

22361

22232

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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following :** **10**
 - (a) Define the term 'Moisture content'.
 - (b) Define the terms :
 - (i) Fibre and
 - (ii) Yarn
 - (c) Write the value of (i) Moisture content (ii) Tensile strength of cotton fibre.
 - (d) Give the chemical composition of Jute fibre.
 - (e) Write four uses of banana fibre.
 - (f) Name four amino acids present in wool.
 - (g) List the phases in life cycle of silk worm.

- 2. Attempt any THREE of the following :** **12**
 - (a) Describe classification of textile fibres on the basis of their origin.
 - (b) With neat sketch explain morphological structure of cotton.
 - (c) Describe Retting process of Jute.
 - (d) Explain extraction process of Sisal fibre.



- 3. Attempt any THREE of the following : 12**
- (a) State the essential properties of textile fibres and explain importance of them.
 - (b) Draw labelled schematic diagram of cellulose structure. Also explain importance of hydrogen bonding in cellulose polymer.
 - (c) Describe Retting process of Linen fibre.
 - (d) Give chemical composition of Banana fibre. Explain importance of lignin in chemical structure.
- 4. Attempt any THREE of the following : 12**
- (a) Explain importance of mesomorphous region in fibre structure.
 - (b) Describe cultivation of cotton fibre.
 - (c) Give two physical properties and two chemical properties of Jute fibre.
 - (d) Explain the effect of oxycellulose formation on fibre properties.
 - (e) Explain morphology of Banana fibre with neat sketch.
- 5. Attempt any TWO of the following : 12**
- (a) 'Wool fibre gives warmth'. Justify this statement with respect to its physical properties.
 - (b) 'Lustre in silk is due to trilobal cross section'. Justify this statement.
 - (c) Degumming brings original lustre of silk. Elaborate this statement by describing degumming process.
- 6. Attempt any TWO of the following : 12**
- (a) "Physical properties of fibre are the replication of arrangement of molecular chain in crystalline region". Justify this statement.
 - (b) With chemical reaction explain hydrocellulose formation, also elaborate causes of hydrocellulose formation.
 - (c) Explain the statement 'Cystine links in wool are responsible for elasticity'.
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