

**HIGHER SECONDARY PRACTICAL EVALUATIONS - MARCH 2017****Subject: Chemistry****Maximum Score: 40****Time: 3 Hours**

1. Estimate the mass of ..... in the whole of the given solution. You are provided with a standard solution of ..... containing ..... g/L. (Score: 13)
2. Briefly write the procedure for the above estimation within first five minutes. (Score: 2)
3. Analyse the given salt systematically and identify and confirm the anion and cation present in it. (Score: 13)
4. Analyse the given organic compound and identify and confirm the functional group present in it. (Score: 6)
5. Viva voce (Informal simple Questions to know awareness on practical) (Score: 2)
6. Practical Record (Score: 4)

**DETAILED SPLIT UP OF SCORES**

- 1. Quantitative Analysis** : 3 + 5 + 5 = 13
- a. Tabulation and recording of data : 3
- b. Calculation : 1 + 1 + 1 + 2 = 5  
[Normality of standard solution (1), Normality of solution to be estimated (1), Correct equivalent masses (1), Correct calculation of the result with unit (2)]
- c. Correct recording of results : 5  
[Error within 1% - 5, Error up to 1% - 4, Error up to 2% - 3, Error above 2% - 2]
- 2. Procedure for quantitative analysis** :  $\frac{1}{2} \times 4 = 2$   
[Solution in pipette, Solution in burette, Indicator used, Colour change at end point -  $\frac{1}{2} \times 4 = 2$ ]
- 3. Qualitative Analysis** : 5 + 6 + 2 = 13
- a. Anion : 2 + 3 = 5  
[Identification test (One) - 2, Confirmatory test (One) - 3]
- b. Cation : 1 + 2 + 3 = 6  
[Identification of group (One) - 1, Identification of cation (One) - 2, Confirmatory test (One) - 3]
- c. Systematic analysis and recording of simple salt : 1 + 1 = 2  
[Anion - 1, Cation - 1]
- 4. Functional group analysis of organic compound** : 3 + 3 = 6  
[Identification of functional group (One test) - 3, Confirmatory test (One) - 3]
- 5. Viva Voce** : 2  
[Ascertaining the awareness of concepts related to the practical through simple questions - 2]
- 6. Practical Record** : 4  
[Basic laboratory techniques -  $\frac{1}{2}$ , Physical chemistry experiments (two) -  $\frac{1}{2}$ , Reactions of anions and cations -  $\frac{1}{2}$ , Salt analysis (8 salts) -  $\frac{1}{2}$ , Reactions of Organic compounds -  $\frac{1}{2}$ , Identification of Functional group of organic compounds (5 functional groups) -  $\frac{1}{2}$ , Volumetric Analysis (Acidimetry, Alkalimetry & Permanganometry - 2each) - 1]