

LESSON PLAN

- 1) Subject Code: TH 1
- 2) Subject Title: Structural Mechanics
- 3) Semester: 3rd
- 4) Branch: Civil Engg.
- 5) Faculty: Rutuparna Mohapatra
- 6) No. of Classes / Week: 3Th. Cl./week, 1Pr. Cl./week
- 7) On completion of the course, students will be able to
 - i. Comprehend, define, compute and interpret major mechanical properties demonstrated by solid materials.
 - ii. Analyze solid states under uniaxial loading and plane stress conditions.
 - iii. Draw shear force and bending moment diagrams of simple statically determinate and statically indeterminate structural members subject to transverse loading.
 - iv. Obtain slope and deflection profiles of statically determinate simple structural members.
 - v. Comprehend buckling as a failure mode in column and determine crippling loads for columns using Euler's theory.
 - vi. Compute forces in members of a truss
- 8) Text Book to be referred by students:

Sl No.	Book	Author	Publication	% of Questions Asked	Year (Edition)	Whether available in Library
i	Theory of structure	S.Rammrutham,	Dhanpat Rai Publications	50%	2013 9th	YES
ii	Theory of structure	R.S. Khurmi	S. Chand	35%	2009 11th	YES

9) Course Coverage Schedule:

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
01	Review of Basic Concepts	1.1 Basic Principle of Mechanics: Force, Moment, support conditions, Conditions of equilibrium, C.G & MI, Free body diagram	2	4+1(P) Week(1-2)	
		1.2 Review of CG and MI of different sections	1+1P		
		1001 Topic End (Practice)	1		
02	Simple And Complex Stress, Strain	2.1 Simple Stresses and Strains Introduction to stresses and strains: Mechanical properties of materials – Rigidity, Elasticity, Plasticity, Compressibility, Hardness, Toughness, Stiffness, Brittleness, Ductility, Malleability, Creep, Fatigue, Tenacity, Durability, Types of stresses -Tensile, Compressive and Shear stresses, Types of strains - Tensile, Compressive and Shear strains, Complimentary shear stress - Diagonal tensile / compressive Stresses due to shear, Elongation and Contraction, Longitudinal and Lateral strains, Poisson's Ratio, Volumetric strain, computation of stress, strain, Poisson's ratio, change in dimensions and volume etc, Hooke's law -	2	5+1(P) Week(2-3)	

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
		Elastic Constants, Derivation of relationship between the elastic constants.			
		2.2 Application of simple stress and strain in engineering field: Behaviour of ductile and brittle materials under direct loads, Stress Strain curve of a ductile material, Limit of proportionality, Elastic limit, Yield stress, Ultimate stress, Breaking stress, Percentage elongation, Percentage reduction in area, Significance of percentage elongation and reduction in area of cross section, Deformation of prismatic bars due to uniaxial load, Deformation of prismatic bars due to its self weight.	1+1P		
		2.3 Complex stress and strain Principal stresses and strains: Occurrence of normal and tangential stresses, Concept of Principal stress and Principal Planes, major and minor principal stresses and their orientations, Mohr's Circle and its application to solve problems of complex stresses	1		
		1002 Topic End (Practice)	1		
05	Shear Force and Bending Moment	5.1 Types of loads and beams Types of Loads: Concentrated (or) Point load, Uniformly Distributed load (UDL), Types of Supports: Simple support, Roller support, Hinged support, Fixed support, Types of Reactions: Vertical reaction, Horizontal reaction, Moment reaction, Types of Beams based on support conditions: Calculation of support reactions using equations of static equilibrium.	2	4+2(P) Week(3-5)	
		5.2 Shear force and bending moment in beams Shear Force and Bending Moment: Signs Convention for S.F. and B.M, S.F and B.M of general cases of determinate beams with concentrated loads and udl only, S.F and B.M diagrams for Cantilevers, Simply supported beams and Over hanging beams, Position of maximum BM, Point of contra flexure, Relation between intensity of load, S.F and B.M.	1+2P		
		1002 Topic End (Practice)	1		
03	Stresses In Beams and Shafts	3.1 Stresses in beams due to bending Bending stress in beams – Theory of simple bending – Assumptions – Moment of resistance – Equation for Flexure– Flexural stress distribution – Curvature of beam – Position of N.A. and Centroidal Axis – Flexural rigidity – Significance of Section modulus	2	6+ 0(P) Week(5-7)	
		3.2 Shear stresses in beams	1		

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
		Shear stress distribution in beams of rectangular, circular and standard sections symmetrical about vertical axis.			
		3.3 Stresses in shafts due to torsion Shear stress distribution in beams of rectangular, circular and standard sections symmetrical about vertical axis.	1		
		3.4 Combined bending and direct stresses Combination of stresses, Combined direct and bending stresses, Maximum and Minimum stresses in Sections, Conditions for no tension, Limit of eccentricity, Middle third/fourth rule, Core or Kern for square, rectangular and circular sections, chimneys, dams and retaining walls	1		
		1005 Topic End	1		
04	Columns and Struts	4.1 Columns and Struts, Definition, Short and Long columns, End conditions, Equivalent length / Effective length, Slenderness ratio, Axially loaded short and long column, Euler's theory of long columns, Critical load for Columns with different end conditions	1+1P	2+1(P) Week(7)	
		1004 Topic End	1		
06	Slope and Deflection	6.1 Introduction: Shape and nature of elastic curve (deflection curve); Relationship between slope, deflection and curvature (No derivation), Importance of slope and deflection.	1	3+2(P) Week(8-9)	
		6.2 Slope and deflection of cantilever and simply supported beams under concentrated and uniformly distributed load (by Double Integration method, Macaulay's method).	1+2P		
		1006 Topic End	1		
07	Indeterminate Beams	7.1 Indeterminacy in beams, Principle of consistent deformation/compatibility, Analysis of propped cantilever, fixed and two span continuous beams by principle of superposition, SF and BM diagrams (point load and udl covering full span)	2+1P	3+1(P) Week(9)	
		1007 Topic End	1		
08	Trusses	8.1 Introduction: Types of trusses, statically determinate and indeterminate trusses, degree of indeterminacy, stable and unstable trusses, advantages of trusses	1	3+2(P) Week (9-10)	
		8.2 Analysis of trusses: Analytical method (Method of joints, method of Section)	1+2P		
		1008 Topic End	1		

R. Mohapatra
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HOD

B. Pal
29.07.23
Principal

LESSON PLAN

- 1) **Subject Code:** TH 2
- 2) **Subject Title:** Geotechnical Engineering
- 3) **Semester:** 3rd
- 4) **Branch:** Civil Engg.
- 5) **Faculty:** Subhasmita Swain
- 6) **No. of Classes / Week:** 4/Week
- 7) **On completion of the course, students will be able to :**
 - a) comprehend the scope of soil mechanics and define the associated terminology and inter-relation among various soil properties.
 - b) classify and indentify soil types under different standards
 - c) comprehend significance of permeability and seepage and compute those.
 - d) describe requirement and methodology of compaction and consolidation.
 - e) realize the methods towards shear strength estimation and obtain strength envelop for different types of soils.
 - f) define terms of foundation engineering and estimate bearing capacity
- 8) **Text Book to be referred by students:**

Sl No.	Book	Author	Publication	% of Questions Asked	Year (Edition)	Whether available in Library
i	Soil Mechanics & Foundation Engineering	Dr. B.C.Punmia	Laxmi publications (P) LTD	85%	2005 16th	Yes

9) Course Coverage Schedule:

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
01	Introduction	1.1 Soil and Soil Engineering 1.2 Scope of Soil Mechanics 1.3 Origin and formation of soil	1	2 Week(1)	
		1001 Topic End	1		
02	Preliminary Definitions and Relationship.	2.1 Soil as a three Phase system.	1	4 Week(1-2)	
		2.2 Water Content, Density, Specific gravity, Voids ratio, Porosity, Percentage of air voids, air content, degree of saturation, density Index, Bulk/Saturated/dry/submerged density, Interrelationship of various soil parameters	2		
		1002 Topic End	1		
03	Index Properties of soil	3.1 Water Content 3.2 Specific Gravity	1	4 Week(2-3)	
		3.3 Particle size distribution: Sieve analysis, wet mechanical analysis, particle size distribution curve and its uses	1		
		3.4 Consistency of Soils, Atterberg's Limits, Plasticity Index, Consistency Index, Liquidity Index	1		
		1003 Topic End	1		
04	Classification of Soil	4.1 General 4.2 I.S. Classification, Plasticity chart	1	1 Week(3)	
		1004 Topic End			

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
05	Permeability and Seepage	5.1 Concept of Permeability, Darcy's Law, Co-efficient of Permeability	1	7 Week(3-5)	
		5.2 Factors affecting Permeability.	1		
		5.3 Constant head permeability and falling head permeability Test.	2		
		5.4 Seepage pressure, effective stress, phenomenon of quick sand	2		
		1005 Topic End	1		
06	Compaction and Consolidation.	6.1 Compaction: Compaction, Light and heavy compaction Test, Optimum Moisture Content of Soil, Maximum dry density, Zero air void line, Factors affecting Compaction, Field compaction methods and their suitability	2	5 Week(5-6)	
		6.2 Consolidation: Consolidation, distinction between compaction and consolidation. Terzaghi's model analogy of compression/ springs showing the process of consolidation – field implications	2		
		1006 Topic End	1		
07	Shear Strength.	7.1 Concept of shear strength, Mohr-Coulomb failure theory, Cohesion, Angle of internal friction, strength envelope for different type of soil, Measurement of shear strength;- Direct shear test, triaxial shear test, unconfined compression test and vane-shear test	3	4 Week(6-7)	
		1007 Topic End	1		
08	Earth Pressure on Retaining Structures.	8.1 Active earth pressure, Passive earth pressure, Earth pressure at rest.	2	5 Week(7-8)	
		8.2 Use of Rankine's formula for the following cases (cohesion-less soil only) (i) Backfill with no surcharge, (ii) backfill with uniform surcharge	2		
		1008 Topic End	1		
09	Foundation Engineering.	9.1 Functions of foundations, shallow and deep foundation, different type of shallow and deep foundations with sketches. Types of failure (General shear, Local shear & punching shear)	3	8 Week (9-10)	
		9.2 Bearing capacity of soil, bearing capacity of soils using Terzaghi's formulae & IS Code formulae for strip, Circular and square footings, Effect water table on bearing capacity of soil	2		
		9.3 Plate load test and standard penetration test	2		
		1009 Topic End	1		

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LESSON PLAN

- 1) Subject Code: Th-3
- 2) Subject Title: Building Material & CT
- 3) Semester: 3rd
- 4) Branch: Civil Engineering
- 5) Faculty: Milan Pradhan
- 6) No. of Classes / Week: 4/week
- 7) On completion of the course, students will be able to
 - i. To understand the role of rock, bricks, cement, concrete, timber and steel in
 - ii. To understand the composition and mechanism of the protective paints and prescribe as necessary.
 - iii. To classify buildings on occupancy and different components and their requirement in a building.
 - iv. To understand the glossary of terms involved in foundation, masonry, wood works and other activities involved in building construction.
 - v. To grasp the construction details involved in a building.
 - vi. To realize the significance of protecting environment and adopt necessary practices towards green construction.

8) Text Book to be referred by students:

Sl No.	Book	Author	Publication	% of Questions Asked	Year (Edition)	Whether available in Library
I	Engineering Materials	Rangwala	Charorar Publishing House	45%	39 th edition-2012	Yes
II	Building Construction	Rangwala	Charorar Publishing House	40%	29 th edition-2011	Yes

9) Course Coverage Schedule:

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
PART :A (BUILDING MATERIALS)					
1.	Stone	1.1 Classification of rock, uses of stone, natural bed of stone,	1	3 week 1	
		1.2 Qualities of good building stone			
		1.3 Dressing of stone	1		
		1.4 Characteristics of different types of stone and their uses	1		
		1001 Topic End			
2.	Bricks	2.1 Brick earth – its composition	1	4 Week(1-2)	
		2.2 Brick making – Preparation of brick earth, Moulding, Drying, Burning in kilns (continuous Process)	2		
		2.3 Classification of bricks, size of traditional and modular bricks, qualities of good building bricks	1		
		1002 Topic End			

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
3.	Cement, Mortar and Concrete	3.1 Cement: Types of cements, Properties of cements, Manufacturing of cement	1	5 week (2- 3)	
		3.2 Importance and application of blended cement with fly ash and blast furnace slag.			
		3.3 Mortar: Definition and types of mortar	1		
		3.4 Sources and classification of sand, Bulking of sand	1		
		3.5 Use of gravel, morrum and fly ash as different building material	1		
		3.6 Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete.	1		
		1003 Topic End			
4.	Other Construction Materials	4.1 Timber: Classification and Structure of timber.	1	5 week 4- 5	
		4.2 Seasoning of timber – Importance.	1		
		4.3 Characteristics of good timber.			
		4.3 Clay products and refractory materials – Definition and Classification.	1		
		4.4 Properties and uses of refractory materials- tiles, terracotta, porcelain glazing.	1		
		4.5 Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel	1		
		1004 Topic End			
5.	Surface Protective Materials	5.1 Composition of Paints, enamels, varnishes.	1	3 week 5	
		5.2 Types and uses of surface protective materials like Paints, Enamels, Varnishes, Distempers, Emulsion, French polish and Wax Polish.	1		
		1005 Topic End	1		
		PART B: (CONSTRUCTION TECHNOLOGY)			
6.	Introduction	6.1 Buildings and classification of buildings based on occupancy	1	2 week 6	
		6.2 Different components of a building.			
		6.3 Site investigation – objectives, site reconnaissance and explorations.	1		
		1006 Topic End			
7.	Foundations	7.1 Concept of foundation and its purpose	1	3 week 6-7	
		7.2 Types of foundations – shallow and deep	1		
		7.3 Shallow foundation-constructional details of : Spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block			

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
		7.4 Deep foundations: Pile foundations-their suitability, classification of piles based on materials, function and method of installation. 1007 Topic End	1		
8.	Walls & Masonry Works	8.1 Purpose of walls 8.2 Classification of walls – load bearing, non-load bearing walls, retaining walls.	1	4 week 7-8	
		8.3 Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite masonry walls (Concept Only). 8.4 Partition Walls : Suitability and uses of brick and wooden partition walls	1		
		8.5 Brick masonry : Definition of different terms 8.6 Bond – meaning and necessity: English bond for 1 and 1-1/2 Brick thick walls. T, X and right angled corner junctions. Thickness for 1 and 1-1/2 brick square pillars in English bond	1		
		8.7 Stone Masonry : 8.8 Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress 1008 Topic End	1		
9.	Doors, Windows and Lintels	9.1 Glossary of terms used in doors and windows 9.2 Doors – different types of doors	1	2 week 8	
		9.3 Windows – different types of windows 9.4 Purpose of use of arches and lintels 1009 Topic End	1		
10.	Floors, Roofs and Stairs	10.1 Floors: Glossary of terms , Types of floor finishes – cast-in-situ, concrete flooring (monolithic, bonded), terrazzo tile flooring	1	4 week 8-9	
		10.2 Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs	1		
		10.3 Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room.	1		
		10.4 Various types of stair case – straight flight, dog legged, open well, quarter turn, half turn (newel and geometrical stairs), bifurcated stair 1010 Topic End	1		

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
11.	Protective, Decorative Finishes and Termite Proofing	11.1 Plastering – purpose – Types of plastering, Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster etc. 11.2 Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing	1	3 week 9-10	
		11.3 Pointing – purpose –Types of pointing 11.4 Painting – objectives – method of painting new and old wall surfaces, wood surface and metal surfaces – powder coating and spray painting on metal surfaces.	1		
		11.5 White washing – Colour washing – Distempering – internal and external walls. 11.6 Damp and Termite proofing – Materials and Methods. 1011 Topic End	1		
12.	Green Buildings, Energy Management and Energy Audit of Buildings & Project	12.1 Concept of green building 12.2 Introduction to Energy Management and Energy Audit of Buildings. 12.3 Aims of energy management of buildings.	1	2 week 10	
		12.4 Types of energy audit, Response energy audit questionnaire 12.5 Energy surveying and audit report 1012 Topic End	1		

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LESSON PLAN

- 1) **Subject Code:** TH 4
- 2) **Subject Title:** Estimation & Cost Evaluation
- 3) **Semester:** 3rd
- 4) **Branch:** Civil Engg.
- 5) **Faculty:** Dipika Samal
- 6) **No. of Classes / Week:** 4 Th. Cl./Week, 1Pr. Cl./Week
- 7) **On completion of the course, students will be able to –**
 - i. Understand the significance of accurate estimation practices.
 - ii. Evaluate and generate component wise estimates for a building
 - iii. Develop a proper cost estimate for single storeyed building.
 - iv. Analyse and offer reason behind the costs involved in different components
 - v. Prepare abstract of cost estimates in line with prescription by state regulating bodies.
 - vi. Realize the levels existing in organization and comprehend the roles and responsibilities at different levels
- 8) **Text Book to be referred by students:**

Sl No.	Book	Author	Publication	% of Questions Asked	Year (Edition)	Whether available in Library
i	Estimating, Costing, specification & Valuation in Civil Engineering	M.Chakraborty.	Published by author	30%	2010 23rd	YES
ii	Estimating & Costing	B.N.Dutta	UBSPD	60%	2012 27th	YES

9) Course Coverage Schedule:

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
1	Introduction	1.1 Types of estimates – Plinth area, floor area / carpet area	1	2 Week (1)	
		1.2 Units and modes of measurements as per IS 1200			
		1.3 Accuracy of measurement for different item of work	1		
2	Quantity Estimate of Building	1001. Topic End		20+6(p) Week (1-6)	
		2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.	10		
		2.2 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.	9		
		1002. Topic End	1		

Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
3	Analysis of Rates and Valuation	3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD.	5	15+4(p) Week (7-10)	
		3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)	5		
		3.3 Abstract of cost of estimate.	2		
		3.4 Valuation- Value and cost, scrap value, salvage value, assessed value, sinking fund, depreciation and obsolesce, methods of valuation.	2		
		1003. Topic End	1		
4	Administrative Set-Up of Engineering Organisations:	4.1 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.	2	3 Week (10)	
		1003. Topic End	1		

D. Samal
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Principal

LESSON PLAN

- 1) Subject Code: TH 5
- 2) Subject Title: ENVIRONMENTAL STUDIES
- 3) Semester: 3rd
- 4) Branch: Civil/Comp.Sc/Elect./Mech. Engg.
- 5) No. of Classes / Week: 3P/Week
- 6) Faculty: Amrita Mallick
- 7) After completion of study of environmental studies, the student will be able to:
 1. Gather adequate knowledge of different pollutants, their sources and shall be aware of solid waste management systems and hazardous waste and their effects.
 2. Develop awareness towards preservation of environment.
- 8) Text Book to be referred by students:

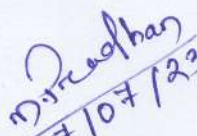
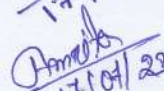
Sl No.	Book	Author	Publication	% of Questions Asked	Year (Edition)	Whether available in Library
i	Fundamental concepts in Environmental Studies	D.D. Mishra	S.Chand & Co-Ltd	90%	2009 1st	YES

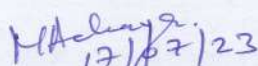
9) Course Coverage Schedule:

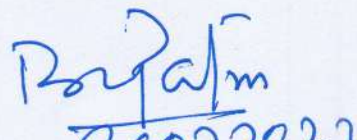
Ch. No.	Name of Chapter	Course to be Covered	No of periods Required	Total Class for Chapter/ Week (From-To)	Remarks
01	The Multidisciplinary nature of environmental studies	1.1 Definition, scope and importance, Need for public awareness.	1	2 Week(1)	
		1001 Topic End	1		
02	Natural Resources	2.1 Renewable and non renewable resources: a) Natural resources and associated problems.	1	8 Week(1-4)	
		Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining, dams and their effects on forests and tribal people			
		Water resources:- Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.	1		
		Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.	1		
		Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture,	1		

		fertilizers- pesticides problems, water logging, salinity,.			
		Energy Resources: Growing energy need, renewable and nonrenewable energy sources, use of alternate energy sources, case studies	1		
		Land Resources:- Land as a resource, land degradation, man induces landslides, soil erosion, anddesertification.	1		
		2.2Role of individual in conservation of natural resources.	1		
		2.3Equitable use of resources for sustainable life styles. Equitable use of resources for sustainable life styles.	1		
		1002 Topic End			
03	Systems	3.1 Concept of an eco system.	1	5 Week(4-5)	
		3.2 Structure and function of an eco system.			
		3.3 Producers, consumers,decomposers.	1		
		3.4 Energy flow in the eco systems.			
		3.5 Ecological succession.	1		
		3.6 Food chains, food webs and ecological pyramids	1		
		3.7 Introduction, types, characteristic features, structure and function of the following eco system: - Forest ecosystem: - Aquatic eco systems (ponds, streams, lakes,rivers, oceans, estuaries)	1		
		1003 Topic End			
04	Biodiversity and it's Conservation	4.1 Introduction-Definition: genetics, species and ecosystem diversity.	1	3 Week(6)	
		4.2 Biogeographically classification of India.			
		4.3 Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and optinvalues.	1		
		4.4 Biodiversity at global, national and local level.			
		4.5 Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts.	1		
		1004 Topic End			
05	Environmental Pollution.	5.1Definition Causes, effects and control measures of: a) Air pollution. b) Water pollution. c) Soil pollution d) Marine pollution e) Noise pollution. f) Thermal pollution	1	3 Week(7)	

		effects and control measures of urban and industrial wastes.			
		5.3 Role of an individual in prevention of pollution. Disaster management: Floods, earth quake, cyclone and landslides.	1		
		1005 Topic End			
06	Social issues and the Environment	6.1 Form unsustainable to sustainable development.	1	5 Week(8-9)	
		6.2 Urban problems related to energy.			
		6.3 Water conservation, rain water harvesting, water shed management.	1		
		6.4 Resettlement and rehabilitation of people; its problems and concern	1		
		6.5 Environmental ethics: issue and possible solutions.			
		6.6 Climatechange, globalwarming,acidrain,ozonelayerdepl etion, nuclear accidents and holocaust, case studies.	1		
		6.7 Air (prevention and control of pollution) Act.			
		6.8 Water (prevention and control of pollution) Act.	1		
		6.9 Public awareness.			
		1006 Topic End			
07	Human population and the environment	7.1 Population growth and variation among nations	1	4 Week (9-10)	
		7.2 Population explosion- family welfare program.	1		
		7.3 Environment and humanhealth.	1		
		7.4 Human rights.			
		7.5 Value education			
		7.6 Role of information technology in environment and human health.	1		
		1007 Topic End			


 17/10/23

 17/04/23
 Faculty


 17/07/23
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