B.Sc II Yr (IV Semester) Chemistry Practical Examination

Paper IV- Quantitative analysis – II

Question Bank

Question Paper Pattern:

A. **Question for Principle Writing**
B. **Main Experiment Question**

A. Questions for the Principle Writing:

Any one among the following may be given:

1. Write the principle of conductometric titration of a strong acid vs strong base.
2. Give the principle of conductometric titration of a weak acid vs strong base.
3. Write the principle of potentiometric titration of a strong acid vs strong base.
4. Give the principle of potentiometric titration of a weak acid vs strong base.
5. Write the principle for the estimation of Ni^{+2} by back titration method.
6. Give the principle for the estimation of Ba(II) as $BaSO_4$.

B. Questions for the Main Experiment

1. Determine the concentration of given HCl solution **by a conductometric titration** with the provided standard 0.5 M NaOH solution.
2. Determine the concentration of given NaOH solution **by a conductometric titration** with the provided standard 0.1 M HCl solution.
3. Determine the concentration of given CH_3COOH solution **by a conductometric titration** with the provided standard 0.5 M NaOH solution.
4. Determine the concentration of given NaOH solution **by a conductometric titration** with the provided standard 0.1 M CH_3COOH solution.
5. Determine the concentration of given HCl solution **by Potentiometrically** using standard 0.1 M NaOH solution provided.
6. Determine the concentration of given NaOH solution **by Potentiometrically** using standard 0.1 M HCl solution provided.
7. Determine the concentration of given CH_3COOH solution **by Potentiometrically** using standard 0.1 M NaOH solution provided.
8. Determine the concentration of given NaOH solution **by Potentiometrically** using standard 0.1 M CH_3COOH solution provided.
9. Estimate the amount of Ni^{+2} present in the given solution by **back titration method**. You are provided with standard 0.01M $MgSO_4$ solution and approximately 0.01M EDTA solution.
10. Estimate the amount of **Barium (II)** present in the given solution as **Barium Sulphate.**

20/4/18

Scheme of Evaluation for questions 1-8

A. Principle Writing:	**05 Marks**
B. **Experiment**:	**15 Marks** (Performing experiment and Tabulation - 06 marks, Graph - 05 marks, Calculation - 03 marks and Result – 01 mark)
C. Record & Viva:	**05 Marks**
TOTAL:	**25 Marks**

Scheme of Evaluation for questions 9,10

A. Principle Writing:	**05 Marks**
B. **Experiment**:	**15 Marks** (Weighing & Standardization - 04 marks, Estimation – 05 marks, Calculation - 05 marks and Result - 01 mark)
C. Record & Viva:	**05 Marks**
TOTAL:	**25 Marks**