15162

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 FIVE :**   **20**

    (a) Draw and define weft knitting.

    (b) State the functions of cylinder and cams in weft knitting.

    (c) Draw the loop structure for

        (i) 2×2 purl structure

        (ii) single jersey structure

    (d) Enlist various principle stitches used in weft knitting.

    (e) State meaning of G.S.M. and give its formula.

    (f) Define overlap and underlap.

    (g) Define warp knitting.

2. **Attempt any FOUR :**   **16**

    (a) Compare woven fabric with knitted fabric.

    (b) Draw the Latch needle and lable it.

    (c) Explain the four important features of rib machine.

    (d) State meaning of ornamentation in knitted fabric and give two examples.

    (e) Calculate stitch length if course length is 6.25 meter and total no. of needles are 2500.

    (f) State any four application of warp knit fabric.

3. **Attempt any FOUR :** 16

    (a)   Define :

        (i)   Course

        (ii)   Wale

        (iii) Face loop

        (iv) Purl stitch.

    (b)   Draw the schematic figure of compound needle and lable its parts.

    (c)   State the needle arrangement for 1×1 rib fabric and draw it.

    (d)   Draw the symbolic and diagrammatic notation for half cardigan design.

    (e)   State the meaning of tightness factor and give its formula.

    (f)   Give the classification of warp knitting machine.

4. **Attempt any TWO :** 16

    (a)   Draw the beamed needle and explain knitting action of it with suitable diagram.

    (b)   (i)   Compare Tricot and Rachel machine.

        (ii)   State various principle stitches used in warp knitting and show there chain notation.

    (c)   Explain the knitting cycle for Rachel machine with suitable figure.

5. **Attempt any TWO :** 16

    (a)   Explain working of flat knitting machine with suitable knitting cycles.

    (b)   State causes and remedies for following weft knit fabric defects and explain the defect

        (i)   Fabric body

        (ii)   Spriallity

    (c)   (i)   Compare flat knitting with circular weft knitting.

        (ii)   State the procedure to find out stitch length of knitted fabric.

6. **Attempt any TWO :** **16**

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

        (i) $1 - 0 / 1 - 2$ //

        (ii) $0 - 1 / 0 - 1$ //

        (iii) $1 - 0 / 3 - 4$ //

        (iv) $1 - 0 / 2 - 3$ //

    (b)   (i)   Show the needle arrangement and trick arrangement for interlock fabric.

        (ii)   Draw the diagrammatic notation for

            (1)   Knit stitch

            (2)   Purl loop

            (3)   Miss stitch

            (4)   Tuck stitch

    (c)   (i)   Calculate the G.S.M. of knitted fabric if

            (1)   C.P.I – 30

            (2)   W.P.I. – 24

            (3)   Yarn count : 40 Ne

            (4)   Stitch length : 2.5 mm

        (ii)   Differentiate between pattern wheel and pattern drum.

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