TENTATIVE LESSON PLAN: CE R1622011

Course Title: Building planning and Drawing		
Section : Sec B	Date :	Page No : 01 of 03
Revision No : 00	Prepared By : R.DURGARAO	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	Building Byelaws and Regulations		
1	Introduction	18-11-2019	
2	terminology	19-11-2019	
3	objectives of building byelaws	21-11-2019	
4	floor area ratio	21-11-2019	
5	floor space index	22-11-2019	
6	principles under laying building bye laws	25-11-2019	
7	classification of buildings	26-11-2019	
8	open space requirements	27-11-2019	
9	built up area limitations	27-11-2019	
10	Height of buildings	28-11-2019	
11	wall thickness	29-11-2019	
12	lightening and ventilation requirements	02-12-2019	
13	Tutorial	04-12-2019	
14	Tutorial	6-12-2019	
UNIT –II			
15	Minimum standards for various parts of buildings	06-12-2019	
16	Requirements of different rooms	10-12-2019	
17	their grouping	10-12-2019	
18	characteristics of various types of residential buildings	17-12-2019	
19	relationship between plan, elevation and forms and functions	18-12-2019	Lecture interspersed with discussions lightening and ventilation requirements
20	relationship between plan, elevation and forms and functions bank building	19-12-2019	
21	relationship between plan, elevation and forms and functions office building	20-12-2019	
22	Tutorial	23-12-2019	
23	Tutorial	3-01-2020	
UNIT –III	Public Buildings		
24	Planning of educational institutions	28-01-2020	
25	hospitals	30-01-2020	
26	dispensaries	31-01-2020	
27	office buildings	4-2-2020	
28	banks	6-2-2020	
29	industrial buildings	12-2-2020	
30	hotels and motels	13-2-2020	Lecture interspersed with discussions
31	buildings for recreation	14-2-2020	
32	Landscaping requirements	15-2-2020	
33	Tutorial	25-2-2020	
34	Tutorial	5-3-2020	
UNIT IV	Sign Conventions And Bonds		

35	Brick, stone, plaster, sand filling	21-11-2019 10-12-2019	Lecture interspersed with discussions
36	concrete, glass, steel, cast iron		
37	copper alloys, aluminium alloys etc.,	14-12-2019	
38	lead, zinc, tin etc	15-12-2019	
39	earth, rock, timber and marbles.	16-12-2019	
40	English bond and Flemish bond	18-2-2020	
41	odd and even courses for one	25-2-2020	
42	one and half brick walls in thickness at the junction of a corner	26-2-2020	Lecture interspersed with discussions
43	two and two and half brick walls in thickness at the junction of a corner	10-3-2020	
44	Tutorial	14-3-2020	
UNIT –V	**Doors, Windows, Ventilators And Roofs**		
45	Panelled door, panelled	18-2-2020	
46	Glazed door, glazed windows	25-2-2020	
47	panelled windows, swing ventilators, fixed ventilators	29-2-2020	
48	coupled roof, collar roofs	10-3-2020	
49	King Post truss, Queen Post truss	17-3-2020	
50	Sloped and flat roof and buildings	18-3-2020	
51	drawing plans, Elevations	19-3-2020	
52	Cross Sections of given sloped and flat roof buildings.	20-3-2020	
UNIT –VI	**Planning And Designing Of Buildings**		
53	Draw the Plan, Elevation and Sections of a Residential building from the given line diagram.	24-12-2019 to 30-12-2019	Lecture interspersed with discussions
54	Draw the Plan, Elevation and Sections of a public building from the given line diagram	6-1-2020 to 28-1-2020	
55	Draw the Plan, Elevation and Sections of office building from the given line diagram	04-2-2020	
56	Tutorial	11-2-2020	
57	Tutorial	15-2-2020	

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TENTATIVE LESSON PLAN: R1622011

Course Title: Building planning and Drawing		
Section : Sec A	Date : 18-11-19	Page No : 01 of 03
Revision No : 00	Prepared By :R.DURGARAO	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	Building Byelaws and Regulations		
1	Introduction	18-11-2019	Lecture interspersed with discussions
2	terminology	19-11-2019	
3	objectives of building byelaws	21-11-2019	
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5	floor space index	22-11-2019	
6	principles under laying building bye laws	25-11-2019	
7	classification of buildings	26-11-2019	
8	open space requirements	27-11-2019	
9	built up area limitations	27-11-2019	
10	Height of buildings	28-11-2019	
11	wall thickness	29-11-2019	
12	lightening	02-12-2019	
13	ventilation requirements	04-12-2019	
14	Tutorial	04-12-2019	
15	Tutorial	05-12-2019	
UNIT –II	Residential Buildings		
16	Minimum standards for various parts of buildings	06-12-2019	
17	Requirements of different rooms	10-12-2019	
18	their grouping	10-12-2019	
19	characteristics of various types of residential buildings	17-12-2019	
20	relationship between plan, elevation and forms and functions residential building	18-12-2019	
21	relationship between plan, elevation and forms and functions bank building	19-12-2019	
22	relationship between plan, elevation and forms and functions office building	20-12-2019	
23	Tutorial	23-12-2019	
24	Tutorial	3-01-2020	
UNIT –III	Public Buildings		
25	Planning of educational institutions	28-01-2020	
26	hospitals	30-01-2020	
27	dispensaries	31-01-2020	
28	office buildings	4-2-2020	
29	banks	6-2-2020	
30	industrial buildings	12-2-2020	
31	hotels and motels	13-2-2020	Lecture interspersed with discussions
32	buildings for recreation	14-2-2020	
33	Landscaping requirements	15-2-2020	
34	Tutorial	25-2-2020	
35	Tutorial	5-3-2020	
UNIT IV	Sign Conventions And Bonds		

35	Brick, stone, plaster, sand filling	21-11-2019 10-12-2019	Lecture interspersed with discussions
36	concrete, glass, steel, cast iron		
37	copper alloys, aluminium alloys etc.,	14-12-2019	
38	lead, zinc, tin etc	15-12-2019	
39	earth, rock, timber and marbles.	16-12-2019	
40	English bond and Flemish bond	18-2-2020	
41	odd and even courses for one	25-2-2020	
42	one and half brick walls in thickness at the junction of a corner	26-2-2020	
43	two and two and half brick walls in thickness at the junction of a corner	10-3-2020	
44	Tutorial	14-3-2020	
UNIT –V	**Doors, Windows, Ventilators And Roofs**		
45	Panelled door, panelled	18-2-2020	Lecture interspersed with discussions
46	Glazed door, glazed windows	25-2-2020	
47	panelled windows, swing ventilators, fixed ventilators	29-2-2020	
48	coupled roof, collar roofs	10-3-2020	
49	King Post truss, Queen Post truss	17-3-2020	
50	Sloped and flat roof and buildings	18-3-2020	
51	drawing plans, Elevations	19-3-2020	
52	Cross Sections of given sloped and flat roof buildings.	20-3-2020	
UNIT –VI	**Planning And Designing Of Buildings**		
53	Draw the Plan, Elevation and Sections of a Residential building from the given line diagram.	24-12-2019 to 30-12-2019	Lecture interspersed with discussions
54	Draw the Plan, Elevation and Sections of a public building from the given line diagram	6-1-2020 to 28-1-2020	
55	Draw the Plan, Elevation and Sections of office building from the given line diagram	04-2-2020	
56	Tutorial	11-2-2020	
57	Tutorial	15-2-2020	

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TENTATIVE LESSON PLAN: R1621012

Course Title: Strength of Materials-II R1621012		
Section : Sec A	**Date : 18-11-19**	**Page No :** 01 of 03
Revision No : 00	**Prepared By :** Dr V.Karthik	**Approved By : HOD**

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of 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	18-11-19	Lecture interspersed with discussions
2	Stresses on an inclined section of a bar under axial loading	21-11-19	
3	compound stresses	25-11-19	
4	Normal and tangential stresses on an inclined plane for biaxial stresses	27-11-19	
5	Two perpendicular normal stresses accompanied by a state of simple shear	28-11-19	
6	Mohr's circle of stresses	29-12-19	
7	Principal stresses and strains	30-11-19	
8	Analytical and graphical solutions.	02-12-19	
9	Theories of Failures: Introduction	04-12-19, 05-12-19	
10	Maximum Principal stress theory	06-12-19	
11	Maximum Principal strain theory	07-12-19	
12	Maximum shear stress theory	09-12-19	
13	Maximum strain energy theory	11-12-19	
14	Maximum shear strain energy theory.	12-12-19	
15	Tutorial	13-12-19	
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	16-12-19	
17	Derivation of Torsion equations: $T/J = q/r = N\phi/L$	18-12-19	
18	Assumptions made in the theory of pure torsion	19-12-19	
19	Torsional moment of resistance –	19-12-19	
20	Polar section modulus	20-12-19	
21	Power transmitted by shafts	21-12-19	
22	Combined bending and torsion and end thrust	21-12-19	
23	Design of shafts according to theories of failure	22-12-19	

24	Springs: Introduction	23-12-19	Lecture interspersed with discussion
25	Types of springs	24-12-19	
26	deflection of close coiled helical springs under axial pull	24-12-19	
27	deflection of open coiled helical springs under axial pull	25-12-19	
28	deflection of close coiled helical springs under axial couple	25-12-19	
29	deflection of open coiled helical springs under axial couple	26-12-19	
30	springs in series and parallel.	26-12-19	
31	Tutorial	26-12-19	

UNIT –III FLEXURAL STRESSES &SHEAR STRESSES

CO3 The student will have knowledge of stresses developed in the cross section and bending equations, calculation of section modulus of section for different cross sections

T1 Strength of Materials by S.S Bhavikatti,
T2 Strength of Materials by R.K Bansal, Lakshmi Publication

32	Columns and Struts	02-01-20	Lecture interspersed with discussions
33	: Introduction	04-01-20	
34	Types of columns	04-01-20	
35	– Short, medium and long columns	04-01-20	
36	Axially loaded compression members	06-01-20	
37	Crushing load	07-01-20	
38	Euler's theorem for long columns	09-01-20	
39	Euler's theorem for long columns	10-01-20	
40	assumptions	10-01-20	
41	derivation of Euler's critical load formulae for various end conditions	11-01-2020	
42	derivation of Euler's critical load formulae for various end conditions	27-01-2020	
43	derivation of Euler's critical load formulae for various end conditions	29-01-2020	
44	derivation of Euler's critical load formulae for various end conditions	30-01-2020	
45	Equivalent length of a column	01-02-2020	
46	slenderness ratio	03-02-2020	Lecture interspersed with discussions
47	Euler's critical stress	04-02-2020	
48	Limitations of Euler's theory –	05-02-2020	
49	Limitations of Euler's theory –	11-02-2020	
50	Rankine – Gordon formula	12-02-2020	
51	Long columns subjected to eccentric loading –	17-02-2020	
52	Long columns subjected to eccentric loading –	24-02-2020	
53	Secant formula	25-02-2020	
54	Secant formula	25-02-2020	
55	Empirical formulae	25-02-2020	
56	Straight line formula –	26-02-2020	

57	Prof. Perry's formula	26-02-2020	
58	Tutorial	26-02-2020	

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	27-02-2020	Lecture interspersed with discussions
60	B.M. Core of a section	27-02-2020	
61	determination of stresses in the case of chimneys	28-02-2020	
62	retaining walls	28-02-2020	
63	dams	02-03-2020	
64	conditions for stability	02-03-2020	
65	stresses due to direct loading	02-03-2020	
66	B.M. about both axis	04-03-2020	
67	stresses due to direct loading and B.M. about both axis.	04-03-2020	
68	Tutorial	04-03-2020	

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	05-03-2020	Lecture interspersed with discussions
70	Centroidal principal axes of section	05-03-2020	
71	Graphical method for locating principal axes	06-03-2020	
72	Moments of inertia referred to any set of rectangular axes	06-03-2020	
73	Stresses in beams subjected to unsymmetrical bending	07-03-2020	
74	Principal axes	07-03-2020	
75	Resolution of bending moment into two rectangular axes through the centroid	09-03-2020	
76	Location of neutral axis	10-03-2020	
77	Deflection of beams under unsymmetrical bending.	12-03-2020	
78	Shear Centre: Introduction	12-03-2020	
79	Shear center for symmetrical and unsymmetrical sections	12-03-2020	

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TENTATIVE LESSON PLAN: R1621012

Course Title: Strength of Materials-II R1621012		
Section : Sec B	**Date : 18-11-19**	**Page No :** 01 of 03
Revision No : 00	**Prepared By :** Anuradha.G	**Approved By : HOD**

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of 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	18-11-19	Lecture interspersed with discussions
2	Stresses on an inclined section of a bar under axial loading	21-11-19	
3	compound stresses	25-11-19	
4	Normal and tangential stresses on an inclined plane for biaxial stresses	27-11-19	
5	Two perpendicular normal stresses accompanied by a state of simple shear	28-11-19	
6	Mohr's circle of stresses	29-12-19	
7	Principal stresses and strains	30-11-19	
8	Analytical and graphical solutions.	02-12-19	
9	Theories of Failures: Introduction	04-12-19, 05-12-19	
10	Maximum Principal stress theory	06-12-19	
11	Maximum Principal strain theory	07-12-19	
12	Maximum shear stress theory	09-12-19	
13	Maximum strain energy theory –	11-12-19	
14	Maximum shear strain energy theory.	12-12-19	
15	Tutorial	13-12-19	
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	16-12-19	
17	Derivation of Torsion equations: $T/J = q/r = N\phi/L$	18-12-19	
18	Assumptions made in the theory of pure torsion	19-12-19	
19	Torsional moment of resistance –	19-12-19	
20	Polar section modulus	20-12-19	
21	Power transmitted by shafts	21-12-19	
22	Combined bending and torsion and end thrust	21-12-19	
23	Design of shafts according to theories of failure	22-12-19	

24	Springs: Introduction	23-12-19	Lecture interspersed with discussion
25	Types of springs	24-12-19	
26	deflection of close coiled helical springs under axial pull	24-12-19	
27	deflection of open coiled helical springs under axial pull	25-12-19	
28	deflection of close coiled helical springs under axial couple	25-12-19	
29	deflection of open coiled helical springs under axial couple	26-12-19	
30	springs in series and parallel.	26-12-19	
31	Tutorial	26-12-19	

UNIT –III FLEXURAL STRESSES &SHEAR STRESSES

CO3 The student will have knowledge of stresses developed in the cross section and bending equations, calculation of section modulus of section for different cross sections

T1 Strength of Materials by S.S Bhavikatti,
T2 Strength of Materials by R.K Bansal, Lakshmi Publication

32	Columns and Struts	02-01-20	Lecture interspersed with discussions
33	: Introduction	04-01-20	
34	Types of columns	04-01-20	
35	– Short, medium and long columns	04-01-20	
36	Axially loaded compression members	06-01-20	
37	Crushing load	07-01-20	
38	Euler's theorem for long columns	09-01-20	
39	Euler's theorem for long columns	10-01-20	
40	assumptions	10-01-20	
41	derivation of Euler's critical load formulae for various end conditions	11-01-2020	
42	derivation of Euler's critical load formulae for various end conditions	27-01-2020	
43	derivation of Euler's critical load formulae for various end conditions	29-01-2020	
44	derivation of Euler's critical load formulae for various end conditions	30-01-2020	
45	Equivalent length of a column	01-02-2020	
46	slenderness ratio	03-02-2020	Lecture interspersed with discussions
47	Euler's critical stress	04-02-2020	
48	Limitations of Euler's theory –	05-02-2020	
49	Limitations of Euler's theory –	11-02-2020	
50	Rankine – Gordon formula	12-02-2020	
51	Long columns subjected to eccentric loading –	17-02-2020	
52	Long columns subjected to eccentric loading –	24-02-2020	
53	Secant formula	25-02-2020	
54	Secant formula	25-02-2020	
55	Empirical formulae	25-02-2020	
56	Straight line formula –	26-02-2020	

57	Prof. Perry's formula	26-02-2020	
58	Tutorial	26-02-2020	

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	27-02-2020	Lecture interspersed with discussions
60	B.M. Core of a section	27-02-2020	
61	determination of stresses in the case of chimneys	28-02-2020	
62	retaining walls	28-02-2020	
63	dams	02-03-2020	
64	conditions for stability	02-03-2020	
65	stresses due to direct loading	02-03-2020	
66	B.M. about both axis	04-03-2020	
67	stresses due to direct loading and B.M. about both axis.	04-03-2020	
68	Tutorial	04-03-2020	

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.

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

69	Introduction	05-03-2020	Lecture interspersed with discussions
70	Centroidal principal axes of section	05-03-2020	
71	Graphical method for locating principal axes	06-03-2020	
72	Moments of inertia referred to any set of rectangular axes	06-03-2020	
73	Stresses in beams subjected to unsymmetrical bending	07-03-2020	
74	Principal axes	07-03-2020	
75	Resolution of bending moment into two rectangular axes through the centroid	09-03-2020	
76	Location of neutral axis	10-03-2020	
77	Deflection of beams under unsymmetrical bending.	12-03-2020	
78	Shear Centre: Introduction	12-03-2020	
79	Shear center for symmetrical and unsymmetrical sections	12-03-2020	

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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	21-12-19	
31	Rayleigh's method	23-12-19	
32	Buckingham's pi theorem	24-12-19	
33	study of Hydraulic models	26-12-19	
34	Geometric, kinematic	27-12-19	
35	Dynamic similarities	28-12-19	
36	dimensionless numbers	30-12-19	Lecture interspersed with discussions
37	model and prototype relations.	31-12-19	
38	Problems	2-1-20	
39	Problems	3-1-20	
40	Problems	4-1-20	
41	Problems	6-1-20	

UNIT IV BASICS OF TURBO MACHINERY

CO4 The student will be able to understand the basic concepts of impact of jet in the direction and angular momentum.

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.

42	Hydrodynamic force of jets on stationary	27-1-20	Lecture interspersed with discussions
43	moving flat	28-1-20	
44	inclined and curved vanes	30-1-20	
45	jet striking centrally and at tip	3-2-20	
46	velocity triangles at inlet and outlet,	4-1-20	
47	expressions for work done and efficiency	5-1-20	
48	Angular momentum principle	6-2-20	
49	Problems	7-2-20	Lecture interspersed with discussions
50	problems	8-2-20	
51	problems	10-2-20	

UNIT –V HYDRAULIC TURBINES

CO5 The student will be able to understand the basic concepts. To understand the 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.

52	Layout of a typical Hydropower installation	11-2-20	
53	Heads and efficiencies	12-2-20	
54	classification of turbines	13-2-20	
55	Pelton wheel	14-2-20	
56	Francis turbine	15-2-20	
57	Kaplan turbine	17-2-20	
58	working, working proportions velocity diagram, work done and efficiency	24-2-20	

59	hydraulic design, draft tube, theory and efficiency	25-2-20	
60	Governing of turbines ,surge tanks-unit	26-2-20	
61	specific quantities, selection of turbines,	27-2-20	
62	performance characteristics	28-2-20	
63	geometric similarity-cavitations.	29-2-20	
64	Problems	2-3-20	
UNIT –VI 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**			
65	Pump installation details	3-3-20	
66	classification Work done- Manometric head	4-3-20	
67	Work done- Manometric head	5-3-20	
68	minimum starting speed	6-3-20	
69	losses and efficiencies-specific speed	7-3-20	
70	multistage pumps-pumps in parallel and series	8-3-20	
71	performance of pumps-characteristic curves	10-3-20	
72	NPSH- Cavitation.	11-3-20	
73	**RECIPROCATING PUMPS:** Introduction	12-3-20	
74	classification components, working	13-3-20	

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TENTATIVE LESSON PLAN: CE R1622013

Course Title: H&HM		
Section : Sec b	Date : 18-11-2019	Page No : 01 of 03
Revision No : 00	Prepared By :M.Karthik Khumar	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of 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	18-11-19	
3	Types of flows	19-11-19	
4	Velocity distribution	20-11-19	
5	Energy and momentum correction factors	21-11-19	
6	Chezy's formulae for uniform flow	22-11-19	
7	Manning's formulae for uniform flow	23-11-19	
8	Most Economical sections	25-11-19	
9	Critical flow: Specific energy	26-11-19	
10	critical depth	27-11-19	
11	computation of critical depth	28-11-19	
12	Problems	29-11-19	
13	Problems	30-11-19	
14	Problems	2-12-19	
15	Problems	3-12-19	
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.**			Lecture interspersed with discussions
16	Steady Gradually Varied flow	4-12-19	
17	Dynamic equation slope	5-12-19	
18	Mild, Critical slope	6-12-19	
19	Steep, horizontal	7-12-19	
20	adverse slope	9-12-19	
21	surface profiles	10-12-19	
22	Profiles direct step method	11-12-19	
23	Rapidly varied flow	12-12-19	
24	hydraulic jump	13-12-19	
25	energy dissipation	16-12-19	
26	Problems	17-12-19	
27	Problems	18-12-19	
28	Problems	19-12-19	
29	Problems	20-12-19	

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	21-12-19	
31	Rayleigh's method	23-12-19	
32	Buckingham's pi theorem	24-12-19	
33	study of Hydraulic models	26-12-19	
34	Geometric, kinematic	27-12-19	
35	Dynamic similarities	28-12-19	
36	dimensionless numbers	30-12-19	Lecture interspersed with discussions
37	model and prototype relations.	31-12-19	
38	Problems	2-1-20	
39	Problems	3-1-20	
40	Problems	4-1-20	
41	Problems	6-1-20	

UNIT IV BASICS OF TURBO MACHINERY

CO4 The student will be able to understand the basic concepts of impact of jet in the direction and angular momentum.

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.

42	Hydrodynamic force of jets on stationary	27-1-20	Lecture interspersed with discussions
43	moving flat	28-1-20	
44	inclined and curved vanes .	30-1-20	
45	jet striking centrally and at tip	3-2-20	
46	velocity triangles at inlet and outlet,	4-1-20	
47	expressions for work done and efficiency	5-1-20	
48	Angular momentum principle	6-2-20	
49	Problems	7-2-20	Lecture interspersed with discussions
50	problems	8-2-20	
51	problems	10-2-20	

UNIT –V HYDRAULIC TURBINES

CO5 The student will be able to understand the basic concepts. To understand the 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.

52	Layout of a typical Hydropower installation	11-2-20	
53	Heads and efficiencies	12-2-20	
54	classification of turbines	13-2-20	
55	Pelton wheel	14-2-20	
56	Francis turbine	15-2-20	
57	Kaplan turbine	17-2-20	
58	working, working proportions velocity diagram, work done and efficiency	24-2-20	

59	hydraulic design, draft tube, theory and efficiency	25-2-20	
60	Governing of turbines ,surge tanks-unit	26-2-20	
61	specific quantities, selection of turbines,	27-2-20	
62	performance characteristics	28-2-20	
63	geometric similarity-cavitations.	29-2-20	
64	Problems	2-3-20	
UNIT –VI 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**			
65	Pump installation details	3-3-20	
66	Classification, Work done- Manometric head	4-3-20	
67	minimum starting speed, losses and efficiencies-specific speed	5-3-20	
68	multistage pumps-pumps in parallel ,series	6-3-20	
69	performance of pumps-characteristic curves, NPSH- Cavitation.	7-3-20	
70	**RECIPROCATING PUMPS:** Introduction	8-3-20	
71	Classification, components, working	10-3-20	
72	work done and slip.	11-3-20	
73	Problems	12-3-20	
74	Problems	13-3-20	

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TENTATIVE LESSON PLAN: CIVIL R1622014

Course Title: CONCRETE TECHNOLOGY		
Section: Sec A	**Date: 18-11-2019**	**Page No:** 01 of 03
Revision No: 00	**Prepared By:** A.KRISHNA PRIYA	**Approved By: HOD**

Tools: Black board, power point presentations

UNIT 1 CEMENT,AGGREGATES&ADMIXTURES

CO1: To make students understand concepts hydration, setting time of cement, fineness of cement, tests for physical properties, grades of cement, admixtures

TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi

No. of Periods	TOPIC	Tentative Dates	MODE OF DELIVERY
1	Introduction To Cement, Portland Cement	18-11-19	Lecture interspersed with discussions
2	Chemical Composition, Hydration Of Cement, Setting Time Of Cement	21-11-19	
3	Fineness Of Cement &Structure Of Hydrated Cement	25-11-19	
4	Test For Physical Properties Of Cement	27-11-19	
5	Different Grades Of Cement , Admixtures: mineral and chemical admixtures	28-11-19	
6	Accelerators, Retarders	29-12-19	
7	Plasticizers, Super Plasticizers, air entrainers	30-11-19	
8	Fly ash, Silica Fume	02-12-19	
9	Classification Of Aggregates based on Particle Shape & Texture	04-12-19, 05-12-19	
10	Bond & Strength Of aggregates & other mechanical properties of aggregates	06-12-19	
11	Bulk Density, Specific Gravity ,Porosity	07-12-19	
12	Adsorption ,Moisture Content Of Aggregates	09-12-19	
13	Bulking Of Sand, Deleterious Substances In Aggregates	11-12-19	
14	Soundness Of Aggregates , Alkali Aggregate Reaction	12-12-19	
15	Thermal properties of aggregates, Sieve Analysis	13-12-19	
16	Grading curves, Fineness modulus	16-12-19	
17	Grading Of Fine & Coarse Aggregate	18-12-19	
18	Gap Graded And Well Graded Aggregate, Maximum Aggregate Size & Quality Of Mixing Water	19-12-19	
19	Tutorial	19-12-19	

UNIT 2 FRESH CONCRETE

CO 2: To make students understand mixing, placing, compaction, finishing, curing, properties, workability, segregation & bleeding

TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi

20	Introduction, Steps In Manufacture Of Concrete-proportion Mixing, placing, compaction, finishing	20-12-19	
21	Curing methods, Including Various Types In	21-12-19	

	Each Stage		Lecture interspersed with discussions
22	Properties Of Fresh Concrete	22-12-19	
23	Workability, Factors affecting on Workability	23-12-19	
24	Measurement Of Workability By Different Tests	24-12-19	
25	Setting Times Of Concrete, Effect Of Time And Temperature On Workability	25-12-19	
26	Segregation & bleeding, Mixing and vibration of concrete	26-12-19	
27	Ready mixed concrete, Shotcrete.	26-12-19	
28	Tutorial	26-12-19	

UNIT 3 Hardened Concrete

CO 3: To make students understand W/C ratio, gel space ratio, nature of strength of concrete, curing methods

TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi

29	Introduction: W / C ratio, Abram's Law –Gel space ratio	02-01-20	Lecture interspersed with discussions
30	Factors affecting strength	04-01-20	
31	Nature of strength of concrete	04-01-20	
32	Maturity concept	04-01-20	
33	Strength in tension & compression	06-01-20	
34	Relation between compression & tensile strength	07-01-20	
35	Testing of Hardened Concrete: Compression tests, Tension tests ,Flexure tests	09-01-20	
36	Splitting tests	10-01-20	
37	Nondestructive testing methods, codal Provisions for NDT.	10-01-20	
38	Tutorial	11-01-2020	

UNIT 4 Elasticity, Creep & Shrinkage

CO 4: To make student understand modulus of elasticity, poisons ratio, creep of concrete, shrinkage concepts

TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi

39	Introduction ,Modulus of elasticity	27-01-2020	Lecture interspersed with discussions
40	Dynamic modulus of elasticity & Poisson's ratio	29-01-2020	
41	Creep of concrete & Factors influencing creep,	30-01-2020	
42	Relation between creep & time	01-02-2020	
43	Nature of creep & Effects of creep	03-02-2020	
44	Shrinkage & types of shrinkages	04-02-2020	
45	Tutorial	05-02-2020	

UNIT 5 Mix Design

CO 5: To make students understand durability of concrete, quality of concrete, mix design

TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi

46	Introduction: Factors in the choice of mix proportions	11-02-2020	

47	Durability of concrete ,Quality Control of concrete	12-02-2020	Lecture interspersed with discussions
48	Statistical methods & Acceptance criteria	17-02-2020	
49	Concepts Proportioning of concrete mixes by various methods	24-02-2020	
50	BIS method of mix design	25-02-2020	
51	Tutorial	26-02-2020	
UNIT 6 Special Concretes **CO 6:** To make students understand concepts of special concrete **TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi**			
52	Ready mixed concrete, Shotcrete.	27-02-2020	Lecture interspersed with discussions
53	Light weight aggregate concrete	28-02-2020	
54	Cellular concrete	02-03-2020	
55	No-fines concrete, High density concrete	04-03-2020	
56	Fibre reinforced concrete, Different types of fibres – Factors affecting properties of F.R.C	05-03-2020	
57	Polymer concrete –Types of Polymer concrete, Properties	06-03-2020	
58	High performance concrete	07-03-2020	
59	Self consolidating concrete, SIFCON, self healing concrete	09-03-2020	
60	Tutorial class :FRC	10-03-2020	
61	Previous question papers revision	12-03-2020	

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TENTATIVE LESSON PLAN: CIVIL R1622014

Course Title: CONCRETE TECHNOLOGY		
Section: Sec B	**Date: 18-11-2019**	**Page No:** 01 of 03
Revision No: 00	**Prepared By:** A.KRISHNA PRIYA	**Approved By: HOD**

Tools: Black board, power point presentations

UNIT 1 CEMENT,AGGREGATES&ADMIXTURES

CO1: To make students understand concepts hydration, setting time of cement, fineness of cement, tests for physical properties, grades of cement, admixtures

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No. of Periods	TOPIC	Tentative Dates	MODE OF DELIVERY
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16	Grading curves, Fineness modulus	16-12-19	
17	Grading Of Fine & Coarse Aggregate	18-12-19	
18	Gap Graded And Well Graded Aggregate, Maximum Aggregate Size & Quality Of Mixing Water	19-12-19	
19	Tutorial	19-12-19	

UNIT 2 FRESH CONCRETE

CO 2: To make students understand mixing, placing, compaction, finishing, curing, properties, workability, segregation & bleeding

TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi

20	Introduction, Steps In Manufacture Of Concrete-proportion Mixing, placing, compaction, finishing	20-12-19	
21	Curing methods, Including Various Types In	21-12-19	

	Each Stage		Lecture interspersed with discussions
22	Properties Of Fresh Concrete	22-12-19	
23	Workability, Factors affecting on Workability	23-12-19	
24	Measurement Of Workability By Different Tests	24-12-19	
25	Setting Times Of Concrete, Effect Of Time And Temperature On Workability	25-12-19	
26	Segregation & bleeding, Mixing and vibration of concrete	26-12-19	
27	Ready mixed concrete, Shotcrete.	26-12-19	
28	Tutorial	26-12-19	
UNIT 3 Hardened Concrete **CO 3:** To make students understand W/C ratio, gel space ratio, nature of strength of concrete, curing methods **TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi**			
29	Introduction: W / C ratio, Abram's Law –Gel space ratio	02-01-20	Lecture interspersed with discussions
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32	Maturity concept	04-01-20	
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34	Relation between compression & tensile strength	07-01-20	
35	Testing of Hardened Concrete: Compression tests, Tension tests ,Flexure tests	09-01-20	
36	Splitting tests	10-01-20	
37	Nondestructive testing methods, codal Provisions for NDT.	10-01-20	
38	Tutorial	11-01-2020	
UNIT 4 Elasticity, Creep & Shrinkage **CO 4:**To make student understand modulus of elasticity, poisons ratio, creep of concrete, shrinkage concepts **TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi**			
39	Introduction ,Modulus of elasticity	27-01-2020	Lecture interspersed with discussions
40	Dynamic modulus of elasticity & Poisson's ratio	29-01-2020	
41	Creep of concrete & Factors influencing creep,	30-01-2020	
42	Relation between creep & time	01-02-2020	
43	Nature of creep & Effects of creep	03-02-2020	
44	Shrinkage & types of shrinkages	04-02-2020	
45	Tutorial	05-02-2020	
UNIT 5 Mix Design **CO 5**: To make students understand durability of concrete, quality of concrete, mix design **TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi**			
46	Introduction: Factors in the choice of mix proportions	11-02-2020	

47	Durability of concrete ,Quality Control of concrete	12-02-2020	Lecture interspersed with discussions
48	Statistical methods & Acceptance criteria	17-02-2020	
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50	BIS method of mix design	25-02-2020	
51	Tutorial	26-02-2020	
UNIT 6 Special Concretes **CO 6:** To make students understand concepts of special concrete **TB: "A Textbook of Concrete Technology by M.S.SHETTY-S.CHAND Publishers", New Delhi**			
52	Ready mixed concrete, Shotcrete.	27-02-2020	Lecture interspersed with discussions
53	Light weight aggregate concrete	28-02-2020	
54	Cellular concrete	02-03-2020	
55	No-fines concrete, High density concrete	04-03-2020	
56	Fibre reinforced concrete, Different types of fibres – Factors affecting properties of F.R.C	05-03-2020	
57	Polymer concrete –Types of Polymer concrete, Properties	06-03-2020	
58	High performance concrete	07-03-2020	
59	Self consolidating concrete, SIFCON, self healing concrete	09-03-2020	
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TENTATIVE LESSON PLAN: (R1622015)

Course Title: Structural Analysis-1 (R1622015)		
Section : Sec A	**Date :** 18/11/2019	**Page No :** 01 of 04
Revision No : 00	**Prepared By :** K. CHANDRA PADMAKAR	**Approved By : HOD**

Tools: Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I PROPPED CANTILEVER BEAMS CO1 The student will be able Distinguish the determinate and indeterminate structures. **T1** Theory of Structures by S. Ramamrutham & R. Narayan, **T2** Structural Analysis by V. S. Prasad **T3** Theory of Structures by R. S. Khurmi			
1	INTRODUCTION TO PROPPED CANTILEVER BEAMS	18/11/19	Lecture interspersed with discussions
2	ANALYSIS OF PROPPED CANTILEVER BEAM WITH POINT LOAD-SF	18/11/19	
3	ANALYSIS OF PROPPED CANTILEVER BEAM WITH POINT LOAD-BMD	19/11/19	
4	ANALYSIS OF PROPPED CANTILEVER BEAM POIND LOAD DEFLECTION	19/11/19	
5	ANALYSIS OF PROPPED CANTILEVER BEAM UDL-SF	20/11/19	
6	ANALYSIS OF PROPPED CANTILEVER BEAM UDL-BMD	20/11/19	
7	ANALYSIS OF PROPPED CANTILEVER BEAM UDL-SF	21/11/19	
8	ANALYSIS OF PROPPED CANTILEVER BEAM-DEFLECTION	21/11/19	
9	ANALYSIS OF PROPPED CANTILEVER BEAM WITH POINT LOAD PROBLEM	22/11/19	
10	ANALYSIS OF PROPPED CANTILEVER BEAM UDL-PROBLM	22/11/19	
11	ANALYSIS OF PROPPED CANTILEVER BEAM COMBINATION OF LOAD CONDITION-PROBLEM	23/11/19	
UNIT –II FIXED BEAMS CO2 The student will be able to Identify the behaviour of structures due to the expected loads, including the moving loads, acting on the structure **T1** Theory of Structures by S. Ramamrutham & R. Narayan, **T2** Structural Analysis by V. S. Prasad **T3** Theory of Structures by R. S. Khurmi			Lecture interspersed with discussion
12	- INTRODUCTION TO FIXED BEAMS	26/11/19	
13	ANALYSIS OF FIXED BEAM CARRYING TWO UNSYMMETRICAL LOAD	30/11/19	
14	ANALYSIS OF FIXED BEAM CARRYING POINT LOAD AT CENTRE	2/12/19	
15	ANALYSIS OF FIXED BEAM CARRYING ECENTRIC POINT LOAD	3/12/19	
16	ANALYSIS OF FIXED BEAM CARRYING UDL	5/12/19	
17	ANAYLYSIS OF FIXED BEAM CARRYING UVL	6/12/19	

UNIT –III CONTINUOUS BEAM

CO3 The student can be able to estimate the bending moment and shear forces in beams for different fixity conditions.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

18	INTRODUCTION TO CONTINUOUS BEAMS	19/12/19	Lecture interspersed with discussion
19	CLAPEYRON'S THEOREM OF THREE MOMENTS	20/12/19	
20	ANALYSIS OF CONTINUOUS BEAMS WITH CONSTANT MOMENT OF INERTIA WITH ONE OR BOTH ENDS FIXED	24/12/19	
21	CONTINUOUS BEAMS WITH OVERHANG	26/12/19	
22	CONTINUOUS BEAMS WITH DIFFERENT MOMENT OF INERTIA FOR DIFFERENT SPANS	27/12/19	
23	EFFECTS OF SINKING OF SUPPORTS	2/01/20	
24	SHEAR FORCE AND BENDING MOMENT DIAGRAMS.	8/01/20	

UNIT IV SLOPE DEFLECTION METHOD

CO4 Make the student to Analyze the continuous beams using various methods -, three moment method, slope deflection method, energy theorems.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

25	SLOPE-DEFLECTION METHOD-INTRODUCTION	10/01/20	Lecture interspersed with discussions
26	DERIVATION OF SLOPE DEFLECTION EQUATION	17/01/20	
27	APPLICATION TO CONTINUOUS BEAMS WITH SUPPORTS	6/02/20	
28	APPLICATION TO CONTINUOUS BEAMS WITHOUT SUPPORTS	8/02/20	

UNIT – V ENERGY THEOREMS

CO5 Make the student to Analyze the continuous beams using various methods -energy theorems.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

29	**ENERGY THEOREMS**-INTRODUCTION	10/02/20	Lecture interspersed with discussions
30	STRAIN ENERGY IN LINEAR ELASTIC SYSTEM	11/02/20	
31	EXPRESSION OF STRAIN ENERGY DUE TO AXIAL LOAD	12/02/20	
32	BENDING MOMENT AND SHEAR FORCES	13/02/20	
33	CASTIGLIANO'S FIRST THEOREM	14/02/20	
34	DEFLECTIONS OF SIMPLE BEAMS	15/02/20	
35	PIN JOINTED TRUSSES	13/02/20	

UNIT –VI MOVING LOADS AND INFLUENCE LINES

CO6 Analyze the loads in Pratt and Warren trusses when loads of different types and spans are passing over the truss.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

36	**MOVING LOADS AND INFLUENCE LINES-** INTRODUCTION	24/02/20	Lecture interspersed with discussions
37	INTRODUCTION MAXIMUM SF AND BM AT A GIVEN SECTION	24/2/20	
38	ABSOLUTE MAXIMUM S.F. AND B.M DUE TO SINGLE CONCENTRATED LOAD	25/2/20	
39	ABSOLUTE MAXIMUM S.F. AND B.M DUE TO SINGLE UDL LONGAR THAN SPAN	25/02/20	
40	ABSOLUTE MAXIMUM S.F. AND B.M DUE TO SINGLE UDL SHORTER THAN SPAN	25/02/20	
41	TWO POINT LOADS WITH FIXED DISTANCE BETWEEN THEM AND SEVERAL POINT LOADS	26/02/20	
42	EQUIVALENT UNIFORMLY DISTRIBUTED LOAD	27/02/20	
43	FOCAL LENGTH.	27/02/20	
44	**INFLUENCE LINES-** INTRODUCTION	28/02/20	
45	DEFINITION OF INFLUENCE LINE FOR SF	29/02/20	
46	INFLUENCE LINE FOR BM	02/03/20	
47	LOAD POSITION FOR MAXIMUM SF AT A SECTION	03/03/20	
48	POSITION FOR MAXIMUM BM AT A SECTIONS	04/03/20	
49	SINGLE POINT LOAD, U.D. LOAD LONGER THAN THE SPAN	06/03/20	
50	U.D. LOAD SHORTER THAN THE SPAN	07/03/20	
51	INFLUENCE LINES FOR FORCES IN MEMBERS OF PRATT AND WARREN TRUSSES	09/03/20	

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TENTATIVE LESSON PLAN: (R1622015)

Course Title: Structural Analysis-1 (R1622015)		
Section : Sec B	**Date :** 18/11/2019	**Page No :** 01 of 04
Revision No : 00	**Prepared By :** K. CHANDRA PADMAKAR	**Approved By : HOD**

Tools: Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I PROPPED CANTILEVER BEAMS CO1 The student will be able Distinguish the determinate and indeterminate structures. **T1** Theory of Structures by S. Ramamrutham & R. Narayan, **T2** Structural Analysis by V. S. Prasad **T3** Theory of Structures by R. S. Khurmi			
1	INTRODUCTION TO PROPPED CANTILEVER BEAMS	18/11/19	Lecture interspersed with discussions
2	ANALYSIS OF PROPPED CANTILEVER BEAM WITH POINT LOAD-SF	18/11/19	
3	ANALYSIS OF PROPPED CANTILEVER BEAM WITH POINT LOAD-BMD	19/11/19	
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10	ANALYSIS OF PROPPED CANTILEVER BEAM UDL-PROBLM	22/11/19	
11	ANALYSIS OF PROPPED CANTILEVER BEAM COMBINATION OF LOAD CONDITION-PROBLEM	23/11/19	
UNIT –II FIXED BEAMS CO2 The student will be able to Identify the behaviour of structures due to the expected loads, including the moving loads, acting on the structure **T1** Theory of Structures by S. Ramamrutham & R. Narayan, **T2** Structural Analysis by V. S. Prasad **T3** Theory of Structures by R. S. Khurmi			Lecture interspersed with discussion
12	- INTRODUCTION TO FIXED BEAMS	26/11/19	
13	ANALYSIS OF FIXED BEAM CARRYING TWO UNSYMMETRICAL LOAD	30/11/19	
14	ANALYSIS OF FIXED BEAM CARRYING POINT LOAD AT CENTRE	2/12/19	
15	ANALYSIS OF FIXED BEAM CARRYING ECENTRIC POINT LOAD	3/12/19	
16	ANALYSIS OF FIXED BEAM CARRYING UDL	5/12/19	
17	ANAYLYSIS OF FIXED BEAM CARRYING UVL	6/12/19	

UNIT –III CONTINUOUS BEAM

CO3 The student can be able to estimate the bending moment and shear forces in beams for different fixity conditions.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

18	INTRODUCTION TO CONTINUOUS BEAMS	19/12/19	Lecture interspersed with discussion
19	CLAPEYRON'S THEOREM OF THREE MOMENTS	20/12/19	
20	ANALYSIS OF CONTINUOUS BEAMS WITH CONSTANT MOMENT OF INERTIA WITH ONE OR BOTH ENDS FIXED	24/12/19	
21	CONTINUOUS BEAMS WITH OVERHANG	26/12/19	
22	CONTINUOUS BEAMS WITH DIFFERENT MOMENT OF INERTIA FOR DIFFERENT SPANS	27/12/19	
23	EFFECTS OF SINKING OF SUPPORTS	2/01/20	
24	SHEAR FORCE AND BENDING MOMENT DIAGRAMS.	8/01/20	

UNIT IV SLOPE DEFLECTION METHOD

CO4 Make the student to Analyze the continuous beams using various methods -, three moment method, slope deflection method, energy theorems.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

25	SLOPE-DEFLECTION METHOD-INTRODUCTION	10/01/20	Lecture interspersed with discussions
26	DERIVATION OF SLOPE DEFLECTION EQUATION	17/01/20	
27	APPLICATION TO CONTINUOUS BEAMS WITH SUPPORTS	6/02/20	
28	APPLICATION TO CONTINUOUS BEAMS WITHOUT SUPPORTS	8/02/20	

UNIT – V ENERGY THEOREMS

CO5 Make the student to Analyze the continuous beams using various methods -energy theorems.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

29	**ENERGY THEOREMS**-INTRODUCTION	10/02/20	Lecture interspersed with discussions
30	STRAIN ENERGY IN LINEAR ELASTIC SYSTEM	11/02/20	
31	EXPRESSION OF STRAIN ENERGY DUE TO AXIAL LOAD	12/02/20	
32	BENDING MOMENT AND SHEAR FORCES	13/02/20	
33	CASTIGLIANO'S FIRST THEOREM	14/02/20	
34	DEFLECTIONS OF SIMPLE BEAMS	15/02/20	
35	PIN JOINTED TRUSSES	13/02/20	

UNIT –VI MOVING LOADS AND INFLUENCE LINES

CO6 Analyze the loads in Pratt and Warren trusses when loads of different types and spans are passing over the truss.

T1 Theory of Structures by S. Ramamrutham & R. Narayan,

T2 Structural Analysis by V. S. Prasad

T3 Theory of Structures by R. S. Khurmi

36	**MOVING LOADS AND INFLUENCE LINES-** INTRODUCTION	24/02/20	Lecture interspersed with discussions
37	INTRODUCTION MAXIMUM SF AND BM AT A GIVEN SECTION	24/2/20	
38	ABSOLUTE MAXIMUM S.F. AND B.M DUE TO SINGLE CONCENTRATED LOAD	25/2/20	
39	ABSOLUTE MAXIMUM S.F. AND B.M DUE TO SINGLE UDL LONGAR THAN SPAN	25/02/20	
40	ABSOLUTE MAXIMUM S.F. AND B.M DUE TO SINGLE UDL SHORTER THAN SPAN	25/02/20	
41	TWO POINT LOADS WITH FIXED DISTANCE BETWEEN THEM AND SEVERAL POINT LOADS	26/02/20	
42	EQUIVALENT UNIFORMLY DISTRIBUTED LOAD	27/02/20	
43	FOCAL LENGTH.	27/02/20	
44	**INFLUENCE LINES-** INTRODUCTION	28/02/20	
45	DEFINITION OF INFLUENCE LINE FOR SF	29/02/20	
46	INFLUENCE LINE FOR BM	02/03/20	
47	LOAD POSITION FOR MAXIMUM SF AT A SECTION	03/03/20	
48	POSITION FOR MAXIMUM BM AT A SECTIONS	04/03/20	
49	SINGLE POINT LOAD, U.D. LOAD LONGER THAN THE SPAN	06/03/20	
50	U.D. LOAD SHORTER THAN THE SPAN	07/03/20	
51	INFLUENCE LINES FOR FORCES IN MEMBERS OF PRATT AND WARREN TRUSSES	09/03/20	

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18/11/19

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TENTATIVE LESSON PLAN: R1622016

Course Title: TRANSPORTATION ENGINEERING – I		
Section : Sec B	**Date :** 19-11-19	**Page No :** 01 of 03
Revision No : 00	**Prepared By** : A.Tanusree	**Approved By : HOD**

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –IHIGHWAY PLANNINGAND ALIGINEMENT			
1	Introduction	19-11-19	
2	Highway development in India	20-11-19	
3	Classification of Roads	20-11-19	
4	Road Network Patterns	23-11-19	
5	Necessity for Highway Planning	23-11-19	
6	Different Road Development Plans - First	24-11-19	
7	second	24-11-19	
8	third road development plans	24-11-19	
9	road development vision 2021	24-11-19	
10	Vision 2025	24-11-19	
11	Planning Surveys	26-11-19	
12	Highway Alignment	26-11-19	
13	Factors affecting Alignment	27-11-19	
14	Engineering Surveys	27-11-19	
15	Drawings and Reports	28-11-19	
UNIT –II Highway Geometric Design			
16	Introduction	29-11-19	
17	Importance of Geometric Design	29-11-19	
`18	Design controls and Criteria	29-11-19	

`18	Design controls and Criteria	29-11-18	
19	Highway Cross Section Elements	30-11-18	
20	Sight Distance Elements	30-11-18	Lecture interspersed with discussions
21	Stopping sight Distance	30-11-18	
22	Overtaking Sight Distance	30-11-18	
23	Intermediate Sight Distance	30-11-18	
24	Design of Horizontal Alignment	30-11-18	
25	Design of Super elevation	30-11-18	
26	Extra widening	30-11-18	
27	Design of Transition Curves	01-12-18	
28	Design of Vertical alignment	01-12-18	
29	Gradients	01-12-18	
30	Vertical curves	01-12-18	
UNIT –III	**Traffic Engineering**		
31	Introduction	03-12-18	
32	Basic Parameters of Traffic	03-12-18	
33	Volume, Speed and Delays	03-12-18	
34	Traffic Volume Studies	03-12-18	
35	Spot speed	03-12-18	
36	Speed & delay studies	03-12-18	
37	Parking Studies	03-12-18	
38	Road Accidents-Causes and Preventive measures - Condition Diagram and Collision Diagrams	04-12-18	Lecture interspersed

39	PCU Factors, Capacity of Highways	05-12-18	with discussions
40	LOS Concepts; Road Traffic Signs	05-12-18	
41	Road markings	06-12-18	
42	Types of Intersections	06-12-18	
43	At-Grade Intersections – Design of Plain, Flared, Rotary and Channelized Intersections	06-12-18	
44	Design of Traffic Signals –Webster Method –IRC Method.	07-12-18	
UNIT IV Highway Materials			
45	Introduction	21-01-19	
46	Subgrade soil	21-01-19	
47	Group Index, California Bearing Ratio	22-01-19	
48	Stone aggregates	24-01-19	
49	Bituminous Materials	28-01-19	
50	Marshall Method of Mix Design	29-01-19	
UNIT V	**Design Of Pavements**		
51	Introduction	12-02-19	Lecture interspersed with discussions
52	Types of pavements	13-02-19	
53	Functions and requirements of different components of pavements	13-02-19	
54	Flexible Pavement Design Methods, CBR method	18-02-19	
55	IRC Method for Low volume Flexible pavements	18-02-19	
56	Rigid Pavements, wheel load stresses	21-02-19	
57	Temperature stresses – Frictional stresses – Combination of stresses	22-02-19	
58	Design of slabs – Design of Joints	25-02-19	
59	Continuously Reinforced Cement Concrete Pavements – Roller Compacted Concrete Pavements	26-02-19	
UNIT VI Highway Construction and Maintenance			

60	Introduction	5-03-19	
61	Types of Highway Construction	5-03-19	
62	Construction of Earth Roads	6-03-19	
63	Gravel Roads	6-03-19	
64	Water Bound Macadam Roads	7-03-19	Lecture interspersed with discussions
65	Bituminous Pavements and Construction of Cement Concrete Pavements	7-03-19	
66	Pavement Failures,Maintenance of Highways	12-03-19	
67	pavement evaluation, strengthening of existing pavements.	11-03-19	

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TENTATIVE LESSON PLAN: R1622016

Course Title: TRANSPORTATION ENGINEERING – I		
Section : Sec A	**Date :** 19-11-19	**Page No :** 01 of 03
Revision No : 00	**Prepared By :** A.Tanusree	**Approved By : HOD**

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –IHIGHWAY PLANNINGAND ALIGINEMENT			
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2	Highway development in India	20-11-19	
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15	Drawings and Reports	28-11-19	
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17	Importance of Geometric Design	29-11-19	
`18	Design controls and Criteria	29-11-19	

19	Highway Cross Section Elements	30-11-19	Lecture interspersed with discussions
20	Sight Distance Elements	30-11-19	
21	Stopping sight Distance	30-11-19	
22	Overtaking Sight Distance	30-11-19	
23	Intermediate Sight Distance	30-11-19	
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26	Extra widening	30-11-19	
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28	Design of Vertical alignment	01-12-19	
29	Gradients	01-12-19	
30	Vertical curves	01-12-19	
UNIT –III	**Traffic Engineering**		
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32	Basic Parameters of Traffic	03-12-19	
33	Volume, Speed and Delays	03-12-19	
34	Traffic Volume Studies	03-12-19	
35	Spot speed	03-12-19	
36	Speed & delay studies	03-12-19	
37	Parking Studies	03-12-19	
38	Road Accidents-Causes and Preventive measures - Condition Diagram and Collision Diagrams	04-12-19	Lecture interspersed with
39	PCU Factors, Capacity of Highways	05-12-19	

40	LOS Concepts; Road Traffic Signs	05-12-19	discussions
41	Road markings	06-12-19	
42	Types of Intersections	06-12-19	
43	At-Grade Intersections – Design of Plain, Flared, Rotary and Channelized Intersections	06-12-19	
44	Design of Traffic Signals –Webster Method –IRC Method.	07-12-19	
UNIT IV Highway Materials			
45	Introduction	21-01-19	
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48	Stone aggregates	24-01-19	
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50	Marshall Method of Mix Design	29-01-19	
UNIT V	**Design Of Pavements**		
51	Introduction	12-02-19	Lecture interspersed with discussions
52	Types of pavements	13-02-19	
53	Functions and requirements of different components of pavements	13-02-19	
54	Flexible Pavement Design Methods, CBR method	18-02-19	
55	IRC Method for Low volume Flexible pavements	18-02-19	
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57	Temperature stresses – Frictional stresses – Combination of stresses	22-02-19	
58	Design of slabs – Design of Joints	25-02-19	
59	Continuously Reinforced Cement Concrete Pavements – Roller Compacted Concrete Pavements	26-02-19	
UNIT –VI Highway Construction and Maintenance			
60	Introduction	5-03-19	

61	Types of Highway Construction	5-03-19	
62	Construction of Earth Roads	6-03-19	
63	Gravel Roads	6-03-19	
64	Water Bound Macadam Roads	7-03-19	Lecture interspersed with discussions
65	Bituminous Pavements and Construction of Cement Concrete Pavements	7-03-19	
66	Pavement Failures,Maintenance of Highways	12-03-19	
67	pavement evaluation, strengthening of existing pavements.	11-03-19	

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TENTATIVE LESSON PLAN: R1632011

Course Title: DESIGN AND DRAWING OF STEEL STRUCTURES		
Section : Sec A	**Date : 18-11-2019**	**Page No :** 01 of 03
Revision No : 00	**Prepared By :**E.Usha Sree	**Approved By : HOD**

Tools: Black board

	TOPIC	DATE	MODE OF DELIVERY
UNIT – I CONNECTIONS **CO1: familiarize Students with different types of Connections and relevant IS codes** **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**			
1	Connections: Introduction - Riveted connections – definition,	18-11-2019	Lectures interspersed with discussions
2	Rivet Strength and capacity	19-11-2019	
3	rivet strength and capacity,	20-11-2019	
4	Welded connections:	21-11-2019	
5	Welded connections: Introduction,	22-11-2019	
6	Advantages and disadvantages of welding-	23-11-2019	
7	Strength of welds	24-11-2019	
8	Butt and fillet welds:	25-11-2019	
9	Butt and fillet welds: Permissible stresses – IS Code requirements.	27-11-2019	
10	Design of fillet weld subjected to moment acting in the plane	27-11-2019	
11	Design of fillet weld subjected to moment acting in the plane	27-11-2019	
12	Design of fillet weld subjected to moment acting d at right angles to the plane of the joints.	28-11-2019	
13	Tutorial	28-11-2019	
UNIT – II BEAMS **CO2: Equip student with concepts of design of flexural members** **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**			
9	Allowable stresses,	29/11/19	Lectures interspersed with discussions
10	Design requirements as per IS Code	30/11/19	
11	Design of simple and compound beams	02/12/19	
12	Curtailment of flange plates,	03/12/19	
13	Beam to beam connection,	04/12/19	
14	Check for deflection, shear,	04/12/19	
15	Check for buckling, check for bearing,	10/12/19	
16	Laterally unsupported beams.	10/12/19	

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	13/12/19	Lectures interspersed with discusions
18	General Design of members subjected to direct tension.	16/12/19	
19	General Design of members subjected to direct bending	17/12/19	
20	Effective length of columns- Slenderness ratio	18/12/19	
21	Permissible stresses.	19/12/19	
22	Design of compression members	23/12/19	
23	Design of struts etc.	24/12/19	
24	Roof Trusses: Different types of trusses	26/12/19	
25	Design loads – Load combinations as per IS Code recommendations	30/12/19	
26	structural details	04/01/2020	
27	Design of simple roof trusses involving the design of purlins	06/01/2020	
28	Design of members and joints – tubular trusses	07/01/2020	
29	Design of tubular trusses	09/01/2020	
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 Press.**			
30	Design of Built up compression members	27/01/2020	Lectures interspersed with discussions
31	Design of lacings	28/01/2020	
32	Design of lacings	29/01/2020	
33	Design of battens	30/01/2020	
34	Design of battens	01/02/2020	
35	Design Principles of Eccentrically loaded columns,	03/02/2020	
36	Design Principles of Eccentrically loaded columns,	04/02/2020	
37	Design of Splicing of columns	05/02/2020	
38	Design of Splicing of columns	06/02/2020	
39	Tutorial		
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.**			
40	Design of slab base	08/02/2020	Lectures interspersed
41	Design of slab base	10/02/2020	
42	Design of slab base	11/02/2020	

43	Design of gusseted base.	12/02/2020	with discussions
44	Design of Column bases subjected moment.	13/02/2020	
45	Tutorial	17/02/2020	
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.**			
46	UNIT – VI: Design consideration – I S Code recommendations	24/02/2020	Lectures interspersed with discussions
47	Design of plate girder-Welded	05/03/2021	
48	Design of plate girder- Curtailment of flange plates,	07/03/2021	
49	Design of Plate Girder- stiffeners	09/03/2021	
50	Design of Plate Girder - splicing and connections.	11/03/2021	
51	Design of Gantry Girder: impact factors	13/03/2021	
52	longitudinal forces	16/03/2021	
53	Design of Gantry girders.	16/03/2021	

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TENTATIVE LESSON PLAN: R1632011

Course Title: DESIGN AND DRAWING OF STEEL STRUCTURES		
Section : Sec B	**Date : 18-11-2019**	**Page No :** 01 of 03
Revision No : 00	**Prepared By :**E.Usha Sree	**Approved By : HOD**

Tools: Black board

	TOPIC	DATE	MODE OF DELIVERY
UNIT – I CONNECTIONS **CO1: familiarize Students with different types of Connections and relevant IS codes** **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**			
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13	Tutorial	28-11-2019	
UNIT – II BEAMS **CO2: Equip student with concepts of design of flexural members** **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**			
9	Allowable stresses,	29/11/19	Lectures interspersed with discussions
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11	Design of simple and compound beams	02/12/19	
12	Curtailment of flange plates,	03/12/19	
13	Beam to beam connection,	04/12/19	
14	Check for deflection, shear,	04/12/19	
15	Check for buckling, check for bearing,	10/12/19	
16	Laterally unsupported beams.	10/12/19	

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	13/12/19	Lectures interspersed with discusions
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21	Permissible stresses.	19/12/19	
22	Design of compression members	23/12/19	
23	Design of struts etc.	24/12/19	
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25	Design loads – Load combinations as per IS Code recommendations	30/12/19	
26	structural details	04/01/2020	
27	Design of simple roof trusses involving the design of purlins	06/01/2020	
28	Design of members and joints – tubular trusses	07/01/2020	
29	Design of tubular trusses	09/01/2020	
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 Press.**			
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33	Design of battens	30/01/2020	
34	Design of battens	01/02/2020	
35	Design Principles of Eccentrically loaded columns,	03/02/2020	
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37	Design of Splicing of columns	05/02/2020	
38	Design of Splicing of columns	06/02/2020	
39	Tutorial		
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.**			
40	Design of slab base	08/02/2020	Lectures interspersed
41	Design of slab base	10/02/2020	
42	Design of slab base	11/02/2020	

43	Design of gusseted base.	12/02/2020	with discussions
44	Design of Column bases subjected moment.	13/02/2020	
45	Tutorial	17/02/2020	
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.**			
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TENTATIVE LESSON PLAN: R1632012

Course Title: GEO TECHNICAL ENGINEERING-I		
Section : Sec A	**Date : 18-11-2019**	**Page No :** 01 of 02
Revision No : 00	**Prepared By :**P.S.V.BHARATH	**Approved By : HOD**

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**Introduction**		
CO1: The student must know the definition of the various parameters related to soil mechanics and establish their inter-relationships.			
TB: Soil mechanics and foundation engineering, Dr. K. R. ARORA			
1.	Soil structure and formation	18-11-2019	Lecture interspersed with discussions
2.	Weathering action of rocks	19-11-2019	
3.	Mechanical and chemical weathering	20-11-2019	
4.	Single honey comb structure	21-11-2019	
5.	Clay mineral, adsorbed water	22-11-2019	
6.	2 and 3 phase systems and definitions	22-11-2019	
7.	Relation between e, s, g	22-11-2019	
8.	Derivations	23-11-2019	
9.	Relation between dry mass and percentage air voids	23-11-2019	
10.	Relative density	25-11-2019	
11.	Derivations	25-11-2019	
12.	Factors effecting compaction	27-11-2019	
13.	Compaction effect on soil	28-11-2019	
14.	Problems	29-11-2019	
15.	**Tutorial**	2-12-2019	
UNIT –II	**Index properties of soils**		
CO 2: To enable the student to determine the index properties of the soil and classify it.			
TB: soil mechanics and foundation engineering, Dr. K.R.ARORA			
16.	Index property of soil	3 -12-2019	Lecture interspersed with discussions
17.	Grain size analysis and sieve analysis	4-12-2019	
18.	Hydrometer analysis	5-12-2019	
19.	Consistency limits	6-12-2019	
20.	Determination of liquid limit	7-12-2019	
21.	Determination of plastic and shrinkage limit	9-12-2019	
22.	Definition of plasticity index, etc	10-12-2019	
23.	Classification of soil	11-12-2019	
24.	Unified soil classification	12-12-2019	
25.	Unified soil classification	13-12-2019	
26.	IS classification	14-12-2019	
27.	IS classification	16-12-2019	
28.	Problems on LL, PL	17-12-2019	
29.	Problems on sieve analysis	19-12-2019	
30.	**Tutorial**	20-12-2019	
UNIT –III	**Permeability of soils**		
CO 3:To impart the concept of seepage of water through soils and determine the discharge of water through soils.			

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

31.	Introduction to permeability	21-12-2019	Lecture interspersed with discussions
32.	Soil water, one dimensional flow	21-12-2019	
33.	Darcy's law, factors	23-12-2019	
34.	Determination of k permeability	24-12-2019	
35.	Layered systems of permeability	25-12-2019	
36.	Total, neutral and effective stresses	26-12-2019	
37.	Quick sand condition	27-12-2019	
38.	Laplace's equations	28-12-2019	
39.	Seepage through soils	30-12-2019	
40.	Flow net and uses	2-1-2020	
41.	Problems	3-1-2020	
42.	**Tutorial**	4-1-2020	

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	27-1-2020	Lecture interspersed with discussions
44.	Boussinesqu's equation	28-1-2020	
45.	Westergaard's equation	29-1-2020	
46.	Newmark's influence chart	30-1-2020	
47.	Problems on rectangular area	30-1-2020	
48.	Problems on circular area	31-1-2020	
49.	Problems on square area	1-2-2020	
50.	**Tutorial**	3-2-2020	

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	11-2-2020	Lecture interspersed with discussions
52.	e-p and e-log p curves	11-2-2020	
53.	Stress history , concept	12-2-2020	
54.	Spring analogy	13-2-2020	
55.	Terzaghi's theory	14-2-2020	
56.	One-dimensional consolidation equation derivation	15-2-2020	
57.	Time rate of consolidation	18-2-2020	
58.	Degree of consolidation	19-2-2020	
59.	Determination of coefficient of consolidation	21-2-2020	
60.	Over and normally consolidated clay	22-2-2020	
61.	Problems on consolidation	22-2-2020	
62.	Problems on consolidation	24-2-2020	
63.	**Tutorial**	25-2-2020	

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 of sands and clays and the areas of their application. TB: soil mechanics and foundation engineering, Dr. K.R.ARORA			
64.	Introduction of shear strength	26-2-2020	Lecture interspersed with discussions
65.	Basic mechanism	28-2-2020	
66.	Mohr coloumb's failure, critical void ratio	2-3-2020	
67.	Stress- strain behavior on clay	3-3-2020	
68.	Determination of shear strength by vane shear test	4-3-2020	
69.	Determination of shear strength by direct shear test	5-3-2020	
70.	Determination of shear strength by unconfined shear Test	6-3-2020	
71.	Determination of shear strength by tri axial test	7-3-2020	
72.	Problems on direct test	9-3-2020	
73.	Drainage condition- one way and two way drainage	10-3-2020	
74.	Problems	11-3-2020	
75.	**Tutorial**	12-3-2020	

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TENTATIVE LESSON PLAN: R1632012

Course Title: GEO TECHNICAL ENGINEERING-I		
Section : Sec B	**Date : 18-11-2019**	**Page No :** 01 of 02
Revision No : 00	**Prepared By :**P.S.V.BHARATH	**Approved By : HOD**

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**Introduction**		
CO1: The student must know the definition of the various parameters related to soil mechanics and establish their inter-relationships. TB: Soil mechanics and foundation engineering, Dr. K. R. ARORA			
1.	Soil structure and formation	18-11-2019	Lecture interspersed with discussions
2.	Weathering action of rocks	19-11-2019	
3.	Mechanical and chemical weathering	20-11-2019	
4.	Single honey comb structure	21-11-2019	
5.	Clay mineral, adsorbed water	22-11-2019	
6.	2 and 3 phase systems and definitions	22-11-2019	
7.	Relation between e, s, g	22-11-2019	
8.	Derivations	23-11-2019	
9.	Relation between dry mass and percentage air voids	23-11-2019	
10.	Relative density	25-11-2019	
11.	Derivations	25-11-2019	
12.	Factors effecting compaction	27-11-2019	
13.	Compaction effect on soil	28-11-2019	
14.	Problems	29-11-2019	
15.	**Tutorial**	2-12-2019	
UNIT –II	**Index properties of soils**		
CO 2: To enable the student to determine the index properties of the soil and classify it. TB: soil mechanics and foundation engineering, Dr. K.R.ARORA			
16.	Index property of soil	3 -12-2019	Lecture interspersed with discussions
17.	Grain size analysis and sieve analysis	4-12-2019	
18.	Hydrometer analysis	5-12-2019	
19.	Consistency limits	6-12-2019	
20.	Determination of liquid limit	7-12-2019	
21.	Determination of plastic and shrinkage limit	9-12-2019	
22.	Definition of plasticity index, etc	10-12-2019	
23.	Classification of soil	11-12-2019	
24.	Unified soil classification	12-12-2019	
25.	Unified soil classification	13-12-2019	
26.	IS classification	14-12-2019	
27.	IS classification	16-12-2019	
28.	Problems on LL, PL	17-12-2019	
29.	Problems on sieve analysis	19-12-2019	
30.	**Tutorial**	20-12-2019	
UNIT –III	**Permeability of soils**		
CO 3:To impart the concept of seepage of water through soils and determine the discharge of water through soils.			

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

31.	Introduction to permeability	21-12-2019	Lecture interspersed with discussions
32.	Soil water, one dimensional flow	21-12-2019	
33.	Darcy's law, factors	23-12-2019	
34.	Determination of k permeability	24-12-2019	
35.	Layered systems of permeability	25-12-2019	
36.	Total, neutral and effective stresses	26-12-2019	
37.	Quick sand condition	27-12-2019	
38.	Laplace's equations	28-12-2019	
39.	Seepage through soils	30-12-2019	
40.	Flow net and uses	2-1-2020	
41.	Problems	3-1-2020	
42.	**Tutorial**	4-1-2020	

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	27-1-2020	Lecture interspersed with discussions
44.	Boussinesqu's equation	28-1-2020	
45.	Westergaard's equation	29-1-2020	
46.	Newmark's influence chart	30-1-2020	
47.	Problems on rectangular area	30-1-2020	
48.	Problems on circular area	31-1-2020	
49.	Problems on square area	1-2-2020	
50.	**Tutorial**	3-2-2020	

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	11-2-2020	Lecture interspersed with discussions
52.	e-p and e-log p curves	11-2-2020	
53.	Stress history , concept	12-2-2020	
54.	Spring analogy	13-2-2020	
55.	Terzaghi's theory	14-2-2020	
56.	One-dimensional consolidation equation derivation	15-2-2020	
57.	Time rate of consolidation	18-2-2020	
58.	Degree of consolidation	19-2-2020	
59.	Determination of coefficient of consolidation	21-2-2020	
60.	Over and normally consolidated clay	22-2-2020	
61.	Problems on consolidation	22-2-2020	
62.	Problems on consolidation	24-2-2020	
63.	**Tutorial**	25-2-2020	

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 of sands and clays and the areas of their application. TB: soil mechanics and foundation engineering, Dr. K.R.ARORA			
64.	Introduction of shear strength	26-2-2020	Lecture interspersed with discussions
65.	Basic mechanism	28-2-2020	
66.	Mohr coloumb's failure, critical void ratio	2-3-2020	
67.	Stress- strain behavior on clay	3-3-2020	
68.	Determination of shear strength by vane shear test	4-3-2020	
69.	Determination of shear strength by direct shear test	5-3-2020	
70.	Determination of shear strength by unconfined shear Test	6-3-2020	
71.	Determination of shear strength by tri axial test	7-3-2020	
72.	Problems on direct test	9-3-2020	
73.	Drainage condition- one way and two way drainage	10-3-2020	
74.	Problems	11-3-2020	
75.	**Tutorial**	12-3-2020	

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TENTATIVE LESSON PLAN: CIVIL R1631013

ENVIRONMENTAL ENGINEERING-I

Course Title: ENVIRONMENTAL ENGINEERING-I (CIVIL)		
Section: Sec A	**Date: 18-11-2019**	**Page No:** 01 of 03
Revision No: 00	**Prepared By**: Dr. T SATYANARAYANA	**Approved By: HOD**

Tools: Black board, power point presentations

No. of Periods	TOPIC	Tentative date	Mode of Delivery
UNIT 1: WATER QUANTITY ESTIMATION & POPULATION FORECASTING **CO1:** PLAN AND ESTIMATE WATER QUANTITY REQUIREMENT FOR DOMESTIC USAGE **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
1	Introduction to Environmental Engg	25/11/2019	Lecture interspersed with discussions
2	Introduction, Importance of WSS	26/11/2019	
3	Necessity of WSS and features	27/11/2019	
4	Water borne diseases	28/11/2019	
5	Flow chart of WSS and objectives	29/11/2019	
6	Role of environmental engineer and agency activities	30/11/2019	
7	Estimation of WD for city, Water demand- design period	02/12/2019	
8	Types of water demand	02/12/2019	
9	Factors affecting the WD, Variation of WD	03/12/2019	
10	Population forecasting methods	04/12/2019	
11	PFC- Methods	05/12/2019	
12	Master plan & Numerical Problems	06/12/2019	
13	Numerical Problems	07/12/2019	
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			
14	Sources of water	10/12/2019	Lecture interspersed with discussions
15	Collection- criteria, suitability	12/12/2019	
16	Comparison of sources- surface and Ground water sources	13/12/2019	
17	Capacity of storage reservoir, Pollution	16/12/2019	
18	Mass curve analysis, Intakes	17/12/2019	
19	Selection Criteria	18/12/2019	
20	Intakes- types	19/12/2019	
21	Water Conveyance through wells	20/12/2019	
22	Water Conveyance through pipes	21/12/2019	
23	pipes – types- materials	23/12/2019	
24	pipes corrosion and control	24/12/2019	
25	Pipes joints - types	26/12/2019	
26	Design considerations	27/12/2019	
27	Laying of pipelines	30/12/2019	

UNIT 3: WATER QUALITY ASSESMENT **CO3:** CHARACTERISATION OF WATER **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
28	Characteristics of water- sources and pollution	31/12/2019	Lecture interspersed with discussions
29	Analysis of water- common impurities	02/01/2020	
30	Standards of drinking water- IS & WHO	03/01/2020	
31	Tests on water- physical	04/01/2020	
32	Tests on water- chemical	06/01/2020	
33	Tests on water- bacteriological	07/01/2020	
34	Comparisons of sources and tests on water- physical	09/01/2020	
UNIT 4: PRIMARY WATER TREATMENT **CO4:** SELECTION OF SUITABLE TREATMENT FLOW FOR RAW WATER TREATMENTS **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
35	Objectives – flow chart & function of a WTP	27/01/2020	Lecture interspersed with discussions
36	Theory, purpose & design of a Sedimentation tank	28/01/2020	
37	Types of Sedimentation tank	29/01/2020	
38	Theory, purpose & design of a Coagulation tank- flocculation	31/01/2020	
39	Feeding & mixing devices, Types of coagulants- jar test	01/02/2020	
40	Numerical Problems	03/02/2020	
41	Theory, types of Filtration tank	04/02/2020	
42	Slow sand filters, Rapid sand filters	05/02/2020	
43	Pressure filters	06/02/2020	
44	Design problems	07/02/2020	
45	Comparison btw filters	10/02/2020	
46	Merits & Demerits- Tutorial	11/02/2020	
UNIT 5: DISINFECTION & OTHER TREATMENT METHODS **CO5:** SELECTION OF SUITABLE TREATMENT FLOW FOR RAW WATER TREATMENTS **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
47	Disinfection of water	12/02/2020	Lecture interspersed with discussions
48	Need , methods & Chlorination	13/02/2020	
49	Action & application of chlorine	14/02/2020	
50	Forms of Chlorination	15/02/2020	
51	Break Point Chlorination	17/02/2020	
52	Tests for residual chlorine	24/02/2020	
53	Water softening- types of hardness	25/02/2020	
54	Need of Water Softening & removal of TH	26/02/2020	
55	removal of TH-lime soda, zeolite process	27/02/2020	
56	Demineralisation	28/02/2020	
57	Iron- manganese removal	29/02/2020	
58	miscellaneous methods	29/02/2020	
59	removal of colour, odour and taste-	02/03/2020	
60	Aeration methods	03/03/2020	
61	Fluorides- addition & removal	04/03/2020	
62	Salts removal methods-RO	05/03/2020	
63	Electra dialysis, Ultrafiltration,	05/03/2020	
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			
64	Water Distribution System - Need and requirements	06/03/2020	Lecture interspersed with discussions
65	WSS, Layouts, Systems of supply, types of reservoirs	07/03/2020	
66	Water Wastage- Leakage tests and control	09/03/2020	
67	Types and pressure in WDS and its maintenance	09/03/2020	
68	Valves and Pipe fittings types	10/03/2020	
69	Equivalent method- parallel & series	11/03/2020	
70	Design & analysis of Pipe Networks	12/03/2020	
71	Hardy Cross method-Numerical problems- Tutorial	13/03/2020	

13/3/2020

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13/3/20

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TENTATIVE LESSON PLAN: CIVIL R1631013

ENVIRONMENTAL ENGINEERING-I

Course Title: ENVIRONMENTAL ENGINEERING-I (CIVIL)		
Section: Sec B	**Date: 18-11-2019**	**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 & POPULATION FORECASTING **CO1:** PLAN AND ESTIMATE WATER QUANTITY REQUIREMENT FOR DOMESTIC USAGE **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
1	Introduction to Environmental Engg	18/11/2019	Lecture interspersed with discussions
2	Importance of Environmental Engg- public health & safety	19/11/2019	
3	Introduction, Importance of WSS	20/11/2019	
4	Necessity of WSS and features	21/11/2019	
5	Water borne diseases	21/11/2019	
6	Flow chart of WSS and objectives	23/11/2019	
7	Role of environmental engineer and agency activities	25/11/2019	
8	Estimation of WD for city, Water demand- design period	26/11/2019	
9	Types of water demand	27/11/2019	
10	Factors affecting the WD, Variation of WD	30/11/2019	
11	Population forecasting methods	02/12/2019	
12	PFC- Methods	03/12/2019	
13	Master plan & Numerical Problems	04/12/2019	
14	Numerical Problems	05/12/2019	
15	Tutorial-I	07/12/2019	
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			
16	Sources of water	09/12/2019	Lecture interspersed with discussions
17	Collection- criteria, suitability	10/12/2019	
18	Comparison of sources- surface and Ground water sources	12/12/2019	
19	Capacity of storage reservoir, Pollution	12/12/2019	
20	Mass curve analysis, Intakes- selection	16/12/2019	
21	Intakes- types	17/12/2019	
22	Water Conveyance through wells	17/12/2019	
23	Water Conveyance through pipes	18/12/2019	
24	pipes – types- materials	18/12/2019	
25	pipes corrosion and control	19/12/2019	
26	Laying of pipelines	19/12/2019	

27	Pipes joints - types	21/12/2019	
28	Design considerations	21/12/2019	
29	Tutorial	23/12/2019	
UNIT 3: WATER QUALITY ASSESMENT **CO3:** CHARACTERISATION OF WATER **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
30	Water quality assessment	26/12/2019	Lecture interspersed with discussions
31	Characteristics of water- sources and pollution	26/12/2019	
32	Analysis of water- common impurities	30/12/2019	
33	Comparisons of sources and tests on water- physical	30/12/2019	
34	Tests on water- physical	02/01/2020	
35	Tests on water- chemical	04/01/2020	
36	Tests on water- chemical	04/01/2020	
37	Tests on water- bacteriological	06/01/2020	
38	Tests on water- bacteriological	08/01/2020	
39	Standards of drinking water- IS & WHO	09/01/2020	
40	Tutorial	09/01/2020	
UNIT 4: PRIMARY WATER TREATMENT **CO4:** SELECTION OF SUITABLE TREATMENT FLOW FOR RAW WATER TREATMENTS **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
41	Primary Water Treatment	27/01/2020	Lecture interspersed with discussions
42	Objectives – flow chart & function of a WTP	28/01/2020	
43	Theory, purpose & design of a Sedimentation tank	29/01/2020	
44	Types of Sedimentation tank	30/01/2020	
45	Theory, purpose & design of a Coagulation tank-flocculation	31/01/2020	
46	Feeding & mixing devices,	01/02/2020	
47	Types of coagulants- jar test	03/02/2020	
48	Numerical Problems	04/02/2020	
49	Theory, types of Filtration tank	05/02/2020	
50	Slow sand filters	06/02/2020	
51	Rapid sand filters	10/02/2020	
52	Pressure filters	11/02/2020	
53	Design problems	12/02/2020	
54	Comparison btw filters	13/02/2020	
55	Merits & Demerits- Tutorial	15/02/2020	
UNIT 5: DISINFECTION & OTHER TREATMENT METHODS **CO5:** SELECTION OF SUITABLE TREATMENT FLOW FOR RAW WATER TREATMENTS **TB:** WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE			
56	Disinfection of water	17/02/2020	Lecture interspersed with discussions
57	Need , methods & Chlorination	18/02/2020	
58	Action & application of chlorine	19/02/2020	
59	Forms of Chlorination	20/02/2020	
60	Break Point Chlorination & Tests for residual chlorine	24/02/2020	
61	Water softening- types of hardness	25/02/2020	
62	Need of Water Softening & removal of TH	28/02/2020	

63	removal of TH, Iron- manganese removal	29/02/2020	
64	removal of colour, odour and taste- miscellaneous methods	02/03/2020	
65	Fluorides & Salts removal methods	03/03/2020	
66	Electra dialysis, Ultrafiltration, Tutorial	04/03/2020	
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			
67	Water Distribution System- Introduction & methods	05/03/2020	Lecture interspersed with discussions
68	Need and requirements of distribution	06/03/2020	
69	WSS, Layouts, Systems of supply, types of reservoirs	07/03/2020	
70	Water Wastage- Leakage tests and control	09/03/2020	
71	Types and pressure in WDS and its maintenance	11/03/2020	
72	Valves and Pipe fittings types	12/03/2020	
73	Equivalent method- parallel & series	13/03/2020	
74	Design & analysis of Pipe Networks	14/03/2020	
75	Pipes-types, joints, laying (Revision)	16/03/2020	
76	Hardy Cross method-Numerical problems- Tutorial	17/03/2020	

17/3/20

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17/3/20

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TENTATIVE LESSON PLAN

Course Title: WWM (R163201D)		
Section : Sec A	**Date : 19-11-2019**	**Page No : 01 of 03**
Revision No : 00	**Prepared By: N.KRANTHI REKHA**	**Approved By : HOD**

Tools: Black board, power point presentations

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III **T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.** **T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.** **CO 1: To know about collection and conveyance of industrial waste water.**			
1	BASIC THERIES OF IWWM	19-11-19	Lecture interspersed with discussions
2	IWS	20-11-19	
3	MEASUREMENT OF IWW	21-11-19	
4	IWW GENERATION RATES	22-11-19	
5	IWW SAMPLING	23-11-19	
6	IWW PRESERVATION	24-11-19	
7	WW CHARECTERISATION	26-11-19	
8	TOXICITY OF IWW	27-11-19	
9	TREATMENT OF WW	28-11-19	
10	UNIT OPERATIONS	29-11-19	
11	UNIT PROCESSES	1-12-19	
12	VOLUME REDUCTION	3-12-19	
13	STRENTH REDUCTION	4-12-19	
14	NEUTRALIZATION	5-12-19	
15	EQUALIZATION	6-12-19	
16	PROPORTIONING	07-12-19	
17	RECYCLE,REUSE,RESOURCES RECOVERY	07-12-19	
UNIT IV **T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.** **T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.** **CO 2: To know about collection and conveyance of industrial waste water**			Lecture interspersed with discussions
19	IWW DISPOSAL MANAGEMENT	11-12-19	
19	DISCHARGES INTO WATER BODIES-STREAMS,SEAS	12-12-19	
20	DISCHARGES INTO WATER BODIES-LAKES	13-12-19	
21	DISCHARGES INTO WATER BODIES-RIVERS	14-12-19	
22	LAND TREATMENT	17-12-19	
23	CETP- PROCESS	19-12-19	
24	CETP-TREATMENT UNITS	20-12-19	
25	CETP-ADVANTAGES,DISADVANTAGES	21-12-19	
26	CETP-LIMITATIONS, CHALLENGES	22-12-19	
		26-12-19	
27	RECIRCULATION OF IW	27-12-19	
28	EFFLUENT DISPOSAL METHODS	28-12-19	

UNIT II
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.
CO 3: To know about preliminary and primary treatment of industrial waste water.

29	MISCELLANOUS TREATMENTS	4-01-19	Lecture interspersed with discussions
30	USE OF MWW IN INDUSTRIES	5-01-19	
31	ADVANCED WWT PROCESSES	7-01-19	
32	R.O	8-01-19	
33	U.F	9-01-19	
34	FREEZING	9-01-19	
35	ION EXCHANGE	10-01-19	
36	ELUTRIATION	24-1-19	
37	REMOVAL OF COLOUR,ODOUR	25-1-19	
38	REMOVAL OF IRON AND MANGANESE	14-2-19	
39	ADSORPTION	15-2-19	

UNIT I
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.
CO 4: To know about biological treatment of waste water of industrial waste water.

40	IWW QUALITY AND QUANTITY REQUIREMENTS	16-2-19	Lecture interspersed with discussions
41	BOILER AND COOLING WATERS	19-2-19	
42	TEXTILE INDUSTRY- PROCESS	19-2-19	
43	FOOD PROCESSING INDUSTRY- PROCESS	20-2-19	
44	BREWERY INDUSTRY- PROCESS	21-2-19	
45	POWERPLANTS INDUSTRY- PROCESS	22-2-19	
46	FERTILIZERS INDUSTRY- PROCESS	23-2-19	
47	SUGAR MILLS INDUSTRY- PROCESS	25-2-19	
40	IWW QUALITY AND QUANTITY REQUIREMENTS	26-2-19	
41	BOILER AND COOLING WATERS	28-2-19	

UNIT V
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.
CO 5: To know about advanced treatments of industrial waste water.

48	STEEL PLANTS	4-3-19	Lecture interspersed with discussions
49	FERTILIZERS INDUSTRY	5-3-19	
50	TEXTILE INDUSTRY	6-3-19	
51	PAPER AND PULP	7-3-19	
52	OIL REFINERIES	8-3-19	
53	COAL AND GAS BASED POWER PLANTS	11-3-19	

UNIT VI
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.

CO 6: To know about industrial waste water disposal and sludge disposal.			
54	TANNERIES INDUSTRY WW -TREATMENT	16-3-19	Lecture interspersed with discussions
55	SUGAR MILLS INDUSTRY WW – TREATMENT	16-3-19	
56	DISTILLERS INDUSTRY WW –TREATMENT	17-3-19	
57	DAIRY INDUSTRY WW –TREATMENT	17-3-19	
58	FOOD PROCESSING INDUSTRY WW – TREATMENT	18-3-19	
59	PHARMACEUTICAL PLANTS INDUSTRY WW -TREATMENT	18-3-19	

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TENTATIVE LESSON PLAN

Course Title: WWM (R163201D)		
Section : Sec B	**Date : 19-11-2019**	**Page No : 01 of 03**
Revision No : 00	**Prepared By: N.KRANTHI REKHA**	**Approved By : HOD**

Tools: Black board, power point presentations

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III **T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.** **T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.** **CO 1: To know about collection and conveyance of industrial waste water.**			
1	BASIC THERIES OF IWWM	19-11-19	Lecture interspersed with discussions
2	IWS	20-11-19	
3	MEASUREMENT OF IWW	21-11-19	
4	IWW GENERATION RATES	22-11-19	
5	IWW SAMPLING	23-11-19	
6	IWW PRESERVATION	24-11-19	
7	WW CHARECTERISATION	26-11-19	
8	TOXICITY OF IWW	27-11-19	
9	TREATMENT OF WW	28-11-19	
10	UNIT OPERATIONS	29-11-19	
11	UNIT PROCESSES	1-12-19	
12	VOLUME REDUCTION	3-12-19	
13	STRENTH REDUCTION	4-12-19	
14	NEUTRALIZATION	5-12-19	
15	EQUALIZATION	6-12-19	
16	PROPORTIONING	07-12-19	
17	RECYCLE,REUSE,RESOURCES RECOVERY	07-12-19	
UNIT IV **T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.** **T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.** **CO 2: To know about collection and conveyance of industrial waste water**			Lecture interspersed with discussions
19	IWW DISPOSAL MANAGEMENT	11-12-19	
19	DISCHARGES INTO WATER BODIES-STREAMS,SEAS	12-12-19	
20	DISCHARGES INTO WATER BODIES-LAKES	13-12-19	
21	DISCHARGES INTO WATER BODIES-RIVERS	14-12-19	
22	LAND TREATMENT	17-12-19	
23	CETP- PROCESS	19-12-19	
24	CETP-TREATMENT UNITS	20-12-19	
25	CETP-ADVANTAGES,DISADVANTAGES	21-12-19	
26	CETP-LIMITATIONS, CHALLENGES	22-12-19	
		26-12-19	
27	RECIRCULATION OF IW	27-12-19	
28	EFFLUENT DISPOSAL METHODS	28-12-19	

UNIT II
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.
CO 3: To know about preliminary and primary treatment of industrial waste water.

29	MISCELLANOUS TREATMENTS	4-01-19	Lecture interspersed with discussions
30	USE OF MWW IN INDUSTRIES	5-01-19	
31	ADVANCED WWT PROCESSES	7-01-19	
32	R.O	8-01-19	
33	U.F	9-01-19	
34	FREEZING	9-01-19	
35	ION EXCHANGE	10-01-19	
36	ELUTRIATION	24-1-19	
37	REMOVAL OF COLOUR,ODOUR	25-1-19	
38	REMOVAL OF IRON AND MANGANESE	14-2-19	
39	ADSORPTION	15-2-19	

UNIT I
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.
CO 4: To know about biological treatment of waste water of industrial waste water.

40	IWW QUALITY AND QUANTITY REQUIREMENTS	16-2-19	Lecture interspersed with discussions
41	BOILER AND COOLING WATERS	19-2-19	
42	TEXTILE INDUSTRY- PROCESS	19-2-19	
43	FOOD PROCESSING INDUSTRY- PROCESS	20-2-19	
44	BREWERY INDUSTRY- PROCESS	21-2-19	
45	POWERPLANTS INDUSTRY- PROCESS	22-2-19	
46	FERTILIZERS INDUSTRY- PROCESS	23-2-19	
47	SUGAR MILLS INDUSTRY- PROCESS	25-2-19	
40	IWW QUALITY AND QUANTITY REQUIREMENTS	26-2-19	
41	BOILER AND COOLING WATERS	28-2-19	

UNIT V
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.
CO 5: To know about advanced treatments of industrial waste water.

Lecture interspersed with discussions

48	STEEL PLANTS	4-3-19
49	FERTILIZERS INDUSTRY	5-3-19
50	TEXTILE INDUSTRY	6-3-19
51	PAPER AND PULP	7-3-19
52	OIL REFINERIES	8-3-19
53	COAL AND GAS BASED POWER PLANTS	11-3-19

UNIT VI
T1: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE.
T2: ENVIRONMENTAL ENGINEERING BY N.N.BASAK.

CO 6: To know about industrial waste water disposal and sludge disposal.			
54	TANNERIES INDUSTRY WW -TREATMENT	16-3-19	Lecture interspersed with discussions
55	SUGAR MILLS INDUSTRY WW – TREATMENT	16-3-19	
56	DISTILLERS INDUSTRY WW –TREATMENT	17-3-19	
57	DAIRY INDUSTRY WW –TREATMENT	17-3-19	
58	FOOD PROCESSING INDUSTRY WW – TREATMENT	18-3-19	
59	PHARMACEUTICAL PLANTS INDUSTRY WW -TREATMENT	18-3-19	

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TENTATIVE LESSON PLAN: CE

Course Title: WATER RESOURCES ENGINEERING-I (R1632014)		
Section : Sec B	Date : 19/11/2019	Page No : 01 of 02
Revision No : 00	Prepared By : K.KIRAN	Approved By : HOD

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Tentative Date	Implemented Date
UNIT I Introduction to Hydrology **CO1: Have a thorough understanding of the theories and principles governing the hydrologic processes** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
1	Engineering hydrology and its applications,	19-11-19	Lecture interspersed with discussions
2	Hydrologic cycle	20-11-19	
3	Hydrological data-sources of data.	21-11-19	
4	**Precipitation**: Types and forms	22-11-19	
5	Measurement of rain fall	23-11-19	
6	Raingauge network	24-11-19	
7	Presentation of rainfall data	26-11-19	
8	Average rainfall over a basin	27-11-19	
9	Continuity and consistency of rainfall data	28-11-19	
10	Frequency of rainfall,	29-11-19	
11	Intensity-Duration-Frequency (IDF) curves,	1-12-19	
12	Depth-Area-Duration (DAD) curves,	3-12-19	
13	Probable Maximum Precipitation (PMP), design storm	4-12-19	
UNIT-II Abstractions from Precipitation **CO2:** develop Intensity-Duration-Frequency and Depth-Area Duration curves to design hydraulic structures and be able to develop design storms and carry out frequency analysis **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
14		6-12-19	Lecture interspersed with discussions
15	Initial abstractions.	7-12-19	
16	**Evaporation**: factors affecting	10-12-19	
17	**Evaporation**: Measurement & reduction	11-12-19	
19	**Evapotranspiration**: factors affecting	12-12-19	
19	**Evapotranspiration**: measurement, control	13-12-19	
20	**Infiltration**: factors affecting,	14-12-19	

21	Infiltration capacity curve,	17-12-19	
22	**Infiltration**: measurement	18-12-19	
23	Infiltration indices	19-12-19	
UNIT-III Runoff and Hydrograph analysis **CO3: Be able to determine storage capacity and life of reservoirs and develop unit hydrograph and synthetic hydrograph** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
24	**Runoff:** Catchment characteristics	21-12-19	
25	Factors affecting runoff	22-12-19	
26	**Runoff** :components, computation	26-12-19	
27	**Runoff** :empirical formulae ,tables and curves	27-12-19	
28	**Runoff** :stream gauging, rating curve,	24-1-19	
29	Flow mass curve and flow duration curve.	25-1-19	
30	**Hydrograph analysis**: Components of hydrograph	28-1-19	
31	Separation of base flow	29-1-19	
32	Effective rainfall hyetograph and direct runoff hydrograph	30-1-19	
33	Unit hydrograph - assumptions	31-1-19	
34	Derivation of unit hydrograph	1-2-19	
35	Unit hydrographs of different durations	2-2-19	
36	Principle of superposition and S-hydrograph methods	5-2-19	
37	Limitations and applications of unit hydrograph,	6-2-19	
38	Limitations and applications of synthetic unit hydrograph	16-2-19	
UNIT-IV Floods **CO4:** be able to estimate flood magnitude and carry out flood routing **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
39	Causes and effects of floods	19-2-19	Lecture interspersed with discussions
40	Frequency analysis- Gumbel's and Log-Pearson type III distribution methods	20-2-19	
41	Standard Project Flood (SPF)	21-2-19	
42	Probable Maximum Flood (MPF),	22-2-19	
43	Flood control methods and management.	23-2-19	

44	**Flood Routing:** Hydrologic routing,	25-2-19	
45	Channel and reservoir routing	26-2-19	
46	Muskingum and Pulse methods of routing.	27-2-19	
UNIT-V Groundwater **CO5:Be able to determine aquifer parameters and yield of wells** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
47	**Groundwater:** Occurrence	1-3-19	Lecture interspersed with discussions
48	types of aquifers,	2-3-19	
49	aquifer parameters,	4-3-19	
50	Porosity, specific yield, permeability, transmissivity and storage coefficient.	5-3-19	
51	Types of wells,	6-3-19	
52	Darcy's law,	7-3-19	
53	Dupuit's equation	8-3-19	
54	Steady radial flow to wells in confined and unconfined aquifers,	11-3-19	
55	Yield of a open well-recuperation test	12-3-19	
UNIT VI Advanced Topics in Hydrology **CO6: Be able to model hydrologic processes** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
56	Rainfall-runoff Modelling,	14-3-19	Lecture interspersed with discussions
57	Instantaneous unit hydrograph (IUH)	15-3-19	
58	Conceptual models	16-3-19	
59	Clark and Nash models,	19-3-19	
60	General hydrological models	19-3-19	
61	Chow - Kulandaiswamy model.	20-3-19	

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TENTATIVE LESSON PLAN: CE

Course Title: WATER RESOURCES ENGINEERING-I (R1632014)		
Section : Sec A	Date : 19/11/2019	Page No : 01 of 02
Revision No : 00	Prepared By : K.KIRAN	Approved By : HOD

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Tentative Date	Implemented Date
UNIT I Introduction to Hydrology **CO1: Have a thorough understanding of the theories and principles governing the hydrologic processes** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
1	Engineering hydrology and its applications,	19-11-19	Lecture interspersed with discussions
2	Hydrologic cycle	20-11-19	
3	Hydrological data-sources of data.	21-11-19	
4	**Precipitation**: Types and forms	22-11-19	
5	Measurement of rain fall	23-11-19	
6	Raingauge network	24-11-19	
7	Presentation of rainfall data	26-11-19	
8	Average rainfall over a basin	27-11-19	
9	Continuity and consistency of rainfall data	28-11-19	
10	Frequency of rainfall,	29-11-19	
11	Intensity-Duration-Frequency (IDF) curves,	1-12-19	
12	Depth-Area-Duration (DAD) curves,	3-12-19	
13	Probable Maximum Precipitation (PMP), design storm	4-12-19	
UNIT-II Abstractions from Precipitation **CO2: develop Intensity-Duration-Frequency and Depth-Area Duration curves to design hydraulic structures and be able to develop design storms and carry out frequency analysis** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
14		6-12-19	Lecture interspersed with discussions
15	Initial abstractions.	7-12-19	
16	**Evaporation**: factors affecting	10-12-19	
17	**Evaporation**: Measurement & reduction	11-12-19	
19	**Evapotranspiration**: factors affecting	12-12-19	
19	**Evapotranspiration**: measurement, control	13-12-19	
20	**Infiltration**: factors affecting,	14-12-19	
21	Infiltration capacity curve,	17-12-19	

22	**Infiltration**: measurement	18-12-19	
23	Infiltration indices	19-12-19	
UNIT-III Runoff and Hydrograph analysis **CO3: Be able to determine storage capacity and life of reservoirs and develop unit hydrograph and synthetic hydrograph** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
24	**Runoff:** Catchment characteristics	21-12-19	
25	Factors affecting runoff	22-12-19	
26	**Runoff** :components, computation	26-12-19	
27	**Runoff** :empirical formulae ,tables and curves	27-12-19	
28	**Runoff** :stream gauging, rating curve,	24-1-19	
29	Flow mass curve and flow duration curve.	25-1-19	
30	**Hydrograph analysis**: Components of hydrograph	28-1-19	
31	Separation of base flow	29-1-19	
32	Effective rainfall hyetograph and direct runoff hydrograph	30-1-19	
33	Unit hydrograph - assumptions	31-1-19	
34	Derivation of unit hydrograph	1-2-19	
35	Unit hydrographs of different durations	2-2-19	
36	Principle of superposition and S-hydrograph methods	5-2-19	
37	Limitations and applications of unit hydrograph,	6-2-19	
38	Limitations and applications of synthetic unit hydrograph	16-2-19	
UNIT-IV Floods **CO4: be able to estimate flood magnitude and carry out flood routing** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
39	Causes and effects of floods	19-2-19	Lecture interspersed with discussions
40	Frequency analysis- Gumbel's and Log-Pearson type III distribution methods	20-2-19	
41	Standard Project Flood (SPF)	21-2-19	
42	Probable Maximum Flood (MPF),	22-2-19	
43	Flood control methods and management.	23-2-19	
44	**Flood Routing:** Hydrologic routing,	25-2-19	

45	Channel and reservoir routing	26-2-19	
46	Muskingum and Pulse methods of routing.	27-2-19	
UNIT-V Groundwater **CO4; Be able to determine aquifer parameters and yield of wells** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
47	**Groundwater:** Occurrence	1-3-19	Lecture interspersed with discussions
48	types of aquifers,	2-3-19	
49	aquifer parameters,	4-3-19	
50	Porosity, specific yield, permeability, transmissivity and storage coefficient.	5-3-19	
51	Types of wells,	6-3-19	
52	Darcy's law,	7-3-19	
53	Dupuit's equation	8-3-19	
54	Steady radial flow to wells in confined and unconfined aquifers,	11-3-19	
55	Yield of a open well-recuperation test	12-3-19	
UNIT VI Advanced Topics in Hydrology **CO6: Be able to model hydrologic processes** **TB1:: Engineering Hydrology, Jayarami Reddy, P., Laxmi Publications Pvt. Ltd., (2013), New Delhi** **TB2::Irrigation and Water Power Engineering, B. C. Punmia, Pande B. B. Lal, Ashok Kumar Jain and Arun Kumar Jain, Lakshmi Publications (P) Ltd.**			
56	Rainfall-runoff Modelling,	14-3-19	Lecture interspersed with discussions
57	Instantaneous unit hydrograph (IUH)	15-3-19	
58	Conceptual models	16-3-19	
59	Clark and Nash models,	19-3-19	
60	General hydrological models	19-3-19	
61	Chow - Kulandaiswamy model.	20-3-19	

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TENTATIVE LESSON PLAN: R1642011

Course Title: ESTIMATING,SPECIFICATIONS AND CONTRACTS(R1642011)		
Section : Sec A	**Date : 18-11-2020**	**Page No :** 01 of 03
Revision No : 00	**Prepared By :**G.Sahithi	**Approved By : HOD**

Tools: Black board

	TOPIC	DATE	MODE OF DELIVERY
UNIT – I INTRODUCTION:GENERAL ITEMS OF WORK IN BUILDINGS **CO1:** The student will be able to calculate quantity of different components of the buildings and know about types of estimates. **TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.** **TB:: Estimating and Costing' by G.S. Birdie.**			
1.	**UNIT-I:Introduction:** about estimation , specifications	19/11/2019	Lectures interspersed with discussions
2.	Purpose of estimation	19/11/2019	
3.	General items of work excavation, filling, concrete in foundation	20/11/2019	
4.	General items of work soling ,dam proof course,masonary,arch masonary,lintels	21/11/2019	
5.	General items of work RCC,RB works,flooring,roofing,plastering,pointing,cornice	22/11/2019	
6.	General items of works doors,windows,wood work,iron work	25/11/2019	
7.	White washing,painting,lumpsump items	26/11/2019	
8.	Standard units , principles of working out quantities	27/11/2019	
9.	Types of estimates	28/11/2019	
10.	Description of detailed estimates	29/11/2019	
11.	Description ob abstract estimates	2/12/2019	
12.	Methods of approximate estimates	2/12/2019	
UNIT – II RATE ANALYSIS **CO2:** The student will be able to find the cost of various building components. **TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.** **TB:: Estimating and Costing' by G.S. Birdie.**			
13	Introduction to rate analysis	3/12/2019	Lectures interspersed with discussions Lectures
14	Calculation of mazdoor required	4/12/2019	
15	Rate analysis problems on excavation for foundation	5/12/2019	
16	Sand filling in plinth problems	6/12/2019	
17	Rate analysis for cement concrete	7/12/2019	
18	Rate analysis for lime concrete in foundation	10/12/2019	
19	Rate analysis for brick work with standard bricks	11/12/2019	
20	Rate analysis for plastering and pointing	12/12/2019	

21	Rate analysis for cement concrete floor	13/12/2019	interspersed with discussions
22	Rate analysis for painting , varnishing	16/12/2019	
23	Rate analysis for mosaic floor finish	17/12/2019	
24	Rate analysis for reinforcement , RCC works	18/12/2019	
25	Rate analysis for other works	18/12/2019	
26	Tutorial	19/12/2019	
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.**			
27	Introduction to earth work	19/12/2019	Lectures interspersed with discussions
28	Embankment, cutting definitions	20/12/2019	
29	Reinforcement , bar bending concept	23/12/2019	
30	Bar requirement schedules	26/12/2019	
31	Methods for earthwork for roads	27/12/2019	
32	Problems on mid sectional area method	28/12/2019	
33	Problems on mean sectional area method	30/12/2019	
34	Problems on Prismodial formula method	2/1/2020	
35	Problems on trapezoidal formula method	3/1/2020	
36	Problems on area of side slopes	4/1/2020	
37	Problems on earthwork for canals	6/1/2020	
38	Earthwork for canals based on Prismodial formula	9/1/2020	
39	Problems on combinations of embankment and cutting	9/1/2020	
40	Tutorial	9/1/2020	
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**	24/1/2020	Lectures interspersed with discussions
42	Types of contracts	25/1/2020	
43	Contract documents	27/1/2020	
44	Conditions of contrac5ts	28/1/2020	
45	Valuation of building	29/1/2020	
46	Genral specifications of first class building	30/1/2020	
47	General specifications of second class building	3/2/2020	
48	General specification of third class building	4/2/2020	
49	General specification of fourth class building	6/2/2020	
50	Standard specifications of various items of works	7/2/2020	
51	Specification for earthwork in foundation , lime concrete in foundation	8/2/2020	
52	Specifications for standard bricks	10/2/2020	
53	Specifications for plastering , pointing	10/2/2020	
54	Tutorial	10/2/2020	

UNIT – V DETAILED ESTIMATION OF BUILDINGS USING INDIVIDUAL WALL METHOD **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	12/2/2020	Lectures interspersed with discussions
56	Detailed estimation of building	13/2/2020	
57	Methods of detailed estimation	17/2/2020	
58	Individual wall method	18/2/2020	
59	Applications of individual wall method	24/2/2020	
60	Problems on individual wall method	24/2/2020	
61	Problems on individual wall method	25/2/2020	
62	Problems on individual wall method	26/2/2020	
63	Problems on individual wall method	26/2/2020	
64	Problems on individual wall method	26/2/2020	
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	25/2/2020	Lectures interspersed with discussions
66	Centre line method	5/3/2020	
67	Problems on centre line method	6/3/2020	
68	Problems on centre line method	7/3/2020	
69	Problems on centre line method	9/3/2020	
70	Problems on centre line method	11/3/2020	
71	Problems on centre line method	13/2/2020	
72	Tutorial on centre line method	16/3/2020	
73	Tutorial on centre line method	16/3/2020	

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TENTATIVE LESSON PLAN: R1642011

Course Title: ESTIMATING,SPECIFICATIONS AND CONTRACTS(R1642011)		
Section : Sec B	**Date : 18-11-2020**	**Page No : 01 of 03**
Revision No : 00	**Prepared By :G.Sahithi**	**Approved By : HOD**

Tools: Black board

	TOPIC	DATE	MODE OF DELIVERY
UNIT – I INTRODUCTION:GENERAL ITEMS OF WORK IN BUILDINGS **CO1:** The student will be able to calculate quantity of different components of the buildings and know about types of estimates. **TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.** **TB:: Estimating and Costing' by G.S. Birdie.**			
1.	**UNIT-I:Introduction:** about estimation , specifications	19/11/2019	Lectures interspersed with discussions
2.	Purpose of estimation	19/11/2019	
3.	General items of work excavation, filling, concrete in foundation	20/11/2019	
4.	General items of work soling ,dam proof course,masonary,arch masonary,lintels	21/11/2019	
5.	General items of work RCC,RB works,flooring,roofing,plastering,pointing,cornice	22/11/2019	
6.	General items of works doors,windows,wood work,iron work	25/11/2019	
7.	White washing,painting,lumpsump items	26/11/2019	
8.	Standard units , principles of working out quantities	27/11/2019	
9.	Types of estimates	28/11/2019	
10.	Description of detailed estimates	29/11/2019	
11.	Description ob abstract estimates	2/12/2019	
12.	Methods of approximate estimates	2/12/2019	
UNIT – II RATE ANALYSIS **CO2:** The student will be able to find the cost of various building components. **TB:: 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.** **TB:: Estimating and Costing' by G.S. Birdie.**			
13	Introduction to rate analysis	3/12/2019	Lectures interspersed with discussions Lectures interspersed
14	Calculation of mazdoor required	4/12/2019	
15	Rate analysis problems on excavation for foundation	5/12/2019	
16	Sand filling in plinth problems	6/12/2019	
17	Rate analysis for cement concrete	7/12/2019	
18	Rate analysis for lime concrete in foundation	10/12/2019	
19	Rate analysis for brick work with standard bricks	11/12/2019	
20	Rate analysis for plastering and pointing	12/12/2019	
21	Rate analysis for cement concrete floor	13/12/2019	

22	Rate analysis for painting , varnishing	16/12/2019	with discussions
23	Rate analysis for mosaic floor finish	17/12/2019	
24	Rate analysis for reinforcement , RCC works	18/12/2019	
25	Rate analysis for other works	18/12/2019	
26	Tutorial	19/12/2019	
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.**			
27	Introduction to earth work	19/12/2019	Lectures interspersed with discussions
28	Embankment, cutting definitions	20/12/2019	
29	Reinforcement , bar bending concept	23/12/2019	
30	Bar requirement schedules	26/12/2019	
31	Methods for earthwork for roads	27/12/2019	
32	Problems on mid sectional area method	28/12/2019	
33	Problems on mean sectional area method	30/12/2019	
34	Problems on Prismodial formula method	2/1/2020	
35	Problems on trapezoidal formula method	3/1/2020	
36	Problems on area of side slopes	4/1/2020	
37	Problems on earthwork for canals	6/1/2020	
38	Earthwork for canals based on Prismodial formula	9/1/2020	
39	Problems on combinations of embankment and cutting	9/1/2020	
40	Tutorial	9/1/2020	
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**	24/1/2020	Lectures interspersed with discussions
42	Types of contracts	25/1/2020	
43	Contract documents	27/1/2020	
44	Conditions of contrac5ts	28/1/2020	
45	Valuation of building	29/1/2020	
46	Genral specifications of first class building	30/1/2020	
47	General specifications of second class building	3/2/2020	
48	General specification of third class building	4/2/2020	
49	General specification of fourth class building	6/2/2020	
50	Standard specifications of various items of works	7/2/2020	
51	Specification for earthwork in foundation , lime concrete in foundation	8/2/2020	
52	Specifications for standard bricks	10/2/2020	
53	Specifications for plastering , pointing	10/2/2020	
54	Tutorial	10/2/2020	

UNIT – V DETAILED ESTIMATION OF BUILDINGS USING INDIVIDUAL WALL METHOD

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	12/2/2020	Lectures interspersed with discussions
56	Detailed estimation of building	13/2/2020	
57	Methods of detailed estimation	17/2/2020	
58	Individual wall method	18/2/2020	
59	Applications of individual wall method	24/2/2020	
60	Problems on individual wall method	24/2/2020	
61	Problems on individual wall method	25/2/2020	
62	Problems on individual wall method	26/2/2020	
63	Problems on individual wall method	26/2/2020	
64	Problems on individual wall method	26/2/2020	

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	25/2/2020	Lectures interspersed with discussions
66	Centre line method	5/3/2020	
67	Problems on centre line method	6/3/2020	
68	Problems on centre line method	7/3/2020	
69	Problems on centre line method	9/3/2020	
70	Problems on centre line method	11/3/2020	
71	Problems on centre line method	13/2/2020	
72	Tutorial on centre line method	16/3/2020	
73	Tutorial on centre line method	16/3/2020	

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TENTATIVE LESSON PLAN: ~~CE~~ R16 4-2012

Course Title: CONSTRUCTION TECHNOLOGY AND MANAGEMENT		
Section : Sec A	**Date : 18-11-2019**	**Page No :** 01 of 02
Revision No : 00	**Prepared By :**A.ANOOP KUMAR	**Approved By : HOD**

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I TB: Project planning and control with PERT AND CPM TB: Construction engineering and management. CO1: To introduce students about construction project management including network drawing and monitoring.			
1.	Construction project management and its relevance	18-11-2019	Lecture interspersed with discussions
2.	Qualities of a project manager	19-11-2019	
3.	Project planning	20-11-2019	
4.	Coordination	21-11-2019	
5.	scheduling	23-11-2019	
6.	Monitoring	25-11-2019	
7.	Bar charts	26-11-2019	
8.	Milestone charts	27-11-2019	
9.	Critical path method-applications	29,30-11-2019, 1,2,3,4-12-2019	
UNIT –II TB : Project planning and control with PERT AND CPM TB: Construction engineering and management. CO2: To introduce students about project evaluation, project structure.			
10.	Project evaluation and review technique	6 to 14-12-2019	Lecture interspersed with discussions
11.	Cost analysis	15-12-2019	
12.	Updating	16-12-2019	
13.	Crashing for optimum cost	17-12-2019	
14.	Crashing for optimum resources	18-12-2019	
15.	Allocation of resources	19,20-12-2019	
UNIT –III TB: Construction engineering and management. TB: Construction planning, equipment, and methods. CO3: To introduce students about various construction equipment, their capacity calculation.			
16.	Construction equipment	21-12-2019	Lecture interspersed with discussions
17.	Economical conditions	22-12-2019	
18.	Earthquake equipment	23-12-2019	
19.	Trucks and handling equipment	24-12-2019	
20.	Rear dump trucks	25-12-2019	
21.	Capacities of trucks and handling equipment	26-12-2019	
22.	Calculation of truck production	27-12-2019 to 3-1-2020	

23.	Compaction equipment	4-1-2020	
24.	Types of compaction rollers	5-1-2020	
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	27-1-2020	Lecture interspersed with discussions
26.	Hoists	29-1-2020	
27.	Cranes	29-1-2020	
28.	Tractors	30-1-2020	
29.	Bulldozers	30-1-2020	
30.	Graders	30-1-2020	
31.	Scrapers	1-2-2020	
32.	Draglines	3-2-2020	
33.	Clamshell Buckets.	4-2-2020	
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	11-2-2020	Lecture interspersed with discussions
35.	Crushers	11-2-2020	
36.	Jaw Crushers	12-2-2020	
37.	Gyratory Crushers	12-2-2020	
38.	Impact Crushers	17-2-2020	
39.	Selection Of Crushing Equipment	17-2-2020	
40.	Screening Of Aggregate	24-2-2020	
41.	Concrete Mixers	24-2-2020	
42.	Mixing And Placing Of Concrete	25-2-2020	
43.	Consolidating And Finishing	25-2-2020	
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	26-2-2020	Lecture interspersed with discussions
45.	Earthwork	28-2-2020	
46.	Piling	2-3-2020	
47.	Placing Of Concrete	4-3-2020	
48.	Form Work	6-3-2020	
49.	Fabrication And Erection	10-3-2020	
50.	Quality control & Safety engineering	12-3-2020	

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TENTATIVE LESSON PLAN: ~~CE~~

Course Title: CONSTRUCTION TECHNOLOGY AND MANAGEMENT		
Section : Sec B	**Date : 18-11-2019**	**Page No :** 01 of 02
Revision No : 00	**Prepared By :** A.ANOOP KUMAR	**Approved By : HOD**

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I TB: Project planning and control with PERT AND CPM by B.C.Punmai. TB :Construction engineering and management by Seetharaman CO1: To introduce students about construction project management including network drawing and monitoring.			
1.	Construction project management and its relevance	18-11-2019	Lecture interspersed with discussions
2.	Qualities of a project manager	19-11-2019	
3.	Project planning	20-11-2019	
4.	Coordination	21-11-2019	
5.	scheduling	23-11-2019	
6.	Monitoring	25-11-2019	
7.	Bar charts	26-11-2019	
8.	Milestone charts	27-11-2019	
9.	Critical path method-applications	29,30-11-2019, 1,2,3,4-12-2019	
UNIT –II TB: Project planning and control with PERT AND CPM TB: Construction engineering and management. CO2: To introduce students about project evaluation, project structure.			
10.	Project evaluation and review technique	12-12-2019	Lecture interspersed with discussions
11.	Cost analysis	17-12-2019	
12.	Updating	18-12-2019	
13.	Crashing for optimum cost	19-12-2019	
14.	Crashing for optimum resources	21-12-2019	
15.	Allocation of resources	24-12-2019	
UNIT –III TB: Construction engineering and management. TB: construction planning, equipment, and methods. CO3: To introduce students about various construction equipment, their capacity calculation.			
16.	Construction equipment	21-12-2019	Lecture interspersed with discussions
17.	Economical conditions	22-12-2019	
18.	Earthquake equipment	23-12-2019	
19.	Trucks and handling equipment	24-12-2019	
20.	Rear dump trucks	25-12-2019	
21.	Capacities of trucks and handling equipment	26-12-2019	

22.	Calculation of truck production	27-12-2019 to 3-1-2020	
23.	Compaction equipment	4-1-2020	
24.	Types of compaction rollers	5-1-2020	
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	27-1-2020	Lecture interspersed with discussions
26.	Hoists	29-1-2020	
27.	Cranes	29-1-2020	
28.	Tractors	30-1-2020	
29.	Bulldozers	30-1-2020	
30.	Graders	30-1-2020	
31.	Scrapers	1-2-2020	
32.	Draglines	3-2-2020	
33.	Clamshell Buckets.	4-2-2020	
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	11-2-2020	Lecture interspersed with discussions
35.	Crushers	11-2-2020	
36.	Jaw Crushers	12-2-2020	
37.	Gyratory Crushers	12-2-2020	
38.	Impact Crushers	17-2-2020	
39.	Selection Of Crushing Equipment	17-2-2020	
40.	Screening Of Aggregate	24-2-2020	
41.	Concrete Mixers	24-2-2020	
42.	Mixing And Placing Of Concrete	25-2-2020	
43.	Consolidating And Finishing	25-2-2020	
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	26-2-2020	Lecture interspersed with discussions
45.	Earthwork	28-2-2020	
46.	Piling	2-3-2020	
47.	Placing Of Concrete	4-3-2020	
48.	Form Work	6-3-2020	
49.	Fabrication And Erection	10-3-2020	
50.	Quality control & Safety engineering	12-3-2020	

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TENTATIVE LESSON PLAN: R1642013

Course Title: PRESTRESSED CONCRETE			
Section : Sec A	Date : 18-112019	Page No : 01 of 03	
Revision No : 00	Prepared By : Ch.Mallika Chowdary	Approved By : HOD	

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of delivery
UNIT –I	**Basic concepts of PSC**		
Text book:Prestressed Concrete b N.Krishna Raju			
1	Introduction of concrete and prestressed concrete	18-11-2019	PPT& BLACK BOARD
2	Centroid problems of T,L,I Sections	19-11-2019	
3	Basic Concepts of Prestressing and Applications of PSC	20-11-2019	
4	Reinforced concrete and high strength steel and concrete ,Advantages of PSC	21-11-2019	
5	Need for HSC and HSS	22-11-2019	
6	High strength concrete properties and classification of PSC members	23-11-2019	
7	High strength steel and its properties	25-11-2019	
UNIT –II	**Prestressing systems and analysis of prestress**		
Text book:Prestressed Concrete by N.Krishna Raju			
12	Introduction and Principles about tensioning devices	27-11-2019	PPT&BLACK BOARD
13	Principles of Tensioning devices	28-11-2019	
14	Hoers long line system of tensioning and pretensioning devices	29-11-2019	
15	Introduction and brief description of the pretensioning and post tensioning members	2-12-2019	
16	Introduction about the analysis of prestress and bending stress	3 -12-2019	
17	Basic assumptions of the analysis of prestress	4-12-2019	
18	Resultant stress at a section	5-12-2019	
19	Problems on the Resultant stress on a Rectangular section	6-12-2019	
20	Problems on the Resultant stress on a Rectangular section	7-12-2019	
21	Problems on I-Section and their resultant stresses	9-12-2019	
22	Calculations the stresses and also determination of the magnitudes and their moments	10-12-2019	
23	Concept of pressure line and introduction of problems	12-12-2019	
24	Introduction of pressure line and problems of rectangular section	13-12-2019	
25	Problems of Rectangular Section	14-12-2019	
26	Problems of I-Section	16-12-2019	
27	Concept of load balancing	17-12-2019	
28	Problems of concept of load balancing for triangle sections	19-12-2019	
29	Problems on the Resultant stress on a Rectangular section and trapezoidal sections	20-12-2019	
30	Problems of concept of load balancing	21-12-2019	
UNIT –III	**LOSSES OF PRESTRESS**		
Text book:Prestressed Concrete b N.Krishna Raju			

31	Introduction of losses and problems of Elastic Deformation of concrete	21-12-2019	
32	Problems on losses of creep,shrinkage	23-12-2019	PPT&BLACK BOARD
33	Problems on losses of creep,shrinkage	24-12-2019	
34	Problems on loss due to friction	25-12-2019	
35	Problems on loss due to friction for three cables	26-12-2019	
36	Problems on loss due to friction for three cables	27-12-2019	
37	Introduction to the Anchorage Slip	28-12-2019	
38	Introduction to the Relaxation of the stress in steel	30-12-2019	
39	Problems on the Anchorage slip and Relaxation of stress in steel.	2-1-2020	
40	Problems on the total losses with calculation of the percentage of the losses	3-1-2020	
UNIT IV Flexural strength of PSC members & Deflections of the PSC members Text book:Prestressed Concrete b N.Krishna Raju			
41	Introduction of Flexural Strength	27-1-2020	PPT&BLACK BOARD
42	Introduction of design methods	28-1-2020	
43	Problems on design of flexure	29-1-2020	
44	Problems of Rectangular sections when xu<d	30-1-2020	
45	Problems of flexure moment Rectangular sections when xu>d	30-1-2020	
46	Design of flexure for rectangular sections	31-1-2020	
47	Design of flexure for T-Section	1-2-2020	
48	Introduction to the Deflections and Control of the Deflections,Factors influencing Deflections	3-2-2020	
49	Design steps for the Design of the Flexure members	11-2-2020	
50	Problems on short term deflections and long term deflections	11-2-2020	
51	Problems on short term deflections and long term deflections	12-2-2020	
52	Problems on short term deflections and long term deflections	13-2-2020	
53	Problems on short term deflections and long term deflections	14-2-2020	
UNIT V Shear and Trosional design of PSC members Text book:Prestressed Concrete b N.Krishna Raju **and vedio lectures and notes by devdas menon**			
54	Introduction of shear and torsionsl resistance	15-2-2020	PPT&BLACK BOARD
55	Problems on Rectangular sections for shear	18-2-2020	
56	Problems on Rectangular sections for shear	19-2-2020	
57	Problems on Rectangular section for Torsion	21-2-2020	
58	Problems on Rectangular section for Torsion	22-2-2020	
59	Problems on Vertical Tensile Stresses,End -zone reinforcement	22-2-2020	
60	Problems on Bond stresses,Flexural stresses	24-2-2020	
UNIT – VI TRANSFER OF PRESTRESSIN PRE TENSIONED MEMBERS AND ANCHORAGE ZONE STRESSES IN POST-TENSIONED MEMBERS Text book:Prestressed Concrete b N.Krishna Raju **, S.Ramamrutham and vedio lectures and notes by devdas menon**			
61	Introduction of Anchorage and stress block diagram	26-2-2020	PPT& BLACK
62	Introduction and Problems on Gyon's method	28-2-2020	

63	Introduction and Problems on Magnel's method	2-3-2020	BOARD
64	Introduction and Problems of Post-tensioned end block	3-3-2020	PPT& BLACK BOARD
65	Problems of Post-tensioned end block	4-3-2020	
66	Stress Distribution in the End-Block	5-3-2020	
67	Problems of the Anchorage zone Reinforcement.	6-3-2020	

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TENTATIVE LESSON PLAN: R1642013

Course Title: PRESTRESSED CONCRETE			
Section : Sec B	Date : 18-112019	Page No : 01 of 03	
Revision No : 00	Prepared By : Ch.Mallika Chowdary	Approved By : HOD	

Tools : Black board, PPTs, Model

No. of Periods	TOPIC	Date	Mode of delivery
UNIT –I	**Basic concepts of PSC**		
Text book:Prestressed Concrete b N.Krishna Raju			
1	Introduction of concrete and prestressed concrete	18-11-2019	PPT& BLACK BOARD
2	Centroid problems of T,L,I Sections	19-11-2019	
3	Basic Concepts of Prestressing and Applications of PSC	20-11-2019	
4	Reinforced concrete and high strength steel and concrete ,Advantages of PSC	21-11-2019	
5	Need for HSC and HSS	22-11-2019	
6	High strength concrete properties and classification of PSC members	23-11-2019	
7	High strength steel and its properties	25-11-2019	
UNIT –II	**Prestressing systems and analysis of prestress**		
Text book:Prestressed Concrete by N.Krishna Raju			
12	Introduction and Principles about tensioning devices	27-11-2019	PPT&BLACK BOARD
13	Principles of Tensioning devices	28-11-2019	
14	Hoers long line system of tensioning and pretensioning devices	29-11-2019	
15	Introduction and brief description of the pretensioning and post tensioning members	2-12-2019	
16	Introduction about the analysis of prestress and bending stress	3 -12-2019	
17	Basic assumptions of the analysis of prestress	4-12-2019	
18	Resultant stress at a section	5-12-2019	
19	Problems on the Resultant stress on a Rectangular section	6-12-2019	
20	Problems on the Resultant stress on a Rectangular section	7-12-2019	
21	Problems on I-Section and their resultant stresses	9-12-2019	
22	Calculations the stresses and also determination of the magnitudes and their moments	10-12-2019	
23	Concept of pressure line and introduction of problems	12-12-2019	
24	Introduction of pressure line and problems of rectangular section	13-12-2019	
25	Problems of Rectangular Section	14-12-2019	
26	Problems of I-Section	16-12-2019	
27	Concept of load balancing	17-12-2019	
28	Problems of concept of load balancing for triangle sections	19-12-2019	
29	Problems on the Resultant stress on a Rectangular section and trapezoidal sections	20-12-2019	
30	Problems of concept of load balancing	21-12-2019	
UNIT –III	**LOSSES OF PRESTRESS**		
Text book:Prestressed Concrete b N.Krishna Raju			

31	Introduction of losses and problems of Elastic Deformation of concrete	21-12-2019	
32	Problems on losses of creep,shrinkage	23-12-2019	PPT&BLACK BOARD
33	Problems on losses of creep,shrinkage	24-12-2019	
34	Problems on loss due to friction	25-12-2019	
35	Problems on loss due to friction for three cables	26-12-2019	
36	Problems on loss due to friction for three cables	27-12-2019	
37	Introduction to the Anchorage Slip	28-12-2019	
38	Introduction to the Relaxation of the stress in steel	30-12-2019	
39	Problems on the Anchorage slip and Relaxation of stress in steel.	2-1-2020	
40	Problems on the total losses with calculation of the percentage of the losses	3-1-2020	
UNIT IV Flexural strength of PSC members & Deflections of the PSC members Text book:Prestressed Concrete b N.Krishna Raju			
41	Introduction of Flexural Strength	27-1-2020	PPT&BLACK BOARD
42	Introduction of design methods	28-1-2020	
43	Problems on design of flexure	29-1-2020	
44	Problems of Rectangular sections when xu<d	30-1-2020	
45	Problems of flexure moment Rectangular sections when xu>d	30-1-2020	
46	Design of flexure for rectangular sections	31-1-2020	
47	Design of flexure for T-Section	1-2-2020	
48	Introduction to the Deflections and Control of the Deflections,Factors influencing Deflections	3-2-2020	
49	Design steps for the Design of the Flexure members	11-2-2020	
50	Problems on short term deflections and long term deflections	11-2-2020	
51	Problems on short term deflections and long term deflections	12-2-2020	
52	Problems on short term deflections and long term deflections	13-2-2020	
53	Problems on short term deflections and long term deflections	14-2-2020	
UNIT V Shear and Trosional design of PSC members Text book:Prestressed Concrete b N.Krishna Raju **and vedio lectures and notes by devdas menon**			
54	Introduction of shear and torsionsl resistance	15-2-2020	PPT&BLACK BOARD
55	Problems on Rectangular sections for shear	18-2-2020	
56	Problems on Rectangular sections for shear	19-2-2020	
57	Problems on Rectangular section for Torsion	21-2-2020	
58	Problems on Rectangular section for Torsion	22-2-2020	
59	Problems on Vertical Tensile Stresses,End -zone reinforcement	22-2-2020	
60	Problems on Bond stresses,Flexural stresses	24-2-2020	
UNIT – VI TRANSFER OF PRESTRESSIN PRE TENSIONED MEMBERS AND ANCHORAGE ZONE STRESSES IN POST-TENSIONED MEMBERS Text book:Prestressed Concrete b N.Krishna Raju , **S.Ramamrutham and vedio lectures and notes by devdas menon**			
61	Introduction of Anchorage and stress block diagram	26-2-2020	PPT& BLACK
62	Introduction and Problems on Gyon's method	28-2-2020	

63	Introduction and Problems on Magnel's method	2-3-2020	BOARD
64	Introduction and Problems of Post-tensioned end block	3-3-2020	PPT& BLACK BOARD
65	Problems of Post-tensioned end block	4-3-2020	
66	Stress Distribution in the End-Block	5-3-2020	
67	Problems of the Anchorage zone Reinforcement.	6-3-2020	

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TENTATIVE LESSON PLAN: CIVIL R164201C

SOLID & HAZARDOUS WASTE MANAGEMENT

Course Title: SOLID & HAZARDOUS WASTE MANAGEMENT (CIVIL)		
Section: Sec A	**Date: 18-11-2019**	**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 SWM **CO1:**UNDERSTAND THE IMPACT OF SOLID WASTE ON THE HEALTH OF THE LIVING BEINGS **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
1	**Introduction to SWM**	18/11/2019	Lecture interspersed with discussions
2	Goals and Objectives of Solid Waste Management	25/11/2019	
3	Classification of Solid Waste	26/11/2019	
4	Factors influencing generation of SW	27/11/2019	
5	Sampling and Characterization of Wastes	28/11/2019	
6	Characterization of Waste	29/11/2019	
7	Future changes in waste composition of SW	02/12/2019	
8	Major legislation and monitoring responsibilities	03/12/2019	
9	ISWM terms—WTE, ULB	04/12/2019	
10	TLV, Measurement of NPK and calorific value	05/12/2019	
11	Assignment & Tutorial-I	06/12/2019	
UNIT 2: BASIC ELEMENTS IN SWM **CO2:** DESIGN THE COLLECTION SYSTEMS OF SOLID WASTE OF A TOWN **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
12	**Basic elements in SWM**	09/12/2019	Lecture interspersed with discussions
13	Functional elements and their interrelationship in SWM	10/12/2019	
14	Principles of SWM	12/12/2019	
15	Onsite handling of wastes	13/12/2019	
16	Storage and Processing of wastes at site	16/12/2019	
17	Types of containers and Collection of solid wastes	17/12/2019	
18	Types of waste Collection systems	17/12/2019	
19	Methods of waste collection-Hauling container system	18/12/2019	
20	Stationary container system	18/12/2019	
21	Frequency of collection	19/12/2019	
22	Analysis of collection system	19/12/2019	
	Optimization of collection routes	21/12/2019	
24	Alternative techniques for collection system	21/12/2019	

25	Tutorial-II	23/12/2019	
26	Assignment-II	23/12/2019	
UNIT 3: TRANSFER, TRANSPORT AND TRANSFORMATION OF WASTES **CO3:** ACQUIRE THE PRINCIPLES OF TRANSFORMATION OF MUNICIPAL SOLID WASTE TO ENERGY **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
27	**Transfer, Transport and Transformation of wastes**	26/12/2019	Lecture interspersed with discussions
28	Need for Transfer Operations	26/12/2019	
29	Compaction of solid waste	30/12/2019	
30	Means and methods of transporting wastes	30/12/2019	
31	Transfer station and types	02/01/2020	
32	Design requirements of TS	04/01/2020	
33	Separation of wastes- Unit operations	04/01/2020	
34	Transformation of wastes	06/01/2020	
35	Shredding of waste materials and sorting	08/01/2020	
36	Recovery of materials from wastes- RRPs- Tutorial	09/01/2020	
UNIT 4: PROCESSING AND TREATMENT OF WASTES **CO4:** CHARACTERISE THE SOLID WASTE AND DESIGN A COMPOSTING FACILITY **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
37	**Processing and Treatment of Wastes**	27/01/2020	Lecture interspersed with discussions
38	Processing of Solid Wastes	28/01/2020	
39	Waste Transformation through combustion and composting	29/01/2020	
40	Types of composting- yard wastes	30/01/2020	
41	Windrows, warming composting and vermi-composting	31/01/2020	
42	Anaerobic methods of material recovery	01/02/2020	
43	Treatment of wastes	03/02/2020	
44	Energy recovery	04/02/2020	
45	Biogas generation	05/02/2020	
46	Cleaning	06/02/2020	
47	Incineration	10/02/2020	
48	Gasification & pyrolysis	11/02/2020	
49	Tutorial-IV	12/02/2020	
50	Assignment	14/02/2020	
UNIT 5: DISPOSAL OF SOLID WASTES **CO5:** KNOW THE CRITERIA FOR SELECTION OF LANDFILL AND DESIGNING **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
51	**Disposal of Solid Wastes**	16/02/2020	Lecture interspersed with discussions
52	Methods of Disposal	17/02/2020	
53	Site selection for Landfill	18/02/2020	
54	Types of landfill	19/02/2020	
55	Design of Landfill	20/02/2020	
56	Operations involved at landfill site	24/02/2020	
57	Drainage and Leachate collection systems	25/02/2020	
58	Designated waste Landfill remediation	28/02/2020	
59	Case Studies	29/02/2020	
60	Case Studies -Assignment & Tutorial-V	02/03/2020	

UNIT 6: HAZARDOUS WASTE MANAGEMENT CO6: KNOW THE METHOD OF TREATMENT AND DISPOSAL OF HAZARDOUS WASTES. TB: SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
61	Sources of HW- characteristics, Collection of HW	03/03/2020	Lecture interspersed with discussions
62	Transport and Treatment of HW	04/03/2020	
63	Disposal methods of HW- Biomedical Waste Management	05/03/2020	
64	Nuclear & E-Waste Management, Env. Laws related to HW	06/03/2020	
65	Case Studies - Tutorial-VI	07/03/2020	

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TENTATIVE LESSON PLAN: CIVIL R164201C

SOLID & HAZARDOUS WASTE MANAGEMENT

Course Title: SOLID & HAZARDOUS WASTE MANAGEMENT (CIVIL)		
Section: Sec B	**Date: 18-11-2019**	**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
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11	Assignment & Tutorial-I	06/12/2019	
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25	Tutorial-II	23/12/2019	

26	Assignment-II	23/12/2019	
UNIT 3: TRANSFER, TRANSPORT AND TRANSFORMATION OF WASTES **CO3:** ACQUIRE THE PRINCIPLES OF TRANSFORMATION OF MUNICIPAL SOLID WASTE TO ENERGY **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
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48	Gasification & pyrolysis	11/02/2020	
49	Tutorial-IV	12/02/2020	
50	Assignment	14/02/2020	
UNIT 5: DISPOSAL OF SOLID WASTES **CO5:** KNOW THE CRITERIA FOR SELECTION OF LANDFILL AND DESIGNING **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
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59	Case Studies	29/02/2020	
60	Case Studies -Assignment & Tutorial-V	02/03/2020	
UNIT 6: HAZARDOUS WASTE MANAGEMENT			

CO6: KNOW THE METHOD OF TREATMENT AND DISPOSAL OF HAZARDOUS WASTES. **TB:** SOLID & HAZARDOUS WASTE MANAGEMENT BY PM CHERRY			
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