

17347

16172

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--	--

- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Figures to the right indicate full marks.
  - (4) Abbreviations used, convey usual meaning.

**Marks**

1. Answer any FIVE :

5 × 4 = 20

- (a) Draw morphological structure of jute fibre.
- (b) State uses of viscose rayon.
- (c) Compare properties of PE and PP fibres.
- (d) Describe the term 'congealing'. Explain importance of congealing properties of starch.
- (e) Give sizing recipe formulation of medium count cotton warp yarn.
- (f) Describe 'enzymetic desizing' process.
- (g) Explain continuous bleaching, using J-box systems with outline diagram.

2. Answer any TWO :

2 × 8 = 16

- (a) (i) Name raw materials – and method of polymerisation in the manufacture of nylon 6, nylon 66. (3)  
Classify them as thermoplastic or thermoset.
- (ii) Compare properties of nylon 6 and nylon 66. (5)
- (b) Name sizing ingredients. Explain their function.
- (c) (i) Explain object for singeing.
- (ii) With neat sketch explain gas singeing process.

[ 1 of 4 ]

P.T.O.

**3. Answer any TWO :****2 × 8 = 16**

- (a) (i) Give brief classification of Textile fibres.
- (ii) Explain chemical properties and physical properties of cotton fibres.
- (b) Draw the process flow sheet and describe manufacturing process of Acrylic fibres.
- (c) In relation to sizing operation, explain with examples, role of :
  - (i) antiseptic agents
  - (ii) antistatic agents

**4. Answer any TWO :****2 × 8 = 16**

- (a) Draw the process flow sheet and describe manufacture of viscose rayon.
- (b) (i) Define 'Saponification value'.
- (ii) Give brief procedure to determine 'Saponification' value.
- (c) (i) Explain the scouring process. State function of chemicals used in scouring.
- (ii) Describe bleaching process of synthetic materials.

**5. Answer any TWO :****2 × 8 = 16**

- (a) Give the process flow-chart for manufacturing polyester. Explain melt spinning of polyester with neat sketch.
- (b) (i) Explain with examples 'classification' of adhesives for sizing.
- (ii) Describe method to test, adhesives.
- (c) Describe bleaching of :
  - (i) Cotton with sodium hypo chlorite.
  - (ii) Cotton/polyester blend using hydrogen peroxide.

6. Answer any FOUR :

4 × 4 = 16

- (a) Compare physical properties of wool and silk-fibres.
  - (b) Give physical properties and uses of acetate rayon.
  - (c) Give two chemical properties and two uses of acrylic fibres.
  - (d) Define 'sizing'. State objects of sizing.
  - (e) Describe the process of wise enzyme desizing.
  - (f) Explain the object of shearing/cropping process.
-

