

- 1 The spreading of perfume in a room is an example of
A melting B diffusion C boiling D freezing [1]
- 2 Which statement about an object that has mass is **NOT** true?
A it has volume B it must be heavy
C it takes up space D it is made up of matter [1]
- 3 Which of the following is an example of chemical change?
A melting of ice B ripening of mangoes
C drying clothes D boiling of water [1]
- 4 Which of the following is **NOT** a state of matter?
A gas B solid
C vacuum D liquid [1]
- 5 Which of the following best describes the particles in matter?
A They are larger in solids than in liquids or in gases.
B They are larger in gases than in liquids or in solids.
C They do not move.
D They are always moving. [1]
- 6 Ronaldo found some apparatus in the science laboratory.
beaker *conical flask* *measuring cylinder*
(a) Draw this apparatus in the table below. [3]

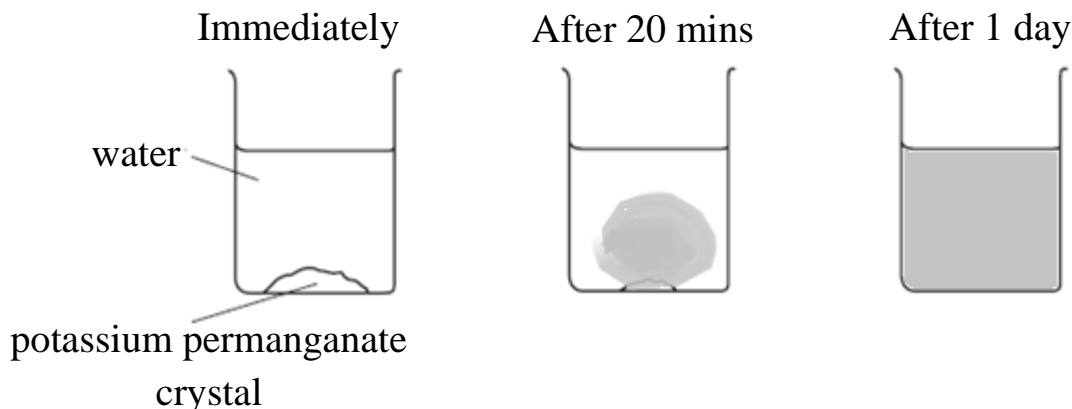
beaker	conical flask	measuring cylinder

- (b) Ronaldo investigated the properties of liquid. He measured 200 cm³ of water into the beaker, then he transferred 50 cm³ of water into each of the others, one at a time. Finally, he transferred the liquid back into the beaker.

- i. What can Ronaldo conclude about the shape of water in the different glassware? [1]
- ii. What will be final volume of water at the end of his experiment? [1]
- iii. What can he conclude about the properties of liquid? [1]

(c) Ronaldo placed some crystals of potassium permanganate in water as shown below. He left the contents to stand for one day.

The diagram below shows his observations.



- (i) Describe what Ronaldo observed immediately after the potassium permanganate crystal is dropped in the water. [2]
- (ii) What happens to the particles of potassium permanganate when the crystal is dropped in water? [2]

[Total: 10]

7 Copy and complete the table below to show what state of matter a material must be in if it has each of the properties listed.

property	state(s) of matter
easily compressed	
fixed shape	
no fixed volume	
does not flow	
no fixed shape	

[Total: 7]

8 Fill in the blanks, choosing words from the following list.

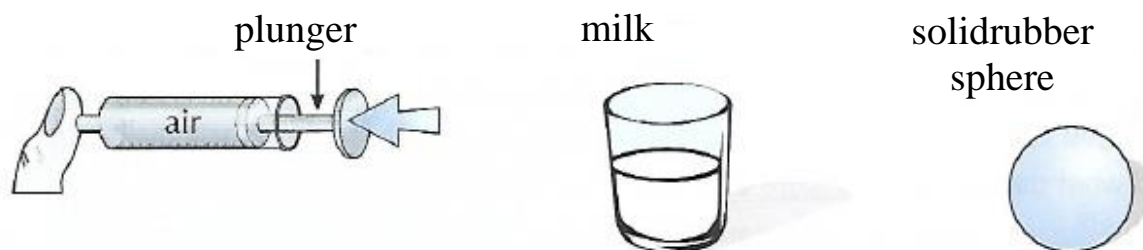
physical solid vibrate mass chemical particle temperature

- a) is the smallest part of matter.
- b) Matter has and occupies space.

- c) The particles of a are closely packed in an ordered arrangement and they at fixed positions.
- d) Changes in cause matter to change from one state to another.
- e) All changes of states are changes.
- f) A change is one during which new substances are formed and it is irreversible.

[Total: 7]

9 In the picture below, there is the same volume of air, milk and rubber.



- (a) Are there more particles of air, milk or rubber? [1]
Explain your answer. [1]
- (b)(i) Would it possible to decrease the volume of the milk or rubber in the same in a similar way air. [1]
- (ii) The air and milk are both in containers, the rubber is not. [1]
Explain why the rubber does **not** need a container. [1]

[Total: 4]

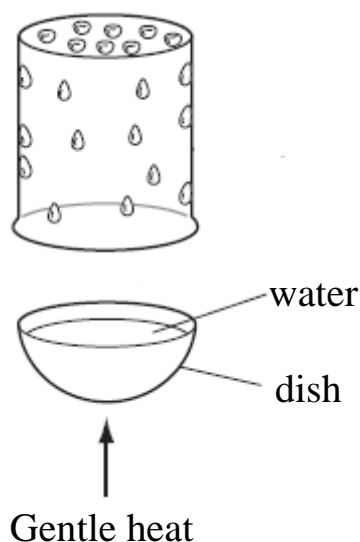
10 Copy the table and classify the following states of matter that follows.

nitrogen snow sugar milk hydrogen petrol salt

solid	Liquid	gas

[Total: 6]

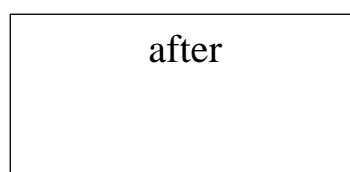
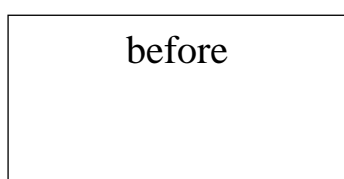
11 Messi wanted to investigate water. The first thing he did was to heat water in a dish and a container was held above the dish as shown.



Complete the observations carried out by Messi.

- (a) When water is heated using a (i), it gains (ii) energy and starts (iii) to form gaseous steam. When the latter comes into contact with a (iv) surface, it loses energy and (v) to form water droplets. (vi), melting and boiling occur when there is an (vii) in temperature whereas (viii) and condensation occur when there is a (ix) in temperature. [9]

- (b) During boiling, water changes its state of matter from a liquid to a gas. In the boxes below, draw the arrangement of the particles before and after this change.



[2]

[Total: 11]