

GUJARAT TECHNOLOGICAL UNIVERSITY

RUBBER TECHNOLOGY

B. E. SEMESTER: VII

Subject Name: **Rubber Plant & Process Engineering**

Subject Code: **172603**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam (E)		Mid Sem Exam (Theory) (M)	Practical (Internal)
				Theory	Practical		
3	0	0	3	70	-	30	50

Sr. No	Course Content	Total Hrs.
1.	Industrial Sanitation & Housekeeping:	2
2.	Industrial Safety: General introduction, Safety science, Technology of hazard identification, Nature of fire & explosion & their Remedies, Safety in use of Rubber machineries & Equipments. Toxic hazards of Rubber Chemicals & their handling.	10
3.	Industrial Pollution: Various types of Environmental pollution by Rubber Industries, Their impact & remedial measures.	6
4.	Location & Layout: Factory location & layout, Plant location & layout, Equipment layout Guiding principles for layout of rubber industry. Calculation of storage area.	4
5.	Motion & Time Study : Establishing time value of time study, processing & use of time study date. Aims and benefits of time and motion study.	4
6.	Cost Estimation & Profitability Analysis: Costing, Fixed, Variable & overhead costs, Job costing & Process costing, Product Cost, Cost analysis. Investment, Profitability analysis Projected cash flow statements and balance sheets. Introduction to project identification & Formulation for Rubber products.	8

7.	Plant Maintenance: Types of Plant maintenance – Unplanned and planned maintenance, Preventive maintenance and its importance.	6
8.	Just In Time Concept: Concept of JIT, Right first time and Total quality management.	4
9.	Waste Management: Different ways of Waste disposal in rubber industry.	5
10.	Energy Conservation: Energy conservation in rubber industries at different processing area.	5

Practical and Term work:

It should be based on theories

Text Books:

1. Rubber Processing & Production Organisation. By: Philip K. Freakley
2. Toxic Hazards of Rubber Chemicals By: A. R. Nutt

Reference Books:

1. Rubber Products Manufacturing Technology By: Anil K. Bhowmick