

CHEMISTRY-11	Chapter#08(Complete) Test-4A		
	Name:	Class:	ID:
Date: / /	Marks Total: 40	Marks Obtained:	
Time Allowed: 75 Min.			

Maximum Marks: 08

(OBJECTIVE TYPE)

Time Allowed: 10 Min.

NOTE: Tick The Correct Option:

- When 50% reactants in a reversible reaction are converted into product, the value of equilibrium constant K_c is:
 (a) 2 (b) 1 (c) 3 (d) 4
- When K_c value is small, the equilibrium position is:
 (a) Towards left (b) Towards right
 (c) Remains unchanged (d) None of these
- _____ million tons of ammonia is produced by Haber's process.
 (a) 110 (b) 120 (c) 115 (d) 200
- In the presence of common ion, the ionization of an electrolyte will:
 (a) Increase (b) Decrease (c) No effect (d) Moderate change
- pH of a buffer can be calculated by using:
 (a) Moseley's equation (b) Henderson's equation
 (c) De-Broglie's equation (d) Bohr's equation
- The units of K_c for the reaction: $N_2 + 3H_2 \rightleftharpoons 2NH_3$
 (a) $Moles^2 dm^{-6}$ (b) $Moles^{-2} dm^{-6}$ (c) $Moles^{-2} dm^6$ (d) $Moles^2 dm^6$
- If we add HCl to the system $BiCl_3 + H_2O \rightleftharpoons BiOCl + 2HCl$, at equilibrium:
 (a) The solution will become cloudy. (b) The solution will become clear.
 (c) There will be no effect on the system. (d) All
- On increasing temperature from $0^\circ C$ to $100^\circ C$ the value of K_w increases by:
 (a) 2 times (b) 10 times (c) 75 times (d) 100 times

Maximum Marks: 32

(SUBJECTIVE TYPE)

Time Allowed: 65 Min.

SECTION-I

Q.2: Give brief answers to the following questions: (20)

- What is equilibrium constant?
- What is the effect of rise in temperature on the solubility of KI?
- What are the optimum or best industrial conditions for the synthesis of NH_3 in Haber's process?
- What is the effect of change in pressure on $2SO_2 + O_2 \rightleftharpoons 2SO_3$?
- Differentiate between K_a and K_b .
- Prove that $pK_a + pK_b = 14$ at $25^\circ C$.
- How does common ion effect help in identifying the II group basic radicals?
- How does a buffer act? Explain with an example.
- Define buffer capacity.
- How can solubility product be determined from solubility? Give an example.

SECTION-II

NOTE: Attempt All Questions:

(12)

- Define law of mass action & derive equilibrium constant for a general chemical reaction.
- Define pH and pOH. How are they related with pK_w ?
- Define buffers. How can you calculate the pH of a buffer solution?