

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
ENGINEERING CHEMISTRY – II (ORGANIC)

SEMESTER- III

TEACHING SCHEME	L=3; P/D=2; TA=0
EXAMINATION SCHEME	Theory = 3hours; Marks= 100
PRACTICAL / DRAWING	Internal evaluation marks: - 20 External evaluation marks - 30 Total Marks - 50

- i) Purification of organic compounds by crystallizations, sublimation & different types of distillation.
- ii) Detection & estimation of C H N S P & X elements combustion Duma's, Kjeldahl's & Carius method with chemical reactions.
- iii) IUPAC Nomenclature of organic compounds including Hetero-and ali-cyclic compounds.
- iv) Structural & Stereo-isomerisms, optical isomers of lactic and tartaric acid ,geometrical isomerism.
- v) General nature of substitutions, addition, elimination, rearrangement, nucleophilic & electrophilic reactions/mechanisms.
- vi) Preparations and chemical properties and uses of: chloroform, carbon tetra chloride, Iodoform, ethanol, ethylene glycol, glycerine, formaldehyde, acetaldehyde, Acetone, Lactic-, oxalic-, citric-, and succinic acids, diethyl ether, acetoacetic ester, malonic ester.
- vii) Preparation and industrial uses of organometallic compounds: Lead, zinc, lithium and magnesium organometallic compounds.
- viii) Aromatic halogenation, sulphonation, nitration, alkylation, acylation and addition reactions & their mechanisms.
- ix) Study of chloro- and bromo- benzenes, benzyle chlorides, DDT & BHC.
- x) Study of aniline, acetanilide, sulphanic acid, sulphanilamide, diphenyleamine, Dimethylaniline. Tests to distinguish different amines.
- xi) Preparations and chemical properties of phenol, catechol, Resorcinol, Quinol, And Phloroglucinol.
- xii) Study of benzaldehyde, Salicaldehyde, Cinnamaldehyde, aceto-and benzo-phenones
- xiii) Study of benzoic-salicylic-, phthalic-and cinnamic acids
- xiv) Study of naphthalene, anthracene, furan, thiophene, pyrrole, pyridine, quinoline and carbazole.

TEXT BOOKS

- (1) P.L.Soni, A Text Book of Organic Chemistry.
- (2) Fischel and Fischer, Advanced Organic Chemistry.
- (3) Robert and Cassero, Advanced organic chemistry.
- (4) L.Finar, Organic chemistry, VOI. I & II, FLBS & hongmans, Lireer.