

# 22674

**21222**

**3 Hours / 70 Marks**

Seat No.

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15 minutes extra for each hour

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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: **10****
- a) List the name of chemicals used in the stripping of vat dyes.
  - b) Name the indicators used in titrometric quantitative estimation of
    - i) Sulphuric acid
    - ii) Sodium bicarbonate
  - c) Recite the principle involved in the evaluation of active content of binders.
  - d) Memorize the norms for determining the desizing efficiency by iodine drop test.
  - e) Restate the principle involved in determining the weight loss of a 100% desized cotton fabric.

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- f) State the different standard grey scales used in determining the colour fasteners of coloured fabric.
- g) Define LOI and give the LOI of cotton and wool.

**2. Attempt any THREE of the following: 12**

- a) Elaborate the process to determine the migration characteristic of a dye.
- b) Describe the test method to determine the free formaldehyde present in resins.
- c) Describe the procedure to determine the carboxyl group content in a wool fabric.
- d) Describe the Shirley Crease recovery angle test method for determining the efficiency of crease resistant finish.

**3. Attempt any THREE of the following: 12**

- a) State the procedure to find out the purity of sodium hydro sulphite by litigation method.
- b) Elaborate the procedure to find the axial ratio of mercerised fabric. Also write the norms for the same.
- c) Set up the procedure to determine the colour fastness to perspiration as per Indian standard.
- d) Describe the method and norms for evaluating the finish efficiency of fabric by bending length method.

**4. Attempt any THREE of the following: 12**

- a) Describe the stripping method for
  - i) Acid dyes from wool fabric
  - ii) Reactive dyes from cotton fabric.
- b) Suggest the principle and procedure to determine the solid content of a given cationic softener.
- c) Describe the procedure to determine the whiteness index of bleached cotton and also mention their norms for white, pastel dyed and black dyed fabric.

- d) Describe the procedure to determine the rubbing fastness of dyed fabric using IS method.
- e) Elaborate the AATCC test methods for determining the DP rating of a resinfinished 100% cotton fabric.

**5. Attempt any TWO of the following: 12**

- a) Illustrate with suitable example the importance of testing dyes for
  - i) critical temperature test
  - ii) levelling test
- b) Demonstrate with procedure the test method adopted for evaluating the
  - i) wetting agents
  - ii) Dye fixing agents
- c) Set up a detailed procedure for determining the Barium activity number of a mercerised fabric and also state its norms.

**6. Attempt any TWO of the following: 12**

- a) Relate the various norms set for the bleached fabric by copper number test method. Also elaborate the procedure of the same.
  - b) Elaborate the test methods developed by ISO to evaluate the colour fastness to washing.
  - c) Suggest the method and norms to evaluate the efficiency of flame retardant finish for
    - i) Sofa cushions fabric
    - ii) Curtain fabrics
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