

**Primary Four
Science
Continual Assessment One**

Section A

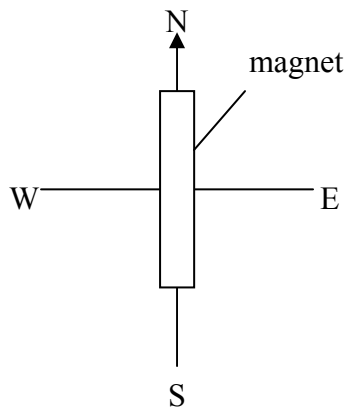
Each question is followed by four possible answers. Choose the most suitable answer and write your answer in the boxes provided.

(15 x 2 marks)

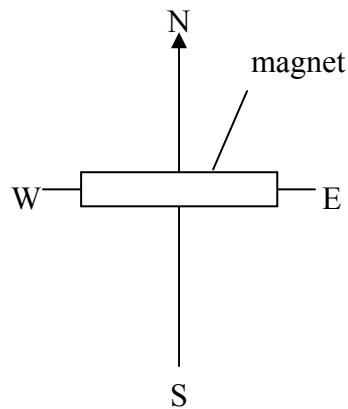
1. The following objects are classified according to the type of materials they are made of. Which one of the following lists of objects has been classified wrongly?

- (1) a transparency, a mineral bottle, a shower cap
- (2) a T-shirt, a raincoat, a towel
- (3) a safety pin, a nail, a coin
- (4) a tyre, an eraser, a balloon

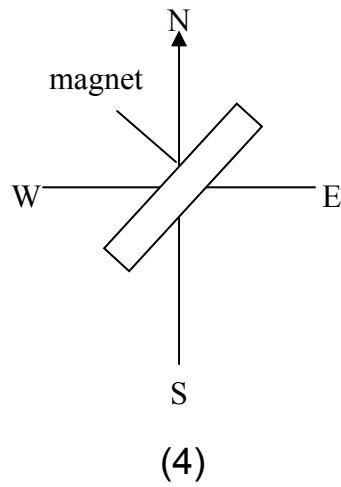
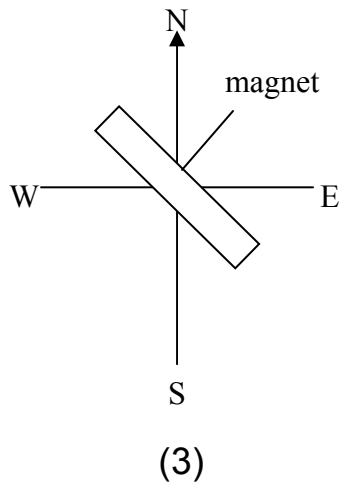
2. If a magnet is allowed to suspend freely, which of the following diagram is most likely to show the final position of the magnet?



(1)



(2)



3. Study the three pairs of items below.

Pair 1: spoon – steel

Pair 2: tyre – latex

Pair 3: brick – clay

How are the two items in each pair related?

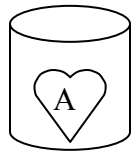
(1) An object and how it is classified.

(2) An object and its state.

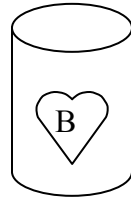
(3) An object and its use.

(4) An object and what it is made of.

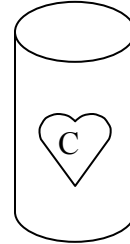
4. John has 800 cm^3 of oxygen in a small tank. He wants to transfer all the oxygen in the tank into another container. Which one of the following containers would be able to hold all the oxygen gas?



Volume: 400 cm^3



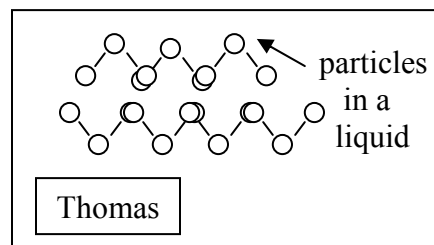
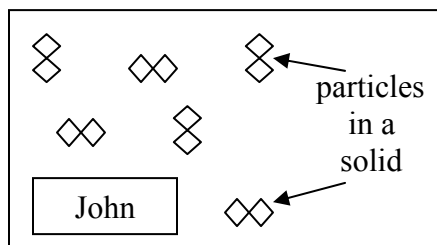
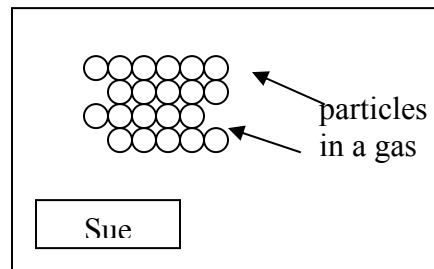
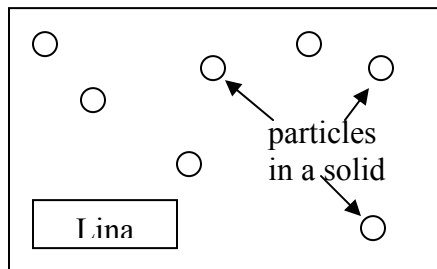
Volume: 600 cm^3



Volume: 750 cm^3

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

5. Four pupils in a class drew a diagram each to represent different states of matter. Which pupil is most likely to be correct?



- (1) Lina
 (2) Sue
 (3) John
 (4) Thomas

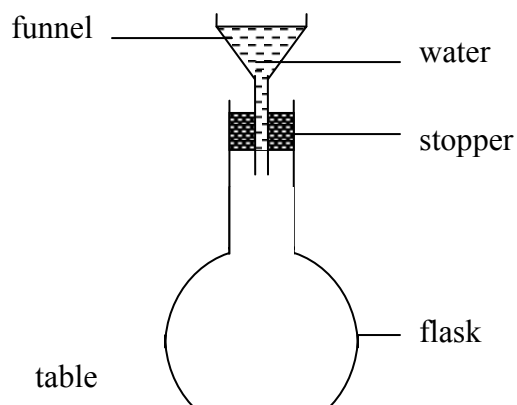
6. Adrian experimented the properties of X, Y and Z. He recorded the results in the table below.

Property	X	Y	Z
(a) Can be compressed	☆		
(b) Occupies space	☆	☆	☆
(c) Flows easily	☆	☆	

Which one of the following groups of matter could represent X, Y and Z?

	X	Y	Z
(1)	Mercury	Book	Plasticine
(2)	Marble	Ball	Cup
(3)	Petrol	Kite	Sugar
(4)	Oxygen	Water	Brick

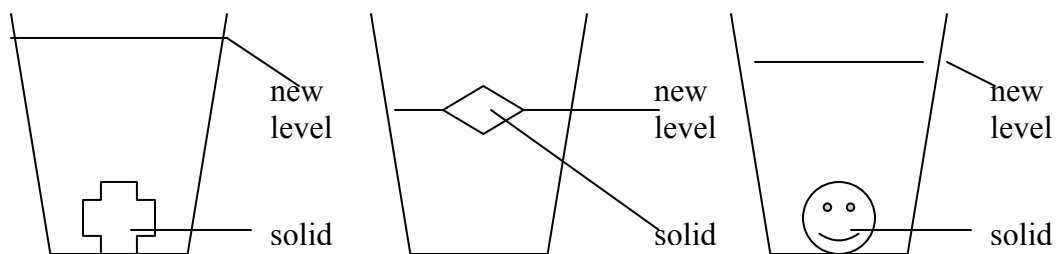
7. A student's set up an experiment as shown in the diagram. When he poured water into the funnel, the water did not flow into the flask.



Which one of the following could be a possible reason why the water did not flow into the flask?

- (1) The water in the funnel could not mix with the air in the flask.
- (2) The stopper stopped the flow of the water.
- (3) The water was poured too fast into the funnel.
- (4) There was air in the flask taking up space.

8. A student did an experiment as shown in the following diagrams. Three different solids were put into three similar glasses containing the same amount of water. The observations are shown below.

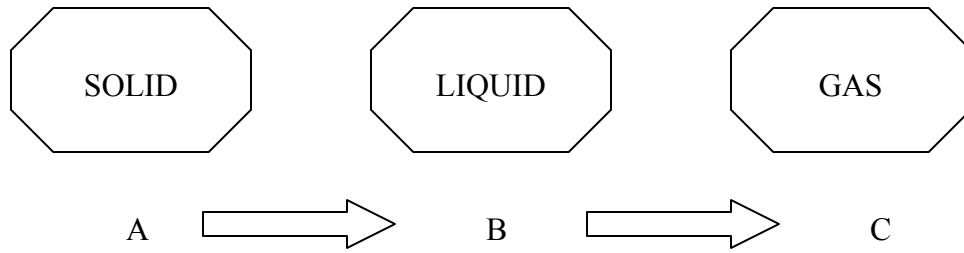


Based on the above results, which of the following statements about the solids is/are not true?

- A: They are made of the same material.
- B: They have the same mass.
- C: They take up space.
- D: They will increase in volume when heated.

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

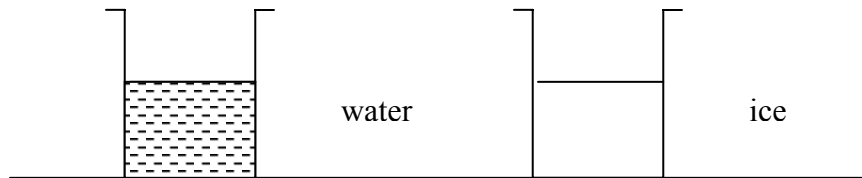
9. Study the diagram carefully.



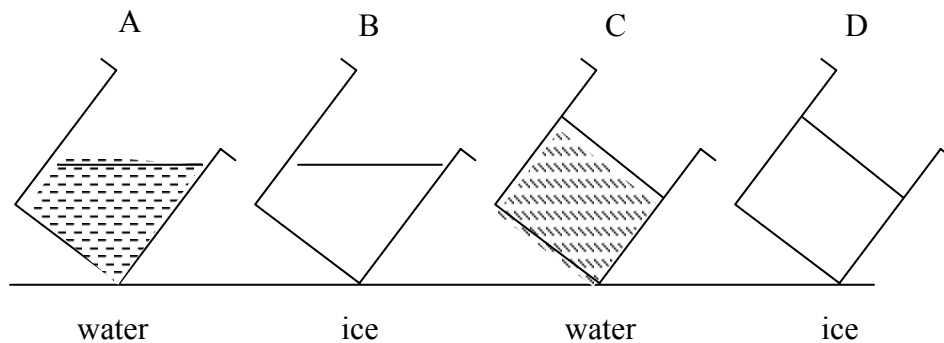
What should A, B and C represent if the above diagram shows how water changes into different states?

	A	B	C
(1)	water	water vapour	ice
(2)	water vapour	ice	water
(3)	ice	water	water vapour
(4)	ice	water vapour	water

10. The diagram below shows a beaker of water and a beaker of ice.



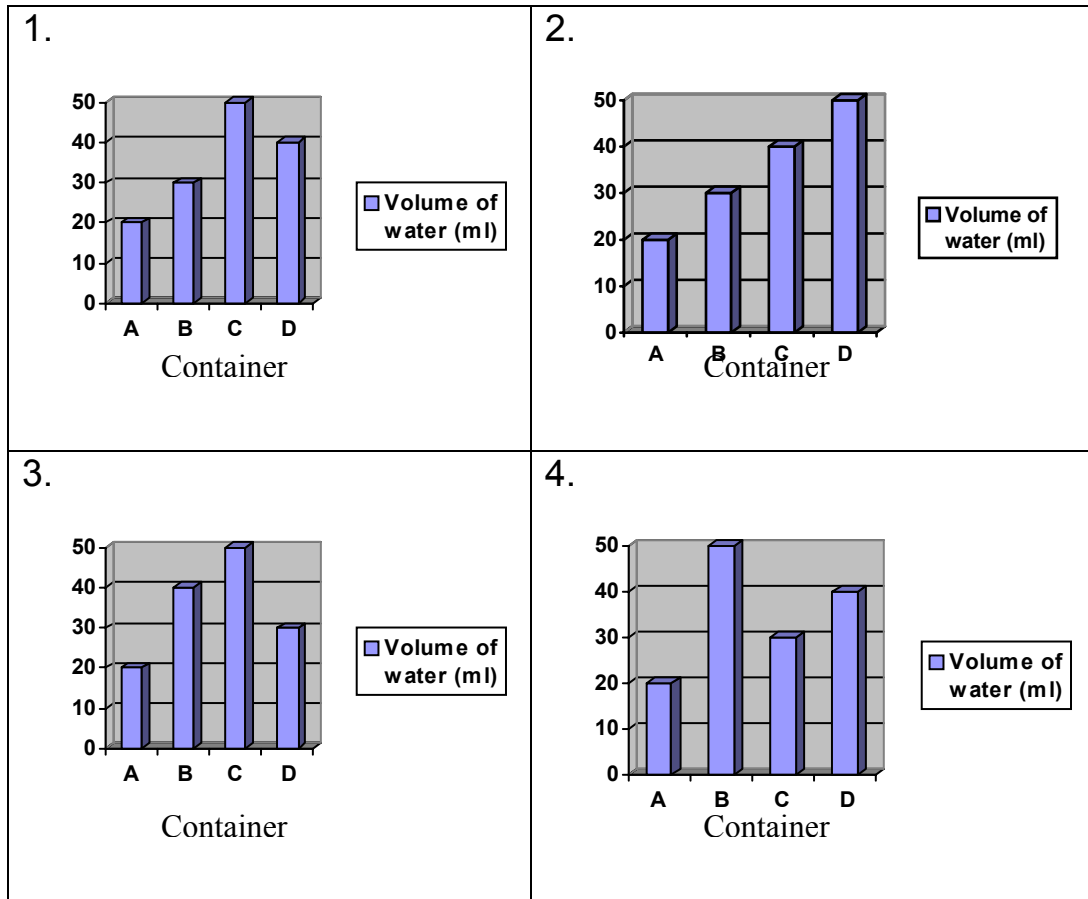
Which pair of the diagrams below would show what would be observed when the two beakers are tilted?



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

11. There are 4 identical containers A, B, C and D. Each was filled with the same volume of water. These 4 containers were left in four places with different conditions for 12 hours as shown in the table below.

Container	A	B	C	D
Conditions	sunny and windy	sunny but not windy	cloudy and windy	cloudy but not windy

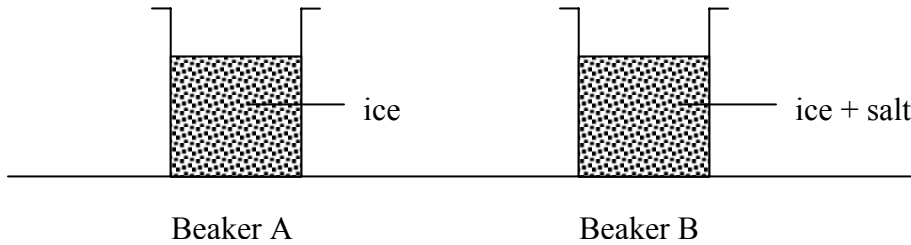


12. Evaporation has taken place when water changes from liquid state into gaseous state. Which of the following statements show the process of evaporation taking place?

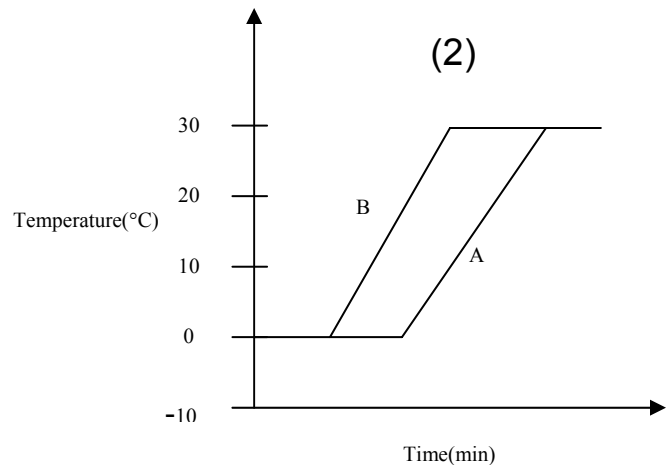
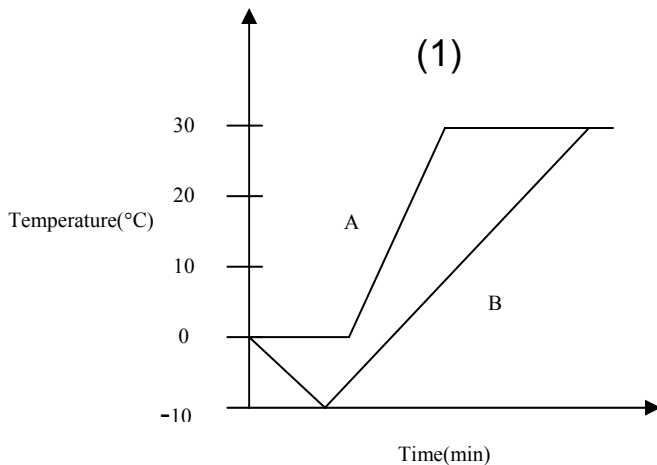
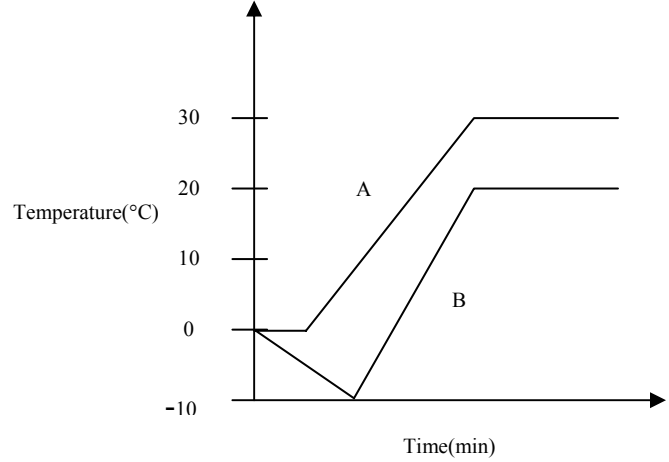
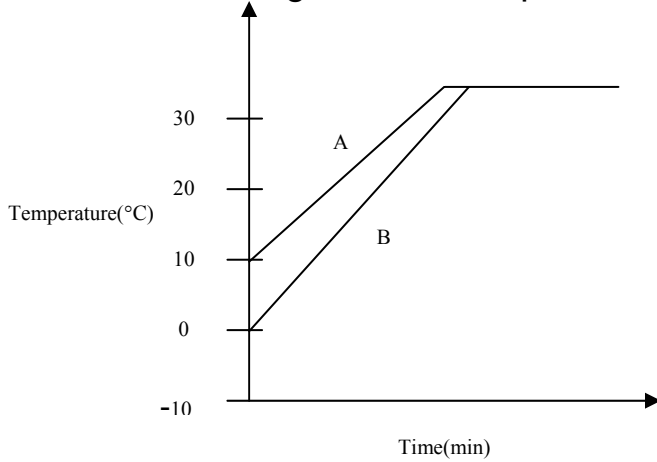
- A: A dog hanging out its tongue to pant on a hot day.
- B: Perspiration from our skin cooling our body when we are hot.
- C: A saucer of sea water left to dry leaving behind salt crystals.
- D: Spectacles turning misty when the wearer steps out of an air-conditioned room.

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

13. Mark carried out an experiment using 2 beakers of ice. Beakers A and B contain an equal amount of ice. Some salt was added to ice in beaker A. The temperature of the two beakers were observed and recorded at regular intervals. Both beakers were then left undisturbed on a table.



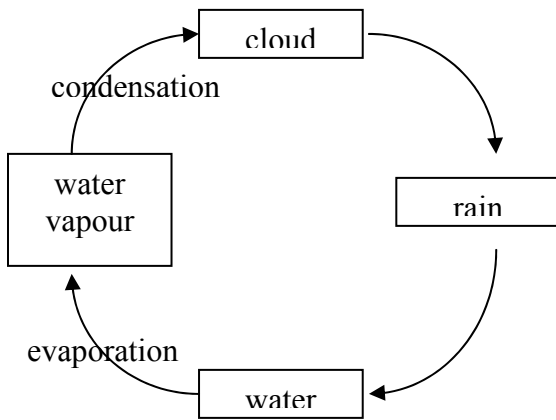
Which of the following graphs below correctly shows the changes in the temperature in the 2 beakers over time?



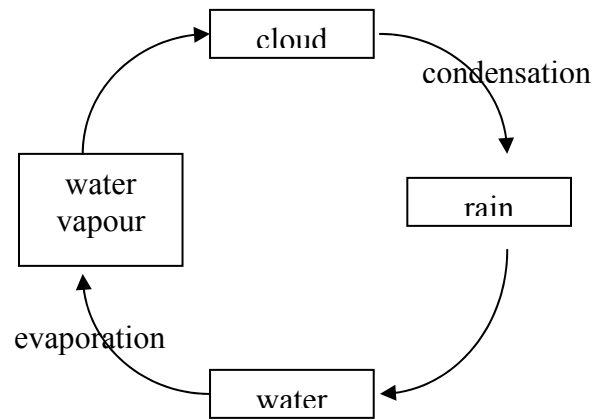
(3)

(4)

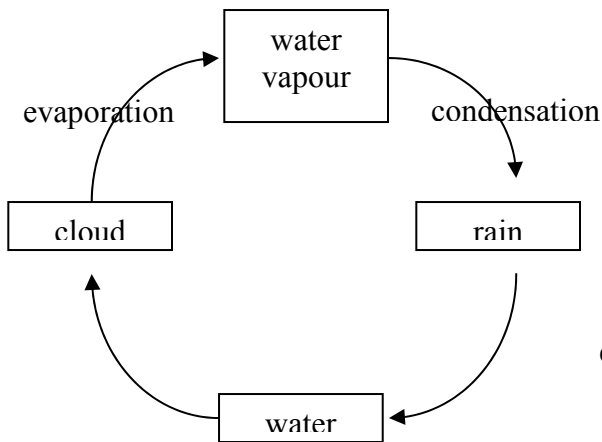
14. Which one of the following diagrams could represent the water cycle?



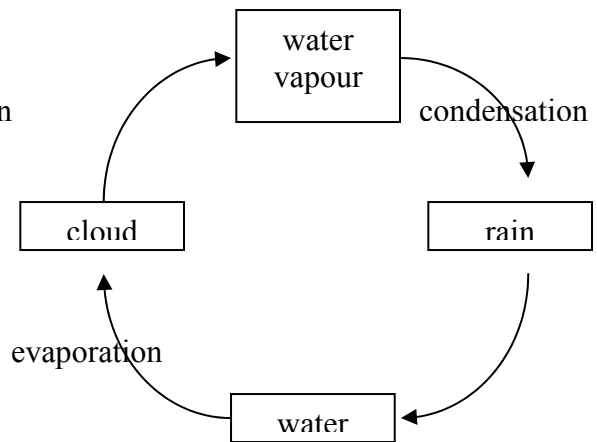
(1)



(2)

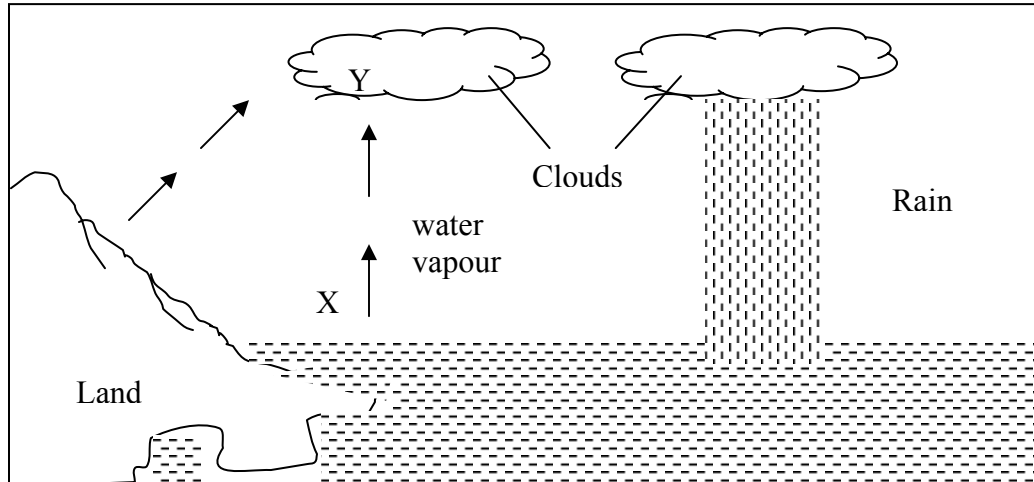


(3)



(4)

15.



Based on the diagram above, which of the following statements are true?

- A: X takes place at a higher temperature than Y.
- B: X does not take place at a fixed temperature.
- C: Y takes place only when water vapour evaporates.

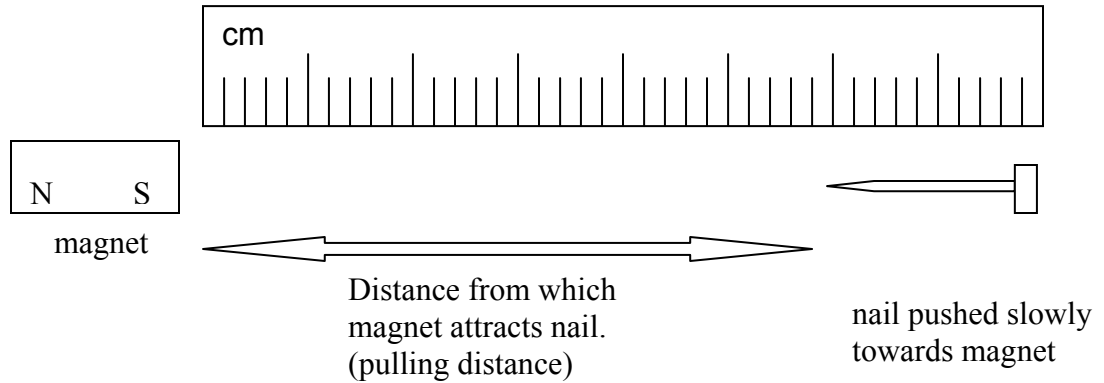
- (1) A and B only
- (3) A and C only

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

Section B

**Study each question carefully and write its answers in the space provided.
(20 marks)**

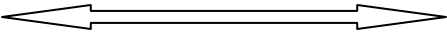
16. 4 magnets A, B, C and D are tested for their strength. A nail is slowly pushed towards each magnet until it is attracted by the magnet.



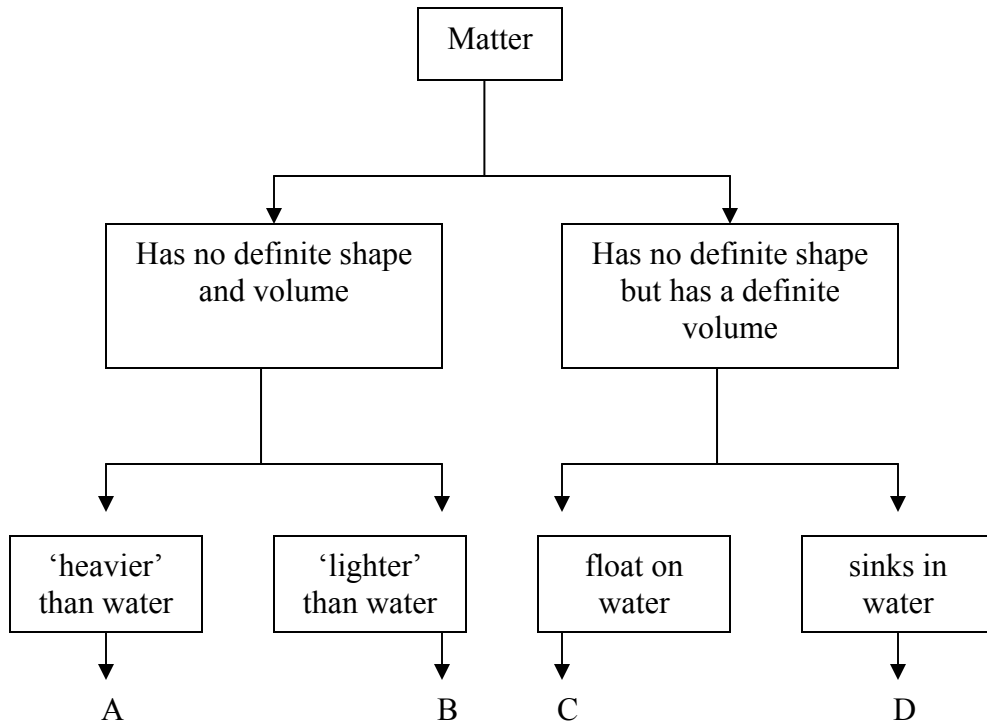
The table below shows the 'pulling distances' of the 4 magnets.

Magnet	Pulling Distance in cm
A	10
B	6
C	8
D	3

In the boxes below, arrange the magnets in order of their strength starting from the weakest to the strongest.

Weakest  Strongest

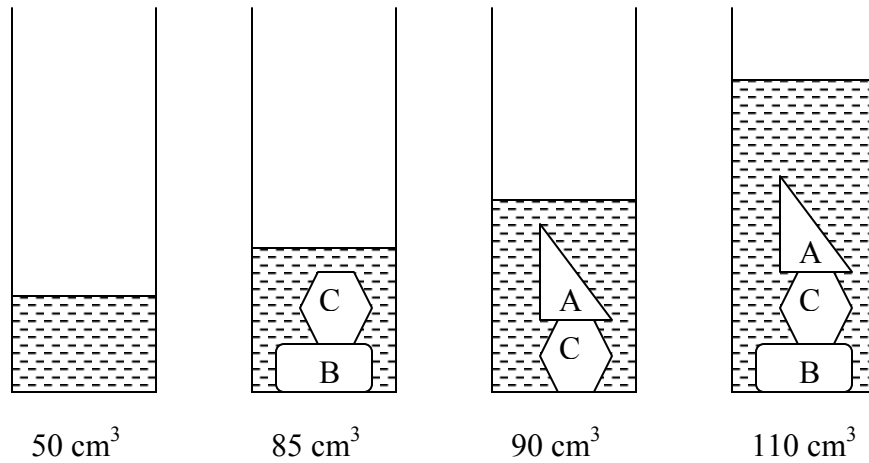
17. Study the following classification table below.



(a) Based on the classification table above, state one similarity between objects C and D. (1 mark)

(b) State a difference between objects A and C. (1 mark)

18. A container has 50 cm^3 water in it. Three different objects A, B and C are placed in the container and the water levels are shown in the diagram below.



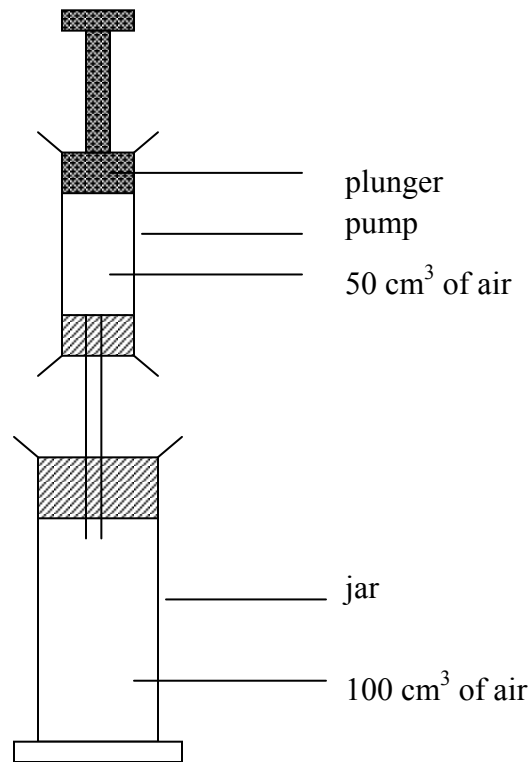
- (a) Based on the above observations, what is the volume of C?
(1 mark)

- (b) Arrange the 3 objects, according to their volumes. Begin with the smallest one. (2 marks)

Smallest Volume \longleftrightarrow Biggest Volume

- (c) This experiment demonstrates a property common to water and the other 3 objects. What is this common property?
(1 mark)

19. The diagram below shows a jar containing 100 cm^3 of air and a pump containing 50 cm^3 of air.



- (a) When the plunger of the pump is pushed all the way into the pump, all the air from the pump goes into the jar. What is the volume of air in the jar then? (1 mark)

- (b) Explain your answer in part(a). (1 mark)

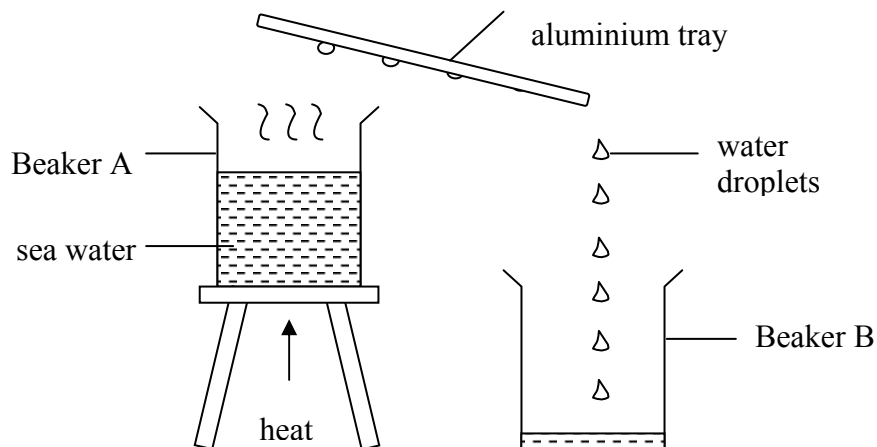
20. Study the following statements carefully. Write “True” or “False” in each of the boxes provided. (3 marks)

(a) Water has a definite volume.

(b) The melting and freezing points of water are not the same.

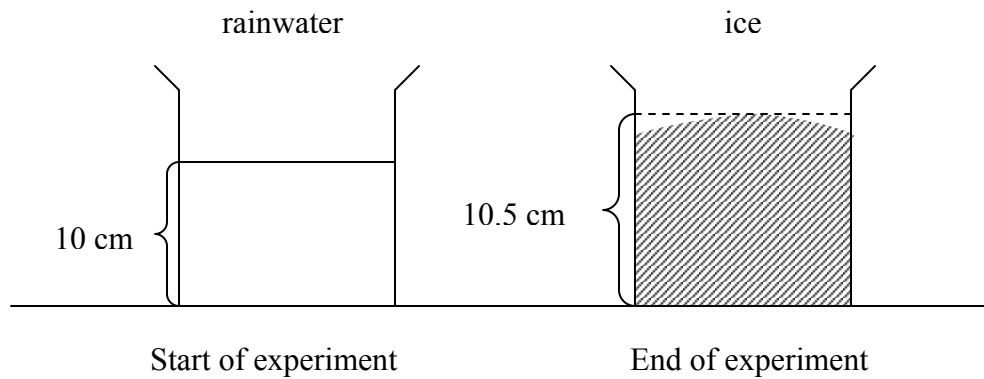
(c) Steam has mass.

21. Beaker A contained some sea water and it was heated until it boiled. An aluminium tray was then placed above Beaker A. Water droplets appear on the aluminium tray and were collected in Beaker B.



At the beginning, water vapour changed into droplets on the aluminium tray quickly. After some time, a large amount of water vapour escaped into the air and very few droplets were formed on the tray. What is the reason for this? (2 marks)

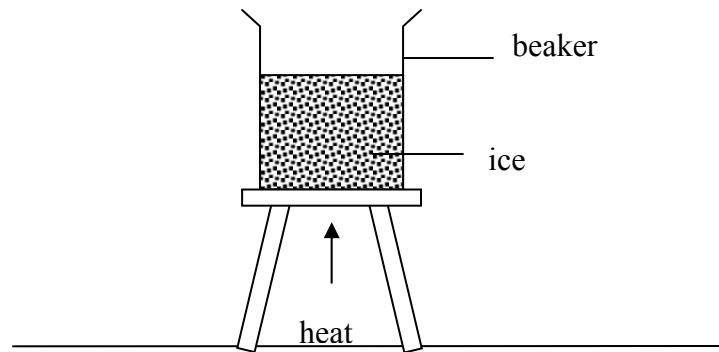
22. May collected some rainwater in a container. She measured the height of the rainwater and then left the container of rainwater in the freezer compartment of a fridge. After 4 hours, she found that the rainwater had turned into ice. She measured the height of the ice formed in the container.



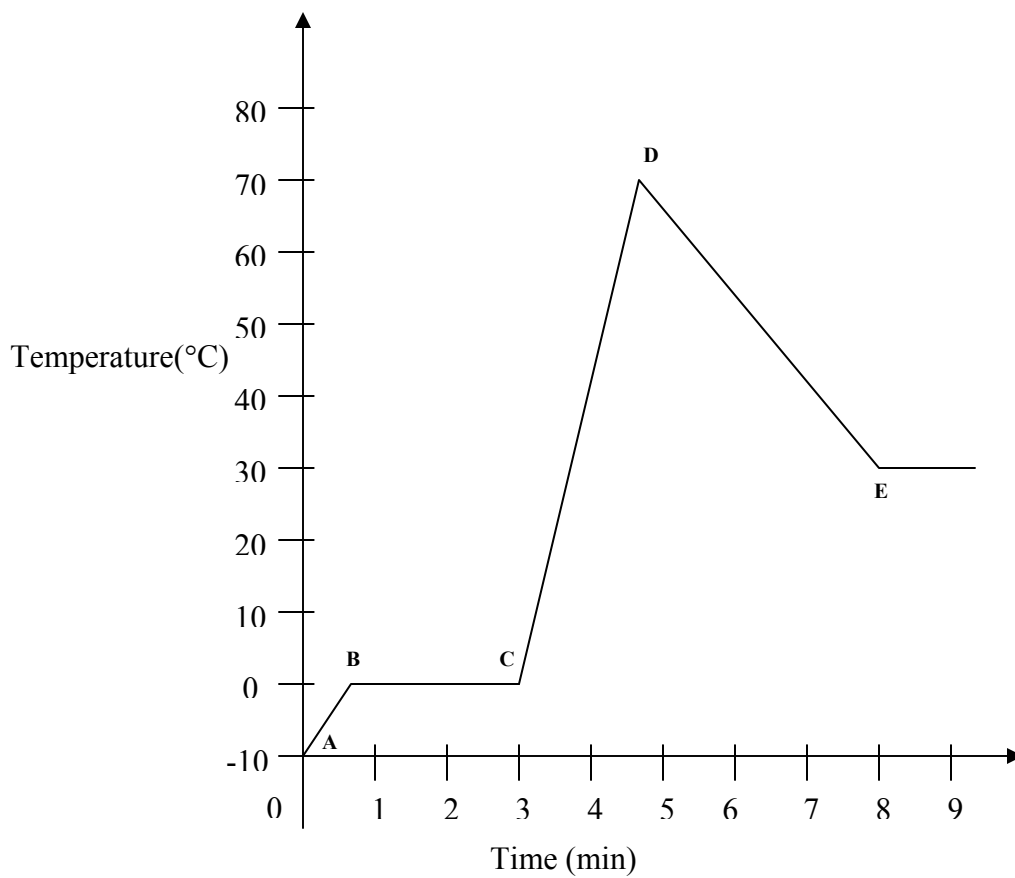
- (a) Name the process of water changing into ice. (1 mark)

- (b) What does the experiment demonstrate when the volume of water turns into ice?

23. Charlie heated a beaker of ice as shown in the diagram below. He then used a thermometer to measure the temperature of the beaker of ice. After some time, he decide to stop heating the beaker of ice.



Charlie gathered all the information from his observation and plotted a graph as shown below.



Study the graph above and answer the following questions.

(a) What was the temperature of the ice when Charlie started heating it? (1 mark)

(b) Which part of the graph, (AB, BC, CD or DE) shows the following?

(i) the contents in the beaker is cooling down?
(1 mark)

(ii) the ice is melting? (1 mark)
