

22368

23242

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Attempt 6 questions including Question No. 1 which is compulsory.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Assume suitable data, if necessary.
  - (6) 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 the term 'Degree of Polymerisation'.
- (b) Define the terms – 'LOY and MOY'.
- (c) State any two physical properties of Jute fibre.
- (d) Draw morphological structure of wool fibre.
- (e) State any four end uses of Tencel fibre.
- (f) List the chemical names of raw materials required for Polyester fibre.
- (g) State the advantages of texturised yarns.

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

**12**

- (a) Explain the essential properties of the Textile fibres.
- (b) Describe Melt Spinning method with neat sketch.
- (c) Select raw materials and manufacturing process for Tencel fibre.
- (d) Draw a labelled diagram of false twist texturing machine and explain its working in short.



- 3. Attempt any THREE of the following : 12**
- (a) Compare addition polymerization with condensation polymerization in four points.
  - (b) State any two Physical and two Chemical properties of silk fibre.
  - (c) List the raw material required for manufacturing of polyacrylonitrile fibre and chemical reactions involved in it.
  - (d) Draw the process flow chart for manufacturing of polyester. Also state end uses of polyester fibres.
- 4. Attempt any THREE of the following : 12**
- (a) Describe crystalline region and amorphous region in the fibre structure.
  - (b) Explain Dry Spinning process with neat sketch.
  - (c) Compare viscose rayon fibre with Tencel fibre in four points.
  - (d) Write any two physical and two chemical properties of polypropylene fibre.
  - (e) Identify the factors influencing the Texturising of yarns.
- 5. Attempt any TWO of the following : 12**
- (a) With neat sketch of morphological structure of cotton fibre explain the primary wall, secondary wall, cuticle and lumen with their functions.
  - (b) Suggest the suitable method for manufacturing of viscose rayon fibre with precautions and procedure.
  - (c) Classify the textured yarns. Also explain them briefly.
- 6. Attempt any TWO of the following : 12**
- (a) Describe physical and chemical properties of wool fibre for production of yarn and its end uses.
  - (b) With process flow chart suggest the manufacturing process for Nylon 66 fibre and write its end uses also.
  - (c) Elaborate Air texturising process with respect to machine, working procedure and process parameters.
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