

22360

23124

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 answer with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) 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 any two purpose of sizing.
- b) List out the importance of Mechanical Pretreatments of cotton fabrics.
- c) State two objectives of singeing process.
- d) Classify desizing methods for cotton fabric.
- e) State the principle involved in cotton scouring.
- f) State the changes observed in cotton due to bleaching.
- g) Enlist any four advantages of mercerisations process.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Enlist the sizing ingredients with their specific functions used for sizing 20 Ne's. cotton yarn.
 - b) With a neat sketch, describe construction and working principle of Gas-singeing machine.
 - c) Explain the factors affecting on desizing process of cotton fabric.
 - d) With a neat sketch describe - Enzymatic desizing method for grey cotton fabric.
- 3. Attempt any THREE of the following:** **12**
- a) Suggest the size paste formulation for P/C and P/V blended yarn.
 - b) Describe bio-scouring with its advantages over conventional scouring.
 - c) Outline the process of wool scouring in detail.
 - d) Suggest any one method for bleaching of silk fabric with justification.
- 4. Attempt any THREE of the following:** **12**
- a) Demonstrate the H_2O_2 bleaching process for cotton fabric with its advantages over NaOCl bleaching.
 - b) Prepare formulation for sodium chlorite bleaching of polyester with its mechanism.
 - c) Explain the changes occurring in cotton fibre after mercerization process.
 - d) Suggest the process parameters for the mercerization of cotton by using liquid ammonia with proper justification.
 - e) Suggest the factors affecting the mercerization process with justification.

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

- a) Elaborate the four point system for the inspection of grey fabric with the suitable example. Also comment on the difficult fabric flaws and the acceptability criteria.
- b) Justify the statement – “Enzymatic desizing is safer than acid desizing”.
- c) Justify with reactions, the saponification and emulsification processes occurring during scouring of cotton.

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

- a) Suggest and elaborate a relevant method to evaluate efficiency of the scoured fabric.
 - b) Select relevant method of bleaching polyester/cotton blended fabric with proper justification.
 - c) Demonstrate with neat sketch, the process of mercerization of tubular knitted cotton fabric.
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