**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 (Any two)**

(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 (Any three)**

(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>8</u> substances.**

**PHYSICAL PRACTICALS : (Any three)**

**1 Adsorption :**

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

2 **Chemical Kinetics - Ester hydrolysis :**

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

3 **Saponification :**

To investigate the reaction in saponification of Ethyl acetate by NaOH.

**4 . Conductometric Titration**

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

**5 Viscosity :**

To determine the viscosity of the given liquids and the % of unknown mixture 'C'.

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