Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER IV (NEW) – EXAMINATION – SUMMER - 2017

Subject Code: 2744002 **Date:03/05/2017**

Subject Name: Powder & Particulate Rubber Technology

Time:02:30PM-05:00 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		**Draw the schematic diagram for Attrition Mill and discuss about its working and various affecting parameters.**	**(14)**
Q. 2	**(a)**	**Give a detailed note on Cryogenic grinding with schematic diagram.**	**(07)**
	(b)	**Mention the powdered mastication principle. Write about the processing of Powdered rubber Preblend.**	**(07)**
		OR	
	(b)	**Discuss about the geometry, function and processing of Turbo-rapid mixer in detail.**	**(07)**
Q. 3	**(a)**	**Write the importance and procedure of T/50 test for powdered rubber compounds and give its comparison with Cabot test.**	**(07)**
	(b)	**Justify the Powdered rubber technology in Adhesives and Doughs industry.**	**(07)**
		OR	
Q. 3		**Discuss about the effect of Type and Amount of Partitioning agent on various properties of Powdered rubber.**	**(14)**
Q. 4	**(a)**	**Explain the Direct powder extrusion by using Compaction system.**	**(07)**
	(b)	**List the different types of Extruders for Direct Extrusion and explain about all.**	**(07)**
		OR	
Q. 4		**Discuss about the Continuous Mixing process on Twin-screw extruder by using different types of Screw elements and configuration for Powdered rubber.**	**(14)**
Q. 5		**Explain the geometry of Apparatus and test procedure used to measure the relative Dustiness of rubber chemicals in detail.**	**(14)**
		OR	
Q. 5		**Give a detailed description on Economics of Powdered rubber Systems.**	**(14)**

****