

17464

16172

3 Hours / 100 Marks

Seat No.

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- 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) Draw diagram of face loop and reverse loop.
- (b) Define :
 - (i) Course
 - (ii) Wale
- (c) Draw diagram of sinker and state its function.
- (d) Give notation of 'La-coste'.
- (e) Draw diagram of tuck stitch. Give graphical representation and loop diagram.
State how tuck stitch is produced ?
- (f) Define Tightness factor.
- (g) What is 'stitch length' ? How you will measure stitch length in a single jersey fabric ?

- (h) Define 'over lap' and 'under lap' in warp knitting.
- (i) Explain the swinging and shogging motion of guide bars.
- (j) Define 'open and closed lap'.
- (k) What is the function of chain link ?
- (l) Draw diagrams of different chain links.
- (m) Give classification of flat knitting machines.
- (n) What is 'Laddering' ?
- (o) List down eight knitting elements on a flat knitting machine.

2. Attempt any FOUR :

16

- (a) Give detailed classification of weft knitting machines.
- (b) Compare woven and knitted fabrics.
- (c) Draw diagram of latch needle and label the parts.
- (d) Compare latch needle with bearded needle.
- (e) State the function of positive feeder. List different types of the feeders.
- (f) Draw diagram of single jersey structure. Give loop diagram also.

3. Attempt any TWO :

16

- (a) Draw structure of 1×1 Rib. Draw loop diagram of it. Explain knitting cycle on rib knitting machine.
- (b) Draw structure of Interlock. Draw loop diagram of the same. Explain cam arrangement on Interlock machine with the help of a diagram.
- (c)
 - (i) Explain properties of Rib structure.
 - (ii) Explain properties of Interlock structure.

4. Attempt any FOUR :**16**

- (a) Draw loop diagram of 'Eight lock structure'. Explain the cams arrangement of the same.
- (b) Draw loop diagram of 'Half cardigan'.
- (c) Draw loop diagram of texi pique.
- (d) Calculate the length in metres of a plain single jersey fabric knitted at 16 course per cm on a 26 inch diameter 28 gauge circular machine, having 104 feeds. The machine operates for 8 hours at 30 revolutions per minute and 95% efficiency.
- (e) A circular weft knitting machine is working with following particulars :

No. of feeders	—	20
Rpm of cylinder	—	25
Stitch length	—	0.15 inch
No. of needles	—	756
Efficiency of machine	—	84%
Count of yarn	—	18 ^s
Courses per inch	—	24

Calculate production in yards and pounds per hour.

- (f) Sample analysis of a single jersey structure shows 30 courses per inch, 24 wales per inch, length of yarn for 50 stitches is 8.75 inches and count of yarn is 15^s cotton. Find the weight per square yard of fabric.

5. Attempt any TWO :**16**

- (a) Compare warp knitting with weft knitting.
- (b) Explain knitting cycle on Tricot machine with the help of a neat diagram.
- (c) Compare tricot machine with Rachel machine.

P.T.O.

6. Attempt any TWO :**16**

- (a) Give detailed account for patterning mechanism on warp knitting machine. Draw diagram (Lapping movement) for basic overlap/underlap variations of guide bars (any four). Write chain notation for the same.
 - (b) Explain knitting cycle of flat bed knitting machine with the help of a diagram.
 - (c) Explain causes of following defects in weft knitting :
 - (i) Vertical lines.
 - (ii) Horizontal lines.
 - (iii) Drop stitches.
 - (iv) Distorted stitches.
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