

# Government Polytechnic Arwal, Arwal

## LECTURE PLAN

SEMESTER 3RD DIPLOMA

Subject(code) : MECHANICAL ENGINEERING DRAWING(1625302)					
Name : RAM RAJA(Lecturer/Mechanical engg.)					
Diploma of Mechanical Engineering					
Units	Topics Covered	Lecture No.	Weeks	Lecture Modes	Remarks
1. Auxiliary views: -	Study of auxiliary planes Projection of objects on auxiliary planes.	1	1	google meet/video/ pdf/ppt	
	Completing the regular views with the help of given auxiliary views (Use first angle method of projection)	2		google meet/video/ pdf/ppt	
2. Intersection of solids:-	Curves of intersection of the surfaces of the solids in the following cases.Prism with prismWhen (i) the axes are at 90 and intersecting (ii) The axes are at 90 and Offset	3	2	google meet/video/ pdf/ppt	
	Cylinder with cylinder When (i) the axes are at 90 and intersecting (ii) The axes are at 90 and Offset	4		google meet/video/ pdf/ppt	
	Prism with Cylinder When (i) the axes are at 90 and intersecting (ii) The axes are at 90 and Offset	5	3	google meet/video/ pdf/ppt	
	Cylinder with Cone When axis of cylinder is parallel to both the reference planes and cone resting on base on HP and with axis intersecting and offset from axis of cylinder	6		google meet/video/ pdf/ppt	
3. Developments of Surfaces:-	Developments of Lateral surfaces of cube, prisms, cylinder, pyramids, cone	7	4	google meet/video/ pdf/ppt	
4. Conventional Representation:-	1. Standard convention using SP – 46 (1988) (a) Materials C.I., M.S, Brass, Bronze, Aluminum, wood, Glass, Concrete and Rubber (b) Long and short break in pipe, rod and shaft. (c) Ball and Roller bearing, pipe joints, cocks, valves, internal / external threads.	8		google meet/video/ pdf/ppt	

4. Conventional Representation:-	(d) Various sections- Half, removed, revolved, offset, partial and aligned sections. (e) Knurling, serrated shafts, splined shafts, and chain wheels. (f) Springs with square and flat ends, Gears, sprocket wheel (g) Countersunk & counterbore. (h) Tapers	9	5	google meet/video/pdf/ppt	
5. Limits, Fits and Tolerances:-	1. Characteristics of surface roughness- Indication of machining symbol showing direction of lay, roughness grades, machining allowances, manufacturing methods.	10	6	google meet/video/pdf/ppt	
	2. Introduction to ISO system of tolerancing, dimensional tolerances, elements of interchangeable system, hole & shaft based system, limits, fits & allowances. Selection of fit.	11		google meet/video/pdf/ppt	
	3. Geometrical tolerances, tolerances of form and position and its geometric representation.	12	7	google meet/video/pdf/ppt	
	4. General welding symbols, sectional representation and symbols used in Engineering practices	13		google meet/video/pdf/ppt	
6. Details to Assembly:-	1. Introduction- 2. Couplings – Universal couplings & Oldham’s Coupling	14	8	google meet/video/pdf/ppt	
	3. Bearing – Foot Step Bearing & Pedestal Bearing 4. Lathe tool Post	15		google meet/video/pdf/ppt	
	5. Machine vice & Pipe Vice 6. Screw Jack 7. Steam Stop Valve	16	9	google meet/video/pdf/ppt	
7. Assembly to Details:-	1. Introduction – 2. Pedestal Bearing	17	10	google meet/video/pdf/ppt	
	3. Lathe Tail Stock 4. Drilling Jig	18	11	google meet/video/pdf/ppt	
	5. Piston & connecting rod 6. Gland and Stuffing box Assembly	19		google meet/video/pdf/ppt	
	7. Valve – Not more than eight parts 8. Fast & loose pulley	20	12	google meet/video/pdf/ppt	