Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV • EXAMINATION – SUMMER 2013

Subject Code: 142901 **Date: 07-06-2013**

Subject Name: Yarn Manufacturing- II

Time: 10:30am – 01:00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	What is differential motion? How it can be used in comber and speed frame?	**07**
	(b)	Write about the different types of drafting system used in draw frame.	**07**
Q.2	**(a)**	Calculate production of draw frame in Kgs/ Shift from the following data Hank of sliver- 0.15 Number of machine- 8 Tension draft- 1.02 Number of heads- 1 Surface speed of front roller- 600 m/ min Efficiency- 80%	**07**
	(b)	Calculate (i) Production of speed frame in Kg/ Day/ Machine (ii) Draft Flyer speed- 1100 rpm Efficiency- 87% Sliver hank- 0.17 T.M.- 1.4 Roving hank- 1.62	**07**
		OR	
	(b)	Calculate production of comber in Kgs / shift from the followings. Feed/nip- 0.25 inch Comber lap weight- 17 Kg Nips/min- 300 Comber lap length- 250 m Efficiency- 85% Noil %- 10%	**07**
Q.3	**(a)**	What is the function of builder motion? Write in detail about the reversal o the bobbin rail movement.	**07**
	(b)	What is the function of speed frame? Draw the passage of material in speed frame.	**07**
		OR	
Q.3	**(a)**	Explain the cone drive transmission mechanism in speed frame.	**07**
	(b)	Write in detail about the spindle.	**07**
Q.4	**(a)**	What are the objects of draw frame? Draw the passage of material through draw frame.	**07**
	(b)	Describe the following terms: 1. Drafting wave 2. Stick- slip phenomenon	**07**
		OR	
Q.4	**(a)**	Describe the suction systems in the drafting arrangement of draw frame.	**07**
	(b)	What is the function of autoleveller in draw frame? Explain the working of autoleveller based on open loop principle.	**07**

Q.5	**(a)**	Write in detail about the modern development in comber.	**07**
	(b)	Explain the sliver lap machine in detail.	**07**

OR

Q.5	**(a)**	Explain the following terms: 1. top comb 2. waste removal system	**07**
	(b)	What is forward feed and backward feed in comber? Explain forward feed in detail.	**07**

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