

312337

12526

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
- a) Give the process flow sequence for pretreatments of polyester fabric.
  - b) Explain objective of cropping process.
  - c) Explain the objective of desizing process.
  - d) Explain the objective of scouring process.
  - e) List the factors affecting bleaching process.
  - f) Draw suitable sketch for cross section mercerized and unmercerized cotton fibre.
  - g) List the factors affecting mercerization of cotton.

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- 2. Attempt any THREE of the following : 12**
- a) List the size paste ingredients and state their role in sizing.
  - b) Describe the process for degumming of silk fiber by any one method.
  - c) Explain the objectives of breaching process.
  - d) Describe the yarn mercerization process with neat sketch.
- 3. Attempt any THREE of the following : 12**
- a) Describe Acid steeping desizing process.
  - b) Describe the scouring process of cotton using vertical kier with suitable sketch.
  - c) Explain the advantages and dis-advantages of sodium hypochlorite bleaching process.
  - d) Explain the causticization process.
- 4. Attempt any THREE of the following : 12**
- a) Explain hotplate singeing method with suitable diagram
  - b) Suggest the size paste formulation for 100 Ne polyester spun yarn.
  - c) Give the classification of scouring process. State advantages of each process.
  - d) Give the classification of bleaching agents.
  - e) Explain the concept of hot mercerization process.

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

- a) Calculate defects point per 100 sq. meter by four point inspection system for fabric roll of 600 meters of 1.5 meters width from following data,
- 20 defects upto 3 inches,
  - 20 defects between 3 to 6 inches,
  - 04 defects between 6 to 9 inches,
  - 05 defects above 9 inches
  - 03 holes less than 3 inches size.
- b) Describe the continuous enzyme desizing process by using winch machine with suitable diagram.
- c) Describe Mechanism of scouring process with respect to
- i) Saponification
  - ii) Detergency

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

- a) Describe the evaluation of efficiency of desizing by weight loss method.
- b) Explain the advantages and disadvantages of hydrogen peroxide bleaching.
- c) Illustrate the construction and working of pad-chainless mercerization process with suitable sketch.
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