Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY

## ME SEMESTER II EXAMINATION – SUMMER 2017

Subject Code: 2724006

Subject Name: Speciality Elastomers & its technology
Time:02:30 PM to 05:00 PM

Instructions:

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

## Q. 1 Answer the following: Write about the modification of Natural Rubber by Halogenation with (07)its advantages and applications. Give the basic chemistry of Enexidized Natural Rubber (ENR) and write about its important advantages. What do you mean by Isomerization? Explain by giving reaction (07)Q. 2 mechanism and write its advantages. Discuss the effect of Fiber orientation on properties of rubber (07)Q. 2 (b) composite with graphical representation. How good fiber dispersion can be achieved in rubber composite? (07)(b) Write about the factors which affect on degree of dispersion in short fiber rubber composite. Mention the various blends of Carboxylated Elastomers with other (14) Q. 3 polymers. Write about any four in detail. Discuss about the applications of Carboxylated latices and Solid (14)Q. 3 Carboxylated Elastomers. List out the processes for product forming of XLPE compounds by (14)0.4 Moisture curing technique. Explain both the process with flow diagram. OR Write the basic mechanism of Radiation Cross linking. Explain this (07)Q. 4 technique for synthesis of XLPE by giving reaction. Write about the properties and applications of Crosslinked (07)(b) Polyethylene. Draw the structures of basic monomers and Cure site monomers used Q. 5 (07)(a) for synthesis of Acrylic rubbers and explain its chemistry. Write about the various types and grades of AFLAS polymer with (07)(b) their properties and applications. (07)Short note on Compounding of Acrylic Elastomers. Q. 5 (a) Explain the Peroxide vulcanization of Tetrafluoroethylene-Propylene (07)(b) (TFE-P) Copolymer.

\*\*\*\*\*\*