Lesson Plan/ Course Break – up

PCC-CVE201-T SURVEYING-I

Name of the Faculty	Mr. Manik Goyal
Discipline	B.Tech in Civil Engineering
Semester	III (2nd Year)
Subject	Surveying-I
Lesson Plan Duration	15 Weeks (from September to December 2021)
Work Load (Lecture / Practical) per week (in hrs.)	Lectures – 03

Week	Theory	
	Lecture Day	Topic (Including assignment / Test)
1st	1	**Fundamental Principles of Surveying: Definition,** objects, classification, fundamental principles, methods of fixing stations
	2	**Measurement of distances: Direct** measurement, instruments for measuring distance
	3	Instruments for making stations, chaining of line, errors in chaining, tape corrections examples
2nd	4	**Compass and Chain Traversing:** Methods of traversing
	5	Instruments for measurement of angles-prismatic and surveyor's compass
	6	Bearing off lines, local attraction, examples.
3rd	7	**Leveling: Definition** of terms used in leveling, types of levels and staff
	8	Temporary adjustment of levels, principles of leveling
	9	Reduction of levels, booking of staff readings examples
4th	10	characteristics of contours lines, locating contours, interpolation of contours
	11	**Plane Table Surveying: Plane** table, methods of plane table surveying
	12	Radiation, intersection, traversing and resection
5th	13	Two point and three point problems
	14	**Theodolite· and Theodolite** Traversing: Theodolites, temporary adjustment of theodolite
	15	Measurement of angles, repetition and reiteration method
6th	16	Traverse surveying with theodolite, checks in traversing
	17	Checks in traversing
	18	Adjustment of closed traverse
7th	**1st Minor Test**	
8th	19	Examples
	20	**Tacheometry: Uses** of tacheometry
	21	**Tacheometry: Uses** of tacheometry

9th	22	Principle of tacheometric surveying	
	23	Principle of tacheometric surveying	
	24	Surveying, instruments used in tacheometry,	
10th	25	Systems of tacheometric surveying-stadia system fixed hair method	
	26	Systems of tacheometric surveying-stadia system fixed hair method	
	27	Determination of tacheometric constant	
11th	28	Tangential systems, examples	
	29	Tangential systems, examples	
	30	**Curves:** Classification of curves	
12th	31	**Curves:** Classification of curves	
	32		
	33	Elements of simple circular curve	
13th	34	Location of tangent points-chain and tape methods	
	35	Instrumental methods	
	36	Examples of simple curves.	
14th	**2nd Minor test**		
15th	37	Transition Curves-Length and types of transition curves	
	38	Length of combined curve, examples	
	39	Vertical Curves: Necessity and types of vertical curve	