

22575

23242

3 Hours / 70 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) Use of Non-programmable Electronic Pocket Calculator is permissible.
  - (6) 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) State the advantages of carrier dyeing. (any four)
- (b) State effect of heat setting on polyester.
- (c) List the types of carriers with their one example.
- (d) List various blend substrate taken for dyeing.
- (e) State fastness properties of basic dye on nylon.
- (f) List the various retarders used in acrylic dyeing.
- (g) List the levelling agents used in colouration of nylon substrate.

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

**12**

- (a) Compare between one-bath and two bath process for blend dyeing.
- (b) Explain the defitherm method of acrylic dyeing.
- (c) Describe effect of scouring on polyester, nylon and acrylic.
- (d) Discuss any two defects observed in polyester dyeing with their remedies.



- 3. Attempt any THREE of the following : 12**
- (a) Describe advantages and limitations of thermosol dyeing.
  - (b) With flow chart, describe dyeing of acrylic with cationic dye by using retarders.
  - (c) Describe with flow chart various colour effect on fibre blend.
  - (d) Explain effect of mercerisation on polyester/cotton blend with their precautions.
- 4. Attempt any THREE of the following : 12**
- (a) Compare between HTHP beam dyeing machine and Jet dyeing machine.
  - (b) Explain various parameters affecting the dyeing quality of acrylic with cationic dye.
  - (c) Describe dyeing of polyester/nylon blended fabric with disperse/metal complex dyes by one bath dyeing technic.
  - (d) Propose remedies for faults occurred in polyester/cotton blend dyeing.
  - (e) Write any two defects occurred in nylon dyeing and suggest remedies for these defects.
- 5. Attempt any TWO of the following : 12**
- (a) With neat sketch, describe continuous dyeing method for polyester/cotton blend with disperse/reactive dye combination.
  - (b) Explain general procedure, advantages and limitations of high temperature high pressure dyeing method carried out for polyester.
  - (c) With neat sketch, describe the construction and working of soft flow dyeing machine.
- 6. Attempt any TWO of the following : 12**
- (a) Explain procedure, advantages and limitations of carrier dyeing method carried out for polyester.
  - (b) With flow chart analyse the dyeing of polyester/Acrylic blend with two bath method for different parameters.
  - (c) Explain classification, dyeing mechanism and compute the effect of different class of acid dyes on different properties of dyed nylon fabric.
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