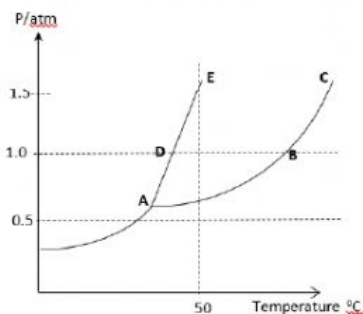


- C. the liquid and vapour coexist at equilibrium
- D. gas molecules have higher kinetic energy than that of liquid molecules.
27. Which of the following quantities is independent of the type of attractive forces between molecules in liquid state?
- A. viscosity
- B. evaporation rate at a specific temperature
- C. heat or enthalpy of condensation and vaporisation
- D. distribution of kinetic energy of molecules.
28. The relative molecular masses of gases U and V are 32 and 46 respectively. Pick the **TRUE** statement(s) for both gases in a specific quantity.
- I: At constant temperature and pressure, the density of gas U is less than that of V.
- II: At the same temperature and pressure, the volume of gas U is larger than V.
- III: At the same pressure and volume, the temperature of gas U is higher than V.
- A. I only C. II and III
- B. I and II D. I, II and III
29. Which of the following properties indicate the presence of weak intermolecular attractive forces in a liquid?
- I: A high boiling point
- II: A low viscosity
- III: A high vapour pressure
- A. I only C. II and III
- B. I and II D. I, II and III

Question 30 until 32 are based on the following phase diagram for substance Y:



30. Which point is the normal boiling point?

- A. A C. C
- B. B D. D

31. If the temperature increases from 0°C to 50°C at constant pressure of 0.5 atm, what process would you observe?

- A. Sublimation C. Melting
- B. Freezing D. Vaporisation

32. At STP,

- A. Y exist as gas only.
- B. Y exist as liquid only.
- C. Y exist as solid only.
- D. Gas Y and liquid Y coexist in equilibrium.

33.

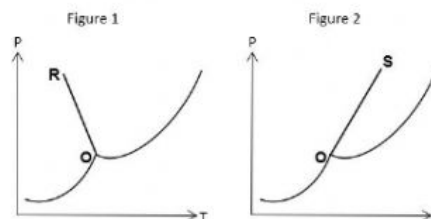


Figure 1 and figure 2 show the phase diagrams for compound P and Q respectively. Why **OR** slopes to the left but **OS** slopes to the right?

- A. Compound P is denser than compound Q.