Lesson Plan

Name of the Faculty : Sh. Rajender Kumar Tayal (G1), Sh. Munish Kumar Jain (G2)

Discipline : Mechanical Engineering

Semester : 3rd

Subject : Mechanical Engineering Drawing

Lesson Plan duration : 17 weeks (01.10.2021 to 28.01.2022)

Work load per week : Lecture – 00, Practical – 06

Practical	
Practical Day	Topic
1st	**1. Limit, fits and tolerance:** Need of limit, fits and tolerance, Maximum limit of size, minimum limit of size, tolerance, allowance, deviation, upper deviation, lower deviation, fundamental deviation, clearance, maximum clearance, minimum clearance. Fits – clearance fit, interference fit and transition fit
2nd	Hole basis system, shaft basis system, tolerance grades, calculating values of clearance, interference, hole tolerance, shaft tolerance with given basic size for common assemblies like H_7/g6, H_7/m6, H_8/p6. Basic terminology and symbols of geometrical dimensioning and tolerances.
3rd	**2. Drawing of the following with complete dimensions, tolerances, bill of material and surface finish representation.** **2.1 Universal coupling and Oldham coupling (Assembly)**
4th	**2.2 Bearings:** 2.2.1 Bushed Bearing (Assembly Drawing) 2.2.2 Ball Bearing and Roller Bearing (Assembled Drawing)
5th	2.2.3 Plummer Block (Detail and Assembly Drawing) 2.2.4 Foot step Bearing (Assembled Drawing)
6th	**2.3 Pulleys:** Pulleys, Function of pulley, Types and materials of Pulley, Fast and loose pulley (Assembly Drawing)
7th	**1st sessional test (Tentative)** **Assessment**

8th	**2.4 Pipe Joints :** Types of pipe Joints, Symbol and line layout of pipe lines Expansion pipe joint (Assembly drawing) Flanged pipe and right angled bend joint (Assembly Drawing)
9th	**2.5 Lathe Tool Holder (Assembly Drawing)** **2.6 Reading and interpretation of mechanical components and assembly drawings**
10th	**2.7 Sketching practice of bearings and bracket** **3. Drilling Jig (Assembly Drawing)**
11th	**2nd sessional test (Tentative)** **Assessment**
12th	**4. Machine vices (Assembly Drawing)** **5. I.C. Engine Parts :** 1.Piston 2.Connecting rod (Assembly Drawing) 3.Crankshaft and flywheel (Assembly Drawing)
13th	**6. Boiler Parts :** Steam Stop Valve (Assembly Drawing) Blow off cock. (Assembly Drawing)
14th	**7. Mechanical Screw Jack (Assembled Drawing)** **8. Gear, Types of gears, Nomenclature of gears and conventional representation** Draw the actual profile of involute teeth of spur gear by different methods
15th	**3rd sessional test (Tentative)** **Assessment**
16th	Revision
17th	Revision