

Dicipline:	civil	Semester: 4th	Name of the Teaching Faculty	Ashutosh Bhal
Subject:	Survey - I	No of Days/Week Class Allotted: 05	Semester From date: _____ To date _____	No. of Weeks:
WEEK	Class Day	Theory Topics		
	1st	Introduction to surveying, Defination and aims and objectives		
	2nd	Principles of survey - plane and geodetic surveying and accuracy measurement		
	3rd	Instruments, Types of tape and chain errors and mistakes in line measurement		
	4th	Corrections to measured length due to incorrect length, temp, variation pull corrections ^{pull correction} & its problem.		
	5th	Variation pull correction problem no - 2		
	1st	chaining and chain surveying - Equipments & accessories for direct & indirect ^{chaining} its error ^{surveying}		
	2nd	Method of chaining - flat ground, sloping ground, stepping method, clinometer structure ^{& use}		
	3rd	Slope correction and its problems. setting perpendicular with chain & tape, Type of obstacles		
	4th	Numerical problems on chaining across obstacles purpose of chain surveying		
	5th	chain surveying obstacles Problem - 2 no		
	1st	Principle of chain surveying, concept of tie line & selection of survey stations		
	2nd	Base line, the lines, check lines, offsets perpendicular & oblique, necessity ^{for setting} instrument		
	3rd	Errors in chain surveying - compensating and accumulative errors causes & remedies permutation for chain surveying		
	4th	Measurement of angles with chain, tape, and compass - Type, structure, parts merit, demerits testing & adjustment ^{compass}		
	5th			

1st	Revision class:- Method of chaining
2nd	Designation of angles - concepts of Meridians, concept of bearing - WCB, QB, RB
3rd	Numerical problem on conversion of bearing use of compass - centering, leveling
4th	Effect of earth's magnetic and its numerical problems
5th	Numerical problems
1st	Errors in angle measurement with compass - sources & remedies
2nd	Traversing - open & closed principle and methods & its numerical problems
3rd	Local attraction - causes, detection errors, corrections & its numericals
4th	Errors in compass traversing - sources & remedies - Bowditch's correction gives stable
5th	errors in compass traversing:- sources & remedies
1st	Map reading cadastral maps & nomenclature study of direction, scale, grids
2nd	Study of signs and symbols, cadastral map preparation methodology
3rd	benique identification number of parcel positions of existing control points its types
4th	Adjacent boundaries and features, topology creation and verification
5th	Topology creation and verification

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WEEK	Class Day	Theory Topics
	1st	Plane table Surveying - objectives, principles use of PTS. Instrument and accessories
	2nd	Revision previous numerical problems
	3rd	Method of PTS - Radiation, Intersection, Traversing, Resection
	4th	Two point and three point problems statement
	5th	Problem no-2 (two point & three point)
	1st	Errors in PTS, corrections and precautions in PTS
	2nd	Theodolite Surveying and traversing purposes and destinations, Types
	3rd	Transit theodolite - Descriptions, component parts, fundamental of theodolite concept readings
	4th	Temporary adjustment of theodolite concept of traversing
	5th	↳ class test →
	1st	Measurement of magnetic bearing, deflection angle, direct angle, setting out angle
	2nd	Errors in theodolite observations, Method of theodolite traversing with inclined method & its numerical problems
	3rd	Methods of theodolite traversing with deflection bearing method & its numerical problems
	4th	Plotting the traverse by coordinate method check for open and closed traverse
	5th	↳ class test →

of chaining
concepts of
WB, EP, PS
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: <u>Survey I</u>		No of Days/Week Class Allotted: <u>05</u>	Semester From date: _____ To _____ date _____	No of Weeks: _____
WK	Class Day	Theory Topics		
	1st	Definition of contours; Concept & characteristics; Methods.		
	2nd	Plotting contour maps; Interpretation of contour maps; Top sheets.		
	3rd	Use of contour maps on civil engineering projects - Drawing C/S from contour map.		
	4th	Locating proposal routes of roads/railways/canal on a contour map. <u>computation of volume of earthwork.</u>		
	5th	← Class test →		
	1st	Map Interpretation - Interpret Human & economic Activities (i.e. settlement, communication, land use).		
	2nd	Interpret - physical features (i.e. relief, drainage pattern etc.).		
	3rd	Problem Solving & Decision making		
	4th	Computation of area and volume - Determination of areas. <u>computation of area plans.</u>		
	5th	Calculating of area by using ordinate rule.		
	1st	Trapezoidal rule (Calculation of area)		
	2nd	Calculation of area by using Simpson's rule.		
	3rd			
	4th			
	5th			