TENTETIVE LESSON PLAN R1921011 CIVIL ENGINEERING

TICAL METHODS
Page No: 01 of 03
Approved By: HOD

Tools: Black board		D-4-	Mode of Delivery
No. of	TOPIC	Date	Mode of Benvery
Periods			

UNIT- I: FUNCTIONS OF A COMPLEX VARIABLE AND COMPLEX INTEGRATION

CO1: To apply Cauchy-Riemann equations to complex functions in order to determine whether a given continuous function is analytic and find the differentiation and integration of complex functions used in engineering problems

TB1 :: COMPLEX VARIABLES AND STATISTICAL METHODS By Dr. T.V.K. Iyengar, S. Chand

& Company Pvt. Ltd., 2014.

1.	Introduction	02/11/2020	
2.	Definition of Continuity, Problems	03/11/2020	
3.	Problems		
4.	Differentiability, Problems	04/11/2020	
5.	Problems	05/11/2020	
6.	Analyticity, Problems	06/11/2020	
7.	Problems, Properties	07/11/2020	
8.	Cauchy-Riemann equations in Cartesian, Problems	09/11/2020	
9.	Problems	10/11/2020	Lecture interspersed with discussions
10.	Cauchy-Riemann equations polor Coordinates, Problems	11/11/2020	With discussions
11.	Tutorial Class	12/11/2020	
12.	Harmonic and conjugate harmonic functions	13/11/2020	
13.	Problems	16/11/2020	
14.	Milne –Thompson method Problems	17/11/2020	
15.	Complex integration: Line integral Problems	18/11/2020	
16.	Cauchy's integral theorem Problems	19/11/2020	
17.	Cauchy's integral formula Problems	20/11/2020,	
18.	Generalized integral formula (all without proofs).Problems	21/11/2020	
19.	Revision	23/11/2020	

UNIT- II: SERIES EXPANSIONS AND RESIDUE THEOREM

CO2: To make use of the Cauchy residue theorem to evaluate certain integrals

TB1:: COMPLEX VARIABLES AND STATISTICAL METHODS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

20.	Radius of convergence	24/11/2020	
A CONTRACTOR OF THE PARTY OF TH	Expansion in Taylor's series, Prob;ems	25/11/2020	
21.	Maclaurin's series, Problems	26/11/2020	
22.		28/11/2020	
23.	Laurent series, Problems	30/11/2020	
24.	Types of Singularities: Isolated, Problems	01/12/2020	
25.	pole of order m Problems	The state of the s	Lecture interspersed
26.	Tutorial Class	02/12/2020	with discussions
27.	Essential Problems	03/12/2020	with discussions
28.	Residues Problems	04/12/2020	
29.	Residue theorem (without proof) Problems	05/12/2020	
29.	Evaluation of real integral of the type f (x)dx	07/10/2020	
30.	에 마양하는 그렇게 그를 그리고 하는 어린이 하는 그 것이 아니라 아이를 하는데 하는데 하는데 하는데 하는데 이 사람이 아니라 하는데	07/12/2020	
30.	Problems	09/12/2020	1
31.	Revision	03/12/2020	

UNIT III- PROBABILITY AND DISTRIBUTION

CO3: To provide mathematical background and sufficient experience so that the student can read, write, and understand sentences in the language of discrete and Continuous Probability theory. To introduce students to the basic methodology of "probabilistic thinking" and to apply it to problems.

TB1 :: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

2014.		1 1 1 1 2 1 2 2 2 2 2	
22		11/12/2020	
32.	Review of probability and Baye's theorem	15/12/2020	
33.	Baye's theorem- Problems	16/12/2020	
34.	Random variables – Discrete and Continuous random variables	18/12/2020	
35.	Distribution function and properties	19/12/2020	
		22/12/2020	
36.	Mathematical Expectation & Properties	23/12/2020	
37.	Variance & Properties	24/12/2020	
38.	Tutorial Class	26/12/2020	Lecture interspersed
39.	Binomial Distribution-p.m.f, Properties,	28/12/2020	with discussions
40.	Problems	29/12/2020	
41.	Poisson Distribution-p.m.f, Properties	30/12/2020	
42.	Problems	31/12/2020	
43.	Uniform Distribution- p.d.f., properties	02/01/2021	
44.	Problems	04/01/2021	
45.	Normal Distribution- p.d.f., properties	05/01/2021	
46.	normal Approximation to Binomial distribution	06/01/2021	
47.	Problems	07/01/2021	
48.	Revision	07/01/2021	

UNIT - IV SAMPLING THEORY

CO4: To the aim of this course is to cover sampling design and analysis methods that would be useful for research and management in many field. A well designed sampling procedure ensures that we can summarize and analyze data with a minimum of assumptions and complications.

TB1 :: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

49.	Introduction- Population, Sample, Types of Sampling, Parameter & Statistic	08/01/2021	
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50.	Sampling Distribution of Mean with Known Variance, Problems	18/01/2021	Lecture interspersed
51.	Central Limit theorem	19/01/2021	with discussions
52.	Sampling Distribution of Mean with Unknown Variance, Problems	20/01/2021	
53.	Tutorial Class	22/01/2021	
54.	t - distribution - Problems	23/01/2021	
55.	F- distribution - Problems	03/02/2021	
56.	Chi- Square Distribution - Problems	04/02/2021	
57.	Point Estimation, Maximum Error Estimate - Problems	05/02/2021	
58.	Interval Estimation - Problems	06/02/2021	
59.	Maximum error of estimate - Problems.	08/02/2021	
60.	Revision	10/02/2021	

UNIT -V TESTS OF HYPOTHESIS

CO 5: One of the most important uses of statistics is to be able to make conclusions and test Hypothesis. Your conclusions can never be absolutely sure but you can quantify of your measure of confidence in the results.

TB1:: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

61	Introduction – Hypothesis – Null and Alternative		
01	Hypothesis	11/02/2021	
62	Type I and Type II errors – Level of significance	11/02/2021	
63	One tail and two-tail tests		
64	Large Sample tests - Test for Single Mean, Problems	12/02/2021	
65	Test for Two Means, Problems	13/02/2021	
66	Test for Single Proportion, Problems	15/02/2021	
67	Test for Two Proportion, Problems	16/02/2021	
68	Tutorial Class	19/02/2021	
69	Small Sample tests: Test for Single Mean, Problems	20/02/2021	
70	Test for Two Means, Problems	23/02/2021	
71	F test, Problems	24/02/2021	
72	Chi – square test for Goodness of fit Problems	25/02/2021	
73	Chi – square test for Independence of Attributes	26/02/2021	
13	Problems		
74	Revision	27/02/2021	

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1. [Signature of the HOD2 11/20

PRINCIPAL

20-21 2-I

TENTATIVE LESSON PLAN: (R1921012)

Course Title: Strength of Materials-I (R1921012)

Section: Sec A Date: 29-10-2020 Page No: 01 of 04
Revision No: 00 Prepared By: G.Sahithi Approved By: HOD

Tools: Black board, PPTs, Model

Tools: Black Doard, I	I is, would		1 2
No. of	TOPIC	Date	Mode of Delivery
Periods			

UNIT -I SIMPLE STRESSES AND STRAINS AND STRAIN ENERGY

CO1 The student will be able to understand the basic concepts of Strength of Materials and Principles of Elasticity and Plasticity Stress strain behavior of materials and their governing laws. Introduce student the moduli of Elasticity and their relations.

T1 Strength of Materials by S.S Bhavikatti,

T2 Strength of Materials by R.K Bansal, Lakshmi Publications

1	Introduction to elasticity and plasticity -Types of stresses	2-11-2020
2	Types of strains – Hooke's law	3-11-2020
3	Stress – strain diagram for mild steel	4-11-2020
4	Working stress – Factor of safety – Lateral strain, Poisson's ratio and volumetric strain	5-11-2020
5	Problems related to stress, strain and elongation	6-11-2020
6	Problems on relation between stress strain and youngs modulus	7-11-2020
7	Elastic moduli and the relationship between them	9-11-2020
8	Problems on relation between elastic constants	10-11-2020
9	Bars of varying section	11-11-2020
10	Problems on bars of varying cross section	12-11-2020
11	Description of composite bars	13-11-2020
	Problems on composite bars	16-11-2020
12	Temperature stresses, problems	17-11-2020
13	Strain Energy - Resilience - Gradual, sudden, impact and shock loadings	18-11-2020
15	Problems on strain energy	19-11-2020

Lecture interspersed with discussions

UNIT -II SHEAR FORCE AND BENDING MOMENT

CO2 The student will be able to draw the diagrams indicating the variation of the

key performance features like bending moment and shear forces

T1 Strength of Materials by S.S Bhavikatti,

T2 Strength of Materials by R.K Bansal, Lakshmi Publications

16	Definition of beam - Types of beams	20-11-2020
17	Concept of shear force and bending moment	21-11-2020
18	Diferrent types of loadings	23-11-2020
19	Conversion of udl,uvl into point loads	24-11-2020
20	S.F and B.M diagrams for simply Supported subjected to point loads, u.d.l loadings	25-11-2020
21	S.F and B.M diagrams for simply	26-11-2020

	Supported subjected to u.v.l loadings	27-11-2020	
22	S.F and B.M diagrams for cantilever subjected to		
	point loads, u.d.l loadings	28-11-2020	
23	S.F and B.M diagrams for cantilever subjected to		
	u.v.l loadings	1-12-2020	
24	overhanging beams, Relation between S.F., B.M		
	and		Lecture
	rate of loading at a section of a beam	2-12-2020	interspersed
25	Problems on calculation of SFD,BMD for S.S.B	2-12-2020	with discussion
	subjected to point load	3-12-2020	With discussion
26	Problems on calculation of SFD,BMD for S.S.B	3-12-2020	
	subjected to u.d.l	4-12-2020	
27	Problems on calculation of SFD,BMD for S.S.B	4-12-2020	
	subjected to combination loadings	5-12-2020	
28	Problems on calculation of SFD,BMD for	5-12-2020	
	cantilever subjected to u.d.l	= 10 0000	
29	Problems on calculation of SFD,BMD for	7-12-2020	
	cantilever subjected to combination load	0.10.0000	-
30	Problems on calculation of SFD,BMD for over	8-12-2020	
30	hanging beams		
		9-12-2020	
31	Problems on calculation of SFD,BMD for over		A Color of the Col
31	hanging subjected beams subjected to combination		
	loading beams		
	loading ocams		
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71 Strens 32 33 34 35 36	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the company equations, calculation of section modulus of section for sec	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020	intersperse
71 Strens 32 33 34 35 36	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congequations, calculation of section modulus of section for section modulus of section for section for materials by S.S Bhavikatti, and the section of Materials by R.K Bansal, Lakshmi Publication Theory of simple bending Assumptions of simple bending Derivation of bending equation: M/I = f/y = E/R, Definition of bending stresses Section Modulus Section	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020	interspersed with
71 Strens 32 33 34 35 36	student will have knowledge of stresses developed in the company equations, calculation of section modulus of section for sections. In a section modulus of section for section for section for section modulus of section for section for section for section modulus by S.S. Bhavikatti, and for materials by R.K. Bansal, Lakshmi Publication. Theory of simple bending. Assumptions of simple bending. Derivation of bending equation: M/I = f/y = E/R, Definition of bending stresses. Section Modulus. Section modulus of rectangular and circular sections (Solid and Hollow), Section.	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020	interspersed with
71 Strens 32 33 34 35 36 37	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congequations, calculation of section modulus of section for section modulus of section for section for section modulus of section for section for modulus by S.S Bhavikatti, ath of Materials by R.K Bansal, Lakshmi Publication Theory of simple bending Assumptions of simple bending Derivation of bending equation: M/I = f/y = E/R, Definition of bending stresses Section Modulus Section modulus of rectangular and circular sections (Solid and Hollow),	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020	interspersed with
71 Streng 32 33 34 35 36 37	student will have knowledge of stresses developed in the company equations, calculation of section modulus of section for sections. In a section modulus of section for section for section for section modulus of section for section for section for section modulus by S.S. Bhavikatti, and for materials by R.K. Bansal, Lakshmi Publication. Theory of simple bending. Assumptions of simple bending. Derivation of bending equation: M/I = f/y = E/R, Definition of bending stresses. Section Modulus. Section modulus of rectangular and circular sections (Solid and Hollow), Section.	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020	interspersed with
71 Strens 32 33 34 35 36 37	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congequations, calculation of section modulus of section for simple bending Assumptions of simple bending Derivation of bending stresses Section Modulus Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections Section Section	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 18-12-2020	interspersed with discussions
703 The send bending ross section of Streng 32 33 34 35 36 37 38 39	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congequations, calculation of section modulus of section for section for section modulus of section for section for section for section modulus of section for section for modulus by R.K Bansal, Lakshmi Publication Theory of simple bending Assumptions of simple bending Derivation of bending stresses Section Modulus Section modulus Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections Section modulus of angle sections	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020	interspersed with discussions
71 Streng 32 33 34 35 36 37	FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congequations, calculation of section modulus of section for simple bending assumptions of simple bending assumptions of simple bending bending assumption of bending equation: M/I = f/y = E/R, Definition of bending stresses Section Modulus Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections Section modulus of angle sections Section Section Section	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 19-12-2020 21-12-2020	interspersed with discussions
71 Streng 32 33 34 35 36 37 38	FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congregations, calculation of section modulus of section for simple bending assumptions of simple bending assumptions of simple bending bending assumption of bending equation: M/I = f/y = E/R, Definition of bending stresses Section for modulus of rectangular and circular sections (Solid and Hollow), Section for modulus of I,T sections Section for modulus of angle sections Section for modulus of channel sections	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 18-12-2020	interspersed with discussions
CO3 The send bending ross section of the section of	Student will have knowledge of stresses developed in the congequations, calculation of section modulus of section for section for section modulus of section for simple bending Assumptions of simple bending Derivation of bending equation: M/I = f/y = E/R, Definition of bending stresses Section Modulus Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections Section modulus of angle sections Section modulus of channel sections Problems on section modulus for standard sections	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 19-12-2020 21-12-2020	interspersed with discussions
703 The send bending ross section of the section of	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congregations, calculation of section modulus of section for simple bending Assumptions of simple bending Derivation of bending stresses Section Modulus Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections Section modulus of angle sections Section modulus of channel sections Problems on section modulus for standard sections Problems on section modulus for standard sections Problems on section modulus for standard sections	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 19-12-2020 21-12-2020	interspersed with discussions
71 Streng 32 33 34 35 36 37 38 39 40 41 42 43	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congregations, calculation of section modulus of section for section for sections. In a section for section modulus of section for simple bending. Assumptions of simple bending. Derivation of bending stresses. Section Modulus. Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections. Section modulus of angle sections. Section modulus of channel sections. Problems on section modulus for standard sections. Problems on bending stresses.	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 19-12-2020 21-12-2020 22-12-2020 23-12-2020	interspersed with discussions
703 The send bending ross section of the section of	I FLEXURAL STRESSES & SHEAR STRESSES student will have knowledge of stresses developed in the congregations, calculation of section modulus of section for simple bending Assumptions of simple bending Derivation of bending stresses Section Modulus Section modulus of rectangular and circular sections (Solid and Hollow), Section modulus of I,T sections Section modulus of angle sections Section modulus of channel sections Problems on section modulus for standard sections Problems on section modulus for standard sections Problems on section modulus for standard sections	10-12-2020 11-12-2020 14-12-2020 15-12-2020 16-12-2020 17-12-2020 19-12-2020 21-12-2020 22-12-2020 23-12-2020 24-12-2020	interspersed with discussions

41	Introduction to ohear stress distribution	
48	Shear stress distribution across various beam sections like rectangular section	31-12-2020
49	Shear stress distribution across various beam sections like cicular section	2-1-2021
50	Shear stress distribution across various beam sections like triangular section	4-1-2021
51	Shear stress distribution across I section	5-1-2021
52	Shear stress distribution across T section	6-1-2021
53	Shear stress distribution across built up section	7-1-2021
54	Problems on S.S.D across various standard sections	8-1-2021
55	Problems on S.S.D across various standard sections	9-1-2021
56	Determination of S.S.D in T section	11-12021
57	Determination of S.S.D in I section	12-1-2021
58	Determination of S.S.D in built up sections	16-1-2021

Lecture interspersed with discussions

UNIT-IV DEFLECTION OF BEAMS

CO4 The student will be able to calculate the deflections in beams under various loading and support conditions.

T1 Strength of Materials by S.S Bhavikatti,

T2 Strength of Materials by R.K Bansal, Lakshmi Publication

59	Bending into a circular arc – slope, deflection and radius of curvature – Differential equation for the elastic line of a beam	18-1-2021	
60	Double integration Method	19-1-2021	
61	Determination of slope and deflection for cantilever subjected to point loads,	20-1-2021	
62	Determination of slope and deflection for cantilever subjected to u.d.l	21-1-2021	Lecture interspersed
63	Determination of slope and deflection for cantilever subjected to u.v.l	22-1-2021	with discussions
64	Determination of slope and deflection for S.S.B subjected to point loads	23-1-2021	
65	Determination of slope and deflection for S.S.B subjected to u.d.l	1-2-2021	The state of the s
66	Determination of slope and deflection for S.S.B subjected to u.v.l	2-2-2021	
67	Macaulay's methods and problems on it	3-2-2021	
68	Mohrs theorem and Moment area method	4-2-2021	

UNIT -V THIN AND THICK CYLINDERS

CO5 The student will be able to classify cylinders based on their thickness and to derive equations for measurement of stresses across the cross section when subjected to external pressure.

T1 Strength of Materials by S.S Bhavikatti,

T2 Strength of Materials by R.K Bansal, Lakshmi Publication

69	Introduction to Thin and thick cylinders	5-2-2021	1
70	Derivation of formula for hoop and longitudinal stress	6-2-2021	
71	Volumetric strain,	8-2-2021	
72	Changes in diameter volume in cylinders	9-2-2021	Lecture
73	Introduction to thin spherical shells and derivation	10-2-2021	interspersed
74	Lames theory derivation	11-2-2021	with
75	Hoop and radial stress	12-2-2021	discussions
76	Design of thick cylinders	15-2-2021	discussion
77	Compound cylinders and problems	16-2-2021	The state of the s
78	Thick spherical shells	17-2-2021	
79	Problems on cylinders	18-2-2021	
80	Problems on cylinders	19-2-2021	
81	Problems on cylinders	20-2-2021	

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Signature of the HOD 29 110 120

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TENTATIVE LESSON PLAN: CIVIL R1921013

FLUID MECHANICS

	Course Title: FLUID MECHANICS (CIV	IL)
Section: Sec A	Date: 29-10-2020	Page No: 01 of 03
Revision No: 00	Prepared By: J PURNA CHANDRA RAO	Approved By: HOD

Tools: Black board, power point presentations

No. of Periods	TOPIC	Tentative date	Mode of Delivery
	UNIT 1: INTRODUCTION TO FLUID MECHANICS DERSTAND THE VARIOUS PROPERTIES OF FLUIDS AND T CALCULATE THE FORCES THAT ACT ON SUBMERGE LUID MECHANICS AND HYDRAULIC MECHANICS BY R.K.	THEIR INFLUENCE D PLANES AND CU	ON FLUID MOTION RVES.
1	Properties of fluid	02-11-2020	
2	Gravity, viscosity, surface tension, vapour pressure	03-11-2020	
3	Numerical problems	04-11-2020	
4	Mechanics of fluid motion	05-11-2020	
5	Pressure at point, Pascal's law	06-11-2020	
6	Hydraulic law-atmospheric, gauge and vacuum pressures	07-11-2020	
7	Numerical problems	09-11-2020	
8	Measurement of pressure	10-11-2020	
9	Pressure gauges	11-11-2020	
10	Differential and Micro manometers	12-11-2020	
11	Numerical problems	13-11-2020	Lecture intersperse
12	Mechanical gauges	16-11-2020	with
13	Hydrostatics- Introduction	17-11-2020	discussions
14	Hydrostatic law, Total Pressure Center of pressure	18-11-2020	
15	Moments of Inertia, Geometric properties	19-11-2020	
16	Hydrostatic forces on submerged plane-Horizontal	20-11-2020	
17	Hydrostatic forces on submerged plane-Vertical	21-11-2020	
18	Hydrostatic forces on submerged plane-Inclined	23-11-2020	
19	Hydrostatic forces on submerged Curved Surface	24-11-2020	
20	Numerical problems	25-11-2020	
21	Archimedes Principle, Metacenter	26-11-2020	
22	Tutorial	27-11-2020	
TB: I	UNIT 2: FLUID KINEMATICS & FLUID CO2: IDENTIFY AND ANALYSE VARIOUS TYPE FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.I	ES OF FLUID FLOW	
23	Fluid kinematics -Fluid flow, stream, streak, path line	28-11-2020	
24	0)-12-20. Classification of flows	01-12-2020	
25	Continuity equation- 1,2,3 D	02-12-2020	Lecture intersperse
26	03-12-2020 Flow Nets	03-12-2020	with discussions

27	Numerical problems	04-12-2020
28	Stream and velocity potential function	05-12-2020
29	Fluid Dynamics - Surface and body forces	07-12-2020
30	Euler's equation of motion	08-12-2020
31	Bernoulli's equation	09-12-2020
32	Numerical problems	10-12-2020
33	Momentum equation	11-12-2020
34	Forces on Pipe bend	14-12-2020
35	Numerical problems	15-12-2020
36	Applications	16-12-2020
37	Tutorial	17-12-2020

UNIT 3: LAMINAR FLOW, TURBULENT FLOW AND CLOSED CONDUIT FLOW

CO3: APPLY THE INTEGRAL FORMS OF THE THREE FUNDAMENTAL LAWS OF FLUID MECHANICS TO

TURBULENT AND LAMINAR FLOW THROUGH PIPES AND DUCTS IN ORDER TO PREDICT RELEVANT

PRESSURES, VELOCITIES AND FORCES.

TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS

		2012 112 011 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	38	Flows-Reynolds experiment	18-12-2020	
	39	Characteristics of laminar and turbulent flow	19-12-2020	
1	40	Shear and velocity distribution	21-12-2020	
	41	Laws, Hagen Poiseuille's formula	22-12-2020	
Ī	42	Flow between plates	23-12-2020	
	43	Long tubes, problems	24-12-2020	
	44	Hydrodynamically smooth and rough boundary	26-12-2020	
	45	Darcy's equation	28-12-2020	Lecture interspersed
	46	Flow through Pipes and Major, minor losses	29-12-2020	with discussions
	47	Pipes in series, parallel	30-12-2020	
	48	Hardy Cross method	31-12-2020	
	49	TEL, HGL, moody chart	02-01-2021	
	50	Equivalent Pipes	04-01-2021	
	51	Numerical Problems	05-01-2021	
	52	. Tutorials	06-01-2021	
	10 STATE OF THE REAL PROPERTY.	TRUE 4 MEAGINEMENT OF F	LOW	

UNIT 4: MEASUREMENT OF FLOW

CO4: MEASURE THE QUANTITIES OF FLUID FLOWING IN PIPES, TANK AND CHANNELS. TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS

53	Measurement Of Flow-Pitot tube	07-01-2021	
54	Orificemeter	08-01-2021	Lecture interspersed with discussions
55	Venturimeter	09-01-2021	with discussions
56	Classification of orifice	11-01-2021	
57	Flow over rectangular notch	12-01-2021	
58	Problems	18-01-2021	
59	V- notch	19-01-2021	
60	Problems	20-01-2021	
61	Trapezoidal, stepped	21-01-2021	19.
62	Numerical Problems	22-01-2021	26

63	Numerical Problems	23-01-2021
64	Broad crested weir	01-02-2021
65	Problems - Problems	02-02-2021
66	Tutorial	03-02-2021

UNIT 5: BOUNDARY LAYER THEORY

CO5: KNOW THE CONCEPT OF BOUNDARY LAYER THEORY

TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS

67	Boundary Layer Theory	04-02-2021	
68	Concept, Prandtl contribution	05-02-2021	
69	Characteristics of B.L	06-02-2021	
70	Thickness of B.L	08-02-2021	
71	Vonkarman Integral Equation	09-02-2021	
72	Seperation, control of B.L	10-02-2021	
73	Drag, lift, Magnus effect	11-02-2021	
74	Numerical Problems	12-02-2021	Lecture interspersed with discussions
75	Tutorial	15-02-2021	with discussions
76	Summary on FM	16-02-2021	
77	Revision-1,2 units	17-02-2021	
78	Revision- 3,4,5 units	18-02-2021	
79	Old Question papers	19-02-2021	
80	Old Question papers	20-02-2021	

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Signature of the HOD

Numerical Problems

PRINCIPAL

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Course Title: S	SURVEYING AND GEOMETRICS	Dogo No - O1	of 03
Section · Sec	A Date: 2-11-2020	Page No: 01	
Revision No : (00 Prepared By :M.Karthik Khumar	Approved By	: 1101
Tools: Black boar	rd, PPTs, Moodle	Date	Mode of
No. of	TOPIC	Date	Delivery
Periods			
CO1 The stude surveying. Mea T ₁ –Surveying ve	Introduction: ent will be able to understand the basic concepts Know to a sure horizontal and vertical- distances and angles bl-1-Br.B.C.punmia ashok.jain,arun k.jain d leveling -N.N.Basak rveying-Satheesh gopi,R.Sathikumar,N.madhu		d methods of
T ₃ -Advanced Su	Introduction and Basic Concepts	2-11-2020	
1	Objectives ,Classification	3-11-2020	
2	Principles of Surveying	4-11-2020	
3	Surveying accessories	5-11-2020	
4		6-11-2020	
5	Compass	7-11-2020	
6	Plane table surveying	9-11-2020 .	
7	Measurement of distances and directions	10-11-2020	
8	Linear distances-Approximate methods	11-11-2020	
9	Direct Methods-chains- tapes	12-11-2020	
10	Direct Methous-chains- tapes	13-11-2020	
11	Ranging ,Tape corrections	16-11-2020	
12	Prismatic Compass- Bearings	17-11-2020	
13	Included angles, Local Attraction	18-11-2020	
14	Magnetic Declination and dip	19-11-2020	
15	Whole circle Bearings systems Quadrant Bearings systems of locating Bearings	20-11-2020	
16		21-11-2020	
17	Problem	23-11-2020	
18	Problem		
data collection	Leveling dent will be able to Recording of observation accurately on methods and prepare field notes vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling—N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu	and Identify	Lecture intersperse with discussion
19	Introduction	25-11-2020	
20	Leveling -types of levels	26-11-2020	
21	Temporary and permanent adjustments method of leveling	27-11-2020	
22	Methods of leveling	28-11-2020	
23	Booking and Determination of level	1-12-2020	-
24	Effect of Curvature of earth	2-12-2020	
25	Refraction	3-12-2020	-
26	Introduction of contours	4-12-2020	
27	Characteristics and Uses of contours	5-12-2020	
28	methods of contour surveying		
29	Areas: Determination of areas consisting of irregular boundary		
30	Regular boundary	8-12-2020	
31	Volume: Determination of volume of earth work in	9-12-2020	

32	Embankments for level section	10-12-2020	
33	Volume of borrow pits	11-12-2020	
34	Capacity of reservoirs	14-12-2020	
35	Problems on height of instrument	15-12-2020	
36	Problems on rise and fall method	16-12-2020	
37	problem	17-12-2020	

	problem		
No. of Periods	TOPIC	Date	Mode of Delivery
measuremen	Theodolite Surveying Ident will have knowledge Understand the working principaterors and corrective measures Second-1-Br.B.C.punmia ashok.jain,arun k.jain	ples of survey ins	struments,
T ₂ -Surveying T ₂ -Advanced	and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu		
38	Theodolite: Introduction	18-12-2020	
39	Types of Theodolites	19-12-2020	
40	principles-uses	21-12-2020	
41	adjustments – temporary and permanent	22-12-2020	
42	Measurement of horizontal angles by Repetition method	23-12-2020	
43	Measurement of horizontal angles by reiteration method	24-12-2020	
44	Measurement of vertical angles.	26-12-2020	
45	Trigonometrical leveling when base is accessible	28-12-2020	
46	Trigonometrical leveling when base is inaccessible	29-12-2020	
47	Traversing:Methods of traversing	30-12-2020	
48	Traverse computations	31-12-2020	
49	adjustements	2-1-2021	
50	Introduction to omitted measurements	4-1-2021	
51	Problems	5-1-2021	
	D 11	6-1-2021	
52	Problems		
53	Problems	7-1-2021	
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak	7-1-2021 d rectification s and setting	with
53 UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₂ -Surveying	Problems V Curves tudent will be able toldentification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves	7-1-2021 d rectification s and setting	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₂ -Surveying T ₃ -Advanced	Problems V Curves tudent will be able toldentification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₂ -Surveying T ₃ -Advanced	Problems V Curves tudent will be able toldentification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₂ -Surveying T ₃ -Advanced 54	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₂ -Surveying T ₃ -Advanced 54 55 56	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out Reverse curve	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 16-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 16-1-2021 18-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57 58	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out Reverse curve	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 18-1-2021 19-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57 58	Problems Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve design and setting out Reverse curve Tacheometric Surveying: Principles	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 18-1-2021 19-1-2021 20-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57 58 59 60	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve design and setting out Reverse curve Tacheometric Surveying: Principles Stadia and tangential methods	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57 58 59 60 61	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve design and setting out Reverse curve Tacheometric Surveying: Principles Stadia and tangential methods Problem	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57 58 59 60 61 62	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve design and setting out Reverse curve Tacheometric Surveying: Principles Stadia and tangential methods Problem Problem	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021	interspersed with
UNIT -IV CO4 The s methods .A out curves I T ₁ -Surveying T ₃ -Advanced 54 55 56 57 58 59 60 61 62 63	Problems V Curves tudent will be able to Identification of source of errors and pply surveying principles to determine areas and volume Perform calculations based on the observation g vol-1-Br.B.C.punmia ashok.jain,arun k.jain and leveling –N.N.Basak Surveying-Satheesh gopi,R.Sathikumar,N.madhu Introduction Curves Curves: Types of curves and their necessity design and setting out – simple curves design and setting out compound curve design and setting out Reverse curve Tacheometric Surveying: Principles Stadia and tangential methods Problem Problem Modern Surveying methods: Principles	7-1-2021 d rectification s and setting 8-1-2021 9-1-2021 11-12021 12-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021	interspersed

UNIT -V Photogrammetry Surveying:

CO5 The student will be Use modern surveying equipment's for accurate results

T₁ -Surveying vol-1-Br.B.C.punmia ashok.jain,arun k.jain

T2-Surveying and leveling -N.N.Basak

T3-Advanced Surveying-Satheesh gopi,R.Sathikumar,N.madhu

67	Photogrammetry Surveying -Basics	3-2-2021
68	Perspective geometry of aerial photogragh	4-2-2021
69	Relief	5-2-2021
70	tilt displacements	6-2-2021
71	terrestrial	8-2-2021
72	Flight planning	9-2-2021
73	sterscopy	10-2-2021
74	Ground control extension for photographic	11-2-2021
75	Mapping-aerial	12-2-2021
76	radial triangulation	15-2-2021
77	Methods: Photographic mapping	16-2-2021
78	Paper prints	17-2-2021
79	stereoplotting instruments	18-2-2021
80	Mosaics	19-2-2021
81	Map substitutes	20-2-2021

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TENTATIVE LESSON PLAN: (CE)

1-1

	UILDING MATERIALS AND CONSTRUCT		` '		
Section: Sec A	Date:10-11-2020	Page no : 01 o			
RevisionNo:00	Prepared By: A.ANOOP KUMAR	Approved By : H	OD		
	Iodel, Nptel videos				
No. of Periods	TOPIC	Implemented	Mode of		
		Dates	Delivery		
UNIT					
clay products, 7 building indust TB1::BUILDIN	he types and properties of various building ma Fimber, metals, cement and concrete and their ry NG MATERIALS by S.K.Duggal, New Age Pul NG CONSTRUCTION by B.C.Punmia, laxmi publ	applications in			
1	Introduction of building stones	10-11-2020			
2	Properties of building stones	11-11-2020			
3	Properties of building stones	12-11-2020			
4	Relation to their structural requirements	13-11-2020			
5	Classification of stones	16-11-2020			
6	Classification of stones	17-11-2020	Lecture		
7	Stone quarrying	18-11-2020	interspersed wit		
8	Precautions in blasting	19-11-2020	discussions		
9	Dressing of stones	20-11-2020			
10	Composition of good brick earth	21-11-2020			
11	various methods of manufacturing of bricks	23-11-2020			
12	various methods of manufacturing of bricks	24-11-2020			
13	Characteristics of good tiles	25-11-2020			
14	Manufacturing methods of tiles	26-11-2020			
15	Types of tiles	26-11-2020			
16	Uses of materials like Aluminum, Gypsum,	27-11-2020			
	glass, Bituminous materials & Their quality				
TB1::BUILDIN TB2:: BUILDI 2009	e appropriate construction methods to meet the NG MATERIALS by S.K.Duggal, New Age Pul NG CONSTRUCTION by B.C.Punmia, laxmi	blishers publications-			
17	Types of masonry, English and Flemish bonds	27-11-2020			
18	Rubble Masonry	28-11-2020			
19	Ashlar Masonry	30-11-2020			
20	Cavity & partition walls &	01-12-2020			
21	WOOD: Structure	02-12-2020	Lecture		
22	Properties of wood	03-12-2020			
23	Seasoning of timber	04-12-2020	interspersed wit		
24	Classification of types of woods used in buildings	05-12-2020	UISCUSSIOIIS		
	D.C 1	07 12 2020			
25	Defects in timber	07-12-2020			

	Reinforced Plastics		
27	Tutorial	09-12-2020	
UNIT	Γ−III LIME AND CEMENT		
TB1::BUILE	DING MATERIALS by S.K.Duggal, New Age Publ	lishers	
ГВ2::BUILI	DING CONSTRUCTION by R.Shankar, Falcon pu	iblications	
28	Introduction	11-12-2020	
29	Lime: Various ingredients of lime	14-12-2020	
30	Constituents of limestone	15-12-2020	
31	classification of lime	16-12-2020	
32	various methods of manufacture of lime	17-12-2020	Lecture
33	various methods of manufacture of lime	18-12-2020	interspersed with
34	Cement-portland cement, Chemical Composition of cement	19-12-2020	discussions
35	Hydration Setting times & Fineness of cement	21-12-2020	
36	Various types of cement & their properties	22-12-2020	
37	A Various field & laboratory tests for Cement	23-12-2020	
38	Various ingredients of cement concrete & Their importance	24-12-2020	
39	Various tests for concrete	26-12-2020	
40	Tutorial	28-12-2020	
Describe the construction Describe the and material	various types of stairs and stair cases and their loos including fire escapes and also lifts and escalator	cations, sizes	
	G CONSTRUCTION by B.C.Punmia, laxmi publica		
41	Lintels	30-12-2020	
42	Arches	31-12-2020	
43	vaults	02-01-2021	
44	stair cases	04-01-2021	
45	Different types of stair cases	05-01-2021	Lecture
46	Different types of floors	06-01-2021	interspersed with
47	Concrete floor Mosaic floor, Terrazzo floor ,Pitched roofs	07-01-2021	discussions
48	Flat roofs	08-01-2021	
49	Lean to roofs	09-01-2021	
50	Coupled Roofs	11-01-2021	
51	King post Trusses, Queen post Trusses	03-02-2021	

UNIT-V

52

53

54

FINISHINGS & AGGREGATES

04-02-2021

05-02-2021

06-02-2021

CO4 Describe the various methods of shuttering, scaffolding and centering Select the appropriate' building materials to suit to the structural requirements including exposure conditions

R.C.C Roofs, Madras Terrace

Prefabricated Roofs

Tutorial

TB BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009,

S.K.Duggal, New Age Publishers

55	Introduction	10-02-2021	
56	Damp Proofing materials and Water proofing materials, Uses	11-02-2021	,
57	Plastering	12-02-2021	Lecture
58	Pointing	13-02-2021	interspersed with
59	White washing	15-02-2021	discussions
60	Distempering	15-02-2021	
61	Paints: Constituents of a paint ,Types of paints	16-02-2021	
62	Painting of new /old wood, Varnish	16-02-2021	
63	Form Work, Scaffoldings	16-02-2021	
64	Tutorial	17-02-2021	
65	Classification of aggregate: Coarse& Fine aggregates	17-02-2021	
66	Particle shape & texture	17-02-2021	
67	Strength of aggregates	18-02-2021	Lecture
68	Specific gravity	18-02-2021	interspersed with
69	Bulk Density	19-02-2021	discussions
70	Porosity & Absorption	19-02-2021	
71	Moisture content of Aggregate	20-02-2021	
72	Bulking of sand	22-02-2021	
73	Sieve analysis	22-02-2021	
74	Tutorial	23-02-2021	

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TENTATIVE LESSON PLAN: CE

Course Title: TR.	ANSPORTATION ENGINEERING-I (R1921	016)
Section : Sec A	Date :2/0/2020	Page No: 01 of 03
Revision No: 00	Prepared By: K.KIRAN	Approved By: HOD

1001s: Black Doard, Pris,	Model		
No. of	TOPIC		Implemented Date
Periods		Date	Date

UNIT I Highway Planning and Alignment

CO1: Plan highway network for a given area.

TB1::Highway Engineering, Khanna S. K., Justo C. E. G and Veeraragavan A, Nem Chand Bros., Roorkee.

TB2::Traffic Engineering and Transportation Planning, Kadiyali L. R, Khanna Publishers, New Delhi.

T 10 11 - 0-11-			
1	Highway development in India	2-11-2020	
2	Classification of Roads	3-11-2020	
3	Road Network Patterns	4-11-2020	
4	Necessity for Highway Planning	5-11-2020	
5	Different Road Development Plan	6-11-2020	
6	First, second, third road development plans,	7-11-2020	
7	road development vision 2021	9-11-2020	Lecture
8	Rural Road Development Plan – Vision 2025	10-11-2020	interspersed
9	Planning Surveys	11-11-2020	with
10	Highway Alignment	12-11-2020	discussions
11	Factors affecting Alignment	13-11-2020	
12	Engineering Surveys	16-11-2020	
13	Drawings and Reports.	17-11-2020	

UNIT - II Highway Geometric Design

CO2:Determine Highway alignment and design highway geometrics

TB1::Highway Engineering, Khanna S. K., Justo C. E. G and Veeraragavan A, Nem Chand Bros., Roorkee.

TB2::Traffic Engineering and Transportation Planning, Kadiyali L. R, Khanna Publishers, New Delhi.

Importance of Geometric Design	19-11-2020	
	20-11-2020	Lecture
	21-11-2020	interspersed
<u> </u>	23-11-2020	with
	24-11-2020	discussions
	25-11-2020	
Distance		
Design of Horizontal Alignment	26-11-2020	
Design of Super elevation and Extra widening	27-11-2020	
Design of Transition Curves	28-11-2020	
Design of Vertical alignment	1-12-2020	
Gradients- Vertical curves.	24-11-2020	
	Design of Horizontal Alignment Design of Super elevation and Extra widening Design of Transition Curves Design of Vertical alignment	Design controls and Criteria Highway Cross Section Elements Sight Distance Elements Stopping sight Distance Overtaking Sight Distance and Intermediate Sight Distance Design of Horizontal Alignment Design of Super elevation and Extra widening Design of Vertical alignment Design of Vertical alignment 20-11-2020 24-11-2020 25-11-2020 26-11-2020 28-11-2020 1-12-2020

UNIT - III Traffic Engineering

CO3: Design Intersections and prepare traffic management plans

TB1::Highway Engineering, Khanna S. K., Justo C. E. G and Veeraragavan A, Nem Chand Bros., Roorkee.

TB2::Traffic Engineering and Transportation Planning, Kadiyali L. R, Khanna Publishers, New Delhi.

25	Basic Parameters of Traffic-Volume	2-12-2020	
26	Speed and Density	3-12-2020	
27	Traffic Volume Studies	4-12-2020	
28	Speed studies	5-12-2020	
29	spot speed and speed & delay studies	7-12-2020	
30	Parking Studies	8-12-2020	
31	Road Accidents	9-12-2020	
32	Causes and Preventive measures	10-12-2020	
33	Condition Diagram and Collision Diagrams	11-12-2020	Lecture
34	PCU Factors	14-12-2020	interspersed
35	Capacity of Highways	15-12-2020	with
36	Factors Affecting	16-12-2020	discussions
37	LOS Concepts	17-12-2020	
38	Road Traffic Signs	18-12-2020	
39	Road markings	19-12-2020	
40	Types of Intersections; At-Grade Intersections	21-12-2020	
41	Design of Plain, Flared, Rotary and Channelized	22-12-2020	
	Intersections		
42	Design of Traffic Signals –Webster Method	23-12-2020	
43	IRC Method.	24-12-2020	

UNIT - IV Highway Materials:

CO4: Judge suitability of pavement materials

TB1::Highway Engineering, Khanna S. K., Justo C. E. G and Veeraragavan A, Nem Chand Bros., Roorkee.

TB2::Traffic Engineering and Transportation Planning, Kadiyali L. R, Khanna Publishers, New Delhi.

44	Subgrade soil: classification	2-1-2021	
45	Group Index	4-1-2021	
46	Subgrade soil strength	5-1-2021	
47	California Bearing Ratio	6-1-2021	
48	Modulus of Subgrade Reaction.	7-1-2021	Lastura
49	Stone aggregates: Desirable properties	8-1-2021	Lecture
50	Tests for Road Aggregates	9-1-2021	interspersed with
51	Bituminous Materials: Types	11-12021	discussions
52	Desirable properties	12-1-2021	discussions
53	Tests on Bitumen	16-1-2021	
54	Bituminous paving mixes: Requirements	18-1-2021	
55	Marshall Method of Mix Design.	19-1-2021	

UNIT - V Design Of Pavements: Types of pavements

CO5: Design flexible and rigid pavements

TB1::Highway Engineering, Khanna S. K., Justo C. E. G and Veeraragavan A, Nem Chand Bros., Roorkee.

TB2::Traffic Engineering and Transportation Planning, Kadiyali L. R, Khanna Publishers, New Delhi.

56	Functions and requirements of different components of pavements;	20-1-2021	Lecture interspersed
57	Design Factors	21-1-2021	with
58	Flexible Pavements: Design factors	22-1-2021	discussions
59	Flexible Pavement Design Methods - CBR method	23-1-2021	
60	IRC method	1-2-2021	

61	Burmister method	2-2-2021
62	Mechanistic method	3-2-2021
63	IRC Method for Low volume Flexible pavements.	4-2-2021
64	Rigid Pavements: Design Considerations	5-2-2021
65	wheel load stresses	6-2-2021
66	Temperature stresses	8-2-2021
67	Frictional stresses	9-2-2021
68	Combination of stresses	10-2-2021
69	Design of slabs	11-2-2021
70	Design of Joints	12-2-2021
71	IRC method	15-2-2021
72	Rigid pavements for low volume roads	16-2-2021
73	Continuously Reinforced Cement Concrete	17-2-2021
	Pavements	
74	Roller Compacted Concrete Pavements.	18-2-2021

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

	tle: MANAGEMENT SCIENCE(R1631011)		
Section:C	IV-A Date: 29 10 20	Page No: 01 of 02	
Revision 1		Approved By: H	OD
Tools: Black	k board	A 12	
No. of		Date	Mode of
Periods	TOPIC	(Taught on)	Delivery
(Actual Taken)		(Taught on)	Benvery
UNIT –I	Introduction to Management		
	e to understand the concept and nature of management, eva	iluation of management theories,	motivation and
	R. Aryasri, Management Science'TMH 2011.		
1	Introduction to management	02-11-2020	
2	Nature & importance of management	03-11-2020	-
3	Generic function of management	04-11-2020	
4	Evaluation of management thoughts	05-11-2020	PPT
5	Motivation theories	06-11-2020	
6	Decision making process	07-11-2020	
7	Designing organization structure	08-11-2020	
8	Principles & types of organization	09-11-2020	
9	Organization typology	10-11-2020	
10	Global leadership	11-11-2020	
11	Principals and types of management	12-11-2020	
	R Arvasri Management Science'TMH 2011.	nt and inventory control	
	R. Aryasri, Management Science'TMH 2011. Work study	13-11-2020	
TB:Dr. A.	Work study Statistical quality control	13-11-2020 16-11-2020	
TB: Dr. A. 12 13 14	Work study Statistical quality control Control charts	13-11-2020 16-11-2020 17-11-2020	PPT
TB: Dr. A.	Work study Statistical quality control Control charts Problems On Control Charts	13-11-2020 16-11-2020 17-11-2020 18/11/2020	PPT
TB: Dr. A. 12 13 14	Work study Statistical quality control Control charts Problems On Control Charts Material Management	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020	PPT
TB: Dr. A. 12 13 14 15 16 17	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020	PPT
TB: Dr. A. 12 13 14 15 16 17 19	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020	PPT
TB: Dr. A. 12 13 14 15 16 17 19 20	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020	PPT
TB: Dr. A. 12 13 14 15 16 17 19 20 20	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020	PPT
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Functional management	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Functional management e to understand the different functional areas in an organ	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abland channel	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Functional management e to understand the different functional areas in an organ is of distribution.	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abland channel TB: Dr. A.	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Other Methods Of EOQ Functional management e to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science TMH 2011	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities-	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis ' Problems On EOQ Other Methods Of EOQ Functional management e to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science 'TMH 2011 Concept of HRM,HRD and PMIR	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities-	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Gunctional management e to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities-	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22 23	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Gunctional management e to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science'TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM Wage payment plans	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities- 25-11-2020 26-11-2020 27-11-2020	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Other Methods Of EOQ Functional management to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM Wage payment plans Job evolution Vs merit rating	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities- 25-11-2020 26-11-2020 27-11-2020 30-11-2020	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22 23	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Gunctional management e to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science'TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM Wage payment plans	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities- 25-11-2020 26-11-2020 27-11-2020	
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22 23 24	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Other Methods Of EOQ Functional management to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM Wage payment plans Job evolution Vs merit rating	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities- 25-11-2020 26-11-2020 27-11-2020 30-11-2020	product life cy
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22 23 24 25	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Gunctional management e to understand the different functional areas in an organ of distribution. R. Aryasri, Management Science TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM Wage payment plans Job evolution Vs merit rating Marketing management functions	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities- 25-11-2020 26-11-2020 30-11-2020 01-12-2020	product life cy
TB:Dr. A. 12 13 14 15 16 17 19 20 20 UNIT-III:F CO3: Abl and channel TB: Dr. A. 21 22 23 24 25 26	Work study Statistical quality control Control charts Problems On Control Charts Material Management Need For Inventory Control EOQ And ABC Analysis Problems On EOQ Other Methods Of EOQ Tunctional management e to understand the different functional areas in an organ is of distribution. R. Aryasri, Management Science TMH 2011 Concept of HRM,HRD and PMIR Functions of HRM Wage payment plans Job evolution Vs merit rating Marketing management functions Marketing strategies based on plc	13-11-2020 16-11-2020 17-11-2020 18/11/2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 ization and their responsibilities- 25-11-2020 27-11-2020 30-11-2020 01-12-2020 02-12-2020	- product life cy

	Project Management		
	e toequip with different techniques in project management, i.e, CPM and project crashing		
TB: Dr. A	R. Aryasri, Management Science'TMH 2011		
30	Introduction to PERT and CPM	08-12-2020	en ann ann each ann an ann ann ann ann ann ann ann ann
31	Development of network diagram	09-12-2020	
32	Difference between pert and CPM	10-12-2020	
33	Identifying critical part	11-12-2020	
34	Probability	14-12-2020	Lecture
35	Project crashing simple problems	15-12-2020	interspersed with
36	Problems	16-12-2020	discussions
	le to equip with the concept and practical issues relating to stra A. R. Aryasri, Management Science'TMH 2011 Vision, mission, goals and strategy	18-12-2020	
38	Elements of corporate planning process	19-12-2020	-
The second second		21-12-2020	-
39	SWOT analysis	22-12-2020	Lecture
40	Steps in strategic formulation and implementation		interspersed with
41	Generic strategy and global strategy	23-12-2020	discussions
42	Theories of MNCs	24-12-2020	13043310113
43	Environmental scanning	25-12-2020	
CO6:: Al	Contemporary Management Practices ble to equip with the contemporary management practices, R. Aryasri, Management Science'TMH 2011		
44	Basic concepts of MIS	26-12-2020	
45	Total quality management	28-12-2020	
46	Six sigma	29-12-2020	
47	Supply chain management	30-12-2020	
48	Enterprise resource planning	01/01/2021	Lecture
49	Business process outsources	02/01/2021	interspersed
50	Business process re-engineering	04/01/2021	with
51	Bench Marking	05/01/2021	discussions
52	Balanced Score Card	06/01/2021	
53	Material Requirement Planning	07/01/2021	

PRINCIPAL

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			NAGEMENT SCIENCE(R1631011)	D T 01 CO	A SOURCE AND A SOURCE AND ASSOCIATION OF THE PARTY OF THE
and the second	Section:CI		Date: 29/10/20 Prepared By: SRINIVAS. V	Page No: 01 of 0	
L	Revision N Tools: Black		Prepared By: SRINIVAS. V	Approved By: H	עט
	No. of Periods (Actual Taken)	board	TOPIC	Date (Taught on)	Mode Delive
	UNIT –I	Intro	luction to Management		
	CO1::Able		tand the concept and nature of management, eva	aluation of management theories.	motivation
	leadership sty				
	TB: Dr. A. F	. Aryasr	i, Management Science'TMH 2011.		
	1		uction to management	02-11-2020	
	2		e & importance of management	03-11-2020	
	3		ic function of management	04-11-2020	
	4		ation of management thoughts	05-11-2020	PPT
	5	1000	ation theories	06-11-2020	
	6		on making process	07-11-2020	
	7		ning organization structure	08-11-2020	
	8		ples & types of organization	09-11-2020	
	9		ization typology	10-11-2020	
	10		l leadership	11-11-2020	
	11		pals and types of management s Management	12-11-2020	
	12 13		study cical quality control	13-11-2020 16-11-2020	
	14		ol charts	17-11-2020	PPT
	15	Proble	ems On Control Charts	18/11/2020	
	16	Mater	ial Management	19-11-2020	
	17		For Inventory Control	20-11-2020	
	19	EOQ	And ABC Analysis	21-11-2020	
	20	Proble	ems On EOQ	23-11-2020	
	20	Other	Methods Of EOQ	24-11-2020	
	CO3: Able and channels TB: Dr. A. I	to under of distrib R. Aryası	i, Management Science'TMH 2011		- product lif
	21	Conce	ept of HRM,HRD and PMIR	25-11-2020	
	22	Funct	ions of HRM	26-11-2020	
	23	Wage	payment plans	27-11-2020	
	24		Volution Vs merit rating	30-11-2020	
	25		eting management functions	01-12-2020	PPT
	26		eting strategies based on plc	02-12-2020	
	27		nels of distribution	03-12-2020	
				04-12-2020	
	28	-	tional change management ions of marketing	05-12-2020	1000000

	roject Management			
	e toequip with different techniques in project management, i.e, CPM and project crashing			
	R. Aryasri, Management Science'TMH 2011			
30	Introduction to PERT and CPM	08-12-2020		
31	Development of network diagram	09-12-2020		
32	Difference between pert and CPM	10-12-2020		
33	Identifying critical part	11-12-2020		
34	Probability	14-12-2020	Lecture	
35	Project crashing simple problems	15-12-2020	interspersed with	
36	Problems	16-12-2020	discussions	
C O5:: Ab	rategic Management le to equip with the concept and practical issues relating to stra A. R. Aryasri, Management Science'TMH 2011			
37	Vision, mission, goals and strategy	18-12-2020		
38	Elements of corporate planning process	19-12-2020		
39	SWOT analysis	21-12-2020	Lecture	
40	Steps in strategic formulation and implementation	22-12-2020	interspersed with	
41	Generic strategy and global strategy	23-12-2020	discussions	
42	Theories of MNCs	24-12-2020		
43	Environmental scanning	25-12-2020		
CO6:: Al	Contemporary Management Practices ble to equip with the contemporary management practices, a. R. Aryasri, Management Science'TMH 2011		1	
44	Basic concepts of MIS	26-12-2020		
45	Total quality management	28-12-2020		
46	Six sigma	29-12-2020		
47	Supply chain management	30-12-2020		
48	Enterprise resource planning	01/01/2021	Lecture	
49	Business process outsources	02/01/2021	interspersed	
50	Business process re-engineering	04/01/2021	· with	
51	Bench Marking	05/01/2021	discussions	
52	Balanced Score Card	06/01/2021		
53	Material Requirement Planning	07/01/2021		
		08/01/2021		

PRINCIPAL

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: CE R1631012

Course Title: EN	GINEERING GEOLOGY	
Section : Sec A	Date: 2-11-2020	Page No: 01 of 03
Revision No: 00	Prepared By :Dr.T.Satyanaryana	Approved By: HOD

Tools: Black board, PPTs

No. of	TOPIC	Date	Mode of
Periods			Delivery

UNIT - I Introduction:

CO1 The student will be able to understand the basic concepts of Identify and classify the geological minerals

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

1	Introduction	2-11-2020
2	Definition of geology and various Branches of	3-11-2020
	Geology	
3	Allied Branches of geology	4-11-2020
4	Importance of Geology in Civil Engineering with	5-11-2020
	case studies	
5	Weathering	6-11-2020
6	Weathering of rocks- physical weathering	7-11-2020
7	Weathering of rocks- chemical weathering	9-11-2020
8	Geological agents	10-11-2020
9	River process-erosion	11-11-2020
10	River process-Transportation	12-11-2020
11	weathering process of Rock and their development	13-11-2020
12	River valley development	16-11-2020

UNIT -II Mineralogy And Petrology

CO2 The student will be able to understand the basic concepts Measure the rock strengths of various rocks. Classify and measure the earthquake prone areas to practice the hazard zonation

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications, T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

13	Mineralogy And Petrology	17-11-2020
14	Definitions of mineral	18-11-2020
15	Structures of silicates and rock,	19-11-2020
16	Different methods of study of mineral and rock,	20-11-2020
17	The study of physical properties of minerals and rocks for megascopic study for the following minerals and rocks,	21-11-2020
18	Common rock forming minerals are Feldspar	23-11-2020
19	Quartz Group	24-11-2020
20	Olivine,	25-11-2020
21	Augite,	26-11-2020
22	Hornblende,	27-11-2020
23	Mica Group,	28-11-2020
24	Asbestos,	1-12-2020
25	Talc,	2-12-2020
26	Chlorite,	3-12-2020

Lecture interspersed with discussion

27	Kyanite,	4-12-2020
28	Garnet,	5-12-2020
29	Calcite,	7-12-2020
30	other ore forming minerals are Pyrite, Hematite,	8-12-2020
31	Magnetite,	9-12-2020
32	Chlorite, Galena,	10-12-2020
33	Pyrolusite, Graphite,	11-12-2020
34	Chromite, Magnetite And Bauxite. Classification,	14-12-2020
35	structures Pyrolusite, Graphite, Chromite,	15-12-2020
36	Magnetite And Bauxite.	16-12-2020
37	Classification, structures textures and forms of Igneous rocks	17-12-2020
38	Metamorphic rocks, and their megascopic study of granite varieties, (pink, gray, green).	18-12-2020
39	Pegmatite	19-12-2020
40	,Dolerite, Basalt etc.,	21-12-2020
41	Shale, Sand Stone, Lime Stone,	22-12-2020
42	Laterite, Quartzite, Gneiss,	23-12-2020
43	Schist, Marble, Khondalite	24-12-2020
44	and Slate and their importance in Civil Engineering	26-12-2020

UNIT -III Structural Geology:

CO3 The student will be able to understand the basic Classify, monitor and measure the Landslides and subsidence Prepares, analyses and interpret the Engineering Geologic maps

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

45	Strike, Dip and Outcrop study of common geological structures	28-12-2020	
46	associating with the rocks such as Folds	29-12-2020	
47	Faults	30-12-2020	
48	Joints	31-12-2020	
49	Unconformities- parts	2-1-2021	
50	types mechanism	4-1-2021	
51	their importance in Civil Engineering–Indian stratigraphy ,Aims of statigraphy	5-1-2021	Lecture interspersed
52	Principles, Geological time scour	6-1-2021	with discussions
53	Geological division in India	7-1-2021	
54	Major stratigraphic units in India	8-1-2021	

UNIT IV Ground Water:

CO4 The student will be able to understand the basic Analyses the ground conditions through geophysical surveys

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

55	Water table	9-1-2021	
56	Cone of depression	11-12021	
57	Geological controls of Ground Water Movement	12-1-2021	Lecture
58	Ground Water Exploration Techniques	16-1-2021	interspersed with
59	Earthquakes And Land Slides: Terminology	18-1-2021	With

60	Classification, causes and effects	19-1-2021	discussions
61	Shield areas and Seismic bells, Richter scale	20-1-2021	
01	intensity		
62	Precautions of building constructions in seismic	21-1-2021	
	areas	22-1-2021	
63	Classification of Landslides, Causes and Effects,	23-1-2021	
64	measures to be taken prevent their occurrence at Landslides Case studies	23-1-2021	
INIT -V	Geophysics:		Lecture
CO5 The stud	dent will be able to understand the Test the geological	material and	interspersed
	ck the suitability of civil engineering project construction		with discussions
[1 Engineeri	ng Geology, N. Chenn Kesavulu, Laxmi Publications,		discussions
Γ2. Engineer	ing Geology, Subinoy Gangopadhay, Oxford Universi	ty press	
0		1-2-2021	
65	Importance of Geophysical methods,	2-2-2021	
66	Classification	3-2-2021	
67	Principles of Geophysical study by Gravity method	3 2 2 3 2 3	
68	Magnetic method,	4-2-2021	
69	Electrical methods	5-2-2021	
70	Seismic methods,	9-2-2021	
71	Radiometric method and Electrical resistivity,	10-2-2021	
72	Seismic refraction methods	11-2-2021	
73	Engineering properties of rocks	12-2-2021	
CO6 The mega/mini c	: Geology of Dams, Reservoirs And Tunnel student will be able to understand Investigate the privil engineering projects. Site selection for mega engine	loject site ioi	
	unnels, disposal sites etc		
T1 Engineer	ing Geology, N. Chenn Kesavulu, Laxmi Publications ring Geology, Subinoy Gangopadhay, Oxford Univers	ity press	
74 74	Types and purpose of Dams,	15-2-2021	
	Geological considerations in the selection of a Dam	16-2-2021	
75	site		
76	Life of Reservoirs Purpose of Tunnelling,	17-2-2021	
77	effects,	18-2-2021	
78	Lining of Tunnels.	19-2-2021	
	Influence of Geology for successful Tunnelling	20-2-2021	

TENTATIVE LESSON PLAN: CE R1631012

Course Title: EN	GINEERING GEOLOGY		
	Date : 2-11-2020	Page No : 01 of 03	
	Prepared By :Dr.T.Satyanaryana		
Tools: Black board,			
No of	TOPIC	Date	Mode of

Periods

Delivery

Introduction: UNIT -I

CO1 The student will be able to understand the basic concepts of Identify and classify the geological minerals

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

1	Introduction	2-11-2020
2	Definition of geology and various Branches of	3-11-2020
	Geology	1
3	Allied Branches of geology	4-11-2020
4	Importance of Geology in Civil Engineering with case studies	5-11-2020
5	Weathering	6-11-2020
6	Weathering of rocks- physical weathering	7-11-2020
7	Weathering of rocks- chemical weathering	9-11-2020
8	Geological agents	10-11-2020
9	River process-erosion	11-11-2020
10	River process-Transportation	12-11-2020
11	weathering process of Rock and their development	13-11-2020
12	River valley development	16-11-2020

Mineralogy And Petrology: UNIT-II

CO2 The student will be able to understand the basic concepts Measure the rock strengths of various rocks .Classify and measure the earthquake prone areas to practice the hazard zonation

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

13	Mineralogy And Petrology	17-11-2020
14	Definitions of mineral	18-11-2020
15	Structures of silicates and rock,	19-11-2020
16	Different methods of study of mineral and rock,	20-11-2020
17	The study of physical properties of minerals and rocks for megascopic study for the following minerals and rocks,	21-11-2020
18	Common rock forming minerals are Feldspar	23-11-2020
19	Quartz Group	24-11-2020
20	Olivine,	25-11-2020
21	Augite,	26-11-2020
22	Hornblende,	27-11-2020
23	Mica Group,	28-11-2020
24	Asbestos,	1-12-2020
25	Talc,	2-12-2020
26	Chlorite,	3-12-2020

Lecture interspersed with discussion

27	Kyanite,	4-12-2020
28	Garnet,	5-12-2020
29	Calcite,	7-12-2020
30	other ore forming minerals are Pyrite, Hematite,	8-12-2020
31	Magnetite,	9-12-2020
32	Chlorite, Galena,	10-12-2020
33	Pyrolusite, Graphite,	11-12-2020
34	Chromite, Magnetite And Bauxite. Classification,	14-12-2020
35	structures Pyrolusite, Graphite, Chromite,	15-12-2020
36	Magnetite And Bauxite.	16-12-2020
37	Classification, structures textures and forms of Igneous rocks	17-12-2020
38	Metamorphic rocks, and their megascopic study of granite varieties, (pink, gray, green).	18-12-2020
39	Pegmatite	19-12-2020
40	,Dolerite, Basalt etc.,	21-12-2020
41	Shale, Sand Stone, Lime Stone,	22-12-2020
42	Laterite, Quartzite, Gneiss,	23-12-2020
43	Schist, Marble, Khondalite	24-12-2020
44	and Slate and their importance in Civil Engineering	26-12-2020

UNIT-III Structural Geology:

CO3 The student will be able to understand the basic Classify, monitor and measure the Landslides and subsidence .Prepares, analyses and interpret the Engineering Geologic maps

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press

45	Strike, Dip and Outcrop study of common geological structures	28-12-2020	
46	associating with the rocks such as Folds	29-12-2020	
47	Faults	30-12-2020	
48	Joints	31-12-2020	
49	Unconformities- parts	2-1-2021	
50	types mechanism	4-1-2021	
51	their importance in Civil Engineering-Indian stratigraphy, Aims of statigraphy	5-1-2021	Lecture interspersed
52	Principles, Geological time scour	6-1-2021	with discussions
53	Geological division in India	7-1-2021	
54	Major stratigraphic units in India	8-1-2021	

UNIT IV Ground Water:

CO4 The student will be able to understand the basic Analyses the ground conditions through geophysical surveys

T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,

55	Water table	9-1-2021	
56	Cone of depression	11-12021	
57	Geological controls of Ground Water Movement	12-1-2021	Lecture
58	Ground Water Exploration Techniques	16-1-2021	interspersed with
59	Earthquakes And Land Slides: Terminology	18-1-2021	discussions
60	Classification, causes and effects	19-1-2021	

61	Shield areas and Seismic bells, Richter scale	20-1-2021	
	intensity,	21-1-2021	
62	Precautions of building constructions in seismic areas	21-1-2021	
63	Classification of Landslides, Causes and Effects,	22-1-2021	
64	measures to be taken prevent their occurrence at Landslides Case studies	23-1-2021	,
CO5 The stud	Geophysics: dent will be able to understand the Test the geological ck the suitability of civil engineering project construction		Lecture interspersed with discussions
T2. Engineeri	ng Geology, N. Chenn Kesavulu, Laxmi Publications, ing Geology, Subinoy Gangopadhay, Oxford Universi	ty press	
65	Importance of Geophysical methods,	1-2-2021	
66	Classification	2-2-2021	
67	Principles of Geophysical study by Gravity method	3-2-2021	
68	Magnetic method,	4-2-2021	
69	Electrical methods	5-2-2021	
70	Seismic methods,	9-2-2021	
71	Radiometric method and Electrical resistivity,	10-2-2021	
72	Seismic refraction methods	11-2-2021	
73	Engineering properties of rocks	12-2-2021	
CO6 The s mega/mini ci	: Geology of Dams, Reservoirs And Tunnels student will be able to understand Investigate the provide engineering projects. Site selection for mega engine	oject site for	
	unnels, disposal sites etc ing Geology, N. Chenn Kesavulu, Laxmi Publications,		
T2. Engineer	ring Geology, Subinoy Gangopadhay, Oxford University	ity press	
74	Types and purpose of Dams,	15-2-2021	
75	Geological considerations in the selection of a Dam site	16-2-2021	
76	Life of Reservoirs Purpose of Tunnelling,	17-2-2021	
77	effects,	18-2-2021	
		10 0 0001	-

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79

Lining of Tunnels.

Signature of the HOD

19-2-2021

20-2-2021

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

Influence of Geology for successful Tunnelling

TENTATIVELESSON PLAN: R1631013

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Revision N	o: 00 Prepared By: E.Usha Sree board, PPTs, Model	Approved By	: HOD
No. of	TOPIC	* *	
Periods	Toric	Implemented	Mode of
UNIT -I	THREE HINGED ARCHES, TWO HINGED ARCH	Date	Delivery
	rentiate determinate and indeterminate Structures Thandava Moorthy, "Structural Analysis – II", 2014,	Oxford Univers	sity press,
1.	Introduction to concept of arches, types of arches	2-11-2020	
2.	Statement and proof of Eddy's theorem	3-11-2020	
3.	Introduction to horizontal thrust, bending moment, Normal thrust	4-11-2020	
4.	Analysis procedure for parabolic arches	5-11-2020	
5.	Problems on analysis of parabolic arches ex: 1	6-11-2020	1
6	Problems on analysis of parabolic arches ex: 2	7-11-2020	Lecture
7.	Problems on analysis of parabolic arches ex: 3	9-11-2020	intersperse
8.	Problems on analysis of parabolic arches	10-11-2020	with
9.	Problems on three hinged circular arches	11-11-2020	discussion
10.	Problems on three hinged arches	12-11-2020	
11.	Introduction to two hinged arches	13-11-2020	
12.	Problems on two hinged parabolic arches	16-11-2020	
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O2 Carry B :: T.S.	Tutorial – problems on effect of temperature ATERAL LOAD ANALYSIS USING APPROXIMATI yout lateral load analysis on Structures Thandava Moorthy, "Structural Analysis – II", 20		iversity pre
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1		bridges		interspers
	29.	Characteristics of cables	11-12-2020	with
Control of the second	30.	Analysis of a cable subjected to udl	14-12-2020	discussion
The second control	31.	Analysis of a cable subjected to concentrated loads	15-12-2020	74650 A. a. i. a. a.
	32.	Problems on cables	16-12-2020	
	33.	Problems on cables	17-12-2020	
	34.	Analysis of simple suspension bridges	18-12-2020	
	35.	Problems on suspension bridges	19-12-2020	
	36.	Problems on suspension bridges	21-12-2020	4
	37.	Problems on suspension bridges	22-12-2020	-
TB :: T India	r.s. Th	Structures using Moment distribution methods andava Moorthy, "Structural Analysis – II", 2014, C	xford Univers	ity press,
	38.	Introduction	2-1-2021	
	39.	Problems on continuous beams	4-1-2021	
	40.	Calculation of stiffness factor, distribution factor	5-1-2021	
	41.	Problems on continuous beams	6-1-2021	T
	42.	Problems on continuous beams	7-1-2021	1
	43.	Problems on continuous beams	8-1-2021	1
	44.	Problems on continuous beams	9-1-2021	
	45.	Problems on portal frame	11-12021	1
	46. 47.	Problems on portal frame	12-1-2021	Lecture
INIT -	V KA	ANI'S METHOD		intersperse with discussions
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CO5 An TB :: T. India	alyze .S. Tha	Structures using kani's Method andava Moorthy , "Structural Analysis – II ", 2014, Or	xford Universi	ty press,
CO5 An TB :: T. India	alyze .S. Tha	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, On Introduction	xford Universi	ty press,
CO5 An TB :: T. India 4	18. Tha	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, Or Introduction Analysis of continuous beams		ty press,
CO5 An TB :: T. India 4	18. 19. 10.	Structures using kani's Method undava Moorthy, "Structural Analysis – II", 2014, Or Introduction Analysis of continuous beams Analysis of continuous beams - fixed	18-1-2021	ty press,
CO5 An TB :: T. India 4 4 5	18. Tha 18. 19. 10. 11.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, Or Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - fixed	18-1-2021 19-1-2021	ty press,
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61.	Analysis of continuous beams using flexibility methods	6-2-2021	
62.	Analysis of continuous beams using flexibility	8-2-2021	and the chiral state of the property of the below
	methods	The same of the same of the same	To all the Property and the second section of the se
63	Analysis of continuous beams including settlement of supports	9-2-2021	Lecture
64.	Introduction to stiffness method	10-2-2021	with
65.	Analysis of continuous beams using flexibility methods	11-2-2021	discussions
66.	Analysis of continuous beams using flexibility methods	12-2-2021	
67.	Analysis of continuous beams using flexibility methods	15-2-2021	
68.	Analysis of continuous beams including settlement of supports.	16-2-2021	
69.	Solving university question papers	17-2-2021	
70.	Solving university question papers	18-2-2021	

Signature of the HoD
29/10/20

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Section : Se	: STRUCTURAL ANALYSIS - II be B Date: 29-10-2020	Page No: 01 o	f 03
B&B			****
Revision No		Approved By	: HOD
	oard, PPTs, Model TOPIC	Implemented	Mode of
No. of Periods	Toric	Date	Delivery
UNIT -I	THREE HINGED ARCHES, TWO HINGED ARCH		
	entiate determinate and indeterminate Structures		
	handava Moorthy , "Structural Analysis – II ", 2014, (Oxford Universi	tv press.
India	indicate into the second of th		
1.	Introduction to concept of arches, types of arches	2-11-2020	
2.	Statement and proof of Eddy's theorem	3-11-2020	
3.	Introduction to horizontal thrust, bending moment,	4-11-2020	
	Normal thrust		
4.	Analysis procedure for parabolic arches	5-11-2020	
5.	Problems on analysis of parabolic arches ex: 1	6-11-2020	
6.	Problems on analysis of parabolic arches ex: 2	7-11-2020	Lecture
7.	Problems on analysis of parabolic arches ex: 3	9-11-2020	intersperse
8.	Problems on analysis of parabolic arches	10-11-2020	with
9.	Problems on three hinged circular arches	11-11-2020	discussion
10.	Problems on three hinged arches	12-11-2020	
11.	Introduction to two hinged arches	13-11-2020	
12.	Problems on two hinged parabolic arches	16-11-2020	
13.	Tutorial – problems on effect of temperature	17-11-2020	
TB :: T.S. India	Thandava Moorthy, "Structural Analysis – II", 20	14, Oxford Uni	iversity pres
14.	Introduction to lateral load analysis	20-11-2020	
15.	Procedure for analyzing frame by Portal method	21-11-2020	
16.	Problems on Portal method	23-11-2020	
17.	Problems single bay single storied portal frame	24-11-2020	
18.	Problems two bays single storied portal frame	25-11-2020	
19.	Problems two bays multi storied portal frame	26-11-2020	
20.	1 Toblems two bay's main storied portar frame		
21.	Problems three bays single storied portal frame	28-11-2020	
		1-12-2020	Lecture
22.	Problems three bays single storied portal frame	1-12-2020 2-12-2020	intersperse
and the same of th	Problems three bays single storied portal frame Problems three bays single storied portal frame	1-12-2020 2-12-2020 3-12-2020	intersperse with
22.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads	1-12-2020 2-12-2020 3-12-2020 4-12-2020	intersperse with
22. 23.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020	intersperse with
22. 23. 24.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial Problems on cantilever method	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020	intersperse with
22. 23. 24. 25.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020	intersperse with
22. 23. 24. 25. 26. 27.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial Problems on cantilever method Problems on cantilever method – 2 bays & 2 stories	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020 9-12-2020	intersperse with
22. 23. 24. 25. 26. 27.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial Problems on cantilever method	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020 9-12-2020	intersperse with
22. 23. 24. 25. 26. 27.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial Problems on cantilever method Problems on cantilever method – 2 bays & 2 stories	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020 9-12-2020	intersperse with
22. 23. 24. 25. 26. 27. UNIT –IIIC CO3Analyz TB :: T.S.	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial Problems on cantilever method Problems on cantilever method – 2 bays & 2 stories ABLE STRUCTURES AND SUSPENSION BRIDGES	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020 9-12-2020	intersperse with discussion
22. 23. 24. 25. 26. 27. UNIT –IIIC	Problems three bays single storied portal frame Problems three bays single storied portal frame Problem – three bays – two lateral loads Problem – three bays – three lateral loads Problem – three bays – three lateral loads Tutorial Problems on cantilever method Problems on cantilever method – 2 bays & 2 stories ABLE STRUCTURES AND SUSPENSION BRIDGES e cable structures and suspension bridges	1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020 9-12-2020	intersperse with discussion

29.	bridges		interspersed
27.	Characteristics of cables	11-12-2020	with discussions
30.	Analysis of a cable subjected to udl	14-12-2020	discussions
31.	Analysis of a cable subjected to concentrated loads	15-12-2020	t was explored and the state of the state of
32.	Problems on cables	16-12-2020	
33.	Problems on cables	17-12-2020	
34.	Analysis of simple suspension bridges	18-12-2020	
35.	Problems on suspension bridges	19-12-2020	
36.	Problems on suspension bridges	21-12-2020	
37.	Problems on suspension bridges	22-12-2020	
	Structures using Moment distribution methods andava Moorthy, "Structural Analysis – II", 2014, (ity press,
38.	Introduction	2-1-2021	
39.	Problems on continuous beams	4-1-2021	
40.	Calculation of stiffness factor, distribution factor	5-1-2021	
41.	Problems on continuous beams	6-1-2021	
42.	Problems on continuous beams	7-1-2021	
43.	Problems on continuous beams	8-1-2021	
44.	Problems on continuous beams	9-1-2021	
45.	Problems on portal frame	11-12021	
46.	Problems on portal frame	12-1-2021	Lecture
47.	Problems on portal frame	16-1-2021	interspersed with
	ANI'S METHOD		
CO5 Analyze TB :: T.S. Th	ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Oxford Univers	discussions
CO5 Analyze TB :: T.S. Th India	Structures using kani's Method andava Moorthy , "Structural Analysis – II ", 2014, (Oxford Univers	discussions
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CO5 Analyze TB :: T.S. Th India 48. 49.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams		discussions
CO5 Analyze TB :: T.S. Th India 48. 49. 50.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - fixed	18-1-2021	discussions
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CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - fixed	18-1-2021 · 19-1-2021 20-1-2021	Lecture interspersed
CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - overhang Analysis of continuous beams - overhang	18-1-2021 · 19-1-2021 · 20-1-2021 · 21-1-2021	Lecture interspersed with
CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - overhang Analysis of continuous beams - overhang Analysis of continuous beams - overhang Analysis of continuous beams	18-1-2021 · 19-1-2021 20-1-2021 21-1-2021 22-1-2021	Lecture interspersed
CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55. 56.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - overhang Analysis of continuous beams - overhang Analysis of continuous beams Analysis of portal frames	18-1-2021 · 19-1-2021 20-1-2021 21-1-2021 22-1-2021 23-1-2021	Lecture interspersed with
CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55. 56. 57.	Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - fixed Analysis of continuous beams - overhang Analysis of continuous beams - overhang Analysis of continuous beams Analysis of portal frames Analysis of portal frames	18-1-2021 · 19-1-2021 20-1-2021 22-1-2021 23-1-2021 1-2-2021	Lecture interspersed with
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61.	Analysis of continuous beams using flexibility methods	6-2-2021	Lecture interspersed
62.	Analysis of continuous beams using flexibility methods	8-2-2021	
	Analysis of continuous beams including settlement of supports	9-2-2021	
64.	Introduction to stiffness method	10-2-2021	with
65.	Analysis of continuous beams using flexibility methods	11-2-2021	discussions
66.	Analysis of continuous beams using flexibility methods	12-2-2021	
67.	Analysis of continuous beams using flexibility methods	15-2-2021	
68.	Analysis of continuous beams including settlement of supports.	16-2-2021	
69.	Solving university question papers	17-2-2021	
70.	Solving university question papers	18-2-2021	

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TENTATIVE LESSON PLAN: R1631014

Course Title: DI	Date: 29-10-2020	Page No: 01	of 02
Section : Sec A		Approved By	
Revision No: 00		Approved D	, HOD
Tools : Black	board, PPTs, Model		Mode of
No. of Periods	TOPIC	Date	Delivery
UNIT – I Introd			
CO1: Work on d	lifferent types of design philosophies		M.C. IIII
	d Concrete Structures' by S. Unnikrishna Pill	ai & Devdas Menon, Tat	a McGraw Hill
New Delhi.	D : "ND : formal Compute Design" 201	1 Now oge Publisher	
TB:: N.Krishna	Raju, ""Reinforced Concrete Design", 201	2-11-2020	
1	Introduction to Railways	3-11-2020	
2	Components of Permanent way	4-11-2020	
3	Track gauge, Cross-section of track	5-11-2020	
4	Functions of Rails	6-11-2020	Lectures
5	Functions of Sleepers	7-11-2020	interspersed
6	Functions of Ballast	9-11-2020	with
7	Functions of Fastenings Cross of Pails, Theories of Creen	10-11-2020	Discussions
8	Creep of Rails, Theories of Creep Adzing of sleepers, Sleeper density	11-11-2020	
9		12-11-2020	
10	Rail joints	13-11-2020	
11	Revision Revision	16-11-2020	
12			
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi.	gn for Flexure: analysis and design of flexural members and de nforced Concrete Structures' by S. Unnikrishi a Raju, ""Reinforced Concrete Design", 201	na Pillai & Devdas Meno 4, New age Publisher	n, Tata McGrav
TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishia Raju, ""Reinforced Concrete Design", 201	na Pillai & Devdas Meno	n, Tata McGrav
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishia Raju, ""Reinforced Concrete Design", 201 Alignment of Track	na Pillai & Devdas Meno 4, New age Publisher	n, Tata McGrav
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishia Raju, ""Reinforced Concrete Design", 201	14, New age Publisher 17-11-2020	n, Tata McGrav
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishia Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys	4, New age Publisher 17-11-2020 20-11-2020	n, Tata McGrav
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14 15	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishia Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys Gradients	4, New age Publisher 17-11-2020 20-11-2020 21-11-2020	n, Tata McGrav
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14 15 16	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishing Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys Gradients Grade Compensation	14, New age Publisher 17-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020	
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14 15 16 17	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishing Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys Gradients Grade Compensation Cant and Negative Super Elevation	14, New age Publisher 17-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020	n, Tata McGrav
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CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14 15 16 17 18 19 20 21 22 23 24 25	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishing Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys Gradients Grade Compensation Cant and Negative Super Elevation Cant Deficiency Degree of curve Safe speed on curves Transition Curves Compound curves Reverse curves Extra-clearance on curves Widening of Gauge	14, New age Publisher 17-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 28-11-2020 1-12-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020	Lectures interspersed with
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14 15 16 17 18 19 20 21 22 23 24 25 26	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishing Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys Gradients Grade Compensation Cant and Negative Super Elevation Cant Deficiency Degree of curve Safe speed on curves Transition Curves Compound curves Reverse curves Extra-clearance on curves Widening of Gauge Vertical curves	14, New age Publisher 17-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 28-11-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020	Lectures interspersed with
CO2: Carryout TB:: TB:: 'Rein Hill, New Delhi. TB:: N.Krishna 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	analysis and design of flexural members and denforced Concrete Structures' by S. Unnikrishing Raju, ""Reinforced Concrete Design", 201 Alignment of Track Engineering Surveys Gradients Grade Compensation Cant and Negative Super Elevation Cant Deficiency Degree of curve Safe speed on curves Transition Curves Compound curves Reverse curves Extra-clearance on curves Widening of Gauge Vertical curves Cheek rail on curves	14, New age Publisher 17-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 28-11-2020 2-12-2020 3-12-2020 4-12-2020 5-12-2020 7-12-2020 8-12-2020	Lectures interspersed with
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36	Turn-Outs	19-12-2020	Lectures
37	Diamond Crossing	21-12-2020	interspersed
38	Scissor Crossing	22-12-2020	with
39	Signaling	2-1-2021	
40	Fixed Signals	4-1-2021	Discussions
41	Stop Signals	5-1-2021	
42	Mechanical Signaling	6-1-2021	
43	Electrical Signaling	7-1-2021	
44	Modern Signaling	8-1-2021	
	abs lifferent type of compression members na Raju, ""Reinforced Concrete Design", 2014, New ago	e Publisher	
45	Airport Planning	9-1-2021	
46	Master Plan	11-12021	
47	Airport Site Selection	12-1-2021	
48	Aircraft Characteristics	16-1-2021	
49	Zoning Laws	2-1-2021	Lectures
50	Airport Classification	4-1-2021	
51	Runway Orientation	5-1-2021	interspersed
52	Wind-Rose Diagram	6-1-2021	with
53	Runway length	7-1-2021	Discussions
54	Taxiway Design	18-1-2021	
	Terminal Area & Airport Layout	19-1-2021	
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56	Visual Aids & Air Traffic Control	20-1-2021	
56 57	Visual Aids & Air Traffic Control Problems – Unit IV	21-1-2021	
56 57 58	Visual Aids & Air Traffic Control Problems – Unit IV Revision	21-1-2021 22-1-2021	
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Signature of the Faculty ENIKEPADU, VIJAYAWADA-521 108

Signature of the HOD 291 101 2020

TENTATIVE LESSON PLAN: R1631014

Course Title: DI		Page No: 01	of 02
Section : Sec B	Date: 29-10-2020	Approved B	
Revision No: 00		Approved by	y: HOD
Tools : Black	board, PPTs, Model		Mode of
No. of Periods	TOPIC	Date	Delivery
UNIT – I Introd			
TB:: 'Reinforceo New Delhi.	lifferent types of design philosophies d Concrete Structures' by S. Unnikrishna Pillai n Raju, ""Reinforced Concrete Design", 2014,		ta McGraw Hill
1	Introduction to Railways	2-11-2020	
2	Components of Permanent way	3-11-2020	
3	Track gauge, Cross-section of track	4-11-2020	
4	Functions of Rails	5-11-2020	.
5	Functions of Sleepers	6-11-2020	Lectures
6	Functions of Ballast	7-11-2020	interspersed
7	Functions of Fastenings	9-11-2020	with
8	Creep of Rails, Theories of Creep	10-11-2020	Discussions
9	Adzing of sleepers, Sleeper density	11-11-2020	
10	Rail joints	12-11-2020	
11	Revision	13-11-2020	
12	Revision	16-11-2020	
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36	Turn-Outs	19-12-2020	Lectures
37	Diamond Crossing	21-12-2020	interspersed
38	Scissor Crossing Scissor Crossing	22-12-2020	with
39	Signaling	2-1-2021	Discussions
40	Fixed Signals	4-1-2021	Discussions
41	Stop Signals	5-1-2021	
42	Mechanical Signaling	6-1-2021	
42	Electrical Signaling	7-1-2021	
43	Modern Signaling	8-1-2021	
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	lifferent type of compression members		
D4: Design u	na Raju, ""Reinforced Concrete Design", 2014, New age	Publisher	
45	Airport Planning	9-1-2021	
46	Master Plan	11-12021	
47	Airport Site Selection	12-1-2021	
48	Aircraft Characteristics	16-1-2021	
	Zoning Laws	2-1-2021	Lectures
49	Airport Classification	4-1-2021	interspersed
50	Runway Orientation	5-1-2021	
51		6-1-2021	with
52	Wind-Rose Diagram	7-1-2021	Discussions
53	Runway length	18-1-2021	
54	Taxiway Design	19-1-2021	
	Terminal Area & Airport Layout		-
55		20-1-2021	
56	Visual Aids & Air Traffic Control	20-1-2021	-
56 57	Visual Aids & Air Traffic Control Problems – Unit IV	21-1-2021	
56 57 58	Visual Aids & Air Traffic Control Problems – Unit IV Revision	21-1-2021 22-1-2021	-
56 57 58 59	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision	21-1-2021	-
56 57 58 59 UNIT – V De	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members:	21-1-2021 22-1-2021	
56 57 58 59 UNIT – V De CO5: Design	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings	21-1-2021 22-1-2021 23-1-2021	
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56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021	
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56 57 58 59 UNIT – V De CO5: Design of TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 3-2-2021	Lectures
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56 57 58 59 UNIT – V De CO5: Design of TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. na Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 3-2-2021 4-2-2021 5-2-2021	Lectures interspersed with
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56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI I	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. na Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings:	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 3-2-2021 4-2-2021 5-2-2021	Lectures interspersed with
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56 57 58 59 UNIT – V De CO5: Design of TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI H CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision Revision Resign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs leinforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 4-2-2021 4-2-2021 6-2-2021 6-2-2021 evdas Menon,	Lectures interspersed with Discussions
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI I CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision Sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs teinforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 3-2-2021 4-2-2021 5-2-2021 6-2-2021 evdas Menon, ge Publisher 8-2-2021 9-2-2021	Lectures interspersed with Discussions
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI H CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67 68	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision Sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & De Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs teinforced Concrete Structures' by S. Unnikrishna Pillai & De Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses Quay walls, Wharves	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 4-2-2021 5-2-2021 6-2-2021 evdas Menon, ge Publisher 8-2-2021 9-2-2021 10-2-2021	Lectures interspersed with Discussions
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI H CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67 68 69	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision Sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs leinforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses Quay walls, Wharves Jetties – Tides - Break Waters	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 4-2-2021 5-2-2021 6-2-2021 6-2-2021 9-2-2021 10-2-2021 11-2-2021	Lectures interspersed with Discussions Lectures
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI I CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67 68 69 70	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision Sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & De Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs deinforced Concrete Structures' by S. Unnikrishna Pillai & De Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses Quay walls, Wharves Jetties – Tides - Break Waters Dredging	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 4-2-2021 5-2-2021 6-2-2021 6-2-2021 10-2-2021 11-2-2021 12-2-2021	Lectures interspersed with Discussions Lectures
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI H CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67 68 69 70 71	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. ma Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs teinforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. ma Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses Quay walls, Wharves Jetties – Tides - Break Waters Dredging Maintenance of Ports	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 3-2-2021 4-2-2021 5-2-2021 6-2-2021 0-2-2021 10-2-2021 11-2-2021 11-2-2021 15-2-2021	Lectures interspersed with Discussions Lectures interspersed with
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI I CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67 68 69 70 71 72	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs teinforced Concrete Structures' by S. Unnikrishna Pillai & D. Hill, New Delhi. Ina Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses Quay walls, Wharves Jetties – Tides - Break Waters Dredging Maintenance of Ports Navigational Aids	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 2-2-2021 4-2-2021 5-2-2021 6-2-2021 9-2-2021 10-2-2021 11-2-2021 12-2-2021 15-2-2021 16-2-2021	Lectures interspersed with Discussions Lectures interspersed
56 57 58 59 UNIT – V De CO5: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 60 61 62 63 64 65 UNIT – VI H CO6: Design TB:: TB:: 'R Tata McGraw TB:: N.Krish 66 67 68 69 70 71	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision sign of Compression members: different type of footings einforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. ma Raju, ""Reinforced Concrete Design", 2014, New ag Various Design factors Design Methods for Rigid Pavement LCN system of Pavement Design Airfield Pavement Failures Maintenance & rehabilitation Airport Drainage Footings: different type of Slabs teinforced Concrete Structures' by S. Unnikrishna Pillai & D Hill, New Delhi. ma Raju, ""Reinforced Concrete Design", 2014, New ag Classification of Ports and Harbours Dry & Wet Docks, Transition Sheds & Ware houses Quay walls, Wharves Jetties – Tides - Break Waters Dredging Maintenance of Ports	21-1-2021 22-1-2021 23-1-2021 evdas Menon, e Publisher 1-2-2021 3-2-2021 4-2-2021 5-2-2021 6-2-2021 0-2-2021 10-2-2021 11-2-2021 11-2-2021 15-2-2021	Lectures interspersed with Discussions Lectures interspersed with

TENTATIVE LESSON PLAN: R1631015

Section : Sec A	RANSPORTATION ENGINEERING - II Date: 29-10-2020	Page No: 01	of 03
Revision No: 00		Approved B	
	board, PPTs, Model	Тарразия	3
No. of Periods	TOPIC	Date	Mode of Delivery
	PONENTS OF RAILWAY ENGINEERING	1	
	various components and their functions in a rail-		
ΓB: "Railway En	ngineering" by Satish Chandra & M.M Aggarwa	l	-
1	Introduction to Railways	2-11-2020	
2	Components of Permanent way	3-11-2020	
3	Track gauge, Cross-section of track	4-11-2020	
4	Functions of Rails	5-11-2020	Lectures
5	Functions of Sleepers	6-11-2020	
6	Functions of Ballast	7-11-2020	interspersed
7	Functions of Fastenings	9-11-2020	with
8	Creep of Rails, Theories of Creep	10-11-2020	Discussions
9	Adzing of sleepers, Sleeper density	11-11-2020	
10	Rail joints	12-11-2020	
11	Revision	13-11-2020	
12	Revision	16-11-2020	
CO2 - To Acqu	OMETRIC DESIGN OF RAILWAY TRACI nire Design Principles of Geometrics in a Rail ngineering" by Satish Chandra & M.M Aggarw	lway Track	
13	Alignment of Track	17-11-2020	
14	Engineering Surveys	20-11-2020	
15	Gradients	21-11-2020	
16	Grade Compensation	23-11-2020	
17	Cant and Negative Super Elevation	24-11-2020	
18	Cant Deficiency	25-11-2020	
19	Degree of curve	26-11-2020	Lectures
20	Safe speed on curves	28-11-2020	intersperse
21	Transition Curves	1-12-2020	with
22	Compound curves	2-12-2020	Discussions
23	Reverse curves	3-12-2020	Discussions
24	Extra-clearance on curves	4-12-2020	
25	Widening of Gauge	5-12-2020	
26	Vertical curves	7-12-2020	
27	Cheek rail on curves	8-12-2020	
28	Problems – Unit II	9-12-2020	
29	Problems – Unit II	10-12-2020	
30	Problems – Unit II	11-12-2020	
31	Revision	14-12-2020	
32	Revision	15-12-2020	
	URNOUTS AND CONTROLLERS		
	Various Techniques for movement of Train	S	
	ngineering" by Satish Chandra & M.M Aggarwa		
33	Track layouts, Switches	16-12-2020	
22	Design of Tongue Rails	17-12-2020	
34	L'estant of a one de l'unio		-
34		1 18-12-2020	
35	Crossings	18-12-2020 19-12-2020	Lectures
		18-12-2020 19-12-2020 21-12-2020	Lectures

39	Signaling	2-1-2021	with
40	Fixed Signals	4-1-2021	Discussions
41	Stop Signals	5-1-2021	
42	Mechanical Signaling	6-1-2021	
43	Electrical Signaling	7-1-2021	
44	Modern Signaling	8-1-2021	
CO4 – To Acc TB: "Airport	IRPORT PLANNING AND DESIGN quire Design Principles of Airport Geometrics & Pavem Engineering" by Khanna & Arora	ents 9-1-2021	
45	Airport Planning	11-12021	
46	Master Plan	12-1-2021	
47	Airport Site Selection	16-1-2021	
48	Aircraft Characteristics	2-1-2021	· ·
49	Zoning Laws		Lectures
50	Airport Classification	4-1-2021	interspersed
51	Runway Orientation	5-1-2021	with
52	Wind-Rose Diagram	6-1-2021	Discussions
53	Runway length	7-1-2021	
54	Taxiway Design	18-1-2021	
55	Terminal Area & Airport Layout	19-1-2021	
56	Visual Aids & Air Traffic Control	20-1-2021	
57	Problems – Unit IV	21-1-2021	
58	Revision	22-1-2021	
59	Revision	23-1-2021	
CO5- To Acc	UNWAY DESIGN puire Design Principles of Airport Geometrics & Pavem t Engineering" by Khanna & Arora		
60	Various Design factors	1-2-2021	
61	Design Methods for Rigid Pavement	2-2-2021	Lectures
62	LCN system of Pavement Design	3-2-2021	interspersed
63	Airfield Pavement Failures	4-2-2021	with
64	Maintenance & rehabilitation	5-2-2021	
65	Airport Drainage	6-2-2021	Discussions
OF DOCKS & CO6 – To kno Harbours	PLANNING, LAYOUT, CONSTRUCTION AND MAIN HARBOURS ow the Planning, Construction and maintenance of dock HarbourEngineering" by S.P. Bindra	as &	
66	Classification of Ports and Harbours	8-2-2021	
67	Dry & Wet Docks, Transition Sheds & Ware houses	9-2-2021	
68	Quay walls, Wharves	10-2-2021	Lectures
69	Jetties - Tides - Break Waters	11-2-2021	interspersed
70	Dredging	12-2-2021	with
	Maintenance of Ports	15-2-2021	Discussions
71			DISCUSSIONS
72	Navigational Aids	16-2-2021	
	Navigational Aids Revision	16-2-2021 17-2-2021	

R. DurgaRao Signature of the Faculty 29/10/20

SRK Institute of Technology

Signature of the HOD 29/10/20

	Date : 29-1	N ENGINEERING - II	Page No: 01	of 03
Section : Sec B			Approved By	
Revision No : 00		y : R.Durga Rao	Approved by	, HOD
Tools : Black	oard, PPTs, Model			Mode of
No. of Periods		TOPIC	Date	Delivery
UNIT -I :COM	PONENTS OF RA	ILWAY ENGINEERING	3	
CO 1 - To know	arious components	and their functions in a rail	way track	
TB: "Railway En		h Chandra & M.M Aggarwa	2-11-2020	
1	Introduction to Ra		3-11-2020	
2	Components of Pe		4-11-2020	
3		ss-section of track	5-11-2020	
4	Functions of Rails		6-11-2020	Lectures
5	Functions of Sleep		7-11-2020	interspersed
6	Functions of Balla			with
7	Functions of Faste		9-11-2020 10-11-2020	Discussions
8	Creep of Rails, T			Discussions
9		s, Sleeper density	11-11-2020	
10	Rail joints		12-11-2020	
11	Revision		13-11-2020	
12	Revision		16-11-2020	
UNIT -II : GE	METRIC DESIG	GN OF RAILWAY TRAC	K	
CO2 - To Acqu	ire Design Princip	oles of Geometrics in a Ra	ilway Track	
TB: "Railway E	gineering" by Sat	ish Chandra & M.M Aggarv	val	
13	Alignment of Tra	ck	17-11-2020	
14	Engineering Surv	reys	20-11-2020	
15	Gradients		21-11-2020	
16	Grade Compensa	tion	23-11-2020	
17	Cant and Negativ	ve Super Elevation	24-11-2020	
18	Cant Deficiency		25-11-2020	
19	Degree of curve		26-11-2020	Lectures
20	Safe speed on cur	rves	28-11-2020	intersperse
21	Transition Curve		1-12-2020	with
22	Compound curve		2-12-2020	Discussions
23	Reverse curves		3-12-2020	Discussions
24	Extra-clearance of	on curves	4-12-2020	
25	Widening of Gau		5-12-2020	
26	Vertical curves	50	7-12-2020	
27	Cheek rail on cur	wes	8-12-2020	
28	Problems – Unit		9-12-2020	
29	Problems – Unit		10-12-2020	
30	Problems – Unit		11-12-2020	
31	Revision	Ш	14-12-2020	
		<u> </u>	15-12-2020	
32	Revision	CONTROLLEDS	13-12-2020	
	RNOUTS AND C			
		ues for movement of Train		
		sh Chandra & M.M Aggarw	16-12-2020	T
33	Track layouts, Sv		17-12-2020	
34	Design of Tongu	e Kails		
35	Crossings		18-12-2020	T
36	Turn-Outs		19-12-2020	Lectures
37	Diamond Crossin	~	21-12-2020	intersperse
38	Scissor Crossing		22-12-2020	

39	Signaling	2-1-2021	with
40	Fixed Signals	4-1-2021	Discussions
41	Stop Signals	5-1-2021	Discussions
42	Mechanical Signaling	6-1-2021	
43	Electrical Signaling	7-1-2021	
44	Modern Signaling	8-1-2021	
CO4 – To Acc TB: "Airport 45 46 47 48 49 50 51 52 53 54 55	AIRPORT PLANNING AND DESIGN quire Design Principles of Airport Geometrics & Pavem Engineering" by Khanna & Arora Airport Planning Master Plan Airport Site Selection Aircraft Characteristics Zoning Laws Airport Classification Runway Orientation Wind-Rose Diagram Runway length Taxiway Design Terminal Area & Airport Layout	9-1-2021 11-12021 12-1-2021 16-1-2021 2-1-2021 4-1-2021 5-1-2021 6-1-2021 7-1-2021 18-1-2021 19-1-2021 20-1-2021	Lectures interspersed with Discussions
CO5- To Ac	Visual Aids & Air Traffic Control Problems – Unit IV Revision Revision UNWAY DESIGN quire Design Principles of Airport Geometrics & Pavem	21-1-2021 22-1-2021 23-1-2021	
	t Engineering" by Khanna & Arora	1-2-2021	
60	Various Design factors	2-2-2021	
61	Design Methods for Rigid Pavement	3-2-2021	Lectures
62	LCN system of Pavement Design	4-2-2021	interspersed
63	Airfield Pavement Failures	5-2-2021	with
64	Maintenance & rehabilitation	6-2-2021	Discussions
OF DOCKS of CO6 – To kn Harbours	Airport Drainage PLANNING, LAYOUT, CONSTRUCTION AND MAIN & HARBOURS ow the Planning, Construction and maintenance of dock & Harbour Engineering" by S.P. Bindra	NTENANCE	
66	Classification of Ports and Harbours	8-2-2021	
67	Dry & Wet Docks, Transition Sheds & Ware houses	9-2-2021	
68	Quay walls, Wharves	10-2-2021	Lectures
69	Jetties – Tides - Break Waters	11-2-2021	intersperse
70	Dredging	12-2-2021	with
71	Maintenance of Ports	15-2-2021	Discussions
72	Navigational Aids	16-2-2021	Discussions
73	Revision	17-2-2021	

R. Dulga Rad Signature of the Faculty 29/10/20

Signature of the HOD 29/10/2

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TENTATIVE LESSON PLAN

Course Title: ENV	IRONMENTAL ENGINEERING II (R164101	1)
Section : Sec A	Date: 29-10-2020	Page No: 01 of 02
Revision No : 00	Prepared By :N.KRANTHI REKHA	Approved By : HOD

No. of Periods	TOPIC	Date	Mode of Delivery
	Introduction to sanitation R SUPPLY & SANITATION ENGINEERING BY J.S.BII NOW about collection and conveyance of waste water.	RDIE & B.S.BIRDI	E
1	System of sanitation	2-11-2020	
2	Relative merits and demerits	3-11-2020	
3	Collection of ww	4-11-2020	Lecture
4	Conveyance of ww	5-11-2020	interspersed
5	Sewerage Sewerage	6-11-2020	with
6	Classification of sewerage systems	7-11-2020	discussions
7	Estimation of sewage flow	9-11-2020	
8	Storm water drainage-fluctuations	10-11-2020	
9	Types of sewers	11-11-2020	
10	Sewer appurtenances	12-11-2020	
11	Cleaning and ventilation of sewers	13-11-2020	
12 13	Pumping of ww and ps Location, components of ps	13-11-2020 16-11-2020	
B.S.BIRDIE			
	ow about pumping system and house plumbing.	13-11-2020	
		16-11-2020	
14	Types of pumps and their suitability	17-11-2020	
15	House plumbing	18-11-2020	
16	System of plumbing ·	19-11-2020	
17	Sanitary fittings	20-11-2020	Lecture
18	One pipe and two pipe system	21-11-2020	interspersed
19	Design of building drainage	23-11-2020	with discussions
B.S.BIRDIF CO 3: To ki	now about preliminary and primary treatment.	RDIE & 24-11-2020	
20	Sampling and analysis of ww		
21	Physical	25-11-2020	
22	Chemical	26-11-2020	
23	Biological	20-11-2020	
24	Measurement of COD &BOD	21-11-2020	Lecture
25	BOD equations	23-11-2020	interspersed
26	Treatment of sewage	24-11-2020	with
27	Primary treatment	25-11-2020	discussions
28	Screens and grit chambers	26-11-2020	
29	Grease traps and floatation	28-11-2020	
30	Sedimentation	1-12-2020	

TENTATIVE LESSON PLAN

Course Title: ENVIRONMENTAL ENGINEERING II (R1641011)

occuon . o	Sec B Date: 29-10-2020	Page No: 01 of	02
Revision No	o: 00 Prepared By: N.KRANTHI REKHA	Approved By:	HOD
Tools: Blac	k board,PPTs		
No. of Periods	TOPIC	Date	Mode of Delivery
	Introduction to sanitation OR SUPPLY & SANITATION ENGINEERING BY S HOW about collection and conveyance of waste w		E
1	System of sanitation	2-11-2020	
2	Relative merits and demerits	3-11-2020	
3	Collection of ww	4-11-2020	Lecture
4	Conveyance of ww	5-11-2020	interspersed
5	Sewerage	6-11-2020	with
6	Classification of sewerage systems	7-11-2020	discussions
7	Estimation of sewage flow	9-11-2020	
8	Storm water drainage-fluctuations	10-11-2020	
9	Types of sewers	11-11-2020	
10	Sewer appurtenances	12-11-2020	
11	Cleaning and ventilation of sewers	13-11-2020	
12	Pumping of ww and ps Location, components of ps	13-11-2020 16-11-2020	
13	Location, components of ps	16-11-2020	
14	Types of pumps and their suitability	17-11-2020	
15	House plumbing	18-11-2020	
16	System of plumbing .	19-11-2020	
17	Sanitary fittings	20-11-2020	Lecture
18	One pipe and two pipe system	21-11-2020	interspersed
19	Design of building drainage	23-11-2020	
			with discussions
TB: WATE B.S.BIRDII CO 3: To ki	now about preliminary and primary treatment.		
TB: WATE B.S.BIRDII	now about preliminary and primary treatment. Sampling and analysis of ww		
TB: WATE B.S.BIRDII CO 3: To ki 20 21	now about preliminary and primary treatment. Sampling and analysis of ww Physical		
TB: WATE B.S.BIRDII CO 3: To ki	now about preliminary and primary treatment. Sampling and analysis of ww	24-11-2020	
FB: WATE B.S.BIRDII CO 3: To ki 20 21 22 23	now about preliminary and primary treatment. Sampling and analysis of ww Physical	24-11-2020 25-11-2020	
FB: WATE B.S.BIRDII CO 3: To ke 20 21 22 23 24	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological Measurement of COD &BOD	24-11-2020 25-11-2020 26-11-2020	discussions
FB: WATE B.S.BIRDII CO 3: To ki 20 21 22 23 24 25	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological	24-11-2020 25-11-2020 26-11-2020 20-11-2020	discussions
FB: WATE B.S.BIRDII CO 3: To ki 20 21 22 23 24	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological Measurement of COD &BOD	24-11-2020 25-11-2020 26-11-2020 20-11-2020 21-11-2020	Lecture interspersed
FB: WATE B.S.BIRDII CO 3: To ke 20 21 22 23 24 25 26 27	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological Measurement of COD &BOD BOD equations Treatment of sewage Primary treatment	24-11-2020 25-11-2020 26-11-2020 20-11-2020 21-11-2020 23-11-2020	Lecture interspersed with
20 21 22 23 24 25 26 27 28	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological Measurement of COD &BOD BOD equations Treatment of sewage Primary treatment Screens and grit chambers	24-11-2020 25-11-2020 26-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020	Lecture interspersed
TB: WATE B.S.BIRDII CO 3: To ki 20 21 22 23 24 25 26 27 28 29	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological Measurement of COD &BOD BOD equations Treatment of sewage Primary treatment Screens and grit chambers Grease traps and floatation	24-11-2020 25-11-2020 26-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 28-11-2020	Lecture interspersed with
TB: WATE B.S.BIRDII CO 3: To ki 20 21 22 23 24 25 26 27 28	now about preliminary and primary treatment. Sampling and analysis of ww Physical Chemical Biological Measurement of COD &BOD BOD equations Treatment of sewage Primary treatment Screens and grit chambers	24-11-2020 25-11-2020 26-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 28-11-2020 1-12-2020	Lecture interspersed with

32 33 34 35 36 37 38 39	Secondary treatment Aerobic TU Anaerobic TU Suspended growth process ASPT Principles, designs, operational problems	4-12-2020 5-12-2020	
34 35 36 37 38	Anaerobic TU Suspended growth process ASPT		
35 36 37 38	Suspended growth process ASPT	7-12-2020	1
36 37 38	ASPT	8-12-2020	Lecture
37 38		2-1-2021	interspersed
38		4-1-2021	with discussions
	Oxidation ponds	5-1-2021	uiscussions
	Aerated lagoons	6-1-2021	
40	Attached growth process	7-1-2021	
41	Trickling filters	8-1-2021	
42	Mechanism of impurities removal	9-1-2021	
43	Classification, design, operation and maintenance	11-12021	
44	RBCs	12-1-2021	
NIT -V	Fluidized bed reactors	16-1-2021	
S.S.BIRDIE	SUPPLY & SANITATION ENGINEERING BY J.S.B ow about advanced treatments of sewage.		Lecture
45	Nitrification	18-1-2021	with discussions
46	De-nitrification 8	19-1-2021	discussions
47	Removal of phosphates	20-1-2021	
48	UASB	21-1-2021	
49	Membrane reactor	22-1-2021	
50	IFFR	23-1-2021	
51	Septic tanks Imhoff tanks	2-2-2021	-
53	Designs	3-2-2021	
54	Disposal of septic tank effluents	4-2-2021	
	SUPPLY & SANITATION ENGINEERING BY J.S.B ow about sewage disposal and sludge disposal. Sludge management	6-2-2021	DIE
	Characteristics	8-2-2021	
56	Characteristics	9-2-2021	
56 57	Handling of sludge	9-2-2021	
		10-2-2021	
57	Handling of sludge		Lecture
57 58	Handling of sludge Treatment of sludge	10-2-2021	interspersed with
57 58 59	Handling of sludge Treatment of sludge Sludge thickening	10-2-2021	interspersed with
57 58 59 60	Handling of sludge Treatment of sludge Sludge thickening Aerobic digestion of sludge	10-2-2021 11-2-2021 12-2-2021	interspersed with
57 58 59 60 61	Handling of sludge Treatment of sludge Sludge thickening Aerobic digestion of sludge Disposal of sewage	10-2-2021 11-2-2021 12-2-2021 15-2-2021	interspersed with
57 58 59 60 61 62	Handling of sludge Treatment of sludge Sludge thickening Aerobic digestion of sludge Disposal of sewage Methods of disposal	10-2-2021 11-2-2021 12-2-2021 15-2-2021 16-2-2021	interspersed with
57 58 59 60 61 62 63	Handling of sludge Treatment of sludge Sludge thickening Aerobic digestion of sludge Disposal of sewage Methods of disposal Disposal into water bodies	10-2-2021 11-2-2021 12-2-2021 15-2-2021 16-2-2021 17-2-2021	interspersed

TENTATIVE LESSON PLAN: R1641012

WATER RESOURCES ENGINEERING - II

	Section :	Sec A	Date: 29-10-2020	Page No:	01 of 03
	Revision N	(o:00	Prepared By: J PURNA CHANDRA RAO	Approved By : HOD	
			Tools: Black board, power point presentation	ns	
	No. of Periods		TOPIC	Implemented Date	Mode of Delivery
			UNIT 1: IRRIGATION		
		TB: IF	CO 1: ESTIMATE IRRIGATION WATER REQUI		
	1		Necessity and importance	02-11-2020	
	2		Crop seasons and types	03-11-2020	
	3		Methods of application	04-11-2020	Lecture
	4		Soil water plant relationships	05-11-2020	interspersed
	- 5		Soil moisture constants	06-11-2020	with
10 (1 (1 (1 (1 (1 (1 (1 (1 (1 (6	Consum	ptive use and estimation of consumptive use	07-11-2020	discussions
	7		Crop water requirement	09-11-2020	
	8		Outy and delta, factors affecting duty	10-11-2020	
	9		Depth and frequency of irrigation	11-11-2020	
	10		Irrigation efficiencies	12-11-2020	
	11		Water logging and drainage	13-11-2020	
	12	Irri	gation water standards and crop rotation	16-11-2020	
	13		Tutorial	17-11-2020	
			UNIT 2: CANALS		
		C	O 2: DESIGN IRRIGATION CANALS AND CANA	AL NETWORK	
			TB: Irrigation and water power engineering, B.	C Punmia	
	The second second			C. I ullilla	
	14		Design of non erodible canals	18-11-2020	
	15		Design of non erodible canals Methods of economic section		
			Methods of economic section	18-11-2020	Lecture
	15			18-11-2020 19-11-2020	
•	15 16		Methods of economic section Maximum permissible velocity	18-11-2020 19-11-2020 20-11-2020	interspersed with
•	15 16 17		Methods of economic section Maximum permissible velocity Kennedy's silt theory	18-11-2020 19-11-2020 20-11-2020 21-11-2020	interspersed with
•	15 16 17 18		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020	interspersed with
•	15 16 17 18 19		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020	interspersed
•	15 16 17 18 19 20		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020	interspersed with
	15 16 17 18 19 20 21 22		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020	interspersed with
	15 16 17 18 19 20 21 22 23		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020	interspersed with
	15 16 17 18 19 20 21 22 23 24		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 28-11-2020 01-12-2020	interspersed with
	15 16 17 18 19 20 21 22 23 24 25		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020	interspersed with
	15 16 17 18 19 20 21 22 23 24		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 28-11-2020 01-12-2020	interspersed with
	15 16 17 18 19 20 21 22 23 24 25 26		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020 03-12-2020	interspersed with
ALLAN LA	15 16 17 18 19 20 21 22 23 24 25 26		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020	interspersed with
	15 16 17 18 19 20 21 22 23 24 25 26		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial UNIT 3: CANAL STRUCTURES CO 3: DESIGN IRRIGATION CANAL STRUC	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020 04-12-2020 04-12-2020	interspersed with
CHU VIII. CIER PC A Cand locario	15 16 17 18 19 20 21 22 23 24 25 26 27		Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial UNIT 3: CANAL STRUCTURES CO 3: DESIGN IRRIGATION CANAL STRUCTURES	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020 04-12-2020 04-12-2020	interspersed with
CALCALLA CER PCA Sand location Floatida tenas	15 16 17 18 19 20 21 22 23 24 25 26 27	0:	Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial UNIT 3: CANAL STRUCTURES CO 3: DESIGN IRRIGATION CANAL STRUC	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 CTURES NG, B. C. PUNMIA	interspersed with discussions
CALCALLA CER PCA Sand location Floatida tenas	15 16 17 18 19 20 21 22 23 24 25 26 27	0: 10:	Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial UNIT 3: CANAL STRUCTURES CO 3: DESIGN IRRIGATION CANAL STRUCTURES REGIGATION AND WATER POWER ENGINEERING	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 CTURES NG, B. C. PUNMIA 05-12-2020	Lecture interspersed with
TER PC W. sand locario franta tener rda type fall	15 16 17 18 19 20 21 22 23 24 25 26 27	0: 0: 0:	Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial UNIT 3: CANAL STRUCTURES CO 3: DESIGN IRRIGATION CANAL STRUCTURES CRIGATION AND WATER POWER ENGINEERING Canal falls: types and location Design principles of sarda type fall	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 28-11-2020 01-12-2020 02-12-2020 04-12-2020 CTURES IG, B. C. PUNMIA 05-12-2020 07-12-2020	interspersed with discussions Lecture interspersed
ARIGATION	15 16 17 18 19 20 21 22 23 24 25 26 27	0: 0: 0: - + 0:	Methods of economic section Maximum permissible velocity Kennedy's silt theory Design Problems Lacey's regime theory Design Problems Comparison between both theories Balancing depth of cutting Numerical problems Economics of canal lining Types of lining Maintenance of canals Tutorial UNIT 3: CANAL STRUCTURES CO 3: DESIGN IRRIGATION CANAL STRUCTURES RRIGATION AND WATER POWER ENGINEERING Canal falls: types and location Design principles of sarda type fall	18-11-2020 19-11-2020 20-11-2020 21-11-2020 23-11-2020 24-11-2020 25-11-2020 26-11-2020 27-11-2020 28-11-2020 01-12-2020 03-12-2020 04-12-2020 CTURES NG, B. C. PUNMIA 05-12-2020 07-12-2020 08-12-2020	Lecture interspersed with

	34	Cross drainage works: types and selection	14-12-2020	
	35	Design principles of aqueduct	15-12-2020	
	36	Siphon aqueduct and super passage	16-12-2020	
	37	Canal outlets: types, proportionality, sensitivity and flexibility	17-12-2020	
Marian Company	38	River training objectives	18-12-2020	and the section of th
	39	River training approaches	19-12-2020	
	40	Tutorial	21-12-2020	
		UNIT 4: DIVERSION HEAD WORKS		
		CO 4: PLAN AND DESIGN DIVERSION HEAD W TB: IRRIGATION AND WATER POWER ENGINEERING,		
	41	Weirs and barrages	22-12-2020	
	42	Layout of diversion head works and components	23-12-2020	
	43	Causes and failures of weirs on permeable foundations	24-12-2020	Lecture
	44	Bligh's creep theory	26-12-2020	interspersed
	45	Khosla's theory	28-12-2020	with
	46	Design of impervious floors for sub surface flow	29-12-2020	discussions
	47	Exit gradient	30-12-2020	
	48	Tutorial	31-12-2020	
		UNIT 5: RESERVOIR PLANNING, DAMS AND GRAY	THE PROPERTY HONOLOGY SERVICE STATES TO	
	n - 1 - 4 - 4 - 1 1 1 1	CO 5: ANALYZE STABILITY OF GRAVITY D.		
	TB: IRE	RIGATION AND WATER POWER ENGINEERING, B. C. PUNMIA		
	49	Reservoir planning: introduction	02-01-2021	
	50	Investigations, site selections, zones of storage	04-01-2021	
	51	Yield and storage capacity of reservoir	05-01-2021	
	52	Reservoir sedimentation	06-01-2021	100
	53	Dams: types of dams, selection	07-01-2021	
	54	Selection of site of the dam	08-01-2021	2.5
	55	Gravity dams: forces acting on gravity dams	09-01-2021	Lecture
	56	Causes of failures of gravity dams	11-01-2021	interspersed
	57	Problems	12-01-2021	with
	58	Elementary profile of dam	25-01-2021	discussions
	59	Practical profile of dam	27-01-2021	
	60		28-01-2021	
		Limiting height of dam Stability analysis	29-01-2021	
	61		30-01-2021	
		Drainage galleries and grouting Tutorial	30-01-2021	
	63	UNIT 6: EARTH DAMS AND SPILL WAY		
		CO 6: DESIGN EARTH DAMS, OGEE SPILLWAYS AND ENERGY		WORKS
		TB: IRRIGATION AND WATER POWER ENGINEERING.		WORKS
			01-02-2021	·
	64	Earth dams, types and causes of failures	The second secon	
	65	Criteria for safe design	02-02-2021	
	66	Seepage control measures	03-02-2021	
	67	Filters and stability analysis	04-02-2021	
	68	Stability of d/s slope during steady seepage	05-02-2021	
	69	Stability of u/s slope during sudden drawdown	06-02-2021	Lastres
	70	Spillways: types	08-02-2021	Lecture
	71	Design principles of ogee spillways	09-02-2021	interspersed
	72	Problems	10-02-2021	discussions
per une succe nos e posiciones en ca	73	Types of spillway crest gates	11-02-2021	And the second restricted by the State of the second secon
ination	74	Energy dissipation	12-02-2021	vov fali j
A LONG AND STATE OF THE PARTY O		Stilling basin and appurtenances	15-02-2021	ercis fair
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Revision 19-02-2021

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	34	Cross drainage works: types and selection	14-12-2020	
	35	Design principles of aqueduct	15-12-2020	
	36	Siphon aqueduct and super passage	16-12-2020	
	37	Canal outlets: types, proportionality, sensitivity and flexibility	17-12-2020	
	38	River training objectives	18-12-2020	The first contract of the state of the
	39	River training approaches	19-12-2020	1
	40	Tutorial	21-12-2020	
		UNIT 4: DIVERSION HEAD WORKS		1
		CO 4: PLAN AND DESIGN DIVERSION HEAD TB: IRRIGATION AND WATER POWER ENGINEERIN	WORKS	
	41	Weirs and barrages	22-12-2020	
	42	Layout of diversion head works and components	23-12-2020	
	43	Causes and failures of weirs on permeable foundations	24-12-2020	Lecture
	44	Bligh's creep theory	26-12-2020	intersperse
	45	Khosla's theory	28-12-2020	with
	46	Design of impervious floors for sub surface flow	29-12-2020	discussions
	47	Exit gradient	30-12-2020	discussions
	48	Tutorial	31-12-2020	1
	40	UNIT 5: RESERVOIR PLANNING, DAMS AND GR		
		CO 5: ANALYZE STABILITY OF GRAVITY		
	TB: IRR	IGATION AND WATER POWER ENGINEERING, B. C. PUNMI	Α	
	49	Reservoir planning: introduction	02-01-2021	
	50	Investigations, site selections, zones of storage	04-01-2021	
	51	Yield and storage capacity of reservoir	05-01-2021	
	52	Reservoir sedimentation	06-01-2021	
	53	Dams: types of dams, selection	07-01-2021	
	54	Selection of site of the dam	08-01-2021	1
	55	Gravity dams: forces acting on gravity dams	09-01-2021	Lecture
	56	Causes of failures of gravity dams	11-01-2021	intersperse
	57	Problems	12-01-2021	with
	58	Elementary profile of dam	25-01-2021	discussions
	59	Practical profile of dam	27-01-2021	
	60	Limiting height of dam	28-01-2021	1
	61	Stability analysis	29-01-2021	1
	62	Drainage galleries and grouting	30-01-2021	1
	63	Tutorial	30-01-2021	1
		UNIT 6: EARTH DAMS AND SPILL WA		
	C	O 6: DESIGN EARTH DAMS, OGEE SPILLWAYS AND ENERG TB: IRRIGATION AND WATER POWER ENGINEERIN		WORKS
	64	Earth dams, types and causes of failures	01-02-2021	
	65	Criteria for safe design	02-02-2021	1
	66	Seepage control measures	03-02-2021	+
	67	Filters and stability analysis	04-02-2021	1
	68		05-02-2021	1
	69	Stability of d/s slope during steady seepage		1
		Stability of u/s slope during sudden drawdown	06-02-2021	Lecture
	70	Spillways: types	08-02-2021	intersperse
	71	Design principles of ogee spillways	09-02-2021	with
1.5	72	Problems -	10-02-2021	discussions
	73	Types of spillway crest gates	11-02-2021	also desiron.
1041150	74	Energy dissipation	12-02-2021	
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appurtenanc iol n Paness	76	An Status and the Control Tutorial Control State Control State Control	16-02-2021 18-02-2021	Cross : it.

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TENTATIVE LESSON PLAN: CIVIL R1641013

Cou	rse Title: GEO TECHNICAL ENGINEERIN	IG-II (CIVIL)
Section: Sec A	Date: 10-11-2020	Page No: 01 of 03
Revision No: 00	Prepared By: A.KRISHNA PRIYA	Approved By: HOD

Tools: Black board, power point presentations

No. of Periods	TOPIC	Tentative Dates	MODE OF DELIVERY
CO1: The stability.	Stability of slopes e student must know the stability of slope and differe mechanics and foundation engineering, Dr. K. R. AR		o slope
1	Geotechnical engineering I (recall)	10-11-2020	
2	Geotechnical engineering II introduction	11-11-2020	
3	Stability of slopes introduction	12-11-2020	
4	Infinite slopes	13-11-2020	
5	Infinite slopes	16-11-2020	
6	Finite slopes	17-11-2020	Lecture
7	Finite slopes	18-11-2020	interspersed
8	Types of failures	19-11-2020	with
9	Factor of safety of infinite slopes	20-11-2020	discussions
10	Stability analysis by swidish arc method	21-11-2020	discussions
11	Method of slices	23-11-2020	
12	Taylor stability number	24-11-2020	
13	Stability of slopes of dams	25-11-2020	
14	Stability of slopes of embankments and different conditions	26-11-2020	
CO 2: Th	Earth retaining structures ne student must be able to understand earth pressure a mechanics and foundation engineering, Dr. K.R.ARC		
15	Rankines theory of earth pressure	27-11-2020	
16	Rankines theory of earth pressure	28-11-2020	Lecture
17	Coulombs theory of earth pressure	30-11-2020	interspersed
18	Coulombs theory of earth pressure	01-12-2020	with
19	Culmanns graphical method	02-12-2020	discussions
	Culmanns graphical method	03-12-2020	uiscussions
20			
	Earth pressures in layered soil	04-12-2020	
20 21 UNIT 3 CO 3:To required	Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity.	foundations and the	eories
20 21 UNIT 3 CO 3:To required	Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow	foundations and the	
20 21 UNIT 3 CO 3:To required TB: soil	Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundation engineering, Dr. K.R.ARC Types of foundations and factors to be considered in	foundations and the	Lecture
20 21 UNIT 3 CO 3:To required TB: soil	Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundation engineering, Dr. K.R.ARC Types of foundations and factors to be considered in their location	foundations and the DRA 05-12-2020	Lecture interspersed
20 21 UNIT 3 CO 3:To required TB: soil 1 22 23	Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundation engineering, Dr. K.R.ARC Types of foundations and factors to be considered in their location Bearing capacity	foundations and the ORA 05-12-2020 07-12-2020	

27	Terzaghi's theory	11-12-2020	
28	IS methods	14-12-2020	
29	Safe bearing pressure based on N value	15-12-2020	
30	Allowable bearing pressure	16-12-2020	
31	Safe bearing capacity and settlement from plate load test	17-12-2020	
32	Types of foundation settlements and their determination	18-12-2020	
33	Allowable settlements of structures	19-12-2020	
CO 4: T	Pile Foundations o enable the student to imbibe the concept of pile found capacity. mechanics and foundation engineering, Dr. K.R.AROR	tA.	mine their load
34	Types of piles	21-12-2020	
35	Load carrying capacity of piles based on static pile formulae	22-12-2020	
36	Load carrying capacity of piles based on static pile formulae	23-12-2020	
37	Dynamic pile formulae	24-12-2020	Lecture
38	Dynamic pile formulae	26-12-2020	interspersed
39	Pile load tests	28-12-2020	with
40	Pile load tests	29-12-2020	discussions
41	Load carrying capacity of pile group in sands	30-12-2020	
42	Load carrying capacity of pile group in sands	31-12-2020	
74	Louis currying cupacity of priviles		
43	Load carrying capacity of pile group in clays	02-01-2021	
43 44 UNIT-5	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations	04-01-2021	etion of wells
43 44 UNIT-5 CO 5:T TB: soi	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations The Enable student to understand concept of well foundation and foundation engineering, Dr. K.R.AROI	04-01-2021 ons and constructions	etion of wells
43 44 UNIT-5 CO 5:T TB: soi 45	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Types of well foundation Types of well foundation	04-01-2021 ons and construct RA 05-01-2021	ction of wells
43 44 UNIT-5 CO 5:T TB: soi 45 46	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Enable student to understand concept of well foundation mechanics and foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well	04-01-2021 ons and construct RA 05-01-2021 06-01-2021	etion of wells
43 44 UNIT-5 CO 5:T TB: soi 45 46 47	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Enable student to understand concept of well foundatil mechanics and foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well	04-01-2021 ons and construct RA 05-01-2021 06-01-2021 07-01-2021	ction of wells
43 44 UNIT-5 CO 5:T TB: soi 45 46	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Table student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation	04-01-2021 ons and construct A 05-01-2021 06-01-2021 07-01-2021 08-01-2021	etion of wells
43 44 UNIT-5 CO 5:T TB: soi 45 46 47	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Enable student to understand concept of well foundation mechanics and foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well	04-01-2021 ons and construct RA 05-01-2021 06-01-2021 07-01-2021 08-01-2021 09-01-2021	ction of wells Lecture
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Table student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 09-01-2021 11-01-2021	Lecture
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Table Student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations	04-01-2021 ons and construct RA 05-01-2021 06-01-2021 07-01-2021 08-01-2021 09-01-2021 11-01-2021 03-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations To Enable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 09-01-2021 11-01-2021 03-02-2021 04-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations To Enable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria	04-01-2021 ons and construct RA 05-01-2021 06-01-2021 07-01-2021 08-01-2021 09-01-2021 11-01-2021 03-02-2021 04-02-2021 05-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations To Enable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria	04-01-2021 ons and construct RA 05-01-2021 06-01-2021 07-01-2021 08-01-2021 09-01-2021 11-01-2021 03-02-2021 04-02-2021 05-02-2021 06-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52 53	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations To Enable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria Design criteria Determination of steining thickness and plug Construction and sinking of wells	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 11-01-2021 11-01-2021 03-02-2021 04-02-2021 06-02-2021 08-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52 53 54	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations To Enable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria Design criteria Determination of steining thickness and plug	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 11-01-2021 03-02-2021 04-02-2021 06-02-2021 08-02-2021 10-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52 53 54 55	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations To Enable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria Design criteria Determination of steining thickness and plug Construction and sinking of wells	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 11-01-2021 11-01-2021 03-02-2021 04-02-2021 06-02-2021 08-02-2021	Lecture interspersed with
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52 53 54 55 56 57 UNIT-CO 6: 7	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Table Student to understand concept of well foundation engineering, Dr. K.R.AROF Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria Determination of steining thickness and plug Construction and sinking of wells Tilt and shift Tilt and shift Tilt and shift Tilt and shift	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 11-01-2021 03-02-2021 04-02-2021 06-02-2021 08-02-2021 10-02-2021 11-02-2021 and plate bearin	Lecture interspersed with discussions
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52 53 54 55 56 57 UNIT-CO 6: 7	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Tenable student to understand concept of well foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria Design criteria Determination of steining thickness and plug Construction and sinking of wells Tilt and shift Tilt and shift	04-01-2021 ons and construct (A) 05-01-2021 06-01-2021 07-01-2021 08-01-2021 11-01-2021 03-02-2021 04-02-2021 06-02-2021 08-02-2021 10-02-2021 11-02-2021 and plate bearin	Lecture interspersed with discussions
43 44 UNIT-5 CO 5:T TB: soi 45 46 47 48 49 50 51 52 53 54 55 56 57 UNIT-CO 6: 7 TB: soi	Load carrying capacity of pile group in clays Load carrying capacity of pile group in clays Well foundations Table Student to understand concept of well foundation mechanics and foundation engineering, Dr. K.R.AROI Types of well foundation Different shapes of well Components of well Functions of well foundation Forces acting on well foundations Forces acting on well foundations Design criteria Design criteria Design criteria Determination of steining thickness and plug Construction and sinking of wells Tilt and shift Tilt and shift To impart the principles of important field test such as SPT I mechanics and foundation engineering, Dr. K.R.AROI Load carrying capacity of pile group in clays Eventually and shift and shift Soil Exploration To impart the principles of important field test such as SPT I mechanics and foundation engineering, Dr. K.R.AROI	04-01-2021 ons and construct A 05-01-2021 06-01-2021 07-01-2021 08-01-2021 11-01-2021 03-02-2021 04-02-2021 06-02-2021 08-02-2021 10-02-2021 11-02-2021 and plate bearin RA	Lecture interspersed with discussions

61	Boring and sampling methods	16-02-2021	
62	Field tests	17-02-2021	Lecture
63	Field tests	18-02-2021	interspersed
64	Penetration tests	19-02-2021	with
65	Pressure meter	20-02-2021	discussions
66	Planning of programme and preparation of soil investigation report	22-02-2021	
67	Planning of programme and preparation of soil investigation report	23-02-2021	

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PRINCIPAL

TENTATIVE LESSON PLAN: CIVIL R1641013

Cou	rse Title: GEO TECHNICAL ENGINEERIN	G-II (CIVIL)
Section: Sec B	Date: 10-11-2020	Page No: 01 of 03
Revision No: 00	Prepared By: A.KRISHNA PRIYA	Approved By: HOD

No. of Periods	TOPIC	Tentative Dates	MODE OF DELIVERY
UNIT 1 S CO1: The	stability of slopes student must know the stability of slope and different		o slope
	mechanics and foundation engineering, Dr. K. R. AR	10-11-2020	
1	Geotechnical engineering I (recall)	11-11-2020	
2	Geotechnical engineering II introduction	12-11-2020	
3	Stability of slopes introduction		
4	Infinite slopes	13-11-2020	
5	Infinite slopes	16-11-2020	
6	Finite slopes	17-11-2020	Lecture
7	Finite slopes	18-11-2020	interspersed
8	Types of failures	19-11-2020	with
9	Factor of safety of infinite slopes	20-11-2020	discussions
10	Stability analysis by swidish arc method	21-11-2020	
11	Method of slices	23-11-2020	
12	Taylor stability number	24-11-2020	
	Stability of slopes of dams	25-11-2020	
15 1			
13	Stability of slopes of embankments and different conditions	26-11-2020	
14 UNIT 2 I CO 2: Th	Stability of slopes of embankments and different conditions Earth retaining structures student must be able to understand earth pressure a	and their theories.	
UNIT 2 I CO 2: Th TB: soil I	Stability of slopes of embankments and different conditions Earth retaining structures he student must be able to understand earth pressure a mechanics and foundation engineering, Dr. K.R.ARO	and their theories.	
UNIT 2 I CO 2: Th TB: soil I	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at the mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure	and their theories.	Lecture
14 UNIT 2 I CO 2: Th TB: soil I 15	Stability of slopes of embankments and different conditions Earth retaining structures be student must be able to understand earth pressure a mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure	and their theories. ORA 27-11-2020	Lecture
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARG Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure	27-11-2020 28-11-2020	interspersed
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18	Stability of slopes of embankments and different conditions Earth retaining structures le student must be able to understand earth pressure a mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure	27-11-2020 28-11-2020 30-11-2020	interspersed with
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARG Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method	27-11-2020 28-11-2020 30-11-2020 01-12-2020	interspersed with
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20	Stability of slopes of embankments and different conditions Earth retaining structures be student must be able to understand earth pressure a mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020	interspersed with
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20 21 UNIT 3 CO 3:To required	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity.	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 foundations and the	interspersed with discussions
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20 21 UNIT 3 CO 3:To required	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundation engineering, Dr. K.R.ARC	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 foundations and the	interspersed with discussions
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20 21 UNIT 3 CO 3:To required	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 foundations and the ORA	interspersed with discussions
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20 21 UNIT 3 CO 3:To required TB: soil	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARG Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundations and factors to be considered in	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 foundations and the	interspersed with discussions eories
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20 21 UNIT 3 CO 3:To required TB: soil I 22	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundations engineering, Dr. K.R.ARC Types of foundations and factors to be considered in their location	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 foundations and the ORA	interspersed with discussions eories Lecture interspersed
14 UNIT 2 I CO 2: Th TB: soil I 15 16 17 18 19 20 21 UNIT 3 CO 3:To required TB: soil I 22 23	Stability of slopes of embankments and different conditions Earth retaining structures the student must be able to understand earth pressure at mechanics and foundation engineering, Dr. K.R.ARC Rankines theory of earth pressure Rankines theory of earth pressure Coulombs theory of earth pressure Coulombs theory of earth pressure Culmanns graphical method Culmanns graphical method Earth pressures in layered soil Shallow Foundations impart to the student knowledge of types of shallow for the determination of their bearing capacity. mechanics and foundations and factors to be considered in their location Bearing capacity	27-11-2020 28-11-2020 30-11-2020 01-12-2020 02-12-2020 03-12-2020 04-12-2020 foundations and the ORA	interspersed with discussions eories

27	Terzaghi's theory	11-12-2020	
28	IS methods	14-12-2020	
29	Safe bearing pressure based on N value	15-12-2020	
30	Allowable bearing pressure	16-12-2020	
31	Safe bearing capacity and settlement from plate load test	17-12-2020	
32	Types of foundation settlements and their determination	18-12-2020	
33	Allowable settlements of structures	19-12-2020	
CO 4: To arrying TB: soil	Pile Foundations To enable the student to imbibe the concept of pile found capacity. mechanics and foundation engineering, Dr. K.R.AROR		mine their load
34	Types of piles		-
35	Load carrying capacity of piles based on static pile formulae	22-12-2020	
36	Load carrying capacity of piles based on static pile formulae	23-12-2020	
37	Dynamic pile formulae	24-12-2020	Lecture
38	Dynamic pile formulae	26-12-2020	interspersed
39	Pile load tests	28-12-2020	with
40	Pile load tests	29-12-2020	discussions
41	Load carrying capacity of pile group in sands	30-12-2020	
42	Load carrying capacity of pile group in sands	31-12-2020	
43	Load carrying capacity of pile group in clays	02-01-2021	
44	Load carrying capacity of pile group in clays	04-01-2021	
TB: soi	To Enable student to understand concept of well foundation length mechanics and foundation engineering, Dr. K.R.AROF Types of well foundation	RA 05-01-2021	
46	Different shapes of well	06-01-2021	
47	Components of well	07-01-2021	
48	Functions of well foundation	08-01-2021	
49	Forces acting on well foundations	09-01-2021	Lecture
	Forces acting on well foundations	11-01-2021	7
50	Design criteria	03-02-2021	interspersed with
51		04-02-2021	discussions
52	Design criteria Design criteria	05-02-2021	- uiscussions
53 54	Design criteria Determination of steining thickness and plug	06-02-2021	-
55	Construction and sinking of wells	08-02-2021	
56	Tilt and shift	10-02-2021	
57	Tilt and shift	11-02-2021	
UNIT- CO 6:	6 Soil Exploration To impart the principles of important field test such as SPT il mechanics and foundation engineering, Dr. K.R.AROI	and plate bearing	g test.
58	Need of soil exploration	12-02-2021	
59	Methods of soil exploration	13-02-2021	
60	Boring and sampling methods	15-02-2021	
00	Doring and sampling methods	13 02 2021	

61	Boring and sampling methods	16-02-2021	
62	Field tests	17-02-2021	Lecture
63	Field tests	18-02-2021	interspersed
64	Penetration tests	19-02-2021	with
65	Pressure meter	20-02-2021	discussions
66	Planning of programme and preparation of soil investigation report	22-02-2021	
67	Planning of programme and preparation of soil investigation report	23-02-2021	

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TENTATIVE LESSON PLAN: CE R1641014

Course Title: REMOTE SENSING AND GIS APPLICATION				
Section : Sec A	Date: 2-11-2020	Page No: 01 of 03		
Revision No: 00	Prepared By : A.ANOOP KUMAR	Approved By: HOD		

Tools: BLACK BOARD, I	PPTs, NPTEL VIDEOS		
No. of Periods	TOPIC	Date	Mode of Delivery

UNIT -I Introduction to remote sensing:

CO1 The student will be able to understand the basic concepts of remote sensing and gis techniques.

T1 RS& GIS By BASUDEB BHATTA,OXFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

1	Introduction	2-11-2020
2	Basic concepts of remote sensing,	3-11-2020
3	electromagnetic radiation	4-11-2020
4	electromagnetic spectrum,	5-11-2020
5	interaction with atmosphere	6-11-2020
6	energy interaction with the earth surfaces	7-11-2020
7	Characteristics of remote sensing systems Sensors and platforms	9-11-2020
8	Introduction, types of sensors	10-11-2020
9	airborne remote sensing	11-11-2020
10	Space borne remote sensing	12-11-2020
11	image data characteristics	13-11-2020
12	digital image data formats	16-11-2020
13	band interleaved by pixel	17-11-2020
14	band interleaved by line	18-11-2020
15	band sequential	19-11-2020
16	IRS, LANDSAT	20-11-2020
17	SPOT	21-11-2020
18	MODIS	23-11-2020
19	ASTER	24-11-2020
20	RISAT	25-11-2020
21	CARTOSAT	26-11-2020
22	Tutorial	27-11-2020
23	Tutorial	28-11-2020

Lecture interspersed with discussion

UNIT -II Image analysis:

CO2 The student will be able to understand the basic concepts learn various types of satellite sensors and platforms.

T1 RS& GIS By BASUDED BHATTA,ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

24	Image analysis: Introduction	1-12-2020
25	elements of visual interpretations	2-12-2020
26	digital image processing	3-12-2020
27	image preprocessing	4-12-2020
28	image enhancement	5-12-2020
29	image classification	7-12-2020
30	supervised classification	8-12-2020
31	unsupervised classification	9-12-2020
32	Different b/w supervised and unsupervised	10-12-2020
33	Tutorial	11-12-2020

UNIT -III Geographic Information System

CO3 The student will be able to understand the basic concepts learn concepts of visual and digital image analyses

T1 RS& GIS By BASUDED BHATTA, ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

33	Geographic Information System: Introduction	14-12-2020	
34	key components	15-12-2020	
35	application areas of GIS	16-12-2020	
36	map projections	17-12-2020	
37	Data entry and preparation:	18-12-2020	
38	spatial data input	19-12-2020	
39	raster data models	21-12-2020	Lecture
40	vector data model	22-12-2020	interspersed
41	Different b/w raster and vector model	23-12-2020	with
42	Tutorial	24-12-2020	discussions
43	Tutorial	26-12-2020	

UNIT IV Spatial data analysis

CO4 The student will be able to understand the basic concepts understand the principles of spatial analysis create and input spatial data for GIS application

T1 RS& GIS By BASUDED BHATTA,ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

44	Spatial data analysis: Introduction	28-12-2020	
45	overlay function-vector overlay operations	29-12-2020	
46	raster overlay operations	30-12-2020	1
47	arithmetic operators	31-12-2020	1
48	comparison and logical operators	2-1-2021	
49	conditional expressions	4-1-2021	1
50	overlay using a decision table	5-1-2021	1
51	network analysis-optimal path finding	6-1-2021	T
52	network allocation	7-1-2021	
53	network tracing	8-1-2021	7
54	buffer analysis	9-1-2021	1
55	Tutorial	11-12021	1

UNIT -V RS and GIS applications General:

CO5 The student will be able to understand the basic appreciate application of RS

and GIS to Civil engineering

T1 RS& GIS By BASUDED BHATTA,ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

56	Land cover and land use	12-1-21,16-1-
		21&18-1-21
57		19-1-21 to21-
	agriculture	1-21
58	forestry	22-1-21 to
		23-1-21
59	geology	1-2-21 ,3-2-
		21 to4-2-21
60	geomorphology	5-2-21 ,6-2-
		21 &8-2-21
61	urban applications	9-2-21 to 11-
		2-21
62	Tutorial	12-2-21

Lecture interspersed with discussions

Lecture interspersed with discussions

UNIT -VI Applications of Hydrology, Water Resources and Disaster Management:

CO6 The student will be able to understand the application of RS and GIS to Civil engineering

T1 RS& GIS By BASUDED BHATTA,ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press		
63	Flood zoning and mapping	15-2-21
64	groundwater prospects and potential recharge zones	17-2-2021
65	watershed management and disaster management with case	18-2-2021

64	groundwater prospects and potential recharge zones	17-2-2021
65	watershed management and disaster management with case studies	18-2-2021
66	Tutorial	19-2-2021
67	Tutorial	20-2-2021

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PRINCIPAL

Course Tid	TENTATIVE LESSON PLAN: CE RI	641014	
Section : Se	REMOTE SENSING AND GIS APPLICATION	Dom No . (1 -602
		Page No: 01 of 03 Approved By: HOD	
Tools: Black b	: 00 Prepared By :M.Karthik Khumar	Approved	By: HOD
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT -I	Introduction to remote sensing:	1	Denvery
CO1 The stu T1 RS& GI	dent will be able to understand the basic concepts of remains By BASUDED BHATTA,ORFORD PUBLISHERS tentals of Remote Sensing, George Joseph, Universitie	5	d gis techniques.
1	Introduction	2-11-2020	T
2	Basic concepts of remote sensing,	3-11-2020	
3	electromagnetic radiation	4-11-2020	
4	electromagnetic spectrum,	5-11-2020	
5	interaction with atmosphere	6-11-2020	+
6	energy interaction with the earth surfaces	7-11-2020	+
7	Characteristics of remote sensing systems Sensors and platforms	9-11-2020	-
8	Introduction, types of sensors	10-11-2020	
9	airborne remote sensing	11-11-2020	
10	spaceborne remote sensing	12-11-2020	-
11	image data characteristics	13-11-2020	
12		16-11-2020	-
13	digital image data formats band interleaved by pixel	17-11-2020	
14	band interleaved by line	18-11-2020	
15	band sequential	19-11-2020	
	IRS, LANDSAT	20-11-2020	
16	SPOT SPOT	21-11-2020	
17	MODIS	23-11-2020	
18	ASTER		
19		24-11-2020	
20	RISAT	25-11-2020	
21	CARTOSAT	26-11-2020	Lecture
22	Tutorial	27-11-2020	interspersed
23	Tutorial	28-11-2020	with discussion
of satellite se	Image analysis: dent will be able to understand the basic concepts learn nsors and platforms. S By BASUDED BHATTA, ORFORD PUBLISHERS entals of Remote Sensing, George Joseph, Universities		
24	Image analysis: Introduction	1-12-2020	
25	elements of visual interpretations	2-12-2020	
26	digital image processing	3-12-2020	
27	image preprocessing	4-12-2020	
28	image enhancement	5-12-2020	
29	image classification	7-12-2020	
30	supervised classification	8-12-2020	1
31	unsupervised classification	9-12-2020	1
32	Different b/w supervised and unsupervised	10-12-2020	1

UNIT -III Geographic Information System

CO3 The student will be able to understand the basic concepts learn concepts of visual and digital image analyses

T1 RS& GIS By BASUDED BHATTA, ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

33	Geographic Information System: Introduction	14-12-2020	
34	key components	15-12-2020	
35	application areas of GIS	16-12-2020	
36	map projections	17-12-2020	
37	Data entry and preparation:	18-12-2020	1
38	spatial data input	19-12-2020	
39	raster data models	21-12-2020	Lecture
40	vector data model	22-12-2020	interspersed with discussions
41	Different b/w raster and vector model	23-12-2020	
42	Tutorial	24-12-2020	
43	Tutorial	26-12-2020	

UNIT IV Spatial data analysis

CO4 The student will be able to understand the basic concepts understand the principles of spatial analysis create and input spatial data for GIS application

T1 RS& GIS By BASUDED BHATTA, ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

44	Spatial data analysis: Introduction	28-12-2020	
45	overlay function-vector overlay operations	29-12-2020	
46	raster overlay operations	30-12-2020	Lecture
47	arithmetic operators	31-12-2020	interspersed
48	comparison and logical operators	2-1-2021	with
49	conditional expressions	4-1-2021	discussions
50	overlay using a decision table	5-1-2021	
51	network analysis-optimal path finding	6-1-2021	
52	network allocation	7-1-2021	
53	network tracing	8-1-2021	
54	buffer analysis .	9-1-2021	
55	Tutorial	11-12021	

UNIT -V RS and GIS applications General:

CO5 The student will be able to understand the basic appreciate application of RS

and GIS to Civil engineering

T1 RS& GIS By BASUDED BHATTA, ORFORD PUBLISHERS

T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

56	Land cover and land use	12-1-21,16-1-
30		21&18-1-21
57		19-1-21 to21-
51	agriculture	1-21
58	forestry	22-1-21 to
20		23-1-21
59	geology	1-2-21 ,3-2-
3)	0 0 0	21 to4-2-21
60	geomorphology	5-2-21 ,6-2-
	8	21 &8-2-21
61	urban applications	9-2-21 to 11-
01		2-21

Lecture interspersed with discussions UNIT -VI Applications of Hydrology, Water Resources and
Disaster Management:
CO6 The student will be able to understand the application of RS and GIS to Civil engineering
T1 RS& GIS By BASUDED BHATTA,ORFORD PUBLISHERS
T2 Fundamentals of Remote Sensing, George Joseph, Universities Press

63	Flood zoning and mapping	15-2-21
64	groundwater prospects and potential recharge zones	17-2-2021
65	watershed management and disaster management with case studies	18-2-2021
66	Tutorial	19-2-2021
67	Tutorial	20-2-2021

Signature of the Faculty

VCIPAL Tachnology

TENTATIVE LESSON PLAN: R164101B

Course Title:	Ground Improvement Techniques(R1	164101B)	
Section: Sec B	Date:29-10-2020	Page no: 01 of	03
RevisionNo:00	Prepared By: K.Kiran	Approved By : HOD	
Tools: Black Bo	ard, PPTs, Model		
No. of Periods	TOPIC	Implemented Dates	Mode of Delivery

UNIT-I DENSIFICATION

CO1: Make the student to understand need for different ground improvement methods for improving the properties of remolded and in-situ densification

- T1: Ground Improvement Techniques by Purushotham Raj, Lakshmi Publications, New Delhi.
- T2: Principles Of Ground Modification by Hausman, H.R, McGraw-Hill Book Company.
- T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K International Pvt.Ltd.

1	Introduction on ground improvement methods	2/11/2020	
2	Insitu densification of granular soils:Blasting	4/11/2020	
3	Vibratory probe, vibratory compactors	5/11/2020	
4	Vibro displacement : displacement piles	6/11/2020	
5	Vibroflotation techniques	6/11/2020	
6	Dynamic (or) impact compaction at ground & depth	7/11/2020	Lecture interspersed
7	Insitu densification of cohessive soils: preloading ,surcharge	9/11/2020	with discussions
8	Vertical drains: sand drains	11/11/2020	
9	Vertical drains: geo drains	12/11/2020	
10	Stone columns	13/11/2020	
`11	Vertical drain design	16/11/2020	
12	Dynamic (or) impact compaction(T)	18/11/2020	
13	Tutorial	18/11/2020	

UNIT-II DEWATERING

CO2: Make the student to understand about for improving the properties of remolded and insitu soils by adopting different techniques such as in-situ densification and dewatering methods.

- T1: Ground Improvement Techniques by Purushotham Raj, Lakshmi Publications, New Delhi.
- T2: Principles Of Ground Modification by Hausman, H.R, McGraw-Hill Book Company.
- T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K International Pvt.Ltd.

14	Introduction on dewatering	19/11/2020	
15	Ground water and seepage control	20/11/2020	
16	Open sumps & interceptor ditches	21/11/2020	
17	Well point systems-single stage	23/11/2020	
18	Well point systems-multi stage	25/11/2020	
19	Well points in braced excavation	26/11/2020	Lecture
20	Vacuum dewatering system	27/11/2020	
21	Horizontal wells	28/11/2020	interspersed
22	Electro osmosis	28/11/2020	with
23	Drains: open & closed drains	7/12/2020	discussions
24	Foundation drains & blanket drains	9/12/2020	
25	Criteria for choice of filler material around	10/12/2020	

	drains		
26	Tutorial: Elecro osmosis	11/12/2020	
UNIT –III	SOIL STABILIZATION		
	e student to understand W how the reinforced earth t		N D III
	Improvement Techniques by Purushotham Raj, La		
	s Of Ground Modification by <i>Hausman,H.R</i> ,McG ed Earth and its engineering applications by <i>Swa</i>		
vt.Ltd.	ed Earth and its engineering applications by Swa	my Surun,1.1X 11110	a national
27	Soil stabilization: Introduction	12/12/2020	
28	Mechanical stabilization	28/12/2020	
29	Chemical stabilization	30/12/2020	
30	Lime stabilization-factors	31/12/2020	
31	Cement stabilization	2/1/2021	Lecture
32	Bitumen stabilization-factors	2/1/2021	interspersed
33	Polymer stabilization	4/1/2021	
34	Granulated blast furnace slag & flyash	4/1/2021	with
35	Tutorial	6/1/2021	discussions
UNIT -IV I	REINFORCED EARTH		
CO4: Make t	the student to understand about soil nailing can ol	oviate the problem	ns posed by the
	retaining walls		
	Improvement Techniques by Purushotham Raj, L	akchmi Publicatio	ne New Delhi
T1. Ground	es Of Ground Modification by Hausman, H.R., McG	row-Hill Book C	omnany
12: Principie	ed Earth and its engineering applications by Swa	www. Caran I K Int	ompany. ornational
	ed Earth and its engineering applications by Swa	my Surum, i.ix into	ci national
Pvt.Ltd.	D. C. and and maintaining	7/1/2021	
36	Reinforced earth –principles		
37		0/1/0001	
	Components of Reinforced earth	8/1/2021	
38	Soil nailing- purpose & applications	9/1/2021	
	Soil nailing- purpose & applications Soil nailing- material & machineries	9/1/2021 11/1/2021	
38	Soil nailing- purpose & applications	9/1/2021	Lecture
38 39	Soil nailing- purpose & applications Soil nailing- material & machineries	9/1/2021 11/1/2021	Lecture interspersed
38 39 40	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles	9/1/2021 11/1/2021 11/1/2021	interspersed with
38 39 40 41	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls	9/1/2021 11/1/2021 11/1/2021 16/1/2021	interspersed
38 39 40 41 42 43	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021	interspersed with
38 39 40 41 42 43 UNIT -V G	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021	interspersed with discussions
38 39 40 41 42 43 UNIT -V G	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geo	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021	interspersed with discussions
38 39 40 41 42 43 UNIT -V G CO5: Make improve the	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geoengineering performance of soils.	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 o-synthetics can be	interspersed with discussions e used to
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geongineering performance of soils. Improvement Techniques by Purushotham Raj, L	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 o-synthetics can be akshmi Publication	interspersed with discussions e used to ons,New Delhi.
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geoengineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McC	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 o-synthetics can be akshmi Publication of the control of the	interspersed with discussions oe used to ons,New Delhi.
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geongineering performance of soils. Improvement Techniques by Purushotham Raj, L	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 o-synthetics can be akshmi Publication of the control of the	interspersed with discussions oe used to ons,New Delhi.
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd.	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geoengineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCeded Earth and its engineering applications by Swales	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 co-synthetics can be akshmi Publication of the company of the	interspersed with discussions oe used to ons,New Delhi.
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and georgineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCed Earth and its engineering applications by Swa	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 c-synthetics can be akshmi Publication of the company of the	interspersed with discussions oe used to ons,New Delhi.
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geogengineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCeded Earth and its engineering applications by Swalling Geosynthetics: introduction Classification of Geosynthetics	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 20-synthetics can be akshmi Publication of the company of the	interspersed with discussions oe used to ons,New Delhi.
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45 46	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and georgineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCeded Earth and its engineering applications by Swalling Geosynthetics: introduction Classification of Geosynthetics Geosynthetics: applications & properties	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 -synthetics can be akshmi Publication Graw-Hill Book Comy Saran, I.K Interpretation of the synthetics of the synth	interspersed with discussions oe used to ons,New Delhi. company. ernational
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45 46 47	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geogengineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCed Earth and its engineering applications by Swall Geosynthetics: introduction Classification of Geosynthetics Geosynthetics: applications & properties Geotextiles—types	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 20/1/2021 21/1/2021 21/1/2021 21/1/2021 22/1/2021 23/1/2021	interspersed with discussions oe used to ons,New Delhi.
38 39 40 41 42 43 UNIT –V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45 46 47 48	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and geogengineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCeded Earth and its engineering applications by Swall Geosynthetics: introduction Classification of Geosynthetics Geosynthetics: applications & properties Geotextiles—types Functions, properties	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 -synthetics can be akshmi Publication Graw-Hill Book Comy Saran, I.K Interpretation of the synthetics of the synth	interspersed with discussions e used to ons,New Delhi. ompany. ernational
38 39 40 41 42 43 UNIT –V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45 46 47 48 49	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and georgineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCed Earth and its engineering applications by Swall Geosynthetics: introduction Classification of Geosynthetics Geosynthetics: applications & properties Geotextiles—types Functions, properties Geotextiles-applications	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 20/1/2021 21/1/2021 21/1/2021 22/1/2021 23/1/2021 25/1/2021 25/1/2021	interspersed with discussions e used to ons,New Delhi. ompany. ernational
38 39 40 41 42 43 UNIT -V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45 46 47 48 49 50	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and genering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCeded Earth and its engineering applications by Swall Geosynthetics: introduction Classification of Geosynthetics Geosynthetics: applications & properties Geotextiles—types Functions, properties Geotextiles-applications Geogrids & nets	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 20/1/2021 21/1/2021 21/1/2021 22/1/2021 23/1/2021 25/1/2021 25/1/2021 3/2/2021	interspersed with discussions e used to ons,New Delhi. ompany. ernational Lecture interspersed with
38 39 40 41 42 43 UNIT –V G CO5: Make improve the T1: Ground T2: Principle T3: Reinford Pvt.Ltd. 44 45 46 47 48 49	Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks Tutorial EOSYNTHETICS the student to understand, how geotextiles and georgineering performance of soils. Improvement Techniques by Purushotham Raj, Les Of Ground Modification by Hausman, H.R, McCed Earth and its engineering applications by Swall Geosynthetics: introduction Classification of Geosynthetics Geosynthetics: applications & properties Geotextiles—types Functions, properties Geotextiles-applications	9/1/2021 11/1/2021 11/1/2021 16/1/2021 18/1/2021 20/1/2021 20/1/2021 21/1/2021 21/1/2021 22/1/2021 23/1/2021 25/1/2021 25/1/2021	interspersed with discussions oe used to ons,New Delhi. ompany. ernational Lecture interspersed

5/2/2021

6/2/2021

8/2/2021

Geomembrane-

Tutorial

manufacturing, applications, functions
Gabions – properties, applications

52

53

54

UNIT-VI GROUTING

CO6: Make the student to understand concepts, purpose and effects of grouting.

T1: Ground Improvement Techniques by Purushotham Raj, Lakshmi Publications, New Delhi.

T2: Principles Of Ground Modification by Hausman, H.R, McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K International

Pvt.Ltd.

55	Grouting-objectives	10/2/2021	
56	Grouts and their applications	10/2/2021	Lecture interspersed with discussions
57	Methods of grouting	11/2/2021	
58	Stage of grouting	12/2/2021	
59	Hydraulic fracturing in soils& rocks	13/2/2021	
60	Post grout tests	15/2/2021	
61	Stage of grouting	17/2/2021	
62	Tutorial	18/2/2021	

Signature of the Faculty

Signature of the HOD
29 [10] 20

TENTATIVE LESSON PLAN: R164101B

Course Title:	Ground Improvement Techniques(R1	64101B)	
Section: Sec B	Date:29-10-2020	Page no: 01 of	03
RevisionNo:00	Prepared By: G.Sahithi	Approved By : HO	D
Tools: Black Bo	ard, PPTs, Model		
No. of Periods	TOPIC	Implemented Dates	Mode of Delivery

UNIT-I DENSIFICATION

CO1: Make the student to understand need for different ground improvement methods for improving the properties of remolded and in-situ densification

T1: Ground Improvement Techniques by *Purushotham Raj*, Lakshmi Publications, New Delhi.

T2: Principles Of Ground Modification by *Hausman,H.R*,McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K

International	Pyt Ltd	0/11/2020	
1	Introduction on ground improvement methods	2/11/2020	
2	Insitu densification of granular soils:Blasting	4/11/2020	
3	Vibratory probe, vibratory compactors	5/11/2020	
4	Vibro displacement :displacement piles	6/11/2020	
5	Vibroflotation techniques	6/11/2020	
6	Dynamic (or) impact compaction at ground & depth	7/11/2020	Lecture interspersed
7	Insitu densification of cohessive soils: preloading ,surcharge	9/11/2020	with discussions
8	Vertical drains: sand drains	11/11/2020	
9	Vertical drains: geo drains	12/11/2020	
10	Stone columns	13/11/2020	
`11	Vertical drain design	16/11/2020	
12	Dynamic (or) impact compaction(T)	18/11/2020	
13	Tutorial	18/11/2020	

UNIT-II DEWATERING

CO2: Make the student to understand about for improving the properties of remolded and in-situ soils by adopting different techniques such as in-situ densification and dewatering methods.

T1: Ground Improvement Techniques by *Purushotham Raj*, Lakshmi Publications, New Delhi.

T2: Principles Of Ground Modification by *Hausman,H.R,*McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K. International Pvt.Ltd.

International	Pvt.Ltd.		
14	Introduction on dewatering	19/11/2020	
15	Ground water and seepage control	20/11/2020	
16	Open sumps & interceptor ditches	21/11/2020	
17	Well point systems-single stage	23/11/2020	
18	Well point systems-multi stage	25/11/2020	
19	Well points in braced excavation	26/11/2020	Lecture
20	Vacuum dewatering system	27/11/2020	interspersed
21	Horizontal wells	28/11/2020	
22	Elecro osmosis	28/11/2020	with

discussions

23	Drains:open & closed drains	7/12/2020
24	Foundation drains & blanket drains	9/12/2020
25	Criteria for choice of filler material around drains	10/12/2020
26	Tutorial: Elecro osmosis	11/12/2020

UNIT-III SOIL STABILIZATION

CO3: Make the student to understand W how the reinforced earth technology.

T1: Ground Improvement Techniques by *Purushotham Raj*, Lakshmi Publications, New Delhi.

T2: Principles Of Ground Modification by *Hausman,H.R*,McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K. International Pvt.Ltd.

27	Soil stabilization : Introduction	12/12/2020	
28	Mechanical stabilization	28/12/2020	
29	Chemical stabilization	30/12/2020	
30	Lime stabilization-factors	31/12/2020	
31	Cement stabilization	2/1/2021	Lecture interspersed
32	Bitumen stabilization-factors	2/1/2021	
33	Polymer stabilization	4/1/2021	with
34	Granulated blast furnace slag & flyash	4/1/2021	discussions
35	Tutorial	6/1/2021	

UNIT -IV REINFORCED EARTH

CO4: Make the student to understand about soil nailing can obviate the problems posed by the conventional retaining walls

T1: Ground Improvement Techniques by *Purushotham Raj*, Lakshmi Publications, New Delhi.

T2: Principles Of Ground Modification by *Hausman,H.R*,McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K. International Pvt.Ltd.

I FULLU.		
Reinforced earth -principles	7/1/2021	
Components of Reinforced earth	8/1/2021	
Soil nailing- purpose & applications	9/1/2021	
Soil nailing- material & machineries	11/1/2021	
Soil nailing- design principles	11/1/2021	Lecture
Design principles of Reinforced earth walls	16/1/2021	interspersed
Stability checks	18/1/2021	with
Tutorial	20/1/2021	discussions
	Reinforced earth –principles Components of Reinforced earth Soil nailing- purpose & applications Soil nailing- material & machineries Soil nailing- design principles Design principles of Reinforced earth walls Stability checks	Reinforced earth –principles 7/1/2021 Components of Reinforced earth 8/1/2021 Soil nailing- purpose & applications 9/1/2021 Soil nailing- material & machineries 11/1/2021 Soil nailing- design principles 11/1/2021 Design principles of Reinforced earth walls 16/1/2021 Stability checks 18/1/2021

UNIT-V GEOSYNTHETICS

CO5: Make the student to understand, how geotextiles and geo-synthetics can be used to improve the engineering performance of soils.

T1: Ground Improvement Techniques by *Purushotham Raj*, Lakshmi Publications.New Delhi.

T2: Principles Of Ground Modification by *Hausman,H.R*,McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K. International Pvt.Ltd.

44	Geosynthetics: introduction	21/1/2021	
45	Classification of Geosynthetics	21/1/2021	
46	Geosynthetics: applications & properties	22/1/2021	
47	Geotextiles –types	23/1/2021	Lecture
48	Functions, properties	25/1/2021	interspersed
49	Geotextiles-applications	25/1/2021	with
50	Geogrids & nets	3/2/2021	discussions
51	Geomembrane - properties	4/2/2021	
52	Geomembrane- manufacturing, applications, functions	5/2/2021	
53	Gabions –properties ,applications	6/2/2021	
54	Tutorial	8/2/2021	

UNIT-VI GROUTING

CO6: Make the student to understand concepts, purpose and effects of grouting.

T1: Ground Improvement Techniques by Purushotham Raj, Lakshmi

Publications, New Delhi.

T2: Principles Of Ground Modification by Hausman, H.R, McGraw-Hill Book Company.

T3: Reinforced Earth and its engineering applications by Swamy Saran, I.K

55	Grouting-objectives	10/2/2021	
56	Grouts and their applications	10/2/2021	Lecture interspersed with discussions
57	Methods of grouting	11/2/2021	
58	Stage of grouting	12/2/2021	
59	Hydraulic fracturing in soils& rocks	13/2/2021	
60	Post grout tests	15/2/2021	
61	Stage of grouting	17/2/2021	
62	Tutorial	18/2/2021	

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TENTATIVE LESSON PLAN

	e: GWDM (R164101I)	ection: Sec A Date: 20-10-2020 Page No: 01 of			
Revision No		Approved			
	k board, PPTs, Model	1			
No. of	TOPIC	Date	Mode of Delivery		
Γ1 Ground Γ2 Ground	NTRODUCTION TO GROUNDWATER DEVELOPM water Development by Gopala Ranjan, water Development by DK. Todd ate Aquifer Parameters and Yield of Wells	MENT			
1	GW in hydrological cycle	2-11-2020			
2	GW occurrence	3-11-2020			
3	Aquifer parameters and their determination	4-11-2020			
4	General ground water flow equation	5-11-2020	Lecture		
5	Well Hydraulics- steady radial flow in confined aquifer	6-11-2020	interspersed with discussions		
6	Unsteady radial flow in unconfined aquifer	7-11-2020			
7	Theis solution, jacob and chow's methods	9-11-2020			
8	Leaky aquifers	10-11-2020			
T1 Groun	WELL DESIGN dwater Development by Gopala Ranjan, dwater Development by DK. Todd ial Flow Towards well in Confined and Unconfined Wo	ells			
9	Well Design- water well design- well diameter	20-11-2020			
10	Well depth	21-11-2020	Lecture		
11	Well screen-screen length, slot size, screen diameter	23-11-2020	interspersed		
12	Screen selection	24-11-2020	with		

25-11-2020

26-11-2020

discussions

12

13

14

Infiltration gallery

Design of collector wells

UNIT-IIIWELL CONSTRUCTION AND DEVELOPMENT

T1 Groundwater Development by Gopala Ranjan,

T2 Groundwater Development by DK. Todd

CO3: Design wells and construction practices

15	Well Construction and Development- Water wells	27-11-2020	
16	Drilling methods-rotary drilling, precussion drilling	28-11-2020	
17	Well construction-installation of well screens	1-12-2020	
18	Pull back method, open hole method,	2-12-2020	
19	Bail-down method	17-12-2020	Lecture interspersed with
20	Wash down methods	18-12-2020	
21	Well development-mechanical surging using compressed air	19-12-2020	discussions
22	High velocity getting of water	21-12-2020	
23	Over pumping and back washing	22-12-2020	
24	Well completion	23-12-2020	
25	Well disinfection and maintenance	24-12-2020	

UNIT -IV ARTIFICIAL RECHARGE

T1 Groundwater Development by Gopala Ranjan,

T2 Groundwater Development by DK. Todd

CO4: Artificial Recharge for Increasing Groundwater Potential.

26	Artificial Recharge-Introduction	31-12-2020	
27	Recharge methods-basin, stream-channel	2-1-2021	
28	Ditch and furrow	4-1-2021	
29	Flooding and recharge well methods	5-1-2021	Lecture
30	Recharge mounds and induced recharge	6-1-2021	interspersed with discussions
31	Saline Water Intrusion-Occurrence	7-1-2021	
32	Ghyben-Herzberg relation	8-1-2021	
33	Shape of interface	9-1-2021	
34	Control of Saline water intrusion	11-12021	

UNIT -V GEOPHYSICS

T1 Groundwater Development by Gopala Ranjan,

T2 Groundwater Development by DK. Todd

CO5: Geophysical Exploration data and scientific source finding of aquifer.

35	Geophysics- Surface methods of exploration of GW	18-1-2021	Lastura	
36	Electrical resistivity and seismic refraction methods	19-1-2021	Lecture	
37	Subsurface methods	20-1-2021	with discussions	
38	Geophysical logging	3-2-2021		
39	Resistivity logging, Aerial Photogrammetry applications	4-2-2021		

T1 Groundy T2 Groundy	ROUNDWATER MODELLING vater Development by Gopala Ranjan, vater Development by DK. Todd Appropriate Measures for Groundwater Management	ŧ	
40	Ground water Modelling and Management- Basic principles	5-2-2021	Lecture
41	Analog models-viscous fluid models and membrane models	11-2-2021	interspersed with
42	Digital models-finite difference and finite element models	16-2-2021	discussions
43	Concepts of groundwater management	18-2-2021	
44	Basin management by conjunctive use-case studies	20-2-2021	

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PRINCIPAL

Section: Se	e B	Date:20-10-2020	Page No: 01 of 03		
Revision No	o: 00	Prepared By: K. CHANDRA PADMAKAR	Approved	By: HOD	
Tools: Blac	k boar	d, PPTs, Model			
No. of Periods		TOPIC DUCTION TO GROUNDWATER DEVELO	Date	Mode of Delivery	
72 Ground	water	Development by Gopala Ranjan, Development by DK. Todd uifer Parameters and Yield of Wells			
1	1	in hydrological cycle	2-11-2020		
. 2	GW	occurrence	3-11-2020		
3	Aqu	ifer parameters and their determination	4-11-2020		
4	Ger	neral ground water flow equation	5-11-2020	Lecture	
5		II Hydraulics- steady radial flow in confined ifer	6-11-2020	interspersed with discussions	
6	Uns	steady radial flow in unconfined aquifer	7-11-2020		
	The	is solution, jacob and chow's methods	9-11-2020		
7		ky aquifers	10-11-2020		

T1 Groundwater Development by Gopala Ra T2 Groundwater Development by DK. Todd

CO2: Radial Flow Towards well in Confined and Unconfined Wells

9	Well Design- water well design- well diameter	20-11-2020			
10	Well depth	21-11-2020	T		
11	Well screen-screen length, slot size, screen diameter	23-11-2020	Lecture interspersed with discussions		
12	Screen selection	24-11-2020			
13	Design of collector wells	25-11-2020			
14	Infiltration gallery	26-11-2020			

UNIT-HIWELL CONSTRUCTION AND DEVELOPMENT

T1 Groundwater Development by Gopala Ranjan,

T2 Groundwater Development by DK. Todd

CO3: Design wells and construction practices

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16	Drilling methods-rotary drilling, precussion drilling	28-11-2020	
17	Well construction-installation of well screens	1-12-2020	
18	Pull back method, open hole method,	2-12-2020	
19	Bail-down method	17-12-2020	Lecture interspersed with discussions
20	Wash down methods	18-12-2020	
21	Well development-mechanical surging using compressed air	19-12-2020	
22	High velocity getting of water	21-12-2020	
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UNIT -V GEOPHYSICS

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43	Concepts of groundwater management	18-2-2021	
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