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

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code: 2162908 **Date: 08/05/2017**

Subject Name: Modern Yarn Production Technologies

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.**

			MARKS
Q.1		**Short Questions**	**14**
	1	Name the spinning systems working of "open end spinning principle.	
	2	Which spinning process has high Twist-imparting potential /min?	
	3	Define the term back doubling.	
	4	Write down the delivery speed of electrostatic spinning.	
	5	What is peripheral twist extent in rotor?	
	6	Which yarn characteristics influenced by rotor groove?	
	7	Name the various types of navel used in rotor spinning.	
	8	What is Torque-stop?	
	9	Write down the yarn characteristics of airjet spun yarn.	
	10	What is compact spinning?	
	11	State the major disadvantage of Adhesive spinning system.	
	12	State the delivery speed of twillow process.	
	13	State the major advantage of air vortex spinning.	
	14	Write down Twist-imparting potential /min for Rotor spinning process.	
Q.2	**(a)**	State the technical specification of Dref-2 process.	**03**
	(b)	What are the problems associated with electrostatic spinning?	**04**
	(c)	Discuss the limitation of ring spinning system.	**07**
		OR	
	(c)	Explain the latest developments in rotor spinning.	**07**
Q.3	**(a)**	State briefly the disadvantage of condensed yarn spinning.	**03**
	(b)	What are the technical limitations of rotor spinning to spun fine count?	**04**
	(c)	Explain the merits and demerits of friction spinning.	**07**
		OR	
Q.3	**(a)**	In rotor spinning fiber length is not the dominant fiber characteristics. Justify the statement.	**03**
	(b)	Explain the principle of open end spinning with neat sketch.	**04**
	(c)	Describe the Dref-3 process with neat sketch.	**07**
Q.4	**(a)**	State the application of MJS and MVS yarns.	**03**
	(b)	State the classification of airjet spun yarn.	**04**
	(c)	Explain the principle of False twist process with neat sketch.	**07**
		OR	

Q.4	**(a)**	Calculate back doubling from the following data. Rotor diameter = 38 mm, Rotor rpm =100000, TPI=15.24	**03**
	(b)	State the advantage of condensed yarn spinning.	**04**
	(c)	Explain aerodynamic compact spinning with neat sketch.	**07**
Q.5	**(a)**	State the advantage of siro spun technology.	**03**
	(b)	State the advantage of solo spun technology.	**04**
	(c)	Describe the Bobtex process with neat sketch.	**07**
		OR	
Q.5	**(a)**	Give the technical specification of wrap spinning.	**03**
	(b)	With neat sketch explain only operating principle of wrap spinning.	**04**
	(c)	Calculate the production in gms/hr of 4 head rotor spinning machine from the following data. Rotor speed =100000 rpm, Yarn fineness = 50 Tex, Twist factor = 42, Efficiency =96%.	**07**

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