

[2]

3. a) Enumerate the differences between spectrophotometric and flame photometric analysis. 3
- b) Describe a titrimetric method of analysis of vanadium. 2

Ex/CHEM/H/32/XIV/34/2019

FINAL B. SC. EXAMINATION, 2019

(1st Semester)

CHEMISTRY (HONOURS)

ANALYTICAL CHEMISTRY

PAPER - XIV

Time : Two hours

Full Marks : 25

1. a) Write down the Ilkovic equation. Mention the units of the various parameters involved in it. 1+2
- b) Mention the demerits of DME as used in polarography. What do you mean by polarographic maxima ? Name a maxima suppressor. 1+1+1
- c) Mention the principle of coulometric analysis. 2
- d) Define $E_{1/2}$ in polarography. 2
2. a) What is formal potential ? How does it predict the oxidation of iodide by Cu(II) ions ? 1+2
- b) What function Na_2O_2 plays in the estimation of a binary mixture of Fe(III) and Cr(III) ions ? 2
- c) What is the distribution constant in the case of ion-exchange chromatography ? Explain its significance. 1+1
- d) Mention the basis for the selection of redox indicators. In cerimetry, addition of H_3PO_4 or fluoride is not required for the estimation of ferrous ions using ferroin indicator. Explain. 2+1

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