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21222

3 Hours / 70 Marks

Seat No.

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15 minutes extra for each hour

- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Figures to the right indicate full marks.
  - (4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE :**

**10**

- (a) Define the term 'Bio-scouring'.
- (b) Draw the process flow chart for Terry towel wet processing.
- (c) State the precautions to be taken for knit fabric processing.
- (d) Write the principle of reversing process for tubular knit fabrics.
- (e) State the advantages of Reactive dyes.
- (f) List the names of machines suitable for delicate type of fabric processing.
- (g) Draw neat sketch of 2-dip-2-nip padding mangle machine.

**2. Attempt any THREE :**

**12**

- (a) Describe the enzymatic desizing process used for Grey cotton fabric.
- (b) Suggest the finishing treatments for value addition of Terry towel fabrics.
- (c) Compare knit fabrics with woven fabrics for four points.
- (d) Explain the process sequence for tubular knit fabric processing.

- 3. Attempt any THREE :** **12**
- (a) Suggest the procedure for Bleaching of Textiles using enzymes.
  - (b) State the properties of enzymes and explain their importance in Textile Processing.
  - (c) Describe the essential properties required for Terry towel fabrics.
  - (d) Suggest new natural eco-friendly dyes with their properties.
- 4. Attempt any THREE :** **12**
- (a) Explain the mechanism of enzyme action while scouring of Textiles.
  - (b) Discuss the mechanism and chemical action in bio-polishing of Textiles.
  - (c) Suggest eco-friendly and economical pretreatments for cotton knit fabrics.
  - (d) Explain the dyeing procedure for dyeing of cellulosics with bi-functional reactive dyes.
  - (e) Elaborate the concept of E-control for fabric dyeing.
- 5. Attempt any TWO :** **12**
- (a) Explain the concept of “Bio-technology” in textile processing with its advantages and limitations.
  - (b) Suggest the suitable dye and machine for dyeing of cotton terry towel fabric with standard dyeing procedure and precautions.
  - (c) With neat sketch describe the construction and working of Air flow dyeing machine with its advantages & limitations.
- 6. Attempt any TWO :** **12**
- (a) With neat sketch describe the principle and working of compacting machine used for knit fabric finishing.
  - (b) Comment on vat dyes for fastness properties, advantages and limitations for textile coloration.
  - (c) Explain the concept of digital printing for textiles. Discuss the inks requirements and their properties.
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