Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – VIII EXAMINATION – SUMMER 2015

Subject code: 182602 **Date: 05/05/2015**

Subject Name: Belts, Hoses & Footwear Technology

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		Answer the following.	**(14)**
	(i)	Define the term 'Bend Radius'. Write its importance.	
	(ii)	Write the importance of Carbon Fiber used as reinforcing material for manufacturing of hose.	
	(iii)	What care should be taken while mixing of SFRR for manufacturing of V Belt? Why?	
	(iv)	Give difference between Overlap method & Butt Joint method used for manufacturing of V Belt.	
	(v)	Explain the term 'Transition Distance'. Establish the relationship between Transition distance & Modulus.	
	(vi)	Write the disadvantages of Porometics used as upper material for manufacturing Shoes.	
	(vii)	Show the different parts of Shoes with figure.	
Q.2	**(a)**	Discuss the general Compounding for Footwear.	**(07)**
	(b)	Answer the following.	
	(i)	Write the compositions, use & properties of PBI woven fabric used for manufacturing of Shoes.	**(04)**
	(ii)	Write the importance of DV Process for Footwear Industry	**(03)**
		OR	
	(b)	Discuss in detail about Canvas Shoes and Rubber Shoe Upper Varnish.	**(07)**
Q.3	**(a)**	Define the term " Braid Angle."Explain the correct method of determining Braiding Angle.	**(07)**
	(b)	What do you mean by Dross? How it can be formed? What are the ways to remove it?	**(07)**
		OR	
Q.3	**(a)**	Discuss in detail about different principles for the fitting of Hose Couplings.	**(07)**
	(b)	Write about the Care & Maintenance of Welding Hoses.	**(07)**
Q.4	**(a)**	Short note on Mechanical Fasteners.	**(05)**
	(b)	Write about the Carcass Reinforcement for Conveyor Belt.	**(06)**
	(c)	Discuss about Selection of Yarn for Cord Processing in V Belt.	**(03)**
		OR	
Q.4	**(a)**	Short Note on Vulcanization of Conveyer Belt.	**(05)**
	(b)	Importance of Breakers in Conveyor Belt construction.	**(04)**
	(c)	Describe in detail about Effective Tension & Driving or Slack Side Tension.	**(05)**

Q.5	**(a)**	Discuss the Skiving & Wrapping process foe Wrapped V Belt.	**(05)**
	(b)	Write in detail about Building process foe Raw-edged V Belt.	**(06)**
	(c)	Establish the relationship between twisted constructions of Yarn & V Belt Properties. List the different methods for twisting of yarn.	**(03)**

OR

Q.5	**(a)**	Discuss the Mechanical Properties for V-Belt.	**(07)**
	(b)	Short Note on 'Repair of Flat Belting'.	**(07)**

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