

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV(NEW) – EXAMINATION – SUMMER 2019
Subject Code:2142601
Date:17/05/2019
Subject Name: Rubber Compounding Materials
Time:02:30 PM TO 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.

		MARKS
Q.1	(a) List out the different organic materials used in Rubber Industry.	03
	(b) How ozone will affect the properties of Rubber Products?	04
	(c) Explain the compounds of Aluminum used in rubber industry.	07
Q.2	(a) What do you mean by Bleeding?	03
	(b) Give the classification of Rubber Additives.	04
	(c) Write a Short on “Accelerator”.	07
	OR	
	(c) List the name of Inorganic fillers. Explain any two in detail.	07
Q.3	(a) Write the different name of Processing oil used in Rubber Industries.	03
	(b) List out the different blowing agent used in rubber Industries.	04
	(c) Explain the chain breaking mechanism of antioxidants.	07
	OR	
Q.3	(a) Write the different names of accelerator used in rubber Industries.	03
	(b) List out the different types of Factice used in Rubber Industries. Explain any one in brief.	04
	(c) Write a short note on phenolic antioxidants.	07
Q.4	(a) Give the difference between Hard Clay & Soft Clay.	03
	(b) Write a brief note on Blue pigment.	04
	(c) Short note on “Non Black Fillers”.	07
	OR	
Q.4	(a) Write the importance of Peptiser used in Rubber Industries.	03
	(b) Give the comparison between organic and inorganic pigments.	04
	(c) Calculate the specific gravity of compound used for manufacturing of rubber O ring.	07
Q.5	(a) Write difference between Compounding and Mixing.	03
	(b) Give the influence of fillers characteristics on the cross linking process.	04
	(c) Explain the “Furnace process” of carbon black with flow diagram in detail.	07
	OR	
Q.5	(a) Explain in detail about mechanism of oxidation.	03
	(b) Give the importance of Filler used in Rubber Industries.	04
	(c) Explain the effect of properties of carbon black on properties of rubber Vulcanizates.	07
