

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION – SUMMER 2025

Subject Code:3172911

Date:19-05-2025

Subject Name:Knitting Technology

Time:02:30 PM TO 05:00 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.

- Q.1** (a) Compare woven fabric structure with knitted structure. **03**
(b) State any two modern developments in the circular warp knitting machine. **04**
(c) Draw thread diagram and graphical representation for technical face and technical back side of the plain knit structure. **07**
- Q.2** (a) Write the applications of tuck stitch. **03**
(b) With a suitable sketch, show different parts of sinker. Write the function of individual parts. **04**
(c) Explain loop formation steps for the latch needle with diagram. **07**
- OR**
- (c) Explain the movement of the guide bar in warp knitting machine with the suitable sketch. **07**
- Q.3** (a) Define the following terms: 1) Coarse, 2) Wale, 3) Machine gauge. **03**
(b) Write the function of stitch cam. How does the setting of stitch cam influence fabric properties? **04**
(c) Which needle is called as self-acting needle? Draw a diagram for showing various parts of that needle. Write the function of individual parts. **07**
- OR**
- Q.3** (a) Write the applications of float stitch. **03**
(b) What is the application of Swing cam? Draw a suitable figure showing different adjustments in a swing cam. **04**
(c) Draw a labeled diagram for the Needle cam used in circular weft knitting machine. Also, discuss the function of individual cams present in cam track of circular weft knitting machine. **07**
- Q.4** (a) Draw a labelled figure representing various parts in a spring beard needle. **03**
(b) Draw the structure of the chain stitch. Also, mention characteristics of chain stitch. **04**
(c) Draw a thread diagram for Purl structure. Also discuss the properties of purl structure. **07**
- OR**
- Q.4** (a) Explain briefly about compound needle. **03**
(b) With suitable sketch, show the Laying-in and Plating in Weft knitting process. **04**
(c) Draw a thread diagram of the Rib structure. Also discuss the properties of rib structure. **07**
- Q.5** (a) Draw thread diagram and graphical representation of the Locknit structure. **03**
(b) Compare Tricot and Raschel warp knitting machine. **04**

- (c) Explain the steps followed in the knitting cycle of the Raschel warp knitting machine with suitable sketch. **07**

OR

- Q.5** (a) Draw the yarn lapping notation to represent guide bar movement for the sharkskin structure. **03**
- (b) Compare the fabric characteristics for weft and warp knitted fabric. **04**
- (c) Explain steps followed in knitting cycle of Tricot warp knitting machine with suitable sketch. **07**
