

17223

16172

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 answer 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. Answer any FIVE of the following: 20
- a) Define:
- (i) Degree of polymerisation,
 - (ii) Yarn
 - (iii) Fabric
 - (iv) Filament
- b) Write characteristics of ‘mesomorphous’ region.
- c) (i) Define oxycellulose 1
(ii) Describe a chemical method of its detection. 3
- d) Write physical properties of cotton.
- e) What are ‘polynosic fibres’?
- f) State physical properties of cellulose triacetate.
- g) Write physical properties of silk.

P.T.O.

- 2. Answer any TWO of the following: 16**
- a) Explain with examples, 'classification' of textile fibres.
 - b) With the help of a flow-sheet, describe manufacture of viscose rayon.
 - c) Describe, chemical composition of :
 - (i) Silk,
 - (ii) Wool and explain their various applications also
- 3. Answer any TWO of the following: 16**
- a) Describe essential and desirable properties of textile fibres.
 - b) (i) Outline manufacturing process of 'Lyocell fibre'. 5
 - (ii) State application of the Lyocell fibres. 3
 - c) (i) Why is 'degumming' of silk done? 2
 - (ii) Describe any one process of degumming of silk. 6
- 4. Answer any TWO of the following: 16**
- a) (i) Draw and explain the morphological structure of cotton fibre. 5
 - (ii) Name varieties of cotton fibres. Describe any one. 3
 - b) (i) Explain the term 'morphology'. 2
 - (ii) Describe morphological structure of wool. 6
 - c) (i) Explain morphological structure of jute. 5
 - (ii) Explain cultivation of flax. 3

- 5. Answer any TWO of the following:** **16**
- a) (i) Describe crystalline and amorphous region of fibres. 6
 - (ii) State their 'importance'. 2
 - b) (i) Draw and explain representative structure of 'cellulose'.
Name the type of group present and the repeating unit. 3
 - (ii) Describe chemistry of damage to cellulose. 5
 - c) (i) Describe methylene chloride process of cellulose acetate
manufacture. 6
 - (ii) On what does, the 'economy' of the process, depend? 2
- 6. Answer any FOUR of the following:** **16**
- a) Compare : Dry spinning and Wet spinning.
 - b) Describe 'cultivation' of cotton.
 - c) What are 'high wet modulus' fibres? Give two examples.
 - d) State applications of cellulose acetate.
 - e) Describe 'grading' of wool fibres.
 - f) Write physical properties and uses of banana fibre.
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