

Name of the Faculty : Rakesh Kumar
Discipline : Civil Engineering
Semester : 6th
Subject : Earthquake Resistant Building Construction
Lesson Plan Duration : 14 Weeks (from 15.02.2024 to 14.06.2024)

Week	Theory	
	Lecture Day	Topic (including assignment / test)
1 st	1	Introduction to the Subject and its necessity
	2	1. Elements of Engineering Seismology : General features of tectonic of seismic regions.
	3	Causes of earthquakes, Seismic waves,
2 nd	1	Earthquake size (magnitude and intensity),
	2	Epicentre, Seismograph,
	3	Classification of earthquakes,
3 rd	1	Seismic zoning map of India,
	2	Static and Dynamic Loading, Fundamental period.
	3	2. Seismic Behaviour of Traditionally-Built Constructions of India : Performance of building during earthquakes
4 th	1	Mode of failure: Out-of-plane failure, in-plane failure,
	2	Mode of failure: Diaphragm failure, Connection failure,
	3	Mode of failure: Non-structural components failure
5 th	1	Revision/Assignment-I
	2	Sessional Test -I
	3	3. Special construction method : Special construction methods
6 th	1	Special construction methods
	2	Tips and Precautions to be observed while planning,
	3	Designing and Construction of earthquake resistant building.
7 th	1	Designing and Construction of earthquake resistant building.
	2	Designing and Construction of earthquake resistant building.
	3	4. Introduction to Seismic Zone of India and factor related to :
8 th	1	IS: 1893,
	2	DO
	3	IS: 13920 (latest edition)
9 th	1	Revision/Assignment-II
	2	5. Seismic Provision of Strengthening and Retrofitting : Seismic Provision of Strengthening and Retrofitting
	3	Seismic Provision of Strengthening and Retrofitting
10 th	1	Measures for Traditionally-Built Constructions,
	2	Revision/Quarries
	3	Sessional Test -II

11 th	1	6. Provision of reinforcement detailing in masonry and RC
	2	constructions :
	3	Provision of reinforcement detailing in masonry constructions
12 th	1	Provision of reinforcement detailing in RC constructions
	2	Provision of reinforcement detailing in RC constructions
	3	Provision of reinforcement detailing in RC constructions
13 th	1	7. Disaster Management : Disaster rescue, Psychology of rescue,
	2	Rescue workers, Rescue plan,
	3	Rescue by steps ,Rescue equipment
14 th	1	Safety in rescue operations, Debris clearance
	2	Casualty management
	3	, Sessional Test -III