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3 Hours / 70 Marks

Seat No.

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- 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
(5) Use of Steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. Attempt any FIVE of the following : 10
- a) Define : Degree of polymerisation.
 - b) Enlist the name of Natural Textile fibres.
 - c) Define the terms : LOY, HOY.
 - d) Define thermoplastic fibres and give two examples.
 - e) State names of two regenerated fibres.
 - f) Write the name of raw materials used for polyester fibre manufacturing process.
 - g) Enlist the applications of polyethylene fibres.

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- 2. Attempt any THREE of the following :** **12**
- a) Classify the Textile fibres alongwith their examples on the basis of origin.
 - b) Describe the stages in life cycle of silk worm with suitable sketch.
 - c) Describe the concept of dry spinning with suitable sketch.
 - d) Write the process flow chart for manufacturing regenerated fibres.
- 3. Attempt any THREE of the following :** **12**
- a) Differentiate between crystalline region and amorphous region of the Textile fibre.
 - b) Explain four chemical properties and two uses of Jute fibre.
 - c) Differentiate between types of yarns based on fibre orientation.
 - d) Write the process flow chart for viscose rayon manufacturing process and list the names of chemical used in manufacturing process.
- 4. Attempt any THREE of the following :** **12**
- a) Describe two methods used for retting of Jute fibres.
 - b) With neat labelled sketch explain morphological structure of wool fibre.
 - c) Classify the regenerated fibres based on their source material with examples.
 - d) Explain two physical and two chemical properties of poly propylene fibre.
 - e) List the steps involved in Nylon 6 fibre manufacturing process, also state the names of chemicals used in the process.

- 5. Attempt any TWO of the following :** **12**
- a) Suggest and explain the essential and desirable properties of fibres for being used in textiles.
 - b) Explain in brief manufacturing process of polyester fibres.
 - c) Describe melt spinning fibre manufacturing process with neat labelled sketch. Also state advantages of melt spinning.
- 6. Attempt any TWO of the following :** **12**
- a) Draw the morphological structure of cotton fibre and explain with its morphology.
 - b) State the physical and chemical properties of silk fibres and suggest its applications based on physical properties.
 - c) Describe the stepwise manufacturing process of Tencel fibre and explain its advantages and limitations also.
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