

CLASS : S.E. (Mechanical)		Semester - III	
SUBJECT – MACHINE DRAWING			
Periods Per Week 1 Period of 60 Min.	Lecture		03
	Practicals		04
	Tutorials		-----
		Hours	Marks
Evaluation System	Theory Examination	04	100
	Practical	----	----
	Oral Examination	----	----
Term Work		----	50

1 Solid Geometry:

- 1.1 Intersection of surfaces and interpretation of solids-Intersection of prism or cylinder with Prism cylinder or cone both solids in simple position only.
1.2 Primary auxiliary views and aux. projections of simple machine parts.

2 Machine drawing:

2.1. Machine elements

- 2.1.2. Free hand sketches of M/C elements such as bolts, nuts, washers, studs, tapped holes
2.1.2. Conventional representation of assembly of threaded parts in external and section views

2.2 Detail and Assembly drawing:

Introduction to unit assembly drawing steps involved in preparing assembly drawing from details and vice versa.

2.3 Preparation of details & assembly drawings of following units.

Cotter, knuckle joint

2.3.1 keys and couplings: Keys- sunk, parallel, woodruff, saddle, feather etc.

2.3.2 Couplings- simple, muff, flanged, protected flange coupling, Oldham's coupling
universal Coupling.

2.3.3 Bearings- simple, solid, bushes pedestal footstep. I.S. conventional representation
ball and roller bearings

2.3.4 Pulleys-flat belt, V-belt. rope belts fast and loose pulleys

2.3.5 Pipe joints: flanged joints-spigot and gland and stuffing box, expansion joint

2.3.6 Valves-gate valve, globe valve, non-return valve

2.3.7 IC. Engine parts: piston, connecting rod, and crankshaft

2.3.8 Jigs and fixtures

2.4 Limits fits, and tolerances dimensioning with tolerances indicating various types of fit in detail and assembly drawings

TERM-WORK:

Total 6 numbers of half imperial drawing sheets

1-sheet on Para 1.1 minimum 3 problems

1-sheet on Para 1.2, 2.1.1, 2.1.2 minimum 3 problems

2-sheet on details to assembly of any two units topics from 2.3.1 to 2.3.7

1 sheet' on assembly to details of any unit topics from 2.3.1 to 2.3.7

1 sheet detail -assembly of unit para 2.3.8 with fits and tolerances

NOTE:

In the examination questions related to assembly drawing should be limited to the unit Consisting of not more than 12 parts including standard items.

Term Work: Journal containing of drawing sheets: 30 marks

One class Test: 20 marks

TEXT BOOKS:

i. Machine Drawing-By N.D. Bhatt.

ii. A text book of Machine Drawing By Laxminarayan & M.L. Mathur. (Jain Brother, New Delhi)

iii. Machine Drawing, By Kamat & Rao.

iv. Machine Drawing By, M.B..shah.

v. A text Book of Machine drawing By R.B. Gupta (Satya Prakashan Tech India Publication)