

GUJARAT TECHNOLOGICAL UNIVERSITY

RUBBER TECHNOLOGY

B. E. SEMESTER: VII

Subject Name: **Rubber Products Manufacturing**

Subject Code: **172604**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam (E)		Mid Sem Exam (Theory) (M)	Practical (Internal)
				Theory	Practical		
3	0	2	5	70	30	30	20

Sr. No	Course Content	Total Hrs.
1.	Cellular Rubber: Introduction, Difference between sponge & Expanded Rubber, Compounding Manufacturing of sponge rubber, Manufacture of expanded rubber. Slipper Sole: Compounding and manufacturing.	4
2.	Ebonite Rubber: Introduction, Properties, applications, Manufacturing of ebonite rod.	3
3.	Sports Goods: Tennis ball, Conventional ground golf ball, Solid golf ball, simple play ball.	6
4.	Hospital Rubber Goods: Hospital Rubber Goods: Comp. design, formulations, Manufacturing process of Hot water bag, Rubber sheets, surgical tubing.	6
5.	Rubber Gasket, Washers & Seals: Prop. of seal materials, selection of Rubber for oil seals, Types of seals, methods of mfg.	3
6.	Rubber Band: Comp. design, Formulations, Mfg. process, limitations..	2
7.	Rubber Cables: Comp. Design, Formulations, Mfg. process, causes & remedies. XLPE	6

	cable manufacture. Design of cables, electrical properties.	
8.	Rubber Rollers: Introduction, Application, Method of Mfg., Comp. design, Diff. types of rollers.	4
9.	Printing Blankets: Introduction, Comp. design, Method of mfg., Practical problems, Remedies, Applications etc.	4
10.	Rubber in Automobile Industries: Introduction, Automobile brake lines, Brake chamber diaphragm, Formulations. Defence Rubber Articles: Introduction, Comp. design, Procedure for Mfg., Applications etc. Engineering Applications of Rubber. Other Applications: Application of rubber in civil, textile, chemical, medical, electrical and general field.	8
11.	Vibration Isolators and Mounts : Defination of Vibration & Shock, Principles of Isolation, Principles of Damping, Combination of Isolation and Damping, designing and Compounding for Vibration Isolation and Shock Absorption, Manufacturing Technology.	5
12.	Rubber Lining & Electrodeposition of Metals: Lining of tanks, Lining of Piper and fittings, Lining of barrels and drums, Lining of pickling tanks etc., Rubber armour, Compounding and Formulations, Electrodeposition of rubber.	3

Practical and Term work:

It should be based on theories

Text Books:

1. Rubber Products Manufacturing Technology By: Anil K. Bhowmick
2. Rubber Technology By : C. M. Blow

Reference Books:

1. Handbook of Rubber Projects, Tech. & Product Formulary By : SBP Consultants & Engineers (P) Ltd.