GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2022/23 (SUMMER)

Discipline : CIVIL ENGG.		Semester: 6th Sem		Name of the Teaching Faculty :AMAN MOHANTY
Subject : LS-I		No. of Days / per week class allotted : 03		Semester From date :02.03.2023 To Date : 23.05.2023
MONTH	Week	Day	Unit	Topics
MARCH	1ST			5.PLANE TABLE SURVEYING
		2nd	UNIT-5	Objectives, principles and use of plane table surveying
		3rd		Instruments & accessories used in plane table surveying
	2nd	4th		HOLI
		5th		Methods of plane table surveying – (1) Radiation, (2) Intersection
		6th		Methods of plane table surveying – (3) Traversing, (4) Resection.
	3rd	4th		Statements of Two Point problem,Three point problems
		5th		Question Discussion,Quiz
		6th		Errors in plane table surveying and their corrections
	4th	4th		precautions in plane table surveying,Question Discussion
			UNIT-6	6.THEODOLITE SURVEYING AND TRAVERSING
		5th		Purpose and definition of theodolite surveying
		6th		Transit theodolite- Description of features, component parts, Fundamental axes of a theodolite
	5th	4th		concept of vernier, reading a vernier, Temporary adjustment of theodolite
		5th		RAMA NAVAMI
		6th		Concept of transiting –Measurement of horizontal and vertical angles
APRIL	2nd	4th		Measurement of magnetic bearings, deflection angle, direct angle, setting out angles, prolonging a straight line with theodolite, Errors in Theodolite observations.
		5th		Methods of theodolite traversing with – inclined angle method, deflection angle method, bearing method
		6th		GOOD FRIDAY
	3rd	4th		Plotting the traverse by coordinate method, Checks for open and closed traverse
		5th		Traverse computation – consecutive coordinates, latitude and departure, Gale's traverse
		6th		DR.BR AMBEDKAR JAYANTI
	4th	4th		CLASS TEST-1
		5th		Numerical problems on omitted measurement of lengths & bearings
		6th		Closing error – adjustment of angular errors, adjustment of bearings, numerical problems
	5th	4th		Balancing of traverse – Bowditch's method, transit method, graphical method, axis method ,Calculation of area of closed traverse.
		5th		INTERNAL EXAM
				7.LEVELLING AND CONTOURING

		6th		Definition and Purpose and types of leveling– concepts of level surface, Horizontal surface, vertical surface, datum, R. L., B.M
		3rd		Instruments used for leveling, concepts of line of collimation, axis of bubble tube, axis of telescope, Vertical axis
		4th		**BUDDHA PURNIMA**
	2nd	5th		Levelling staff – Temporary adjustments of level, taking reading with level, concept of bench mark, BS, IS, FS, CP, HI
		4th		Field data entry – level Book – height of collimation method and Rise & Fall method, comparison, Numerical problems on reduction of levels applying both methods, Arithmetic checks,Effects of curvature and refraction, numerical problems on application of correction,
		5th	**UNIT-7**	Effects of curvature and refraction, numerical problems on application of correction,Reciprocal leveling – principles, methods, numerical problems, precise leveling,Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels
		6th		Definitions, concepts and characteristics of contours, Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets
	3rd	4th		Use of contour maps on civil engineering projects – drawing cross- sections from contour maps, locating proposal routes of roads / railway / canal on a contour map, computation of volume of earthwork from contour map for simple structure,Map Interpretation: Interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.), Interpret Physical landform (i.e.:Relief, Drainage Pattern etc.), Problem Solving and Decision Making
				8.COMPUTATION OF AREA & VOLUME
		5th	**UNIT-8**	Determination of areas, computation of areas from plans,Calculation of area by using ordinate rule, trapezoidal rule, Simpson's rule
		6th		Calculation of volumes by prismoidal formula and trapezoidal formula, Prismoidal corrections, curvature correction for volumes
	4th	2nd		Previous year Question Discussion

REFERENCE BOOKS:
Surveying & Levelling-N.N Basak,TMH Publishing
A text Book of Surveying &Levelling-R. Agor,Khanna Publishers