

22368

12425

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 of the following :

10

- (a) Define the terms : (i) Polymerisation (ii) Degree of polymerisation.
- (b) Enlist the characteristics of fibre forming polymers.
- (c) Enlist the various spinning processes.
- (d) State the end uses of “Jute” fibre.
- (e) State the end uses of “Tencel” fibre.
- (f) Draw chemical structure of polyester fibre.
- (g) State the purposes of “Texturising”.

2. Attempt any THREE of the following :

12

- (a) Explain essential properties of fibres.
- (b) Explain solidification process in dry spinning.
- (c) Explain the concept of LOY and FOY.
- (d) State and explain any two physical and two chemical properties of cotton.



- 3. Attempt any THREE of the following : 12**
- (a) With neat sketch explain various parts of melt spinning equipment.
 - (b) With neat labelled diagram explain the morphological structure of wool.
 - (c) Give detailed process sequence for viscose rayon manufacturing.
 - (d) Describe physical and chemical properties of Tencel fibre.
- 4. Attempt any THREE of the following : 12**
- (a) With chemical reaction explain the techniques of addition and condensation polymerization.
 - (b) Identify the essential requirements of wet spinning with reference to polymer properties.
 - (c) With process flow chart, explain manufacturing of polyester fibre.
 - (d) Give the advantages of textured yarn.
 - (e) Describe friction disc texturizing w.r.t. passage of yarn, construction and its working.
- 5. Attempt any TWO of the following : 12**
- (a) State the chemical constitution of Jute and Flax fibres.
 - (b) Explain manufacturing of Nylon 66 with the help of a flow chart.
 - (c) Explain the factors influencing texturizing with their significance.
- 6. Attempt any TWO of the following : 12**
- (a) Give the comparison between tencel fibre and viscose fibre.
 - (b) Illustrate with flow chart, the process of manufacturing polyacrylonitrile fibre.
 - (c) Illustrate with neat sketch “Air texturizing” w.r.t. passage of yarn, construction and working.
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