

22368

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 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.

**Marks**

1. **Attempt any FIVE of the following :** **10**
  - (a) Write two properties of Bulk Yarn.
  - (b) List names of four synthetic fibres.
  - (c) Elaborate the term :
    - (i) POY
    - (ii) FOY
  - (d) Give chemical composition of Raw Cotton.
  - (e) State any two chemical properties of polyacrylonite fibre.
  - (f) State the advantages of textured yarn.
  - (g) State the function of friction disc used in texturing.
  
2. **Attempt any THREE :** **12**
  - (a) Draw morphological structure of wool.
  - (b) Give characteristics of fibre forming polymers.
  - (c) Explain Wet spinning process with sketch.
  - (d) Give flow chart for manufacturing of polyester fibre.



- 3. Attempt any THREE :** **12**
- (a) Describe melt spinning method with labelled diagram.
  - (b) Describe sericulture of silk.
  - (c) Draw the flow chart of polypropylene fibre manufacturing process.
  - (d) Explain solidification process in dry spinning method.
- 4. Attempt any THREE :** **12**
- (a) Explain essential requirements of wet spinning with reference to polymer preparations.
  - (b) Explain spinning process of polyacrylonitrile fibre with help of flow chart.
  - (c) Define the term fibre, filament, polymer and monomer.
  - (d) Explain the effect of texturing time on preparation of textured yarn.
  - (e) Compare any four points between addition and condensation polymerisation.
- 5. Attempt any TWO :** **12**
- (a) Give source and grading of wool.
  - (b) State four end uses of Tencel fibre.
  - (c) Explain the effect of (i) Twist (ii) Temp on Texturing process
- 6. Attempt any TWO :** **12**
- (a) Select the process parameters to be optimised during the manufacturing of Nylon 66 fibre.
  - (b) Give four physical and two chemical properties of viscose rayon.
  - (c) With respect to air texturing method.
    - (i) Draw a labelled diagram of the process.
    - (ii) Explain the function of parts involved in the process.
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