

G.P. DHANGAR (Fatehabad)

Name of Faculty : Sandeep Goyal

Discipline : CIVIL ENGG.

Semester : 3RD

Subject : Surveying I

Week	Lecture No.	Topic Covered
1	1	Basic principles of surveying
	2	Concept and purpose of surveying, measurements-linear and angular, units of measurement
	3	Instruments used for taking these measurements, classification of surveying
2	4	Revision
	5	Purpose and principles of Chain Surveying
	6	Introduction, advantages and disadvantages of chain surveying
3	7	Direct and indirect ranging, offsets and recording of field notes
	8	Obstacles in Chain Surveying
	9	Errors in Chain Surveying and their correction.
4	10	Purpose of compass surveying
	11	Use of prismatic compass: Setting and taking observations
	12	Concept of Meridian - Magnetic and true, Arbitrary
5	13	Concept of Bearing - Magnetic, True and Arbitrary
	14	Concept of Whole circle bearing and reduced bearing
	15	Concept of Fore and back bearing
6	16	Concept of Magnetic dip and declination
	17	Local attraction - causes, detection, errors and corrections, problems
	18	Calculation of included angles
7	19	Numericals
	20	Revision
	21	Purpose of levelling, concept of a level surface, horizontal surface, vertical surface, datum, R.L and B.M
8	22	Dumpy level
	23	Autolevel
	24	Revision
9	25	Temporary adjustment and permanent adjustment of dumpy level by two peg method
	26	method.
	27	Concept of BS, FS, IS and calculation of RL
10	28	Level Book and Height of instrument method & Rise and fall method
	29	Arithmetic checks, problem on reduction of levels, fly levelling, check leveling
	30	profile levelling (L-section and X-section)
11	31	errors in levelling, permissible limits, reciprocal leveling.
	32	Computations of Areas of regular figures and irregular figures. Simpson's rule
	33	prismatic formula and graphical method use of planimeter
12	34	Purpose of plane table surveying, equipment used in plane table survey
	35	Setting of a plane table
	36	Methods of plane table surveying
13	37	Concept of Two point and Three point problems
	38	Errors in plane table survey and precautions to control them. Testing and adjustments
	39	Revision