LESSON PLAN

Name of the Faculty : Dheeraj Grover

Discipline : Civil Engineering

Semester : 6th

subject : Steel Structural Design

Work Load (Lectures) per week (in hours) : Lectures -4

WEEK	THEORY	
	LECTURE DAY	TOPIC
1st	1	Structural Steel and Sections:
	2	Properties of structural steel as per IS Code
	3	Designation of structural steel sections as per IS handbook and IS:800 - 2007
	4	Riveted Connections: Types of rivets, permissible stresses in rivets
2nd	1	Types of riveted joints, specifications for riveted joints as per IS 800.
	2	Failure of a riveted joint.
	3	Assumptions in the theory of riveted joints.
	4	Strength and efficiency of a riveted joint.
3rd	1	Test
	2	Design of riveted joints for axially loaded members Numericals
	3	Design of riveted joints for axially loaded members Numericals
	4	Design of riveted joints for axially loaded members Numericals
4th	1	Bolted and Welded connections:
	2	Types of bolts and bolted joints, specifications for bolted joints as per IS: 800 - 2007
	3	Types of welds and welded joints,
	4	Advantages and disadvantages of welded joints and bolted joints
5th	1	Sessional test-1 and Revision and discussion upto first sessional syllabus
	2	
	3	Design of fillet and butt weld. Numericals
	4	Design of fillet and butt weld. Numericals
6th	1	Design of fillet and butt weld. Numericals
	2	Tension Members
	3	Analysis and design of single and double angle section tension members and their rivetted and welded connections with gusset plate as per IS:800
	4	Analysis and design of single and double angle section tension members and their rivetted and welded connections with gusset plate as per IS:800
7th	1	Analysis and design of single and double angle section tension members and their rivetted and welded connections with gusset plate as per IS:800
	2	Analysis and design of single and double angle section tension members and their rivetted and welded connections with gusset plate as per IS:800
	3	Compression Members
	4	Analysis and design of single and double angle sections compression members (struts) and their welded connections with gusset plate as per IS:800

8th	1	Analysis and design of single and double angle sections compression members (struts)and their welded connections with gusset plate as per IS:800
	2	Analysis and design of single and double angle sections compression members (struts) and their welded connections with gusset plate as per IS:800
	3	Analysis and design of single and double angle sections compression members (struts) and their welded connections with gusset plate as per IS:800
	4	Roof Trusses
9th	1	Form of trusses, pitch of roof truss,
	2	Spacing of trusses, spacing of purlins
	3	Sessional test-2 and Revision and discussion upto second sessional syllabus
	4	
10th	1	Connection between purlin and roof covering.
	2	Connection between purlin and principal rafter
	3	Columns:
	4	Concept of buckling of columns, effective length and slenderness ratio, permissible
11th	1	stresses in compression as per IS:800 for different end conditions.
	2	Analysis and Design of axially loaded single section steel column
	3	Types of column bases,
	4	Beam and column, frame
12th	1	Beams
	2	Analysis and design of single section simply supported laterally restrained steel beams.
	3	Analysis and design of single section simply supported laterally restrained steel beams.
	4	Introduction to plate girder and functions of various elements of a plate girder
13th	1	Introduction to plate girder and functions of various elements of a plate girder
	2	Design of single section simply supported laterally restrained steel beams. Numerical problems
	3	Design of single section simply supported laterally restrained steel beams. Numerical problems
	4	Fabrication and Erection of Steel Structures like trusses, columns and girders
14th	1	Fabrication and Erection of Steel Structures like trusses, columns and girders
	2	Masonry structures – Design of brick column and wall foundations
	3	Masonry structures – Design of brick column and wall foundations
	4	Revision
15th	1	Sessional test-3 and Revision and discussion upto third sessional syllabus
	2	