

Internal Assessment

B.Sc. (P) Life Science Sem-III Sec-A

Paper Name: Chemical Energetics & Equilibria

M.M. : 10

Date : 26-04-2023 . Duration - 1h .

By : Dr Pallavi Aggarwal

Answer the following questions. Do any two
Each carry equal 5 marks.

Q1. What do you understand by buffer and buffer capacity?
Give one example of acidic and basic buffer?

Q2. The solubility of CaF_2 in water at 20°C is 15.6 mg per dm^3 of solution. Calculate the solubility product of CaF_2 (M.M. of $\text{CaF}_2 = 78\text{ g mol}^{-1}$).

Q3. Derive Henderson - Hasselbalch equation for weak acids in its salt.

Q4. Derive expressions for hydrolysis constant (K_h), degree of hydrolysis (α) and pH of salt of strong acid and weak base.