

CHEMISTRY-11	Chapter#08(Complete) Test-3B		
	Name:	Class:	ID:
Date: / /	Marks Total: 30	Marks Obtained:	
Time Allowed: 60 Min.			

Maximum Marks: 06

(OBJECTIVE TYPE)

Time Allowed: 10 Min.

NOTE: Tick The Correct Option:

- Which statement about the following equilibrium is correct?

$$2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{SO}_3(\text{g}) \quad \Delta H = -188.3 \text{ kJmol}^{-1}$$
 - The value of K_p falls with rise in temperature.
 - The value of K_p falls with increasing pressure.
 - Adding V_2O_5 catalyst increases the equilibrium yield of SO_3 .
 - The value of K_p is equal to K_c .
- The law of mass action was given by:
 - D.C. Down and P. Waage
 - C.M. Gulberg and P. Waage
 - Gay-Lussic and C.M. Gulberg
 - Henderson and Le-Chatelier
- Ionic product of water (K_w) increases _____ when temperature increases from 0°C to 100°C :
 - 22 times
 - 75 times
 - 55 times
 - 65 times
- Sum of $\text{p}K_a$ and $\text{p}K_b$ is equal to:
 - 14
 - 7
 - 0
 - 1
- When HCl is added to aqueous solution of H_2S , its ionization:
 - Increases
 - Remains constant
 - Decreases
 - First increases then decreases
- If K_{sp} is greater than ionic product of salt, the result is:
 - Un-saturation
 - Saturation
 - Precipitation
 - None

Maximum Marks: 24

(SUBJECTIVE TYPE)

Time Allowed: 50 Min.

SECTION-I

Q.2: Give brief answers to the following questions: (16)

- What is meant by chemical equilibrium?
- Differentiate between K_c and K_p ? OR What is the relation between K_c and K_p ?
- Why does ice melt, when it is pressed or pressure is increased on it?
- What is ionic product of water? How does K_w vary with the change in temperature?
- Define acid and base according to Lowry Bronsted concept.
- How can NaCl be purified through common ion effect?
- Differentiate between acidic and basic buffers.
- Calculate solubility product expression for Ag_2CrO_4 .

SECTION-II

NOTE: Attempt All Questions: (08)

- Q.3:** Etherification reaction between ethanol and acetic acid was carried out by mixing definite amounts of ethanol and acetic acid along with some mineral acid as a catalyst. Samples were drawn out of the reaction mixture to check the progress of the etherification found to be $[\text{CH}_3\text{COOH}] = 0.025 \text{ mol dm}^{-3}$, $[\text{C}_2\text{H}_5\text{OH}] = 0.032 \text{ mol dm}^{-3}$, $[\text{CH}_3\text{COOC}_2\text{H}_5] = 0.05 \text{ mol dm}^{-3}$, and $[\text{H}_2\text{O}] = 0.04 \text{ mol dm}^{-3}$. Find out the direction of the reaction if K_c for the reaction at 25°C is 4.
- Q.4:** The solubility of PbF_2 at 25°C is 0.64 gdm^{-3} . Calculate K_{sp} of PbF_2 .