17459

21819

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)   Define :

(i)   Course

(ii)   Wales

(b)   State function of Sinker.

(c)   Define :

(i)   Stitch length

(ii)   Course length

(d) Draw loop diagram of 2×2 Rib structure.

(e) Draw graphical representation of 'La-coste'.

(f) State function of stripper.

(g) Explain importance of stitch length.

(h) Define 'Laddering'.

(i) State function of pressure on tricot machine.

(j) Differentiate between swinging and shagging motion of guide bars.

(k) List down various elements on flat knitting machine.

(l) Classify flat knitting machines into different categories.

(m) State objectives of spreading.

(n) List down various sewing machines required for stitching knitted garments.

(o) Draw loop diagram of close loop pillar stitch and give notation for the same.

2. **Attempt any FOUR :** 16

(a) Explain fabric manufacturing by different techniques.

(b) Draw diagram of Latch needle and label the parts.

(c) Draw diagram of 1×1 Rib structure. Give loop diagram and graphical representation of the same.

(d) Explain need of jacquard in knitting with an example.

(e) Draw diagram of tuck stitch. Give procedure to produce it. State its effect on quality of knitted fabric.

(f) Describe the procedures adopted to maintain quality of knitted fabrics.

3. **Attempt any FOUR :** 16

   (a) Compare properties of knits with wovens.

   (b) Draw structure of technical face side of single jersey fabric. Give loop diagram and graphical representation of the same.

   (c) Draw structure of interlock. Give loop diagram and graphical representation of the same.

   (d) Describe the concept of design, needle order and cam order with the help of a suitable example.

   (e) Describe the concept of stripper with the help of a diagram.

   (f) Calculate the production of a single jersey knitting machine in meters/shift of 8 hours from following data :

     No. of feeders – 72

     Cylinder rpm – 30 rev/min

     C.P.I. – 40

     Efficiency – 90%

4. **Attempt any FOUR :** 16

   (a) Give classification of weft knitting machines.

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

   (c) Draw structure of purl fabric. Give loop diagram and graphical representation of the same.

   (d) Draw loop diagram of double pique. Explain in brief how this structure is made.

   (e) Describe the concept of relanit technique.

   (f) Describe any two common defects of knit fabric. Give causes and remedies for the same.

5. **Attempt any FOUR :** 16

   (a) Describe characteristics and properties of single jersey fabric.

   (b) State characteristics and properties of Rib fabric.

   (c) Draw loop diagram of Ottoman Rib structure. Explain how this structure is knitted.

   (d) A circular knitting machine is working with following particulars. Calculate the production in kg/day.

       (i)   Cylinder rpm   –   30

       (ii)   No. of feeders   –   48

       (iii)   Stitch length   –   0.15"

       (iv)   No. of needles   –   756

       (v)   Count of yarn   – 30^s

       (vi)   Efficiency   –   90%

       (vii) Course/inch   –   32

   (e) Describe in brief production of sample knit garment.

   (f) Describe knitting cycle on flat knitting machine with the help of a neat diagram.

6. **Attempt any TWO :** 16

   (a) State various objectives of cutting. List down various cutting machines used in garment industry. Describe working of any one with the help of a diagram.

   (b) Describe the knitting cycle on Raschel warp knitting machine with the help of a neat diagram.

   (c) (i) Draw a labelled diagram of passage of warp on tricot machine.

       (ii) Explain production of tricot lap. Give loop diagram and chainlink notation for the same.

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