

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN MECHATRONICS ENGINEERING
SEMESTER: V

Subject Name: **Machine Element Design and Drafting**

Laboratory Experiences:

Sr. No.	Experiments
1.	Prepare report on design of cotter joint and knuckle joint.
2.	Prepare details and assembly production drawing of above designed joints using AutoCAD.
3.	Prepare report on design of flange coupling or flexible coupling.
4.	Prepare details and assembly production drawing of above designed couplings using AutoCAD.
5.	Prepare report on design of screw jack or screw type hand press.
6.	Prepare details and assembly production drawing of above designed power screw using AutoCAD.
7.	Prepare report on design of bell-crank lever, rocker arm of I.C.engine, lever of boiler safety valve.
8.	Prepare report on design of rivet joint.(one problems)
9.	Prepare report on design of shaft and key(one problems)
10.	Prepare report on design of helical and leaf spring.(one problem each)
11.	Prepare report on design of clamp, bracket., bolt under static load.(Any one)
12.	Selection of anti-friction bearings for given conditions using manufacturer's, table / Design data book/book of mechanical design for machines such as Electric motors, pumps, I.C.engines, lathe, drilling machines, grinders etc. (atleast two problems)
13.	Design of pressure vessels - thin/thick cylinder and thin spherical shell (two problems).