

# 17223

**21819**

**3 Hours / 100 Marks**

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.  
(2) Figures to the right indicate full marks.  
(3) Assume suitable data, if necessary.  
(4) 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) State the terms:
    - (i) Staple fibre
    - (ii) Filament fibre
  - b) Explain the cultivation of cotton.
  - c) Explain the concept of homogeneous acetylation.
  - d) What is degumming of silk? Describe only one method for degumming of silk.
  - e) State any physical and two chemical properties of flax fibres.
  - f) Describe the life cycle of silk worm.
  - g) State any two physical and two chemical properties of wool fibre.
- 2. Attempt any TWO of the following:** **16**
- a) Classify textile fibres based on nature and origin with suitable examples.
  - b) With neat sketch describe the morphological structure of cotton fibre. Describe varieties of cotton fibre.
  - c) State physical and chemical properties of cellulose acetate. Write its uses.

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- 3. Attempt any TWO of the following:** **16**
- a) Explain in detail the essential properties and desirable properties of textile fibres.
  - b) Describe the methods of detection of oxycellulose and hydrocellulose in degraded cotton.
  - c) Describe the raw material, manufacturing process for cellulose triacetate.
- 4. Attempt any TWO of the following:** **16**
- a) Describe the essential requirement of dry and wet spinning process.
  - b) With flow chart describe the manufacturing process for viscose rayon fibres.
  - c) Explain the physical and chemical properties and uses of polynosic fibres.
- 5. Attempt any TWO of the following:** **16**
- a) Explain the concept of crystalline, mesomorphous, amorphous region in textile fibre and state their importance.
  - b) State the physical and chemical properties of cotton fibres.
  - c) Write the chemical composition of wool fibre. Describe the morphological structure of wool, with neat sketch.
- 6. Attempt any TWO of the following:** **16**
- a) Explain the physical and chemical properties of viscose rayon fibre.
  - b) Describe retting process. Explain the various methods of retting for Jute fibre.
  - c) Describe the sericulture of silk. Explain the physical and chemical properties of silk fibres.
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