

17467

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) Assume suitable data, it 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) With two examples each, Define the terms “Percentage shade” and “Material to liquor ratio”.
 - b) What are direct dyes? Give its classification and comment on the fastness properties.
 - c) Draw the structures of the reactive groups present in different class of reactive dyes.
 - d) Write down the general properties of vat dyes.
 - e) Write the procedure for different methods of naphtholation.
 - f) Write a note on the classification of acid dyes.
 - g) Draw a neat labelled diagram of a package dyeing machine and write it’s working principle.

P.T.O.

- 2. Attempt any TWO of the following:** **16**
- a) Explain in detail, the mechanism of dyeing. Also explain the terms 'Exhaustion' and 'Perception expression' with suitable example each.
 - b) Write the general dyeing procedure of direct dyes on cotton. Also enlist and explain the various after treatment given.
 - c) What are solubalised vat dyes? Write the dyeing procedure with a neat dyeing ramp? Also write two advantages and two limitations.
- 3. Attempt any TWO of the following:** **16**
- a) Write down the general dyeing procedure of high exhaust and vinyl sulphone reactive dyes, with a neat dyeing ramp.
 - b) Write down the procedure of application of azoic colours in industry. Comment on the fastness properties. Also enlist the various faults.
 - c) Write down the application procedure of basic dyes on cotton and silk.
- 4. Attempt any TWO of the following:** **16**
- a) Give the classification of vat dyes? Explain the distinct application steps and comment on the fastness properties.
 - b) What are metal complex dyes? Co-relate these dyes with acid dyes. Give classification of metal complex dyes and write its general dyeing procedure.
 - c) Write a detailed note on natural dyes and also comment on the future scope of natural dyes.

- 5. Attempt any TWO of the following:** **16**
- a) Write a detailed note on the various dyeing auxiliaries used during dyeing of textiles and explain their functions.
 - b) Enlist and explain the different techniques of dyeing cotton using reactive dyes.
 - c) Draw a neat labelled diagram of a jigger dyeing machine. Write the procedure of dyeing sulphur dyes on jigger dyeing machine and comment on the fastness properties.
- 6. Attempt any TWO of the following:** **16**
- a) Enlist and explain the different methods of application of vat dyes on cotton fabric.
 - b) Give the classification of sulphur dyes. Enlist and explain the various faults observed in sulphur dyeings. Provide the remedies for the same.
 - c) With a neat labelled diagram, explain the construction and working of a continuous dyeing range? Also write two advantages and two limitations.
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