

22363

23124

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Assume suitable data, if necessary.
 - (4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE :

10

- (a) State any two characteristics of Aromatic compounds.
- (b) Draw a chemical structure of (i) Benzene diazonium chloride (ii) Aniline
- (c) Draw the chemical structure of (i) H. acid (ii) J. acid
- (d) List four general characteristics of dyes used for textiles.
- (e) Define the terms "Chromophore" and "Auxochrome".
- (f) Define the term "Colour Index" number of the dyes.
- (g) Enlist the names of dyes suitable for cellulose.

2. Attempt any THREE :

12

- (a) Describe the method for preparation of Benzene from coal tar.
- (b) Suggest the methods for preparation of Nitrobenzene by direct nitration of benzene.
- (c) Explain the chemical properties of benzene diazonium chloride.
- (d) Compare Napthalene and Anthracene by their properties.



- 3. Attempt any THREE :** **12**
- (a) Apply Wurtz-Fittig reaction for preparation of Toluene.
 - (b) Explain the method of preparation of phenol by benzene diazonium process.
 - (c) Suggest the method of preparation of Aniline from Nitrobenzene.
 - (d) Explain the chemical properties of Naphthionic acid and Gamma acid with their structures.
- 4. Attempt any THREE :** **12**
- (a) Differentiate between Aromatic compounds and Aliphatic compounds for four points.
 - (b) Identify the chemical properties of phenols (any four).
 - (c) Suggest Industrial applications of Nitrobenzene and Phenols.
 - (d) Starting with benzene as raw material, describe the method of preparation of Benzene diazonium chloride.
 - (e) Compare pigments with dyes used for Textile colouration (any four points).
- 5. Attempt any TWO :** **12**
- (a) Select functional groups for Aromatic compounds with their structure and nomenclature.
 - (b) Explain the classification of dyes based on chemical structure as well as method of application.
 - (c) Summarise various fastness properties used for evaluation of dyed textile along with their significance.
- 6. Attempt any TWO :** **12**
- (a) Identify polynuclear hydrocarbons based on nomenclature, properties and resonating structure.
 - (b) Classify pigments based on their chemical structure and state any two advantages & limitations each.
 - (c) Define the term 'Substantivity' and explain the relation between chemical structure of dye and substantivity.
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