

17467

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) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) 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) Describe the terms:
 - (i) Affinity
 - (ii) Substantivity
 - b) Give four properties of direct dyes.
 - c) Draw a neat labelled diagram of a jigger dyeing machine and write its working principle.
 - d) Describe the procedure for vatting of vat dyes.
 - e) List two faults in sulfur dyeing and give their remedies.
 - f) Azoic dyes are called as ice colours. Justify the statement.
 - g) Give classification of Acid dyes.

P.T.O.

- 2. Attempt any FOUR of the following:** **16**
- a) Explain the process of exhaustion in dyeing with suitable example.
 - b) Explain the role of retarding agent in dyeing of textiles.
 - c) Give classification of direct dyes.
 - d) Direct dyes show poor washing fastness explains its reason.
 - e) Describe the procedure for dyeing of cotton with cold brand reactive dyes.
 - f) Give the dyeing ramp and conditions for ME class of reactive dyes on cotton.
- 3. Attempt any FOUR of the following:** **16**
- a) Describe the term:
 - (i) % Shade
 - (ii) % expression and give example for each.
 - b) State the role of:
 - (i) Leveling agent
 - (ii) Alkali in reactive dyeing
 - c) Describe the procedure for cold pad batch reactive dyeing on cotton.
 - d) Describe the procedure for dyeing of cotton with IK class of vat dyes.
 - e) Give brief classification of vat dyes. On the basis of their application conditions.
 - f) List the names of oxidizing agents used in chemical oxidation of vat dyes. Give oxidation conditions for any one oxidizing agent.

- 4. Attempt any FOUR of the following:** **16**
- a) Give chemical properties of solubolised vat dyes. What are solubolised vat dyes?
 - b) State advantages and limitations of solubolised vat dyes.
 - c) Explain the steps involved in sulphur dyeing of cotton.
 - d) Give the brief classification of sulphur dyes.
 - e) Explain sulphur black tendering also given its remedy.
 - f) What is the purpose of continuous dyeing machine? Give its advantages and limitations (any four each) w.r.t jigger m/c.
- 5. Attempt any FOUR of the following:** **16**
- a) Explain the steps involved in Azoic dyeing process.
 - b) List four naphthols and four bases used in azoic dyeing.
 - c) Describe the mechanism of protein fibre dyeing by using basic dyes.
 - d) Explain dyeing procedure of silk by using basic dyes.
 - e) Discuss the chemical properties of metal complex dyes.
 - f) Give the features properties of acid dyes on wool fibres.
- 6. Attempt any FOUR of the following:** **16**
- a) Draw a neat labeled diagram of package dyeing machine. Give two advantages of package dyeing.
 - b) With a neat labeled diagram write the working principle of winch dyeing machine.
 - c) Explain the process of cotton dyeing with basic dyes.
 - d) Give classification of natural dyes.
 - e) Give the procedures of dyeing of natural dyes on cotton fabrics.
 - f) What is mordanting? List mordants used in dyeing with natural dyes.
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