LESSON PLAN

Discipline: Civil Engg. ,UGMIT Rayagada
Semester: 3RD
Name of the Teaching Faculty:
Subject: **STRUCTURAL MECHANICS (TH-1)**

No of Days/week class allotted: 05
Session: 2020-21

Week	Class Day	Theory/Practical Topics	Remarks
1	1-5	1. Review basic concepts 1.1 basic principles of mechanics 1.2 review of CG and MI 2. Simple and complex stress and strain Introduction	
2	6-10	2.1 Introduction to stress and strain, properties of materials, Types of stress, Types of strains, Shear stress and strains, Poisson's ratio, Hooke's law	
3	11-15	2.2 Application of simple stress and strain in Engg. field	
4	16-20	2.3 Complex stress and strain 3.1 Stresses in beam, due to bending	
5	21-25	3.2 Shear stresses in beams 3.3 Stresses in shafts due to torsion	
6	26-30	3.4 Combined bending and direct stress 4.1 Column and struts Introduction, End conditions, etc.	
7	31-35	Euler's theory of long columns, Problems 5 Introduction to SF and BM	
8	36-40	5.1 Types of loads and beams, types of reactions, support reactions, Calculation of support reactions	
9	41-45	5.2 Calculation of SF and BM for determinate beams for different loading conditions	
10	46-50	6.1 Introduction to slope and deflection, Relation and importance of slope and deflection	
11	51-55	6.2 Slope and deflection of cantilever and simply supported beams under conc. And UDL by Double integration and Macauly's method	
12	56-60	7.1 Indeterminacy in beams, principle of consistent deformation or compatibility, Analysis of propped cantilever	
13	61-65	Fixed and two span continuous beam by principle of superposition, SF and BM diagram of beam with point load and UDL covering full span	

14	66-70	8.1 Introduction to trusses, Types, Statically determinate and indeterminate, Degree of indeterminacy, Stable and unstable trusses, advantages	
15	71-75	8.2 Analysis of trusses, Method of section and joints	

Signature of Faculty:

Signature of HOD: