

17343

11920

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following:** **20**
- Differentiate between dye and colour.
 - Explain the importance of intermediates in dyestuff industry.
 - Define the terms: Chromophore and Auxochrome. State its types.
 - Explain the need for preparation of synthetic dyes.
 - State and explain the factors governing absorption of light.
 - Describe the destructive distillation of a coal tar.
 - Name the biproducts obtained during the process of dyestuff manufacturing.

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- 2. Attempt any TWO of the following:** **16**
- a) Explain the relation between chemical structure and fastness properties of dye.
 - b) With examples explain bathochromic and hypsochromic effects.
 - c) Define and classify pigments. Identify the properties require for an ideal pigment.
- 3. Attempt any TWO of the following:** **16**
- a) Explain the additive and subtractive colour mixing theory with suitable examples
 - b) Give the classification of dyes based on method of application and chemical structure.
 - c) Give preparations of following intermediates.
 - (i) H-acid and
 - (ii) Sulphanilic acid.
- 4. Attempt any TWO of the following:** **16**
- a) Define 'colour index'? Give its significance.
 - b) Write preparation method indicating reactions involved for
 - (i) Peri acid and
 - (ii) Metanilic acid
 - c) What are HE and ME brand reactive dyes? With the help of chemical reactions explain preparation of ME brand reactive dyes.

- 5. Attempt any TWO of the following:** **16**
- a) Describe Witt's Chromophore-Auxochrome theory.
 - b) Define the term "dye". Explain the nomenclature of dyes.
 - c) With the help of reactions describe the preparation method of anthraquinone dyes.
- 6. Attempt any TWO of the following:** **16**
- a) Describe the preparation methods for nitro dyes with reactions.
 - b) What are cold and hot brand reactive dyes? With the reactions explain the method for preparation of cold brand reactive dyes.
 - c) (i) Explain the mechanism of dyeing.
(ii) Distinguish between dyes and pigments.
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