23124

3 Hours / 70 Marks Seat No. | | | | | | | | |

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.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1. Attempt any FIVE of the following : **10**

(a) Write two properties of Bulk Yarn.

(b) List names of four synthetic fibres.

(c) Elaborate the term :

(i) POY

(ii) FOY

(d) Give chemical composition of Raw Cotton.

(e) State any two chemical properties of polyacrylonite fibre.

(f) State the advantages of textured yarn.

(g) State the function of friction disc used in texturising.

2. Attempt any THREE : **12**

(a) Draw morphological structure of wool.

(b) Give characteristics of fibre forming polymers.

(c) Explain Wet spinning process with sketch.

(d) Give flow chart for manufacturing of polyester fibre.

3. Attempt any THREE : **12**

(a) Describe melt spinning method with labelled diagram.

(b) Describe sericulture of silk.

(c) Draw the flow chart of polypropylene fibre manufacturing process.

(d) Explain solidification process in dry spinning method.

4. Attempt any THREE : **12**

(a) Explain essential requirements of wet spinning with reference to polymer preparations.

(b) Explain spinning process of polyacrylonitrile fibre with help of flow chart.

(c) Define the term fibre, filament, polymer and monomer.

(d) Explain the effect of texturising time on preparation of textured yarn.

(e) Compare any four points between addition and condensation polymerisation.

5. Attempt any TWO : **12**

(a) Give source and grading of wool.

(b) State four end uses of Tencel fibre.

(c) Explain the effect of (i) Twist (ii) Temp on Texturing process

6. Attempt any TWO : **12**

(a) Select the process parameters to be optimised during the manufacturing of Nylon 66 fibre.

(b) Give four physical and two chemical properties of viscose rayon.

(c) With respect to air texturising method.

(i) Draw a labelled diagram of the process.

(ii) Explain the function of parts involved in the process.