22457

12425

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

Instructions – (1) All Questions are *Compulsory.*

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

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

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

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

a) Define the terms :

i) Fibre

ii) Polymer

b) List out any two physical properties of viscose rayon fibre.

c) List the names of chemicals used for manufacturing of polyester fibres.

d) Mention the end uses of Nylon 6 fibres.

e) List the raw materials used for manufacturing Acrylic fibres.

f) List the names of Industrial Fibres.

g) Enlist any two uses of polyethylene fibres.

Marks

2. Attempt any THREE of the following : **12**

a) Explain the concept of melt spinning.

b) Describe the spinning process for manufacturing of Lyocell fibre.

c) Explain the properties and applications of polyester micro fibres.

d) Differentiate between Nylon 6 and Nylon 6, 6.

3. Attempt any THREE of the following : **12**

a) Distinguish between dry spinning and wet spinning methods.

b) Explain any two physical and any two chemical properties of Acetate Rayon.

c) Explain the concept of low pilling and flame retardent polyester fibres.

d) Explain any two physical and any two chemical properties of Acrylic fibres.

4. Attempt any THREE of the following : **12**

a) Suggest the requirements for LOY and POY yarns.

b) With suitable sketch describe the Dry spinning method.

c) Explain the physical and chemical properties of polyester.

d) Differentiate between Acrylic and Modacrylic fibres.

e) List out the physical and chemical properties of carbon fibres.

Marks

5. Attempt any TWO of the following : **12**

a) Describe with flow chart the manufacturing process for viscose rayon.

b) Suggest the polymerisation technique and spinning method for the manufacturing of Nylon 6 fibres.

c) Explain the relevance of elasticity property of Lycra fibre to its physical properties.

6. Attempt any TWO of the following : **12**

a) With chemical reactions explain the manufacturing of Nylon 6, 6 fibre.

b) Describe the manufacturing process for Acrylic fibres with flow chart.

c) Differentiate between LDPE and HDPE fibres on the basis of their raw materials and properties.