

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII EXAMINATION – WINTER 2025

Subject Code:3172913

Date:28-11-2025

Subject Name:Modern Fibre 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) Write briefly about molecular orientation in fibres.	03
(b) What are the advantages of man-made fibres?	04
(c) Explain about the extruder in the melt spinning machine.	07
Q.2 (a) State the non-conventional applications of manufactured fibres.	03
(b) Write briefly about the cooling system at melt spinning	04
(c) Compare dry spinning and wet spinning.	07
OR	
(c) Discuss recent developments in the texturising technology.	07
Q.3 (a) State the types and application of aramid fibres.	03
(b) Write briefly about production of fibre forming polymers.	04
(c) List out various methods of spin finish and describe any two methods briefly with neat sketch.	07
OR	
Q.3 (a) How does the structure formation take place during solution spinning?	03
(b) Write briefly about the nature of set.	04
(c) Discuss process variables of solution spinning.	07
Q.4 (a) State the objects of texturising.	03
(b) Explain edge crimping.	04
(c) What is glass transition temperature? Explain in detail.	07
OR	
Q.4 (a) Describe briefly defects in false twist textured yarn.	03
(b) Describe role of spin finish and its composition.	04
(c) Discuss the factors influencing properties of textured yarns.	07
Q.5 (a) Give the classification of yarns in air jet texturising.	03
(b) Write briefly about the gear crimping.	04
(c) Describe false twist texturising process with neat sketch.	07
OR	
Q.5 (a) What is knit-de knit texturising?	03
(b) State the features of high speed spinning.	04
(c) Write in detail about the draw texturising.	07
