

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3152901****Date:27/01/2021****Subject Name:Yarn Manufacture III****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) What are the objectives of the ring spinning?	03
	(b) What is spinning triangle? How it affects end down rate on ring frame?	04
	(c) With the suitable sketch explain the material passage in ring frame.	07
Q.2	(a) How the spinning triangle influences yarn structure?	03
	(b) Based on the Spinning balloon theory discuss the basic conditions required for the stable spinning.	04
	(c) Draw a labeled sketch of traveler and define the following different parts: (i) Bow, (ii) Traveler Circle, (iii) Centre of Gravity, (iv) Center of Symmetry, & (v) Horns.	07
Q.3	(a) What are the function of ring and traveler?	03
	(b) With the suitable sketch explain the construction of bottom rollers used in drafting system.	04
	(c) Give the classification of the ring used in the ring frame machine with suitable sketches.	07
Q.4	(a) What is Twist? Enlist different types of twist used in spinning.	03
	(b) Discuss the advantages of Orbit ring and traveller.	04
	(c) With a suitable diagram explain the basic features of an umbrella creel.	07
Q.5	(a) With a suitable sketch explain the function of a Traveller clearer.	03
	(b) Discuss the advantages and disadvantages of the long and short apron used in drafting system.	04
	(c) With suitable sketches explain automatic doffing operation in Ring frame.	07
Q.6	(a) Discuss the materials are used for the manufacturing (composition) of ring?	03
	(b) What are the functions of Balloon checking ring and separators used between spindles?	04
	(c) Explain the principle of TFO. With a suitable diagram explain the passage of material in TFO.	07
Q.7	(a) What is Fancy yarn? Write different uses of fancy yarn.	03
	(b) What is Doubling? Enlist different types of doubling.	04
	(c) What is the Compact Spinning? Discuss the advantages of compact spinning.	07
Q.8	(a) Discuss the structure of Gimp yarn.	03
	(b) With the suitable sketches discuss structure of Loop yarn.	04
	(c) With suitable diagrams explain the production of any two fancy yarns.	07
