



17459

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**.

Marks

1. Attempt **any five** :

20

- a) Define knitting and draw loop structure of weft knitted fabric.
- b) Enlist various zones in weft knitting m/c and state the objects of each zone.
- c) List different types of knitted fabrics and write any two important features of each fabric.
- d) Define and draw tuck stitch and knit-stitch.
- e) State the advantages of relanit technique.
- f) Calculate the total no. of needles if m/c gauge is 24 € and cylinder diameter 30" .
- g) State the various applications of warp knitted fabric.

2. Attempt **any four** :

16

- a) Discuss any 4 reasons for growth of knitting industry.
- b) Draw the schematic diagram of latch needle and label it.
- c) Draw the line diagram notation for 1 × 1 Rib fabric.
- d) Draw the needle order and cam order for following single jersey fabric design.

Course	{	4	X	X	·	X
		3	X	X	X	X
		2	X	·	X	X
		1	X	X	X	X
			1	2	3	4
		Holes				

- e) Draw the loop diagram of three thread fleecy fabric.
- f) Enlist the various defects in weft knitted fabric and suggest the remedial measures for the same.

P.T.O.



3. Attempt any four:

16

- a) Define following terms in knitting :
 - a) Course
 - b) Holes
 - c) Stitch length
 - d) Course length
- b) Write the functions of following in knitting :
 - i) Needle
 - ii) Cylinder
 - iii) Feeder
 - iv) Sinker
- c) Draw the needle arrangement and trick arrangement figure for interlock fabric.
- d) State various methods to represent the knitted fabric on paper with examples.
- e) Explain the “contra technique” with suitable diagram.
- f) Define angle of spirality and state method to calculate it.

4. Attempt any four:

16

- a) “Knitted fabrics have incomplete elastic recovery” justify the statement with suitable reasons.
- b) State the importance of diameter of cylinder and m/c gauge.
- c) Draw the symbolic notion for
 - i) 1×1 single jersey fabric
 - ii) 2×2 purl fabric
- d) Draw the design for following structure
 - i) La-coste
 - ii) Cross tuck
- e) State the importance of stripper mechanism.
- f) Calculate the G.S.M. and tightness factor of knitted fabric, if
 - i) CPI : 30
 - ii) WPI : 24
 - iii) Stitch length (inch) : 0.15 inch
 - iv) Yarn count : 40 Ne

5. Attempt any four:

16

- a) Compare warp knitting and weft knitting.
- b) State the function latch wise and needle bar on warp knitting m/c.
- c) Classify the flat knitting machine and explain briefly.
- d) Enlist the various knitting elements of flat knitting m/c.
- e) State the functions of cutting department.
- f) Enlist various precautions to be taken while cutting the knitted fabric.

6. Attempt any four:

16

- a) Write the characteristic features of single jersey fabric.
- b) Calculate the production of S/J m/c in meters/day, if knitting m/c running with
 - 1) Total No. of feeders : 108
 - 2) C.P.I. : 22
 - 3) Cylinder R.P.M. : 30
 - 4) m/c efficiency : 90%
- c) Draw the lapping movement for following chain notation :
 - i) $(1 - 0/1 - 0//)$
 - ii) $0 - 1/0 - 1//$.
- d) Explain the concept of single bar fabrics.
- e) Write the importance of guide bars in warp knitting machine.
- f) Write the various precautions to be taken while spreading for knit garment production.