



S247

AI TONG SCHOOL

2004 SEMESTRAL ASSESSMENT (1)

PRIMARY FOUR SCIENCE

DURATION : 1hr 30 min

DATE: 18/0⁵4/2004

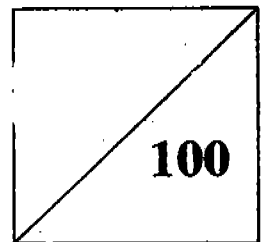
INSTRUCTIONS

**Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.**

Name : _____ ()

Marks :

Class : Primary _____



Parent's Signature : _____

Date : _____

Section A (30 x 2 marks)

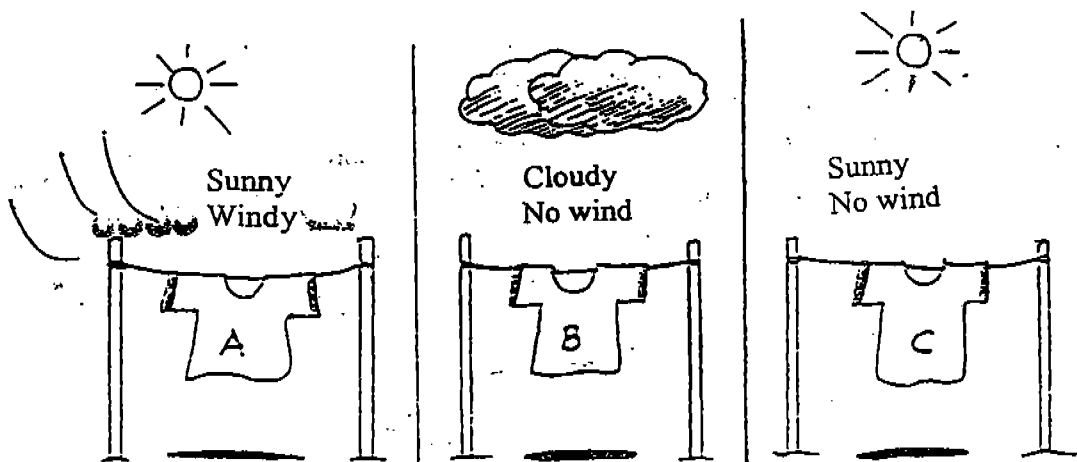
Choose the correct answer and shade its number (1,2,3 or 4) on the ovals in the OAS provided.

1. Clouds are formed when _____
 - (1) water melts
 - (2) water evaporates
 - (3) water freezes
 - (4) water vapour condenses

2. Which one of the following groups shows the same object at different states of matter?
 - (1) Sand, stone, clay
 - (2) Water, oil, alcohol
 - (3) Water vapour, ice cream, steam
 - (4) Water vapour, water, ice

3. Which one of the following processes takes place only when water gains heat?
 - (1) Water freezes
 - (2) Water boils
 - (3) Clouds becomes rain
 - (4) Water vapour condenses

4. The same amount of water is poured over three similar T-shirts. The shirts are then left to dry in the open under different conditions. These conditions are shown in the diagrams below.



Starting with the T-shirt that will take *longest* to dry, arrange the three T-shirts in order of their rate of drying.

- (1) BCA
- (2) CAB
- (3) ACB
- (4) BAC

5. An object is classified as matter if it _____.

- A: has a definite volume
- B: has mass
- C: occupies space
- D: has a definite shape

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

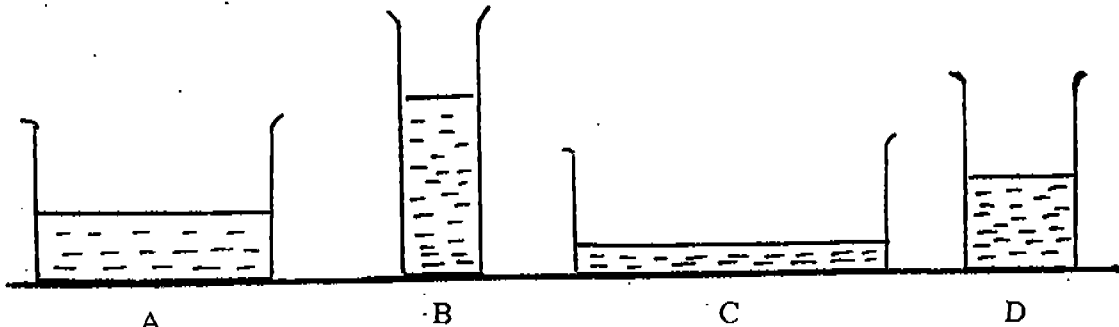
6. During the process of condensation in the water cycle, we get _____.

- (1) snow
- (2) wind
- (3) clouds
- (4) water vapour

7. When carbon dioxide is compressed, its volume _____.

- (1) remains the same
- (2) decreases
- (3) increases
- (4) fluctuates

8. The 4 containers in the diagram hold the same amount of water. Which container of water will take the shortest time to evaporate.



- (1) A
(2) B
(3) C
(4) D
9. What is the importance of the water cycle to living things?
- (1) It prevents water pollution.
(2) It provides energy for plants to make food.
(3) It kills bacteria that are present in water.
(4) It ensures a constant supply of fresh water.
10. Alan poured Substance X into a plastic bag. Substance X filled the plastic bag entirely. Which one of the following statements definitely describes Substance X?
- (1) It cannot be seen.
(2) It has no smell.
(3) It does not have a fixed shape.
(4) It does not occupy space.
11. Which one of the following is true of water and ice?
- (1) Water and ice occupy space.
(2) Water and ice are different kinds of matter.
(3) Water and ice do not have definite shapes.
(4) Water has a lower boiling point than ice.

12. The table below shows the amount of water in five identical beakers at the start of an experiment. It also shows the time required for the water in each beaker to go down by 20ml.

Beaker	Amount of water at beginning (ml)	Time taken for water to reduce by 20ml	
		(min)	
A	60	50	
B	60	30	
C	80	60	
D	90	60	
E	100	70	

What can we conclude from the table?

- (1) Water in Beaker B evaporates faster than in Beaker A.
 - (2) Water in Beaker E evaporates faster than in Beaker B.
 - (3) The rate of evaporation in Beaker C and Beaker E is the same.
 - (4) Beakers C and D have the same amounts of water after 60min.
13. The thin layer of water that we find on leaves and car windscreens in the early morning is formed by a process known as _____.
- (1) compression
 - (2) expansion
 - (3) evaporation
 - (4) condensation

14. The statements A to ^E show the steps of rain formation.

- A: Condensation occurs
 B: Water evaporates
 C: Water droplets form clouds
 D: Bigger droplets fall as rain
 E: The sun warms the earth

shows the steps in the correct order

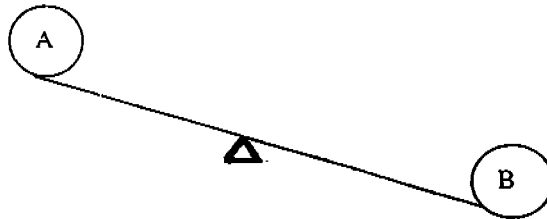
Which one of the below arrangement is in the wrong order?

- (1) D E C A B
- (2) A B C D E
- (3) E B A C D
- (4) E C A B D

15. Which of the following is true?

- (1) Water returns from the sky to the Earth only as rain.
- (2) Water can change to water vapour only at 100 °C
- (3) When seawater evaporates, the salt and water both rise to the sky.
- (4) The water cycle is a continuous process.

16. Two metal balls A and B of the same volume are placed on a balance. What can you conclude if the balance tilts to one side?



- (1) Ball A has a bigger mass than Ball B .
- (2) Ball B has a bigger mass than Ball A.
- (3) Ball A is harder than Ball B
- (4) Ball A and Ball B are made of the same material.

17. Which of the following activities causes water pollution?

- A: Dumping toxic waste.
- B: Cutting down of trees near a river.
- C: Using recycled water.
- D: Oil spills from tankers.

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

18. Which of the following statements are correct?

- A) Water pollution endangers aquatic life.
- B) Water pollution conserves water resources.
- C) Water pollution contaminates water resources.
- D) Water pollution damages natural habitats.

- (1) A and B only
- (2) A, B and D only
- (3) A, C and D only
- (4) All of the above

19. When seawater is polluted, it means that _____

- (1) it contains too much salt.
- (2) it can no longer evaporate.
- (3) there are harmful substances in it.
- (4) there are too many seaweeds in it.

20. The table below shows the condition of 4 streams.

Stream	Presence of Living things	Colour	Smell
A	Few	√	√
B	None	x	x
C	Plenty	√	x
D	Plenty	x	x

A group of scouts went on a camping trip. They wanted to collect some water to boil for drinking. Which one of the streams had water that was safe for drinking?

- (1) Stream A
 - (2) Stream B
 - (3) Stream C
 - (4) Stream D
21. Which one of the following statements about non-living things is correct?
- (1) They need food to grow.
 - (2) They can respond to changes around them.
 - (3) They have young which are also non-living.
 - (4) They could have come from things that were once alive.
22. Which of the following is not a characteristic of all living things?
- (1) Living things will die.
 - (2) Living things reproduce by giving birth.
 - (3) Living things can move by themselves.
 - (4) Living things need air, food and water.

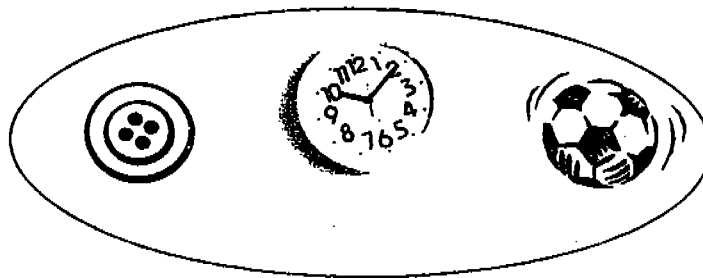
23. The animals below are classified into two groups.

Group X	Group Y
Whale	Snake
Guppy	Penguin
Gorilla	Toad

They are grouped according to _____.

- (1) where they live.
- (2) how they move
- (3) their outer body covering
- (4) how they reproduce

24. The objects below are grouped together because they have the same _____.



- (1) colour
- (2) shape
- (3) size
- (4) texture

25. Which object was made from something that was once alive?



A



B



C



D

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

26. Which one of these animals does not move about in the same way as the rest ?

- (1) swordtail
- (2) snake
- (3) lizard
- (4) centipede

27. Look at the animals shown below.



In what ways are the animals shown above similar?

They _____

- (1) can fly.
- (2) live on land.
- (3) breathe with their gills.
- (4) reproduce by laying eggs.

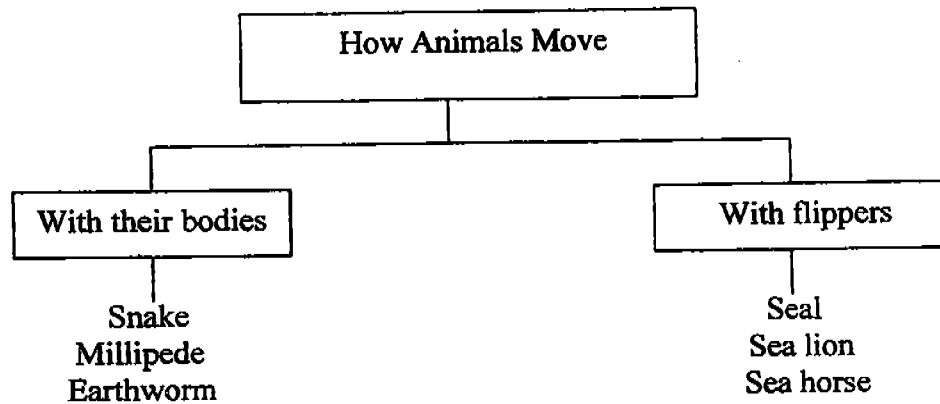
28. Which one of the following lists of animals is correctly matched to the way they move?

	Swim	Fly	Run
(1)	Platypus	Kingfisher	Snake
(2)	Sea Lion	Emu	Lion
(3)	Seahorse	Owl	Ostrich
(4)	Eel	Tiger	Penguin

29. Which of the following animals have the same type of outer body coverings?

- (1) Snakes and turtles
- (2) Penguins and cranes
- (3) Whales and sharks
- (4) Bats and owls

30. Study the classification table below.



Which of the animals have been wrongly grouped?

- (1) Sea lion and millipede
- (2) Sea horse and millipede
- (3) Sea lion and earthworm
- (4) Sea horse and earthworm

Section B (10 x 2 marks)

Fill in the blanks with the correct answers. Use each word once only.

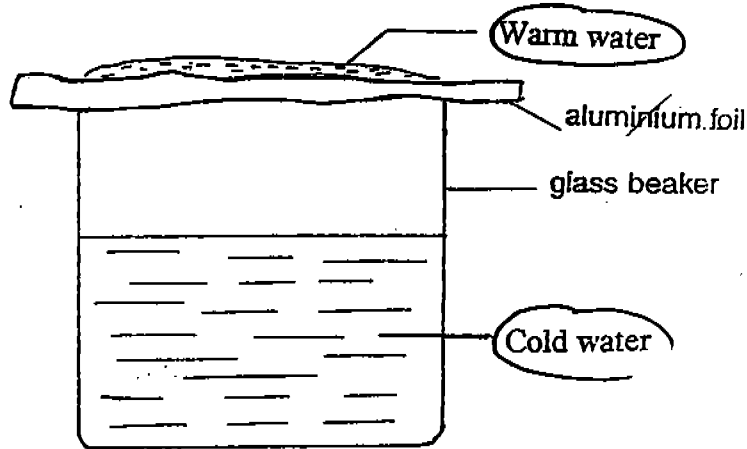
matter	purification	diversity	oxygen	sunlight
conservation	sources	similarities	condensation	differences
respond	temperature	gaseous	solid	liquid

31. All things around us are made up of _____.
32. When matter in this state is placed in any container, it fills up the container completely. This is the _____ state.
33. The process where water changes from a state with no definite volume to one with definite volume is called _____.
34. At zero degree Celsius, water exists in the _____ state.
35. A higher _____ will increase the rate of the evaporation.
36. Water plants living at the bottom of a pond that is cloudy cannot survive because they cannot get enough _____.
37. The saving of water by reducing its use and by recycling is known as water _____.
38. Living things will _____ to changes in their surroundings.
39. The great variety of things around us is called _____.
40. Reservoirs, rivers and lakes are _____ of water.

Section C (20 marks)

Answer all the questions in the spaces provided.

41. Junliang poured some cold water into a glass beaker. He placed an aluminium foil over the beaker. Then he put warm water onto the aluminium foil. He wanted to demonstrate the water cycle using this experiment.



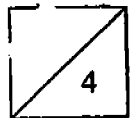
- a) Circle in the diagram the two things which were put in wrongly in the above experiment. [1 m]

- b) What should Junliang do instead?

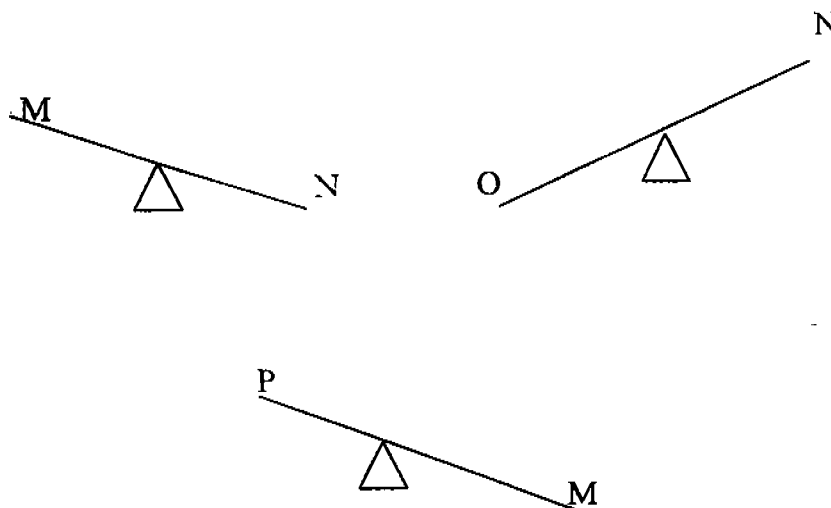
i) _____
ii) _____

- c) If he had done the experiment correctly, what would he have seen on the underside of the aluminium foil?

_____ [1 m]



42. The diagrams below show how objects M, N, O and P balance one another. Answer the questions that follow.



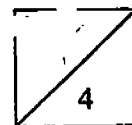
- (a) Arrange the objects M, N, O and P according to their masses from the biggest to the smallest.

_____ [2 m]

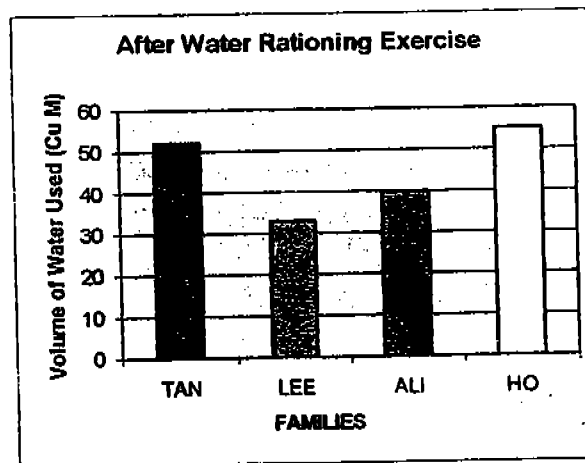
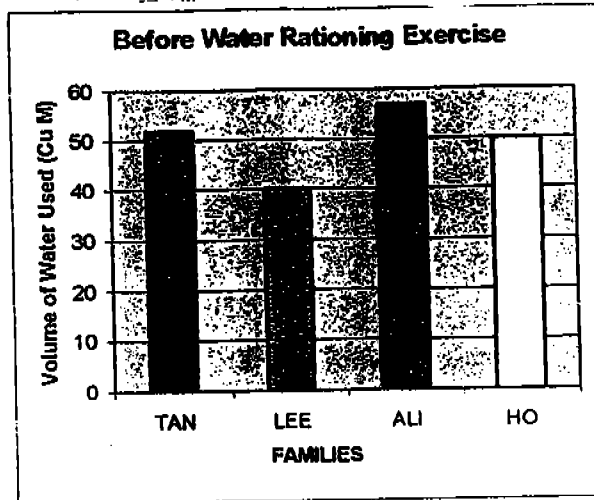
- (b)



Study the diagram above. If N and P are placed in the boxes, indicate your answers in the boxes provided [2m]



43. The Tan, Lee, Ali and Ho families participated in a recent water rationing exercise. The graphs below show the amount of water they used in the month before and after the exercise.



- (a) How can you tell from the graphs that a family is responding correctly to the water rationing exercise? [1m]
-
- (b) Which of the families showed that they have learnt to conserve water through the water rationing exercise? [2m]
-
- (c) Write down one thing they could have done to conserve water. [1m]
-
-

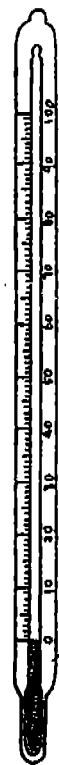
44. John wanted to find out the temperature at which water boils and the temperature at which ice melts. He heated some water in a beaker until the water boiled and put a thermometer in to take the temperature. Then he filled a beaker with ice cubes and placed a thermometer into the beaker to measure the temperature of the melting ice.

He recorded both the temperatures.

- (a) shade the diagrams to show:
 (i) the temperature of the boiling water in Thermometer A. [1 m]
 (ii) the temperature of the melting ice in Thermometer B. [1 m]

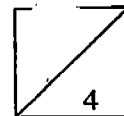


Thermometer A

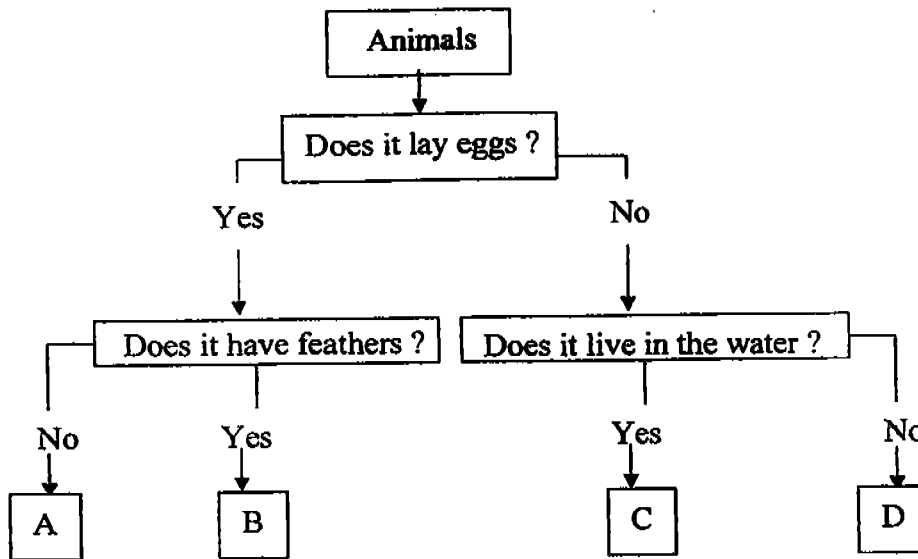


Thermometer B

- (b) the temperature of boiling water is _____ °C and the temperature of melting ice is _____ °C [2 m]

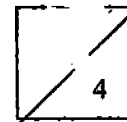


45. Study the flow chart below.



Identify the letters in the flow chart that represent each of the following animals below. [4 m]

- (a) Ostrich _____ (b) Guppy _____
(c) Platypus _____ (d) Tiger _____



End of Paper :

Please Check Your Work Carefully



NAME : _____

DATE : _____

CLASS : _____

SUBJECT : _____

WRITE	SHADE OVALS									
INDEX NUMBER	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	A	B	C	D	E	F	G	H	I	J

EXAMPLE: IF YOU THINK THE 2ND OPTION IS THE CORRECT ANSWER SHADE THE OVAL 2 LIKE THIS :

1 2 3 4

1 1 2 3 4

21 1 2 3 4

41 1 2 3 4

2 1 2 3 4

22 1 2 3 4

42 1 2 3 4

3 1 2 3 4

23 1 2 3 4

43 1 2 3 4

4 1 2 3 4

24 1 2 3 4

44 1 2 3 4

5 1 2 3 4

25 1 2 3 4

45 1 2 3 4

6 1 2 3 4

26 1 2 3 4

46 1 2 3 4

7 1 2 3 4

27 1 2 3 4

47 1 2 3 4

8 1 2 3 4

28 1 2 3 4

48 1 2 3 4

9 1 2 3 4

29 1 2 3 4

49 1 2 3 4

10 1 2 3 4

30 1 2 3 4

50 1 2 3 4

11 1 2 3 4

31 1 2 3 4

51 1 2 3 4

12 1 2 3 4

32 1 2 3 4

52 1 2 3 4

13 1 2 3 4

33 1 2 3 4

53 1 2 3 4

14 1 2 3 4

34 1 2 3 4

54 1 2 3 4

15 1 2 3 4

35 1 2 3 4

55 1 2 3 4

16 1 2 3 4

36 1 2 3 4

56 1 2 3 4

17 1 2 3 4

37 1 2 3 4

57 1 2 3 4

18 1 2 3 4

38 1 2 3 4

58 1 2 3 4

19 1 2 3 4

39 1 2 3 4

59 1 2 3 4

60 1 2 3 4

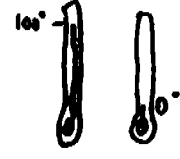
SCORE: 50/60 (83.33%)

SM

AI TONG SCHOOL
2004 SEMESTRAL ASSESSMENT 1
PRIMARY FOUR SCIENCE

- 1) 4 28) 3
- 2) 4 29) 2
- 3) 2 30) 2
- 4) 1 31) matter
- 5) 1 32) gaseous
- 6) 3 33) condensation
- 7) 2 34) solid
- 8) 3 35) temperature
- 9) 4 36) sunlight
- 10) 3 37) conservation
- 11) 1 38) respond
- 12) 1 39) diversity
- 13) 4 40) sources
- 14) 3 41) a) Circle warm water and cold water.
- 15) 4 b) i) He should put ice on the aluminium foil.
- 16) 2 ii) He should pour hot water into the beaker.
- 17) 3 c) Clouds/water droplets
- 18) 3 42) a) O N M P
- 19) 3 b) P
- 20) 4 N
- 21) 4 43) a) If the graph shows that they are using less water after the rationing exercise.
- 22) 2
- 23) 4 b) The Lee and Ali families.
- 24) 2 c) Anything to reduce, reuse or recycle water e.g. take showers instead of baths.
- 25) 4
- 26) 1
- 27) 4

44) a) i) ii)



b) 100°C
0°C

45) a) B b) C
c) A d) D