17347

11920

3 Hours / 100 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.

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

Marks

1. Attempt any TEN : **20**

(a) Write the names of any four natural cellulosic fibres.

(b) Draw the C.S. & L.S. of silk fibres.

(c) What is the difference between viscose rayon and acetate rayon ?

(d) What is the difference between dacron and terylene polyester fibres ?

(e) Write any four physical properties of PAN fibres.

(f) What are Aramid fibres ? Give two examples.

(g) What are the objectives of sizing ?

(h) Draw the basic structure of starch molecule & comment on the linkage.

(i) What is the significance of viscosity of adhesives in sizing ?

(j) Write two trade names and manufacturers name of softeners used in sizing.

(k) What are the objectives of scouring ?

(l) Differentiate between batch & continuous process on two points.

(m) What is bleaching ? Give two examples of bleaching agents.

(n) What is grey inspection ? Give its objectives.

2. Attempt any FOUR : **16**

(a) Give the classification chart of fibres giving suitable example for each.

(b) With a proper flow chart write the manufacturing method of Nylon 6.

(c) Write down the physical properties of adhesives.

(d) What is singeing ? Mention its objectives.

(e) Explain exhaustively the keeping property of starch.

(f) With a neat labelled diagram, explain the principle and working of gas singeing machine.

3. Attempt any FOUR : **16**

(a) Write the physical & chemical properties of viscose fibres.

(b) What are the raw materials used for manufacturing of polyester fibres ? Write the manufacturing procedure also.

(c) Write any four physical & four chemical properties of Nylon 66 fibres.

(d) Explain the term ‘congealing of starch’ & write any four congealing properties of starch.

(e) What precautions are to be taken while preparing a size formulation for cotton and polyester fabrics ?

(f) Write the procedure of bleaching for cotton by using sodium hypochlorite. Mention the bleaching recipe also.

4. Attempt any FOUR : **16**

(a) Write down any two physical & two chemical properties of wool fibres.

(b) Compare the physical & chemical properties of cotton and jute fibres.

(c) Give the manufacturing method and uses of PAN fibres.

(d) Give the method of determining the iodine value of softeners.

(e) Write a detailed note on the bleaching of synthetic fibres.

(f) With a neat labelled diagram, explain the principle and working of kier boiling for scouring of cotton fabric.

5. Attempt any TWO : **16**

(a) Explain the method of manufacturing of acetate fibres with a neat flow chart. Also write any four physical & chemical properties and four uses also.

(b) Explain the terms 'Antiseptic' and 'Antistatic' agents w.r.t. sizing. Write any four physical and four chemical properties of antiseptics and antistatics.

(c) What are the objectives of shearing ? Enlist different types of shearing machines. With a neat labelled diagram, explain the principle and working of any one shearing machine.

P.T.O.

6. Attempt any TWO : **16**

(a) Write the general method of manufacturing PP & PE. Compare their physical and chemical properties. Enlist any two uses of both.

(b) Enlist the sizing ingredients used for sizing of textile yarns. Give the function of each ingredient.

(c) What is desizing ? Write the different methods of desizing. Explain the enzymatic method and Rot method of desizing.
