

312335

12425

03 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) Define fabric.
  - b) Draw the chemical structure of cellulose.
  - c) List the different methods of retting for bast fibre extraction.
  - d) List any two applications of banana fiber.
  - e) List the two examples of leaf fiber. Comment on its commercial application
  - f) List any four varieties of wool fiber.
  - g) Name the different proteins found in silk fiber and give its significance.

P.T.O.

**2. Attempt any THREE of the following : 12**

- a) Explain impact of degree of polymerization on fiber properties with one suitable example.
- b) Explain the morphological structure of cotton fiber with suitable labelled diagram.
- c) Elaborate any two physical and chemical properties of jute fiber.
- d) Explain cultivation of sisal fiber. Comment on its commercial value.

**3. Attempt any THREE of the following : 12**

- a) Explain essential properties of textile fiber.
- b) Elaborate the cotton fiber cultivation process.
- c) Describe the chemical composition of banana fiber.
- d) Suggest any four industrial application of bast fibers.

**4. Attempt any THREE of the following : 12**

- a) Explain concept of moisture regain and content with expression.
- b) List any four amino acids available in wool fiber and draw its structure.
- c) Describe procedure for measurement of wool fiber length by Grease plate method.
- d) Elaborate any one cleaning method of wool fibers.
- e) Explain degumming and reeling process of silk fiber.

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

- a) Classify the textile fiber on the basis of origin with one example each.
- b) Suggest any three applications of cotton fabrics (with justification) for various purposes.
- c) Elaborate the chemical composition of Jute and Flax fibres  
Also enlist the extraction process of each fibre in brief.

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

- a) Explain crystalline, mesomorphous and amorphous regions in fiber with neat labelled diagram and state its importance.
  - b) Describe chemical method for detection of oxycellulose and hydrocellulose in cotton fiber.
  - c) Elaborate the cut and weight method for determining the fineness of silk fibre. Enlist the different varieties of silk available for textile application.
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