

22673

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) 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 :

10

- (a) Define the term 'Enzyme' with suitable example.
- (b) List the factors affecting the performance efficiency of enzymes.
- (c) Identify the limitations of enzyme desizing.
- (d) Name the enzymes used in the scouring of cotton fabrics.
- (e) State the process sequence involved in the processing of tubular knitted fabrics.
- (f) List the machines used for dyeing of terry towel fabrics.
- (g) Draw a neat labelled diagram of a 2 dip-2 nip padding mangle.



- 2. Attempt any THREE :** **12**
- (a) Describe the mechanism of enzymatic action during the desizing of 100% cotton poplin fabric.
 - (b) Demonstrate with a neat diagram, the wet processing sequence and the machineries used for processing of terry towel fabrics.
 - (c) Explain the working principle of machine used for the mercerization of a circular rib knitted fabric.
 - (d) Illustrate with a neat labelled diagram the working principle of an air flow dyeing machine.
- 3. Attempt any THREE :** **12**
- (a) Compute the process parameters involved in the enzymatic sourcing of cotton fabrics by batch process.
 - (b) Explain the working procedure for compacting of knitted fabric with the help of a neat labelled diagram.
 - (c) Justify the need of non-sulphide reducing agents in the dyeing of Sulphur dyes.
 - (d) Demonstrate the significance of auto-dosing system in a continuous dyeing system.
- 4. Attempt any THREE :** **12**
- (a) Suggest and explain the different types of enzymes used in the different pretreatments of 100% cotton fabric.
 - (b) Demonstrate the dyeing procedure of 100% cotton terry towel fabric using HE brand reactive dyes by batch process.
 - (c) Analyse the precautions to be taken for printing of open width knitted fabrics.
 - (d) Elaborate on the different types of pigments available for textile colouration.
 - (e) Illustrate with a neat labelled diagrams the importance of ultra-low liquor dyeing machines in the present day.

5. Attempt any TWO :**12**

- (a) Analyze and justify the use of bio-technology in the wet processing of textiles from ecology point of view.
- (b) Justify the significance of different fabric particulars on the performance of terry towel fabrics as types of fibres, count, pile structure and weight.
- (c) Demonstrate the precautions to be taken during the processing of a circular knitted 100% cotton fabrics.

6. Attempt any TWO :**12**

- (a) Analyse the relevance of E-control dyeing system from ecology point of view.
 - (b) Outline the developments in reactive dyes used for the coloration of 100% cotton & blended (P/C) fabrics.
 - (c) Illustrate the importance of digital printing of 100% cotton over conventional rotary screen printing from environment view point.
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