FORMAT OF LESSON PLAN

Name of faculty	Dheeraj Grover		
Discipline	Civil engineering		
Semester	3rd		
Subject	SM		

Week		Theory		Practical
	Lecture Day	Торіс	Practical Day	Торіс
1st	1st	Introduction Properties of Materials	1st	Determination of yield stress, ultimate stress percentage elongation and plot the stress strain diagram and compute the value of
	2nd	Introduction to tensile test		young's modulus on mild steel
2nd		fatigue test, torsion test on metals.	2nd	Testing of HYSD Steel
	lst	Concept of stress, normal and shear stresses, Concept of strain and deformation		
	2nd	poisson's ratio, volumetric strain		
3rd	1st	Numerical Problems Hooke's law, modulii of elasticity and rigidity Bulk modulus of elasticity, and relationship between them Stresses and strains in bars subjected to tension	3rd	Determination of Young's modulus of elasticity for for steel wire with searl's apparatus
	2nd	Stresses and strains in bars subjected to compression		
4tn	1st	Extension of uniform bar under its own weight, stress produced in compound bars Stress-strain diagram for mild steel and HVSD steel	4th	concrete beam
I	2nd	mechanical properties, factor of safety.		
5th	1st	Temperature stresses and strains Numerical Problems Concept of a beam and supports (Hinges, Roller and Fixed),	5th	Determination of maximum deflection and youngs modulus of elasticity in simply supported beam with load at middle third point
	2nd	Types of loads (dead load, live load, snow load, WL, EL)		
6th	1st	Bending Moment and shear force diagrams for cantilever Numerical Problems	6th	Verification of forces in a framed structure
	2nd	simply supported beams subjected to point load simply supported beams subjected to udl		
7th	1st	Numerical Problems Numerical Problems	7th	Testing of HYSD Steel
	2nd	overganging beam subjected with point load Numerical Problems		
8th	1st	Relationship between load, shear force and bending moment point of maximum bending moment, and point of contraflex. Concept of MOI and second moment of area and radius of gy.	8th	Determination of modulus of rupture of a concrete concrete beam
	2nd	theorems of parallel and perpendicular axis Numerical Problems		
9th	1st	Numerical Problems Concept of pure bending Assumptions	9th	Determination of yield stress, ultimate stress percentage elongation and plot the
	2nd	application of bending equation to circular cross-section, Moment of resistance Calculations of bending stresses in SS		stress strain diagram and compute the value of young's modulus on mild steel
10th	1st	Numerical Problems Concentric and eccentric loads single axis eccentricity only	10th	Determination of Young's modulus of elasticity for for steel wire with searl's apparatus
	2nd	Effect of eccentric load on the section Numerical Problems Concept of shear stresses in beams, shear stress distribution		
11th	1st	Necessity for determination of slope and deflection Moment area theorem Numerical Problems	11th	Verification of forces in a framed structure
	2nd	Theory of columns Eulers and Rankine Formula		
12th	1st	Numerical Problems Concept of a perfect, redundant and deficient frames	12th	Determination of maximum deflection and youngs modulus of elasticity in simply
	2nd	Assumptions and analysis of trusses by: a) Method of joints a) Method of joints		supported beam with load at middle third point
13th	1st	c) Graphical method Numerical Problems	13th	Determination of maximum deflection and youngs modulus of elasticity in simply
	2nd	Numerical Problems		supported beam with load at middle third point
14th	1st 2nd	Revision/Discussion Revision/Discussion	14th	Verification of forces in a framed structure
15th	1st	Revision/Discussion	15th	Testing of HYSD Steel
1	2nd	Revision/Discussion		