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## GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject code: 1724002 Date: 09/07/2012 **Subject Name: Rubber Blends** 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 Describe about Multiphase Elastomers.** (07)(a) **(b)** Describe analytical methods for rubber-rubber blends. (07)0.2 Explain about Cure Systems for NR/NBR41 blends. (07)(a) **(b)** Describe about the effect of Polychloroprene content on crosslink (07)distribution & physical properties. OR Discuss the Compounding of NR/NBR blends for food contact **(b)** (07)applications. **Q.3** Write the importance of Dynamic Vulcanisation for NR/EPM blends. (07)(a) **(b)** Discuss about the resistance to environmental damage by NR/EPM (07)blends. OR 0.3 How can be achieving high damping properties for rubber products? (07)(a) Discuss the effect of incorporating HV-BR into NR/ENR-25 blends. (07)**(b) Q.4** Describe the different approaches to improving NR/EPDM blend (14)properties. OR **Q.4** Write in detail about the Effect of EPDM modification on Crosslink (14)density & Phase morphology. Q.5 Discuss in detail about the modification of different EPDM grades & (07)also discuss the interaction of modified EPDM & Carbon Black. **(b)** Describe in detail about initial preparation & assessment of blend (07)compounds (NR/EPDM). OR Discuss in detail about Blends of Carboxylated Elastomers with other **Q.5** (14)Polymers.