Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1724001 **Date: 06/07/2012**

Subject Name: Rubber Bonding & its Technology

Time: 10:30 am – 13:00 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	**(a)**	**List the methods for metal pretreatment for rubber to metal bonding. Discuss any one in detail.**	**(07)**
	(b)	**Discuss about pretreatments of EP, Butyl & Polyureathene rubber.**	**(07)**
Q.2	**(a)**	**Discuss the first six stages for Wet Blast Phosphating process.**	**(07)**
	(b)	**How many types of bond system characteristics are available? Discuss any one in detail.**	**(07)**
		OR	
	(b)	**Short note on Effective Bond Formation.**	**(07)**
Q.3	**(a)**	**Write about the types of Bonding & Bonding process.**	**(07)**
	(b)	**Describe in detail about Bonding agent ,application and use.**	**(07)**
		OR	
Q.3		**Discuss in detail about Waterborne Bonding Systems.**	**(14)**
Q.4		**How Autohesion, Vulcanisation system & Filler type influence the bonding of Unvulacanised Rubber? Explain in detail.**	**(14)**
		OR	
Q.4		**Explain in detail about Bonding of Vulcanised Rubbers.**	**(14)**
Q.5	**(a)**	**Discuss the factors affecting Adhesion of Rubbers.**	**(07)**
	(b)	**"Bonding-Interphase or Interface Considerations". Justify the Statement.**	**(07)**
		OR	
Q.5		**Explain in detail about Undesirable Adhesion Occurring under Service Conditions (Fixing).**	**(14)**

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