

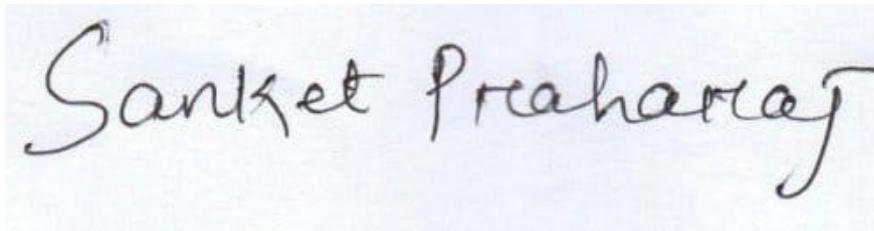
Discipline- <b>Civil Engineering</b>	Semester- <b>3rd</b>	Name Of the teaching Faculty: <b>SANKET PRAHARAJ</b>
Subject- <b>Structural Mechanics</b>	No. of Days/per week class allotted:5	Semester From Date : <b>15/09/2022 To 22/12/2022</b>
		No. Of Weeks:
<b>Week</b>	<b>Class Day</b>	<b>Theory Details to be covered:-</b>
1st		Basic Principle of Mechanics: Force, Moment, support conditions
	2nd	Conditions of equilibrium, C.G & MI, Review of C.G. and M.I of different sections
	3rd	Free body diagram and Review of C.G. and M.I of different sections
	4th	Introduction to stresses and strains Mechanical properties of materials – Rigidity, Elasticity, Plasticity, Compressibility, Hardness
	5th	Mechanical properties of materials – Toughness,Stiffness,Brittleness,Ductility, Malleability,Creep,Fatigue,Tenacity,Durability
2nd	1st	Types of stresses -Tensile, Compressive and Shear
	2nd	Types of strains - Tensile, Compressive and Shear strains,
	3rd	Complimentary shear stress-Diagonal tensile/compressive stresses due to shear ,Elongation and Contraction
	4th	Longitudinal and Lateral strains, Poissons Ratio,Volumetric Strain, Poissons Ratio,Change in dimensions and volume,numericals
	5th	Hooke's law, Elastic Constants, Derivation of relationship between the elastic constants
3rd	1st	Behaviour of ductile and brittle materials under direct loads
	2nd	Stress Strain curve of a ductile material, Limit of proportionality, Elastic limit, Yield stress, Ultimate stress, Breaking stress
	3rd	Percentage elongation, Percentage reduction in area, Significance of percentage elongation and reduction in area of cross section
	4th	Deformation of prismatic bars due to uniaxial load
	5th	Deformation of prismatic bars due to its self weight
4th	1st	Principal stresses and strains: Occurrence of normal and tangential stresses
	2nd	Concept of Principal stress and Principal Planes, major and minor principal stresses and their orientations

	3rd	Mohr's Circle and its application to solve problems of complex stresses
	4th	Bending stress in beams, Theory of simple bending, Assumptions, Moment of resistance
	5th	Equation for Flexure, Flexural stress distribution, Curvature of beam, Position of N.A. and Centroidal Axis, Flexural rigidity, Significance of Section modulus
4th	1st	Shear stress distribution in beams concept
	2nd	Shear stress distribution in beams of rectangular, circular and standard sections symmetrical about vertical axis
	3rd	Concept of torsion, basic assumptions of pure torsion, torsion of solid and hollow circular sections,
	4th	polar moment of inertia, torsional shearing stresses, angle of twist, torsional rigidity, equation of torsion
	5th	Combination of stresses, Combined direct and bending stresses, Maximum and Minimum stresses in Sections,
5th	1st	Conditions for no tension, Limit of eccentricity, Middle third/fourth rule, Core or Kern for square, rectangular and circular sections, chimneys, dams retaining walls
	2nd	Columns and Struts, Definition, Short and Long columns, End conditions, Equivalent length / Effective length, Slenderness ratio
	3rd	Axially loaded short and long column, Euler's theory of long columns, Critical load for Columns with different end conditions
	4th	Types of Loads: Concentrated (or) Point load, Uniformly Distributed load (UDL), Types of Supports: Simple support, Roller support, Hinged support, Fixed support
	5th	Types of Reactions: Vertical reaction, Horizontal reaction, Moment reaction, Types of Beams based on support conditions
6th	1st	Calculation of support reactions using equations of static equilibrium
	2nd	Shear Force and Bending Moment: Signs Convention for S.F. and B.M,
	3rd	S.F and B.M of general cases of determinate beams with concentrated loads and udl only,
	4th	S.F and B.M diagrams for Cantilevers
	4th	S.F and B.M diagrams for Simply Supported Beams
	5th	S.F. and B.M. diagram for Overhanging Beams
7th	1st	Position of maximum BM, Point of contra flexure, Point of Inflection

	2nd	Relation between intensity of load, S.F and B.M.
	3rd	Shape and nature of elastic curve (deflection curve); Relationship between slope, deflection and curvature , Importance of slope and deflection
	4th	Slope and deflection of cantilever under concentrated load (by Double Integration method)
	5th	Slope and deflection of cantilever under uniformly distributed load(by Double Integration method)
8th	1 <sup>st</sup>	Slope and deflection of cantilever under concentrated load (by Macaulay's method)
	2 <sup>nd</sup>	Slope and deflection of cantilever under uniformly distributed load (by Macaulay's method)
	3rd	Slope and deflection of simply supported beams under concentrated and uniformly distributed load (by Double Integration method)
	4th	Slope and deflection of simply supported beams under concentrated and uniformly distributed load (by Macaulay's method)
	5th	Indeterminacy,principle of consistent deformation
9th	1st	Analysis of propped cantileverbeams by principle of superposition
	3rd	Analysis of fixed and two span continuous beams by principle of superposition
	4th	SF and BM diagrams (point load and udl covering full span)
	5th	Types of trusses, statically determinate and indeterminate trusses
10th	1st	degree of indeterminacy
	2nd	Analysis of propped cantileverbeams by principle of superposition
	3rd	Analysis of fixed and two span continuous beams by principle of superposition
	4th	SF and BM diagrams (point load and udl covering full span)

	5th	Types of trusses, statically determinate and indeterminate trusses
11th	1st	degree of indeterminacy
	2nd	stable and unstable trusses, advantages of trusses
	3rd	Analytical method ( Method of joints)
	4th	Analytical method ( Method of Section)
	5th	Method of Joints Numerical
12th	1st	Method of Section Numerical

Name of the Faculty



Sanket Praharaj

Discipline-Civil Engineering	Semester- 3rd	Name Of the teaching Faculty: Er.Diptirani Mishra
Subject- Geotechnical Engineering	No. of Days/per week class allotted:4	Semester From Date : 15/9/2022 To Date:22/12/2022
		No. Of Weeks:13
Week	Class Day	Theory/Practical Topics
1st	1st	CHAPTER-1(Introduction) Soil and Soil Engineering, Scope of Soil Mechanics, Origin and formation of soil
	2nd	CHAPTER-2(Preliminary Definitions and Relationship) Soil as a three Phase system, Water Content, Density
	3rd	Voids ratio, Porosity, Percentage of air voids, air content, degree of saturation
	4th	density Index, Bulk/Saturated/dry/submerged density, Interrelationship of various soil parameters
2nd	1st	Interrelationship of various soil parameters
	2nd	Problems
3rd	3rd	CHAPTER-3(Index Properties of soil) Water Content (Different methods of determining water content)
	4th	Specific Gravity (Different methods of determining water content)
	1st	Particle size distribution: Sieve analysis, wet mechanical analysis, particle size distribution curve and its uses
	2nd	Consistency of Soils, Atterberg's Limits, Plasticity Index, Consistency Index, Liquidity Index
4th	3rd	Problems on Atterberg limits
	4th	Problems on volumetric shrinkage, shrinkage ratio
	1st	CHAPTER-4(Classification of Soil) Indian Standard Classification
	2nd	Textural Classification and Unified Soil Classification System
5th	3rd	AASHTO Soil Classification System
	4th	CHAPTER-5(Permeability and Seepage) Concept of Permeability, Darcy's Law, Co-efficient of Permeability
	1st	Discharge velocity, Seepage Velocity and factors affecting permeability
	2nd	Constant head permeability test, Falling head permeability test and problems on them
6th	3rd	Permeability of stratified soil in horizontal and vertical direction and problems on them
	4th	Total Stress, Pore water pressure and effective stress
	1st	Seepage analysis and Quick sand condition

	2nd	Problems on permeability
		<b>CHAPTER-6 (Compaction and Consolidation)</b>
	3rd	Introduction to compaction, , Light and heavy compaction Test
	4th	Optimum Moisture Content of Soil, Maximum dry density, Zero air void line and problems
7th	1st	Factors affecting Compaction, Field compaction methods and their suitability
	2nd	Field compaction methods and their suitability
	3rd	Problems on soil compaction
	4th	<b>Consolidation:-</b> Consolidation, distinction between compaction and consolidation, Immediate Settle ment, Primary Settle ment and secondary settle ment
8th	1st	Terzaghi's model analogy of compression/ springs showing the process of consolidation
	2nd	Compression Index, Coefficient of Compressibility, Coefficient of volume compressibility
	3rd	Time Factor, Degree of Consolidation, computation of settle ment
	4th	Problems on Consolidation
		<b>CHAPTER-7 (Shear Strength)</b> Concept of shear strength, Mohr- Coulomb failure theory, Cohesion, Angle of internal friction
9th	1st	Angle of internal friction, strength envelope for different type of soil
	2nd	Angle of internal friction, strength envelope for different type of soil
	3rd	Direct Shear test, Triaxial shear test
	4th	Unconfined compression test and vane-shear test
10th	1st	Problems on shear strength of soil
	2nd	<b>CHAPTER-8(Earth Pressure on Retaining Structures)</b> Introduction, Active earth pressure, Passive earth pressure, Earth pressure at rest
	3rd	Introduction, Active earth pressure, Passive earth pressure, Earth pressure at rest
	4th	Rankines formula, Calculation of earth pressure with backfill with no surchagre
11th	1st	Calculation of earth pressure with backfill with no surchagre
	2nd	Calculation of earth pressure with backfill with uniform surchagre load
	3rd	Calculation of earth pressure with backfill with surchagre load and calculation of total pressure acting on wall
	4th	<b>CHAPTER-9(Foundation Engineering)</b> Functions of foundations, shallow and deep foundation

12th	1st	Different type of shallow foundations with sketches
	2nd	Different type of deep foundations with sketches
	3rd	Types of failure (General shear, Local shear & punching shear)
	4th	Bearing capacity of soil
13th	1st	Bearing capacity of soils using Terzaghi's formulae for strip, Circular and square footings
	2nd	Problems on bearing capacity of soil using Terzaghis fomula
	3rd	Bearing capacity of soils using IS Code formulae for strip, Circular and square footings
	4th	Bearing capacity of soils using IS Code formulae for strip, Circular and square footings
14th	1st	Problems on bearing capacity using IS code method
	2nd	Effect water table on bearing capacity of soil
	3rd	Plate load test
	4th	Standard penetration test

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14/9/22

Signature of the teaching Faculty

Discipline-Civil Engineering	Semester-3rd	Name Of the teaching Faculty: Er. M.R. Nayak
Subject-Building Materials & Construction Technology	No. of Days/per week class allotted:5	Semester From Date : 15/9/2022 To No. Of Weeks:14
Week	Class Day	Theory/Practical Topics
1st	1st	<b>CHAPTER-1(Stone)</b> Classification of rock, uses of stone, natural bed of stone
	2nd	Qualities of good building stone
	3rd	Dressing of stone, Characteristics of different types of stone and their uses
	4th	Dressing of stone, Characteristics of different types of stone and their uses
	5th	<b>CHAPTER-2(Bricks)</b> Brick earth – its composition
2nd	1st	Brick making – Preparation of brick earth, Moulding, Drying, Burning in kilns
	2nd	Classification of bricks, size of traditional and modular bricks, qualities of good building bricks
	3rd	<b>CHAPTER-3(Cement, Mortar and Concrete)</b> Cement: Types of cements, Properties of cements, Manufacturing of cement
	4th	Importance and application of blended cement with fly ash and blast furnace slag, Mortar: Definition and types of mortar, Sources and classification of sand, Bulking of sand
	5th	Importance and application of blended cement with fly ash and blast furnace slag, Mortar: Definition and types of mortar, Sources and classification of sand, Bulking of sand
3rd	1st	Use of gravel, morrum and fly ash as different building material
	2nd	Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete
	3rd	Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete
	4th	<b>CHAPTER-4(Other Construction Materials)</b> Timber: Classification and Structure
	5th	Seasoning of timber – Importance
4th	1st	Characteristics of good timber
	2nd	Clay products and refractory materials – Definition and Classification
	3rd	Properties and uses of refractory materials- tiles, terracotta, porcelain glazing

	4th	Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel
5th	1st	<b>CHAPTER-5(Surface Protective Materials)</b> Surface Protective MaterialsComposition of Paints, enamels,
	2nd	Types and uses of surface protective materials like Paints, Enamels, Varnishes, Distempers, Emulsion, French polish and Wax Polish.
		<b>CONSTRUCTION TECHNOLOGY</b>
	3rd	<b>CHAPTER-1(Introduction)</b> Buildings and classification of buildings based on occupancy
	4th	Different components of a building
	5th	Different components of a building
6th	1st	<b>CHAPTER-2(Foundation)</b> Concept of foundation and its purpose
	2nd	Types of foundations – shallow and deep
	3rd	Shallow foundation-constructional details of : Spread foundations for walls,
	4th	Thumb rules for depth and width of foundation and thickness of concrete block
	5th	Thumb rules for depth and width of foundation and thickness of concrete block
7th	1st	Deep foundations: Pile foundations-their suitability
	2nd	Classification of piles based on materials, function and method of installation
	3rd	Distribution system layout – types, comparison, suitability
	4th	<b>CHAPTER-3(Walls &amp; Masonry Works)</b> Purpose of walls, Classification of walls – load bearing, non-load bearing walls, retaining walls
	5th	Purpose of walls, Classification of walls – load bearing, non-load bearing walls, retaining walls
8th	1st	Classification of walls as per materials of construction: brick, stone, reinforced brick,
	2nd	Reinforced concrete, precast, hollow and solid concrete block and composite masonry walls
	3rd	Partition Walls : Suitability and uses of brick and wooden partition walls
	4th	Brick masonry : Definition of different terms
	5th	Brick masonry : Definition of different terms
9th	1st	Bond – meaning and necessity: English bond for 1and 1-1/2 Brick thick walls. T, X and right angled corner junctions. Thickness for 1and 1-1/2 brick square pillars in English bond
	2nd	Stone Masonry and types
	3rd	Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress

	4th	<b>CHAPTER-4(Doors, Windows And Lintels)</b> Glossary of terms used in doors and
<b>10th</b>	1st	Doors – different types of doors
	2nd	Windows – different types of windows
	3rd	Purpose of use of arches and lintels
	4th	<b>CHAPTER-5(Floors, Roofs and Stairs)</b> Floors: Glossary of terms
	5th	Types of floor finishes – cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring
<b>11th</b>	1st	Types of floor finishes – cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring
	2nd	Roofs: Glossary of terms
	3rd	Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs
	4th	Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room
	5th	Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room
<b>12th</b>	1st	Various types of stair case – straight flight, dog legged, open well, quarter turn,
	2nd	Half turn (newel and geometrical stairs), bifurcated stair, spiral stair, cantilever stair, tread riser stair.
	3rd	<b>CHAPTER-6(Protective, Decorative Finishes, Damp and Termite Proofings)</b> Plastering – purpose – Types of plastering
	4th	Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster
	5th	Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster
<b>13th</b>	1st	Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing
	2nd	Pointing – purpose –Types of pointing
	3rd	Painting – objectives – method of painting new and old wall surfaces, wood surface and metal surfaces – powder coating and spray painting on metal surfaces
	4th	White washing – Colour washing – Distemping – internal and external walls

	5th	White washing – Colour washing – Distempering – internal and external walls
14th	1st	Damp and Termite proofing – Materials and Methods
	2nd	<b>CHAPTER-7(Green Buildings, Energy Management and Energy Audit Of Buildings &amp; Projects)</b> Concept of green building, Introduction to Energy Management and
	3rd	Aims of energy management of buildings,Types of energy audit, Response energy audit questionnaire
	4th	Aims of energy management of buildings,Types of energy audit, Response energy audit questionnaire
	5th	Energy surveying and audit report

Signature of teaching Faculty

<b>Discipline: Civil Engineering</b>	<b>Semestar-3rd</b>	<b>Name Of the teaching Faculty: Smt.Pramila Kumari Gouda</b>
<b>Subject: ESTIMATION &amp; COST EVALUATION – I (Th.4)</b>	<b>No. of Days/per week class alloted:4</b>	<b>Semestar From Date : 15/09/2022 To Date: 22/12/2022</b>
		<b>No. Of Weeks: 14</b>
<b>Week</b>	<b>Day</b>	<b>Theory Topics to be covered</b>
1st	1st	<b>CHAPTER 1</b> <b>Introduction</b> 1.1 Types of estimates – Plinth area, floor area / carpet area
	2nd	1.2 Units and modes of measurements as per IS 1200 1.3 Accuracy of measurement for different item of work
2nd	1st	<b>CHAPTER 2</b> <b>Quantity Estimate of Building</b>
	2nd	Short wall long wall method and centre line method
	3rd	deductions in masonry, plastering, white washing, painting etc.,
	4th	deductions in masonry, plastering, white washing, painting etc.,
3rd	1st	multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.
	2nd	multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.
	3rd	Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.
	4th	Detailed estimate of plan 1 by long wall short wall
4th	1st	
	2nd	Detailed estimate of plan 1 by center line method
	3rd	
	4th	
5th	1st	Detailed estimate of plan 2 by long wall short wall
	2nd	Detailed estimate of plan 2 by center line method
	3rd	
	4th	
6th	1st	Detailed estimate of plan 3 by long wall short wall

	2nd	Detailed estimate of plan 3 by center line method
	3rd	
	4th	Detailed estimate of plan 4 by long wall short wall
7th	1st	
	2nd	
	3rd	
	4th	
	4th	Detailed estimate of plan 4 by long wall short wall
8th	1st	
	2nd	
	3rd	
	4th	Detailed estimate of plan 5
9th	1st	
	2nd	
	3rd	<b>CHAPTER 3</b> Analysis of Rates and Valuation Analysis of rates for cement concrete,
	4th	Analysis of rates for brick masonry in Cement Mortar,
10th	1st	
	2nd	Analysis of rates for Laterite stone masonry in Cement Mortar,
	3rd	
	4th	Analysis of rates for cement plaster, white washing,
11th	1st	
	2nd	Analysis of rates for Artificial Stone flooring
	3rd	Analysis of rates for Tile flooring, concrete flooring,
	4th	Analysis of rates for R.C.C. with centering and shuttering,
12th	1st	Analysis of rates for reinforcing steel,
	2nd	Painting of doors and windows etc. as per OPWD.
	3rd	Calculation of lead, lift, conveyance charges, royalty of materials, etc. as

	4th	per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions
13th	1st	Abstract of cost of estimate.
	2nd	Valuation- Value and cost, scrap value, salvage value,
	3rd	assessed value, sinking fund, depreciation and obsolesce, methods of valuation
	4th	
14th	1st	<b>CHAPTER 4</b> Administrative Set-Up of Engineering Organisations
	2nd	Administrative set-up and hierarchy of Engineering department in State Govt./Central Govt./PSUs/Private Sectors etc. Duties and responsibilities of Engineers at different positions /levels.
	3rd	
	4th	

  
 SIGNATURE OF FACULTY

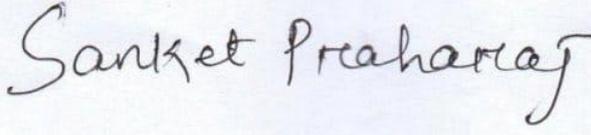
Discipline: <b>Civil Engineering</b>	Semester: <b>3<sup>RD</sup></b>	Name of the Teaching Faculty: <b>RAKESH KUMAR PANDA</b>
Subject: - <b>Environmental Studies</b>	No. of Days/ per week class allotted: <b>4</b>	Semester From Date: <b>15/09/2022 To 22/12/2022</b>
		No. of Weeks: <b>14</b>
<b>Week</b>	<b>Day</b>	<b>Theory Topics</b>
1 <sup>st</sup>	1 <sup>st</sup>	<b>CHAPTER 1</b> 1.1. Definition of environmental studies.
	2 <sup>nd</sup>	1.2. Scope of environmental studies
	3 <sup>rd</sup>	1.3. Importance of environmental studies
	4 <sup>th</sup>	1.4. Need for public awareness of environmental
2 <sup>nd</sup>	1 <sup>st</sup>	<b>CHAPTER 2</b>
	2 <sup>nd</sup>	2.1.1. Forest resources: Use & over-exploitation, deforestation, case studies. Timber extraction mining, dams and their effects on forests and tribal people.
	3 <sup>rd</sup>	2.1.2. Water resources: Use & over-exploitation of surface water and ground water, floods, drought.
	4 <sup>th</sup>	Conflicts over water,
3 <sup>rd</sup>	1 <sup>st</sup>	2.1.3. Mineral Resources: Use and exploitation, environmental
	2 <sup>nd</sup>	2.1.4. Food Resources: effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity.
	3 <sup>rd</sup>	2.1.5. Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources,
	4 <sup>th</sup>	
4 <sup>th</sup>	1 <sup>st</sup>	2.1.6. Land Resources: Land as a resource, land degradation,
	2 <sup>nd</sup>	2.3. Role of individual in conservation of natural resources.
	3 <sup>rd</sup>	<b>CHAPTER 3</b> 3.1. Concept of an eco system. 3.2. Structure and function of an eco system
	4 <sup>th</sup>	3.3. Producers, consumers, decomposers. 3.4. Energy flow in the eco systems.
5 <sup>th</sup>	1 <sup>st</sup>	3.5. Ecological succession. 3.6. Food chains, food webs & ecological pyramids
	2 <sup>nd</sup>	3.7. Forest ecosystem: (Introduction, types, characteristic features, structure & function)
	3 <sup>rd</sup>	

	4th	3.8.1. Aquatic eco systems (Introduction, types, characteristic features, structure & function) : (Ponds, Streams, Lakes, Rivers, Oceans, Estuaries)
6th	1st	
	2nd	
	3rd	<b>CHAPTER 4</b> 4.1. Introduction - Definition: genetics, species and ecosystem diversity.
	4th	4.2. Biogeographically classification of India.
7th	1st	4.3. Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and optin values
	2nd	
	3rd	4.5. Biodiversity at global, national and local level.
	4th	
8th	1st	4.6.2. Threats to biodiversity: (man wildlife conflicts).
	2nd	
	3rd	<b>CHAPTER 5</b>
	4th	5.1.1. Air pollution.
9th	1st	5.1.2. Water pollution
	2nd	5.1.3. Soil pollution
	3rd	
	4th	5.1.4. Marine pollution
1st		
2nd	5.1.5. Noise pollution	
3rd	5.1.6. Thermal pollution	
10th	4th	5.1.7. Nuclear hazards
	1st	5.2. Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
	2nd	5.3. Role of an individual in prevention of pollution.
	3rd	5.4.1. Disaster management: Floods, Earthquake, Cyclone and
11th	4th	<b>CHAPTER 6</b> 6.1. Form unsustainable to sustainable development. 6.2. Urban problems related to energy.
	1st	6.3. Water conservation, rain water harvesting. water shed
	2nd	6.4. Resettlement and rehabilitation of people; its problems and
	3rd	
12th	4th	6.5. Environmental ethics: issue and possible solutions.

	3rd	6.6. Climate change & global warming, Acid rain & ozone layer depletion, nuclear accidents and holocaust, case studies.
	4th	
13th	1st	
	2nd	6.7. Air (prevention and control of pollution) Act. 6.8. Water (prevention and control of pollution) Act.
	3rd	6.9. Public awareness
	4th	<b>CHAPTER 7</b> 7.1. Population growth and variation among nations
14th	1st	7.2. Population explosion- family welfare program
	2nd	7.3. Environment and human health.
	3rd	7.4. Human rights. 7.5. Value education
	4th	7.6. Role of information technology in environment and human

Discipline- <b>Civil Engineering</b>	Semester- <b>3rd</b>	Name Of the teaching Faculty: <b>SANKET PRAHARAJ</b>
Subject: <b>Civil Engineering Lab-1</b>	No. of Days/per week class allotted:4	Semester From Date : <b>15/09/2022 To Date:22/12/2022</b>
		No. Of Weeks:
<b>Week</b>	<b>Class Day</b>	<b>Practicals to be covered:-</b>
1st		<b>Material Testing Laboratory: 1.</b> Test on Steel Determination of Young's Modulus of steel in a tensile testing machine.
		<b>2. Tests on Cement, Sands, Bricks, Blocks &amp; Aggregates 2.1</b> Determination of fineness of Cement by sieving
2 <sup>ND</sup>		<b>2.2</b> Determination of normal Consistency, initial and final setting time of Cement
		<b>2.3</b> Determination of soundness of Cement by Le-Chatelier apparatus.
3 <sup>RD</sup>		<b>2.4</b> Determination of Compressive Strength of cement.
		<b>2.5</b> Determination of Compressive Strength of Burnt clay, Fly Ash Bricks and Blocks
4 <sup>TH</sup>		<b>2.6</b> Grading of Fine & Coarse aggregate by sieving for concrete .
		<b>2.7</b> Determination of Specific Gravity and Bulking of sand
5 <sup>TH</sup>		<b>2.8</b> Determination of Specific Gravity and Bulk density of coarse aggregate
		<b>2.9</b> Grading of Road Aggregates
6 <sup>TH</sup>		<b>2.10</b> Determination of Flakiness, Elongation Index of Road aggregates.
		<b>2.11</b> Determination of Crushing Value Test of aggregates
7 <sup>TH</sup>		<b>2.12</b> Los-Angeles Abrasion Test of aggregate
		<b>2.13</b> Impact test of aggregates
8 <sup>TH</sup>		<b>2.14</b> Determination of soundness test of road aggregates
		<b>II. Concrete Laboratory 3.1</b> Determination of Compressive Strength of concrete cubes.
9 <sup>TH</sup>		<b>3.2</b> Determination of Workability of concrete by: a) Slump Cone method, b) Compaction Factor method.
		<b>3.3</b> Non Destructive tests on Concrete: a) Demonstration on Rebound hammer b) Ultrasonic Pulse Velocity measuring Instrument.

Name of The Faculty



Sanket Praharaj

<b>Discipline-Civil Engineering</b>	<b>Semestar- 3rd</b>	Name Of the teaching Faculty: <b>Smt. Laxmipriya Mohapatra/ R. K. Panda</b>
<b>Subject- Civil Engineering Drawing-1</b>	<b>No. of Days/per week class allotted: 5 (per group)</b>	<b>Semestar From Date : 15/9/2022 To Date:22/12/2022</b>
		<b>No. Of Weeks: 14</b>
<b>Week</b>	<b>Class Day</b>	<b>Theory/Practical Topics</b>
1st	1st (2 Periods)	<b>CHAPTER-1(Auto-CAD Software)</b> Recap of Auto-CAD, Draw & Modify Commands
2nd	1st (3 Periods)	Edit, Dimension Commands
	2nd (2 Periods)	Isometric drawings of simple objects
3rd	1st (3 Periods)	Isometric drawings of simple objects & Praticce
	2nd (2 Periods)	2D drawings of the following Building Door, Window, Stair Case
4th	1st (3 Periods)	2D drawings of the following- Building through wall, Spread footing, Column footing T-beam & slab
	2nd (2 Periods)	Praticce
5th	1st (3 Periods)	3D drawing of simple objects & Praticce
	2nd (2 Periods)	3D drawing of simple objects & Praticce
6th	1st (3 Periods)	3D drawing of simple objects & Praticce
	2nd (2 Periods)	<b>CHAPTER-2 (PLAN, ELEVATION AND SECTIONAL ELEVATION OF FLAT ROOF BUILDING FROM LINE DIAGRAM AND GIVEN SPECIFICATIONS with use of AutoCAD software.)</b> Plan at window sill level of a single storeyed R.C. roof slab building with elevation and sectional views form given line diagram and specification.
7th	1st (3 Periods)	Plan at window sill level of a single storeyed R.C. roof slab building with elevation and sectional views form given line diagram and specification.
	2nd (2 Periods)	Praticce
8th	1st (3 Periods)	Detail drawing of Double storeyed pucca building with R.C.C. stair case from line diagram and given
	2nd (2 Periods)	Praticce
9th	1st (3 Periods)	Praticce
	2nd (2 Periods)	Preparation of approval drawing of a residential building as per the norms of local approving authority
10th	1st (3 Periods)	Praticce

	2nd (2 Periods)	<b>CHAPTER-3 (PLAN, ELEVATION AND SECTION OF INCLINED ROOF BUILDING WITH AC SHEET/GCI/TILES ON WOODEN STRUCTURE with use of AutoCAD Commands)</b> Detail drawing of inclined roof building from given line diagram and specification. (gabled / hipped)
11th	1st (3 Periods)	Pratice
	2nd (2 Periods)	Pratice
12th	1st (3 Periods)	Different type of shallow and deep foundations with sketches
	2nd (2 Periods)	<b>CHAPTER-4 (BUILDING PLANNING)</b> Orientation of buildings, location of openings and living areas & Pratice
13th	1st (3 Periods)	Line plan of School, hostel, market complex and dispensary building & Pratice
	2nd (2 Periods)	Planning of buildings for specific cost based on approximate plinth area rate.
14th	1st (3 Periods)	Pratice
	2nd (2 Periods)	Pratice

*Laxmipriya Mohapatra*

Signature

