



南洋小學  
NANYANG PRIMARY SCHOOL

PRIMARY FOUR SCIENCE  
CONTINUAL ASSESSMENT 1  
2007

**BOOKLET A**

Date : 27 February 2007

Duration : 1 h 45 min

Name : \_\_\_\_\_ (      )

Class: Primary 4 (      )

Marks Scored:

Booklet A:		60
Booklet B :		40
Total :		100

Parent's signature: .....

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.  
FOLLOW ALL INSTRUCTIONS CAREFULLY.

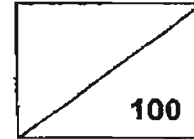
Booklet A consists of 14 printed pages including this cover page.

**NANYANG PRIMARY SCHOOL**  
**PRIMARY 4 SCIENCE**  
**FIRST CONTINUAL ASSESSMENT 2007**

Name : \_\_\_\_\_ ( )      Date : \_\_\_\_\_

Class : Primary 4 ( )      Duration : 1 h 45 min

Parent's signature: \_\_\_\_\_      Score



**Section A (30 x 2 marks = 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 provided.

1. Study the following classification table carefully.

A	B
Cotton towel	Bicycle
Plastic box	Watch
Paper bag	Umbrella

Which one the following pairs of items matches Group A and Group B respectively.

- |   |                               |                              |
|---|-------------------------------|------------------------------|
| ① | <u>Group A</u><br>Metal spoon | <u>Group B</u><br>Television |
| ② | Hammer                        | Clay pot                     |
| ③ | Plastic watering can          | Handkerchief                 |
| ④ | Porcelain vase                | Paper carton                 |

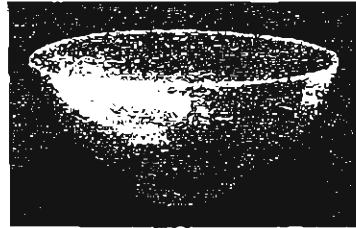
2. Which one of the following objects is made from material that was once alive?

①



Metallic pail

②



Porcelain bowl

③



~~Rubber ball~~  
Plastic

④



Wooden chair

3. The young of Animal X lives in the water but its adult lives on land. Which of the following animals fit the same description as Animal X?

- A. Toad
- B. Platypus
- C. Mosquito
- D. Dragonfly

①

A, B and C only

③

B, C and D only

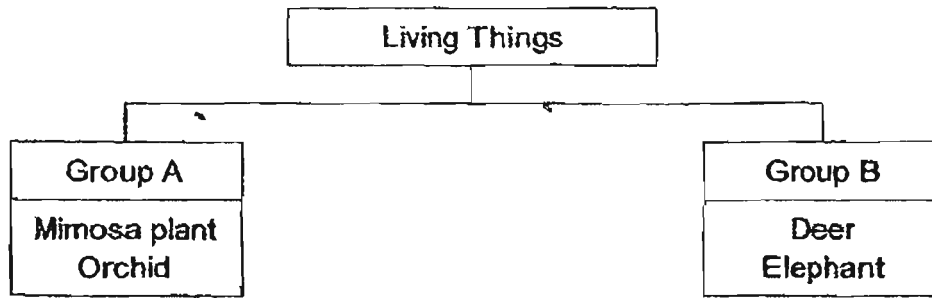
②

A, C and D only

④

A, B and D only

4.



Which one of the following living things can be classified under Group B?

- ① Grass
- ② Cactus
- ③ Toadstool
- ④ Coconut tree

5. Which one of the following statements is true of Plant A and Plant B?



Plant A



Plant B

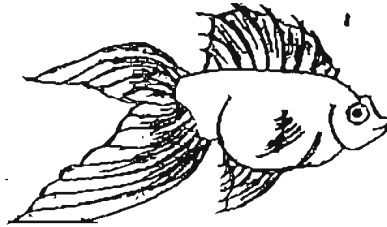
- ① Plant A can grow faster than Plant B.
- ② Plant A has more nutrients than Plant B.
- ③ Plant A has a weak stem but not Plant B.
- ④ Plant A needs more sunlight than Plant B.

6 . After observing an animal carefully, Patricia wrote down her observations.

- | <u>Animal Y</u> |                                 |
|-----------------|---------------------------------|
| (i)             | It breathes through gills.      |
| (ii)            | It moves about by swimming      |
| (iii)           | Its body is covered with scales |

Which one of the following animals is Animal Y likely to be?

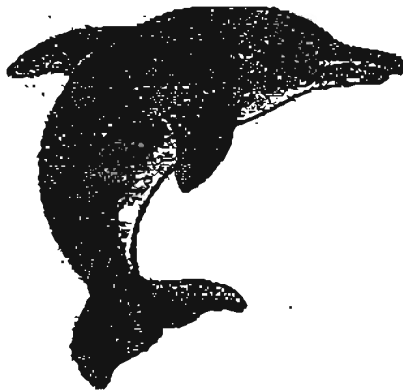
(1)



(2)



(3)



(4)



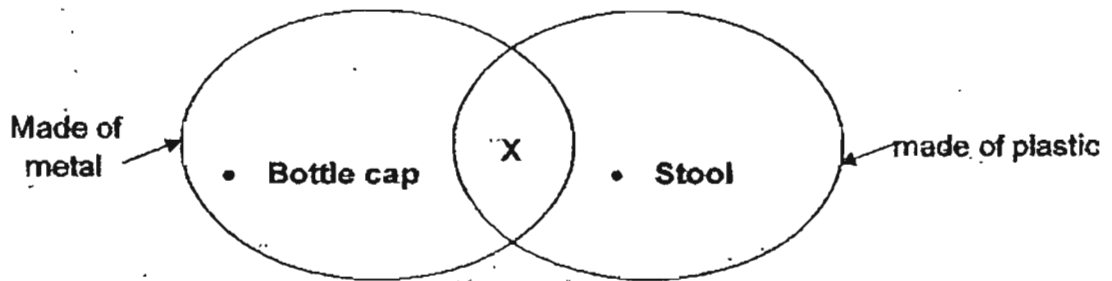
7. Which of the following statement(s) is/are true of both birds and insects?

- (A) All insects and birds can fly.
- (B) Both insects and birds lay eggs.
- (C) Both insects and birds have three body parts
- (D) All insects and birds have the same number of stages in their life cycles

- (1) A only
- (3) B only

- (2) C and D only
- (4) B and D only

8. Study the Venn diagram below.



What can object "X" be in the above Venn diagram?

- (1) Pillow
- (3) Frying pan

- (2) Cushion
- (4) Tennis ball

9. Which of the following properties of metal make it suitable for making gates?

- A : strong
- B : waterproof
- C: transparent
- D: good conductor of heat

- (1) A and B only
- (3) A, B and D only

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

10. Which one of the following is a form of matter?

- |           |           |
|-----------|-----------|
| (1) Heat  | (2) Light |
| (3) Sound | (4) Smoke |

11. Which of the following statements do not describe matter?

- (A) It has mass
- (B) It occupies space
- (C) It has a definite shape
- (D) It has a definite volume

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

12. Which one of the following groups of matter consists of a solid, a liquid and a gas?

- |                           |                                |
|---------------------------|--------------------------------|
| (1) flour, rain, nitrogen | (2) penguin, wire, electricity |
| (3) milk, juice, oxygen   | (4) helium, steam, wine        |

13. A teacher left 150ml of tap water in a beaker on the table in the classroom. After two days he found that the amount of water left was likely to be \_\_\_\_\_.

- |           |           |
|-----------|-----------|
| (1) 120ml | (2) 150ml |
| (3) 165ml | (4) 180ml |

14. Our skin feels more damp and stickler in the forest than in the desert because the \_\_\_\_\_ in the forest is higher than that of the desert.

- |                 |                         |
|-----------------|-------------------------|
| (1) humidity    | (2) pressure            |
| (3) temperature | (4) rate of evaporation |

15. When matter changes from one state to another, \_\_\_\_\_ is taken in or given off.

- ①
- ③

air  
heat

- ②
- ④

gas  
water

16. Which of the following cannot exist at a temperature below 100 °C?

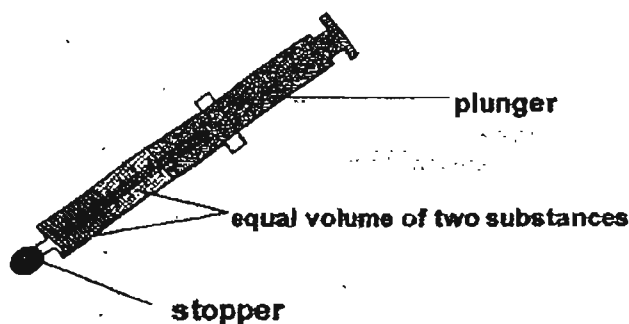
- ①
- ③

Ice  
Steam

- ②
- ④

Water  
Water vapour

17. Four syringes P, Q, R, S each containing two substances. The diagram below shows one of the syringes. Each syringe contained 10cm<sup>3</sup> of each substance making a total volume of 20cm<sup>3</sup>.



The table below shows the final volume for each syringe when the plunger is pushed until it cannot be pushed further.

Syringes	Total volume before plunger is pushed (cm <sup>3</sup> )	Total volume after Plunger is pushed (cm <sup>3</sup> )
P	20	20
Q	20	10
R	20	20
S	20	1

Which syringes could have contained a solid and a liquid?

- ① P and R only
- ③ Q and R only

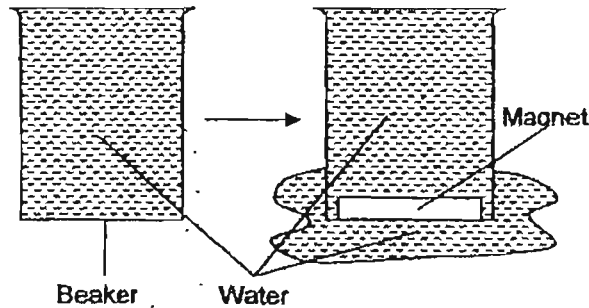
- ② Q and S only
- ④ P and S only



18. Which one of the following changes takes place when a candle is lit?

①	Liquid → Solid → Gas
②	Liquid → Gas → Liquid
③	Solid → Liquid → Gas
④	Solid → Gas → Liquid

19. Tom puts a bar magnet into a beaker of water that is filled to the brim. He then notices that water flows out from the beaker.



Which of the following statements explain why the water flows out of the beaker?

- (A) The magnet has a definite shape.
- (B) The magnet has a definite volume.
- (C) The magnet occupies space in the beaker.
- (D) The magnet is heavier than water.

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

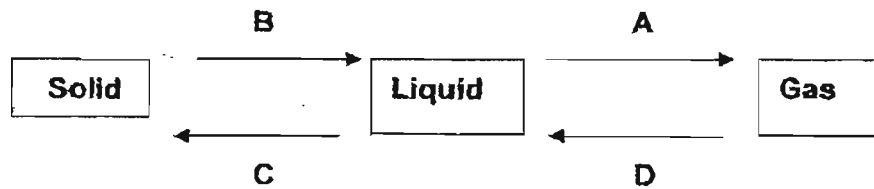
20. A block of ice was placed on the ground. After some time a puddle of water could be seen where the block of ice was.

What had happened to the block of ice?

- (A) It had taken in heat.
- (B) It had given out heat.
- (C) It had changed in state.

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

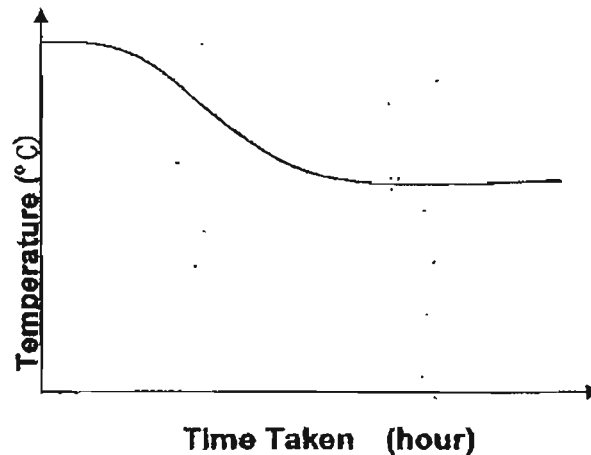
21. The diagram below shows four processes A, B, C and D involved in the change of the states of water.



Which one of the following option below correctly matches the 4 processes?

Processes	A	B	C	D
①	Melting	Condensation	Freezing	Evaporation
②	Condensation	Freezing	Melting	Evaporation
③	Melting	Evaporation	Condensation	Freezing
④	Evaporation	Melting	Freezing	Condensation

22. Study the line graph shown below.



Halim plotted the above line graph to show the change in temperature within an hour after he had carried out one of the following activities.

Which one of the following was the most likely activity?

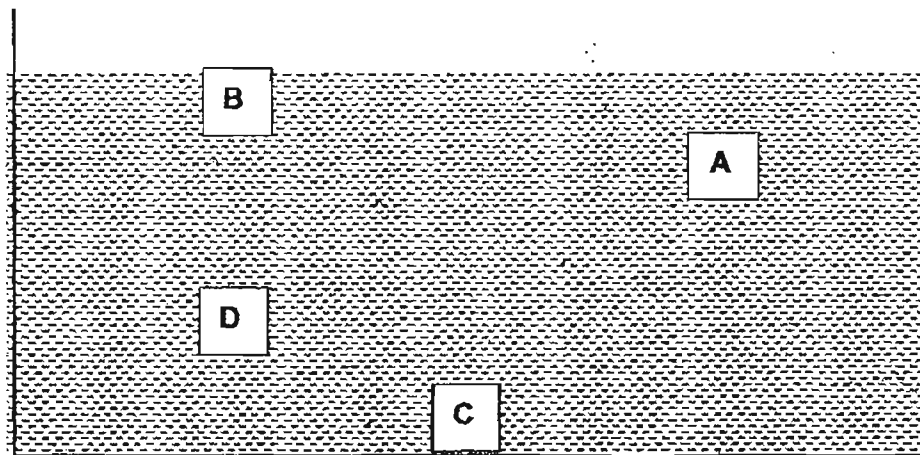
- ① He left a pot of hot plain porridge to cool.
- ② Halim left a tray of tap water in the freezer.
- ③ A pot of vegetable soup being heated up by Halim.
- ④ A frozen chicken was taken out from the freezer by Halim.

23. Hsu Wei had a cup of water with the mass of 40g. He then added 2g of sand and 1g of sugar into the cup of water and stirred till all the sugar had dissolved. What was the total mass of the cup of water and the substances in it after all the sugar had dissolved?

- ① 40g
- ③ 42g

- ② 41g
- ④ 43g

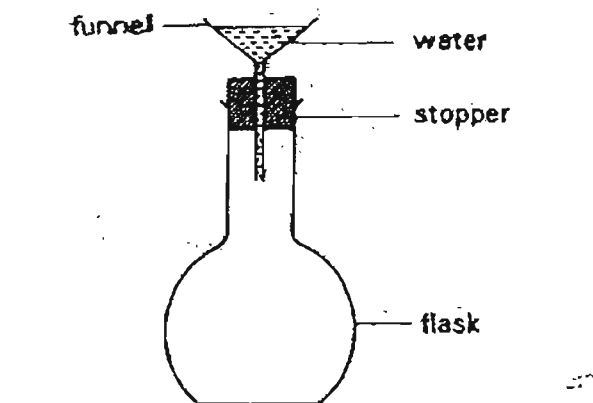
24. Four cubes A, B, C and D, <sup>of similar volume</sup> are dropped into a container of water. Arrange the cubes according to mass from the biggest to the smallest.



- ① A, B, C and D
- ③ C, D, A and B

- ② B, A, D and C
- ④ D, C, B and A

25. Mrs Gupta set up the experiment as shown in the diagram.  
When she poured tap water into the funnel, she noticed that it stopped flowing into the flask after a short while.



What should she do to enable all the water in the funnel to flow into the flask?

- ① Loosen the rubber stopper.
- ② Pour hot water into the funnel.
- ③ Put the flask in a basin of cool water.
- ④ Pour the tap water into the funnel quickly.

26. The substance squeezed from the tube shown below has \_\_\_\_\_

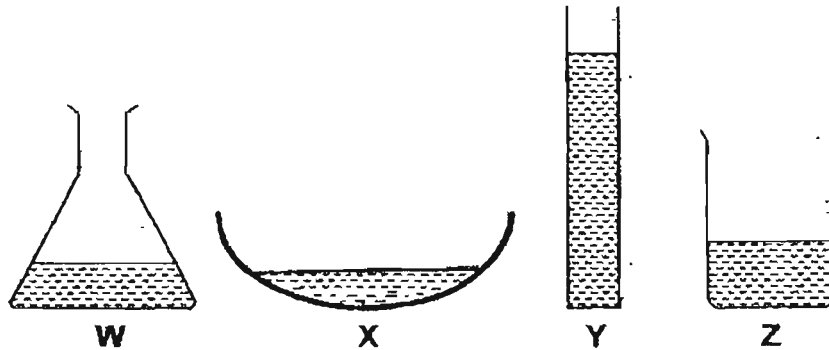


- ① mass and a definite shape.
- ② no mass but has definite volume.
- ③ a definite shape but no definite volume.
- ④ no definite shape and no definite volume.

27. Which one of the following statements correctly shows the difference between a gas and a solid?

- (1) A gas has no mass but a solid has mass.
- (2) A gas does not occupy space but a solid occupies space.
- (3) A gas has no definite shape but a solid has a definite shape,
- (4) A gas has ~~no~~ definite volume but a solid has ~~a~~ definite volume.

28. Allison fills 4 different glass vessels W, X, Y and Z with an equal volume of water as shown the diagram below. She places the vessels side by side under the sun in the field.



After a few hours, which one of the glass vessels contains the largest amount of water.

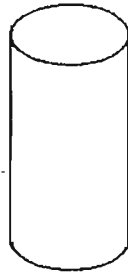
- ① W
- ③ Y

- ② X
- ④ Z

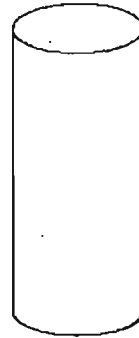
29. Hassim has 120ml of oxygen gas in a tank. He wants to transfer all the oxygen in the tank into another container. Which of the following container(s) A, B and C would be able to hold the 120ml of oxygen?



**A**  
Volume: 100ml



**B**  
Volume: 120ml

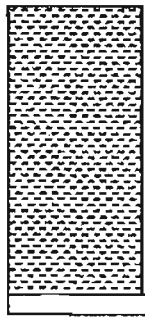


**C**  
Volume: 140ml

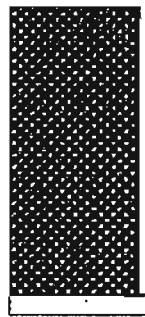
- ① A only
- ③ B only

- ② B and C only
- ④ A, B and C

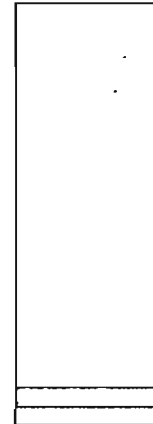
30. Mr. Lim completely filled 100cm<sup>3</sup> measuring cylinder with water. He completely filled up another 100cm<sup>3</sup> cylinder with small marbles. Next, he transferred all the water and marbles into a 250cm<sup>3</sup> measuring cylinder.



100cm<sup>3</sup> cylinder  
filled with water



100cm<sup>3</sup> cylinder  
filled with marbles



250cm<sup>3</sup> cylinder

The volume occupied by the water and marbles in the 250cm<sup>3</sup> cylinder is likely to be \_\_\_\_\_.

- ① 100cm<sup>3</sup>
- ③ 200cm<sup>3</sup>

- ② more than 200cm<sup>3</sup>
- ④ between 100cm and 200cm<sup>3</sup>

Name : \_\_\_\_\_ ( ) Date: \_\_\_\_\_

Class : Primary 4 ( )

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## Section B (40 marks)

Write your answers to questions 31 to 46 in the spaces provided.  
Marks will be deducted for misspelt key words.

31. The diagram below shows a container which was filled with stones and water.

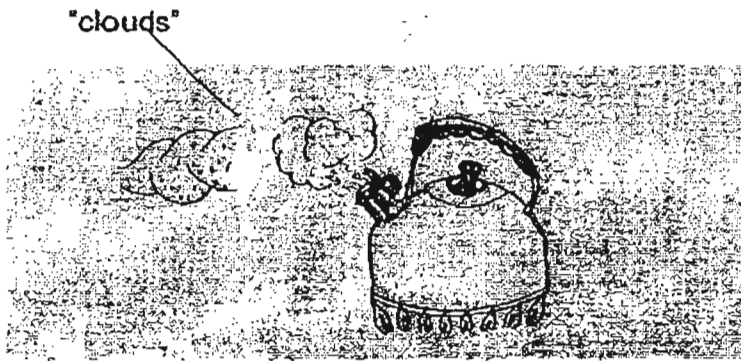


a. Name the states of matter found in the container. (1 mark)

---

b. If all the water was poured away and only the stones were left behind in the container. Name the states of matter left in the container now. (1mark)

---



32. A kettle of water was boiling on the kitchen stove as shown in the diagram above. Sam and his mother commented on the following observations.

Sam: Mom, I can see the steam coming out of the kettle!  
It is white in colour.  
Mother: That is not steam, Sam.

a. Give the reason why Mother made that statement? (1mark)

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b. Explain how the "clouds" that Sam saw was formed. (2marks)

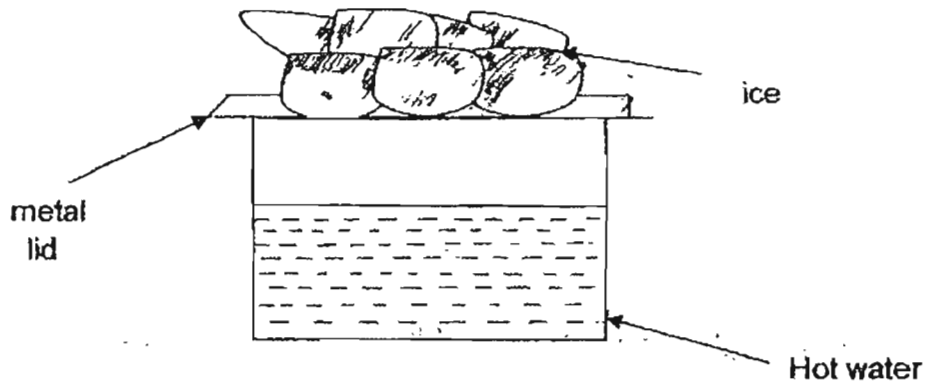
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33. Allen set up an experiment as shown in the diagram below.



He placed a metal lid over the container of hot water. A few ice cubes were placed on top of the metal lid. After a while he noticed that some water droplets were formed.

a. Draw the water droplets that Allen noticed in the above diagram. (1mark)

b. Allen then used the same set-up but he added 6 tablespoons of salt on the ice cubes and he noticed that the water droplets were formed faster in the same amount of time.

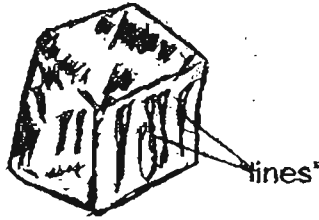
Explain why the water droplets were formed faster? (2marks)

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34. Keith took a cube of ice ~~from his~~ from his freezer. He then noticed that there were little "lines" inside it.



a. What are those "lines" inside the ice cube? (1mark)

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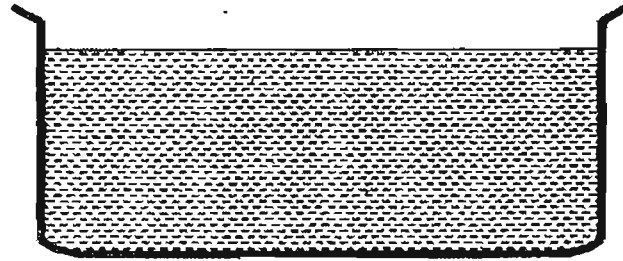
b. How are the "lines" formed? (1mark)

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35. Bala was told to carry out an experiment to show that there is air in the soil. He was given a pot of soil and a tank of water as shown below.



Pot of soil



Tank filled with water

a. Using what he was given how would he show that soil contains air? (1mark)

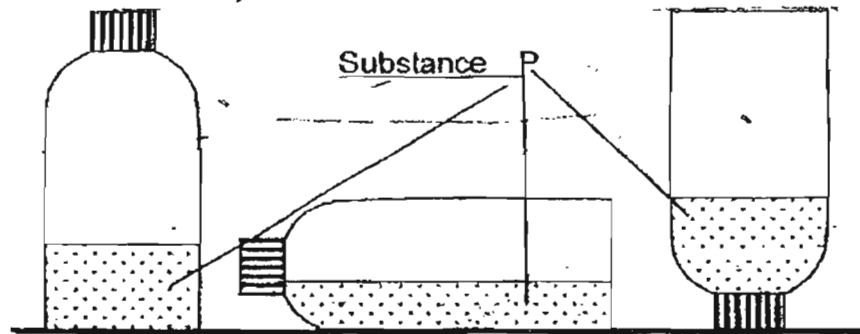
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b. What would he observe that shows that there is air in the soil? (1mark)

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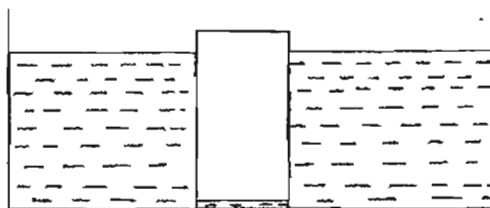
36. The diagram below shows the behaviour of substance P in a bottle. The bottle is then placed in different positions.



Based only on the above diagram, decide if the following statements about substance P are "True" "False" or "Not Possible to Tell" by putting a tick ( ✓ ) in the appropriate box. (3marks)

	Statements	True	False	Not Possible To Tell
i)	P is a gas			
ii)	P is vinegar			
iii)	P has no definite volume			

37. Study the diagram below



Desmond inverted an empty glass into a basin of water. He noticed that the water did not enter the glass.

a. Explain why the water did not flow into the glass. (1 mark)

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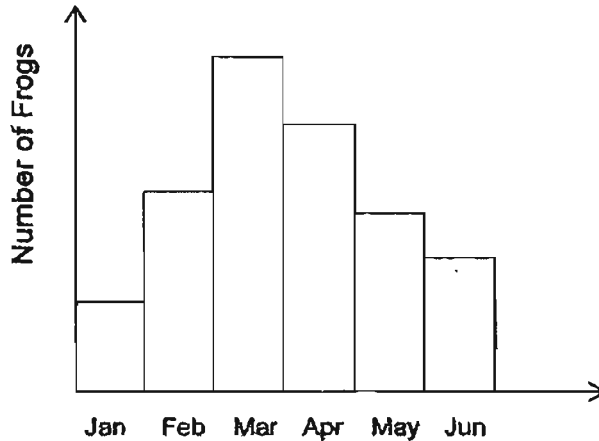
b. Keeping the glass below the water, how would he get the water into the glass? (1m)

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38. Fill in each blank with the correct word. (2marks)

Water boils at \_\_\_\_\_ °C but it can evaporate at any temperature. The \_\_\_\_\_ and \_\_\_\_\_ points of water are at the same temperature which is \_\_\_\_\_ °C.

39. Larry was studying the frogs that lived in a pond. He drew the bar graph shown below to show the number of frogs found in the pond every month for six months.



(a) The number of frogs increased from January to March.  
Give one possible reason for the increase. (1 mark)

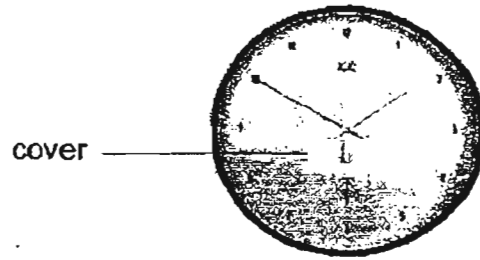
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(b) From the end of March to June, the number of frogs decreased.  
Give one possible reason for the decrease. (1 mark)

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40. The diagram below shows a wall clock with a cover made of material Z.



a. Suggest a material that Z could be.

(1mark)

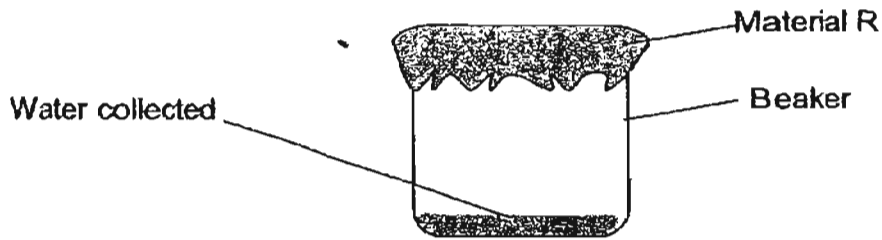
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b. Name one property of material Z that makes it suitable for its use.

(1 mark)

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41. The diagram below shows an experiment that David conducted.



He tied a piece of material R over the mouth of a beaker before pouring 10ml of water onto the material. After 5 minutes, he carefully removed the material and measured the volume of water collected in the beaker. He repeated the experiment with 2 other pieces of materials S and T and recorded his results in the table below.

Material	Amount of Water Collected
R	9
S	6
T	1

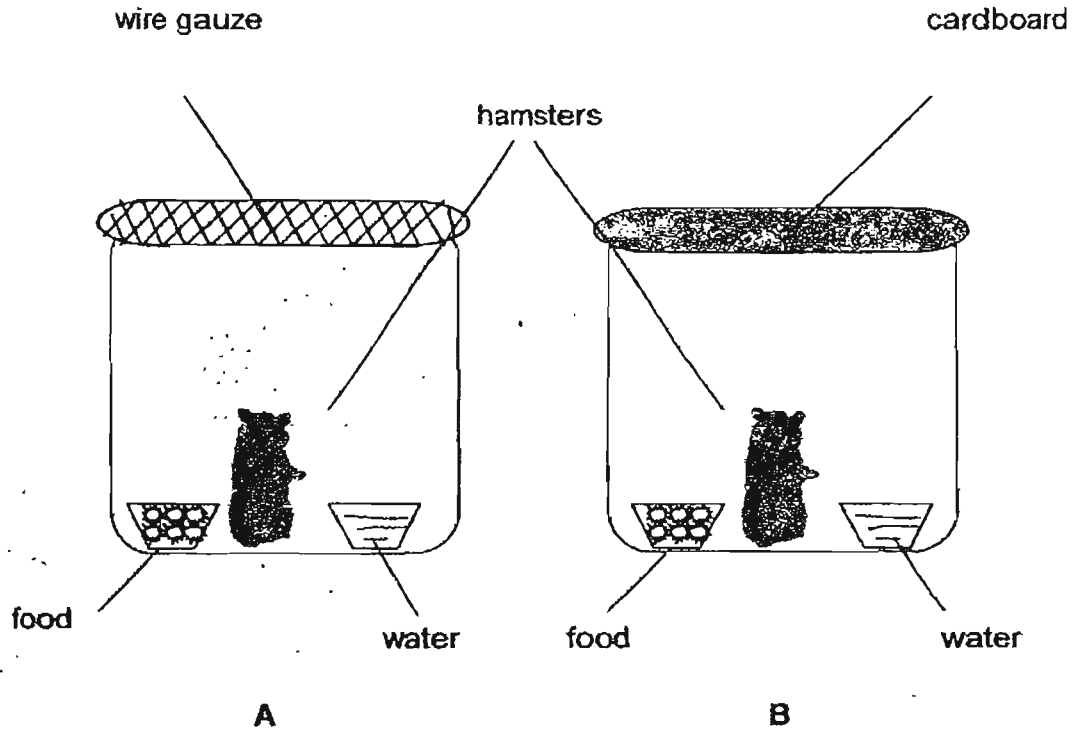
a) Which material is most suitable for making raincoat? (1 mark)

---

b) Explain your choice for (a). (1 mark)

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42. Two jars, A and B, each contains a hamster, a dish of food and a dish of water. A piece of wire gauze is wrapped over the mouth of Jar A. The mouth of Jar B is covered with a piece of cardboard. The hamsters are provided with a 2-week supply of food and water.



- (a) What will happen to both the hamsters after two days? (2 marks)

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- (b) What does the above experiment show? (2marks)

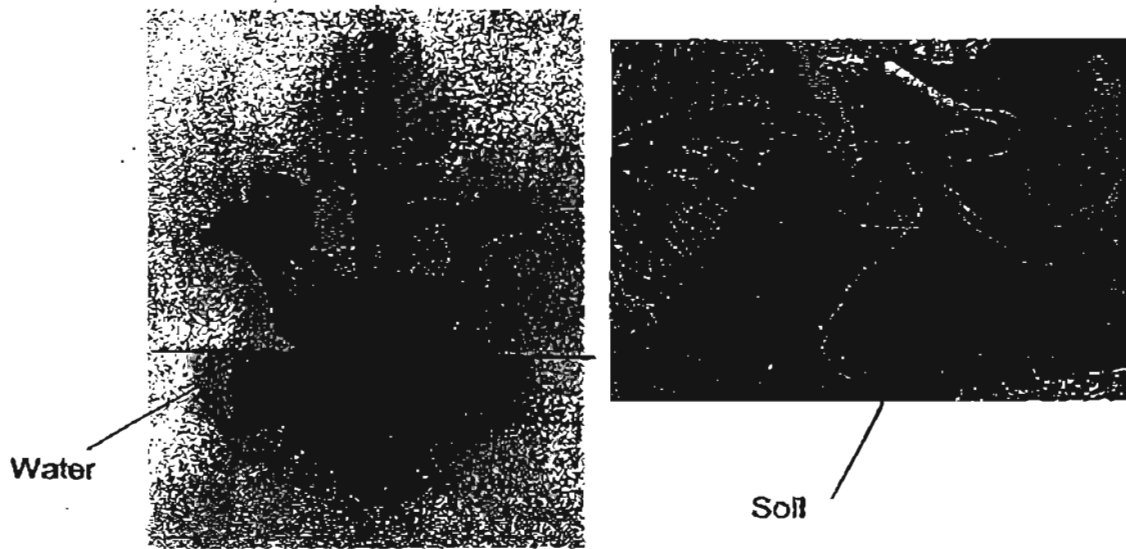
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43. a) Classify the plants in the box below into land and water plants. (2marks)

Cattail	Hydrilla
Hibiscus	Bougainvillea

Land Plants	Water Plants

b) The diagram below shows the roots of two plants.



State one similar function of the roots of both plants. (1mark)

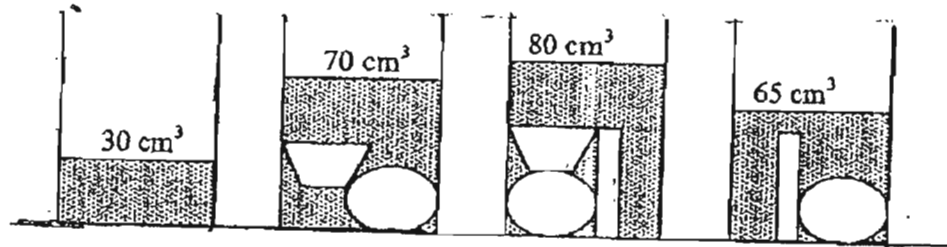
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44. a) Study the diagram below carefully.



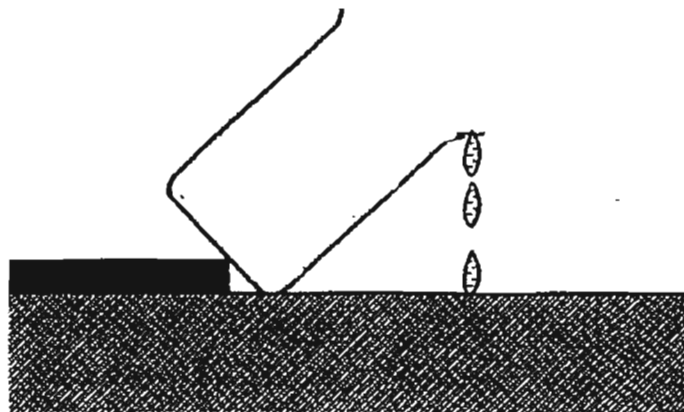
Three objects of different volumes were put into a beaker containing 30cm<sup>3</sup> water and the final water level in each case was shown above.

Arrange the objects according to their volumes from the smallest to the greatest by drawing the correct objects in the spaces below. (2marks)

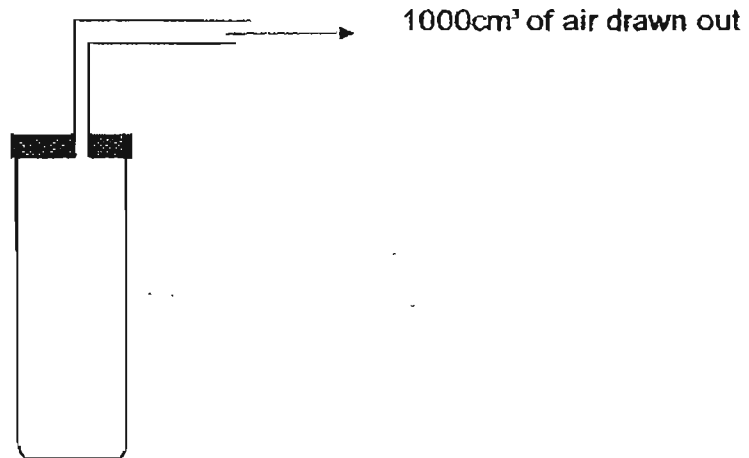
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b. The diagram below shows a tilted can of water.

Complete the diagram by drawing the water level in the can. (1 mark)



45.  $1000\text{cm}^3$  of air is drawn out from a hole on the cover of an  $800\text{cm}^3$  glass cylinder. The hole was immediately sealed after the air was drawn out.



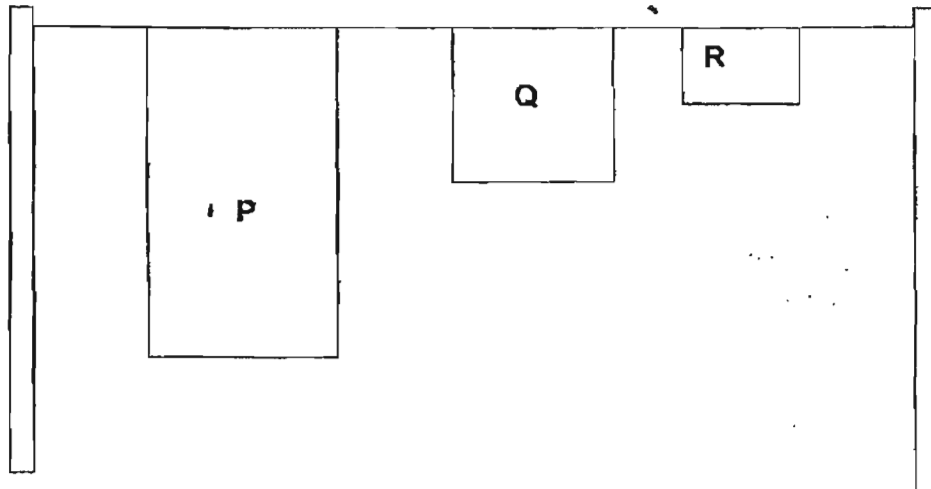
a. What is the volume of air in the glass cylinder after  $1000\text{cm}^3$  of air has been drawn out? (1mark)

---

b. What properties of air is shown in the above experiment? (1mark)

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46. Three wet towels P, Q and R of the same material and size were hung to dry in the sun. Towel P was fully opened, towel Q was folded once and towel R was folded twice as shown in the diagram below.

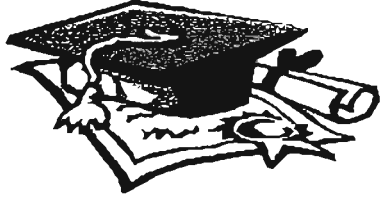


- a. Towel \_\_\_\_\_ dried the slowest because \_\_\_\_\_

(2marks)

- b. State another condition that could have helped to dry the three towels faster. (1mark)

**End of paper**  
**Please check your papers**



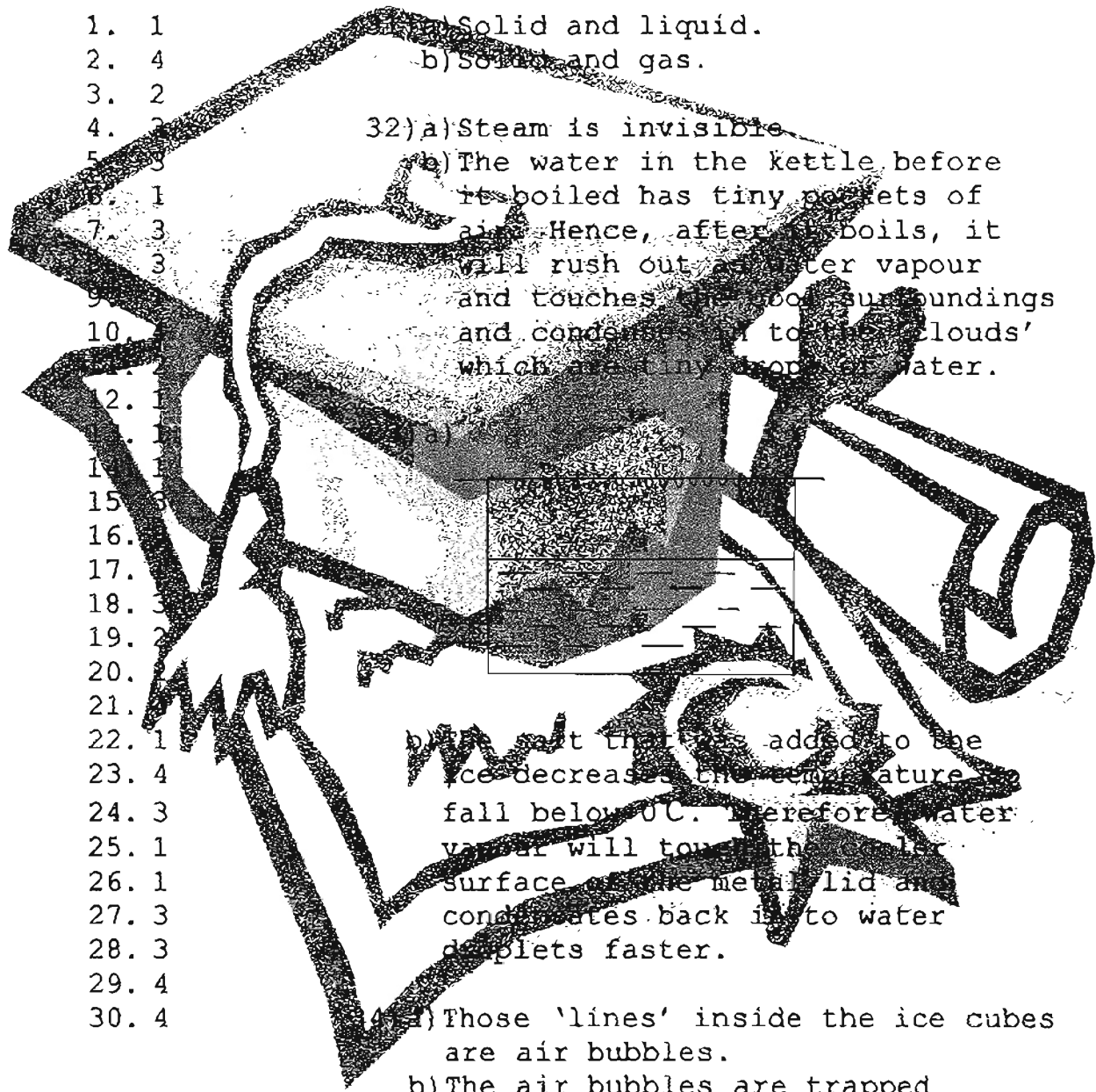
# ANSWER SHEET

NANYANG PRIMARY SCHOOL - PRIMARY 4 SCIENCE 2007  
CONTINUAL ASSESSMENT (1)

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

32) a) Solid and liquid.  
 b) Solid and gas.

a) Steam is invisible.  
 b) The water in the kettle before it boiled has tiny pockets of air. Hence, after it boils, it will rush out as water vapour and touches the cool surroundings and condenses in to the 'clouds' which are tiny drops of water.



a) The salt that is added to the ice decreases the temperature. It fall below 0C. Therefore, water vapour will touch the metal surface of the metal lid and condenses back in to water droplets faster.

43) a) Those 'lines' inside the ice cubes are air bubbles.  
 b) The air bubbles are trapped within the ice cubes during freezing.

35) a) He can put the pot of soil in to the tank filled with water.  
b) There will be air bubbles coming out of the water.

36) ai) False ii) Not iii) False

37) a) Air occupies space in the glass.  
b) He can tilt the glass to let the air escape and water can flow to take up the space previously occupied by the air.

38) 100°C, Freezing, Melting, Boiling

39) a) The frogs reproduced.  
The frog died.

40) a) Glass  
b) Glass is transparent.

41) a) Material T.  
b) The least amount of water was collected in the beaker.

42) a) Hamster A will still be alive but hamster B will die.  
b) Living things need air.

43) a) Land plants: Hibiscus, Bougainvillea  
Water plants: Hydrilla, Cattail  
b) The roots take in water for the plants.

44) a)  b) 

45) a) 800cm<sup>3</sup> b) Air has no definite volume.

46) a) Towel R dried the slowest because it was smallest exposed surface area.  
b) Low humidity.