Scheme – I

Question Paper Profile

Programme Name : Diploma in Textile Manufacture
Programme Code : TX
Semester : Third
Course Title : Basics of Fibre Science
Marks : 70 **Time : 3 Hrs.**

22368

Instructions:

(1) All questions are compulsory.

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

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following. **10 Marks**

a) List names of four Natural fibres.

b) Define the term'Fully Oriented Yarn'.

c) Draw the morphological structure of jute fibres.

d) State four end uses of viscose rayon fibre.

e) State any two physical properties of acrylic fibe.

f) State the advantages of textured yarn.

g) List the types of polymerization.

Q.2) Attempt any THREE of the following. **12 Marks**

a) Differentiate between wool and silk fibre on the basis of their properties.

b) Explain essential properties of textile fibre.

c) Explain Dry spinning process with neat sketch.

d) Describe the advantages and disadvantages of man-made fibres.

Q.3) Attempt any THREE of the following. **12 Marks**

a) Describe wet spinning process with labeled diagram.

b) Explain the morphological structure of wool.

c) Draw the flow chart of nylon 66fibre manufacturing process.

d) Write two physical properties and two uses of polypropylene fibre.

Q.4) Attempt any THREE of the following. 12 Marks

a) Describe the fibrillation in tencel fibre.

b) Describe addition polymerization process with one suitable example.

c) Explain melt spinning process of Polyester fibre.

d) List the raw material required for Polyacrylonitrile fibre manufacturing also its end uses.

e) Explain the significance of i)temperature ii)twist on properties of textured yarn.

Q.5) Attempt any TWO of the following. 12 Marks

a) Define the terms:i) fibre ii)filament iii) degree of polymerization iv) monomer.

b) Explain Viscose Rayonfibre manufacturing process with the help of process flow chart.

c) With respect to friction disc textirising method

(i) Draw a labeled diagram of the process.

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

Q.6) Attempt any TWO of the following. 12 Marks

a) Explain manufacturing process of Polyester with labeled diagram

b) Explain the manufacturing processtencel fibre with labeled diagram of wet spinning.

c) With respect to air texturising method

(i) Draw a labeled diagram of the process.

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

Scheme – I

Sample Test Paper - I

Programme Name : Diploma in Textile Manufacture
Programme Code : TX
Semester : Third
Course Title : Basics of Fibre Science
Marks : 20 **Time : 1 Hour**

22368

Instructions:

(1) All questions are compulsory.

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

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) State the essential properties of fibre

b) List the natural fibres

c) Define low oriented and high oriented yarn

d) State advantages of natural fibres

e) List the fibres spun by melt spinning

f) Define the term polymerization

g) Draw Longitudinal section (LS) and Transverse section (TS) of Cotton

Q.2 Attempt any THREE. **12 Marks**

a) Classify the textile fibres according to their origin.

b) Illustrate Amorphous and Crystalline structure of wool fibre with labled diagram.

c) Describe the terms monomer, polymer and degree of polymarisation.

d) Identify cotton, wool and silk fibre from their physical properties.

e) Explain the function of Melt spinning unit with the help of a schematic diagram.

f) Explain morphological structure of Wool fibre with the help of a neat diagram.

Scheme – I

Sample Test Paper - II

Programme Name : Diploma in Textile Manufacture
Programme Code : TX
Semester : Third
Course Title : Basics of Fibre Science
Marks : 20 **Time : 1 Hour**

22368

Instructions:

(1) All questions are compulsory.

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

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) List the regenerated fibres
b) List the physical properties of regenerated fibre
c) State the physical properties of Nylon 66
d) Define the term manmade fibres
e) State the end uses of viscose and Tencel
f) Draw chemical structure of raw material required for manufacturing polyester

Q.2 Attempt any THREE. **12 Marks**

a) Draw the process flow chart for manufacturing Viscose Rayon.
b) Explain wet spinning process of Tencel fibre.
c) Draw process flow chart for manufacturing of Nylon 66.
d) Explain low temperature polymerization process of Polypropelene.
e) Describe the concept of false twist texturising. State advantages of texturising. State properties of textured yarn.
f) Describe the false twist texturising with the help of a neat labeled diagram.