

- (b) Define the following : 10
- (i) Optical activity and Racemic mixture.
 - (ii) Carbanion and Free radicals.
 - (iii) Rearrangement and Condensation reactions
 - (iv) Specific rotation and Cis isomer
 - (v) Homolytic and Heterolytic Fission
- 2** Attempt any three : 15
- (i) Explain crystallization method to purify solid organic substance.
 - (ii) Explain Kjeldahl's method for estimation of nitrogen.
 - (iii) Write the IUPAC names of the following :
 - (a) Ethylene glycol
 - (b) Formaldehyde
 - (c) Butyl ether
 - (d) Diethyl ether
 - (e) Formic acid
 - (iv) Explain Sodium Fusion Test for the detection of N.S and halogen in an organic compound.
- 3** Attempt any three : 15
- (i) Explain Geometrical isomerism in detail with suitable examples.
 - (ii) Explain Substitution and Addition reactions.
 - (iii) Write preparation, properties and uses of Chloroform.
 - (iv) Write preparation, properties and uses of Ethanol.
- 4** (a) Short answer questions : 10
- (i) Define Plane Polarized light
 - (ii) Define Polynuclear Hydrocarbons with examples.
 - (iii) Discuss Huckel rule.
 - (iv) Write structure of Catechol and Furan.
 - (v) Give example of Primary, Secondary and Tertiary Alcohols.
- (b) Write tests to distinguish different amines. 5
- (c) Explain Sulphonation in detail. 5

- 5** Write Preparation, Properties and uses of (attempt any three) **15**
- (i) Acetanilide
 - (ii) Resorcinol
 - (iii) Phthalic acid
 - (iv) Benzaldehyde
 - (v) Furan
- 6** Answer the following :
- (i) Discuss Organometallic compound. Write the formation of Organo Zinc and Organo Magnesium compound and discuss in detail some important chemical reaction of it. **9**
 - (ii) Explain different reaction to identify the presence of Acids, Pheno, Base in organic compound with different reactions. **6**
- OR**
- (ii) Write Preparation and Properties of Benzyl Chloride and Cinnamic acid. **6**
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