

17223

11920

3 Hours / 100 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.
- (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following:** **20**
- a) Define the terms:
- (i) Filament
- (ii) Degree of polymerization
- b) Classify textile fibres according to their chemical nature.
- c) Explain the various varieties of cotton.
- d) Write a note on cultivation of cotton.
- e) State end uses of polynosic and HWMF fibres.
- f) State and explain physical and chemical properties of high wet modules fibre.
- g) State the applications of Banana and Coir fibres.

P.T.O.

- 2. Attempt any TWO of the following:** **16**
- a) Explain the essential and desirable properties of fibres.
 - b) With a neat labelled diagram explain morphological structure of cotton.
 - c) With flow chart explain manufacturing process of viscose rayon.
- 3. Attempt any TWO of the following:** **16**
- a) Explain the concept of homogeneous and heterogeneous acetylation.
 - b) Explain morphological structure of silk with neat diagram. Also state chemical composition of silk.
 - c) What is degumming of silk? Explain physical and chemical properties of silk.
- 4. Attempt any TWO of the following:** **16**
- a) Explain the concept and importance of crystalline, mesomorphous and amorphous region inside the cotton fibre.
 - b) Explain the functions of various additives used in the manufacture of viscose rayon with the chemical reactions involved in it.
 - c) Describe physical and chemical properties of cellulose acetate and cellulose triacetate. Also state their uses.
- 5. Attempt any TWO of the following:** **16**
- a) State and explain essential requirements of dry and wet spinning.
 - b) Explain chemical methods for detection of oxycellulose and hydrocellulose.
 - c) Write the chemical composition of wool. Also explain physical and chemical properties of wool fibre.

6. Attempt any TWO of the following:**16**

- a) Write the chemical composition of Jute and Flax fibre. Also state the end uses of these fibres.
 - b) (i) Explain the chemical structure of cellulose and reasons for degradation.
(ii) Sources and grading of wool fibre.
 - c) Explain :
 - (i) Extraction of Banana and Coir fibres.
 - (ii) Concept of sericulture and reeling.
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