Lesson Plan

Name of the Faculty	**:**	**Suresh Kumar**	**Discipline**	**:**	**Civil Engineering**	**L**	**T**	**P**
Subject	**:**	**Steel Structure Design**	**Semester**	**:**	**6th**	**4**	**-**	**-**
Lesson Plan Duration	**:**	**15 Weeks (from Jan. 2026 to April 2026)**						

Week	**Theory**		**Delivery Date of Lecture**		Whether the Lesson Plan Followed? **Yes/No**
	Lecture Day	**Topic** (including Assignments / Seminar / Group Discussion / Sessional Tests)	Expected	Actual	
1st	1st	**Introduction to the subject and its necessity / Learning outcomes of the subject** e-Lecture/Video Lecture /PPTs on the subject matters			
	2nd	**UNIT-I** **1.1 Structural Steel and Sections:** 1.1.1 Properties of structural steel as per BIS Code			
	3rd	1.1.2 Designation of structural steel sections as per IS handbook and IS: 800			
	4th	1.1.3 Riveted Connections- Types of Rivets			
2nd	1st	Doubt Session			
	2nd	1.1.3 Riveted Connections- Permissible stresses in rivets, types of riveted joints			
	3rd	1.1.3 specifications as per BIS-800, Failure of riveted joint			
	4th	Doubt Session			
3rd	1st	1.1.3 strength and efficiency of riveted joint			
	2nd	1.1.3 Riveted Connections- Design of Riveted Connection only axially loaded number (No staggered riveting)			
	3rd	1.1.3 Riveted Connections- Design of Riveted Connection only axially loaded number (No staggered riveting)			
	4th	Doubt Session			
4th	1st	Revision			
	2nd	Riveted Connections- Permissible stresses in rivets, types of riveted joints			
	3rd	specifications as per BIS-800, Failure of riveted joint			
	4th	Revision			
5th	1st	**Group discussion / Technical Quiz / Seminar.**			
	2nd	**Assignment-I**			
	3rd	**Revision**			
	4th	**Sessional Test – 1**			
6th	1st	**UNIT-II** **2.1 Bolt Connections**: - Types of bolts, permissible stresses in bolt,			
	2nd	Types of bolted joints, specifications for bolted joints as per B IS 800. Failure of a bolted joint.			

	3rd	Assumptions in the theory of bolted joints. Strength and efficiency of a bolted joint			
	4th	Design of bolted joints for axially loaded members (No Staggered bolts).			
7th	1st	Design of bolted joints for axially loaded members (No Staggered bolts).			
	2nd	**2.2 Welded connections**: - Types of welds and welded joints			
	3rd	advantages and disadvantages of welded joints design of fillet and butt weld for axially loaded members			
	4th	**UNIT-III** **3.1 Tension Members**- Analysis and design of single and double section tension members			
8th	1st	and their riveted and welded connections with gusset plate as per IS:800-2007			
	2nd	**3.2 Compression Members-** Analysis and design of single and double angle sections compression members subjected to axial load			
	3rd	Analysis and design of single and double angle sections compression members subjected to axial load			
	4th	Doubt Session			
9th	1st	**(Assignment-II)**			
	2nd	**Group discussion / Technical Quiz / Seminar.**			
	3rd	**Revision**			
	4th	**Sessional Test – 2**			
10th	1st	**UNIT-IV** **4.1 Roof Trusses**- Form of trusses, pitch of roof truss			
	2nd	spacing of trusses, spacing of purlins			
	3rd	connection between purlin and roof covering			
	4th	Connection between purlin and principal rafter			
11th	1st	Doubt Session			
	2nd	**4.2 Column Bases: -** Types of column bases i.e. slab base, gusseted base. Concept of buckling,			
	3rd	effective length, slenderness ratio, Analysis and Design of axially loaded single section column.			
	4th	Doubt Session			
12th	1st	**UNIT-V** **5.1 Beams**- Analysis and design of single section simply supported laterally restrained steel beams.			
	2nd	Introduction to plate girder and functions of various elements of a plate girder			
	3rd	**5.2 Fabrication and erection** of steel structures like trusses, columns and girders			
	4th	Numerical problem			
13th	1st	Numerical problem			
	2nd	Doubt Session			

	3rd	**Group discussion / Technical Quiz / Seminar.**			
	4th	**Revision**			
14th	1st	**Assignment-III**			
	2nd	**Revision**			
	3rd	**Revision**			
	4th	**Sessional Test – 3**			
15th	1st	**Revision**			
	2nd	**Revision**			
	3rd	**Revision**			
	4th	**Revision**			