





- a) A solution that contains a weak acid and its conjugate base      b) A solution that contains a weak base and its conjugate acid  
 c) A solution that contains a strong acid and its conjugate base      d) A solution that contains a strong base and its conjugate acid

**Group-B**

(Short Answer Type Questions)

5 x 7=35

2. Describe in details about the assay of copper sulphate according to iodometry. (5)  
 3. Discuss in brief about construction and reference of metal indicator electrode. (5)  
 4. Explain the neutralization curve of strong acid vs. strong base. (5)  
 5. Describe about the different sources of impurities in Pharmaceutical substances. (5)  
 6. Describe "Mohr's method" with schemactic representation and working reactions. (5)  
 7. Write the between Mohr's method and Volhard's method. (5)

**OR**

Write the difference between iodometry and iodimetry. (5)

8. Write the construction and working of rotating platinum electrode (5)

**OR**

Write the methods to determine end point of potentiometric titration (5)

**Group-C**

(Long Answer Type Questions)

10 x 2=20

9. Illustrate the "Ilkovic Equation" in a brief manner along with derivation of the terms "Residual current", "Migration current" and "Diffusion current". (10)  
 10. Summarize the process conductometric titration, and explain its applications (10)  
**OR**  
 Summarize the working of Standard hydrogen, silver chloride electrode and calomel electrode. (10)

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Library  
 Pharmaceutical Technology  
 Brainware University  
 Barasat, Kolkata-700125