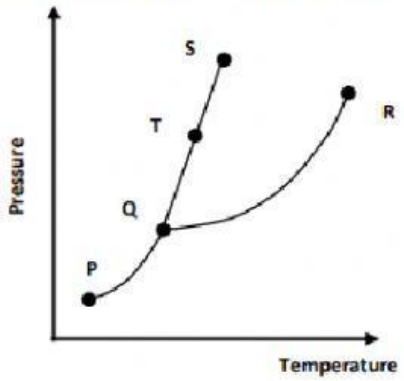
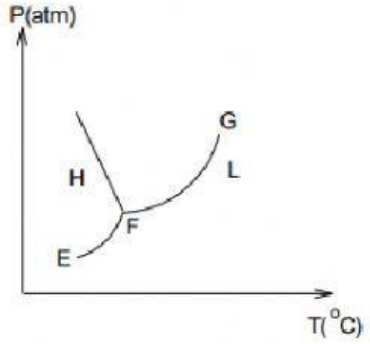
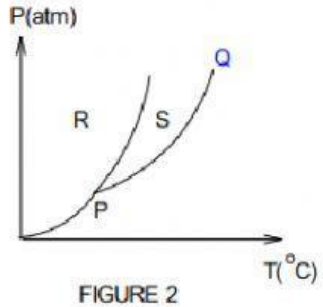
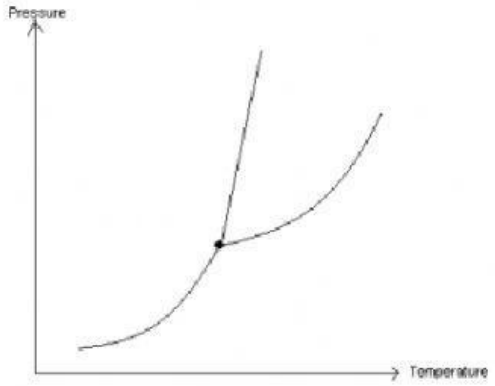
CHEMBUDDY CHAPTER 5
5.4 PHASE DIAGRAM



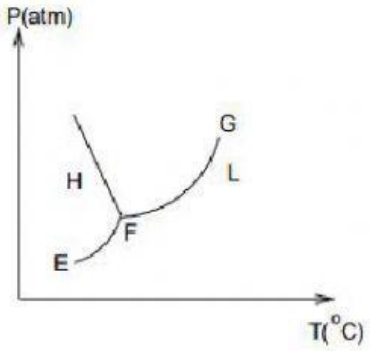
CHOOSE THE CORRECT ANSWER

NO	QUESTION	ANS
1	Why ice floats in water at 1atm pressure? **(C1 & C2)** A. volume expands when water freezes B. the fusion process is endothermic C. the intermolecular forces between water molecules increase as ice change of liquid D. vapour pressure of liquid water decrease as it freezes	A B C D
2	Based on the phase diagram of pure substance *X*, choose the correct statement. **(C1 & C2)**  A. S is the critical point of *X*. B. Solid X and gas *X* exist in equilibrium at point T. C. The density solid *X* is higher than of liquid *X*. D. The melting point and boiling point increase with the increase in pressure.	A B C D
3	Choose the INCORRECT statement based on the phase diagram of a material below. **(C1 & C2)**  I. Line F-G is known as the solid-gas equilibrium line. II. The triple point is F. III. The critical point is G. IV. The substance changes from solid to gas in going from point H to point L.	A B C D

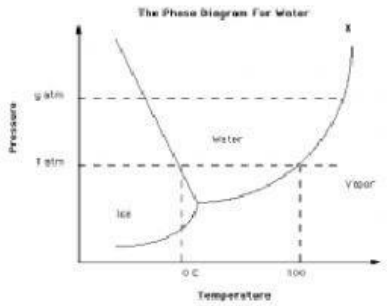
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4	Figure 2 shows phase diagram for compound Y.  FIGURE 2 Which of the following statements is CORRECT? **(C1 & C2)** I. Compound Y is H_2O II. At point P substance can exist in equilibrium in the liquid, solid, and gaseous states at the same temperature and pressure. III. Phase change from liquid to gas from point R to S IV. Point Q is critical point	A B C D
5	Choose the INCORRECT statement about the phase diagram of CO_2 in figure below. **(C1 & C2)**  I. Increase temperature will not melt certain solid compound II. Solid state is denser than liquid state III. Solid state is less dense than liquid state IV. At a constant pressure below the triple point X, a solid will sublime as the temperature is increased	A B C D
6	Where on the phase diagram can you locate conditions under which only one phase exist? **(C1 & C2)** A. At an intersection of two lines. B. At the normal boiling point. C. At an intersection of three lines. D. In an area bounded by lines.	A B C D

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7	 The phase diagram summarises the conditions under which equilibrium exist between states of matter. Choose the correct phase changes when the substance is heated at aconstant pressure from point H to L. **(C1 & C2)** A. Gas → liquid → solid B. Liquid → solid → gas C. Solid → liquid → gas D. No phase change occurs.	A B C D
8	On a phase diagram an isotherm indicates which of the following? **(C1 & C2)** A. A region where the composition of the system is constant B. A region where the pressure is constant C. An area below which only the solid phase exists D. A region where the temperature is constant	A B C D
9	Which of the following statements is NOT true in relation to the triple point on a single component phase diagram? **(C1 & C2)** A. The point at which the solid, liquid and gaseous phases for a substance co-exist B. The triple point exists for a substance occurs at a specific temperature and pressure C. The triple point exists at a single temperature and is independ D. The system must be enclosed so that no vapour can escape	A B C D

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10	 In the phase diagram of a one-component system above, which of the following statements is correct? **(C1 & C2)** A. The melting point of the solid increases with increase of pressure. B. The solid can be in equilibrium with the vapour only at a temperature on or below the triple point. C. The solid if heated at 1 atm will sublime. D. The three lines meet at the critical point.	A B C D

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