

Topical Test

Topic: Chapter 7 Particulate Nature of Matter

Name: () Class:..... Date:

1 Air can be compressed because

- A bonds between the particles cannot be broken.
- B particles are not vibrating fast enough.
- C particles are packed very closely together.
- D there is a lot of space in between particles. ()

2 A substance has a boiling point of 90°C.

What changes occur when it is heated from 50°C to 120°C?

- A energy of particles increase; particles move further apart
- B energy of particles increase; particles move closer together
- C energy of particles decrease; particles move further apart
- D energy of particles decrease; particles move closer together ()

3 A solid iron bar is heated below its melting point. This means the

- A iron atoms increases in size.
- B iron bar melts to form molten iron.
- C iron atoms move further apart to take up empty spaces in the room.
- D iron atoms vibrate more vigorously slightly apart and the iron bar expands. ()

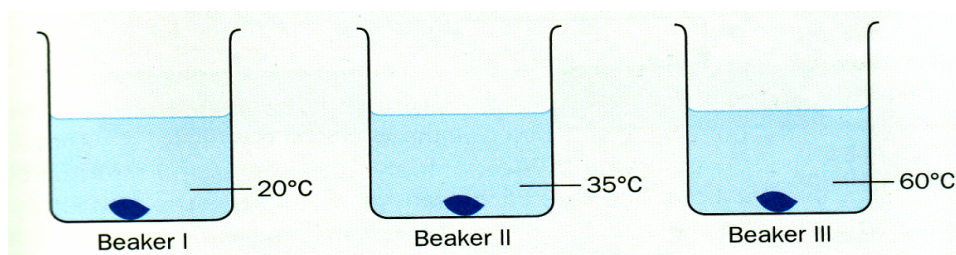
- 4 (a) Describe, in terms of movement and arrangement of the particles, what happens when a liquid boils to form a gas.

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 [2]

- (b) In the box below, draw the arrangement of particles in a liquid.

[1]

- 5 Three beakers, labelled I, II and III were each filled with 50 cm³ of distilled water. The temperature of the water was set at 20 °C, 35°C and 60°C.



1 g of copper(II) sulfate crystals was added to each beaker, dissolves and diffuses throughout the water.

- (a) What is the meaning of the term diffusion?

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- (b) In which beaker did copper(II) sulfate take the shortest time to completely diffuse throughout the water.

Explain your answer.

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 [2]