

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V EXAMINATION – SUMMER 2025

Subject Code:3152901

Date:15-05-2025

Subject Name:Yarn Manufacture III

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.

		MARKS
Q.1	(a) What Are The Objects Of Ring Frame Machine	3
	(b) What is the function of the ring and traveller in a ring frame?.	4
	(c) Describe The Methods Of Manufacture Of Snarl Yarns, Loop Yarns And Two Colour Flake Yarns.	7
Q.2	(a) What Is The Role Of Traveller,Name Different Type Of Traveller	3
	(b) What factors contribute to the unevenness of yarn? Discuss	4
	(c) With neat sketch explain the principle of two-for-one (TFO) twisting.	7
	OR	
	(c) Draw Passage Of Yarn & Explain The Function Of Each Part Of The Ringframe Machine	7
Q.3	(a) What is the role of the lappet guide in thread guidance?	3
	(b) Discuss The Significance Of Traveller Mass.	4
	(c) What Is Compact Spinning? How It Gives Value Addition To Quality.	7
	OR	
Q.3	(a) What Is The Importance Of Spacer Bar	3
	(b) What is a corkscrew yarn, and how is it produced?	4
	(c) Explain Spinning Geometry With A Neat Sketch.	7
Q.4	(a) What role do balloon control rings play in controlling yarn tension?	3
	(b) How can cop shape affect the final yarn quality?	4
	(c) What are the types of rings used in a ring frame? Compare.	7
	OR	
Q.4	(a) Calculate total draft on ring frame machine for 32'S ne cotton yarn, if roving hank is 1.28. Ring frame is running at 21500 Spindle rpm.	3
	(b) Define and differentiate between S-twist and Z-twist in doubling.	4
	(c) Discuss recent modifications in the drafting system of a ring frame and their advantages.	7
Q.5	(a) Enlist factors influence yarn tension in spinning?	3
	(b) Define traveller mass and its significance in spinning.	4
	(c) Write On The Concept Of Autodoffing Employed On Ring Spinning Machine	7

OR

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| Q.5 | (a) | State The Limitations Of Ring Doubling Systems | 3 |
| | (b) | Explain How Two For One Twisting Is Advantageous Over Ring Doubling. | 4 |
| | (c) | Name Different Types Of Spindle Driving Systems Used On Ringframe And Write Briefly On Each. | 7 |
