Lesson Plan

Name of the Faculty :	**Sunita**	**Discipline** :	**Civil Engineering**	**L T P**
Subject :	**Surveying – I**	**Semester** :	**3rd**	**3 - -**
Lesson Plan Duration :	**15 Weeks (from Aug.2025 to Nov.-2025)**			

Week	Lecture Day	Theory — Topic (including Assignments / Seminar / Group Discussion / Sessional Tests)	Delivery Date of Lecture — Expected	Actual	Whether the Lesson Plan Followed? Yes/No
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: Introduction and Basic Concepts** 1.1 Definition and Purpose of Surveying 1.2 Primary Division of Surveying			
	3rd	1.3 Basic principles of surveying			
2nd	1st	1.4 Measurements-linear and angular 1.5 Units of measurements			
	2nd	**UNIT-II: Chain and Compass Surveying** e-Lecture/Video Lecture /PPTs on Chain and Compass Surveying 2.1 Purpose and principles of chain surveying			
	3rd	2.2 Operations in Chain Surveying (Ranging, Measurement, Offsetting)			
3rd	1st	2.3 Purpose of compass surveying			
	2nd	2.4 Use of prismatic compass: Setting and taking observations 2.5 Concept of following with simple numerical problems:			
	3rd	a) Meridian - Magnetic and true, Arbitrary, b) Bearing - Magnetic, True and Arbitrary			
4th	1st	c) Whole circle bearing and reduced bearing, d) Fore and back bearing,			
	2nd	e) Magnetic dip and declination.			
	3rd	2.6 Local attraction – Problems, causes, detection, errors and corrections,			

5th	1st	Revision				
	2nd	**(Assignment – 1) , Group discussion / Technical Quiz / Seminar**				
	3rd	**Sessional Test – 1**				
6th	1st	**UNIT-III: Levelling** e-Lecture/Video Lecture /PPTs on Levelling 3.1 Definition and Purpose of levelling				
	2nd	3.2 Various technical terms used in levelling (level surface, horizontal surface, vertical surface, datum, reduced level, bench marks,				
	3rd	line of collimation, axis of the bubble tube, axis of the telescope and vertical axis)				
7th	1st	3.3 Identification of various parts of Auto level, leveling staff types, uses and least count of leveling staff				
	2nd	3.4 Temporary adjustment and permanent adjustment of Auto level.				
	3rd	3.5 Concept of back sight, foresight, intermediate sight, change point, to determine reduce levels.				
8th	1st	3.6 Level book and reduction of levels by, 3.7.1 Height of collimation method and 3.7.2 Rise and fall method (Numerical problems)				
	2nd	3.7 Methods of Leveling (Simple levelling, differential levelling, fly levelling,				
	3rd	check leveling, and profile levelling (L-section and X-section) only (Numerical problems)				
9th	1st	3.8 Problem on reduction of levels, Errors in levelling				
	2nd	**UNIT-IV: Plane Table Surveying** e-Lecture/Video Lecture /PPTs on Plane Table Surveying 4.1 Introduction and Definition of plane table surveying,				
	3rd	4.2 Advantages & Disadvantages of plane table surveying				
10th	1st	**Revision**				
	2nd	**(Assignment – 2)** **Group discussion / Technical Quiz / Seminar**				
	3rd	**Sessional Test – 2**				
11th	1st	4.3 Equipment used in plane table survey,				
	2nd	4.4 Setting of a plane table: (a) Centering, (b) Levelling, (c) Orientation.				
	3rd	4.5 Methods of plane table surveying (a) Radiation, (b) Traversing				
12th	1st	Revision of Methods of plane table surveying 4.6 Errors in plane table survey				
	2nd	**UNIT-V Contouring** e-Lecture/Video Lecture /PPTs on Contouring				
	3rd	5.1 Definition and Purpose of contour,				
13th	1st	5.2 Contour interval and horizontal equivalent,				

		5.3 Factors effecting contour interval,5.4 Characteristics of contours,			
	2nd	5.5 Methods of contouring: Direct			
	3rd	and indirect			
14th	1st	5.6 Use of stadia measurements in contour survey			
	2nd	5.7 Interpolation of contours; use of contour map			
	3rd	5.8 Drawing cross section from a contour map; marking alignment of a road, railway line and a canal on a contour map			
15th	1st	**Revision**			
	2nd	**(Assignment – 3)** **Group discussion / Technical Quiz / Seminar**			
	3rd	**Sessional Test – 3**			