Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V(New) • EXAMINATION – WINTER 2016

Subject Code:2152901 **Date:24/11/2016**

Subject Name:Yarn Manufacturing-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.**

Q.1		**Short Questions**	**14**
	1	In tape drive to the spindles, speed variation of ___ % do occur and are accepted.	
	2	Travellers which weigh less than 10 grains are called _____ travellers.	
	3	Cots of hardness levels of the order of ____ to ____ are mostly used at back rollers.	
	4	Temperature of oil in the spindle bolster is usually ____^{0}F above that of room temperature.	
	5	If TM is 4.0 and yarn count is 36s Ne , what will be TPI in Yarn ?	
	6	What type of yarn is obtained by dry doubling?	
	7	Write the equation to calculate resultant count of double yarn ?	
	8	The snarling will be more in case of which yarn s/z or z/z?	
	9	If spindle RPM is 14,000 and yarn TPI is 20 , calculate surface speed of front roller in inches/min.	
	10	If a TFO spindle is rotating at 10,000 rpm and surface speed of delivery roller is 1000 inches/min , what will be the TPI in yarn ?	
	11	Compact spinning aims at eliminating _____.	
	12	Which compact spinning system does not use suction ?	
	13	Usually, the traveller used for doubling are _____ than traveller for Ring frame.	
	14	Explain what is a cable yarn.	
Q.2	**(a)**	State various applications of double yarn.	**03**
	(b)	Discuss the effect of various parameters on strength and elongation of double yarn.	**04**
	(c)	Explain the mechanism for building the base at Ring frame with neat sketch.	**07**
		OR	
	(c)	Describe the method of Ring manufacturing in detail.	**07**
Q.3	**(a)**	Enlist the points to be considered before selecting the traveller profile.	**03**
	(b)	Explain the following terms with reference to traveller : (i) Traveller Count (ii) Centre of symmetry.	**04**
	(c)	Discuss the implications of spinning triangle with sketch.	**07**
		OR	

Q.3	**(a)**	Describe the construction of spindle assembly of ring frame showing different parts.	**03**
	(b)	Describe the functions of different parts of spindle assembly of ring frame.	**04**
	(c)	With a neat diagram , explain tangential belt drive at ring frame.	**07**
Q.4	**(a)**	Explain why doubling is not carried out using ring bobbin directly.	**03**
	(b)	State the advantages of TFO.	**04**
	(c)	With a neat sketch describe the working of TFO.	**07**
		OR	
Q.4	**(a)**	State the basic objects of doubling.	**03**
	(b)	Discuss manufacturing of Slub yarn briefly.	**04**
	(c)	With a neat sketch describe wet doubling.	**07**
Q.5	**(a)**	Describe manufacturing of loop yarn briefly.	**03**
	(b)	Explain the basic principle of compact spinning with suitable sketch.	**04**
	(c)	Describe Comfor spinning system with neat sketch.	**07**
		OR	
Q.5	**(a)**	Describe manufacturing of Melange yarn briefly.	**03**
	(b)	Discuss factors affecting end breaks at Ring frame.	**04**
	(c)	Describe features of modern ring frame in detail.	**07**

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