

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

V - SEMESTER

Course Title: Mechanical Maintenance

(Course Code: 1353404)

Diploma Programme in which this course is offered	Semester in which offered
Mechanical (Manufacturing Technology)	Fifth Semester

Module.	Topics	Hours
Module 1	Importance of maintenance function in an Industry	2 h
Module 2	Types of Maintenance 2.1 Preventive Maintenance 2.2 Predictive Maintenance 2.3 Breakdown Maintenance 2.4 Maintenance Procedure Followed in the Company - SOP/WI	4 h
Module 3	Lubrication 3.1 Types of Lubricants 3.2 Methods of Lubrication 3.3 Specification Lubricants 3.4 Selection of Lubricants	4 h
Module 4	Surface protection 4.1 Painting 4.2 Plating	3 h
Module 5	Belt and Chain drives 5.1 Flat belts- Drive Types, care and maintenance 5.2 V- Belts Drives 5.2.1 Types of V belt, Specification and Application 5.2.2 Care and Maintenance of V belt Drives 5.2.3 Speed Ratio and RPM Calculation of Belt Drives 5.3 Chain Drives 5.3.1 Types, Specification and Application of Chains and Sprockets 5.3.2 Speed ratio and RPM Calculation of Chain Drives 5.3.3 Care and Maintenance of Chain drives	5 h
Module 6	Gears and Gear drives 6.1 Types of Gears- Spur, Bevel, Helical, Rack and Pinion and Worm wheel 6.2 Gear Drives – Types and Application 6.3 Study of Reduction Gear Boxes 6.4 Lubrication Gear and Gear Boxes 6.5 Speed ratio and RPM calculation of Gear Drives	5 h
Module 7	Couplings 7.1 Types of Couplings and their Application 7.2 Care and Maintenance of Couplings	4 h

Module 8	Bearings 8.1 Bush Bearings- types and Application 8.2 Antifriction Bearings 8.2.1 Ball Bearings - Types, Specification and Application 8.2.2 Roller Bearings - Types, Specification and Application 8.3 Thrust Bearings - Types, Specification and Application 8.4 Lubrication of Bearings 8.5 Procedure for Removal and Fixing Bearings 8.6 Care and Maintenance of Bearings	5 h
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