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National Institute of Open Schooling Senior Secondary Course : Chemistry Chapter- 11 (Chemical Equilibrium) Worksheet-11



- **1.** The aqueous solution of sugar does not conduct electricity. However, when sodium chloride is added to water, it conducts electricity. How will you explain this statement on the basis of ionization and how it is affected by concentration of sodium chloride?
- **2.** A sparingly soluble salt gets precipitated only when the product of concentration of its ions in the solution (Q_{sp}) becomes greater than it's solubility product. If the solubility of BaSO₄ in water is 8×10^{-4} mol dm⁻³. Calculate it's solubility in 0.01 mol dm⁻³ of H₂SO₄.
- **3.** How can you predict the following stages of a reaction by comparing the value of Kc and Q? (i) Net reaction proceeds in the forward direction.
 - (ii) Net reaction proceeds in the backward direction.
 - (iii) No net reaction accurse.
- **4.** Give reason:
 - (i) Equilibrium can be established only in closed system.
 - (ii) Chemical equilibrium is dynamic in nature.
- 5. Why pH of our blood remains almost constant at 7.4 though we quite often eat spicy food ?
- 6. When two reactants A and B are mixed to give product 'c' and 'p' the reaction quotient 'Q' at the initial stages of the reaction will be?
- 7. Some sugar is added into a saturated solution of sugar in a beaker. What process or processes if any, do you expect to happen with the passage of time? What is this state called?
- 8. Why is there a fizz when a soda water bottle is opened?
- **9.** Can equilibrium be achieved between water and its vapours in an open vessel? Explain your answer and say what happens eventually.
- 10. Would you expect equilibrium constant for the reaction

$I_2(g) \rightleftharpoons 2I(g)$

to increase or decrease as temperature increases. Assign reason.