

Set-A

Class Test-02

Department of CSE, L-1, T-I, Fall 2025

Course Title: Chemistry

Time: 30 min

Course Code: CHEM 111

Total Marks: 15

1. Calculate the pH and pOH of the given Solution: 06
  1. 0.5 M  $\text{H}_2\text{SO}_4$  solution
  2. 0.1 M  $\text{NH}_4\text{OH}$ , where  $k_b = 1.8 \times 10^{-5}$
  
2. A buffer solution is made from 0.3 M benzoic acid ( $\text{C}_6\text{H}_5\text{COOH}$ ,  $k_a = 6.3 \times 10^{-5}$ ) 09  
and 0.25 M sodium benzoate ( $\text{C}_6\text{H}_5\text{COONa}$ ). Calculate the pH of this buffer.