

22360

22223

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 of the following:** **10**
- State the objectives of sizing.
 - Describe the term 'Grey Inspection'
 - Write classification of Desizing Methods.
 - List the hydrophobic impurities present in grey cotton fabric.
 - State objectives of 'scouring' process.
 - List the factors affecting sodium hypochlorite bleaching.
 - Name the machines used for mercerisation

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- 2. Attempt any THREE of the following: 12**
- a) List all the sizing ingredients and state their functions.
 - b) Give the process flow sequence for pre-treatments of polyester / cotton blended fabric.
 - c) Describe enzymes desizing process and state its advantages.
 - d) List the types of chemical reactions taking place while scouring of cotton. Also explain significance of each reaction.
- 3. Attempt any THREE of the following: 12**
- a) Describe the classification of Adhesives used in sizing of cotton yarns.
 - b) Explain continuous desizing method of cotton with neat sketch.
 - c) Elaborate solvent scouring process with a neat labelled diagram.
 - d) Explain the mechanism and process of sodium chlorite bleaching of polyester fabric.
- 4. Attempt any THREE of the following: 12**
- a) Explain role of stabilisers in Hydrogen peroxide bleaching of cotton fabric.
 - b) Describe the process for bleaching of wool fabric using H_2O_2 .
 - c) Differentiate between mercerisation and causticization (any for points).
 - d) Explain the structural changes occurring in cotton due to mercerisation
 - e) Describe yarn mercerisation process. Enlist any two advantages.

- 5. Attempt any TWO of the following:** **12**
- a) 'The fabrics rejected in four point checking are not approved for wet wet processing'. Justify this statement with explanation and proper example.
 - b) 'Degumming process decreases the weight of silk but improvement in lustre of silk.' Justify this statement.
 - c) 'Describe cupra ammonium fluidity method for evaluation of Bleaching efficiency of cotton.
- 6. Attempt any TWO of the following:** **12**
- a) Describe the enzymatic method to determine Desizing efficiency of cotton. Enlist the other methods also.
 - b) 'Bio-scouring is eco-friendly method' justify this statement with one suitable example.
 - c) Explain liquid ammonia mercerisation with neat outline sketch. Also enlist the advantages of this over caustic mercerisation.
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