

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2023

Subject Code:3152901

Date:07-12-2023

Subject Name: Yarn Manufacture III

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) Enlist the functions of traveller.	03
	(b) Aprons are positioned in front zone. Why?	04
	(c) With a brief description explain any one Compact Spinning system.	07
Q.2	(a) Define the terms: Centrifugal force & Coriolis force.	03
	(b) Which are the main drawbacks of Casablanca drafting?	04
	(c) Draw a neat sketch of mechanism used for building the Cop base.	07
	OR	
	(c) Discuss in detail basic steps in Ring manufacture.	07
Q.3	(a) Enlist the advantages of Balloon control rings?	03
	(b) Discuss in brief the importance of Spinning triangle.	04
	(c) Discuss the various methods employed at the Ring frames to control yarn tension & its variations.	07
	OR	
Q.3	(a) Calculate Yarn content per cop in ring spinning for: Spindle lift: 170 mm; Ring diameter: 36 mm.	03
	(b) What are the limitations of the conventional ring & C-shaped traveler system?	04
	(c) Discuss the role of modern spindles in Spinning.	07
Q.4	(a) Discuss the features of Orbit Ring system.	03
	(b) Enlist the properties of Fancy yarn.	04
	(c) With a neat diagram discuss 4-spindle tape drive.	07
	OR	
Q.4	(a) Enlist the advantages of Individual Motor Drive System.	03
	(b) With a neat diagram explain the structure of Fancy yarn.	04
	(c) With neat sketches explain auto doffer operating cycle sequence.	07
Q.5	(a) What is the basic aim of Ply twisting?	03
	(b) What is Two-For-One Twisting?	04
	(c) Explain in detail Wet Doubling systems.	07
	OR	
Q.5	(a) Discuss the manufacture of Marl yarn.	03
	(b) Discuss in brief the snarling and associated problems.	04
	(c) Discuss the possibilities for automation in Ring frame.	07
