

# 17343

**21819**

**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) Assume suitable data, if necessary.
- (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following: **20****
- a) Differentiate between dye and colour.
- b) Explain the term visible light with wavelength range.
- c) Write the preparation method for gamma acid where it is used.
- d) Write the advantages and disadvantages of Reactive dyes.
- e) State the classification of vat dyes and explain their method of applications.
- f) What are pigments? How are they applied on textiles.
- g) Explain the nomenclature of dyes.

P.T.O.

- 2. Attempt any TWO of the following:** **16**
- a) Explain the mechanism of dyeing considering the following points:
    - (i) adsorption
    - (ii) diffusion
    - (iii) dye exhaustion
    - (iv) dye fixation.
  - b) Explain the relation between chemical structure and fastness properties of dyes
  - c) (i) Distinguish between dyes and pigments.  
(ii) Explain the classification of pigments.
- 3. Attempt any TWO of the following:** **16**
- a) Describe the destructive distillation of coal tar and use of by products obtained during this process in dyestuff manufacturing.
  - b) Explain Witts “Chromophore - auxochrome” theory.
  - c) What is colour Index number? Write its significance.
- 4. Attempt any TWO of the following:** **16**
- a) Explain the terms auxochromes and chromophores with their types.
  - b) Define the term “dye” and explain the classification of dyes based on their method of application with suitable examples.
  - c) What are DPM and TPM dyes? Write their preparations.

**5. Attempt any TWO of the following:****16**

- a) i) Explain the importance of intermediates in dyestuff industry.
- ii) Explain the factors governing the absorption of light.
- b) Define the terms: Hue, value and chroma. Explain their significance during colour mixing.
- c) Describe the methods for identification of dyes with suitable examples. Write the importance of identification of dyes.

**6. Attempt any TWO of the following:****16**

- a) Write the preparation methods for:
    - i) H-acid and
    - ii) J-acid
  - b) Write the reaction involved in preparation of naphthoionic acid and sulphanilic acid.
  - c) i) Distinguish between cold brand and hot brand reactive dyes.
  - ii) Write preparation method for hot brand reactive dyes.
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