Veer Narmad South Gujarat University, Surat
B.Sc.
Chemistry Practical
C.B.C.S. (Semester-III)

60 Marks (External) **Uni. Exam. 2 days**
30 Marks (Internal)

Gravimetric Estimation of

(1) Fe^{+2} as Fe_2O_3 (Given Solution of **Fe- NH_4–SO_4 + Conc. H_2SO_4**)

(2) Ba^{+2} as $BaSO_4$ (Given Solution of **$BaCl_2$**)

(3) Ni^{+2} as Ni $(DMG)_2$ (Given Solution of **$NiCl_2$ + Conc. HCl**)

VOLUMETRIC EXERCISE

(1) To determine the amount of Nickel by EDTA.
(2) To determine the amount of Copper by EDTA.
(3) To determine the amount of Zinc by EDTA. .
(4) Determination of total hardness of water by EDTA.

ORGANIC SPOTTING

ACID - Salicylic acid, Cinnamic acid, Phenyl acetic acid, Sulphanilic acid,

BASE - o-Nitroaniline, m-Nitroaniline, p-Nitroaniline, p-Chloroaniline, Dimethylaniline, Diethylaniline, Diphenylamine, p- toludine.

PHENOL - Alpha napthol, Beta napthol, o-Nitro phenol
NEUTRAL- ALDEHYDE - Glucose, Benzaldehyde
KETONE - Methyl Ethyl ketone, Acetophenone
ESTER - Ethylacetate, Butylacetate
ALCOHOL - Ethanol, Butanol
HYDROCARBON - Anthracene, Panhthalene, Diphenyl
NITRO HYDROCARBON - m-Dinitro benzene, Nitro benzene
HALOGENATED HYDROCARBON - Chlorobenzene, Bromobenzene, p-Dichlorobenzene
AMIDE - Benzamide, Thiourea
ANILIDE - Acetanilide
QUINONE - Anthraquinone

N.B. Candidate should perform the analysis of <u>at least</u> <u>10</u> substances.

PHYSICAL PRACTICALS :

1. **pH metry** :
   To determine the normality of weak acid pH metrically using strong base.

2. **Conductometric Titration**
   To determine the normality of the given HCl solution by the coductometric titration with the given 0·1 N NaOH solution.

3. **Viscosity :**
   To determine the viscosity of the given liquids and the % of unknown mixture 'C'.

4. **Adsorption :**
   To study the adsorption of given organic acid (acetic acid/oxalic acid) on animal charcoal.

5. **Chemical Kinetics - Ester hydrolysis :**

   To study the monomolecular reaction in the hydrolysis of methyl acetate in 0.5 N HCl at different initial concentrations.

6. **Saponification :**
   To investigate the reaction in saponification of Ethyl acetate by NaOH.

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