17223

21314

3 Hours/100 Marks

Seat No. | | | | | | | | |

Instructions *: (1)* ***All*** *questions are* ***compulsory****.*
(2) Answer ***each*** *next main question on a* ***new*** *page.*
(3) Figures to the ***right*** *indicate* ***full*** *marks.*
(4) Assume suitable data, ***if necessary****.*

MARKS

1. Answer **any five**. **(5×4=20)**
   a) i) Define :
      1) Polymer
      2) Degree of polymerisation
      ii) State essential characteristics of amorphous region in fibres.
   b) Describe method of cultivation of cotton.
   c) Explain chemical bonding in cotton fibre.
   d) Define viscose rayon. State its physical properties.
   e) Explain differences between cellulose acetate and cellulose triacetate.
   f) Describe chemical constituent of flax fibres and jute fibres.
   g) Classify bass fibres with suitable examples.

2. Answer **any two**. **(2×8=16)**
   a) Explain classification of fibres, according to their chemical nature.
   b) Draw and describe morphological structure of cotton. Enlist various varieties of cotton fibre.
   c) i) Describe chemical composition of silk.
      ii) Explain with reaction, two chemical properties of silk.

3. Answer **any two**. **(2×8=16)**
   a) Describe mesomorphous region and crystalline region in fibres. Explain their significance.
   b) Explain with the help of a flow-diagram, manufacture of high wet modulus fibre.
   c) Describe degumming of silk, by :
      i) Soap ii) Enzymes

P.T.O.

MARKS

4. Answer **any two**. **(2×8=16)**

   a) i) Explain two chemical properties of two physical properties of cotton fibre.

      ii) Describe chemistry of damage to cellulose.

   b) Explain with specific examples, role of any two types of additives used in the manufacture of viscose rayon.

   c) i) Describe morphological structure of wool.

      ii) State physical properties of wool.

5. Answer **any two**. **(2×8=16)**

   a) i) Define : **2**

      1) Dry spinning

      2) Wet spinning

      ii) Explain essential requirements of wet spinning. **6**

   b) Compare/differentiate : homogeneous and heterogeneous-acetylation of cellulose with chemical reactions involved in it.

   c) i) State physical and chemical properties of banana fibres.

      ii) Explain uses of coir fibres and banana fibres.

6. Answer **any four**. **(4×4=16)**

   a) Define :

      i) Fibre ii) Yarn

      iii) Filament iv) Fabric

   b) State essential properties of fibres.

   c) Describe a chemical method to detect hydrocellulose.

   d) What are lyocell fibres ? Explain their uses.

   e) State uses of cellulose acetate and cellulose triacetate.

   f) Describe the life cycle of silk worm.
