22463

24225

3 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) Assume suitable data, if necessary.

Marks

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

(a) Enlist the different fabric forming systems.

(b) Define the terms :

(i) Stitch length

(ii) Stitch density

(c) List the stitches used in weft knitting. Draw its graphical notation.

(d) Draw the graphical and symbolic notation for 1 × 1 purl structure.

(e) Draw the loop diagram for technical face and technical back for a plain single jersey fabric.

(f) Explain the function of :

(i) Pattern wheel

(ii) Chain link

(g) Define the terms :

(i) Stitch length

(ii) Tightness factor

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

(a) State the characteristics of interlock fabrics.

(b) Compare Rib knitting with Interlock knitting.

(c) (i) State one advantage and one disadvantage of compound needle.

(ii) Explain the function of following knitting elements :

(1) Feeder and

(2) Spreader

(d) Compare woven and knitted fabrics with respect to structure and properties of fabric.

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

(a) Define the terms :

(i) Open loop

(ii) Close loop

(iii) Course and

(iv) Wales

(b) Draw the lapping notations for the following warp knitted structures :

(i) Open pillar

(ii) 1 × 1 Tricot

(c) Explain the knitting cycle for a plain single jersey knitting machine with the help of neat diagram.

(d) Compare rib knitted fabrics with plain single jersey fabrics.

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

(a) Explain the terms :

(i) Rib gaiting

(ii) Interlock gaiting

(iii) Stitch cam

(iv) Clearing cam

(b) Explain the method of determining stitch length for a weft knitted fabric.

(c) Compare weft knitting and warp knitting based on :

(i) Structure

(ii) Property

(iii) Production and

(iv) Application

(d) Determine the stitch length in 'mm' for a knitted fabric with following particulars :

(i) Wales/inch = 25

(ii) Extended length of 25 wales = 7.5 cm

(e) Give classification of knitting machines.

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

(a) Calculate the production of a plain single jersey knitting machine with following particulars in (1) Yards/hour (2) Pounds/hr :

(i) RPM of machine – 25

(ii) Number of feeders – 24

(iii) Number of needles – 756

(iv) Machine efficiency – 80%

(v) Yarn count – 30^s

(vi) Courses/inch – 24

(vii) Stitch length – 0.14 inch

(b) Describe with a labelled diagram, the passage of yarn on a Tricot knitting machine.

(c) Draw a neat labelled diagram of latch needle. Give function of each part.

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

(a) Draw the lapping diagram for following chain notation :

(i) 1 – 2 / 1 – 0 //

(ii) 0 – 1 / 3 – 2 //

(b) Draw the symbolic and graphical notation for single jersey. State the characteristics of plain single jersey fabric.

(c) Explain the following knitted fabric defects and give cause of these defects :

(i) Drop stitches

(ii) Horizontal lines

(iii) Spirality