

Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII EXAMINATION – WINTER 2025

Subject Code: 3172911

Date:24-11-2025

Subject Name: Knitting Technology

Time: 10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define the following terms: 1) Loop, 2) Wale, 3) Stitch length.	03
	(b) Discuss the important properties and application of knitted fabric.	04
	(c) Draw a labelled diagram for the latch needle and explain the sequence involved in loop formation for latch needle with necessary figures.	07
Q.2	(a) Write the function of stitch cam.	03
	(b) With a suitable sketch show different parts of sinker. Write the function of individual parts.	04
	(c) Draw graphical representation for rib and purl structure. Write the characteristics of rib and purl structure.	07
	OR	
	(c) Draw diagram to show the needle height for tuck and float stitch formation. Discuss the fabric characteristics obtained by insertion of tuck and float stitches.	07
Q.3	(a) How does the setting of stitch cam influence fabric properties?	03
	(b) Define the given term: open loop, close loop, needle loop and sinker loop.	04
	(c) With the suitable sketch explain the construction of the compound needle. Also discuss the knitting cycle for the compound needle.	07
	OR	
Q.3	(a) Discuss about the construction of the needle cylinder.	03
	(b) Discuss the yarn quality required for the weft knitting.	04
	(c) Draw a figure showing different knitting elements present in a Raschel warp knitting machine.	07
Q.4	(a) Define the following term: Technical face and technical back stitch.	03
	(b) Discuss the advantages and disadvantages of the spring beard needle and compound needle.	04
	© Give the comparison between tricot and raschel warp knitting machine.	07
	OR	
Q.4	(a) List out the various defects in to the knitted fabric.	03

- (b) With the suitable sketch explain the guide bar movement in the warp knitting machine. **04**
- (c) Discuss in detail about the formation of gloves and net fabric. **07**
- Q.5** (a) What is relative technology for the circular weft knitting? **03**
- (b) Draw the structure of the Atlas stitch. Also, mention characteristics of Atlas stitch. **04**
- (c) Discuss the basic elements and its function for the flat bed knitting machine. **07**

OR

- Q.5** (a) Draw the yarn lapping notation to represent guide bar movement for the any one single guide bar structure. **03**
- (b) Draw the yarn lapping notation to represent guide bar movement for the Queenscord and Satin structure. **04**
- (c) Discuss about the yarn preparation for the warp knitting machine and the properties required for the yarn in warp knitting machine **07**
