

Chapter 7 Model of Matter – The Particulate Nature of Matter

AfL Quiz 2

Date: 3/8/2022

By the end of this quiz, I should be able to:

- Explain melting and boiling in terms of the models of the three states of matter

1 Which of the following will increase when matter changes from the solid state to the liquid state?

- I. Energy content of the particles
- II. The distance between two particles
- III. The speed of the particles
- IV. The number of the particles in the matter.

- A I and IV only.
- B II and III only
- C All except IV
- D All of the above

melting of pure substance happens at fixed content temp, i.e. pure solid \downarrow pure l (same temp)

Condensation gas \rightarrow liquid

2 In an air-conditioned bus, water is collected on the glass window panes. This process is best described as _____.

- A sublimation
- B condensation
- C evaporation
- D melting

liquid \rightarrow gas

3 What happens to the particles in a liquid after the liquid boils?

- A The particles will stop moving randomly.
- B The particles will vibrate.
- C The particles break free from being held in their fixed positions.
- D The particles move about freely and randomly in all directions.

4 In which process can particles escape from the surface of a liquid at temperatures below its boiling point?

- A boiling
- B condensation
- C evaporation
- D sublimation

\rightarrow evaporation (l \rightarrow g)

5 When a gas is cooled, its particles _____.

- A move closer together
- B move more rapidly
- C become smaller
- D become stationary

\rightarrow \neq condense, so, still at gas
change to liquid.
(A)

6 When ice melts, there are changes in the _____ of the water molecules.

- A motion
C size

- B mass
D number

(A)

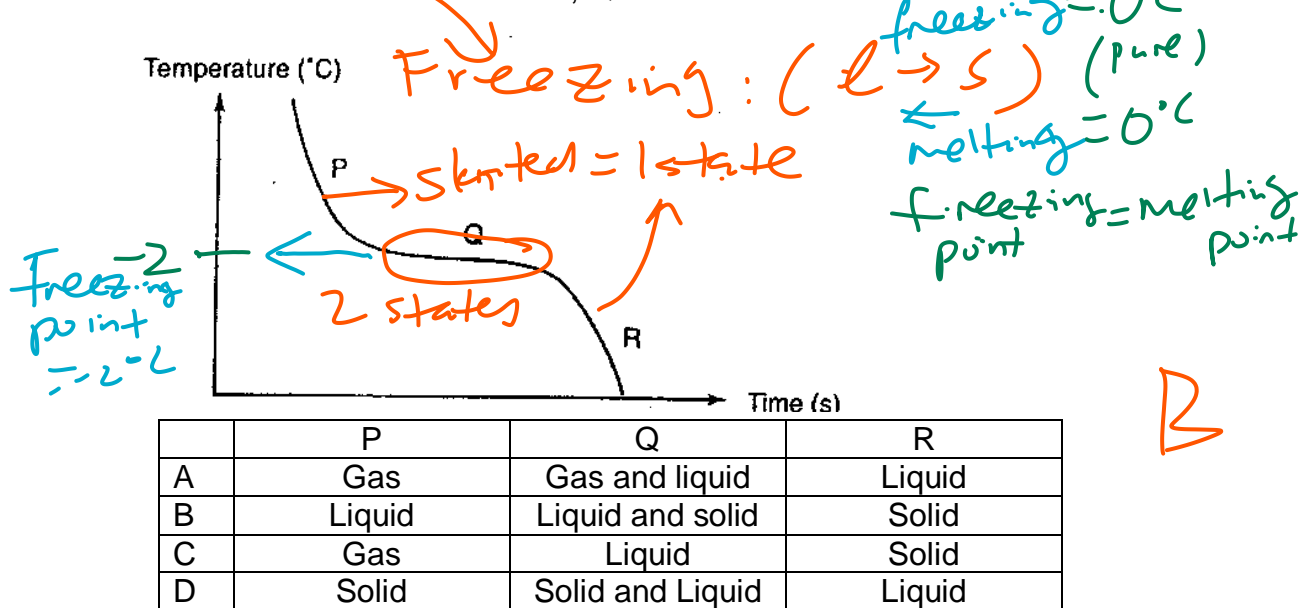
7 In which process is heat energy given out?

- ~~A boiling~~
C freezing

- ~~B sublimation~~
~~D melting~~

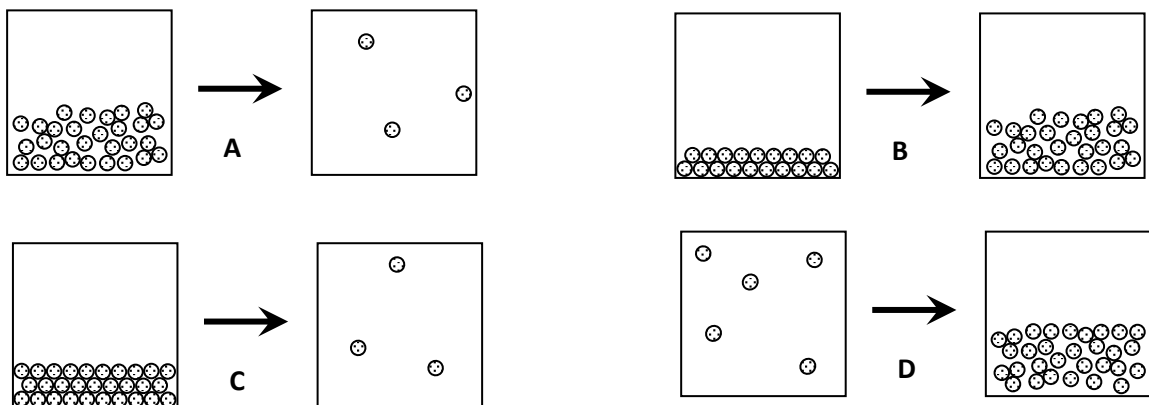
(C)

8 A sample of a pure compound was heated until it was completely molten and was then allowed to cool until it was completely solid again. Which of the following gives the correct states for a substance at P, Q and R?



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9 The following shows diagrams of a process (A, B, C and D) where a substance is undergoing a change of state,



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