

22361

23124

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.

Marks

1. Attempt any FIVE of the following :

10

- (a) Define :
 - (i) Monomer
 - (ii) Degree of polymerisation
- (b) List desirable properties of fibre.
- (c) Draw L.S. and T.S. of cotton fibre.
- (d) Give chemical composition of banana fibre.
- (e) List the uses of banana fibre.
- (f) Give two physical properties of banana fibre.
- (g) Draw morphological structure of wool fibre.

2. Attempt any THREE of the following :

12

- (a) Define the term moisture regain. Also state its impact on fibre properties.
- (b) Differentiate between crystalline region and amorphous region.
- (c) Give brief classification of cotton fibre based on its staple length.
- (d) With chemical structure explain various types of linkages present in cellulose.



- 3. Attempt any THREE of the following : 12**
- (a) Explain the effect of crystalline region on physical properties of fibre.
 - (b) State the importance of moisture regain on fibre properties.
 - (c) What is hydrocellulose ? Explain with chemical structure.
 - (d) Describe two tests for detection of oxycellulose.
- 4. Attempt any THREE of the following : 12**
- (a) Suggest various applications of cotton fibre based on its properties.
 - (b) Determine moisture regain of fibre by relevant method.
 - (c) With neat sketch explain importance of mesomorphous region of fibre.
 - (d) Explain retting of Jute by chemical method.
 - (e) Suggest two uses of flax fibre based on its fibre properties.
- 5. Attempt any TWO of the following : 12**
- (a) Suggest three industrial applications of banana fibre suitable to its fibre properties.
 - (b) Illustrate the effect of hemicellulose removal in flax fibre on strength of fibre.
 - (c) Illustrate the effect of cystine links in wool to its elasticity.
- 6. Attempt any TWO of the following : 12**
- (a) Explain the method to determine fineness of wool.
 - (b) Describe sericulture of silk fibre.
 - (c) Illustrate the effect of degumming process in silk on strength loss.
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