

22368

11819

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.

Marks

1. Attempt any FIVE :

10

- (a) State any two characteristics of fibre forming polymers.
- (b) Define “Degree of polymerisation”.
- (c) Define the term ‘POY’.
- (d) Draw morphological structure of cotton.
- (e) State four end uses of Tencel fibre.
- (f) State the raw materials used for manufacturing of polyester.
- (g) State the purpose of texturising.

2. Attempt any THREE :

12

- (a) Describe physical and chemical properties of wool fibre.
- (b) Describe essential properties of textile fibres.
- (c) Label wet spinning process with neat sketch.
- (d) Compare any four points between wool and silk fibre on the basis of their properties.

- 3. Attempt any THREE :** **12**
- (a) Describe dry spinning process with labelled diagram.
 - (b) Explain two physical and two chemical properties of Jute fibre.
 - (c) Explain two physical and two chemical properties of Tencel fibre.
 - (d) Compare any four points between addition and condensation polymerization.
- 4. Attempt any THREE :** **12**
- (a) Describe morphological structure of silk fibre with neat sketch.
 - (b) Describe the process of fibrillation in tencel fibre.
 - (c) State four end uses of viscose rayon fibre.
 - (d) Draw the process flow chart for manufacturing of nylon 66 fibre.
 - (e) Draw the process flow diagram for manufacturing of viscose rayon.
- 5. Attempt any TWO :** **12**
- (a) Select the process parameters to be optimised during the manufacturing of polyester fibre.
 - (b) With respect to friction disc texturing method –
 - (i) Draw a labelled diagram of the process.
 - (ii) Explain the function of parts involved in the process.
 - (c) Write down the significance of
 - (i) Temperature
 - (ii) Twist and
 - (iii) Time on properties of textured yarn with justification.
- 6. Attempt any TWO :** **12**
- (a) Describe melt spinning process with labelled diagram.
 - (b) With respect to manufacturing of polyacrylonitrile fibre :
 - (i) Draw Flow Chart
 - (ii) Write end uses of polyacrylonitrile fibres.
 - (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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