

17467

16172

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**
- Explain the terms percentage shade and percentage expression for fabric dyeing process.
 - Write down the advantages and limitations of direct dyes.
 - Give the classification of Reactive dyes alongwith chemical groups involved in it.
 - Write down the chemical properties and classification of vat dyes.
 - Give the dyeing procedure of solubilised vat dyes alongwith the precautions.
 - Explain the terms - Naphtholation, Diazotisation.
 - Differentiate between Acid dyes and Basic dyes.

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- 2. Attempt any TWO of the following:** **16**
- a) Explain in detail the mechanism of dyeing with the terms Adsorption, Absorption and Fixation involved in it.
 - b) Explain the dyeing methods of Reactive dyes on cotton fabric with it's advantages and limitations.
 - c) Give the mechanism of dyeing and dyeing process of Basic dyes on silk fabric.
- 3. Attempt any FOUR of the following:** **16**
- a) What are the objectives of sequestering agents and exhausting agents in dyeing process? Explain with one example each.
 - b) Explain the dyeing process of cellulose with direct dyes.
 - c) Write down the advantages and limitations of Reactive dyeing on cellulose.
 - d) Explain the principle and working of package dyeing machine.
 - e) Write down the importance of after treatments in sulphur dyeing. Explain any two after treatments used in sulphur dyeing.
 - f) Write down the dyeing mechanism of metal complex dyes on protein fibres alongwith their properties.
- 4. Attempt any FOUR of the following:** **16**
- a) Write down the chemical properties and classification of direct dyes.
 - b) Explain the principle and method of Cold-Pad-Batch dyeing technique with reactive dyes on cotton.
 - c) Write down any two problems arising in vat dyeing and give their remedies.
 - d) Explain the dyeing process of Acid dyes on wool fibre.
 - e) Enlist different sources of Natural dyes and their application methods for textile fabrics.
 - f) With neat labelled diagram explain the working of winch dyeing machine.

- 5. Attempt any TWO of the following:** **16**
- a) Explain in detail the dyeing process of vat dyes on cellulosics by exhaust method with steps involved in it.
 - b) What are sulphur dyes? Describe the process of sulphur dyeing on cellulosics with precautions in each step.
 - c) Describe the stepwise process of dyeing of cotton with azoic colours and after treatments used for them.
- 6. Attempt any FOUR of the following:** **16**
- a) Give the properties and classification of sulphur dyes.
 - b) Write down the dyeing process of basic dyes on cellulosics.
 - c) Write down the advantages and limitations of Natural dyes on textiles.
 - d) With neat labelled diagram explain the working of Jigger dyeing machine.
 - e) Give the difference between Batch dyeing machines and Continuous dyeing machines.
 - f) Differentiate between Vat Dyes and solubilised Vat dyes.
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