

17347

14115

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.

Marks

1. Attempt any FIVE of the following : 20

- a) Give brief classification of textile fibres.
- b) Describe the terms with suitable example.
 - (i) Fibre
 - (ii) Polymer
- c) With neat sketch explain the concept of Melt Spinning Process.
- d) Give two physical properties and two end uses of polypropylene fibre.
- e) Explain the role of –
 - (i) Wetting agents
 - (ii) Antifoaming agents in sizing.
- f) Give brief classification of adhesives used in sizing.
- g) Give the process flow chart for wet processing of 100% cotton and explain the same.

P.T.O.

2. Attempt any FOUR of the following : 16

- a) What is SAP value ? Explain the method for determination of SAP values of softener.
- b) Write the sizing recipe formulation of medium count cotton warp yarn and fine count cotton yarn.
- c) What is 'Retting' Jute ? Enlist the methods used for it.
- d) With neat sketch explain morphology of cotton fibre.
- e) Enlist the raw material used for Nylon 6.6 fibre with chemical structure also show chemical reaction for formation of Nylon 6.6 polymer.
- f) Draw the process flow chart for manufacturing of acrylic fibre. Also enlist the chemicals used in the manufacturing of acrylic fibre.

3. Attempt any FOUR of the following : 16

- a) With neat sketch explain the dry spinning process of Acetate Rayon.
- b) Explain the life cycle of silk worm.
- c) Describe brief manufacturing process of Nylon 6. fibre.
- d) Give two physical properties and two end uses of polyester fibre.
- e) With a neat sketch, explain the working of vertical pressure kier.
- f) Give the objects of singeing ? Explain the gas singeing method.

4. Attempt any FOUR of the following : 16

- a) State the objects of sizing and explain the role of adhesives in sizing.
- b) What is 'gelatinisation of starches?' give gelatinisation temperature of
 - (i) Maize starch
 - (ii) Tapioca starch
- c) Describe the role of antiseptic in sizing. Enlist four antiseptics.
- d) Describe the objects of –
 - (i) Shearing
 - (ii) Singeing processes
- e) Differentiate between HDPE and LDPE on the basis of their properties.
- f) Explain the process of enzyme desizing.

5. Attempt any FOUR of the following : 16

- a) Explain the grading of wool and state its importance.
- b) Give the process flow chart for viscose rayon manufacturing process.
- c) Describe the term –
 - (i) congealing of starches
 - (ii) Keeping property of starches
- d) Why hydrogen peroxide is called as universal bleaching agent ? State any four reasons.
- e) Describe the process of sodium hypochlorite bleaching for cotton.
- f) State the objects of scouring and give function of chemicals used in scouring process.

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

- a) Describe the role of –
 - (i) Antistatic agents
 - (ii) Deliquescents in sizing.
 - b) Describe the method for determination of viscosity of starches.
 - c) Explain different types of sizing processes on the basis of size add on.
 - d) Explain the advantages and limitations of continuous process of pretreatments.
 - e) Explain the method for bleaching of poly/cotton blended fabric by batchwise method.
 - f) Write any four chemical properties and four uses of acrylic fibres.
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