

LESSON PLAN

NAME OF THE FACULTY : **SUMEET KUMAR**
DEPARTMENT : **ARCHITECTURAL ASSISTANTSHIP**
SEMESTER : **5th**
SUBJECT : **STRUCTURE SYSTEMS-I**
LESSON PLAN DURATION : **14 WEEKS**
LECTURES PER WEEK : **03**

Week	Theory	
	Lecture Day / Hr.	Topic
1 st	1	Force: Definition, effect and characteristics
	2	Representation and types of forces
	3	Force Systems: Coplanar and non-coplanar force systems
2 nd	4	Types of coplanar Forces: Collinear, Concurrent, Parallel, non-concurrent and non-parallel.
	5	Resultant force and components of a force
	6	Laws of forces: Parallelogram, Triangle and polygon Laws of forces
3 rd	7	Definition of centre of Gravity and Centroid
	8	Centroid by method of moments of areas for square, rectangular and triangular cross- sections.
	9	Centroid by method of moments of areas for L-shape, T-shape and I-shape cross- sections.
4 th	10	Moments of Inertia by methods of moments
	11	Radius of Gyration
	12	Practice of Numerical about Moments of Inertia and Radius of Gyration
5 th	13	SESSIONAL TEST-1
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6 th	16	Elasticity and Elastic limit
	17	Definition of stress and strain
	18	Types of stress and strain

7 th	19	Stress strain curve for mild steel
	20	Hook's Law (Theory)
	21	Types of loads- Dead load, Live load, snow, wind and seismic loads as per IS:875
8 th	22	Types of loading: Point load, uniformly distributed load and uniformly varying load.
	23	Types of Supports: Hinged, fixed supports, types of reactions provided by each type of support.
	24	Types of Beams: Simply supported, cantilever, overhanging and continuous beams (description only)
9 th	25	SESSIONAL TEST-2
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10 th	28	Concept of bending moment and shear force.
	29	Bending moment and shear force diagrams for simply supported, cantilever and over hanging beams subjected to point loads.
	30	Bending moment and shear force diagrams for simply supported, cantilever and over hanging beams subjected to uniformly distributed loads only.
11 th	31	Load-Bearing Structures
	32	Frame Structures
	33	Shell Structures
12 th	34	Truss Structures
	35	Cable and Tensile Structures
	36	Hybrid Structure Systems
13 th	37	SESSIONAL TEST-3
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14 th	40	Revision of Important Topics and Practice of Numerical
	41	
	42	