason's father, who was suffering from colorectal cancer, was advised by his doctor to have his large intestine removed to prevent the cancer cells from spreading. Jason is worried that his father will not be able to digest his food. Will the removal of his large intestine have any effects on his digestion of food? Explain your answer. (2m)

6

36. Katelyn and Joyce carried out an experiment as shown below to find out how well different materials conduct heat. The 3 containers were made of different materials, A, B and C. Each cup was filled with hot water. The changes in the temperatures of the hot water were then recorded over a period of time.



a) List 4 variables that must be kept constant to ensure that the experiment is a fair test? (2m)

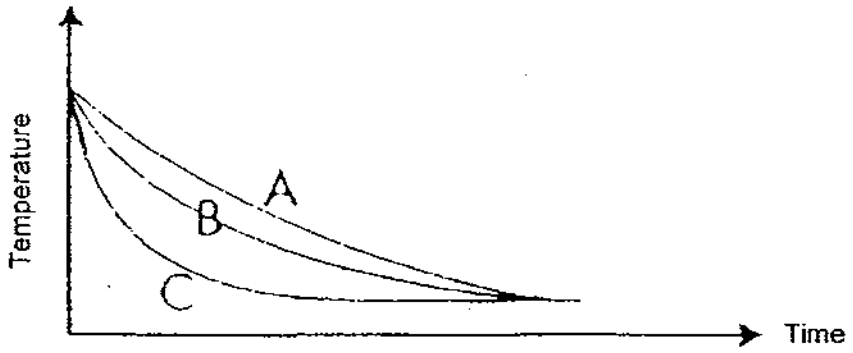
i) _____

ii) _____

iii) _____

iv) _____

b) The graph below shows the temperature change of the water in the 3 cups.



(i) Based on the graph, which material is the best conductor of heat? (1m)

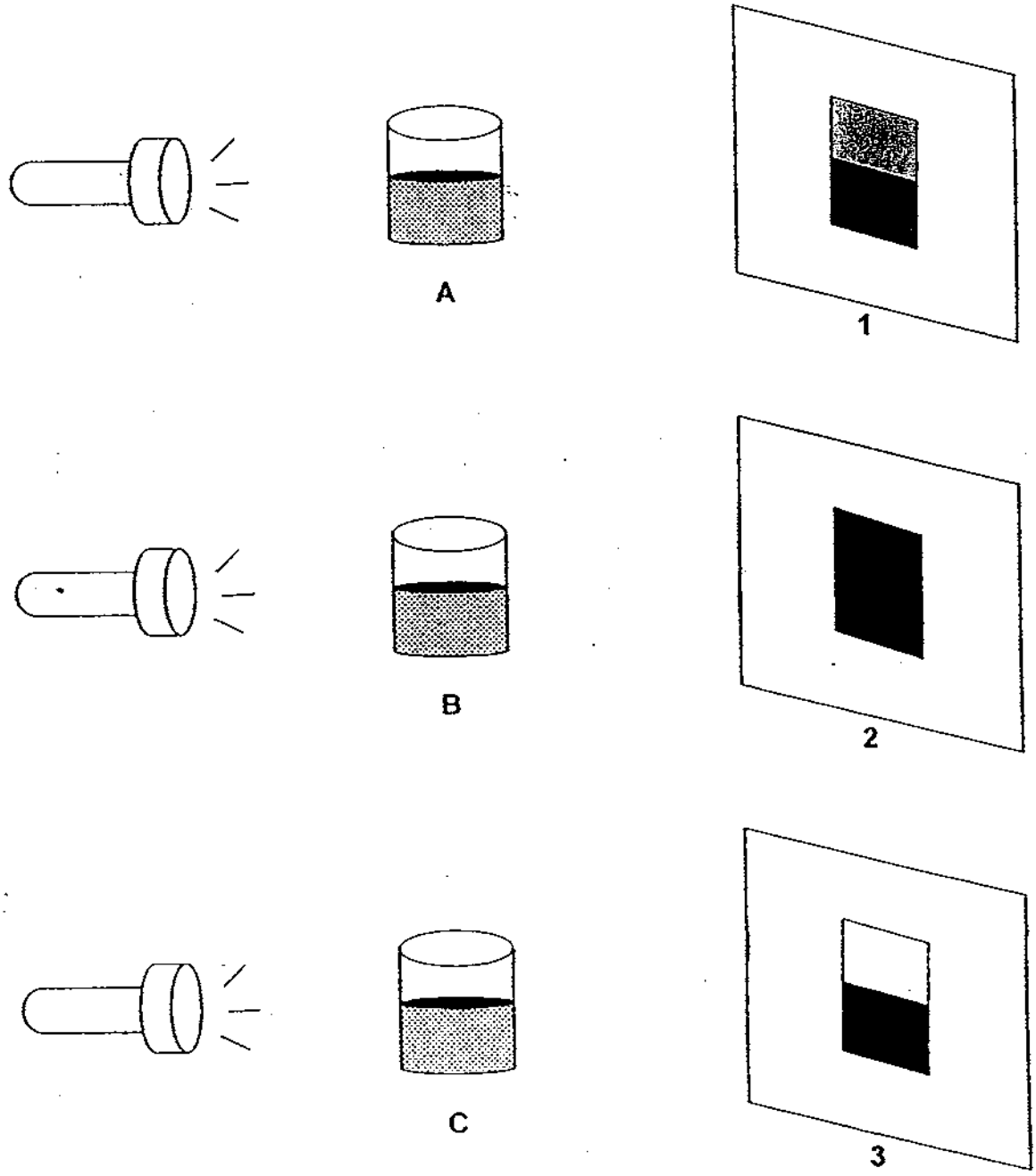
_____

(ii) Based on the graph, which material can be used to make a container for storing ice blocks? (1m)

_____

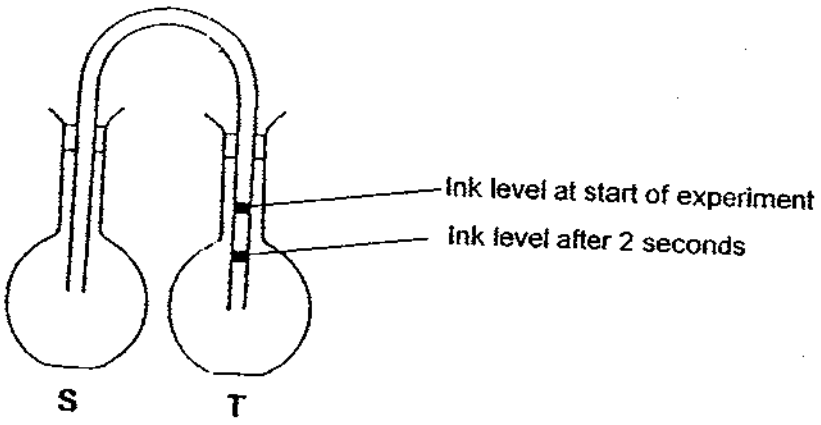
4

37. Roslyn passed light through 3 cups of different materials, each filled with sand. Draw lines to match the shadows that will be cast on the screens if cup A is opaque, cup B is transparent and cup C is translucent. (2m)



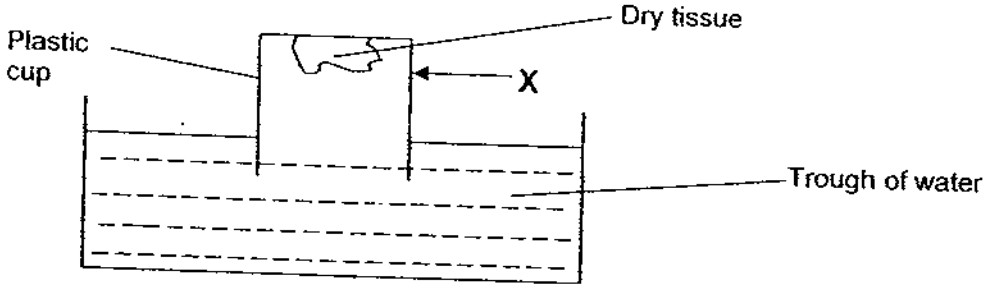
2

38. Suzanne set up the experiment below. She used identical flasks. Flask S is placed in boiling water. After 2 seconds, she noticed that the ink dropped further in the tube in flask T as shown below.



Explain why the ink dropped further in the tube in flask T. (2m)

39. Susie was given the following set up. She was asked to push the inverted cup into the trough.

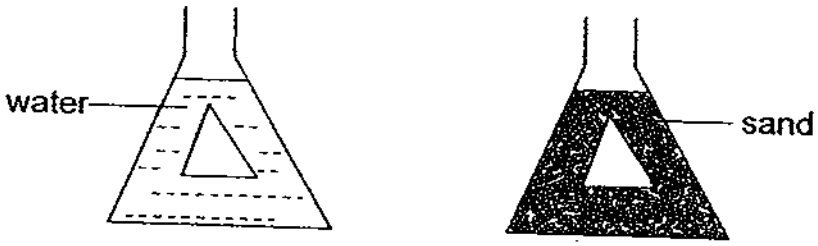


a) State the aim of the above experiment. (1m)

b) If a hole, the size of a 1-cent coin, is made a point X, explain why the experiment will fail. (1m)

4

40. Steven was given the 2 containers below, one filled with water and the other filled with sand. Upon seeing that both took the shape of the container, he concluded that sand is a liquid, just like water.



a) Is Steven's conclusion correct? Explain your answer. (2m)

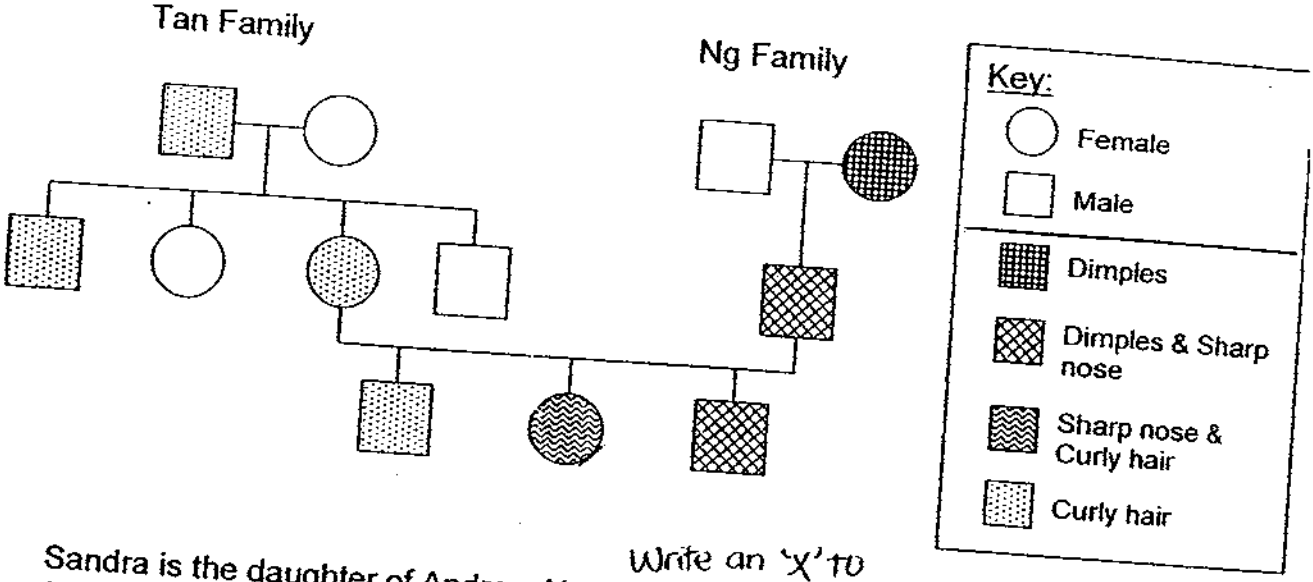
b) Why was it possible for sand to take on the shape of the container? (1m)

41. Compare the life cycles of a grasshopper and mosquito. List a similarity and a difference between the 2 life cycles. (2m)

Similarity	:	
Difference	:	

5

42. Study the family tree below carefully.



a) Sandra is the daughter of Andrew Ng and Kelly Tan. Indicate Sandra on the family tree. (1m)

Write an 'X' to

b) What feature/s did Sandra's father have that she did not inherit? (1m)

_____

c) How many people have curly hair? (1m)

_____

43. Study the table below.

	Male Reproductive System	Female Reproductive System
Type of sex cells produced	X	Egg
Organs	Testes	Y

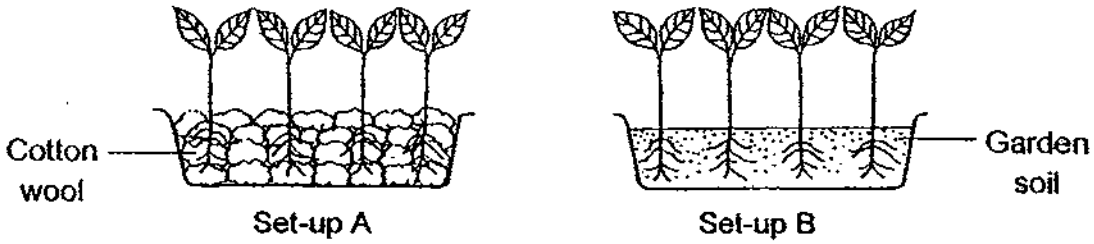
What do X and Y represent? (2m)

X : _____

Y : _____

5

44. Jimmy grew 2 groups of seeds, one group in cotton wool and another in garden soil. The diagram below shows the seedlings that had grown from those seeds. Both groups of seedlings were then placed in sunlight and watered daily.



Set-up A Set-up B

a) What should Jimmy measure to find out in which set-up the plants are healthier? (1m)

_____

_____

b) In which set-up will Jimmy observe healthier-looking plants after 1 month? Explain your answer. (2m)

_____

_____

3

ANSWER SHEET

EXAM PAPER 2009

SCHOOL : SCGS PRIMARY
SUBJECT : PRIMARY 5 SCIENCE

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
2	3	3	3	4	4	2	2	3	2	1	4	3	3	4	4	2

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
4	4	4	3	2	1	1	2	3	3	2	1	2

31)a)M: Metals N: Non-metals

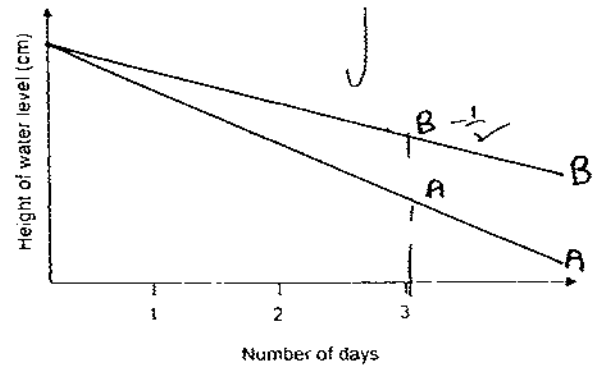
b)

Magnetic	Non-magnetic
Steel	Gold
Iron	Silver
	Aluminium

32)a)C. Oxygen has been used up so it has the least amount of oxygen.

b)Blood vessel Y.

33)a)



b)A: The roots of the small plant takes in water .
The water from the beaker has evaporated.
B: The water in the beaker gained heat from the surrounding air and evaporated.

34)a)No, I do not agree with her. Object X is a magnet because its unlike poles attract the magnet and like poles repel the magnet.

b)Steel.

35)a)Auns and stomach.

b)No, Digestion only take place in the mouth stomach and small intestine./Digestion of food ends in the small intestine.

36)a) i)The type of thermometers used.

ii)The initial temperature of the hot water.

iii)The place the experiment was conducted.

iv)The duration of the experiment.

b)i)Material C.

ii)Material A.

37)A=2 B=3 C=1

38)Air in flask S expands when heated, occupying more space. Therefore, it forces the ink tube to drop.

39)a)It was to find out whether air occupies space.

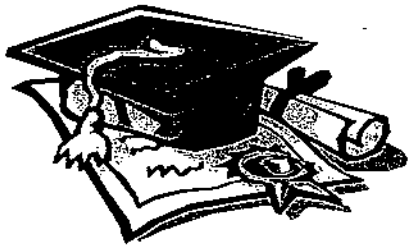
b)Air from the plastic cup will escape and water from the trough will enter the plastic cup.

40)a)No, Steven's conclusion is wrong. Sand has a definite shape, unlike water which does not have a definite shape.

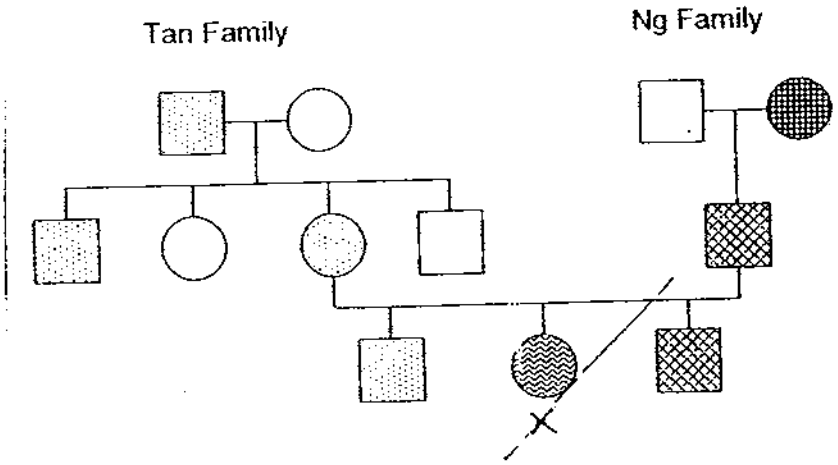
b)Sand particles are very small, so they take on the shape of the container.

41)Similarity: The adult of a grasshopper and mosquito lay eggs.

Difference: A grasshopper has only 3 stages in its life cycle while a mosquito has 4 stages in its life cycle.



42)a)



b)Dimples
c)5 people.

43)X: Sperms
Y: Ovary

44)a)Jimmy should measure the thickness of the stem and the colour of the leaves of the plants.

b)Set-up B. Garden soil has nutrients while cotton wool does not have nutrients, so the plants will grow more healthily in set-up B.