TENTATIVE LESSON PLAN: (R1922011)

Course Title: Strength of Materials-II (R1922011)

Section : Sec ADate : 03-04-2021Page No : 01 of 03Revision No : 00Prepared By : G.SahithiApproved By : HOD

Tools: Black board, PPTs, Model

No. of	TOPIC	Date	Mode of
Periods			Delivery

UNIT -I PRINCIPAL STRESSES AND STRAINS AND THEORIES OF FAILURES

CO1 The student will be able to understand the basic concepts of Principal stresses and strains developed in the cross section of the beams on the cross section and stresses on any inclined plane. To impart concepts of failures in the material.

T1 Strength of Materials by S.S Bhavikatti,

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

1	Introduction	06-04-2021
2	Stresses on an inclined section of a bar under axial loading	07-04-2021
3	compound stresses	08-04-2021
4	Normal and tangential stresses on an inclined plane for biaxial stresses	09-04-2021
5	Two perpendicular normal stresses accompanied by a state of simple shear	10-04-2021
6	Mohr's circle of stresses	12-04-2021
7	Principal stresses and strains	15-04-2021
8	Analytical and graphical solutions.	16-04-2021
9	Theories of Failures: Introduction	17-04-2021
10	Maximum Principal stress theory	19-04-2021
11	Maximum Principal strain theory	20-04-2021
12	Maximum shear stress theory	22-04-2021
13	Maximum strain energy theory –	23-04-2021
14	Maximum shear strain energy theory.	24-04-2021
15	Tutorial .	26-04-2021

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	Theory of pure torsion	27-04-2021
17	Derivation of Torsion equations: $T/J = q/r = N\phi/L$	28-04-2021
18	Assumptions made in the theory of pure torsion	29-04-2021
19	Torsional moment of resistance –	30-04-2021
20	Polar section modulus	01-05-2021
21	Power transmitted by shafts	03-05-2021
22	Combined bending and torsion and end thrust	04-05-2021
23	Design of shafts according to theories of failure	05-05-2021
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Design of snarts according to theories of faiture

24	Springs: introduction	06-05-2021	
25	Types of springs	07-05-2021	
26	deflection of close coiled helical springs under axial pull	08-05-2021	
27	deflection of open coiled helical springs under axial pull	10-05-2021	
28	deflection of close coiled helical springs under axial couple	11-05-2021	Lecture
29	deflection of open coiled helical springs under axial couple	12-05-2021	interspersed with discussion
30	springs in series and parallel.	13-05-2021	
	Tutorial	15-05-2021	3
UNIT -III	FLEXURAL STRESSES & SHEAR STRESSES	_	
	dent will have knowledge of stresses developed in the cro		
	equations, calculation of section modulus of section for o	lifferent cross	
sections			
[1 Strength	of Materials by S.S Bhavikatti,		
2 Strength	of Materials by R.K Bansal, Lakshmi Publication		
32	Columns and Struts	17-05-2021	
33	: Introduction	18-05-2021	
34	Types of columns	19-05-2021	
35	- Short, medium and long columns	20-05-2021	
36	Axially loaded compression members	21-05-2021	
37	Crushing load	22-05-2021	Lecture
		22-03-2021	interspersed
38	Euler's theorem for long columns	24-05-2021	with
39	Euler's theorem for long columns	25-05-2021	discussions
40	assumptions	26-05-2021	discussions
41	derivation of Euler's critical load formulae for various end conditions	27-05-2021	
42	derivation of Euler's critical load formulae for various end conditions	28-05-2021	
43	derivation of Euler's critical load formulae for various end conditions	29-05-2021	
44			
	derivation of Euler's critical load formulae for various end conditions	31-05-2021	
45		31-05-2021 01-06-2021	
45	various end conditions	01-06-2021	
	various end conditions Equivalent length of a column	01-06-2021	
	various end conditions Equivalent length of a column slenderness ratio	01-06-2021	
46	various end conditions Equivalent length of a column slenderness ratio	01-06-2021 02-06-2021 03-06-2021	
46 47	various end conditions Equivalent length of a column slenderness ratio Euler's critical stress	01-06-2021 02-06-2021 03-06-2021 04-06-2021	Lecture
46 47 48	various end conditions Equivalent length of a column slenderness ratio Euler's critical stress Limitations of Euler's theory —	01-06-2021 02-06-2021 03-06-2021 04-06-2021 05-06-2021	
46 47 48 49	various end conditions Equivalent length of a column slenderness ratio Euler's critical stress Limitations of Euler's theory — Limitations of Euler's theory — Rankine — Gordon formula	01-06-2021 02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021	Lecture interspersed with
46 47 48 49 50	various end conditions Equivalent length of a column slenderness ratio Euler's critical stress Limitations of Euler's theory — Limitations of Euler's theory — Rankine — Gordon formula Long columns subjected to eccentric loading —	01-06-2021 02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021	interspersed
46 47 48 49 50 51	various end conditions Equivalent length of a column slenderness ratio Euler's critical stress Limitations of Euler's theory — Limitations of Euler's theory — Rankine — Gordon formula	01-06-2021 02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021	interspersed with

L 33	Empiricai iormuiae	12-06-2021
56	Straight line formula -	14-06-2021
57	Prof. Perry's formula	15-06-2021
58	Tutorial	16-06-2021

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	Stresses under the combined action of direct loading	17-06-2021	
60	B.M. Core of a section	18-06-2021	
61	determination of stresses in the case of chimneys	19-06-2021	Lecture
62-	retaining walls	21-06-2021	interspersed
63	dams	22-6-2021	with
64	conditions for stability	23-06-2021	discussions
65	stresses due to direct loading	24-06-2021	
66	B.M. about both axis	25-06-2021	
67	stresses due to direct loading and B.M. about both axis.	26-06-2021	
68	Tutorial	28-06-2021	

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	29-06-2021
70	Centroidal principal axes of section	30-06-2021
71	Graphical method for locating principal axes	01-07-2021
72	Moments of inertia referred to any set of rectangular axes	02-07-2021
73	Stresses in beams subjected to unsymmetrical bending	03-07-2021
74	Principal axes	05-07-2021
75	Resolution of bending moment into two rectangular axes through the centroid	06-07-2021
76	Location of neutral axis	07-07-2021
77	Deflection of beams under unsymmetrical bending.	08-07-2021
78	Shear Centre: Introduction	09-07-2021
79	Shear center for symmetrical and unsymmetrical sections	09-07-2021

Lecture interspersed with discussions

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TENTATIVE LESSON PLAN [CF-R1922012]

Course Title: EN	VIRONMENTAL ENGINEERING I	
Section : Sec I	Date: 06-04-2021	Page No: 01 of 03
Revision No: 00	Prepared By :N.KRANTHI REKHA	Approved By : HOD

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT -I	Introduction		
TB: WATE	R SUPPLY & SANITATION ENGINEERING BY J.S	BIRDIE & B.S.	BIRDIE
CO 1: To ki	now about WSS and water demand for city or town.		
1.	Introduction of wss	06-04-2021	
2.	Importance of wss	07-04-2021	
3.	Necessity of wss	08-04-2021	
4.	Water borne diseases	09-04-2021	Lecture interspersed
5.	Flow chart of wss	10-04-2021	with discussions
6.	Role of environmental engineer and agency activities	12-04-2021	
7.	Water demand	15-04-2021	
8.	Types of water demand	16-04-2021	
9.	Factors eff the WD	17-04-2021	
10.	Estimation of WD for city	19-04-2021	
11.	PCD and factors eff	20-04-2021	
12.	DP and its factors	22-04-2021	
13.	Variation of WD	23-04-2021	
14.	Population forecasting methods (9)	24-04-2021	
15.	Tutorial	26-04-2021	

16.	Sources of water	27-04-2021	
17.	Rivers, lakes, reservoirs	28-04-2021	
18.	Comparisons of sources	29-04-2021	
19.	Capacity of storage reservoir	30-04-2021	
20.	Mass curve analysis	01-05-2021	
21.	Ground water sources	03-05-2021	
22.	Springs and wellsetc	04-05-2021	Lecture interspersed
23.	Infiltration galleries	05-05-2021	with discussions
24.	Types of WBF	06-05-2021	
25.	Collection and conveyance of water	07-05-2021	
26.	Factors gov intake structure	08-05-2021	
27.	Types of intakes	10-05-2021	
28.	Gravity and pressure pipes	11-05-2021	
29.	Types of pipes	12-05-2021	
30.	Pipe materials and joints	13-05-2021	
31.	Design and laying of pipe lines	15-05-2021	
32.	Tutorial	17-05-2021	

UNIT-III

TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

CO 3: To know about analysis of water that is physical, chemical and bacteriological analysis.

33.	Quality and analysis of water	18-05-2021	
34.	Characteristics of water	19-05-2021	
35.	Physical tests	20-05-2021	Lastura intercongress
36.	Chemical tests	21-05-2021	Lecture interspersed with discussions
37.	Biological tests	22-05-2021	With discussions
38.	Analysis of water	24-05-2021	
39.	Comparisons of sources	25-05-2021	
40.	IS WQS	26-05-2021	
41.	WHO WQS	27-05-2021	
42.	Tutorial	28-05-2021	

UNIT-IV

TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

O 4: To know about various treatment methods for the water.

43.	Treatment of water	29-05-2021	
44.	Flow chart	31-05-2021	
45.	Treatment methods	01-06-2021	
46.	Theory of sedimentation	02-06-2021	
47.	Design of sedimentation	03-06-2021	
48.	Coagulation	04-06-2021	
49.	Coagulation with sedimentation	05-06-2021	
50.	filtration	07-06-2021	T
51.	Disinfection	08-06-2021	Lecture interspersed with discussions
52.	Theory	09-06-2021	with discussions
53.	Chlorination	10-06-2021	
54.	Other disinfection methods	11-06-2021	
55.	Softening of water	12-06-2021	
56.	Removal of color and odor	14-06-2021	
57.	Removal of iron and manganese	15-06-2021	
58.	Fluoridation and de-fluoridation	16-06-2021	
59.	Aeration	17-06-2021	
60.	Ion exchange	18-06-2021	
61.	ultra filtration	19-06-2021	
62.	reverse osmosis	21-06-2021	
63.	Tutorial	22-6-2021	

UNIT-V

TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

CO 6: To know about distribution of water to city or town.

64.	Analysis of distribution networks	23-06-2021
65.	Hardy cross and equivalent pipe methods	24-06-2021
66.	Components of DS	25-06-2021

67.	Valves-types-sluice	26-06-2021	
68.	Scour and check valves	28-06-2021	
69.	Hydrants and water meters	29-06-2021	Lecture interspersed with discussions
70.	Laying and testing of pipes	30-06-2021	With discussions
71.	Selection of pipe materials	01-07-2021	
72.	Pipe joints	02-07-2021	
73.	Analysis of distribution networks	03-07-2021	
74.	Problems	05-07-2021	
75.	Tutorial	05-07-2021	

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TENTATIVE LESSON PLAN: CE R1922013

Course Title: EN	GINEERING GEOLOGY	
Section : Sec A	Date: 22-3-2021	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 - 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	22-3-21
2	Definition of geology and various Branches of	23-3-21
	Geology	
3	Allied Branches of geology	24-3-21
4	Importance of Geology in Civil Engineering with case studies	25-3-21
5	Weathering	26-3-21
6	Weathering of rocks- physical weathering	27-3-21
7	Weathering of rocks- chemical weathering	30-3-21
8	Geological agents	31-3-21
9	River process-erosion	1-4-21
10	River process-Transportation	3-4-21
11	weathering process of Rock and their development	5-4-21
12	River valley development	6-4-21

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	7-4-21
14	Definitions of mineral	8-4-21
15	Structures of silicates and rock,	9-4-21
16	Different methods of study of mineral and rock,	12-4-21
17	The study of physical properties of minerals and rocks for megascopic study for the following minerals and rocks,	15-4-21
18	Common rock forming minerals are Feldspar	16-4-21
19	Quartz Group, ,	17-4-21
20	Olivine, Augite	19-4-21
21	Hornblende,,	20-4-21
22	Mica Group, Asbestos	22-4-21
23	Talc, Chlorite,	23-4-21
24	Kyanite,	24-4-21
25	Garnet, Calcite, other ore forming minerals are Pyrite, Hematite	26-4-21

Lecture interspersed with discussion

29. 30.	bridges		interspersed
30	Characteristics of cables	11-12-2020	with
20.	Analysis of a cable subjected to udl	14-12-2020	discussions
31.	Analysis of a cable subjected to concentrated loads	15-12-2020	
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	
and the second second second second	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	
AF	Problems on portal frame	11-12021	
45.			
45.	Problems on portal frame	12-1-2021	Lecture
46. 47.	Problems on portal frame Problems on portal frame ANI'S METHOD	12-1-2021	with
46. 47. UNIT – V K CO5 Analyze FB :: T.S. Th	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (16-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze FB :: T.S. Th India 48.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction	16-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams	16-1-2021 Oxford Univers	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49. 50.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed	16-1-2021 Dxford Univers 18-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51.	Problems on portal frame ANI'S METHOD 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	16-1-2021 Dxford Univers 18-1-2021 19-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed	16-1-2021 Dxford Univers 18-1-2021 19-1-2021 20-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53.	Problems on portal frame ANI'S METHOD 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	16-1-2021 Dxford Univers 18-1-2021 19-1-2021 20-1-2021 21-1-2021	interspersed with discussions ity press,
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th ndia 48. 49. 50. 51. 52. 53. 54.	Problems on portal frame ANI'S METHOD 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	16-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021	interspersed with discussions ity press, Lecture interspersed
46. 47. UNIT - V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55.	Problems on portal frame ANI'S METHOD 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 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 23-1-2021	interspersed with discussions ity press, Lecture interspersed with
46. 47. UNIT - V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55. 56.	Problems on portal frame ANI'S METHOD 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	16-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 1-2-2021	interspersed with discussions ity press, Lecture interspersed with
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55. 56. 57.	Problems on portal frame ANI'S METHOD 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 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 23-1-2021 1-2-2021 2-2-2021	interspersed with discussions ity press, Lecture interspersed
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th India 48. 49. 50. 51. 52. 53. 54. 55. 56.	Problems on portal frame ANI'S METHOD 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	16-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 1-2-2021	interspersed with discussions ity press, Lecture interspersed with
45.			
Problems Problems ANI'S MET	on portal frame HOD using kani's Method	16-1-2021	
	Problems on portal frame ANI'S METHOD		interspersed
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (16-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze B :: T.S. Th ndia 48.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction	16-1-2021	interspersed with discussions
46. 47. VNIT – V K CO5 Analyze B :: T.S. Th ndia 48. 49.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams	16-1-2021 Oxford Univers	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th ndia 48. 49.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams	16-1-2021 Oxford Univers	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze CB :: T.S. Th ndia 48. 49. 50.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed	16-1-2021 Dxford Univers 18-1-2021	interspersed with discussions
46. 47. UNIT – V K CO5 Analyze TB :: T.S. The ndia 48. 49. 50. 51.	Problems on portal frame ANI'S METHOD 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	16-1-2021 Dxford Univers 18-1-2021 19-1-2021	intersperse with discussion
46. 47. WNIT – V K CO5 Analyze B :: T.S. Th ndia 48. 49. 50. 51.	Problems on portal frame ANI'S METHOD 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	16-1-2021 Dxford Univers 18-1-2021 19-1-2021	intersperse with discussion
46. 47. INIT – V K CO5 Analyze B :: T.S. Th ndia 48. 49. 50. 51.	Problems on portal frame ANI'S METHOD Structures using kani's Method andava Moorthy, "Structural Analysis – II", 2014, (Introduction Analysis of continuous beams Analysis of continuous beams - fixed	16-1-2021 Dxford Univers 18-1-2021 19-1-2021 20-1-2021	intersperse with discussion ity press,
46. 47. UNIT – V K CO5 Analyze CB :: T.S. The ndia 48. 49. 50. 51. 52. 53.	Problems on portal frame ANI'S METHOD 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	16-1-2021 Dxford Univers 18-1-2021 19-1-2021 20-1-2021 21-1-2021	intersperse with discussion: ity press, Lecture
46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th ndia 48. 49. 50. 51. 52. 53.	Problems on portal frame ANI'S METHOD 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	16-1-2021 Dxford Univers 18-1-2021 19-1-2021 20-1-2021 21-1-2021	interspersed with discussions ity press, Lecture interspersed
46. 47. UNIT – V K CO5 Analyze TB :: T.S. The ndia 48. 49. 50. 51. 52. 53. 54.	Problems on portal frame ANI'S METHOD 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	16-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021	intersperse with discussion ity press, Lecture intersperse with
46. 47. UNIT - V K CO5 Analyze CB :: T.S. The ndia 48. 49. 50. 51. 52. 53. 54. 55.	Problems on portal frame ANI'S METHOD 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 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 23-1-2021	intersperse with discussion ity press, Lecture intersperse with
46. 47. UNIT - V K CO5 Analyze CB :: T.S. The ndia 48. 49. 50. 51. 52. 53. 54. 55.	Problems on portal frame ANI'S METHOD 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	16-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 1-2-2021	intersperse with discussion ity press, Lecture intersperse with
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46. 47. UNIT – V K CO5 Analyze TB :: T.S. Th ndia 48. 49. 50. 51. 52. 53. 54. 55. 56.	Problems on portal frame ANI'S METHOD 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	16-1-2021 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 1-2-2021	interspersed with discussions ity press, Lecture interspersed with
46. 47. UNIT - V K CO5 Analyze TB :: T.S. Th ndia 48. 49. 50. 51. 52. 53. 54. 55. 56. 57.	Problems on portal frame ANI'S METHOD 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 18-1-2021 19-1-2021 20-1-2021 21-1-2021 22-1-2021 23-1-2021 1-2-2021 2-2-2021	intersperse with discussion: ity press, Lecture intersperse with

	bridges		interspersed
29.	Characteristics of cables	11-12-2020	with
30.	Analysis of a cable subjected to udl	14-12-2020	discussions
31.	Analysis of a cable subjected to concentrated loads	15-12-2020	
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, (Oxford 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	
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 discussions
	e Structures using kani's Method aandava Moorthy , "Structural Analysis – II ", 2014, G	Oxford Univers	ity press,
48.	Introduction		
49.	Analysis of continuous beams		
50.	Analysis of continuous beams - fixed	18-1-2021	
51.	Analysis of continuous beams - fixed	19-1-2021	
52.	Analysis of continuous beams - fixed	20-1-2021	
53.	Analysis of continuous beams - overhang	21-1-2021	Lecture
54.	Analysis of continuous beams - overhang	22-1-2021	interspersed
55.	Analysis of continuous beams	23-1-2021	with discussions
56.	Analysis of portal frames	1-2-2021	
57.		2-2-2021	
	Analysis of portal frames		
58.	Analysis of portal frames Analysis of portal frames	3-2-2021	
58.		3-2-2021	
59. UNIT – VI I CO6 Analyzo TB :: T.S. TI		4-2-2021	ity press,
59. UNIT – VI I CO6 Analyzo	Analysis of portal frames Analysis of portal frames NTRODUCTION TO MATRIX METHODS Structures using Matrix Methods	4-2-2021	ity press,

61.	Analysis of continuous beams using flexibility methods	6-2-2021	
62.	Analysis of continuous beams using flexibility methods	8-2-2021	
63.	Analysis of continuous beams including settlement of supports	9-2-2021	Lecture interspersed
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 Faculty

Signature of the HoD
29/10/20
PRINCIPAL

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TENTATIVE LESSON PLAN: CE R1922012

Course Title: H&	zHM	
Section : Sec A	Date: 22-3-2021	Page No: 01 of 03
Revision No: 00	Prepared By :M.Karthik Khumar	Approved By: HOD

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No. of	TOPIC	Date	Mode of
Periods			Delivery

UNIT -I Introduction: UNIFORM FLOW IN OPEN CHANNELS

- CO1 The student will be able to understand the basic concepts. To study about uniform flows in open channel and also to learn about the characteristics of hydraulic jump. Solve uniform open channel flow problems
- T1 A text of Fluid mechanics and hydraulic machines, R. K. Bansal, Laxmi Publications New Delhi.
- T2 Fluid Flow in Pipes and Channels, G.L. Asawa, CBS.
- T3 Fluid Mechanics, Modi and Seth, Standard book house.

1	UNIFORM FLOW IN OPEN CHANNELS:	
2	Types of channels	22-3-21
3	Types of flows	23-3-21
4	Velocity distribution	24-3-21
5	Energy and momentum correction factors	25-3-21
6	Chezy's formulae for uniform flow	26-3-21
7	Manning's formulae for uniform flow	27-3-21
8	Most Economical sections	30-3-21
9	Critical flow: Specific energy	31-3-21
10	critical depth	1-4-21
11	computation of critical depth	3-4-21
12	Problems	5-4-21
13	Problems	6-4-21
14	Problems	7-4-21
15	Problems	8-4-21

UNIT -II NON-UNIFORM FLOW IN OPEN CHANNELS:

CO2 The student will be able to understand the basic concepts. To study about non- uniform flows in open channel and also to learn about the characteristics of hydraulic jump Solve non uniform open channel flow problems

T1 A text of Fluid mechanics and hydraulic machines, R. K. Bansal, Laxmi Publications New Delhi.

T2 Fluid Flow in Pipes and Channels, G.L. Asawa, CBS.

T3 Fluid Mechanics, Modi and Seth, Standard book house,

13 Fluid Mechanics, Modi and Seth, Standard book house.			
16	Steady Gradually Varied flow	9-4-21	
17	Dynamic equation slope	12-4-21	
18	Mild, Critical slope	15-4-21	
19	Steep, horizontal	16-4-21	
20	adverse slope	17-4-21	
21	surface profiles	19-4-21	
22	Profiles direct step method	20-4-21	
23	Rapidly varied flow	22-4-21	
24	hydraulic jump	23-4-21	
25	energy dissipation	24-4-21	
26	Problems	26-4-21	
27	Problems	27-4-21	
28	Problems	28-4-21	
29	Problems	29-4-21	

Lecture interspersed with discussions

UNIT -III HYDRAULIC SIMILITUDE

CO3 The student will be able to understand the basic concepts. Dimensional analysis for fluid flow problems and apply the principals of dimensional analysis and similitude in hydraulic model testing.

- T1 A text of Fluid mechanics and hydraulic machines, R. K. Bansal, Laxmi Publications New Delhi.
- T2 Fluid Flow in Pipes and Channels, G.L. Asawa, CBS.
- T3 Fluid Mechanics, Modi and Seth, Standard book house.

30	Dimensional analysis	30-4-21	
31	Rayleigh's method	3-5-21	
32	Buckingham's pi theorem	4-5-21	
33	study of Hydraulic models	5-5-21	
34	Geometric, kinematic	6-5-21	
35	Dynamic similarities	7-5-21	
36	dimensionless numbers	8-5-21	Lecture
37	model and prototype relations.	13-5-21	interspersed
38	Problems	15-5-21	with
39	Problems	17-5-21	discussions
40	Problems	18-5-21	
41	Problems	19-5-21	

UNIT IV BASICS OF TURBO MACHINERY, HYDRAULIC TURBINES

CO4 The student will be able to understand the basic concepts of impact of jet in the direction and angular momentum. working principles of various types of hydraulic machines Understand the working principles of various hydraulic machineries

- T1 A text of Fluid mechanics and hydraulic machines, R. K. Bansal, Laxmi Publications New Delhi.
- T2 Fluid Flow in Pipes and Channels, G.L. Asawa, CBS.

T3 Fluid Mechanics, Modi and Seth, Standard book house.

TO THEFT	manies, indui and Seni, Standard South Monor		
42	Hydrodynamic force of jets on stationary	20-5-21	
43	moving flat	21-5-21	
44	inclined and curved vanes	22-5-21	
45	jet striking centrally and at tip	24-5-21	Lecture
46	velocity triangles at inlet and outlet,	25-5-21	interspersed with
47	expressions for work done and efficiency	26-5-21	discussion
48	Angular momentum principle	27-5-21	
49	Problems	28-5-21	
50	problems	29-5-21	
51	problems	31-5-21	
52	Layout of a typical Hydropower installation	1-6-21	
53	Heads and efficiencies	2-6-21	
54	classification of turbines	3-6-21	
55	Pelton wheel	4-6-21	
56	Francis turbine	5-6-21	Lecture
57	Kaplan turbine	7-6-21	
58	working, working proportions velocity diagram, work done and efficiency	8-6-21	interspersed with discussions
59	hydraulic design, draft tube, theory and efficiency	9-6-21	
60	Governing of turbines ,surge tanks-unit	10-6-21	
61	specific quantities, selection of turbines,	11-6-21	
62	performance characteristics	12-6-21	
63	geometric similarity-cavitations.	14-6-21	
		15-6-21	

64	Problems

UNIT -V CENTRAIFUGAL-PUMPS-

CO6 The student will be able to understand the basic concepts. To understand the working principles of various types of pumps.

Understand the working principles of various pumps

- T1 A text of Fluid mechanics and hydraulic machines, R. K. Bansal, Laxmi Publications New Delhi.
- T2 Fluid Flow in Pipes and Channels, G.L. Asawa, CBS.
- T3 Fluid Mechanics, Modi and Seth, Standard book house

	Pump installation details	16-6-21	
65	Pump installation details	17-6-21	
66	classification Work done- Manometric head	18-6-21	
67	Work done- Manometric head		
	minimum starting speed	19-6-21	
68		21-6-21	
69	Problems	22-6-21	
70	losses and efficiencies-specific speed	23-6-21	
71	multistage pumps-pumps in parallel and series		
72	performance of pumps-characteristic curves	24-6-21	
		25-6-21	
73	Problems	26-6-21	
74	NPSH- Cavitation.	28-6-21	
75	RECIPROCATING PUMPS: Introduction		
76	classification components, working	29-6-21	
		30-6-21	
77	Problems		

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TENTATIVE LESSON PLAN: CE

No. of Periods UNIT – I Co		Page No : (
No. of Periods UNIT – I Co	board, PPTs, Model		by . HOD
No. of Periods UNIT – I Co		700 / 4°	
UNIT – I Co	10110	Tentative	Implemented Date
		Date	Date
	omponents of Railway Engineering we various components and their functions in a railway way Engineering by Satish Chandra and Agarwal M.M.		iversity Press
1	Permanent way components	06-04-2021	
2	Railway Track Gauge	07-04-2021	
3	Cross Section of Permanent Way	08-04-2021	
4	Functions of various Components like Rails, Sleepers and Ballast	09-04-2021	
5	Rail Fastenings	10-04-2021	
6	Creep of Rails	12-04-2021	Lecture
7	Theories related to creep	15-04-2021	interspersed
8	Adzing of Sleepers	16-04-2021	with
9	Sleeper density	17-04-2021	discussions
4.0	Rail joints.	19-04-2021	discussions
CO2: Desig TB1:: Railv	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment	1., Oxford Un	iversity Pres
UNIT – II (CO2: Desig TB1:: Railv	Geometric Design of Railway Track n geometrics in a railway track.	I., Oxford Un	iversity Pres
UNIT – II (CO2: Desig TB1:: Railv New Delhi	Geometric Design of Railway Track n geometrics in a railway track. way Engineering by Satish Chandra and Agarwal M.M.		iversity Pres
UNIT – II C CO2: Desig TB1:: Railv New Delhi	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M Alignment		iversity Pres
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11	Geometric Design of Railway Track n geometrics in a railway track. way Engineering by Satish Chandra and Agarwal M.M.	20-04-2021	iversity Pres
UNIT – II C CO2: Desig TB1:: Railv New Delhi	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients	20-04-2021 22-04-2021	iversity Pres
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13	Geometric Design of Railway Track In geometrics in a railway track. In geometrics in a railway track. In geometrics in a railway track. In geometrics by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation	20-04-2021 22-04-2021 23-04-2021	iversity Pres
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients	20-04-2021 22-04-2021 23-04-2021 24-04-2021	iversity Pres
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021	iversity Press
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021	
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021	Lecture interspersed with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021	Lecture interspersed
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021	Lecture interspersed with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20	Geometric Design of Railway Track In geometrics in a railway track. In geometrics in a railway track. In geometrics in a railway track. In geometric by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	Lecture interspersed with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20 21	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves Reverse curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 04-05-2021 05-05-2021	Lecture interspersed with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20 21 22	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves Reverse curves Extra clearance on curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	Lecture interspersed with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys	20-04-2021 22-04-2021	iversity
UNIT – II C CO2: Desig FB1:: Railv New Delhi 11 12 13 14 15 16 17	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021	Lecture intersperse
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20	Geometric Design of Railway Track In geometrics in a railway track. In geometrics in a railway track. In geometrics in a railway track. In geometric by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021	Lecture intersperse with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20 21	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves Reverse curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021	Lecture intersperse with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20 21	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves Reverse curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	Lecture interspersed with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20 21 22	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves Reverse curves Extra clearance on curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	Lecture intersperse with
UNIT – II C CO2: Desig TB1:: Railv New Delhi 11 12 13 14 15 16 17 18 19 20 21 22 23	Geometric Design of Railway Track n geometrics in a railway track. vay Engineering by Satish Chandra and Agarwal M.M. Alignment Engineering Surveys Gradients Grade Compensation Cant and Negative Super elevation Cant Deficiency Degree of Curve safe speed on curves Transition curve Compound curves Reverse curves Extra clearance on curves widening of gauge on curves	20-04-2021 22-04-2021 23-04-2021 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 04-05-2021 05-05-2021	Lecture interspersed with

31	Layout of Turnout	15-05-2021	discussions
32	Double Turnout	17-05-2021	
33	Diamond crossing	18-05-2021	
34	Scissors crossing.	19-05-2021	
35	Signal Objectives	20-05-2021	
36	Classification	21-05-2021	
37	Fixed signals	22-05-2021	
38	Stop signals	24-05-2021	
39	Signalling systems	25-05-2021	
40	Mechanical signalling system	26-05-2021	
41	Electrical signalling system	27-05-2021	
42	System for Controlling Train Movement	28-05-2021	
43	Interlocking	29-05-2021	
44	Modern signalling Installations.	31-05-2021	
CO4: Design	Airport Planning & Design gn airport geometrics and airfield pavements ort Engineering by Khanna & Arora - Nemchand Bro		
45	Airport Master plan	01-06-2021	
46	Airport site selection	02-06-2021	
47	Air craft characteristics	03-06-2021	
48	Zoning laws	04-06-2021	
49	Airport classification	05-06-2021	
50	Runway orientationt	07-06-2021	
51	Wind rose diagram	08-06-2021	
52	Runway length	09-06-2021	
53	Taxiway design	10-06-2021	
54	Terminal area and Airport layout	11-06-2021	Lecture
55	Visual aids and Air traffic control.	12-06-2021	interspersed
56	Runway Design: Various Design factors	14-06-2021	with
57	Design methods for Flexible pavements	15-06-2021	discussions
58	Design methods for Rigid pavements	16-06-2021	
59	LCN system of Pavement Design	17-06-2021	
60	Airfield Pavement Failures	18-06-2021	
61	Maintenance and Rehabilitation of Airfield	19-06-2021	
	pavements		
62	Evaluation & Strengthening of Airfield pavements	21-06-2021	
63	Airport Drainage	22-6-2021	
64	Design of surface and subsurface drainage.	22-6-2021	
	Planning, Layout, Construction and Maintenance Of	Docks and Har	bours
	, construct and maintain Docks and Harbours s and Harbour Engineering by Bindra S.P Dhanpat	hi Rai & Sons	New Delhi
65	Classification of ports	23-06-2021	Lecture
66		23-06-2021	interspersed
67	Requirement of a good port classification of Harbours	24-06-2021	with
68	Docks - Dry & wet docks	25-06-2021	discussions
69	Transition sheds and workhouses	26-06-2021	discussions
		28-06-2021	
70	Layouts; Quays	29-06-2021	
71	construction of Quay walls Wharves	30-06-2021	
72			
73	Jetties	01-07-2021	

74	Tides - Tidal data and Analysis	02-07-2021
75	Break waters	03-07-2021
76	Dredging	03-07-2021
77	Maintenance of Ports and Harbours	05-07-2021
78	Navigational aids.	05-07-2021

Signature of the Faculty

Signature of the HOD

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SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R1632011

Course Title: DESIGN	N AND DRAWING OF STEEL STR	UCTURES
Section: Sec A	Date: 06-04-2021	Page No: 01 of 03
Revision No: 00	Prepared By :Dr V Karthik	Approved By: HOD

Tools: PPT, Blackboard

	TOPIC	DATE	MODE OF DELIVERY
JNIT -	-I CONNECTIONS		
CO1: fa	amiliarize Students with different types of C	Connections an	d relevant IS code
	teel Structures Design and Practice' by N.S		
Press.			•
TB:: 'D	esign of steel structures' by S.K. Duggal, T	ata Mcgraw H	ill, and New Delhi
1	Connections: Introduction - Riveted	06-04-2021	
	connections – definition,		
2	Rivet Strength and capacity	07-04-2021	
3	rivet strength and capacity,	08-04-2021	
4	Welded connections:	09-04-2021	
5	Welded connections: Introduction,	10-04-2021	Lectures
6	Advantages and disadvantages of welding-	12-04-2021	interspersed with
7	Strength of welds	15-04-2021	discussions
8	Butt and fillet welds:	16-04-2021	uiscussions
9	Butt and fillet welds: Permissible stresses	17-04-2021	
	- IS Code requirements.		
10	Design of fillet weld subjected to	19-04-2021	
	moment acting in the plane		
11	Design of fillet weld subjected to	20-04-2021	
	moment acting in the plane		
12	Design of fillet weld subjected to	22-04-2021	
	moment acting d at right angles to the		
	plane of the joints.		
13	Tutorial	23-04-2021	
JNIT -	II BEAMS		
	quip student with concepts of design of flex		
	teel Structures Design and Practice' by N.S		Oxford University
Press.			
	esign of steel structures' by S.K. Duggal, T		ill, and New Delhi
9	Allowable stresses,	24-04-2021	
10	Design requirements as per IS Code	26-04-2021	Lectures
11	Design of simple and compound beams	27-04-2021	interspersed
12	Curtailment of flange plates,	28-04-2021	with
13	Beam to beam connection,	29-04-2021	
14	Check for deflection, shear,	30-04-2021	discussions
15	Check for buckling, check for bearing,	01-05-2021	
16	Check for buckling, check for bearing,	03-05-2021	
17	Laterally unsupported beams.	04-05-2021	

UNIT -III TENSION MEMBERS AND COMPRESSION MEMBERS

CO3: understand Design Concepts of tension and compression members in trusses TB:: 'Steel Structures Design and Practice' by N.Subramanian, Oxford University Press.

TB:: 'Design of steel structures' by S.K. Duggal, Tata Mcgraw Hill, and New Delhi

17	Introduction		
18	General Design of members subjected to	05-05-2021	•
	direct tension.		Lectures
19	General Design of members subjected to	06-05-2021	interspersed
	direct bending		with
20	Effective length of columns- Slenderness	07-05-2021	discusions
	ratio		
21	Permissible stresses.	08-05-2021	
22	Design of compression members	10-05-2021	
23	Design of struts etc.	11-05-2021	
24	Roof Trusses: Different types of trusses	12-05-2021	
25	Design loads - Load combinations as per	13-05-2021	
	IS Code recommendations		
26	structural details	15-05-2021	
27	Design of simple roof trusses involving	17-05-2021	
	the design of purlins		
28	Design of members and joints – tubular	18-05-2021	
	trusses		
29	Design of tubular trusses	19-05-2021	

UNIT - IV DESIGN OF COLUMNS

CO4: Familiarize students with different types of Columns and their Design

TB:: 'Design of steel structures' by S.K. Duggal, Tata Mcgraw Hill, and New Delhi TB:: 'Steel Structures Design and Practice' by N.Subramanian, Oxford University

2.0	D : 0D !!	20 07 2004	
30	Design of Built up compression members	20-05-2021	Lectures
31	Design of lacings	21-05-2021	interspersed
32	Design of lacings	22-05-2021	with
33	Design of battens	24-05-2021	discussions
34	Design of battens	25-05-2021	discussions
35	Design Principles of Eccentrically loaded columns,	26-05-2021	
36	Design Principles of Eccentrically loaded columns,	27-05-2021	
37	Design of Splicing of columns	28-05-2021	
38	Design of Splicing of columns	26-05-2021	
39	Tutorial	27-05-2021	

UNIT - V DESIGN OF COLUMN FOUNDATIONS

CO5: Familiarize students with different types of column bases and their Design TB:: 'Design of steel structures' by S.K. Duggal, Tata Mcgraw Hill, and New Delhi TB:: 'Steel Structures Design and Practice' by N.Subramanian, Oxford University

Press.

Press.

40	Design of slab base	28-05-2021	Lectures
41	Design of slab base	29-05-2021	interspersed
42	Design of slab base	31-05-2021	mensperseu

43	Design of gusseted base.	01-06-2021	with
44	Design of gusseted base.	02-06-2021	discussions
45	Design of gusseted base.	03-06-2021	415445510115
46	Design of Column bases subjected moment.	04-06-2021	
47	Design of Column bases subjected moment.	05-06-2021	
48	Design of Column bases subjected moment.	07-06-2021	
49	Tutorial	08-06-2021	

UNIT - VI DESIGN PLATE GIRDER AND GANTRY GIRDER

CO6: Familiarize students with Plate girder and Gantry Girder and their Design TB:: 'Design of steel structures' by S.K. Duggal, Tata Mcgraw Hill, and New Delhi TB:: 'Steel Structures Design and Practice' by N.Subramanian, Oxford University

11000			
50	UNIT – VI: Design consideration – I S Code recommendations	09-06-2021	
51	Design of plate girder-Welded	10-06-2021	Lectures
52	Design of plate girder- Curtailment of flange plates,	11-06-2021	interspersed
53	Design of plate girder- Curtailment of flange plates,	12-06-2021	with discussions
54	Design of Plate Girder- stiffeners	14-06-2021	
55	Design of Plate Girder- stiffeners	15-06-2021	
56	Design of Plate Girder - splicing and connections.	23-06-2021	
57	Design of Gantry Girder: impact factors	24-06-2021	
58	longitudinal forces	28-06-2021	
59	Design of Gantry Girder: impact factors	29-06-2021	
60	Design of Gantry girders.	30-06-2021	
61	Solving university question papers	01-07-2021	
62	Solving university question papers	02-07-2021	
63	Solving university question papers	03-07-2021	
64	Tutorial	05-07-2021	

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Signature of the HoD 6/4/2/

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R1632011

	: Sec B	Date: 06-04-2021			No: 01 of 03
	n No : 00	Prepared By :E.Usha Sree			
	PT, Blackboard	Trepared by .E. esit	Bicc	прри	y cu by . Hob
1 00101 1	,				
	TOPIC		DATE		MODE OF DELIVERY
INIT	I CONNECTIONS		1		DELIVERT
		with different types of C	Connection	s and i	elevant IS codes
TB:: 'St	eel Structures Desi	gn and Practice' by N.S	ubramania	an, Ox	ford University
Press.					
ГВ:: 'D		ures' by S.K. Duggal, T			and New Delhi
1		oduction - Riveted	06-04-202	21	
	connections – def				
2	Rivet Strength and		07-04-202		
3	rivet strength and		08-04-20		
4	Welded connection		09-04-20		Lectures
5	Welded connection		10-04-20		interspersed
6	Advantages and d	isadvantages of	12-04-20	21	with
7	Strength of welds		15-04-20	21	discussions
8	Butt and fillet we		16-04-20		aiscussions
9		lds: Permissible stresses	17-04-20		
	- IS Code require		17 01 20		
10	Design of fillet w		19-04-20	21	
	moment acting in				
11	Design of fillet w		20-04-20	21	
	moment acting in				
12	Design of fillet w	2	22-04-20	21	
		at right angles to the			
12	plane of the joints	S	22.04.20	21	
13	Tutorial		23-04-20	21	
	II BEAMS	oncepts of design of flex	ural mem	here	
		gn and Practice' by N.S.			ford University
Press.		9		,	·
TB:: 'D	esign of steel struct	ures' by S.K. Duggal, T	ata Mcgra	w Hill	, and New Delhi
9	Allowable stresse	es,	24-04-20	21	
10		ents as per IS Code	26-04-20	21	Lectures
11		and compound beams	27-04-20	21	interspersed
12	Curtailment of fla		28-04-20	21	with
13	Beam to beam co		29-04-20		discussions
14	Check for deflect		30-04-20		
15		ng, check for bearing,	01-05-20		
16		ng, check for bearing,	03-05-20		
17	Laterally unsupp	orted heams	04-05-20	21	

	Laterally unsupported beams.	05-05-2021	
INIT -	III TENSION MEMBERS AND COMPRES	SSION MEMB	ERS
	nderstand Design Concepts of tension and co		
	eel Structures Design and Practice' by N.Su	ibramanian, O	xford University
ress.			
	esign of steel structures' by S.K. Duggal, Ta	ita Megraw Hil	I, and New Delhi
17	Introduction		
18	General Design of members subjected to direct tension.	05-05-2021	Lectures
19	General Design of members subjected to	06-05-2021	interspersed
19	direct bending	00-03-2021	with
20	Effective length of columns- Slenderness	07-05-2021	discusions
20	ratio	07 03 2021	uiscusions
21	Permissible stresses.	08-05-2021	
22	Design of compression members	10-05-2021	
23	Design of struts etc.	11-05-2021	
24	Roof Trusses: Different types of trusses	12-05-2021	
25	Design loads – Load combinations as per	13-05-2021	
	IS Code recommendations		
26	structural details	15-05-2021	
27	Design of simple roof trusses involving	17-05-2021	
	the design of purlins		
28	Design of members and joints – tubular	18-05-2021	
	trusses		
29	Design of tubular trusses	19-05-2021	
	IV DESIGN OF COLUMNS		
CO4: F	amiliarize students with different types of C		
СО4: F: ГВ:: 'D	amiliarize students with different types of C esign of steel structures' by S.K. Duggal, Ta	ata Megraw Hi	ll, and New Delhi
CO4: F: FB:: 'D FB:: 'St	amiliarize students with different types of C	ata Megraw Hi	ll, and New Delhi
CO4: F: FB:: 'D FB:: 'Si Press.	amiliarize students with different types of C esign of steel structures' by S.K. Duggal, Ta teel Structures Design and Practice' by N.St	nta Mcgraw Hi ubramanian, O	ll, and New Delhi xford University
CO4: F: FB:: 'D FB:: 'Si Press.	amiliarize students with different types of Coesign of steel structures' by S.K. Duggal, Tateel Structures Design and Practice' by N.Sue Design of Built up compression members	nta Mcgraw Hil ubramanian, O 20-05-2021	l, and New Delhi xford University Lectures
CO4: F: FB:: 'D FB:: 'Si Press. 30 31	amiliarize students with different types of Coesign of steel structures' by S.K. Duggal, Tateel Structures Design and Practice' by N.Sue Design of Built up compression members Design of lacings	ata Mcgraw Hil ubramanian, O 20-05-2021 21-05-2021	I, and New Delhi xford University Lectures interspersed
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32	amiliarize students with different types of Coesign of steel structures' by S.K. Duggal, Takeel Structures Design and Practice' by N.Suel Design of Built up compression members Design of lacings Design of lacings	20-05-2021 21-05-2021 22-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'St Press. 30 31 32 33	amiliarize students with different types of Clesign of steel structures' by S.K. Duggal, Tateel Structures Design and Practice' by N.Su Design of Built up compression members Design of lacings Design of lacings Design of battens	20-05-2021 21-05-2021 22-05-2021 24-05-2021	I, and New Delhi xford University Lectures interspersed
CO4: F: FB:: 'D FB:: 'St Press. 30 31 32 33 34	amiliarize students with different types of Cesign of steel structures' by S.K. Duggal, Takeel Structures Design and Practice' by N.Su Design of Built up compression members Design of lacings Design of lacings Design of battens Design of battens	20-05-2021 21-05-2021 22-05-2021 24-05-2021 25-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'St Press. 30 31 32 33	Design of lacings Design of battens Design Principles of Eccentrically loaded	20-05-2021 21-05-2021 22-05-2021 24-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'St Press. 30 31 32 33 34 35	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns,	20-05-2021 21-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'St Press. 30 31 32 33 34	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design Principles of Eccentrically loaded	20-05-2021 21-05-2021 22-05-2021 24-05-2021 25-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design Principles of Eccentrically loaded columns,	20-05-2021 21-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 27-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35 36	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design of Splicing of columns	20-05-2021 21-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 27-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design Principles of Eccentrically loaded columns,	20-05-2021 21-05-2021 22-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 28-05-2021 28-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35 36 37 38 39	Design of battens Design Principles of Eccentrically loaded columns, Design of Splicing of columns Design of Splicing of columns Design of Splicing of columns	20-05-2021 21-05-2021 22-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 28-05-2021 26-05-2021 26-05-2021 26-05-2021	Lectures interspersed with
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35 36 37 38 39 UNIT -	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design of Splicing of columns Design of Splicing of columns Tutorial V DESIGN OF COLUMN FOUNDATION	20-05-2021 21-05-2021 22-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 28-05-2021 26-05-2021 26-05-2021 27-05-2021	Lectures interspersed with discussions
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35 36 37 38 39 UNIT - CO5: F:	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design of Splicing of columns Design of Splicing of columns Tutorial V DESIGN OF COLUMN FOUNDATION amiliarize students with different types of columns of the students of the sum	20-05-2021 21-05-2021 22-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 27-05-2021 26-05-2021 27-05-2021 27-05-2021	Lectures interspersed with discussions
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35 36 37 38 39 UNIT - CO5: F: FB:: 'D	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design of Splicing of columns Design of Splicing of columns Tutorial V DESIGN OF COLUMN FOUNDATION amiliarize students with different types of cesign of steel structures' by S.K. Duggal, Ta	20-05-2021 21-05-2021 22-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 26-05-2021 26-05-2021 26-05-2021 27-05-2021 27-05-2021 27-05-2021	Lectures interspersed with discussions d their Design ll, and New Delhi
CO4: F: FB:: 'D FB:: 'Si Press. 30 31 32 33 34 35 36 37 38 39 UNIT - CO5: F: FB:: 'D	Design of Built up compression members Design of lacings Design of battens Design of battens Design of battens Design Principles of Eccentrically loaded columns, Design of Splicing of columns Design of Splicing of columns Tutorial V DESIGN OF COLUMN FOUNDATION amiliarize students with different types of columns of the students of the sum	20-05-2021 21-05-2021 22-05-2021 22-05-2021 24-05-2021 25-05-2021 26-05-2021 26-05-2021 26-05-2021 26-05-2021 27-05-2021 27-05-2021 27-05-2021	Lectures interspersed with discussions d their Design ll, and New Delhi

41	Design of slab base	29-05-2021	interspersed
42	Design of slab base	31-05-2021	with
43	Design of gusseted base.	01-06-2021	discussions
44	Design of gusseted base.	02-06-2021	
45	Design of gusseted base.	03-06-2021	
46	Design of Column bases subjected moment.	04-06-2021	
47	Design of Column bases subjected moment.	05-06-2021	
48	Design of Column bases subjected moment.	07-06-2021	
49	Tutorial	08-06-2021	

UNIT - VI DESIGN PLATE GIRDER AND GANTRY GIRDER

CO6: Familiarize students with Plate girder and Gantry Girder and their Design TB:: 'Design of steel structures' by S.K. Duggal, Tata Mcgraw Hill, and New Delhi TB:: 'Steel Structures Design and Practice' by N.Subramanian, Oxford University Press.

1 1 033.			
50	UNIT – VI: Design consideration – I S Code recommendations	09-06-2021	
51	Design of plate girder-Welded	10-06-2021	Lectures
52	Design of plate girder- Curtailment of flange plates,	11-06-2021	interspersed
53	Design of plate girder- Curtailment of flange plates,	12-06-2021	with discussions
54	Design of Plate Girder- stiffeners	14-06-2021	
55	Design of Plate Girder- stiffeners	15-06-2021	
56	Design of Plate Girder - splicing and connections.	23-06-2021	
57	Design of Gantry Girder: impact factors	24-06-2021	
58	longitudinal forces	28-06-2021	
59	Design of Gantry Girder: impact factors	29-06-2021	
60	Design of Gantry girders.	30-06-2021	
61	Solving university question papers	01-07-2021	
62	Solving university question papers	02-07-2021	
63	Solving university question papers	03-07-2021	
64	Tutorial	05-07-2021	

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SRK Institute of Technology

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ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: CIVIL R1632012

Course Title: GE	O-TECHNICAL ENGINEERING-I(CIV	IL)
	Date: 06-04-2021	Page No: 01 of 03
Revision No : 00	Prepared By : A.THANU SREE	Approved By: HOD

Date

Mode of Delivery

Tools: Black board, PPTs

TOPIC

No. of

NIT -I	Introduction		
O1. The st	tudent must know the definition of the various param	eters related to	soil
lechanics	and establish their inter-relationships.		
B. Soil me	chanics and foundation engineering, Dr. K. R. ARORA		
1.	Soil structure and formation	06-04-2021	
2.	Weathering action of rocks	07-04-2021	
3.	Mechanical and chemical weathering	08-04-2021	
4.	Single honey comb structure	09-04-2021	Lecture interspersed with discussions
5.	Clay mineral, adsorbed water	10-04-2021	
6.	2 and 3 phase systems and definitions	12-04-2021	
7.	Relation between e, S,G	15-04-2021	
8.	Derivations	16-04-2021	
9.	Relation between dry mass and percentage air voids	17-04-2021	
10.	Relative density	19-04-2021	
11.	Derivations	20-04-2021	
12.	Factors effecting compaction	22-04-2021	
13.	Compaction effect on soil	23-04-2021	
13.			
14.	Problems	24-04-2021	
14. 15. UNIT –II CO 2: To en	Index properties of soils table the student to determine the index properties of the student to determine the student to	26-04-2021	
14. 15. UNIT –II CO 2: To en	Tutorial Index properties of soils	26-04-2021 soil and classify it.	
14. 15. UNIT –II CO 2: To en	Index properties of soils sable the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil	26-04-2021 soil and classify it.	
14. 15. UNIT —II CO 2: To en TB: soil med	Index properties of soils table the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis	26-04-2021 soil and classify it. 27-04-2021 28-04-2021	
14. 15. UNIT –II CO 2: To en TB: soil med	Index properties of soils table the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021	
14. 15. UNIT –II CO 2: To en B: soil med 16. 17.	Index properties of soils table the student to determine the index properties of the stable and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021 30-04-2021	
14. 15. JNIT –II CO 2: To en B: soil med 16. 17. 18. 19. 20.	Index properties of soils lable the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021	
14. 15. UNIT —II CO 2: To en B: soil med 16. 17. 18. 19. 20. 21.	Index properties of soils table the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021	
14. 15. UNIT -II CO 2: To en TB: soil med 16. 17. 18. 19. 20. 21. 22.	Index properties of soils lable the student to determine the index properties of the stances and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	Lecture interspersed
14. 15. UNIT —II CO 2: To en B: soil med 16. 17. 18. 19. 20. 21.	Index properties of soils lable the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	
14. 15. UNIT –II CO 2: To en TB: soil med 16. 17. 18. 19. 20. 21. 22.	Index properties of soils table the student to determine the index properties of the stable the student to determine the index properties of the schanics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil Unified soil classification	26-04-2021 soil and classify it. 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 04-05-2021 05-05-2021 06-05-2021	Lecture interspersed
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31.	Introduction to permeability	15-05-2021	
32.	Soil water, one dimensional flow	17-05-2021	I active interpress
33.	Darcy's law, factors	18-05-2021	Lecture interspersed with discussions
34.	Determination of k permeability	19-05-2021	With discussions
35.	Layered systems of permeability	20-05-2021	
36.	Total, neutral and effective stresses	21-05-2021	
37.	Quick sand condition	22-05-2021	
38.	Laplace's equations	24-05-2021	
39.	Seepage through soils	25-05-2021	
40.	Flow net and uses	26-05-2021	
41.	Problems	27-05-2021	
42.	Tutorial	28-05-2021	

UNIT -IV Stress distribution of soils

CO4: The student should be able to know the importance Of soil

TB: soil mechanics and foundation engineering, Dr. K.R.ARORA

43.	Stress induced by applied loads	29-05-2021	
44.	Boussinesqu's equation	31-05-2021	7
45.	Westergaard's equation	01-06-2021	Lecture interspersed with discussions
46.	Newmark's influence chart	02-06-2021	With the tast of tast
47.	Problems on rectangular area	03-06-2021	
48.	Problems on circular area	04-06-2021	
49.	Problems on square area	05-06-2021	
50.	Tutorial	07-06-2021	

UNIT-V Consolidation of soils

CO 5: To impart the principles of compaction and consolidation of soils and determine the magnitude and the rate of consolidation settlement.

TB: soil mechanics and foundation engineering, Dr. K.R.ARORA

51.	Consolidation and compressibility	08-06-2021	
52.	e-p and e-log p curves	09-06-2021	
53.	Stress history, concept	10-06-2021	
54.	Spring analogy	11-06-2021	
55.	Terzaghi's theory	12-06-2021	
56.	One-dimensional consolidation equation derivation	14-06-2021	Lecture interspersed
57.	Time rate of consolidation	15-06-2021	with discussions
58.	Degree of consolidation	16-06-2021	
59.	Determination of coefficient of consolidation	17-06-2021	
60.	Over and normally consolidated clay	18-06-2021	
61.	Problems on consolidation	19-06-2021	
62.	Problems on consolidation	21-06-2021	
63.	Tutorial	22-6-2021	

UNIT - VI Shear Strength of soils

CO 6: To enable the student to understand the concept of shear strength of soils, determine the shear

parameters TB: soil me	of sands and clays and the areas of their application. echanics and foundation engineering, Dr. K.R.ARORA		
64.	Introduction of shear strength	23-06-2021	
65.	Basic mechanism	24-06-2021	
66.	Mohr coloumb's failure, critical void ratio	25-06-2021	
67.	Stress- strain behavior on clay	26-06-2021	
68.	Determination of shear strength by vane shear test	28-06-2021	Lecture interspersed
69.	Determination of shear strength by direct shear test	29-06-2021	with discussions
70.	Determination of shear strength by unconfined shear Test	30-06-2021	
71.	Determination of shear strength by tri axial test	01-07-2021	
72.	Problems on direct test	02-07-2021	
73.	Drainage condition- one way and two way drainage	03-07-2021	
74.	Problems	05-07-2021	
75.	Tutorial	05-07-2021	

Signature of the HOD

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PRINCIPAL

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: CIVIL R1632012

Course Title: GE	O-TECHNICAL ENGINEERING-I(CIVII	L)
Section : Sec B	Date: 06-04-2021	Page No: 01 of 03
Revision No: 00	Prepared By : A.KRISHNAPRIYA	Approved By : HOD

Introduction Introduction Introduction Introduction Interception Introduction Introduction Introduction Interception Introduction Introduction Interception Introduction Interception Inte	Periods	TOPIC	Date	Mode of Delivery
Rechanics and establish their inter-relationships.		stroduction	11	
Bechanics and establish their inter-relationships.			arameters relat	ted to soil
B: Soil mechanics and foundation engineering, Dr. K. R. ARORA 1. Soil structure and formation 06-04-2021 2. Weathering action of rocks 07-04-2021 3. Mechanical and chemical weathering 08-04-2021 4. Single honey comb structure 09-04-2021 5. Clay mineral, adsorbed water 10-04-2021 6. 2 and 3 phase systems and definitions 12-04-2021 7. Relation between e, S,G 15-04-2021 8. Derivations 16-04-2021 9. Relation between dry mass and percentage air voids 10. Relative density 19-04-2021 11. Derivations 20-04-2021 12. Factors effecting compaction 22-04-2021 13. Compaction effect on soil 23-04-2021 14. Problems 24-04-2021 15. Tutorial 26-04-2021 15. Tutorial 26-04-2021 17. Index properties of soils 26-04-2021 18. Hydrometer analysis and sieve analysis 28-04-2021 17. Grain size analysis and sieve analysis 29-04-2021 19. Consistency limits 30-04-2021 20. Determination of plastic and shrinkage limit 01-05-2021 22. Definition of plastic and shrinkage limit 03-05-2021 24. Unified soil classification 06-05-2021 25. Unified soil classification 07-05-2021 26. IS classification 10-05-2021 27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021 11-05-2021 11-05-2021 11-05-2021 11-05-2021 11-05-2021 11-05-2021 28. Problems on LL, PL 11-05-2021 1			arametero rela	ou to con
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20. Determination of liquid limit 01-05-2021 21. Determination of plastic and shrinkage limit 03-05-2021 22. Definition of plasticity index, etc 04-05-2021 23. Classification of soil 05-05-2021 24. Unified soil classification 06-05-2021 25. Unified soil classification 07-05-2021 26. IS classification 08-05-2021 27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021	15. UNIT –II CO 2: To enable B: soil mechan	Tutorial Index properties of soils the student to determine the index properties of soils and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis	26-04-2021 the soil and class A 27-04-2021 28-04-2021	sify it.
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23. Classification of soil 05-05-2021 24. Unified soil classification 06-05-2021 25. Unified soil classification 07-05-2021 26. IS classification 08-05-2021 27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021	esify it.
23. Classification of soil 03-03-2021 24. Unified soil classification 06-05-2021 25. Unified soil classification 07-05-2021 26. IS classification 08-05-2021 27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20.	Tutorial Index properties of soils the student to determine the index properties of soils and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021	
25. Unified soil classification 07-05-2021 26. IS classification 08-05-2021 27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021	Lecture interspersed
26. IS classification 08-05-2021 27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021	
27. IS classification 10-05-2021 28. Problems on LL, PL 11-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22. 23.	Index properties of soils the student to determine the index properties of soils and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021 05-05-2021	Lecture interspersed
28. Problems on LL, PL 11-05-2021	15. JNIT –II O 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22. 23. 24.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil Unified soil classification	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 05-05-2021 06-05-2021	Lecture interspersed
	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22. 23. 24. 25.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.ARORA Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil Unified soil classification Unified soil classification	26-04-2021 the soil and class 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 03-05-2021 04-05-2021 06-05-2021 07-05-2021 08-05-2021	Lecture interspersed
29. Problems on sieve analysis 12-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil Unified soil classification Unified soil classification IS classification IS classification	26-04-2021 the soil and class A 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 04-05-2021 06-05-2021 07-05-2021 08-05-2021 10-05-2021	Lecture interspersed
	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil Unified soil classification Unified soil classification IS classification IS classification	26-04-2021 the soil and class A 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 04-05-2021 06-05-2021 07-05-2021 08-05-2021 10-05-2021 11-05-2021	Lecture interspersed
30. Tutorial 13-05-2021	15. JNIT –II CO 2: To enable B: soil mechan 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28.	Index properties of soils the student to determine the index properties of sics and foundation engineering, Dr. K.R.AROR Index property of soil Grain size analysis and sieve analysis Hydrometer analysis Consistency limits Determination of liquid limit Determination of plastic and shrinkage limit Definition of plasticity index, etc Classification of soil Unified soil classification Unified soil classification IS classification IS classification	26-04-2021 the soil and class A 27-04-2021 28-04-2021 29-04-2021 30-04-2021 01-05-2021 04-05-2021 06-05-2021 07-05-2021 08-05-2021 10-05-2021 11-05-2021 11-05-2021 12-05-2021	Lecture interspersed

31.	Introduction to permeability	15-05-2021	
32.	Soil water, one dimensional flow	17-05-2021	T antique interpresent
33.	Darcy's law, factors	18-05-2021	Lecture interspersed with discussions
34.	Determination of k permeability	19-05-2021	With discussions
35.	Layered systems of permeability	20-05-2021	
36.	Total, neutral and effective stresses	21-05-2021	
37.	Quick sand condition	22-05-2021	
38.	Laplace's equations	24-05-2021	
39.	Seepage through soils	25-05-2021	
40.	Flow net and uses	26-05-2021	
41.	Problems	27-05-2021	
42.	Tutorial	28-05-2021	

UNIT -IV Stress distribution of soils

CO4: The student should be able to know the importance Of soil

TB: soil mechanics and foundation engineering, Dr. K.R.ARORA

43.	Stress induced by applied loads	29-05-2021	
44.	Boussinesqu's equation	31-05-2021	7
45.	Westergaard's equation	01-06-2021	Lecture interspersed with discussions
46.	Newmark's influence chart	02-06-2021	With discussions
47.	Problems on rectangular area	03-06-2021	
48.	Problems on circular area	04-06-2021	
49.	Problems on square area	05-06-2021	
50.	Tutorial	07-06-2021	

UNIT -V Consolidation of soils

CO 5: To impart the principles of compaction and consolidation of soils and determine the magnitude and the rate of consolidation settlement.

TB: soil mechanics and foundation engineering, Dr. K.R.ARORA

51.	Consolidation and compressibility	08-06-2021	
52.	e-p and e-log p curves	09-06-2021	
53.	Stress history, concept	10-06-2021	
54.	Spring analogy	11-06-2021	
55.	Terzaghi's theory	12-06-2021	
56.	One-dimensional consolidation equation derivation	14-06-2021	Lecture interspersed
57.	Time rate of consolidation	15-06-2021	with discussions
58.	Degree of consolidation	16-06-2021	
59.	Determination of coefficient of consolidation	17-06-2021	
60.	Over and normally consolidated clay	18-06-2021	
61.	Problems on consolidation	19-06-2021	
62.	Problems on consolidation	21-06-2021	
63.	Tutorial	22-6-2021	

UNIT - VI Shear Strength of soils

CO 6: To enable the student to understand the concept of shear strength of soils, determine the shear

oarameters TB: soil me	of sands and clays and the areas of their application. echanics and foundation engineering, Dr. K.R.ARORA		
64.	Introduction of shear strength	23-06-2021	
65.	Basic mechanism	24-06-2021	
66.	Mohr coloumb's failure, critical void ratio	25-06-2021	
67.	Stress- strain behavior on clay	26-06-2021	
68.	Determination of shear strength by vane shear test	28-06-2021	Lecture interspersed
69.	Determination of shear strength by direct shear test	29-06-2021	with discussions
70.	Determination of shear strength by unconfined shear Test	30-06-2021	
71.	Determination of shear strength by tri axial test	01-07-2021	
72.	Problems on direct test	02-07-2021	
73.	Drainage condition- one way and two way drainage	03-07-2021	
74.	Problems	05-07-2021	
75.	Tutorial	05-07-2021	

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TENTATIVE LESSON PLAN: CIVIL R1632013

ENVIRONMENTAL ENGINEERING-I

Course	Title: ENVIRONMENTAL ENGINEERIN	G-I (CIVIL)
Section: Sec A	Date: 06-04-2021	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: WATER QUANTITY ESTIMATION & POPULA	ATION FORECASTI	NG
	CO1: PLAN AND ESTIMATE WATER QUANTITY REQUIREM	MENT FOR DOMEST	TIC USAGE
	TB: WATER SUPPLY & SANITATION ENGINEERING BY	J.S.BIRDIE & B.S.I	BIRDIE
1	Introduction to Environmental Engg	06-04-2021	
2	Introduction, Importance of WSS - public health & safety	07-04-2021	
3	Necessity of WSS and features	08-04-2021	
4	Water borne diseases	09-04-2021	
5	Flow chart of WSS and objectives	10-04-2021	
6	Role of environmental engineer and agency activities	12-04-2021	Lecture interspersed
7	Estimation of WD for city, Water demand- design period	15-04-2021	with
8	Types of water demand	16-04-2021	discussions
9	Factors affecting the WD, Variation of WD	20-04-2021	
10	Population forecasting methods	22-04-2021	
11	PFC, Master plan & Numerical Problems	23-04-2021	
12	Numerical Problems- Tutorial-I	24-04-2021	

UNIT 2: SOURCES & CONVEYANCE OF WATER CO2: IDENTIFY THE WATER SOURCE AND SELECT PROPER INTAKE STRUCTURE TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

13	Sources of water, Collection- criteria, suitability	26-04-2021	
14	Comparison of sources- surface and Ground water sources	27-04-2021	
15	Capacity of storage reservoir, Pollution	28-04-2021	
16	Mass curve analysis, Intakes- selection	29-04-2021	
17	Intakes- types	30-04-2021	
18	Water Conveyance through wells	01-05-2021	Lecture interspersed
19	Water Conveyance through pipes	03-05-2021	with discussions
20	pipes – types- materials	04-05-2021	With diseassions
21	pipes corrosion and control- Laying of pipelines	05-05-2021	
22	Pipes joints - types	06-05-2021	
23	Design considerations- Tutorial	07-05-2021	

24 25 26 27	TB: WATER SUPPLY & SANITATION ENGINEERING BY Characteristics of water- sources and pollution Analysis of water- common impurities		.BIRDIE
25 26 27	Characteristics of water- sources and pollution		
25 26 27			
26 27	Analysis of water common imparties	10-05-2021	
27	Comparisons of sources and tests on water-physical	11-05-2021	
	Tests on water- physical	12-05-2021	
28	Tests on water- chemical	13-05-2021	Lecture interspersed
29	Tests on water- chemical	15-05-2021	with discussions
30	Tests on water- bacteriological	17-05-2021	
31	Tests on water-bacteriological	18-05-2021	
32	Standards of drinking water- IS & WHO	19-05-2021	
33	Tutorial	20-05-2021	
33	UNIT 4: PRIMARY WATER TREATM		
	CO4: SELECTION OF SUITABLE TREATMENT FLOW FOR F		EATMENTS
	TB: WATER SUPPLY & SANITATION ENGINEERING BY		
34	Objectives – flow chart & function of a WTP	21-05-2021	
35	Theory, purpose & design of a Sedimentation tank	22-05-2021	
36	Types of Sedimentation tank	24-05-2021	
37	Theory, purpose & design of Coagulation tank-flocculation	25-05-2021	
38	Feeding & mixing devices,	26-05-2021	
39	Types of coagulants- jar test	28-05-2021	
40	Numerical Problems	29-05-2021	Lecture interspersed
41	Theory, types of Filtration tank	31-05-2021	with discussions
42	Slow sand filters, Rapid sand filters	01-06-2021	
43	Pressure filters, Comparison btw filters	02-06-2021	
44	Design problems	03-06-2021	
45	Merits & Demerits- Tutorial UNIT 5: DISINFECTION & OTHER TREATME	04-06-2021	

46	Disinfection of water	05-06-2021	
47	Need, methods & Chlorination	07-06-2021	
48	Action & application of chlorine	08-06-2021	
49	Forms of Chlorination	09-06-2021	
50	Break Point Chlorination & Tests for residual chlorine	10-06-2021	
51	Water softening- types of hardness	11-06-2021	Lecture interspersed
52	Need of Water Softening & removal of TH	12-06-2021	with discussions
53	removal of TH, Iron- manganese removal	16-06-2021	with discussions
54	removal of colour, odour and taste	17-06-2021	
55	(Aeration, Adsorption etc) miscellaneous methods	18-06-2021	
56	Fluorides & Salts removal methods	19-06-2021	
57	Demineralization, Electra dialysis, Ultrafiltration	21-06-2021	
58	Tutorial	22-06-2021	

UNIT 6: WATER DISTRIBUTION SYSTEM

CO6: SELECT THE APPROPRIATE APPURTENANCES, PLAN AND DESIGN THE WATER DISTRIBUTION NETWORKS

TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

59	Water Distribution System- Introduction-Need	26-06-2021	
60	Design Considerations and requirements of distribution	28-06-2021	
61	WSS- methods and Layouts	29-06-2021	
62	Systems of supply, types of reservoirs	30-06-2021	
63	Water Wastage- Leakage tests and control	01-07-2021	
64	Types and pressure in WDS and its maintenance	02-07-2021	Lecture interspersed
65	Pipes-types	03-07-2021	with discussions
66	Pipes joints, laying (Revision)	05-07-2021	
67	Valves and Pipe fittings types	06-07-2021	
68	Design & analysis of Pipe Networks	07-07-2021	
69	Equivalent method- parallel & series	08-07-2021	
70	Hardy Cross method-Numerical problems- Tutorial	09-07-2021	

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TENTATIVE LESSON PLAN: CIVIL R1632013

ENVIRONMENTAL ENGINEERING-I

Course	Title: ENVIRONMENTAL ENGINEERIN	G-I (CIVIL)
Section: Sec B	Date: 06-04-2021	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: WATER QUANTITY ESTIMATION & POPULA	ATION FORECASTI	NG
	CO1: PLAN AND ESTIMATE WATER QUANTITY REQUIREM	MENT FOR DOMEST	TIC USAGE
	TB: WATER SUPPLY & SANITATION ENGINEERING BY	J.S.BIRDIE & B.S.I	BIRDIE
1	Introduction to Environmental Engg	06-04-2021	
2	Introduction, Importance of WSS - public health & safety	07-04-2021	
3	Necessity of WSS and features	08-04-2021	
4	Water borne diseases	09-04-2021	
5	Flow chart of WSS and objectives	10-04-2021	
6	Role of environmental engineer and agency activities	12-04-2021	Lecture interspersed
7	Estimation of WD for city, Water demand- design period	15-04-2021	with
8	Types of water demand	16-04-2021	discussions
9	Factors affecting the WD, Variation of WD	20-04-2021	
10	Population forecasting methods	22-04-2021	
11	PFC, Master plan & Numerical Problems	23-04-2021	
12	Numerical Problems- Tutorial-I	24-04-2021	

UNIT 2: SOURCES & CONVEYANCE OF WATER CO2: IDENTIFY THE WATER SOURCE AND SELECT PROPER INTAKE STRUCTURE TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

13	Sources of water, Collection- criteria, suitability	26-04-2021	
14	Comparison of sources- surface and Ground water sources	27-04-2021	
15	Capacity of storage reservoir, Pollution	28-04-2021	
16	Mass curve analysis, Intakes- selection	29-04-2021	
17	Intakes- types	30-04-2021	
18	Water Conveyance through wells	01-05-2021	Lecture interspersed
19	Water Conveyance through pipes	03-05-2021	with discussions
20	pipes – types- materials	04-05-2021	With discussions
21	pipes corrosion and control- Laying of pipelines	05-05-2021	
22	Pipes joints - types	06-05-2021	
23	Design considerations- Tutorial	07-05-2021	

	UNIT 3: WATER QUALITY ASSESM	FNT	
	CO3: CHARACTERISATION OF WA		
	TB: WATER SUPPLY & SANITATION ENGINEERING BY		BIRDIE
24	Characteristics of water- sources and pollution	08-05-2021	
25	Analysis of water- common impurities	10-05-2021	
26	Comparisons of sources and tests on water- physical	11-05-2021	
27	Tests on water- physical	12-05-2021	
28	Tests on water- chemical	13-05-2021	Lecture interspersed
29	Tests on water- chemical	15-05-2021	with discussions
30	Tests on water- bacteriological	17-05-2021	
31	Tests on water- bacteriological	18-05-2021	
32	Standards of drinking water- IS & WHO	19-05-2021	
33	Tutorial	20-05-2021	
- 55	UNIT 4: PRIMARY WATER TREATM		
	CO4: SELECTION OF SUITABLE TREATMENT FLOW FOR F TB: WATER SUPPLY & SANITATION ENGINEERING BY	RAW WATER TREA	
34	Objectives – flow chart & function of a WTP	21-05-2021	
35	Theory, purpose & design of a Sedimentation tank	22-05-2021	
36	Types of Sedimentation tank	24-05-2021	
37	Theory, purpose & design of Coagulation tank- flocculation	25-05-2021	
38	Feeding & mixing devices,	26-05-2021	
39	Types of coagulants- jar test	28-05-2021	
40	Numerical Problems	29-05-2021	Lecture interspersed
41	Theory, types of Filtration tank	31-05-2021	with discussions
42	Slow sand filters, Rapid sand filters	01-06-2021	
43	Pressure filters, Comparison btw filters	02-06-2021	
44	Design problems	03-06-2021	
45	Merits & Demerits- Tutorial	04-06-2021	
	UNIT 5: DISINFECTION & OTHER TREATMENT		
	CO5: SELECTION OF SUITABLE TREATMENT FLOW FOR I		
16	TB: WATER SUPPLY & SANITATION ENGINEERING BY		BIRDIE
46	Disinfection of water	05-06-2021	
47	Need, methods & Chlorination	07-06-2021	
48	Action & application of chlorine Forms of Chlorination	08-06-2021	
50	Break Point Chlorination & Tests for residual chlorine	09-06-2021 10-06-2021	-
51	Water softening- types of hardness	11-06-2021	
52	Need of Water Softening & removal of TH	12-06-2021	Lecture interspersed
53	removal of TH, Iron- manganese removal	16-06-2021	with discussions
54	removal of colour, odour and taste	17-06-2021	
	Tomo var of colour, odour and table	17 00 2021	

18-06-2021

19-06-2021

21-06-2021

22-06-2021

(Aeration, Adsorption etc) miscellaneous methods

Fluorides & Salts removal methods

Demineralization, Electra dialysis, Ultrafiltration

Tutorial

55

56

57

58

UNIT 6: WATER DISTRIBUTION SYSTEM

CO6: SELECT THE APPROPRIATE APPURTENANCES, PLAN AND DESIGN THE WATER DISTRIBUTION NETWORKS

TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE

59	Water Distribution System- Introduction-Need	26-06-2021	
60	Design Considerations and requirements of distribution	28-06-2021	
61	WSS- methods and Layouts	29-06-2021	
62	Systems of supply, types of reservoirs	30-06-2021	
63	Water Wastage- Leakage tests and control	01-07-2021	
64	Types and pressure in WDS and its maintenance	02-07-2021	Lecture interspersed
65	Pipes-types	03-07-2021	with discussions
66	Pipes joints, laying (Revision)	05-07-2021	
67	Valves and Pipe fittings types	06-07-2021	
68	Design & analysis of Pipe Networks	07-07-2021	
69	Equivalent method- parallel & series	08-07-2021	
70	Hardy Cross method-Numerical problems- Tutorial	09-07-2021	

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TENTATIVE LESSON PLAN: CIVIL R1632014

Cou	irse Title: WATER RESOURCES ENGINEERIN	NG-I (CIVIL)
Section: Sec A	Date: 06-04-2021	Page No: 01 of 03
Revision No: 00	Prepared By: K CHANDRA PADMAKAR	Approved By: HOD

Tools: Black board, power point presentations

No. of Periods	TOPIC	Actual Date	Mode of Delivery
ГВ: ENGINEE	ODUCTION AND PRECIPITATION: RING HYDROLOGY BY Dr. P. JAYARAMI REDDY lop IDF and DAD curves for designing hydraulic structures.		
1	Unit – I: Introduction: engineering hydrology	06-04-2021	
2	Applications of hydrology	07-04-2021	
3	Hydrologic cycle	08-04-2021	
4	Hydrological data	09-04-2021	
5	Meteorological data	10-04-2021	
6	Precipitation: Introduction, forms of precipitation	12-04-2021	
7	Types of precipitation	15-04-2021	
8	Measurement of precipitation	16-04-2021	Lecture interspersed with
9	Rain gauge network	17-04-2021	discussions
10	Presentation of rainfall data	19-04-2021	
11	Computation of average rainfall	20-04-2021	
12	Estimation of missing rainfall data	22-04-2021	
13	Continuity and consistency of rainfall data	23-04-2021	
14	Depth - area – duration curves, probable maximum precipitation	24-04-2021	
15	Frequency of rainfall, intensity – duration – frequency curves	26-04-2021	

EVAPORATION, EVAPOTRANSPIRATION, INFILTRATION: TB: HYDROLOGY BY RAGHUNATH. H. M.

CO2: To make the student to be able to quantify hydrologic components and apply key concepts to several practical areas of engineering hydrology and related design aspects.

16	Unit – II: Abstraction from precipitation: Initial abstractions	27-04-2021	
17	Evaporation: Factors affecting evaporation	28-04-2021	
18	Measurement of evaporation	29-04-2021	
19	Reduction	30-04-2021	
20	Evapotranspiration: Factors affecting	01-05-2021	Lecture interspersed with
21	Measurement, control	03-05-2021	discussions
22	Infiltration: Factors affecting	04-05-2021	
23	Measurement and infiltration indices	05-05-2021	
24	Infiltration capacity curves	06-05-2021	

o. The st	udent should be able to develop unit hydrographs and synth		
25	Unit – III: Runoff: Catchment characteristics	07-05-2021	
26	Factors affecting runoff	08-05-2021	
27	Computation of runoff	10-05-2021	
28	Stream gauging, rating curve	11-05-2021	
29	Flow mass curve and flow duration curve	12-05-2021	
30	Hydrograph analysis: Components of hydrograph	13-05-2021	
31	Separation of base flow	15-05-2021	
32	Effective rainfall hyetograph and direct runoff hydrograph	17-05-2021	Lecture interspersed with discussions
33	Unit hydrograph, assumptions	07-05-2021	
34	Derivation of unit hydrograph	18-05-2021	
35	Unit hydrographs of different durations	19-05-2021	
36	Principle of superposition and S – hydrograph methods	20-05-2021	
37	Limitations and applications of unit hydrograph	21-05-2021	
38	Synthetic unit hydrograph	22-05-2021	
B: ENGINI	OODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY	at flood routing.	
B: ENGINI	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou		
B: ENGINE O4: The st	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects	24-05-2021 25-05-2021	
B: ENGINI O4: The st	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou	24-05-2021	
B: ENGINE O4: The st 39 40	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution	24-05-2021 25-05-2021	
B: ENGINE (O4: The st 39 40 41	OODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods	24-05-2021 25-05-2021 26-05-2021	Looking interpolated with
B: ENGINE (O4: The st 39 40 41 42	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood	24-05-2021 25-05-2021 26-05-2021 27-05-2021	
B: ENGINE (O4: The st 39 40 41 42 43	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021	Lecture interspersed with discussions
B: ENGINE (O4: The st 39 40 41 42 43 44	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood Flood control methods and management	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021	
B: ENGINE 39 40 41 42 43 44 45	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood Flood control methods and management Flood routing: Hydrologic routing	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021	
B: ENGINE 39 40 41 42 43 44 45 46	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood Flood control methods and management Flood routing: Hydrologic routing Channel and reservoir routing	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021	
B: ENGINE 39 40 41 42 43 44 45 46 47 48 INIT 5: GR	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood Flood control methods and management Flood routing: Hydrologic routing Channel and reservoir routing Muskingum method of routing Puls method of routing OUND WATER DUOGY BY RAGHUNATH H.M.	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021 02-06-2021 03-06-2021	
B: ENGINE 39 40 41 42 43 44 45 46 47 48 WIT 5: GR B: HYDRO	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood Flood control methods and management Flood routing: Hydrologic routing Channel and reservoir routing Muskingum method of routing Puls method of routing OUND WATER	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021 02-06-2021 03-06-2021	Lecture interspersed with discussions
B: ENGINE 39 40 41 42 43 44 45 46 47 48 UNIT 5: GR B: HYDRO CO 5: To m	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry out the standard project flood and probable maximum flood and probable maximum flood and reservoir routing and reservoir routing and management flood probable maximum flood and probable maximum flood and flood routing: Hydrologic routing and reservoir routing and management flood frouting flood	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 01-06-2021 02-06-2021 03-06-2021 dd from wells.	
B: ENGINE 39 40 41 42 43 44 45 46 47 48 WIT 5: GR B: HYDRO CO 5: To m	DODS AND FLOOD ROUTING: EERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood Flood control methods and management Flood routing: Hydrologic routing Channel and reservoir routing Muskingum method of routing Puls method of routing OUND WATER DLOGY BY RAGHUNATH H.M. ake the student to determine the aquifer parameters and yiel Unit – V: Ground water: Occurrence of ground water	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021 02-06-2021 03-06-2021 dd from wells.	discussions

53	Transmissivity and storage coefficient	09-06-2021	
54	Types of wells, Darcy's law	10-06-2021	
55	Dupit's equation – steady radial flow to wells in confined aquifers	11-06-2021	
56	Steady radial flow to wells in unconfined aquifers	12-06-2021	
57	Yield of an open well	14-06-2021	
58	Recuperation test	15-06-2021	

UNIT 6: ADVANCED TOPICS IN HYDROLOGY:

TB: ENGINEERING HYDROLOGY BY Dr. P. JAYARAMI REDDY

CO6: The student will be able to model hydrologic processes.

59	Unit – VI: Advanced topics in hydrology: Introduction	16-06-2021	
60	Rainfall - runoff modeling	17-06-2021	
61	Instantaneous unit hydrograph	18-06-2021	
62	Conceptual models	19-06-2021	
63	Clark and Nash models	21-06-2021	
64	General hydrological models	22-6-2021	Lecture interspersed with
65	Chow's model	23-06-2021	discussions
66	Kulandaiswamy's model	24-06-2021	
67	Revision	25-06-2021	
68	Revision	26-06-2021	
69	Revision	29-06-2021	

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Signature of the HOD 6 4 2 /

TENTATIVELESSON PLAN: CIVIL R1632014

Course Title: WATER RESOURCES ENGINEERING-I(CIVIL)				
Section: Sec B	Date:06-04-2021	Page No: 01 of 03		
Revision No: 00	Prepared By:K CHANDRA PADMAKAR	Approved By: HOD		

Tools: Black board, power point presentations

No. of Periods	TOPIC	Actual Date	Mode of Delivery
JNIT 1: INTR	ODUCTION AND PRECIPITATION:		
B: ENGINEE	RING HYDROLOGY BY Dr. P. JAYARAMI REDDY		
CO1:To devel	op IDF and DAD curves for designing hydraulic structures.		
1	Unit – I: Introduction: engineering hydrology	06-04-2021	
2	Applications of hydrology	07-04-2021	
3	Hydrologic cycle	08-04-2021	
4	Hydrological data	09-04-2021	
5	Meteorological data	10-04-2021	
6	Precipitation: Introduction, forms of	12-04-2021	
6	precipitation	12-04-2021	
7	Types of precipitation	15-04-2021	
8	Measurement of precipitation	16-04-2021	Lecture interspersed with
9	Rain gauge network	17-04-2021	discussions
10	Presentation of rainfall data	19-04-2021	
. 11	Computation of average rainfall	20-04-2021	
12	Estimation of missing rainfall data	22-04-2021	
13	Continuity and consistency of rainfall data	23-04-2021	
14	Depth - area – duration curves, probable	24-04-2021	
	maximum precipitation		
15	Frequency of rainfall, intensity – duration – frequency curves	26-04-2021	

EVAPORATION, EVAPOTRANSPIRATION, INFILTRATION: TB: HYDROLOGY BY RAGHUNATH. H. M.

CO2: To make the student to be able to quantify hydrologic components and apply key concepts to several practical areas of engineering hydrology and related design aspects.

16	Unit – II: Abstraction from precipitation: Initial abstractions	27-04-2021	
17	Evaporation: Factors affecting evaporation	28-04-2021	
18	Measurement of evaporation	29-04-2021	
19	Reduction	30-04-2021	
20	Evapotranspiration: Factors affecting	01-05-2021	Lecture interspersed with
21	Measurement, control	03-05-2021	discussions
22	Infiltration: Factors affecting	04-05-2021	
23	Measurement and infiltration indices	05-05-2021	
24	Infiltration capacity curves	06-05-2021	

	udent should be able to develop unit hydrographs and synth		
25	Unit – III: Runoff: Catchment characteristics	07-05-2021	
26	Factors affecting runoff	08-05-2021	
27	Computation of runoff	10-05-2021	
28	Stream gauging, rating curve	11-05-2021	
29	Flow mass curve and flow duration curve	12-05-2021	
30	Hydrograph analysis: Components of hydrograph	13-05-2021	
31	Separation of base flow	15-05-2021	
32	Effective rainfall hyetograph and direct runoff hydrograph	17-05-2021	Lecture interspersed with discussions
33	Unit hydrograph, assumptions	07-05-2021	
34	Derivation of unit hydrograph	18-05-2021	
35	Unit hydrographs of different durations	19-05-2021	
36	Principle of superposition and S – hydrograph methods	20-05-2021	
37	Limitations and applications of unit hydrograph	21-05-2021	
38			
NIT 4: FLC	Synthetic unit hydrograph ODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou	22-05-2021 at flood routing.	
NIT 4: FLC 3: ENGINE	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY		
NIT 4: FLC 3: ENGINE O 4: The st	DODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou	at flood routing.	
NIT 4: FLC B: ENGINE O 4: The st	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out Unit – IV: Floods: Causes and effects	at flood routing. 24-05-2021	
NIT 4: FLC 3: ENGINE O 4: The st 39 40	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out the control of the control o	24-05-2021 25-05-2021	
39 40 41	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY addent will be able to estimate flood magnitude and carry out the control of the control o	24-05-2021 25-05-2021 26-05-2021	Lagture interpersed with
39 40 41	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out the state of the sta	24-05-2021 25-05-2021 26-05-2021 27-05-2021	
39 40 41 42 43	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry ou Unit – IV: Floods: Causes and effects Frequency analysis Gumbels and log-pearson type III distribution methods Standard project flood Probable maximum flood	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021	Lecture interspersed with discussions
39 40 41 42 43 44	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry out the state of the stat	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021	
39 40 41 42 43 44 45	OODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY udent will be able to estimate flood magnitude and carry out the state of the stat	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021	
39 40 41 42 43 44 45 46 47 48	DODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out the substitution of the substitution o	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021	
1 4: FLC 3: ENGINE 0 4: The st 39 40 41 42 43 44 45 46 47 48 NIT 5: GRO 3: ENGINE	DODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out the light of the lig	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021 02-06-2021 03-06-2021	
10 4: FLC 3: ENGINE 0 4: The st 39 40 41 42 43 44 45 46 47 48 NIT 5: GRO 3: HYDRO 0 5: To ma	DODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out the little of	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021 02-06-2021 03-06-2021 d from wells.	discussions
41 42 43 44 45 46 47 48 NIT 5: GRO 5: To ma	DODS AND FLOOD ROUTING: ERING HYDROLOGY BY: Dr. P. JAYARAMI REDDY rudent will be able to estimate flood magnitude and carry out the light of the lig	24-05-2021 25-05-2021 26-05-2021 27-05-2021 28-05-2021 29-05-2021 31-05-2021 01-06-2021 02-06-2021 03-06-2021	Lecture interspersed with discussions Lecture interspersed with discussions

53	Transmissivity and storage coefficient	09-06-2021	
54	Types of wells, Darcy's law	10-06-2021	
55	Dupit's equation – steady radial flow to wells in confined aquifers	11-06-2021	
56	Steady radial flow to wells in unconfined aquifers	12-06-2021	
57	Yield of an open well	14-06-2021	
58	Recuperation test	15-06-2021	

UNIT 6: ADVANCED TOPICS IN HYDROLOGY:

TB: ENGINEERING HYDROLOGY BY Dr. P. JAYARAMI REDDY

CO6: The student will be able to model hydrologic processes.

59	Unit – VI: Advanced topics in hydrology: Introduction	16-06-2021	
60	Rainfall - runoff modeling	17-06-2021	
61	Instantaneous unit hydrograph	18-06-2021	
62	Conceptual models	19-06-2021	
63	Clark and Nash models	21-06-2021	
64	General hydrological models	22-6-2021	Lecture interspersed with
65	Chow's model	23-06-2021	discussions
66	Kulandaiswamy's model	24-06-2021	
67	Revision	25-06-2021	
68	Revision	26-06-2021	
69	Revision	29-06-2021	- Control of the Cont

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Signature of the HOD 6 4 2 1

TENTATIVE LESSON PLAN

Section : Sec A	Date: 06-04-2021	Page No: 01 of	f 03
Revision No : 0	0 Prepared By: N.KRANTHI REKHA	Approved By :	HOD
	Tools: Black board, power point presentat	ions	
No. of Periods	TOPIC	Date	Mode of Delivery
T2: ENVIRON	UPPLY & DESCRIPTION ENGINEERING BY MENTAL ENGINEERING BY N.N.BASAK. Tabout collection and conveyance of industrial waste		p; B.S.BIRDI
-1	BASIC THERIES OF IWWM	06-04-2021	
2	IWS	07-04-2021	
3	MEASUREMENT OF IWW	08-04-2021	
4	IWW GENERATION RATES	09-04-2021	
5	IWW SAMPLING	10-04-2021	
6	IWW PRESERVATION	12-04-2021	
7	WW CHARECTERISATION	15-04-2021	
8	TOXICITY OF IWW	16-04-2021	
9	TREATMENT OF WW	20-04-2021	Lecture
10	UNIT OPERATIONS	22-04-2021	interspersed
11	UNIT PROCESSES	23-04-2021	with
12	VOLUME REDUCTION	24-04-2021	discussions
13	STRENTH REDUCTION	26-04-2021	
14	NEUTRALIZATION	27-04-2021	
15	EQUALIZATION	28-04-2021	
16	PROPORTIONING	29-04-2021	
17	TUTORIAL	30-04-2021	
18	RECYCLE,REUSE,RESOURCES RECOVERY	01-05-2021	
& B.S.BII T2: ENVIRON CO 2: To know	UPPLY & DISPOSAL MANAGEMENT		Lecture interspersed with discussions
19	DISCHARGES INTO WATER BODIES-	04-05-2021	uiscussions
20	STREAMS,SEAS	04-03-2021	
21	DISCHARGES INTO WATER BODIES-LAKES	05-05-2021	
22	DISCHARGES INTO WATER BODIES-RIVERS	06-05-2021	
23	LAND TREATMENT	07-05-2021	
24	CETP- PROCESS	08-05-2021	
25	CETP-TREATMENT UNITS	10-05-2021	
26	CETP-ADVANTAGES, DISADVANTAGES	11-05-2021	
2.7	CETP-LIMITATIONS, CHALLENGES	12-05-2021	
27 28	CETP-LIMITATIONS, CHALLENGES TUTORIAL	12-05-2021 13-05-2021	

30	EFFLUENT DISPOSAL METHODS	17-05-2021	
& B.S.B T2: ENVIRO CO 3: To kno	SUPPLY & SANITATION ENGINEERING BY SIRDIE. ONMENTAL ENGINEERING BY N.N.BASAK. ow about preliminary and primary treatment of industr		
water.	A MAGARIA AND AND AND AND AND AND AND AND AND AN	10.05.2021	
31	MISCELLANOUS TREATMENTS	18-05-2021	-
32	USE OF MWW IN INDUSTRIES ADVANCED WWT PROCESSES	19-05-2021 20-05-2021	Lecture
33	R.O	21-05-2021	interspersed
35	U.F	22-05-2021	with discussions
36	FREEZING	24-05-2021	
37	ION EXCHANGE	25-05-2021	
	ELUTRIATION	26-05-2021	
38	REMOVAL OF COLOUR, ODOUR	28-05-2021	
40	REMOVAL OF COLOUR, ODOOR REMOVAL OF IRON AND MANGANESE	29-05-2021	
41	TUTORIAL	31-05-2021	
42	ADSORPTION	01-06-2021	
		a.n. Diidnin oeu	mp, Divibility
	SUPPLY & SANITATION ENGINEERING BY NMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr		
	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY		
CO 4: To kn	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr	ial waste water.	
CO 4: To kno 43	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS	02-06-2021	
CO 4: To kno 43	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS	02-06-2021 03-06-2021	
43 44 45	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021	
43 44 45 46	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021 05-06-2021	
43 44 45 46 47	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021	Lecture
43 44 45 46 47 48	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021	Lecture
43 44 45 46 47 48 49	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS FERTILIZERS INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021 09-06-2021	Lecture
43 44 45 46 47 48 49 50	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS FERTILIZERS INDUSTRY- PROCESS SUGAR MILLS INDUSTRY- PROCESS IWW QUALITY AND QUANTITY	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021 09-06-2021 10-06-2021	Lecture
43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & CO 5: To kn 53	DNMENTAL ENGINEERING BY N.N.BASAK. OW about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS FERTILIZERS INDUSTRY- PROCESS SUGAR MILLS INDUSTRY- PROCESS IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS SUPPLY & COOLING WATERS SUPPLY & COOLING WATERS ONMENTAL ENGINEERING BY N.N.BASAK. OW about advanced treatments of industrial waste water STEEL PLANTS	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 J.S.BIRDIE	Lecture
43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO	ONMENTAL ENGINEERING BY N.N.BASAK. OW about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS FERTILIZERS INDUSTRY- PROCESS SUGAR MILLS INDUSTRY- PROCESS IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS SUPPLY & DOUBLE AND COOLING	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 J.S.BIRDIE	Lecture interspersed with discussion Lecture interspersed
43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & CO 5: To kn 53	DNMENTAL ENGINEERING BY N.N.BASAK. OW about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS FERTILIZERS INDUSTRY- PROCESS SUGAR MILLS INDUSTRY- PROCESS IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS SUPPLY & COOLING WATERS SUPPLY & COOLING WATERS ONMENTAL ENGINEERING BY N.N.BASAK. OW about advanced treatments of industrial waste water STEEL PLANTS	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 J.S.BIRDIE	Lecture interspersed with discussion Lecture interspersed
43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO CO 5: To kn 53 54	DNMENTAL ENGINEERING BY N.N.BASAK. OW about biological treatment of waste water of industr IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS FERTILIZERS INDUSTRY- PROCESS SUGAR MILLS INDUSTRY- PROCESS IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS SUPPLY & DIE AND COOLING WATERS SUPPLY & DIE AND COOLING WATERS SUPPLY & DIE AND COOLING WATERS STEEL PLANTS FERTILIZERS INDUSTRY FERTILIZERS INDUSTRY	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 J.S.BIRDIE	Lecture interspersed with discussion Lecture interspersed
43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO CO 5: To kn 53 54 55	DIMENTAL ENGINEERING BY N.N.BASAK. Tow about biological treatment of waste water of industry in the property of the property	02-06-2021 03-06-2021 04-06-2021 05-06-2021 08-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 12-06-2021 17-06-2021 17-06-2021 18-06-2021	Lecture interspersed with discussion Lecture interspersed

NIT VI

11: WATER SUPPLY & Camp; SANITATION ENGINEERING BY J.S.BIRDIE & Camp; B.S.BIRDIE.

T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.

CO 6: To know about industrial waste water disposal and sludge disposal.

59	TANNERIES INDUSTRY WW -TREATMENT	26-06-2021	
60	SUGAR MILLS INDUSTRY WW – TREATMENT	28-06-2021	Lecture
61	DISTILLERS INDUSTRY WW -TREATMENT	29-06-2021	with discussions.
62	DAIRY INDUSTRY WW -TREATMENT	30-06-2021	
63	FOOD PROCESSING INDUSTRY WW – TREATMENT	01-07-2021	
64	PHARMACEUTICAL PLANTS INDUSTRY WW -TREATMENT	02-07-2021	
65	TUTORIAL	03-07-2021	
66	REVISION	05-07-2021	

Signature of the Faculty

Signature of the HOD

TENTATIVE LESSON PLAN

ourse Title: WAS	TE WATER MANAGEMENT (R163201D)	
Section : Sec B	Date: 06-04-2021	Page No : 01 of 03
Revision No : 00	Prepared By: N.KRANTHI REKHA	Approved By : HOD

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III			
	UPPLY & amp; SANITATION ENGINEERING BY	J.S.BIRDIE &am	p; B.S.BIRDI
	MENTAL ENGINEERING BY N.N.BASAK.		
CO 1: To know	about collection and conveyance of industrial waste	water.	
1	BASIC THERIES OF IWWM	06-04-2021	
2	IWS	07-04-2021	
3	MEASUREMENT OF IWW	08-04-2021	
4	IWW GENERATION RATES	09-04-2021	
5	IWW SAMPLING	10-04-2021	
6	IWW PRESERVATION	12-04-2021	
7	WW CHARECTERISATION	15-04-2021	
8	TOXICITY OF IWW	16-04-2021	
9	TREATMENT OF WW	20-04-2021	Lecture
10	UNIT OPERATIONS	22-04-2021	interspersed
11	UNIT PROCESSES	23-04-2021	with
12	VOLUME REDUCTION	24-04-2021	discussions
13	GENERATH REDUCTION	26-04-2021	
1.4	STRENTH REDUCTION	27-04-2021	
14	NEUTRALIZATION	28-04-2021	
15	EQUALIZATION	29-04-2021	
16	PROPORTIONING	30-04-2021	
17	TUTORIAL PROVIDE PROVI	01-05-2021	
18	RECYCLE,REUSE,RESOURCES RECOVERY	01-03-2021	
UNIT IV	UDDI V Comm. CANITATION ENCINEEDING DV	I C DIDDIE	
& B.S.BI	SUPPLY & DIE SANITATION ENGINEERING BY	J.S.DIKDIE	Lecture
	MENTAL ENGINEERING BY N.N.BASAK.		interspersed
	v about collection and conveyance of industrial waste	water	with
19	IWW DISPOSAL MANAGEMENT	03-05-2021	discussions
20	DISCHARGES INTO WATER BODIES-	04-05-2021	
20	STREAMS,SEAS		
21	DISCHARGES INTO WATER BODIES-LAKES	05-05-2021	
22	DISCHARGES INTO WATER BODIES-RIVERS	06-05-2021	
22		07-05-2021	
	LAND TREATMENT		
23	CETP- PROCESS	08-05-2021	
23 24			
23	CETP- PROCESS	08-05-2021	
23 24 25 26	CETP- PROCESS CETP-TREATMENT UNITS CETP-ADVANTAGES, DISADVANTAGES	08-05-2021 10-05-2021 11-05-2021	
23 24 25	CETP- PROCESS CETP-TREATMENT UNITS	08-05-2021 10-05-2021	

30	EFFLUENT DISPOSAL METHODS	17-05-2021	
& amp; B.S.E T2: ENVIRO CO 3: To know	SUPPLY & SANITATION ENGINEERING BIRDIE. ONMENTAL ENGINEERING BY N.N.BASAK. ow about preliminary and primary treatment of ind		
water.	MISCELLANOUS TREATMENTS	18-05-2021	T
31	USE OF MWW IN INDUSTRIES	19-05-2021	
33	ADVANCED WWT PROCESSES	20-05-2021	Lecture
34	R.O	21-05-2021	interspersed
35	U.F	22-05-2021	with discussion
36	FREEZING	24-05-2021	
37	ION EXCHANGE	25-05-2021	
38	ELUTRIATION	26-05-2021	
39	REMOVAL OF COLOUR, ODOUR	28-05-2021	
40	REMOVAL OF IRON AND MANGANESE	29-05-2021	
41	TUTORIAL	31-05-2021	
42	ADSORPTION	01-06-2021	
	SUPPLY & SANITATION ENGINEERING DIMENTAL ENGINEERING BY N.N.BASAK.	DI GOODINGIL GO	mp, District
T2: ENVIRO CO 4: To kn	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of ind	ustrial waste water.	
T2: ENVIRO	ONMENTAL ENGINEERING BY N.N.BASAK.		
T2: ENVIRO CO 4: To kn	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of ind IWW QUALITY AND QUANTITY	ustrial waste water.	
T2: ENVIRO CO 4: To kn 43	ONMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of ind IWW QUALITY AND QUANTITY REQUIREMENTS	ustrial waste water. 02-06-2021	
T2: ENVIRO CO 4: To kn 43	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of ind IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS	02-06-2021 03-06-2021 04-06-2021	
T2: ENVIRO CO 4: To kn 43 44 45	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of ind IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021	
T2: ENVIRO CO 4: To kn 43 44 45 46	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indi IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021 SS 05-06-2021	
T2: ENVIRO CO 4: To kn 43 44 45 46 47	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indicated in the second	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021	Lecture
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of ind IWW QUALITY AND QUANTITY REQUIREMENTS BOILER AND COOLING WATERS TEXTILE INDUSTRY- PROCESS FOOD PROCESSING INDUSTRY- PROCESS BREWERY INDUSTRY- PROCESS POWERPLANTS INDUSTRY- PROCESS	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021	Lecture
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48 49	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indicated in the second	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021 09-06-2021	Lecture
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48 49 50	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indicated in the second	02-06-2021 03-06-2021 04-06-2021 8S 05-06-2021 07-06-2021 08-06-2021 09-06-2021 10-06-2021	Lecture
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO CO 5: To kn 53	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indicated in the second state of indicated in th	02-06-2021 03-06-2021 04-06-2021 SS 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 BY J.S.BIRDIE	Lecture interspersed with discussion Lecture interspersed
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO CO 5: To kn 53 54	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indicated in the second	02-06-2021 03-06-2021 04-06-2021 8S 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 BY J.S.BIRDIE	Lecture interspersed with discussion Lecture interspersed
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO CO 5: To kn 53 54 55	DNMENTAL ENGINEERING BY N.N.BASAK. OW about biological treatment of waste water of indicated in the second process of the second pr	02-06-2021 03-06-2021 04-06-2021 05-06-2021 07-06-2021 08-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 BY J.S.BIRDIE vater. 16-06-2021 17-06-2021 18-06-2021	Lecture interspersed with discussion Lecture interspersed
T2: ENVIRO CO 4: To kn 43 44 45 46 47 48 49 50 51 52 UNIT V T1: WATER & amp; B.S.I T2: ENVIRO CO 5: To kn 53 54	DNMENTAL ENGINEERING BY N.N.BASAK. ow about biological treatment of waste water of indicated in the second	02-06-2021 03-06-2021 04-06-2021 8S 05-06-2021 07-06-2021 09-06-2021 10-06-2021 11-06-2021 12-06-2021 BY J.S.BIRDIE	Lecture interspersed with discussion

11: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & S.BIRDIE.

T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.

CO 6: To know about industrial waste water disposal and sludge disposal.

59	TANNERIES INDUSTRY WW -TREATMENT	26-06-2021	
60	SUGAR MILLS INDUSTRY WW – TREATMENT	28-06-2021	Lecture interspersed with discussions.
61	DISTILLERS INDUSTRY WW -TREATMENT	29-06-2021	With discussions.
62	DAIRY INDUSTRY WW -TREATMENT	30-06-2021	
63	FOOD PROCESSING INDUSTRY WW – TREATMENT	01-07-2021	
64	PHARMACEUTICAL PLANTS INDUSTRY WW -TREATMENT	02-07-2021	
65	TUTORIAL	03-07-2021	
66	REVISION	05-07-2021	

Signature of the Faculty

Signature of the HOD 6 14 21

PRINCIPAL

TENTATIVE LESSON PLAN: R1642011

Course Title: ESTIMA	ATING, SPECIFICATIONS AND	CONTRACTS(R1642011)
Section : Sec A	Date: 3-4-2021	Page No: 01 of 03
Revision No: 00	Prepared By :G.Sahithi	Approved By : HOD

Tools: Black board

	TOPIC	DATE	MODE OF
-	The second secon	DAY IN DAIN	DELIVERY
	I INTRODUCTION: GENERAL ITEMS OF WO		
	The student will be able to calculate quantity of diffe	rent componen	its of the building
	ow about types of estimates.	hama 2000	
	Estimating and Costing' by B.N. Dutta, UBS public Estimating and Costing' by G.S. Birdie.	suers, 2000.	
1.	UNIT-I:Introduction: about estimation,	06-04-2021	
1.	specifications	00 04 2021	
	Specifications		
2.	Purpose of estimation	07-04-2021	
3.	General items of work excavation, filling,	08-04-2021	
	concrete in foundation		
4.	General items of work soling ,dam proof	09-04-2021	
	course,masonary,arch masonary,lintels .		Lectures
5.	General items of work RCC,RB	10-04-2021	interspersed
	works, flooring, roofing, plastering, pointing, cornice		with discussions
6.	General items of works doors, windows, wood	12-04-2021	discussions
	work,iron work		
7.	White washing, painting, lumpsump items	15-04-2021	
8.	Standard units, principles of working out quantities	16-04-2021	
9.	Types of estimates	17-04-2021	
10.	Description of detailed estimates	19-04-2021	
11.	Description ob abstract estimates	20-04-2021	
12.	Methods of approximate estimates	22-04-2021	
UNIT-	- II RATE ANALYSIS		
CO2: 7	The student will be able to find the cost of various bui	lding compone	ents.
	Estimating and Costing' by B.N. Dutta, UBS public	shers, 2000.	
	Estimating and Costing' by G.S. Birdie.	,	
13	Introduction to rate analysis	23-04-2021	
14	Calculation of mazdoor required	24-04-2021	
15	Rate analysis problems on excavation for	26-04-2021	Lectures
	foundation		Comment Comments
16	Sand filling in plinth problems	27-04-2021	interspersed with
17	Rate analysis for cement concrete	28-04-2021	discussions
18	Rate analysis for lime concrete in foundation	29-04-2021	discussions
19	Rate analysis for brick work with standard bricks	30-04-2021	Lectures
20	Rate analysis for plastering and pointing	01-05-2021	200100

21	Rate analysis for cement concrete floor	03-05-2021	interspersed
22	Rate analysis for painting, varnishing	04-05-2021	with
23	Rate analysis for mosaic floor finish	05-05-2021	discussions
24	Rate analysis for reinforcement, RCC works	06-05-2021	
25	Rate analysis for other works	07-05-2021	
26	Tutorial	08-05-2021	

UNIT-III: EARTHWORK FOR ROADS AND CANALS

CO2: The student will have knowledge of calculation of earthwork for roads and canals and bar bending schedules

TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.

TB:: Estimating and Costing' by G.S. Birdie.

	Estimating and Costing by Gibi Direit.		
27	Introduction to earth work	10-05-2021	
28	Embankment, cutting definitions	11-05-2021	
29	Reinforcement, bar bending concept	12-05-2021	
30	Bar requirement schedules	13-05-2021	
31	Methods for earthwork for roads	15-05-2021	Lectures
32	Problems on mid sectional area method	17-05-2021	interspersed
33	Problems on mean sectional area method	18-05-2021	with discussions
34	Problems on Prismodial formula method	19-05-2021	discussions
35	Problems on trapezoidal formula method	20-05-2021	
36	Problems on area of side slopes	21-05-2021	
37	Problems on earthwork for canals	22-05-2021	
38	Earthwork for canals based on Prismodial formula	24-05-2021	
39	Problems on combinations of embankment and cutting	25-05-2021	
40	Tutorial	26-05-2021	

UNIT-IV CONTRACTS

CO4: The student will know various specifications and components of buildings and types of contracts.

TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.

41	Introduction to contracts	27-05-2021	
42	Types of contracts	28-05-2021	
43	Contract documents	29-05-2021	
44	Conditions of contrac5ts	31-05-2021	
45	Valuation of building	01-06-2021	Lectures
46	Genral specifications of first class building	02-06-2021	interspersed
47	General specifications of second class building	03-06-2021	with discussions
48	General specification of third class building	04-06-2021	discussions
49	General specification of fourth class building	05-06-2021	
50	Standard specifications of various items of works	07-06-2021	
51	Specification for earthwork in foundation, lime concrete in foundation	08-06-2021	
52	Specifications for standard bricks	09-06-2021	
53	Specifications for plastering, pointing	10-06-2021	
54	Tutorial	11-06-2021	

$\begin{array}{l} \textbf{UNIT-V DETAILED ESTIMATION OF BUILDINGS USING INDIVIDUAL WALL} \\ \textbf{METHOD} \end{array}$

CO5 The student will be able to do the Detailed Estimation of Buildings using individual wall method.

TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.

TB:: Estimating and Costing' by G.S. Birdie.

55	Introduction to detailed estimation	12-06-2021	
56	Detailed estimation of building	14-06-2021	
57	Methods of detailed estimation	15-06-2021	
58	Individual wall method	16-06-2021	Lectures
59	Applications of individual wall method	17-06-2021	interspersed
60	Problems on individual wall method	18-06-2021	with discussions
61	Problems on individual wall method	19-06-2021	uiscussions
62	Problems on individual wall method	21-06-2021	
63	Problems on individual wall method	22-6-2021	
64	Problems on individual wall method	23-06-2021	

UNIT – VI DETAILED ESTIMATION OF BUILDINGS USING CENTERLINE METHOD

CO6: The student will be able to do the Detailed Estimation of Buildings using centerline method.

TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.

TB:: Estimating and Costing' by G.S. Birdie.

65	Detailed estimation of building	24-06-2021	
66	Centre line method	25-06-2021	
67	Problems on centre line method	26-06-2021	Lectures
68	Problems on centre line method	28-06-2021	interspersed
69	Problems on centre line method	29-06-2021	with
70	Problems on centre line method	30-06-2021	discussions
71	Problems on centre line method	01-07-2021	
72	Tutorial on centre line method .	02-07-2021	
73	Tutorial on centre line method	03-07-2021	

SIGNATURE OF FACULTY

TENTATIVE LESSON PLAN: R1642011

Course Title: ESTIM	ATING, SPECIFICATIONS AND	CONTRACTS(R1642011)
Section : Sec B	Date: 3-4-2021	Page No: 01 of 03
Revision No: 00	Prepared By :G.Sahithi	Approved By : HOD

Tools: Black board

	TOPIC	DATE	MODE OF DELIVERY
CO1: Tand known TB:: 'I	The student will be able to calculate quantity of different work of estimates. Estimating and Costing' by B.N. Dutta, UBS public Estimating and Costing' by G.S. Birdie.	erent componer	
1.	UNIT-I:Introduction: about estimation, specifications	06-04-2021	
2.	Purpose of estimation	07-04-2021	
3.	General items of work excavation, filling, concrete in foundation	08-04-2021	
4.	General items of work soling ,dam proof course,masonary,arch masonary,lintels	09-04-2021	Lectures
5.	General items of work RCC,RB works,flooring,roofing,plastering,pointing,cornice	10-04-2021	interspersed with
6.	General items of works doors, windows, wood work, iron work	12-04-2021	discussions
7.	White washing, painting, lumpsump items	15-04-2021	
8.	Standard units, principles of working out quantities	16-04-2021	
9.	Types of estimates	17-04-2021	
10.	Description of detailed estimates	19-04-2021	
11.	Description ob abstract estimates .	20-04-2021	
12.	Methods of approximate estimates	22-04-2021	
CO2: T TB:: 'E TB:: I	II RATE ANALYSIS The student will be able to find the cost of various builtstimating and Costing' by B.N. Dutta, UBS public Estimating and Costing' by G.S. Birdie.	- 1	ents.
13	Introduction to rate analysis	23-04-2021	
14	Calculation of mazdoor required	24-04-2021	
15	Rate analysis problems on excavation for foundation	26-04-2021	Lectures
16	Sand filling in plinth problems	27-04-2021	interspersed
17	Rate analysis for cement concrete	28-04-2021	with discussions
18	Rate analysis for lime concrete in foundation	29-04-2021	uiscussions
19	Rate analysis for brick work with standard bricks	30-04-2021	Lectures
20	Rate analysis for plastering and pointing	01-05-2021	Lectures

21	Rate analysis for cement concrete floor	03-05-2021	interspersed
22	Rate analysis for painting, varnishing	04-05-2021	with
23	Rate analysis for mosaic floor finish	05-05-2021	discussions
24	Rate analysis for reinforcement, RCC works	06-05-2021	
25	Rate analysis for other works	07-05-2021	
26	Tutorial	08-05-2021	

UNIT-III: EARTHWORK FOR ROADS AND CANALS

CO2: The student will have knowledge of calculation of earthwork for roads and canals and bar bending schedules

TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.

TB:: Estimating and Costing' by G.S. Birdie.

	distribution of the state of th	
27	Introduction to earth work	10-05-2021
28	Embankment, cutting definitions	11-05-2021
29	Reinforcement, bar bending concept	12-05-2021
30	Bar requirement schedules	13-05-2021
31	Methods for earthwork for roads	15-05-2021
32	Problems on mid sectional area method	17-05-2021
33	Problems on mean sectional area method	18-05-2021
34	Problems on Prismodial formula method	19-05-2021
35	Problems on trapezoidal formula method	20-05-2021
36	Problems on area of side slopes	21-05-2021
37	Problems on earthwork for canals	22-05-2021
38	Earthwork for canals based on Prismodial formula	24-05-2021
39	Problems on combinations of embankment and cutting	25-05-2021
40	Tutorial	26-05-2021
TRIBITE	IV CONTENT CITO	

Lectures interspersed with discussions

UNIT - IV CONTRACTS

CO4: The student will know various specifications and components of buildings and types of contracts.

TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.

41	Introduction to contracts	27-05-2021	
42	Types of contracts	28-05-2021	
43	Contract documents	29-05-2021	
44	Conditions of contrac5ts	31-05-2021	
45	Valuation of building	01-06-2021	Lectures
46	Genral specifications of first class building	02-06-2021	interspersed
47	General specifications of second class building	03-06-2021	with
48	General specification of third class building	04-06-2021	discussions
49	General specification of fourth class building	05-06-2021	
50	Standard specifications of various items of works	07-06-2021	
51	Specification for earthwork in foundation, lime concrete in foundation	08-06-2021	
52	Specifications for standard bricks	09-06-2021	
53	Specifications for plastering, pointing	10-06-2021	
54	Tutorial	11-06-2021	

55	Empirical formulae	12-06-2021
56	Straight line formula -	14-06-2021
57	Prof. Perry's formula	15-06-2021
58	Tutorial	16-06-2021

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	Stresses under the combined action of direct loading	17-06-2021	
60	B.M. Core of a section	18-06-2021	
61	determination of stresses in the case of chimneys	19-06-2021	Lecture
62	retaining walls	21-06-2021	interspersed
63	dams	22-6-2021	with
64	conditions for stability	23-06-2021	discussions
65	stresses due to direct loading	24-06-2021	
66	B.M. about both axis	25-06-2021	
67	stresses due to direct loading and B.M. about both axis.	26-06-2021	W.
68	Tutorial	28-06-2021	

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

a but ength	of water and by kill Dansui, Landmin I doneation		
69	Introduction	29-06-2021	
70	Centroidal principal axes of section	30-06-2021	
71	Graphical method for locating principal axes	01-07-2021	
72	Moments of inertia referred to any set of rectangular axes	02-07-2021	
73	Stresses in beams subjected to unsymmetrical bending	03-07-2021	L
74	Principal axes .	05-07-2021	inte
75	Resolution of bending moment into two rectangular axes through the centroid	06-07-2021	disc
76	Location of neutral axis	07-07-2021	
77	Deflection of beams under unsymmetrical bending.	08-07-2021	
78	Shear Centre: Introduction	09-07-2021	
79	Shear center for symmetrical and unsymmetrical sections	09-07-2021	

Lecture interspersed with discussions

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TENTATIVE LESSON PLAN: R1621015

Section : S	ec A	Date : 06-04-2021	Page No: 01	of 02
Revision No: 00		Prepared By : A.ANOOP KUMAR	Approved B	
Γools: Black				•
No. of		TOPIC	Date	Mode of
Periods				Delivery
TB: Constru	ction e	ng and control with PERT AND CPM engineering and management. e students about construction project managemen	t including netw	ork drawing an
1.	Con	struction project management and its relevance	06-04-2021	
2.		lities of a project manager	07-04-2021	
3.		ect planning	08-04-2021	
4.		rdination	09-04-2021	Lecture
5.	sche	duling	10-04-2021	interspersed
6.	Mor	nitoring	12-04-2021	with
7.	Bar	charts	15-04-2021	discussions
8.	Mile	estone charts	16-04-2021	
9.	Criti	ical path method-applications	17-04-2021	
			to 24-04-	
TB : Project TB: Constru	ction e	ng and control with PERT AND CPM ngineering and management.	2021	
TB : Project TB: Construct CO2: To intr 10. 11. 12.	Proj Cost	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating	re. 24-04-2021 26-04-2021 27-04-2021	Lecture interspersed with
TB: Construction TB: Co2: To introduce T0. 11. 12. 13.	Proj Cost Upd Cras	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost	24-04-2021 26-04-2021 27-04-2021 28-04-2021	interspersed
TB : Project TB: Construct CO2: To intr 10. 11.	Cras	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating	24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	interspersed with
TB : Project TB: Construct CO2: To intruct 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct CO3: To intruct CO	ction e coduce Projuction e Cost Upd Cras Cras Allo ection e ction p	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the	24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 to 6-05-2021	interspersed with discussions
TB : Project TB: Construct CO2: To intr 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct TB: Construct CO3: To intr 16.	Crass Allo ction e ction e ction e ction e ction e ction e ction p coduce	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the onstruction equipment	re. 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	interspersed with discussions
TB : Project TB: Construct CO2: To intr 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct TB: Construct CO3: To intr 16. 17.	Crass Allo ction e ction e ction e ction e ction e ction e ction p coduce	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the	24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 to 6-05-2021	interspersed with discussions
TB : Project TB: Construct CO2: To intr 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct TB: Construct CO3: To intr 16.	ction e coduce Projuction e Cost Upd Crass Allo ection e ction produce Coduce Ection e Coduce	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the onstruction equipment	re. 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	interspersed with discussions ulation.
TB : Project TB: Construct CO2: To intr 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct TB: Construct CO3: To intr 16. 17.	ction e coduce Projuctos Upd Cras Cras Allo Ction e ction e ction produce Cc Ec Ea	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the onstruction equipment conomical conditions	re. 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	interspersed with discussions ulation. Lecture interspersed
TB : Project TB: Construct CO2: To intruct 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct TB: Construct CO3: To intruct 16. 17. 18.	ction e coduce Projuctos Upd Cras Cras Allo etion e ction produce Eccurrent Eccurrent Tr	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources reation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the onstruction equipment conomical conditions arthquake equipment	re. 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	ulation. Lecture interspersed with
TB : Project TB: Construct CO2: To intr 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct TB: Construct CO3: To intr 16. 17. 18. 19.	ction e coduce Projuctos Upd Cras Cras Allo ection e ction poduce Coduce Ea	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the onstruction equipment conomical conditions arthquake equipment rucks and handling equipment ear dump trucks	re. 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	interspersed with discussions ulation. Lecture interspersed
TB : Project TB: Construct CO2: To intruct 10. 11. 12. 13. 14. 15. UNIT -III TB: Construct CO3: To intruct CO3: To intruct 16. 17. 18. 19. 20.	ction e coduce Proj. Cost Upd Cras Cras Allo ction e ction e ction p coduce Co Ec Tri Ro Ca	ngineering and management. students about project evaluation, project structurect evaluation and review technique t analysis ating shing for optimum cost shing for optimum resources cation of resources ngineering and management. lanning, equipment, and methods. students about various construction equipment, the onstruction equipment conomical conditions arthquake equipment rucks and handling equipment	re. 24-04-2021 26-04-2021 27-04-2021 28-04-2021 29-04-2021 30-04-2021 to	ulation. Lecture interspersed with

		23-05- 2021
23.	Compaction equipment	24-05-2021
24.	Types of compaction rollers	25-05-2021

UNIT-IV

TB: Construction engineering and management.

TB: Construction planning, equipment, and methods

CO4: To introduce students about various earthwork equipment.

Hoisting and Earthwork Equipment	29-05-2021	
Hoists	31-05-2021	
Cranes	01-06-2021	Lecture
Tractors	02-06-2021	interspersed with
Bulldozers	03-06-2021	discussions
Graders	04-06-2021	
Scrapers	05-06-2021	
Draglines	07-06-2021	
Clamshell Buckets.	08-06-2021	
	Hoists Cranes Tractors Bulldozers Graders Scrapers Draglines	Hoists 31-05-2021 Cranes 01-06-2021 Tractors 02-06-2021 Bulldozers 03-06-2021 Graders 04-06-2021 Scrapers 05-06-2021 Draglines 07-06-2021

UNIT-V

TB: Construction planning, equipment, and methods.

CO5: To introduce students about concreting equipment, crushing of aggregates, mixing and placing

of concrete, consolidating and finishing.

0 0		
Concreting Equipment	10-06-2021	
Crushers	11-06-2021	Lecture
Jaw Crushers	12-06-2021	interspersed
Gyratory Crushers	14-06-2021	with discussions
Impact Crushers	15-06-2021	discussions
Selection Of Crushing Equipment	16-06-2021	
Screening Of Aggregate	17-06-2021	
Concrete Mixers	18,19-06- 2021	
Mixing And Placing Of Concrete	21-06-2021	
Consolidating And Finishing	22-06-2021	
	Crushers Jaw Crushers Gyratory Crushers Impact Crushers Selection Of Crushing Equipment Screening Of Aggregate Concrete Mixers Mixing And Placing Of Concrete	Crushers 11-06-2021 Jaw Crushers 12-06-2021 Gyratory Crushers 14-06-2021 Impact Crushers 15-06-2021 Selection Of Crushing Equipment 16-06-2021 Screening Of Aggregate 17-06-2021 Concrete Mixers 18,19-06-2021 Mixing And Placing Of Concrete 21-06-2021

UNIT-VI

TB: Construction planning, equipment, and methods, IS:9000

CO6: To introduce students about how to do earthwork, piling work and importance of safety measures.

measures.			
44.	Construction Methods	23-06-2021	
45.	Earthwork	24-06-2021	
46.	Piling	25-06-2021	Lecture
47.	Placing Of Concrete	26-06-2021	interspersed with
48.	Form Work	28-06-2021	discussions
49.	Fabrication And Erection	29-06-2021	
50.	Quality control & Safety engineering	03-07-2021	

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TENTATIVE LESSON PLAN: R1621015

Section : Se	c B Date: 06-04-2021	Page No: 01	of 02
Revision No	: 00 Prepared By :A.ANOOP KUMAR	Approved B	
Tools: Black board, PPTs			
No. of Periods	TOPIC	Date	Mode of
UNIT -I			Delivery
TB: Project p	clanning and control with PERT AND CPM etion engineering and management. Oduce students about construction project management	t including netw	ork drawing ar
1.	Construction project management and its relevance	06-04-2021	
2.	Qualities of a project manager	07-04-2021	
3.	Project planning	08-04-2021	
4.	Coordination	09-04-2021	Lecture
5.	scheduling	10-04-2021	interspersed
6.	Monitoring	12-04-2021	with
7.	Bar charts	15-04-2021	discussions
8.	Milestone charts	16-04-2021	
9.	Critical path method-applications	17-04-2021	
	**	to 24-04-	
		2021	
	tion engineering and management. oduce students about project evaluation, project structur Project evaluation and review technique	e. 24-04-2021	Lecture
11.	Cost analysis	26-04-2021	interspersed
12.	Updating	27-04-2021	with
13.	Crashing for optimum cost	28-04-2021	discussions
14.	Crashing for optimum resources	29-04-2021	
15.	Allocation of resources	30-04-2021	
		to 6-05-2021	
UNIT -III			
	tion engineering and management.		
	tion planning, equipment, and methods.		
	oduce students about various construction equipment, the		ulation.
16.	Construction equipment	08-05-2021	
17.	Economical conditions	10-05-2021	Lecture
18.	Earthquake equipment	11-05-2021	interspersed
19.	Trucks and handling equipment	12-05-2021	with
20.	Rear dump trucks	15-05-2021	discussions
21.	Capacities of trucks and handling equipment	17-05-2021	
22.	Calculation of truck production	18-05-2021	
44.	Carcalation of track production		

		23-05- 2021
23.	Compaction equipment	24-05-2021
24.	Types of compaction rollers	25-05-2021

UNIT-IV

TB: Construction engineering and management.

TB: Construction planning, equipment, and methods

CO4: To introduce students about various earthwork equipment.

25.	Hoisting and Earthwork Equipment	29-05-2021	
26.	Hoists	31-05-2021	
27.	Cranes	01-06-2021	Lecture
28.	Tractors	02-06-2021	interspersed with
29.	Bulldozers	03-06-2021	discussions
30.	Graders	04-06-2021	
31.	Scrapers	05-06-2021	
32.	Draglines	07-06-2021	
33.	Clamshell Buckets.	08-06-2021	

UNIT-V

TB: Construction planning, equipment, and methods.

CO5: To introduce students about concreting equipment, crushing of aggregates, mixing and placing

of concrete, consolidating and finishing.

34.	Concreting Equipment	10-06-2021		
35.	Crushers	11-06-2021	Lecture	
36.	Jaw Crushers	12-06-2021	interspersed	
37.	Gyratory Crushers	14-06-2021	with discussions	
38.	Impact Crushers	15-06-2021	GISCUSSIONS	
39.	Selection Of Crushing Equipment	16-06-2021		
40.	Screening Of Aggregate	17-06-2021		
41.	Concrete Mixers	18,19-06- 2021		
42.	Mixing And Placing Of Concrete	21-06-2021		
43.	Consolidating And Finishing	22-06-2021		
TINTERN XII				-

UNIT-VI

TB: Construction planning, equipment, and methods, IS:9000

CO6: To introduce students about how to do earthwork, piling work and importance of safety measures.

44.	Construction Methods	23-06-2021	
45.	Earthwork	24-06-2021	
46.	Piling	25-06-2021	Lecture
47.	Placing Of Concrete	26-06-2021	interspersed with discussions
48.	Form Work	28-06-2021	
49.	Fabrication And Erection	29-06-2021	
50.	Quality control & Safety engineering	03-07-2021	

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TENTATIVE LESSON PLAN: CE

Section : S	Sec A Date : 6/4/2021	Page No ·	01 of 02	
Revision No		Page No: 01 of 02 Approved By: HOD		
	board, PPTs, Model	Approved	ву: нов	
No. of	TOPIC	Tentative	Implemented	
Periods	10110	Date	Date	
	sic concepts of Prestressing	Date		
CO1: Under TB1::Prest	erstand the concepts of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham			
1	Advantages and Applications of Prestressed Concretes	06-04-2021		
2	High Strength Concrete	07-04-2021		
3	Permissible Stresses	08-04-2021		
4	Shrinkage	09-04-2021		
5	Creep	10-04-2021		
6	Deformation Characteristics	12-04-2021	Lecture	
7	High strength Steel- Types	15-04-2021	interspersed	
8	Strength	20-04-2021	with	
9	Permissible Stresses	22-04-2021	discussions	
10	Relaxation of Stress	23-04-2021		
11				
UNIT-II Pr CO2: Unde TB1::Prest	Cover Requirements restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham	27-04-2021		
UNIT-II Pr CO2: Unde TB1::Prest	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill	27-04-2021	7	
UNIT-II Pr CO2: Unde TB1::Prest TB2::Prest	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction	28-04-2021		
UNIT-II Pr CO2: Unde TB1::Prest TB2::Prest	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices	28-04-2021 29-04-2021	Lecture	
UNIT-II Pr CO2: Unde TB1::Prest TB2::Prest 12 13 14	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems	28-04-2021 29-04-2021 03-05-2021	interspersed	
UNIT-II Pr CO2: Unde TB1::Prest TB2::Prest 12 13 14 15	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems	28-04-2021 29-04-2021 03-05-2021 04-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest TB2::Prest 12 13 14	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems	28-04-2021 29-04-2021 03-05-2021	interspersed	
UNIT-II Pr CO2: Unde TB1::Prest TB2::Prest 12 13 14 15	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and	28-04-2021 29-04-2021 03-05-2021 04-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 08-05-2021 10-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16	restressing Systems rstand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment osses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 13-05-2021 15-05-2021	interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment cosses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 13-05-2021 15-05-2021	interspersed with discussions	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir TB1::Prest TB2::Prest	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment osses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 13-05-2021 15-05-2021	interspersed with discussions	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir TB1::Prest TB2::Prest	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment osses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Loss of Pre-stress in pre-tensioned and post tensioned members due to various causes	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 13-05-2021 2-m losses	Lecture interspersed	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir TB1::Prest TB2::Prest 23	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment cosses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Loss of Pre-stress in pre-tensioned and post tensioned members due to various causes Elastic shortening of concrete	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 13-05-2021 15-05-2021 2rm losses	Lecture interspersed with	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir TB1::Prest 23 24	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment cosses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Loss of Pre-stress in pre-tensioned and post tensioned members due to various causes Elastic shortening of concrete shrinkage of concrete	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 15-05-2021 21-05-2021 19-05-2021 19-05-2021	Lecture interspersed	
UNIT-II Pr CO2: Unde TB1::Prest 12 13 14 15 16 17 18 19 20 21 22 UNIT-III L CO3: Estir TB1::Prest TB2::Prest 23	restressing Systems restand the different methods of prestressing ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Introduction Tensioning devices Pre-tensioning Systems Post tensioning Systems Basic Assumptions in Analysis of prestress and design Analysis of prestress Resultant Stresses at a section pressure line Concepts of load balancing Stresses in Tendons Cracking moment cosses of Pre-stressing mate effective prestress including the short and long to ressed Concrete, N. Krishna Raju, Tata McGraw hill ressed Concrete, S. Ramamrutham Loss of Pre-stress in pre-tensioned and post tensioned members due to various causes Elastic shortening of concrete	28-04-2021 29-04-2021 03-05-2021 04-05-2021 06-05-2021 10-05-2021 11-05-2021 12-05-2021 13-05-2021 15-05-2021 2rm losses	Lecture interspersed with	

29	Differential shrinkage	28-05-2021	
30	bending of members and frictional losses	29-05-2021	
31	Total losses allowed for design	31-05-2021	
	Design for Flexural resistance		
	lyze and design prestressed concrete beams under flexi	ire	
	tressed Concrete, N. Krishna Raju, Tata McGraw hill		
	tressed Concrete, S. Ramamrutham	,	
32	Types of flexural failure	02-06-2021	
33	Code procedures	04-06-2021	Lecture
34	Design of sections for flexure	07-06-202	interspersed
35	Control of deflections	09-06-2021	with
36	Factors influencing Deflection	11-06-2021	discussions
37	Prediction of short term and long term deflections.	12-06-2021	discussions
UNIT - V	UNIT-V Design for Shear and Torsion		
CO5: Ana	lyze and design prestressed concrete beams under shea	r	
TB1::Pres	tressed Concrete, N. Krishna Raju, Tata McGraw hill		
TB2::Pres	tressed Concrete, S. Ramamrutham .		
38	Shear and Principal Stresses	16-06-2021	T
39	Design of Shear reinforcements	17-06-2021	Lecture
40	Codal Provisions	18-06-2021	interspersed with
41	Design for Torsion	19-06-2021	discussions
42	Design for Combined bending, shear and torsion	21-06-2021	discussions
UNIT-VI	Transfer of Prestress in pre tensioned members		
CO6. Und	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Coo. Ullu	erstand the relevant IS Codal provisions for prestressed	l concrete	
	erstand the relevant IS Codal provisions for prestressed tressed Concrete, N. Krishna Raju, Tata McGraw hill	l concrete	
TB1::Pres		l concrete	
TB1::Pres	ressed Concrete, N. Krishna Raju, Tata McGraw hill	26-06-2021	
TB1::Pres TB2::Pres	tressed Concrete, N. Krishna Raju, Tata McGraw hill tressed Concrete, S. Ramamrutham		
TB1::Pres TB2::Pres 43	tressed Concrete, N. Krishna Raju, Tata McGraw hill tressed Concrete, S. Ramamrutham Transmission length	26-06-2021	Lecture
TB1::Pres TB2::Pres 43 44	tressed Concrete, N. Krishna Raju, Tata McGraw hill tressed Concrete, S. Ramamrutham Transmission length Bond Stresses	26-06-2021 28-06-2021	interspersed
TB1::Pres TB2::Pres 43 44 45	tressed Concrete, N. Krishna Raju, Tata McGraw hill tressed Concrete, S. Ramamrutham Transmission length Bond Stresses end zone reinforcement	26-06-2021 28-06-2021 29-06-2021	interspersed with
TB1::Pres TB2::Pres 43 44 45 46	tressed Concrete, N. Krishna Raju, Tata McGraw hill tressed Concrete, S. Ramamrutham Transmission length Bond Stresses end zone reinforcement Codal provisions	26-06-2021 28-06-2021 29-06-2021 30-06-2021	interspersed

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TENTATIVE LESSON PLAN: CE

		ONCRETE (R1642013)		
Section : Se	B Date: 6/4/2021		Page No:	01 of 02
Revision No	00 Prepared By:	K.KIRAN	Approved	By: HOD
	ard, PPTs, Model			
No. of Periods		TOPIC	Tentative Date	Implemente Date
UNIT-I Basi	concepts of Prestre	ssing		
	stand the concepts o			
ΓB1::Prestr	ssed Concrete, N. K	rishna Raju, Tata McGraw hill		
ΓB2::Prestr	ssed Concrete, S. Ra	mamrutham		
1	Advantages and App	olications of Prestressed	06-04-2021	
	Concretes			
2	High Strength Conci	ete	07-04-2021	
3	Permissible Stresses		08-04-2021	
4	Shrinkage		09-04-2021	
5	Creep		10-04-2021	
6	Deformation Charac	teristics	12-04-2021	Lecture
7	High strength Steel-	Types	15-04-2021	intersperse
8	Strength		20-04-2021	with
9	Permissible Stresses		22-04-2021	discussion
10	Relaxation of Stress		23-04-2021	
11	Cover Requirements		27-04-2021	
12	ssed Concrete, S. Ra Introduction		28-04-2021	
12			28-04-2021	
13	Tensioning devices		29-04-2021	Lecture
14	Pre-tensioning Syste		03-05-2021	intersperse
15	Post tensioning Syst		04-05-2021	with
16		n Analysis of prestress and	06-05-2021	discussion
	design			
17	Analysis of prestres		08-05-2021	
18	Resultant Stresses at	a section	10-05-2021	
19	pressure line		11-05-2021	
20	Concepts of load bal	ancing	12-05-2021	
21	Stresses in Tendons		13-05-2021	
22	Cracking moment		15-05-2021	
	ses of Pre-stressing			
		s including the short and long ter	rm losses	
		ishna Raju, Tata McGraw hill		
	sed Concrete, S. Ra			
23		pre-tensioned and post tensioned	18-05-2021	
	members due to vari			Lecture
24	Elastic shortening of		19-05-2021	intersperse
25	shrinkage of concret	2	21-05-2021	with
26	creep of concrete		22-05-2021	discussion
27	Relaxation stress in	steel	24-05-2021	discussion
28	slip in anchorage		25-05-2021	

29	Differential shrinkage	28-05-2021	
30	bending of members and frictional losses	29-05-2021	
31	Total losses allowed for design	31-05-2021	
	Design for Flexural resistance		
	lyze and design prestressed concrete beams under flexi	ure	
	tressed Concrete, N. Krishna Raju, Tata McGraw hill		
	tressed Concrete, S. Ramamrutham		
32	Types of flexural failure	02-06-2021	
33	Code procedures	04-06-2021	Lecture
34	Design of sections for flexure	07-06-202	interspersed
35	Control of deflections	09-06-2021	with
36	Factors influencing Deflection	11-06-2021	discussions
37	Prediction of short term and long term deflections.	12-06-2021	
	UNIT-V Design for Shear and Torsion		
	lyze and design prestressed concrete beams under shea	r	
	tressed Concrete, N. Krishna Raju, Tata McGraw hill		
	tressed Concrete, S. Ramamrutham .	, ,	
38	Shear and Principal Stresses	16-06-2021	Lecture
39	Design of Shear reinforcements	17-06-2021	interspersed
40	Codal Provisions	18-06-2021	with
41	Design for Torsion	19-06-2021	discussions
42	Design for Combined bending, shear and torsion	21-06-2021	discussions
	Transfer of Prestress in pre tensioned members		
	erstand the relevant IS Codal provisions for prestressed	d concrete	
	tressed Concrete, N. Krishna Raju, Tata McGraw hill		
	tressed Concrete, S. Ramamrutham		
43	Transmission length	26-06-2021	
44	Bond Stresses	28-06-2021	Lecture
45	end zone reinforcement	29-06-2021	
	end zone reinforcement Codal provisions	29-06-2021 30-06-2021	interspersed
45	Codal provisions Anchorage zone Stresses in Post Tensioned members		interspersed with
45 46	Codal provisions	30-06-2021	interspersed

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TENTATIVE LESSON PLAN: CIVIL R164201C

SOLID & HAZARDOUS WASTE MANAGEMENT

Course Title:	SOLID & HAZARDOUS WASTE MANAG	GEMENT (CIVIL)
Section: Sec A	Date: 06-04-2021	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 SV		
CO	1:UNDERSTAND THE IMPACT OF SOLID WASTE ON THE I		
	TB: SOLID & HAZARDOUS WASTE MANAGEME	NT BY PM CHERR	Y
1	Introduction to SWM	06-04-2021	
2	Goals and Objectives of Solid Waste Management	07-04-2021	
3	Classification of Solid Waste	08-04-2021	
4	Factors influencing generation of SW	09-04-2021	
5	Sampling and Characterization of Wastes	12-04-2021	Lecture interspersed
6	Characterization of Waste	15-04-2021	with
7	Future changes in waste composition of SW	16-04-2021	discussions
8	Major legislation and monitoring responsibilities	20-04-2021	
9	ISWM terms—WTE, ULB	22-04-2021	
10	TLV, Measurement of NPK and calorific value	23-04-2021	
11	Tutorial-I	26-04-2021	
	UNIT 2: BASIC ELEMENTS IN S	WM	
	CO2: DESIGN THE COLLECTION SYSTEMS OF SOLI	D WASTE OF A TO	OWN
	TB: SOLID & HAZARDOUS WASTE MANAGEME	NT BY PM CHERR	Y
12	Basic elements in SWM	27-04-2021	
13	Functional elements and their interrelationship in SWM	28-04-2021	
14	Principles of SWM	29-04-2021	
15	Onsite handling of wastes	30-04-2021	
16	Storage and Processing of wastes at site	03-05-2021	
17	Types of containers and Collection of solid wastes	04-05-2021	
18	Types of waste Collection systems	05-05-2021	
19	Methods of waste collection-Hauling container system	06-05-2021	Lecture interspersed with discussions
20	Stationary container system	07-05-2021	with discussions
21	Frequency of collection	10-05-2021	
22	Analysis of collection system	11-05-2021	
23	Optimization of collection routes	12-05-2021	
24	Alternative techniques for collection system	13-05-2021	

25	Tutorial-II	17-05-2021	
	UNIT 3: TRANSFER, TRANSPORT AND TRANSFORM	MATION OF WA	ASTES
CO3:	ACQUIRE THE PRINCIPLES OF TRANSFORMATION OF MUN	ICIPAL SOLID W	ASTE TO ENERGY
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN	T BY PM CHERI	RY
26	Transfer, Transport and Transformation of wastes	18-05-2021	
27	Need for Transfer Operations	19-05-2021	
28	Compaction of solid waste	20-05-2021	
29	Means and methods of transporting wastes	21-05-2021	
30	Transfer station and types	24-05-2021	Lecture interspersed
31	Design requirements of TS	25-05-2021	with discussions
32	Separation of wastes- Unit operations	26-05-2021	
33	Transformation of wastes	27-05-2021	
34	Shredding of waste materials and sorting	28-05-2021	
35	Recovery of materials from wastes- RRPs- Tutorial	31-05-2021	
	UNIT 4: PROCESSING AND TREATMENT O		
	CO4: CHARACTERISE THE SOLID WASTE AND DESIGN A		EACHITY
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN		
36	Processing and Treatment of Wastes	01-06-2021	T
37	Processing of Solid Wastes	02-06-2021	
38	Waste Transformation through combustion and composting	03-06-2021	
39	Types of composting- yard wastes	04-06-2021	
40	Windrows, warming composting and vermi-composting	05-06-2021	
41	Anaerobic methods of material recovery	07-06-2021	
42	Treatment of wastes	08-06-2021	Lecture interspersed
43	Energy recovery	09-06-2021	with discussions
44	Biogas generation	10-06-2021	
45	Incineration & Cleaning	11-06-2021	
46	Gasification & pyrolysis- Tutorial-IV	12-06-2021	
10	UNIT 5: DISPOSAL OF SOLID WAS		
	CO5: KNOW THE CRITERIA FOR SELECTION OF LAND		GNING
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN		
47	Disposal of Solid Wastes	14-06-2021	
48	Methods of Disposal	15-06-2021	
49	Site selection for Landfill	16-06-2021	
	Types of landfill	17-06-2021	
50	Design of Landfill	18-06-2021	Lecture interspersed
50 51			
		19-06-2021	with discussions
51	Operations involved at landfill site	19-06-2021 21-06-2021	with discussions
51 52	Operations involved at landfill site Drainage and Leachate collection systems	21-06-2021	with discussions
51 52 53	Operations involved at landfill site		with discussions

	UNIT 6: HAZARDOUS WASTE MANA	GEMENT	
(CO6: KNOW THE METHOD OF TREATMENT AND DISPOSA	AL OF HAZARDO	US WASTES.
	TB: SOLID & HAZARDOUS WASTE MANAGEME	NT BY PM CHER	RY
57	Sources of HW- characteristics, Collection of HW	25-06-2021	
58	Transport and Treatment of HW	28-06-2021	
59	Disposal methods of HW	29-06-2021	
60	Biomedical Waste Management	30-06-2021	Lecture interspersed with discussions
61	Nuclear & E-Waste Management	01-07-2021	with discussions
62	Env. Laws related to HW	02-07-2021	
63	Case Studies - Tutorial-VI	03-07-2021	

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TENTATIVE LESSON PLAN: CIVIL R164201C

SOLID & HAZARDOUS WASTE MANAGEMENT

Course Title: SOLID & HAZARDOUS WASTE MANAGEMENT (CIVIL)				
Section: Sec B	Date: 06-04-2021	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 SV	VM	
COI	:UNDERSTAND THE IMPACT OF SOLID WASTE ON THE H	EALTH OF THE L	LIVING BEINGS
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN	NT BY PM CHERR	Y
1	Introduction to SWM	06-04-2021	Lecture interspersed with discussions
2	Goals and Objectives of Solid Waste Management	07-04-2021	
3	Classification of Solid Waste	08-04-2021	
4	Factors influencing generation of SW	09-04-2021	
5	Sampling and Characterization of Wastes	12-04-2021	
6	Characterization of Waste	15-04-2021	
7	Future changes in waste composition of SW	16-04-2021	
8	Major legislation and monitoring responsibilities	20-04-2021	
9	ISWM terms—WTE, ULB	22-04-2021	
10	TLV, Measurement of NPK and calorific value	23-04-2021	
11	Tutorial-I	26-04-2021	
	UNIT 2: BASIC ELEMENTS IN SV	VM	
	CO2: DESIGN THE COLLECTION SYSTEMS OF SOLI	D WASTE OF A TO	OWN
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN	NT BY PM CHERR	Y
12	Basic elements in SWM	27-04-2021	
13	Functional elements and their interrelationship in SWM	28-04-2021	
14	Principles of SWM	29-04-2021	
15	Onsite handling of wastes	30-04-2021	
16	Storage and Processing of wastes at site	03-05-2021	
17	Types of containers and Collection of solid wastes	04-05-2021	
18	Types of waste Collection systems	05-05-2021	Lecture interspersed with discussions
19	Methods of waste collection-Hauling container system	06-05-2021	
20	Stationary container system	07-05-2021	
21	Frequency of collection	10-05-2021	
22	Analysis of collection system	11-05-2021	
23	Optimization of collection routes	12-05-2021	
24	Alternative techniques for collection system	13-05-2021	
			1

25	Tutorial-II	17-05-2021	
	UNIT 3: TRANSFER, TRANSPORT AND TRANSFORM	MATION OF WA	ASTES
CO3:	ACQUIRE THE PRINCIPLES OF TRANSFORMATION OF MUNI		
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN	T BY PM CHERI	RY
26	Transfer, Transport and Transformation of wastes	18-05-2021	
27	Need for Transfer Operations	19-05-2021	
28	Compaction of solid waste	20-05-2021	
29	Means and methods of transporting wastes	21-05-2021	
30	Transfer station and types	24-05-2021	Lecture interspersed with discussions
31	Design requirements of TS	25-05-2021	
32	Separation of wastes- Unit operations	26-05-2021	
33	Transformation of wastes	27-05-2021	
34	Shredding of waste materials and sorting	28-05-2021	
35	Recovery of materials from wastes- RRPs- Tutorial	31-05-2021	
	UNIT 4: PROCESSING AND TREATMENT O		
	CO4: CHARACTERISE THE SOLID WASTE AND DESIGN A		FACILITY
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN	T BY PM CHER	RY
36	Processing and Treatment of Wastes	01-06-2021	
37	Processing of Solid Wastes	02-06-2021	
38	Waste Transformation through combustion and composting	03-06-2021	
39	Types of composting- yard wastes	04-06-2021	
40	Windrows, warming composting and vermi-composting	05-06-2021	
41	Anaerobic methods of material recovery	07-06-2021	Lecture interspersed
42	Treatment of wastes	08-06-2021	with discussions
43	Energy recovery	09-06-2021	With diseassions
44	Biogas generation	10-06-2021	
45	Incineration & Cleaning	11-06-2021	
46	Gasification & pyrolysis- Tutorial-IV	12-06-2021	
	UNIT 5: DISPOSAL OF SOLID WAS	TES	
	CO5: KNOW THE CRITERIA FOR SELECTION OF LAND		
	TB: SOLID & HAZARDOUS WASTE MANAGEMEN		RY
47	Disposal of Solid Wastes	14-06-2021	
48	Methods of Disposal	15-06-2021	
49	Site selection for Landfill	16-06-2021	
50	Types of landfill	17-06-2021	
51	Design of Landfill	18-06-2021	Lecture interspersed
52	Operations involved at landfill site	19-06-2021	with discussions
53	Drainage and Leachate collection systems	21-06-2021	
54	Designated waste Landfill remediation	22-06-2021	
55	Case Studies	23-06-2021	
56	Case Studies-Tutorial-V		

	UNIT 6: HAZARDOUS WASTE MANA		
C	CO6: KNOW THE METHOD OF TREATMENT AND DISPOSA	AL OF HAZARDO	US WASTES.
	TB: SOLID & HAZARDOUS WASTE MANAGEME	NT BY PM CHER	RY
57	Sources of HW- characteristics, Collection of HW	25-06-2021	Lecture interspersed with discussions
58	Transport and Treatment of HW	28-06-2021	
59	Disposal methods of HW	29-06-2021	
60	Biomedical Waste Management	30-06-2021	
61	Nuclear & E-Waste Management	01-07-2021	
62	Env. Laws related to HW	02-07-2021	
63	Case Studies - Tutorial-VI	03-07-2021	

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