

THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

CHEMISTRY X

CHAPTER 5 MODULE 2

ANSWER KEY

CW15 XEM

1.a. Ammonia and Hydrogen chloride

b. Ammonia changes red litmus to blue

Hydrogen chloride changes blue litmus to red

c. $\text{NH}_4\text{Cl} \rightarrow \text{NH}_3 + \text{HCl}$

d. The evolving ammonia and hydrogen chloride recombine together form ammonium chloride



e. Forward reaction $\text{NH}_4\text{Cl} \rightarrow \text{NH}_3 + \text{HCl}$

Backward reaction $\text{NH}_3 + \text{HCl} \rightarrow \text{NH}_4\text{Cl}$

2. a. Irreversible reaction -graph(i)

Reversible reaction -graph(iii)

b. A- State of equilibrium

C- Forward reaction

D-Backward reaction

3. Chemical equilibrium is **dynamic** at the molecular level.
Chemical equilibrium is attained in **closed** systems.

4. Total no. of moles of reactants—2moles

Total no. of moles of products---2moles

