LESSON PLAN

Name of Faculty : Mrs. Sunita **Discipline : Civil Engineering** **L T P**

Subject : ERBC **Semester : 6th** **3 - -**

Lesson plan Duration :Jan. 2026 - April 2026 (15 weeks)

Week	Lecture Day	THEORY TOPIC (including Assignments / Seeminar / Group Discussion / Sessional Tests)	Delivery Date of Lecture		Whether the Lesson Plan Followed ?
			Expected	Actual	Yes / No
1st	1st	**UNIT-I** **1. Elements of Engineering Seismology-** 1.1 Concept of Earthquake & Earthquake Seismology			
	2nd	1.2 Various important terminologies related with earthquake seismology			
	3rd	1.3 Earthquake- Causes, effects and classification			
2nd	4th	1.4 Seismic waves- Concept, types and characteristics			
	5th	1.5 Earthquake size- magnitude and intensity			
	6th	1.6 Recording of an earthquake- Seismograph and Seismogram its working, Applications			
3rd	7th	1.7 Seismic zoning map of India with their importance			
	8th	1.8 Concept of static loading, dynamic loading and fundamental period			
	9th	**UNIT-II** **2.1 Seismic Behaviour of Traditionally-Built Constructions of India** 2.1.1 Name of various past earthquake and their magnitude			
4th	10th	2.1.2 Seismic performance of masonry building during earthquakes			
	11th	2.1.3 Common mode of failures of masonry building- Out-of-plane failure, in-plane failure, Diaphragm failure,			
	12th	Connection failure, Non-structural components failure with their causes & characteristics			
5th	13th	Revision			
	14th	**Assignment – I / Group discussion / Technical Quiz / Seminar**			
	15th	**Sessional Test - 1**			
6th	16th	**2.2 Modern techniques and Special construction methods of earthquake resistant buildings** 2.2.1 Modern techniques used in the construction of earthquake resistant buildings- pneumatic. Base isolation and			
	17th	Seismic dumpers and others latest, with their advantages, disadvantages and utility.			
	18th	2.2.2 Special construction method- tips and precautions to be observed while planning, designing and construction of earthquake resistant building.			

7th	19th	2.2.2 Special construction method- tips and precautions to be observed while planning, designing and construction of earthquake resistant building.			
	20th	**UNIT-III** **3. Introduction of Various Types of Earthquake Resistant Building Construction Codes as per BIS.** 3.1 IS: 1893 (Part-1) 2002, IS: 13920 (1993),			
	21st	IS: 4326 (1993), IS: 13828 (1993) SP 22: 1982 (Introduction only)			
8th	22nd	3.2 Importance of seismic codes in various aspects			
	23rd	3.3 Assumptions made in IS: 1893: 2000 for the earthquake resistant design of structure.			
	24th	3.4 General specifications of IS: 13920: 1993			
9th	25th	3.5 General principles considered as per IS: 4326			
	26th	Revision			
	27th	Revision			
10th	28th	Revision			
	29th	**Assignment – 2 / Group discussion / Technical Quiz / Seminar**			
	30th	**Sessional Test – 2**			
11th	31st	**UNIT-IV** 4.1 Seismic Provision of Strengthening and Retrofitting measures for Building Construction (Masonry & RCC Structure) 4.1.1 Seismic provision of strengthening-Concept and objectives			
	32nd	4.1.2 Definitions of Repairing, Restoration, Retrofitting 4.1.3 Retrofitting-Concept, objectives and classification.			
	33rd	4.1.4 Non Conventional methods of retrofitting used for RCC Building			
12th	34th	4.1.5 Retrofitting in masonry construction-Methods/Techniques used			
	35th	4.1.6 Retrofitting in RCC Structures-Methods/Techniques used			
	36th	4.2 Provision of reinforcement detailing in masonry and RCC constructions 4.2.1 Necessity of seismic strengthening arrangements of masonry building			
13th	37th	4.2.2 Concept of horizontal bend in masonry building			
	38th	4.2.3 Various types of horizontal bends & their functions.			
	39th	**UNIT-V** **5. Disaster Management** 5.1 Disaster- Concept and types 5.2 Disaster management-Concept, function and their objectives			

14th	40th	5.3 Disaster rescue- Psychology of rescue, rescue workers and their role, rescue plan & stages, rescue by steps, rescue equipment, safety in			
	41st	5.4 Definition of debris clearance, Percussion in debris clearance			
	42nd	5.5 Casuality management- Concept, function and classification			
15th	43rd	Revision			
	44th	**Assignment – 3/ Group discussion / Technical Quiz / Seminar**			
	45th	**Sessional Test-3**