

<b>CHEMISTRY-11</b>	<b>Chapter#08 (Complete-Smart Syllabus) Test-1A</b>		
	Name:	Class:	ID:
Date: / /	<b>Marks Total: 25</b>	<b>Marks Obtained:</b>	
Time Allowed: 40 Min.			

Maximum Marks: 09

**(OBJECTIVE TYPE)**

Time Allowed: 10 Min.

**NOTE:** Tick The Correct Option:

- For which system does the equilibrium constant,  $K_c$ , has units of  $(\text{conc.})^{-1}$ ?
  - $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$
  - $\text{H}_2 + \text{I}_2 \rightleftharpoons 2\text{HI}$
  - $2\text{NO}_2 \rightleftharpoons \text{N}_2\text{O}_4$
  - $2\text{HF} \rightleftharpoons \text{H}_2 + \text{F}_2$
- An excess of aqueous silver nitrate is added to aqueous barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate?
  - $\text{Ag}^+$  and  $\text{NO}_3^{-1}$  only
  - $\text{Ag}^+$  and  $\text{Ba}^{2+}$  and  $\text{NO}_3^{-1}$
  - $\text{Ba}^{2+}$  and  $\text{NO}_3^{-1}$  only
  - $\text{Ba}^{2+}$  and  $\text{NO}_3^{-1}$  and  $\text{Cl}^{-1}$
- For the reaction  $2\text{SO}_2 + \text{O}_2 \rightleftharpoons 2\text{SO}_3$ :
  - $K_c = K_p$
  - $K_c < K_p$
  - $K_c > K_p$
  - None
- The term pH was introduced by:
  - Henderson
  - Sorenson
  - Goldstein
  - Thomson
- When HCl is added to aqueous solution of  $\text{H}_2\text{S}$ , its ionization:
  - Increases
  - Remains constant
  - Decreases
  - First increases then decreases
- Change in concentration will change:
  - Position of equilibrium
  - $K_c$
  - Both 'a' & 'b'
  - None
- The catalyst used in Haber's process is:
  - Fe
  - $\text{Al}_2\text{O}_3$
  - MgO
  - All
- The pH of milk is:
  - 6.5
  - 7.8
  - 6.5 to 6.9
  - 8.5
- Common ion effect is the application of:
  - Law of mass action
  - Le-Chatelier's Principle
  - Buffer
  - All

Maximum Marks: 16

**(SUBJECTIVE TYPE)**

Time Allowed: 30 Min.

**SECTION-I**

Q.2: Give brief answers to the following questions:

(12)

- Differentiate between reversible and irreversible reactions.
- How does  $K_c$  predict about the direction of the chemical reaction?
- What is the effect of catalyst on a system at equilibrium?
- Define common ion effect?
- Why do we need buffers?
- Define buffer capacity.

**SECTION-II**

**NOTE:** Attempt All Questions:

(04)

Q.3: Define law of mass action & derive equilibrium constant for a general chemical reaction.