

P.C.I.E.T., CHHENDIPADA, DIST- ANGUL

THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH : CIVIL ENGG. SEMESTER : 4TH, SECTION :- (C1 & C2)	NAME OF THE FACULTY : (1) ER. BABITA SAHU (H.O.D., CIVIL ENGG.) (2) ER. SIDHANTA SEKHAR MAHAR (LECT. IN CIVIL ENGG.)
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SEMESTER FROM DT. 13.02.2023 TO 23.05.2023	SUBJECT: - STRUCTURAL DESIGN – I (TH-1)
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CLASS ALLOTTED / WEEK: 05 PERIODS				
Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	UNIT-1 : Working stress method (WSM)	5		
	Objectives of design and detailing & different methods of design of concrete structure.	1	FEBRUARY	14.02.2023
	Introduction to reinforced concrete, grades of concrete and steel, advantages of reinforced cement concrete, concept of under reinforced, balanced & over reinforced section	1		15.02.2023
	Assumptions in working stress method, derivation of formula for balanced design	1		16.02.2023
	Problem discussion on finding out the design constants and analysis of the section using WSM	1		17.02.2023
	Problem discussion on design of the section using WSM	1		20.02.2023
	2	UNIT-2 : Philosophy of Limit State Method (LSM)	3	
definition, advantages of LSM over WSM, Limit state of collapse & serviceability, Characteristic strength of material		1		21.02.2023
characteristic load, partial safety factor, design load, loading on structure, I.S specification regarding spacing of reinforcement in slab		1		22.02.2023
IS specification regarding cover to reinforcement and minimum reinforcement in slab, beam & column, concept of lapping, anchorage, effective span for beam and slab.		1		23.02.2023
3	UNIT - 3 : Analysis and Design of Single and Double Reinforced Sections (LSM)	15		
	Assumptions, idealised stress - strain curve for steel and concrete	1		24.02.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Design stress block parameter, derivation of formula for singly reinforced rectangular beam	1		27.02.2023
	Finding out M.R, limiting M.R, percentage of steel and limiting percentage of steel	1		28.02.2023
	Problem discussion on finding out the type of the beam	1	MARCH	01.03.2023
	Problem discussion on analysis of singly reinforced section	1		02.03.2023
	Problem discussion on analysis of singly reinforced section	1		03.03.2023
	CLASS TEST - I	1		06.03.2023
	Problem discussion on design of singly reinforced beam	1		09.03.2023
	Problem discussion on design of singly reinforced beam	1		10.03.2023
	Necessity of providing doubly reinforced beam, stress & strain diagram, finding out depth of N.A and moment of resistance	1		13.03.2023
	Finding out the area of tensile & compression reinforcement, problem discussion on analysis of doubly reinforced beam	1		14.03.2023
	Problem discussion on analysis of doubly reinforced beam	1		15.03.2023
	Problem discussion on analysis of doubly reinforced beam	1		15.03.2023
	Problem discussion on design of doubly reinforced beam	1		16.03.2023
	REVISION	1		
	UNIT - 4 : Shear, Bond and Development Length (LSM)	4		
4	Nominal shear stress, design shear strength of concrete, maximum shear stress, criteria of minimum shear reinforcement and different forms of shear reinforcement	1		17.03.2023
	Problem discussion on design of shear reinforcement in beam	1		20.03.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Concept of bond, types of bond, bond stress, development length for tension and compression, anchorage values for hook and bend.	1		21.03.2023
	Problem discussion on checking of development length criteria in beams.	1		22.03.2023
	UNIT - 5 : Analysis and design of T – Beam (LSM)	15		
	General features, advantages, effective width of flange	1		23.03.2023
	Finding out position of neutral axis, Analysis of singly reinforced T – beam, stress-strain diagram	1		24.03.2023
	Problem discussion on finding moment of resistance of a T- beam section with N.A lies within the flange.	1		27.03.2023
	CLASS TEST - II	1		28.03.2023
	Analysis of a T – beam section	1		29.03.2023
	Design of a T – beam section	1		31.03.2023
5	Derivation of formula for T – beam section when the N.A lies in the web	1	APRIL	03.04.2023
	Problem discussion on design of simply supported beam along with provision of check for flexure	1		04.04.2023
	Design of simply supported beam along with check for shear and development length.	1		05.04.2023
	Design of simply supported beam along with check for deflection and detailing of the beam	1		06.04.2023
	Problem discussion on analysis of the T – Beam section	1		10.04.2023
	Problem discussion on design of the T – Beam section	1		10.04.2023
	Problem discussion on design of the T – Beam section	1		11.04.2023
	Revision	1		12.04.2023
	CLASS TEST - III	1		13.04.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
6	UNIT - 6 : Analysis and Design of Slab and Stair case (LSM)	15		
	Concept of one way and two way spanning slab, reinforcement requirement, shear stress, spacing of reinforcement, cover and development length criteria for slab	1		17.04.2023
	Design of simply supported one way slab with design of flexure	1		18.04.2023
	Design of slab with check for shear and development length.	1		19.04.2023
	Design of slab with check for deflection and detailing of the slab.	1		20.04.2023
	Design of cantilever slab with check for flexure, check for shear, development length, deflection and detailing of the slab	1		21.04.2023
	Design of two way simply supported slab- moment and shear force calculation	1		21.04.2023
	Design of two way slab with corners free to lift – design of flexure	1		24.04.2023
	Design of two way slab with provision of check for shear and development length	1		25.04.2023
	Design of two way slab with check for deflection and detailing of the slab	1		26.04.2023
	Types of staircase, structural classification of staircase, Loads and their effect on stair slab	1		27.04.2023
	Design of stair slab spanning longitudinally – design of main bar, distribution bar and detailing of the staircase	1		28.04.2023
	Design of a waist slab type dog legged stair case – load and moment calculation	1	MAY	01.05.2023
	Design of a waist slab type dog legged stair case – design of main bar, distribution bar and detailing of the slab	1		02.05.2023
	Problems discussion of slabs	1		02.05.2023
Problems discussion of stair case.	1		03.05.2023	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	UNIT - 7 : Design of axially loaded columns and footing (LSM)	18		
	definition and classification of column, assumptions in limit state of collapse	1		04.05.2023
	Effective length of column, specification for longitudinal & transverse reinforcement.	1		04.05.2023
	Minimum eccentricity and ultimate load carrying capacity of column	1		08.05.2023
	Design of a short axially loaded square column and detailing	1		09.05.2023
	Design of a short axially loaded square column and detailing problems	1		09.05.2023
	Design of a short axially loaded rectangular column and detailing	1		10.05.2023
	Design of a short axially loaded rectangular column and detailing problems	1		11.05.2023
	Design of a short axially loaded circular column and detailing	1		11.05.2023
7	Design of a short axially loaded circular column and detailing problems	1		12.05.2023
	Definition, Types of foundation , Bearing capacity of soil & depth of foundation, determination of area of footing from load and bearing capacity of soil	1		15.05.2023
	Analysis of foundation – critical section for bending moment and shear force, transfer of load at base of column	1		16.05.2023
	Design of isolated square footing for column – design of flexure	1		17.05.2023
	Design of isolated square footing for column – shear one way action and two way action	1		18.05.2023
	Design of isolated square footing for column – development length , load transfer from column to footing & detailing	1		18.05.2023
	Design of isolated square footing for column – design of flexure	1		22.05.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Design of isolated square footing for column – shear one way action and two way action, development length & detailing	1		22.05.2023
	Problems on isolated square footing	1		23.05.2023
	Revision	1		23.05.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH : CIVIL ENGG. SEMESTER : 4TH, SECTION :- (C1 & C2)

NAME OF THE FACULTY : (1) ER. SWARNAPRAVA PARIDA
(2) ER. NANDINI PRADHAN (LECT. IN CIVIL ENGG.)

SEMESTER FROM : 13.02.2023 to 23.05.2023

THEORY SUBJECT : HYDRAULIC & IRRIGATION ENGINEERING (TH-2)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	UNIT-1 : HYDROSTATICS	12	February	
	Introduction to fluid, Properties of fluid	1		14.02.2023
	Discussion on properties of fluid i.e. Surface tension, capillarity, viscosity	1		15.02.2023
	Discussion on properties of fluid Density, specific gravity of fluids.	1		16.02.2023
	Uses of fluid.	1		17.02.2023
	Discussion on water Pressure and its measurements	1		17.02.2023, 20.02.2023
	Intensity of pressure, atmospheric Pressure, gauge pressure	1		20.02.2023
	Discussion on Absolute pressure and vacuum pressure;	1		21.02.2023
	Relationship between atmospheric pressure, absolute pressure and gauge pressure;	1		21.02.2023, 22.02.2023
	What is pressure head & pressure gauges?	1		22.02.2023, 23.02.2023
	Pressure exerted on an immersed surface: Total pressure, resultant pressure,	1		23.02.2023
	Expression for total pressure exerted on horizontal & vertical surface.	1		24.02.2023
Problem based on total pressure, gauge pressure, resultant pressure, absolute pressure, pressure head and pressure gauges	1		24.02.2023, 27.02.2023	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	UNIT-2 : KINEMATICS OF FLUID FLOW	18		
	Equation of continuity of liquid flow,	1		28.02.2023
	Total energy of a liquid in motion i.e. potential, kinetic & pressure,	1	March	28.02.2023, 01.03.2023
	Bernoulli's theorem and its limitations. Practical applications of Bernoulli's equation.	1		01.03.2023, 02.03.2023, 03.03.2023
	Flow over Notches and Weirs	1		06.03.2023
	Discussion on Notches, Weirs, types of notches and weirs	1		06.03.2023, 09.03.2023
	Discharge through different types of notches	1		09.03.2023, 10.03.2023
	Discharge through different types of weirs	1		10.03.2023
	Problems regarding discharge through notches & weirs.	1		13.03.2023, 14.03.2023
	Applications of discharge through notches & weirs	1		14.03.2023, 15.03.2023
2	Types of flow through the pipes: uniform and non uniform; laminar and turbulent; steady and unsteady flow	1		15.03.2023, 16.03.2023
	Reynold's number and its application	1		16.03.2023, 17.03.2023
	Losses of head of a liquid flowing through pipes	1		17.03.2023
	Problems regarding lossess of head of a liquid through pipes.	1		20.03.2023, 21.03.2023
	Different types of major and minor losses.	1		21.03.2023
	Simple numerical problems on losses due to friction using Darcy's equation	1		22.03.2023, 24.03.2023
	Total energy lines & hydraulic gradient lines.	1		24.03.2023
	Flow through the Open Channels: Types of channel sections-rectangular, trapezoidal and circular, discharge formulae.	1		27.03.2023, 28.03.2023
	Chezy's and Manning's equation, Best economical section.	1		28.03.2023, 29.03.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
3	UNIT - 3 : PUMPS	5		
	Type of pumps. Centrifugal pump & Reciprocating pump	1		29.03.2023, 31.03.2023
	Introduction to centrifugal pump, Basic principles, operation	1	APRIL	31.03.2023, 03.04.2023
	Discharge of centrifugal pump. Horse power & efficiency of centrifugal pump.	1		03.04.2023
	Introduction to Reciprocating pumps & its types	1		04.04.2023
	Operation, discharge, horse power & efficiency of Reciprocating pumps	1		04.04.2023, 05.04.2023
4	UNIT - 4 : Hydrology	4		
	Introduction to Hydrology. Hydrology Cycle	1		05.04.2023, 06.04.2023
	Rainfall : types, intensity, hyetograph	1		06.04.2023
	Estimation of rainfall, rain gauges, Its types	1		10.04.2023
	Concept of catchment area, types, run-off, estimation of flood discharge by Dicken's and Ryve's formulae	1		10.04.2023, 11.04.2023
5	UNIT - 5 : Water Requirement of Crops	4		
	Definition of irrigation, necessity, benefits of irrigation, types of irrigation.	1		11.04.2023, 12.04.2023
	Different types of Crop season	1		12.04.2023, 13.04.2023
	Duty, Delta and base period their relationship, overlap allowance, kharif and rabi crops	1		13.04.2023
	Gross command area, culturable command area, Intensity of Irrigation, irrigable area, time factor, crop ratio	1		17.04.2023

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6	UNIT - 6 : FLOW IRRIGATION	7		
	Introduction to Canal irrigation & types of canals	1		18.04.2023
	Discussion on Loss of water in canals	1		18.04.2023, 19.04.2023
	Perennial irrigation	1		19.04.2023
	Different components of irrigation canals and their functions	1		20.04.2023
	Sketches of different canal cross-sections	1		20.04.2023, 21.04.2023
	Classification of canals according to their alignment, Various types of canal lining	1		21.04.2023
	Advantages and disadvantages of canal lining.	1		24.04.2023
7	UNIT - 7 : WATER LOGGING AND DRAINAGE	2		
	Causes and effects of water logging,	1		24.04.2023, 25.04.2023
	Detection, prevention and remedies of water logging.	1		25.04.2023
8	UNIT - 8 : DIVERSION HEAD WORKS AND REGULATORY STRUCTURES	8		
	Necessity of diversion head works.	1		26.04.2023
	Objectives of diversion head works.	1		26.04.2023
	Weirs & Barrages	1		27.04.2023
	General layout and Different parts of Barrages	1		27.04.2023, 28.04.2023
	Functions of different parts of barrage	1		28.04.2023
	Silting and scouring & How it occurs?	1	MAY	01.05.2023
	Functions of regulatory structures	1		01.05.2023, 02.05.2023
	CLASS TEST - I	1		02.05.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	UNIT - 9 : CROSS DRAINAGE WORKS	7		
	Introduction to Cross drainage works.	1		03.05.2023
	Necessity of Cross drainage works	1		03.05.2023, 04.05.2023
	Functions of Cross drainage works	1		04.05.2023
9	Different types of CD-works. Aqueduct, siphon aqueduct, super-passage, level crossing	1		04.05.2023, 08.05.2023
	Concept of aqueduct & Syphon aqueduct with help of neat sketch	1		08.05.2023, 09.05.2023
	Concept of Super Passage & Level crossing with help of neat sketch	1		10.05.2023
	Revision	1		10.05.2023
	UNIT - 10 : DAMS	8		
	Necessity of storage reservoirs & types of dams	1		11.05.2023
	Earthen dams & its Types,	1		12.05.2023
	Causes of failure of Earthen dam and protection measures.	1		15.05.2023
10	Gravity dam & its types	1		16.05.2023
	Causes of failure of Gravity dam and protection measures.	1		17.05.2023
	Spillways & its Types (With Sketch)	1		18.05.2023
	Necessity of Spillways	1		22.05.2023
	CLASS TEST - II	1		23.05.2023

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THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH : CIVIL ENGG. SEMESTER : 4TH, SECTION :- (C1 & C2)

NAME OF THE FACULTY : (1) ER. SIBANI SAHU, (2) ER. PRITAM SAGAR SAHOO, (3) ER. SUMANTA SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM : 13.02.2023 to 23.05.2023

THEORY SUBJECT : LAND SURVEYING - I (TH-3)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	UNIT - 1 : INTRODUCTION TO SURVEYING, LINEAR MEASUREMENTS	7	February	
	Surveying: Definition, Aims and objectives	1		14.02.2023
	Principles of survey-Plane surveying- Geodetic Surveying- Instrumental surveying.	1		15.02.2023
	Precision and accuracy of measurements, instruments used for measurement of distance,	1		16.02.2023
	Types of tapes and chains.	1		17.02.2023
	Errors and mistakes in linear measurement – classification, Sources of errors and remedies.	1		20.02.2023
	Corrections to measured lengths due to-incorrect length, temperature variation, pull, sag,	1		20.02.2023
	Numerical problem applying corrections.	1		21.02.2023 & 22.02.2023
2	UNIT - 2 : CHAINING & CHAIN SURVEYING	7		
	Equipment and accessories for chaining	1		22.02.2023 & 23.02.2023
	Ranging – Purpose, signaling, direct and indirect ranging, Line ranger – features and use, error due to incorrect ranging.	1		23.02.2023
	Methods of chaining –Chaining on flat ground, Chaining on sloping ground – stepping method, Clinometer-features and use, slope correction.	1		24.02.2023
	Setting perpendicular with chain & tape, Chaining across different types of obstacles –Numerical problems on chaining across obstacles.	1		27.02.2023
Purpose of chain surveying, Its Principles, concept of field book. Selection of survey stations, base line, tie lines, Check lines.	1		28.02.2023	

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Offsets – Necessity, Perpendicular and Oblique offsets, Instruments for setting offset – Cross Staff, Optical Square.	1		28.02.2023
	Errors in chain surveying – compensating and accumulative errors causes & remedies, Precautions to be taken during chain surveying.	1	March	01.03.2023
	UNIT - 3 : ANGULAR MEASUREMENT & COMPASS SURVEYING	12		
	Measurement of angles with chain, tape & compass	1		01.03.2023 & 02.03.2023
	Compass – Types, features, parts, merits & demerits, testing & adjustment of compass	1		02.03.2023
	Designation of angles- concept of meridians – Magnetic, True, arbitrary; Concept of bearings – Whole circle bearing, Quadrantal bearing	1		03.03.2023
	Reduced bearing, suitability of application Numerical problems on conversion of bearings	1		06.03.2023
3	Use of compasses – setting in field-centering, leveling, taking readings, concepts of Fore bearing, Back Bearing	1		09.03.2023
	Numerical problems on computation of interior & exterior angles from bearings.	1		09.03.2023
	Errors in angle measurement with compass – sources & remedies	1		10.03.2023
	Principles of traversing – open & closed traverse, Methods of traversing.	1		10.03.2023
	Local attraction – causes, detection, errors, corrections, Numerical problems of application of correction due to local attraction.	1		13.03.2023 & 14.03.2023
	Errors in compass surveying – sources & remedies.	1		15.03.2023
	Plotting of traverse – check of closing error in closed & open traverse,	1		15.03.2023
	Bowditch's correction, Gales table	1		16.03.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
4	UNIT - 4 : MAP READING CADASTRAL MAPS & NOMENCLATURE	7		
	Study of direction, Scale, Grid Reference and Grid Square.	1		16.03.2023
	Study of Signs and Symbols	1		17.03.2023
	Cadastral Map Preparation Methodology	1		17.03.2023
	Unique identification number of parcel	1		20.03.2023
	Positions of existing Control Points and its types	1		20.03.2023
	Adjacent Boundaries and Features, Topology Creation and verification.	1		20.03.2023
	CLASS TEST - I	1		21.03.2023
5	UNIT - 5 : PLANE TABLE SURVEYING	7		
	Objectives, principles and use of plane table surveying.	1		22.03.2023
	Instruments & accessories used in plane table surveying.	1		22.03.2023
	Methods of plane table surveying – (1) Radiation, (2) Intersection, (3) Traversing, (4) Resection	1		23.03.2023
	Statements of Two point problem.	1		24.03.2023
	Statements of Three point problem.	1		24.03.2023
	Errors in plane table surveying and their corrections, precautions in plane table surveying.	1		27.03.2023
	Errors in plane table surveying and their corrections, precautions in plane table surveying.	1		27.03.2023
6	UNIT - 6 : THEODOLITE SURVEYING AND TRAVERSING	15		
	Purpose and definition of theodolite surveying	1		28.03.2023
	Transit theodolite- Description of features, component parts, Fundamental axes of a theodolite,	1		29.03.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Concept of vernier, reading a vernier, Temporary adjustment of theodolite	1		29.03.2023
	Concept of transiting –Measurement of horizontal and vertical angles.	1		31.03.2023
	Measurement of magnetic bearings, deflection angle, direct angle, setting out angles, prolonging a straight line with theodolite.	1	April	31.03.2023 & 3.04.2023
	Errors in Theodolite observations.	1		3.04.2023
	Methods of theodolite traversing with – inclined angle method, deflection angle method, bearing method	1		4.04.2023
	Plotting the traverse by coordinate method, Checks for open and closed traverse.	1		4.04.2023
	Traverse computation – consecutive coordinates, latitude and departure, Gale's traverse table,	1		5.04.2023
	Numerical problems on omitted measurement of lengths & bearings	1		6.04.2023
	Closing error – adjustment of angular errors, adjustment of bearings	1		10.04.2023
	Numerical problems based on bearing & adjustment of angular errors	1		10.04.2023 & 11.04.2023
	Balancing of traverse – Bowditch's method,	1		11.04.2023
	Balancing of traverse - Transit method, graphical method, axis method	1		12.04.2023
	Calculation of area of closed traverse & Numerical Problems.	1		12.04.2023 & 13.04.2023
	UNIT - 7 : LEVELLING AND CONTOURING	15		
7	Definition and Purpose and types of leveling– concepts of level surface, Horizontal surface, vertical surface, datum, R. L., B.M.	1		17.04.2023
	Instruments used for leveling, concepts of line of collimation, axis of bubble tube, axis of telescope, Vertical axis.	1		18.04.2023
	Levelling staff – Temporary adjustments of level, taking reading with level, concept of bench mark, BS, IS, FS, CP, HI.	1		18.04.2023 & 19.04.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Field data entry – level Book – height of collimation method and Rise & Fall method, comparison,	1		19.04.2023
	Numerical problems on reduction of levels applying both methods, Arithmetic checks.	1		20.04.2023 & 21.04.2023
	Effects of curvature and refraction, numerical problems on application of correction.	1		21.04.2023, 24.04.2023
	Reciprocal leveling – principles, methods, numerical problems, precise leveling.	1		24.04.2023, 25.04.2023
	Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels.	1		25.04.2023, 26.04.2023
	Definitions, concepts and characteristics of contours	1		27.04.2023
	Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets.	1		28.04.2023
	Use of contour maps on civil engineering projects – drawing cross-sections from contour maps,	1	May	01.05.2023
	Locating proposal routes of roads / railway / canal on a contour map, computation of volume of earthwork from contour map for simple structure.	1		02.05.2023 & 03.05.2023
	Map Interpretation: Interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.)	1		04.05.2023
	Interpret Physical landform (i.e.: Relief, Drainage Pattern etc.), Problem Solving and Decision Making	1		08.05.2023 & 09.05.2023
	Revision	1		10.05.2023 & 11.05.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	UNIT - 8 : COMPUTATION OF AREA & VOLUME	5		
	Determination of areas, computation of areas from plans	1		12.05.2023
	Calculation of area by using ordinate rule, trapezoidal rule, Simpson's rule.	1		15.05.2023 & 16.05.2023
8	Calculation of volumes by prismoidal formula and trapezoidal formula	1		17.05.2023 & 18.05.2023
	Prismoidal corrections, curvature correction for volumes.	1		18.05.2023
	Revision & Class Test - I	1		22.05.2023 & 23.05.2023

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P.C.I.E.T., CHHENDIPADA, DIST- ANGUL
THEORY LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH : CIVIL ENGG. SEMESTER : 4TH, SECTION :- (C1 & C2)

NAME OF THE FACULTY : (1) ER. SUNIL KUMAR SAHU
 (2) ER. SIBANI SAHU (LECT. IN CIVIL ENGG.)

SEMESTER FROM : 13.02.2023 to 23.05.2023

THEORY SUBJECT : HIGHWAY ENGINEERING (TH-4)

CLASS ALLOTTED /WEEK : 05 PERIODS

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
1	UNIT-1 : Introduction	5	February	
	Importance of Highway transportation: importance organizations like Indian roads congress,	1		14.02.2023
	Ministry of Surface Transport, Central Road Research Institute.	1		15.02.2023
	Functions of Indian Roads Congress	1		16.02.2023
	IRC classification of roads	1		17.02.2023
	Organisation of state highway department	1		17.02.2023
2	UNIT-2 :Road Geometrics	20		
	Glossary of terms used in geometric	1		20.02.2023
	Importance of geometric design	1		21.02.2023
	Discussion on right of way, formation width	1		22.02.2023
	4oad margin, road shoulder, carriage way,	1		22.02.2023
	Side slopes, kerbs, formation level, camber and gradient	1		23.02.2023
	Design and average running speed,	1		23.02.2023
	Problems based on sight distance	1		24.02.2023 & 27.02.2023
	Problems based on sight distance	1		27.02.2023 & 28.02.2023
	Stopping and passing sight distance	1	March	01.03.2023
	Problems based on SSD	1		01.03.2023 & 02.03.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	Problems based on SSD	1		02.03.2023 & 03.03.2023
	Necessity of curves,	1		03.03.2023
	Horizontal and vertical curves	1		06.03.2023
	Transition curves	1		09.03.2023
	Super elevation,	1		09.03.2023 & 10.03.2023
	Methods of providing super – elevation	1		10.03.2023
	Problems based on superelevation	1		13.03.2023 & 14.03.2023
	Problems based on superelevation	1		14.03.2023
	Revision	1		15.03.2023
	Class test	1		16.03.2023
	Unit-3 : Road Materials	9		
	Difference types of road materials in use: soil, aggregates, and binders	1		17.03.2023
	Difference types of road materials in use: soil, aggregates, and binders	1		17.03.2023
	Function of soil as highway Subgrade	1		20.03.2023
	California Bearing Ratio: methods of finding CBR valued in the laboratory and at site and their significance	1		21.03.2023 & 22.03.2023
	California Bearing Ratio: methods of finding CBR valued in the laboratory and at site and their significance	1		22.03.2023 & 23.03.2023
	Testing aggregates: Abrasion test,	1		24.03.2023
	impact test, crushing strength test,	1		27.03.2023
	water absorption test & soundness test	1		28.03.2023 & 29.03.2023
	Revision	1		29.03.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
	UNIT-4 : Road Pavements	13		
	Road Pavement: Flexible and rigid pavement, their merits and demerits,	1		31.03.2023
	typical cross-sections, functions of various components Flexible pavements:	1	April	03.04.2023 & 04.04.2023
	Sub-grade preparation: Setting out alignment of road, setting out bench marks, control pegs for embankment and cutting,	1		04.04.2023 , 05.04.2023
	Borrow pits, making profile of embankment, construction of embankment, compaction, stabilization, preparation of subgrade, methods of checking camber,	1		05.04.2023, 06.04.2023, 10.04.2023
	Gradient and alignment as per recommendations of IRC, equipment used for subgrade preparation	1		10.04.2023 , 11.04.2023
4	Sub base Course: Necessity of sub base, stabilized sub base, purpose of stabilization	1		11.04.2023 , 12.04.2023
	Types of stabilization:- Mechanical stabilization,Lime stabilization	1		12.04.2023 , 13.04.2023
	Cement stabilization,Fly ash stabilization	1		13.04.2023
	Base Course: Preparation of base course, Brick soling, stone soling and metalling,	1		17.04.2023, 18.04.2023
	Water Bound Macadam and wet-mix Macadam, Bituminous constructions: Different types	1		18.04.2023, 19.04.2023
	Surfacing:Surface dressing(i) Premix carpet and (ii) Semi dense carpet	1		20.04.2023
	Bituminous concrete,Grouting	1		21.04.2023
	Rigid Pavements: Concept of concrete roads as per IRC specifications	1		21.04.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
5	UNIT-5 : Hill Roads:	7		
	Introduction:	1		24.04.2023
	Typical cross-sections showing all details of a typical hill road in cut, partly in cutting and partly in filling	1		24.04.2023 , 25.04.2023
	Typical cross-sections showing all details of a typical hill road in cut, partly in cutting and partly in filling	1		25.04.2023 , 26.04.2023
	Breast Walls,	1		27.04.2023
	Retaining walls,	1		27.04.2023 , 28.04.2023
	Different types of bends	1	May	28.04.2023, 01.05.2023
	Class test	1		01.05.2023
6	UNIT-6 :Road Drainage:	7		
	Necessity of road drainage work,	1		02.05.2023
	Cross drainage works	1		02.05.2023
	Surface and sub-surface drains and storm water drains.	1		03.05.2023
	Location, spacing and typical details of side drains,	1		03.05.2023 , 04.05.2023
	Side ditches for surface drainage, intercepting drains,	1		04.05.2023
	Pipe drains in hill roads,	1		08.05.2023
	details of drains in cutting embankment, typical cross sections.	1		08.05.2023

Sl. No.	CHAPTERS TO BE COVERED	NO OF PERIODS AS PER ACADEMIC CALENDAR	MONTH	ACTUAL PROGRESS OF THE COURSES MADE
7	UNIT-7 : Road Maintenance	7		
	Common types of road failures	1		09.05.2023
	Causes and remedies of road failures	1		09.05.2023, 10.05.2023
	Maintenance of bituminous road such as patch work and resurfacing	1		10.05.2023, 11.05.2023
	Maintenance of concrete roads – filling cracks, repairing joints,	1		11.05.2023, 12.05.2023
	Maintenance of shoulders (berm), maintenance of traffic control devices	1		12.05.2023, 15.05.2023
	Basic concept of traffic study, Traffic safety and traffic control signal	1		15.05.2023, 16.05.2023
	Revision	1		16.05.2023
8	UNIT-8 : Construction equipments:	7		
	Preliminary ideas of Hot mixing plant	1		17.05.2023
	Tipper, tractors (wheel and crawler) scraper, bulldozer,	1		17.05.2023, 18.05.2023
	Dumpers, shovels, graders, roller dragline	1		18.05.2023
	Asphalt mixer and tar boilers	1		22.05.2023
	Road pavers	1		22.05.2023
	Modern construction equipments for roads.	1		22.05.2023, 23.05.2023
	Class test	1		23.05.2023

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P.C.I.E.T., CHHENDIPADA, DIST- ANGUL
PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-CIVIL ENGG.

SEMESTER: 4TH

SECTION:- C1

NAME OF THE FACULTY : (1) ER. SUNIL KUMAR SAHU, (2) ER. SIBANI SAHU, (3) ER. SUMANTA SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT: LAND SURVEY PRACTICE-I (PR-1)

CLASS ALLOTTED /WEEK:- 07 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
1	Linear Measurements, Chaining and Chain Surveying:	February		
	1.1 Testing and adjusting of a metric chain.		01	20.02.2023
	1.2 Measurement of distance between two points (more than 2 chain lengths apart) with chain including direct ranging.		01	25.02.2023
	1.3 Setting out different types of triangles, given the lengths of sides with chain and tape.		01	25.02.2023
	1.4 Measurement of distance between two points by chaining across a sloped ground using stepping method and a clinometer.		01	27.02.2023
	1.5 Measurement of distance by chaining across a obstacles on the chain line i) a pond ii) a building iii) a stream/ river (in the event of non-availability of stream / river, a pond or lake may be taken, considering that chaining around the same is not possible.		01	27.02.2023
	1.6 Setting perpendicular offsets to various objects (at least 3) from a chain line using-(1) tape, (2) cross-staff, (3) optical square and comparing the accuracy of the 3 methods	March	01	04.03.2023
	1.7 Setting oblique offsets to objects (at least 3) from a chain using tape		01	04.03.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	Angular Measurement and Compass Surveying:			
2	2.1 Testing and adjustment of Prismatic compass and Surveyor's compass.		01	06.03.2023
	2.2 Measurement of bearings of lines (at least 3 lines) and determination of included angles using Prismatic compass and Surveyor's compass.		01	06.03.2023
	2.3 Setting out triangles (at least 2) with compass, given the length and bearing of one side and included angles.		01	11.03.2023
	2.4 Setting out a closed traverse of 5 sides, using prismatic compass, given bearing of one line and included angles and lengths of sides.		01	11.03.2023
	2.5 Conducting chain and compass traverse surveying in a given plot of area (2plots) and recording data in the field book.		01	13.03.2023
	Map Reading Cadastral Maps & Nomenclature:		01	13.03.2023
	3.1 Study of direction, Scale, Grid Reference and Grid Square		01	13.03.2023
	3.2 Study of Signs and Symbols		01	18.03.2023
3	3.3 Cadastral Map Preparation Methodology		01	18.03.2023
	3.4 Unique identification number of parcel		01	18.03.2023
	3.5 Positions of existing Control Points and its types		01	20.03.2023
	3.6 Adjacent Boundaries and Features, Topology Creation and verification.		01	20.03.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	Plane Table Surveying:			
4	4.1 Setting up of Plane Table and Plotting five points by radiation method and five inaccessible points by intersection method.		01	25.03.2023
	4.2 Conducting Plane Table surveying in a given plot of area by traversing (Atleast a 5-sided traverse and locating the objects)		01	25.03.2023
	4.3 Plane table surveying by Resection method (two point & three point problem method)		01	27.03.2023
	Theodolite Traversing:			
5	5.1 Measurement of horizontal angles (3nos.) by repetition and reiteration method and compare two methods		01	27.03.2023
	5.2 Prolonging a given straight line with the help of a theodolite	April	01	03.04.2023
	5.3 Determination of magnetic bearing of 3 given straight lines Setting out a closed traverse with 6 sides and entering the field data		01	03.04.2023
	5.4 Plotting the traverse from exercise 4.1 and checking the error of closure		01	08.04.2023
	5.5 Setting out an open traverse with 5 sides and entering the field data		01	08.04.2023
	5.6 Plotting the traverse from exercise 4.3 and checking the error of closure		01	10.04.2023
	Leveling and Contouring:			
6	6.1 Making temporary adjustments of Levels		01	10.04.2023
	6.2 Determining Reduced Levels of five given points taking staff readings with Levels.		01	15.04.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	6.3 Determining the difference of levels between two points (3 pairs of points / group) by taking staff readings from single set up of level, recording the readings in level book and application of Arithmetic check. (At least 3 change points must be covered)		01	15.04.2023
	6.4 Conduct Fly Leveling (Compound) between two distant points with respect to R.L. of a given B.M. and reduction of levels by both height of collimation and rise & fall method and applying Arithmetic check. (At least 3 change points must be covered)		01	17.04.2023
	6.5 Conduct profile leveling along the given alignment for a road / canal for 150m length, taking L. S. at every 15m and C. S. at 1m & 3m apart on both sides at every 30m interval and recording the data in level book and applying arithmetical check.		01	17.04.2023
	6.6 Locating contour points in the given area by direct method / indirect method		01	22.04.2023
	6.7 Conducting block level survey in the given area		01	22.04.2023
	6.8 Plotting and drawing contour map of a given area by radial method		01	24.04.2023
	6.9 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		01	24.04.2023
	Basics of Aerial Photography:			
7	7.1 Film		01	29.04.2023
	7.2. Focal Length		01	29.04.2023
	7.3. Scale		01	29.04.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	7.4. Types of Aerial Photographs (Oblique, Straight)	May	01	1.05.2023
8	Basics of Photogrammetry, DEM and Ortho Image Generation:			
	8.1 Classification of Photogrammetry		01	1.05.2023
	8.2 Aerial Photogrammetry		01	6.05.2023
	8.3 Terrestrial Photogrammetry		01	6.05.2023
	Photogrammetry Process:		01	8.05.2023
	8.4 Acquisition of Imagery using aerial and satellite platform		01	8.05.2023
	8.5 Control Survey		01	13.05.2023
	8.6 Geometric Distortion in Imagery		01	13.05.2023
	8.7 Application of Imagery and its support data		01	15.05.2023
	8.8 Orientation and Triangulation		01	15.05.2023
	8.9 Stereoscopic Measurement: X-parallax and Y-parallax		01	20.05.2023
8.10 DTM/DEM Generation		01	20.05.2023	
8.11 Ortho Image Generation		01	22.05.2023	

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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-CIVIL ENGG.

SEMESTER: 4TH

SECTION:- C1

NAME OF THE FACULTY : (1) ER. SIDHANTA SEKHAR MAHAR (3) ER. SUMANTA SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT: CIVIL ENGINEERING DRAWING – II (PR-2)

CLASS ALLOTTED /WEEK:- 06 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
1	Detailed Drawing of Culvert			
	Half foundation plan and half top plan, cross sectional elevation and longitudinal section of	FEBRUARY	03	Dt. 14.02.2023, Dt. 16.02.2023 Dt. 21.02.2023
	i) RCC Slab culvert with right angled wing wall	MARCH	03	Dt. 23.02.2023, Dt. 28.02.2023 Dt. 09.03.2023
	ii) Hume pipe culvert with splayed wing wall		03	Dt. 14.03.2023, Dt. 16.03.2023 Dt. 21.03.2023
2	Irrigation Structures			
	2.1 Detail drawing of a vertical drop type fall (Sarada Type) from given specifications	APRIL	04	Dt. 23.03.2023, Dt. 28.03.2023 Dt. 04.04.2023, Dt. 6.04.2023
	2.2 Drawing of a Drainage siphon from given specifications		04	Dt. 11.04.2023, Dt. 13.04.2023 Dt. 18.04.2023, Dt. 20.04.2023
3	Plumbing and Sanitary connections and fittings of a two roomed building	MAY	04	Dt. 25.04.2023, Dt. 27.04.2023 Dt. 02.05.2023, Dt. 04.05.2023
4	Detailed drawing of septic tank up to 50 users with soak pit and necessary connection from the water closet.		05	Dt. 09.05.2023, Dt. 11.05.2023 Dt. 16.05.2023, Dt. 18.05.2023 Dt. 23.05.2023

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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- CIVIL ENGINEERING

SEMESTER: 4TH

SECTION:- C1

NAME OF THE FACULTY:- (1) ER. SIBANI SAHU, (2) ER. PRITAM SAGAR SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT : TECHNICAL SEMINAR (PR-3)

CLASS ALLOTTED /WEEK:- 03 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
1.	Selection of Seminar topic related to Civil Engg.	FEB	03	Dt. 15.02.2023, Dt. 22.02.2023 Dt. 01.03.2023
2.	Discussion of objectives of the selected topic	MAR	02	Dt. 15.03.2023, Dt. 22.03.2023
3.	Preparation of power point presentation	APRIL	02	Dt. 29.03.2023, Dt. 06.04.2023
4.	Seminar Report writing skill.		02	Dt. 12.04.2023, Dt. 19.04.2023
5.	Seminar presentation of each student. Gr-C	MAY	02	Dt. 26.04.2023, Dt. 03.05.2023
6.	Seminar presentation of Group-C		02	Dt. 10.05.2023, Dt. 17.05.2023
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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- CIVIL ENGG.

SEMESTER: 4TH

SECTION : C1

NAME OF THE FACULTY : (1) ER. SIBANI SAHU, (2) ER. PRITAM SAGAR SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023


PRACTICAL SUBJECT: STUDENT CENTRED ACTIVITIES

CLASS ALLOTTED /WEEK :- 03 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
01	Library Study & Technical Quiz	FEBRUARY	02	Dt. 17.02.2023 Dt. 24.02.2023
02	Seminar On different technical topics	MARCH	02	Dt. 03.03.2023 Dt. 10.03.2023
03	Seminar On different Environment issues.		02	Dt. 17.03.2023 Dt. 24.03.2023
04	Personality development Class	APRIL	02	Dt. 31.03.2023 Dt. 21.04.2023
05	Cultural Activities	MAY	02	Dt. 28.04.2023 Dt. 12.05.2023

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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-CIVIL ENGG.

SEMESTER: 4TH

SECTION:- C2

NAME OF THE FACULTY : (1) ER. SUNIL KUMAR SAHU, (2) ER. SIBANI SAHU, (3) ER. SUMANTA SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT: LAND SURVEY PRACTICE-I (PR-1)

CLASS ALLOTTED /WEEK:- 07 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
1	Linear Measurements, Chaining and Chain Surveying:	February		
	1.1 Testing and adjusting of a metric chain.			20. 02.2023
	1.2 Measurement of distance between two points (more than 2 chain lengths apart) with chain including direct ranging.			25. 02.2023
	1.3 Setting out different types of triangles, given the lengths of sides with chain and tape.			25. 02.2023
	1.4 Measurement of distance between two points by chaining across a sloped ground using stepping method and a clinometer.			27. 02.2023
	1.5 Measurement of distance by chaining across a obstacles on the chain line i) a pond ii)a building iii) a stream/ river (in the event of non-availability of stream / river, a pond or lake may be taken, considering that chaining around the same is not possible.			27. 02.2023
	1.6 Setting perpendicular offsets to various objects (at least 3) from a chain line using-(1) tape, (2) cross-staff, (3) optical square and comparing the accuracy of the 3 methods	March		4. 03. 2023
	1.7 Setting oblique offsets to objects (at least 3) from a chain using tape			4. 03. 2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
2	Angular Measurement and Compass Surveying:			
	2.1 Testing and adjustment of Prismatic compass and Surveyor's compass.			6.03.2023
	2.2 Measurement of bearings of lines (at least 3 lines) and determination of included angles using Prismatic compass and Surveyor's compass.			6.03.2023
	2.3 Setting out triangles (at least 2) with compass, given the length and bearing of one side and included angles.			11.03.2023
	2.4 Setting out a closed traverse of 5 sides, using prismatic compass, given bearing of one line and included angles and lengths of sides.			11.03.2023
	2.5 Conducting chain and compass traverse surveying in a given plot of area (2plots) and recording data in the field book.			13.03.2023
3	Map Reading Cadastral Maps & Nomenclature:			
	3.1 Study of direction, Scale, Grid Reference and Grid Square			13.03.2023
	3.2 Study of Signs and Symbols			18.03.2023
	3.3 Cadastral Map Preparation Methodology			18.03.2023
	3.4 Unique identification number of parcel			18.03.2023
	3.5 Positions of existing Control Points and its types			20.03.2023
	3.6 Adjacent Boundaries and Features, Topology Creation and verification.			20.03.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	Plane Table Surveying:			
4	4.1 Setting up of Plane Table and Plotting five points by radiation method and five inaccessible points by intersection method.			25.03.2023
	4.2 Conducting Plane Table surveying in a given plot of area by traversing (Atleast a 5-sided traverse and locating the objects)			25.03.2023
	4.3 Plane table surveying by Resection method (two point & three point problem method)			27.03.2023
	Theodolite Traversing:			
5	5.1 Measurement of horizontal angles (3nos.) by repetition and reiteration method and compare two methods			27.03.2023
	5.2 Prolonging a given straight line with the help of a theodolite	April		03.04.2023
	5.3 Determination of magnetic bearing of 3 given straight lines Setting out a closed traverse with 6 sides and entering the field data			03.04.2023
	5.4 Plotting the traverse from exercise 4.1 and checking the error of closure			8.04.2023
	5.5 Setting out an open traverse with 5 sides and entering the field data			8.04.2023
	5.6 Plotting the traverse from exercise 4.3 and checking the error of closure			10.04.2023
	Leveling and Contouring:			
6	6.1 Making temporary adjustments of Levels			10.04.2023
	6.2 Determining Reduced Levels of five given points taking staff readings with Levels.			15.04.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOB TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	6.3 Determining the difference of levels between two points (3 pairs of points / group) by taking staff readings from single set up of level, recording the readings in level book and application of Arithmetic check. (At least 3 change points must be covered)			15.04.2023
	6.4 Conduct Fly Leveling (Compound) between two distant points with respect to R.L. of a given B.M. and reduction of levels by both height of collimation and rise & fall method and applying Arithmetic check. (At least 3 change points must be covered)			17.04.2023
	6.5 Conduct profile leveling along the given alignment for a road / canal for 150m length, taking L. S. at every 15m and C. S. at 1m & 3m apart on both sides at every 30m interval and recording the data in level book and applying arithmetical check.			17.04.2023
	6.6 Locating contour points in the given area by direct method / indirect method			22.04.2023
	6.7 Conducting block level survey in the given area			22.04.2023
	6.8 Plotting and drawing contour map of a given area by radial method			24.04.2023
	6.9 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			24.04.2023
7	Basics of Aerial Photography:			
	7.1 Film			29.04.2023
	7.2. Focal Length			29.04.2023
	7.3. Scale			29.04.2023

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
	7.4. Types of Aerial Photographs (Oblique, Straight)	May		1.05.2023
8	Basics of Photogrammetry, DEM and Ortho Image Generation:			
	8.1 Classification of Photogrammetry			1.05.2023
	8.2 Aerial Photogrammetry			6.05.2023
	8.3 Terrestrial Photogrammetry			6.05.2023
	Photogrammetry Process:			8.05.2023
	8.4 Acquisition of Imagery using aerial and satellite platform			8.05.2023
	8.5 Control Survey			13.05.2023
	8.6 Geometric Distortion in Imagery			13.05.2023
	8.7 Application of Imagery and its support data			15.05.2023
	8.8 Orientation and Triangulation			15.05.2023
	8.9 Stereoscopic Measurement: X-parallax and Y-parallax			20.05.2023
	8.10 DTM/DEM Generation			20.05.2023
8.11 Ortho Image Generation			22.05.2023	

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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:-CIVIL ENGG.

SEMESTER: 4TH

SECTION:- C2

NAME OF THE FACULTY : (1) ER. SIDHANTA SEKHAR MAHAR (3) ER. SUMANTA SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT: CIVIL ENGINEERING DRAWING – II (PR-2)

CLASS ALLOTTED /WEEK:- 06 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
1	Detailed Drawing of Culvert			
	Half foundation plan and half top plan, cross sectional elevation and longitudinal section of	FEBRUARY	03	Dt.14.02.2023, Dt. 16.02.2023 Dt. 21.02.2023
	i) RCC Slab culvert with right angled wing wall	MARCH	03	Dt.23.02.2023, Dt. 28.02.2023 Dt. 09.03.2023
	ii) Hume pipe culvert with splayed wing wall		03	Dt. 14.03.2023, Dt.16.03.2023 Dt. 21.03.2023
2	Irrigation Structures			
	2.1 Detail drawing of a vertical drop type fall (Sarada Type) from given specifications	APRIL	04	Dt. 23.03.2023, Dt. 28.03.2023 Dt.04.04.2023, Dt. 06.04.2023
	2.2 Drawing of a Drainage siphon from given specifications		04	Dt.11.04.2023, Dt.13.04.2023 Dt.18.04.2023, Dt. 20.04.2023
3	Plumbing and Sanitary connections and fittings of a two roomed building	MAY		Dt. 25.04.2023, Dt. 27.04.2023 Dt.02.05.2023, Dt. 04.05.2023
4	Detailed drawing of septic tank up to 50 users with soak pit and necessary connection from the water closet.		05	Dt.09.05.2023, Dt. 11.05.2023 Dt.16.05.2023, Dt. 18.05.2023 Dt. 23.05.2023

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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- CIVIL ENGINEERING

SEMESTER: 4TH

SECTION:- C2

NAME OF THE FACULTY:- (1) ER. SIBANI SAHU, (2) ER. PRITAM SAGAR SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT : TECHNICAL SEMINAR (PR-3)


CLASS ALLOTTED /WEEK:- 03 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
1.	Selection of seminar topic related to civil Engg.	FEB	03	Dt. 15.02.2023, Dt. 22.02.2023 Dt. 01.03.2023
2.	Discussion of objectives of the selected topic.	MAR	02	Dt. 15.03.2023, Dt. 22.03.2023
3.	Preparation of power point presentation	APRIL	02	Dt. 29.03.2023, Dt. 05.04.2023
4.	Seminar Report writing skill.		02	Dt. 12.04.2023, Dt. 19.04.2023
5.	Seminar Presentation of each student Grp - C ₁	MAY	02	Dt. 26.04.2023, Dt. 03.05.2023
6.	Seminar Presentation of Group - C ₂		02	Dt. 10.05.2023, Dt. 17.05.2023
7.				


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PRACTICAL LESSON PLAN FOR THE SESSION 2022 - 23

BRANCH:- CIVIL ENGG.

SEMESTER: 4TH

SECTION : C2

NAME OF THE FACULTY : (1) ER. SIBANI SAHU, (2) ER. PRITAM SAGAR SAHOO (LECT. IN CIVIL ENGG.)

SEMESTER FROM DT. 13.02.2023 TO 23.05.2023

PRACTICAL SUBJECT: STUDENT CENTRED ACTIVITIES

CLASS ALLOTTED /WEEK :- 03 PERIODS

Sl. No.	NAME OF THE PRACTICAL EXPERIMENT/JOBS TO BE COVERED	MONTH	AS PER ACADEMIC CALENDAR & TIME TABLE CLASS DAYS	ACTUAL PROGRESS OF THE COURSES MADE DATES
01	Library Study & Technical Quiz	FEBRUARY	02	Dt. 17.02.2023 Dt. 24.02.2023
02	Seminar On different technical topics	MARCH	02	Dt. 03.03.2023 Dt. 10.03.2023
03	Seminar On different Environment issues.		02	Dt. 17.03.2023 Dt. 24.03.2023
04	Personality developement Class	APRIL	02	Dt. 31.03.2023 Dt. 21.04.2023
05	Cultural Activities	MAY	02	Dt. 28.04.2023 Dt. 12.05.2023

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