Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2152901 **Date: 05/05/2017**

Subject Name: Yarn Manufacturing-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.**

Q.1		**Short Questions**	**14**
	1	What is break draft?	
	2	Write the objective of Spacer.	
	3	Write the objective of Aprons.	
	4	What are nip breaks?	
	5	Mention the spindle driving methods.	
	6	State the objective of damping sleeve given on modern spindle.	
	7	Define twist multiplier.	
	8	What is balloon collapse?	
	9	Mention the different types of traveller.	
	10	Give the formula for calculation of production in kgs for Ringframe machine.	
	11	State two package defects on Ringframe.	
	12	What is Slough off?	
	13	Mention the various systems of doubling.	
	14	Give the special feature of Lycra yarn.	
Q.2	**(a)**	State the objectives of Ringframe.	**03**
	(b)	Define Spinning geometry with a neat sketch.	**04**
	(c)	Explain the function of each part of the Ringframe machine.	**07**
		OR	
	(c)	Write a short note on “Creel at Ringframe”.	**07**
Q.3	**(a)**	Discuss the recent modifications in drafting system on Ringframe.	**03**
	(b)	Discuss in detail the importance and influence of spinning geometry parameter “spinning triangle”.	**04**
	(c)	Discuss the methods of maintaining uniform yarn tension on Ringframe.	**07**
		OR	
Q.3	**(a)**	Give the characteristics of a good ring.	**03**
	(b)	Explain the construction of the spindle at Ring frame.	**04**
	(c)	Which factors contribute to the balloon collapse on a Ringframe? State different ways adopted to minimize it on modern ring frames and mention their benefits and limitations.	**07**
Q.4	**(a)**	Write on the effect of level of twist on double yarn characteristics.	**03**
	(b)	Discuss the uses of double and fancy yarns.	**04**
	(c)	Explain the concept of compact spinning.	**07**
		OR	

Q.4	**(a)**	Discuss the effect of tension on double yarn characteristics.	**03**
	(b)	Write a short note on TFO.	**04**
	(c)	State the function of builder mechanism on a Ringframe and explain how these functions are achieved on a modern Ringframe.	**07**
Q.5	**(a)**	Write on spinning techniques for the production of fancy yarns.	**03**
	(b)	Explain the manufacturing of sewing thread.	**04**
	(c)	Discuss the recent developments on Ringframe.	**07**

OR

Q.5	**(a)**	Give the classification of fancy yarn.	**03**
	(b)	Describe the necessary condition to produce Loop yarn and cover yarn.	**04**
	(c)	Write a short note on Automation on Ringframe.	**07**

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