#132, AECS Layout, IT Park Road, Kundalahalli,
Bangalore – 560 037 T:+9180 28524466 / 77 Bangalore – 560 037

CMR
INSTITUTE OF
TECHNOLOY

DEPARTMENT OF CIVIL ENGINEERING

Lesson Plan for the even sem – 2016

Semester – 6

Subject Code: 10CV61 Subject Name: ENVIRONMENTAL ENGINEERING I

SEMESTER : VI
BRANCH : CIV
SUBJECT : ENVIRONMENTAL ENGG I
SUBJECT CODE: 10CV61
NO OF HRS/ WK: 5

NAME OF THE FACULTY : Ms.Bhavya K.
DATE OF COMMENCEMENT: 25-01-2016
DATE OF CLOSING : 21-05-2016
CLASS STRENGTH : 54
TOTAL HRS : 62

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	25.01.16	**UNIT – 1** Human activities and environmental pollution.	Chalk & Board		12.5%
2	2/1	28.01.16	Water for various beneficial uses and quality requirement. Need for protected water supply	,,		
3	3/1	29.01.16	Demand for water: Types of water demands-domestic demand in detail, institutional and commercial, public uses, fire demand. Per capita consumption ,factors affecting per capita demand,	,,		
4	4/1	30.01.16	Variations in demand of water. Fire demand – estimation by Kuichling's formula, Freeman formula & national board of fire underwriters formula	,,		
5	5/1	01.02.16	Peak factors, design periods & factors governing the design periods	,,		
6	6/1	02.02.16	Problems on quantity of water supply based on various types of demand	,,		
7	7/1	04.02.16	Population forecasting, different methods with merits & demerits.	,,		
8	8/1	05.02.16	Problems on population forecasts	,,	*Class test*	
9	1/2	08.02.16	**UNIT – 2** Surface and subsurface sources types and classification	PPT		25%
10	2/2	09.02.16	Suitability of different sources with regard	Chalk &		

			to quality and quantity.	Board		
11	3/2	10.02.16	Collection of water from sources using Intake structures ,selection of location for intake structure ,River intake	PPT		
12	4/2	12.02.16	Reservoir intake, canal intake with diagrams	PPT		
13	5/2	13.02.16	Conveyance of water :open conduits and closed conduits	Chalk & Board		
14	6/2	15.02.16	Pumps- Necessity power of pumps; factors for the selection of a pump	Chalk & Board		
15	7/2	16.02.16	Types of pumps: Reciprocating , centrifugal	,,		
16	8/2	17.02.16	Problems on pumps	,,		
17	9/2	22.02.16	Pipes – Design of the economical diameter for the rising main; Nomograms	,,		
18	10/2	23.02.16	Pipe appurtenances: valves	,,		
19	11/2	24.02.16	Pipe apurtenances: pipe fittings	,,	Assignment -1	
20	1/3	25.02.16	**UNIT – 3** Objectives of water quality management. Whole someness & palatability,	Chalk & Board		
21	2/3	26.02.16	Water borne diseases.	,,		
22	3/3	01.03.16	Water quality parameters – Physical, chemical	,,		
23	4/3	02.03.16	Water quality parameters – Microbiological	,,		37.5%
24	5/3	03.03.16	Sampling of water for examination. Water quality analysis (IS: 3025 and IS: 1622) using analytical and instrumental techniques.	,,		
25	6/3	04.03.16	Drinking water standards BIS & WHO guidelines. Health significance of Fluoride, Nitrates and heavy metals like Mercury	Chalk & Board		
26	7/3	05.03.16	Health significance of Cadmium, Arsenic etc. and toxic / trace organics	,,	*Class test*	
27	1/4	09.03.16	**UNIT – 4** Water treatment: Objectives, Treatment flow-chart.	,,		
28	2/4	10.03.16	Aeration-Principles, types of Aerators.	PPT		
29	3/4	11.03.16	Sedimentation theory of it	,,		
30	4/4	17.03.16	Settling tanks, types, design	Chalk & Board		
31	5/4	18.03.16	Problems on design of settling tanks	,,		
32	6/4	21.03.16	Coagulant aided sedimentation theory	,,		50%
33	7/4	22.03.16	Types of coagulants	,,		
34	8/4	23.03.16	Problems on sedimentation using coagulants	Chalk & Board		
35	9/4	24.03.16	Method to obtain optimum dose of coagulant, jar test	,,		
36	10/4	28.03.16	Chemical feeding, flash mixing,	,,		
37	11/4	30.03.16	Clari flocculator principle and working	,,	Assignment -2	
38	1/5	31.03.16	**UNIT - 5** FILTRATION: Mechanism – theory of filtration	PPT		62.5%
39	2/5	01.04.16	Types of filters, construction, operation,	Chalk &		

			cleaning and design of slow sand filter	Board		
40	3/5	02.04.16	Construction, operation, cleaning and design of rapid sand	,,		
41	4/5	04.04.16	Construction, operation, cleaning and design of pressure filters	,,		
42	5/5	06.04.16	Back washing of filters	,,		
43	6/5	07.04.16	Operational problems in filters	,,		
44	7/5	11.04.16	Design problems on filters	,,	*Class test*	
45	1/6	12.04.16	**UNIT – 6** Theory of disinfection, types of disinfection,	,,		75%
46	2/6	13.04.16	Chlorination, chlorine demand, residual chlorine,	,,		
47	3/6	16.04.16	Use of bleaching powder.	,,		
48	4/6	18.04.16	Problems on chlorine demand	,,		
49	5/6	20.04.16	UV irradiation treatment – treatment of swimming pool water			
50	6/6	21.04.16	Softening – definition, methods of removal of hardness: Lime soda process			
51	7/6	22.04.16	Zeolite process , Demineralization process		Assignment -3	
52	1/7	28.04.16	**UNIT – 7** Removal of color, odor, taste	,,		87.5%
53	2/7	29.04.16	Use of copper sulfate, Adsorption technique	Chalk & Board		
54	3/7	30.04.16	Method of fluoridation	,,		
55	4/7	02.05.16	Distribution System of supply	,,		
56	5/7	03.05.16	Service reservoirs and their capacity determination	,,		
57	6/7	05.05.16	Problems on capacity determination	,,		
58	7/7	06.05.16	Methods of layout of distribution systems	,,	*Class test*	
59	1/8	07.05.16	**UNIT – 8** Different types of manholes	,,		100%
60	2/8	08.05.16	Types of fire hydrants	,,		
61	3/8	10.05.16	Different types of Pipe fittings	,,		
62	4/8	11.05.16	Layout of pipes in buildings	,,	Assignment -4	

Syllabus for Internal Assessment Tests (IAT)*

Sessional #	**Syllabus**
T1	Class # 01 – 26
T2	Class # 27 – 51
T3	Class # 52 - 62

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	S.K GARG WATER SUPPLY ENGINEERING	Twentieth edition,	81-7409-120-3
Text Book	TB2	B.C PUNMIA AND ASHOK JAIN ENVIRONMENTAL ENGG-I	SECOND EDITION' LAXMI PUBLICATION	978-81-318-0703-3
Ref book	RB1	G.S BIRIE AND J.S BIRDIE	NINTH EDITION DHANPAT RAI PUBLICATIONS	81-87433-31-0
Ref book	RB2	RANGWALA"WATER SUPPLY AND SANITARY ENGG"	EIGHTEENTH EDITION CHAROTAR PUBLISHNG HOUSE	81-855-94-12-0

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CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Civil

SEMESTER: VI
BRANCH: Civil
SUBJECT: DDRCC
SUBJECT CODE: 10CV661
NO OF HRS/WK: 3(T) + 3(D)

NAME OF THE FACULTY: Mr. Naresh Dixit P S
DATE OF COMMENCEMENT: 25.01.2016
DATE OF CLOSING: 21.05.2016
CLASS STRENGTH: 54
TOTAL HRS: 72

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	Drawing submission
1	**1/1**	27/01/2016	Introduction to RCC	Board, chalk, duster	
2	**2/1**	28/01/2016	General layout of building showing position of columns, footings beams and slabs	,,	
3	**3/1**	29/01/2016	Problems and drawing on	,,	

4	**4/1**		general layout of building	,,	
5	**5/1**			,,	
6	**1/2**	01/02/2016	Introduction to RCC and codal provisions of IS 456, SP 34, SP 16	,,	
7	**2/2**	03/02/2016	Introduction to beam slab floor system and design criteria	,,	
8	**3/2**	04/03/2016	Introduction to continuous beams and design criteria	Board, chalk, duster	
9	**4/2**	05/02/2016	Drawing of beam slab floor system and continuous beams	,,	
10	**5/2**			,,	
11	**6/2**			,,	
12	**7/2**	09/02/2016	Problems on beam slab floor system and continuous beams	,,	
13	**8/2**	11/02/2016	Problems on beam slab floor system and continuous beams	,,	
14	**1/3**	12/02/2016	Introduction on Column footings	,,	Submission of Unit 1
15	**9/2**	13/02/2016	Drawing of beam slab floor system and continuous beams		
16	**10/2**				
17	**11/2**				
18	**2/3**	16/02/2016	Problems on column footing (square)	,,	
19	**3/3**	18/02/2016	Problems on column footing (rectangular)	,,	
20	**4/3**	22/02/2016	Additional problems on column footings	,,	
21	**5/3**	23/02/2016	Drawing of column footings	,,	
22	**6/3**			,,	
23	**7/3**				
24	**1/4**	25/02/2016	Introduction and Problems on dog legged stair cases	Board, chalk, duster	
25	**2/4**	29/02/2016	Problems on open well stair cases	,,	

26	**3/4**	01/03/2016	Additional problems on stair cases	,,	Submission of Unit 2
27	**4/4**	02/03/2016	Drawing of stair cases	,,	
28	**5/4**			,,	
29	**6/4**			,,	
30	**1/5**	04/03/2016	Introduction to combined footing	,,	
31	**2/5**	08/03/2016	Introduction and design criteria of slab beam type combined footing	,,	
32	**3/5**	09/03/2016	Problems on slab beam type combined footing	,,	Submission of Unit 3
33	**4/5**	10/03/2016	Additional drawings on stair cases, Footings and test	Board, chalk, duster	
34	**5/5**			,,	
35	**6/5**			,,	
36	**7/5**	17/03/2016	Problems on slab beam type combined footing	,,	
37	**8/5**	19/03/2016	Problems on slab beam type combined footing	,,	
38	**1/6**	21/03/2016	Introduction to retaining wall, classification of retaining walls	,,	
39	**9/5**	22/03/2016	Drawing of slab beam type combined footing	,,	
40	**10/5**			,,	
41	**11/5**			,,	Submission of Unit 4
42	**2/6**	24/03/2016	Design criteria of retaining walls and design of cantilever retaining wall	,,	
43	**3/6**	29/03/2016	Design of counter fort retaining wall	,,	
44	**4/6**	30/03/2016	Additional problems on retaining wall	,,	
45	**5/6**	31/03/2016	Drawing of retaining walls	,,	
46	**6/6**			,,	
47	**7/6**			,,	

48	**1/7**	02/04/2016	Introduction to water tanks and classification of water tanks	,,	Submission of Unit 5
49	**2/7**	05/04/2016	Design criteria of tanks resting on ground as per IS 3370	Board, chalk, duster	
50	**3/7**	06/04/2016	Design of circular water tank (flexible base)	,,	
51	**1-6**	07/04/2016	Internal assessment test (drawing)	,,	
52				,,	
53				,,	
54	**4/7**	12/04/2016	Design of circular water tank (Rigid base)	,,	Submission of Unit 6
55	**5/7**	15/04/2016	Design of rectangular water tank (flexible base)	,,	
56	**6/7**	16/04/2016	Design of rectangular water tank (rigid base)	,,	
57	**7/7**	18/04/2016	Drawing of water tanks	,,	
58	**8/7**			,,	
59	**9/7**			,,	
60	**1/8**	21/04/2016	Introduction to moment distribution method	,,	Submission of Unit 7
61	**2/8**	23/04/2016	Introduction to portal frames and classification		
62	**3/8**	28/04/2016	Design of portal frame (single bay single floor)		
63	**4/8**	29/04/2016	Drawing of portal frame		
64	**5/8**				
65	**6/8**				
66	**7/8**	02/05/2016	Design of portal frame (single bay single floor)		
67	**8/8**	04/05/2016	Design of portal frame (single bay single floor)		
68	**9/8**	05/05/2016	Design of portal frame (single bay single floor)		
69	**10/8**	06/05/2016	Drawing of portal frame		
70	**11/8**				
71	**12/8**				
72	**7-8**	10/05/2016	Internal assessment on design		Submission of Unit 8

Text Book/Reference Book	Text Book code	Publication Details	
		Publisher	ISBN
Reinforced concrete structures by B C Punmia	TB1	Laxmi publication	9788131809426
Limit state design of RCC by B C Punmia	TB2	Laxmi Publication	9788131802410
Reinforced concrete limit state design by Ashok Kumar Jain	RB1	Nem chand bros	9788185240664

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Department of Civil

SEMESTER: VI

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NO OF HRS/WK: 3(T) + 3(D)

NAME OF THE FACULTY: Mr. Naresh Dixit P S

DATE OF COMMENCEMENT: 25.01.2016

DATE OF CLOSING: 21.05.2016

CLASS STRENGTH: 54

TOTAL HRS: 72

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	Drawing submission
1	**1/1**	25/01/2016	Introduction to RCC	Board, chalk, duster	
2	**2/1**			,,	
3	**3/1**			,,	

4	**4/1**	27/01/2016	General layout of building showing position of columns, footings beams and slabs	,,	
5	**5/1**	30/01/2016	Problems on general layout of building	,,	
6	**6/1**	01/02/2016	Problems on general layout of building	,,	
7	**7/1**	02/02/2016	Problems and drawing on general layout of building	,,	
8	**8/1**			Board, chalk, duster	
9	**9/1**			,,	
10	**1/2**	02/02/2016	Introduction to RCC and codal provisions of IS 456, SP 34, SP 16	,,	
11	**2/2**	08/02/2016	Introduction to beam slab floor system and design criteria	,,	
12	**3/2**	09/02/2016	Introduction to continuous beams and design criteria	,,	
13	**4/2**	10/02/2016	Problems on beam slab floor system and continuous beams	,,	
14	**5/2**	10/02/2016	Drawing of beam slab floor system and continuous beams	,,	Submission of Unit 1
15	**6/2**				
16	**7/2**				
17	**8/2**	15/02/2016	Problems on beam slab floor system and continuous beams		
18	**9/2**	16/02/2016	Problems on beam slab floor system and continuous beams	,,	
19	**1/3**	17/02/2016	Introduction on Column footings	,,	
20	**10/2**	17/02/2016	Drawing of beam slab floor system and continuous beams	,,	
21	**11/2**			,,	
22	**12/2**			,,	
23	**2/3**	24/02/2016	Problems on column footing (square)		
24	**3/3**	25/02/2016	Problems on column footing (rectangular)	Board, chalk, duster	

25	**4/3**	26/02/2016	Additional problems on column footings	,,	
26	**5/3**	26/02/2016	Drawing of column footings	,,	Submission of Unit 2
27	**6/3**			,,	
28	**7/3**			,,	
29	**1/4**	03/03/2016	Introduction and Problems on dog legged stair cases	,,	
30	**2/4**	04/03/2016	Problems on open well stair cases	,,	
31	**3/4**	05/03/2016	Additional problems on stair cases	,,	
32	**4/4**	05/03/2016	Drawing of stair cases	,,	Submission of Unit 3
33	**5/4**			Board, chalk, duster	
34	**6/4**			,,	
35	**1/5**	11/03/2016	Introduction to combined footing	,,	
36	**2/5**	17/03/2016	Introduction and design criteria of slab beam type combined footing	,,	
37	**3/5**	18/03/2016	Problems on slab beam type combined footing	,,	
38	**4/5**	18/03/2016	Additional drawings on stair cases, Footings and test	,,	
39	**5/5**			,,	
40	**6/5**			,,	
41	**7/5**	23/03/2016	Problems on slab beam type combined footing	,,	Submission of Unit 4
42	**8/5**	24/03/2016	Problems on slab beam type combined footing	,,	
43	**1/6**	28/03/2016	Introduction to retaining wall, classification of retaining walls	,,	
44	**9/5**	28/03/2016	Drawing of slab beam type combined	,,	

45	**10/5**		footing	,,	
46	**11/5**			,,	
47	**2/6**	01/04/2016	Design criteria of retaining walls and design of cantilever retaining wall	,,	
48	**3/6**	02/04/2016	Design of counter fort retaining wall	,,	Submission of Unit 5
49	**4/6**	04/04/2016	Additional problems on retaining wall	Board, chalk, duster	
50	**5/6**	04/04/2016	Drawing of retaining walls	,,	
51	**6/6**			,,	
52	**7/6**			,,	
53	**1/7**	11/04/2016	Introduction to water tanks and classification of water tanks	,,	
54	**2/7**	12/04/2016	Design criteria of tanks resting on ground as per IS 3370	,,	Submission of Unit 6
55	**3/7**	13/04/2016	Design of circular water tank (flexible base)	,,	
56	**1-6**	13/04/2016	Internal assessment test (drawing)	,,	
57				,,	
58				,,	
59	**4/7**	20/04/2016	Design of circular water tank (Rigid base)	,,	
60	**5/7**	21/04/2016	Design of rectangular water tank (flexible base)	,,	Submission of Unit 7
61	**6/7**	22/04/2016	Design of rectangular water tank (rigid base)		
62	**7/7**	22/04/2016	Drawing of water tanks		
63	**8/7**				
64	**9/7**				
65	**1/8**	30/04/2016	Introduction to moment distribution method		
66	**2/8**	02/05/2016	Introduction to portal frames and		

			classification		
67	**3/8**	03/05/2016	Design of portal frame (single bay single floor)		
68	**4/8**	03/05/2016	Drawing of portal frame		
69	**5/8**				
70	**6/8**				
71	**7/8**	07/05/2016	Design of portal frame (single bay single floor)		
72	**8/8**	10/05/2016	Design of portal frame (single bay single floor)		Submission of Unit 8
73	**7-8**	11/05/2016	Internal assessment on design		
74	**9/8**	11/05/2016	Drawing of portal frame		
75	**10/8**				
76	**11/8**				

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DEPARTMENT OF CIVIL ENGINEERING

Lesson Plan for the even sem – 2016

Semester – 6

Subject Code: 10CV63 **Subject Name: TRANSPORTATION ENGINEERING II**

SEMESTER	**: VI A**	**NAME OF THE FACULTY**	**: Azhaginiyal A.**
BRANCH	**: CV**	**DATE OF COMMENCEMENT**	**: 01-02-2016**
SUBJECT	**: TRANSPORTATION ENGINEERING II**	**DATE OF CLOSING**	**: 11-05-2016**
SUBJECT CODE	**: 10CV63**	**CLASS STRENGTH**	**: 50**
NO OF HRS/ WK	**: 5**	**TOTAL HRS**	**: 55**

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	01/02/2016	**INTRODUCTION:** Role of railways in transportation, Indian Railways.	Chalk and Board		10
2	2/1	02/02/2016	Selection of Routes, Permanent way and its requirements.	Chalk and Board		
3	3/1	03/02/2016	Gauges and types, Typical cross sections-single and double line B G track in cutting, embankment and electrified tracks.	Chalk and Board		
4	4/1	05/02/2016	Gauges and types, Typical cross sections-single and double line B G track in cutting, embankment and electrified tracks.	Chalk and Board		
5	5/1	08/02/2016	Coning of wheels and tilting of rails,	Chalk and Board		
6	6/1	09/02/2016	Rails-Functions-requirements—types and sections length, Wear of rails	Chalk and Board		
7	7/1	10/02/2016	Defects-creep of rails, welding-joints	Chalk and Board	Assignment I	
8	1/2	11/02/2016	**SLEEPERS AND BALLAST:** Functions, requirements, Types.	Chalk and Board		22
9	2/2	13/02/2016	**SLEEPERS AND BALLAST:** Functions, requirements, Types.	Chalk and Board		
10	3/2	15/02/2016	Track fitting and fasteners-Dog spike, screw spike and Pandrol clip,-Fish plates-bearing plates.	Chalk and Board		
11	4/2	16/02/2016	Track fitting and fasteners-Dog spike,	Chalk and		

			screw spike and Pandrol clip,-Fish plates-bearing plates.	Board		
12	5/2	17/02/2016	Calculation of quantity of materials required for laying a track-Examples,	Chalk and Board		
13	6/2	18/02/2016	Tractive resistances and hauling capacity with examples.	Chalk and Board	Assignment 2/class test	
14	1/3	23/02/2016	**GEOMETRIC DESIGN:** Necessity, Safe speed on curves.	Chalk and Board		34
15	2/3	24/02/2016	Cant-cant deficiency-negative cant	Chalk and Board		
16	3/3	25/02/2016	Safe speed based on various criteria for normal and high speed tracks	Chalk and Board		
17	4/3	26/02/2016	Transition curves- Theory and Numerical	Chalk and Board	Class test	
18	5/3	29/02/2016	Gradient and types - Theory and Numerical	Chalk and Board		
19	6/3	02/03/2016	Grade compensation - Theory and Numerical	Chalk and Board	Assignment 3	
20	1/4	03/03/2016	**POINTS AND CROSSING:** Components of a turnout, Details of Points and Crossing.	Chalk and Board		49
21	2/4	04/03/2016	Design of turnouts with examples (No derivations)	Powerpoint presentation		
22	3/4	05/03/2016	Types of switches and crossings	Chalk and Board		
23	4/4	08/03/2016	Track junctions, Stations and Types	Chalk and Board		
24	5/4	10/03/2016	Types of yards, Signaling-Objects and types of signals,	Chalk and Board		
25	6/4	11/03/2016	Station and yard Equipment-Turn table,	Chalk and Board		
26	7/4	17/03/2016	Fouling mark, buffer stop, level crossing,	Chalk and Board		
27	8/4	18/03/2016	Track defects, and maintenance	Chalk and Board	Assignment 4	
28	1/5	19/03/2016	**INTRODUCTION:** Layout of an airport with component parts and functions	Powerpoint presentation		61
29	2/5	22/03/2016	Site selection for airport, Layout of an airport with component parts and functions	Powerpoint presentation		
30	3/5	23/03/2016	Aircraft characteristics affecting the design and planning of airport.	Powerpoint presentation		
31	4/5	24/03/2016	Aircraft characteristics affecting the design and planning of airport.	Powerpoint presentation		
32	5/5	28/03/2016	Airport classification, Runway orientation using wind rose with examples	Powerpoint presentation		
33	6/5	29/03/2016	Runway orientation using wind rose with examples	Powerpoint presentation	Assignment 5/class test	
34	1/6	31/03/2016	**RUNWAY-** Basic runway length-Corrections and examples,	Powerpoint presentation		73
35	2/6	01/04/2016	Runway geometrics,	Powerpoint		

				presentation		
36	3/6	02/04/2016	Taxiway-Factors affecting the layout -	Powerpoint presentation		
37	4/6	04/04/2016	geometrics of taxiway-Design of exit taxiway with examples	Powerpoint presentation		
38	5/6	05/04/2016	Visual aids- Airport marking	Powerpoint presentation		
39	6/6	07/04/2016	lighting-Instrumental Landing System	Powerpoint presentation	Assignment 6	
40	1/7	11/04/2016	**TUNNELS:** Advantages and disadvantages, Size and shape of tunnels,	Powerpoint presentation		
41	2/7	12/04/2016	Surveying-Transferring centre line, and gradient from surface to inside the tunnel working face, Weisbach triangle-Examples,	Powerpoint presentation		
42	3/7	13/04/2016	Tunneling in rocks-methods,	Powerpoint presentation		
43	4/7	15/04/2016	Tunneling methods in soils-Needle beam, Liner plate,	Powerpoint presentation		85
44	5/7	18/04/2016	Tunnel lining,	Powerpoint presentation		
45	6/7	20/04/2016	Tunnel ventilation, vertical shafts, Pilot tunneling,	Powerpoint presentation		
46	7/7	21/04/2016	Mucking and methods,	Powerpoint presentation		
47	8/7	22/04/2016	Drilling and drilling pattern.	Powerpoint presentation	Assignment 7	
48	1/8	23/04/2016	**HARBORS:** Harbor classifications, Layout with components,	Powerpoint presentation		
49	2/8	29/04/2016	Natural phenomenon affecting the design of harbors - wind, wave and tide, currents,	Powerpoint presentation		
50	3/8	30/04/2016	Natural phenomenon affecting the design of harbors - wind, wave and tide, currents,	Powerpoint presentation		
51	4/8	02/05/2016	Breakwater-Types Wharf and Quays,	Powerpoint presentation		
52	5/8	03/05/2016	Jetties and Piers, ,	Chalk and Board		100
53	6/8	04/05/2016	Dry dock and wet docks	Chalk and Board		
54	7/8	06/05/2016	Slipways	Chalk and Board		
55	8/8	07/05/2016	Navigational aids	Chalk and Board		
56	9/8	10/05/2016	Warehouse and transit-shed.	Chalk and Board	Assignment 8	

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Saxena S.C & Arora S.P., " A text book of Railway Engineering"	Seventh edition, Dhanpat rai Publications	978-81-89928-83-4
Text Book	TB2	Khanna S.K.& Arora M.G., " Airport Planning and Design"	Sixth edition, Nem Chand & Bros.	81-85240-68-X
Text Book	TB3	Srinivasan R., " Harbours, Docks and tunnel Engineering"	26th edition, Charaotar Publications.	978-93-80358-74-1
References	RB2	IRC 37 -2001, IRC 58-2002	2nd Revision, Indian Roads Congress	NA

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CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER : VI A
BRANCH : CV
SUBJECT : GT-2
SUBJECT CODE : 10CV64
NO OF HRS/WK : 6

NAME OF THE FACULTY : Ms.Divya Viswanath
DATE OF COMMENCEMENT : 25.01.2016
DATE OF CLOSING : 06.11.2015
CLASS STRENGTH : 50
TOTAL HRS : 66

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1.		25.01.16& 27.01.16	Revision of Geotechnical Engg-I Discussion of the pre-requisites.			
2.		28.01.16 to 30.01.16	Introduction to the subject and syllabus			
3	**1/2**	01.02.16	Geostatic stresses- introduction	Board, chalk, duster		
4	**2/2**	02.02.16	Boussinesq's theory for concentrated loads-derivation, Concluding points	,,		
3	**3/2**	03.02.16	Draw backs of above theory, numerical problems.	,,		

4	**4/2**	04.02.16	Isobar-construction, Pressure distribution diagrams	,,		
5	**5/2**	08.02.16	Boussinesq's theory for circular loads-derivation, problems	,,		
6	**6/2**	08.02.16	Vertical stress under rectangular loads and numerical problems.	,,		
7	**7/2**	09.02.16	Newmark's chart –Construction applications & related numerical problems	,,		
8	**8/2**	10.02.16	Westergaard's theories for concentrated, circular and rectangular loads.	Board, chalk, duster		
9	**9/2**	11.02.16	Comparison of Boussinesq's and Westergaard's analysis and contact pressure.	,,	Assignment- I	
10	**1/3**	12.02.16	FLOWNETS: Laplace equation , assumptions and limitations	,,		
11	**2/3**	15.02.16	Characteristics and uses of flow nets.	,,		
12	**3/3**	15.02.16	Estimating quantity of seepage and Exit gradient.	,,		
13	**4/3**	16.02.16	Numerical problems on seepage	,,		
14	**5/3**	17.02.16	Numerical problems on seepage	,,		
15	**6/3**	18.02.16	Methods of drawing flow nets for Dams and sheet piles			
16	**7/3**	22.02.16	Determination of phreatic line in earth dams with and without filter.			
17	**8/3**	24.02.16	Piping and protective filter		Assignment -II	
18	**1/5**	24.02.16	STABILITY OF EARTH SLOPES: Types of slopes,causes and type of failure of slopes.			
19	**2/5**	25.02.16	Definition of factor of safety, Stability of infinite slopes			
20	**3/5**	26.02.16	Stability of infinite slopes-continuation.			
21	**4/5**	29.02.16	Numerical problems on factor of safety.			
22	**5/5**	01.03.16	Stability of finite slopes by Method of slices			
23	**6/5**	03.03.16	Stability of finite slopes by Friction Circle method			
24	**7/5**	03.03.16	Taylor's stability number, Fellineous method.			
25	**8/5**	04.03.16	Related numerical problems		Assignment –III	

26	**8/5**	05.03.16	Related numerical problems			
27	**1/6**	08.03.16	BEARING CAPACITY: Definitions of ultimate, net and safe bearing capacities, Allowable bearing pressure			
28	**2/6**	09.03.16	Terzaghi's bearing capacity equations -assumptions and limitations	,,		
29	**3/6**	11.03.16	Brinch Hansen's bearing capacity equations -assumptions and limitations	,,		
30	**4/6**	17.03.16	Bearing capacity of footing subjected to eccentric loading	,,		
31	**5/6**	18.03.16	Effect of ground water table on bearing capacity.	,,		
32	**6/6**	19.03.16	Numerical problems on bearing capacity.	,,		
33	**7/6**	21.03.16	Numerical problems on effect of water table on bearing capacity	Board, chalk, duster		
34	**8/6**	23.03.16	Field methods of evaluation of bearing capacity - Plate load test	,,		
35	**9/6**	23.03.16	Standard penetration test and cone penetration test.	PPT	Assignmn t –IV	
36	**10/6**	24.03.16	Discussion of questions from previous question papers.	Board, chalk, duster		
37	**1/7**	28.03.16	Importance and Concept of Settlement Analysis	,,		
38	**2/7**	29.03.16	Immediate Consolidation and Secondary settlements	,,		
39	**3/7**	30.03.16	Computation using relevant formula for Normally Consolidated soils	,,		
40	**4/7**	01.04.16	Tolerance, BIS specifications for total and differential settlements of footings and rafts.	,,		
41	**5/7**	01.04.16	Numerical problems on settlements.	,,		
42	**6/7**	02.04.16	Numerical problems on settlements.	,,	Assignme nt -V	
43	**1/4**	04.04.16	LATERAL EARTH PRESSURE: Active and Passive earth pressures , Earth pressure at rest	,,		
44	**2/4**	05.04.16	Variation of pressure.	,,		
45	**3/4**	06.04.16	Rankine's Earth pressure theory-– assumptions and limitations	,,		

46	**4/4**	11.04.16	Related numerical problems.	,,		
47	**5/4**	11.04.16	Rankine's Earth pressure for inclined backfill and cohesive soils (active case)	,,		
48	**6/4**	12.04.16	Rankine's Earth pressure in cohesive soil-passive case, Problems related.	,,		
49	**7/4**	13.04.16	Related numerical problems, Coulomb's Earth pressure theory-– assumptions and limitations	Board, chalk, duster		
50	**8/4**	15.04.16	Graphical solutions for active earth pressure (cohesionless soil only) -Rebhann's methods	,,		
51	**9/4**	16.04.16	Graphical solutions for active earth pressure (cohesionless soil only) – Culmann's methods	,,	Assignment -VI	
52	**1/1**	20.04.16	Importance of exploration Program, Methods of exploration: Boring-Different methods of boring.	PPT		
53	**2/1**	20.04.16	Seismic refraction method of geophysical exploration, soil exploration report.	PPT		
54	**3/1**	21.04.16	Types of samples - undisturbed, disturbed and representative samples	Board, chalk, duster		
55	**4/1**	22.04.16	Samplers, sample disturbance, area ratio, Recovery ratio, clearance, related numerical problems	,,		
56	**5/1**	28.04.16	Stabilisation of boreholes - Typical bore log. Number and depth of borings for various civil engineering structures	,,		
57	**6/1**	30.04.16	Determination of ground water level by Hvorselev's method	,,		
58	**7/1**	30.04.16	Control of ground water during excavation: Dewatering - Ditches and sumps, well point system.	PPT	Assignment -VII	
59	**8/1**	02.05.16	Vacuum method, Electro- Osmosis method	Board, chalk, duster		
60	**1/8**	03. 05.16	Proportioning shallow and pile foundations- Allowable Bearing Pressure, Factors influencing the selection of depth of foundation	,,		
61	**2/8**	04. 05.16	Factors influencing allowable bearing pressure, Classification of pile foundation.	,,		
62	**3/8**	05. 05.16	Pile load capacity.	,,		

63	**4/8**	07. 05.16	Proportioning isolated, combined, strip and mat foundations.	,,	Assignment -VIII	
64	**5/8**	07. 05.16	Proportioning pile foundation.	,,		
65		10. 05.16	Revision			
66		11. 05.16	Revision			

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER : VI B
BRANCH : CV
SUBJECT : GT-2
SUBJECT CODE: 10CV64
NO OF HRS/WK: 6

NAME OF THE FACULTY : Ms.Divya Viswanath
DATE OF COMMENCEMENT : 25.01.2016
DATE OF CLOSING : 06.11.2015
CLASS STRENGTH : 54
TOTAL HRS : 66

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1.		25.01.16& 27.01.16	Revision of Geotechnical Engg-I Discussion of the pre-requisites.			

2.		28.01.16 to 30.01.16	Introduction to the subject and syllabus			
3	**1/2**	01.02.16	Geostatic stresses- introduction	Board, chalk, duster		
4	**2/2**	02.02.16	Boussinesq's theory for concentrated loads-derivation, Concluding points	,,		
3	**3/2**	03.02.16	Draw backs of above theory, numerical problems.	,,		
4	**4/2**	04.02.16	Isobar-construction, Pressure distribution diagrams	,,		
5	**5/2**	05.02.16	Boussinesq's theory for circular loads-derivation, problems	,,		
6	**6/2**	08.02.16	Vertical stress under rectangular loads and numerical problems.	,,		
7	**7/2**	09.02.16	Newmark's chart –Construction applications & related numerical problems	,,		
8	**8/2**	10.02.16	Westergaard's theories for concentrated, circular and rectangular loads.	Board, chalk, duster		
9	**9/2**	11.02.16	Comparison of Boussinesq's and Westergaard's analysis and contact pressure.	,,	Assignment- I	
10	**1/3**	12.02.16	FLOWNETS: Laplace equation , assumptions and limitations	,,		
11	**2/3**	13.02.16	Characteristics and uses of flow nets.	,,		
12	**3/3**	15.02.16	Estimating quantity of seepage and Exit gradient.	,,		
13	**4/3**	16.02.16	Numerical problems on seepage	,,		
14	**5/3**	17.02.16	Numerical problems on seepage	,,		
15	**6/3**	18.02.16	Methods of drawing flow nets for Dams and sheet piles			
16	**7/3**	22.02.16	Determination of phreatic line in earth dams with and without filter.			

17	**8/3**	23.02.16	Piping and protective filter		Assignment -II	
18	**1/5**	24.02.16	STABILITY OF EARTH SLOPES: Types of slopes,causes and type of failure of slopes.			
19	**2/5**	25.02.16	Definition of factor of safety, Stability of infinite slopes			
20	**3/5**	26.02.16	Stability of infinite slopes-continuation.			
21	**4/5**	29.02.16	Numerical problems on factor of safety.			
22	**5/5**	01.03.16	Stability of finite slopes by Method of slices			
23	**6/5**	02.03.16	Stability of finite slopes by Friction Circle method			
24	**7/5**	03.03.16	Taylor's stability number, Fellineous method.			
25	**8/5**	04.03.16	Related numerical problems		Assignment –III	
26	**8/5**	05.03.16	Related numerical problems			
27	**1/6**	08.03.16	BEARING CAPACITY: Definitions of ultimate, net and safe bearing capacities, Allowable bearing pressure			
28	**2/6**	09.03.16	Terzaghi's bearing capacity equations -assumptions and limitations	,,		
29	**3/6**	10.03.16	Brinch Hansen's bearing capacity equations -assumptions and limitations	,,		
30	**4/6**	17.03.16	Bearing capacity of footing subjected to eccentric loading	,,		
31	**5/6**	18.03.16	Effect of ground water table on bearing capacity.	,,		
32	**6/6**	19.03.16	Numerical problems on bearing capacity.	,,		
33	**7/6**	21.03.16	Numerical problems on effect of water table on bearing capacity	Board, chalk,		

				duster		
34	**8/6**	22.03.16	Field methods of evaluation of bearing capacity - Plate load test	,,		
35	**9/6**	23.03.16	Standard penetration test and cone penetration test.	PPT	Assignmn t –IV	
36	**10/6**	24.03.16	Discussion of questions from previous question papers.	Board, chalk, duster		
37	**1/7**	28.03.16	Importance and Concept of Settlement Analysis	,,		
38	**2/7**	29.03.16	Immediate Consolidation and Secondary settlements	,,		
39	**3/7**	30.03.16	Computation using relevant formula for Normally Consolidated soils	,,		
40	**4/7**	31.03.16	Tolerance, BIS specifications for total and differential settlements of footings and rafts.	,,		
41	**5/7**	01.04.16	Numerical problems on settlements.	,,		
42	**6/7**	02.04.16	Numerical problems on settlements.	,,	Assignme nt -V	
43	**1/4**	04.04.16	LATERAL EARTH PRESSURE: Active and Passive earth pressures , Earth pressure at rest	,,		
44	**2/4**	05.04.16	Variation of pressure.	,,		
45	**3/4**	06.04.16	Rankine's Earth pressure theory-– assumptions and limitations	,,		
46	**4/4**	07.04.16	Related numerical problems.	,,		
47	**5/4**	11.04.16	Rankine's Earth pressure for inclined backfill and cohesive soils (active case)	,,		
48	**6/4**	12.04.16	Rankine's Earth pressure in cohesive soil-passive case, Problems related.	,,		
49	**7/4**	13.04.16	Related numerical problems, Coulomb's Earth pressure theory-–	Board, chalk,		

			assumptions and limitations	duster		
50	**8/4**	15.04.16	Graphical solutions for active earth pressure (cohesionless soil only) -Rebhann's methods	,,		
51	**9/4**	16.04.16	Graphical solutions for active earth pressure (cohesionless soil only) – Culmann's methods	,,	Assignment -VI	
52	**1/1**	18.04.16	Importance of exploration Program, Methods of exploration: Boring-Different methods of boring.	PPT		
53	**2/1**	20.04.16	Seismic refraction method of geophysical exploration, soil exploration report.	PPT		
54	**3/1**	21.04.16	Types of samples - undisturbed, disturbed and representative samples	Board, chalk, duster		
55	**4/1**	22.04.16	Samplers, sample disturbance, area ratio, Recovery ratio, clearance, related numerical problems	,,		
56	**5/1**	28.04.16	Stabilisation of boreholes - Typical bore log. Number and depth of borings for various civil engineering structures	,,		
57	**6/1**	29.04.16	Determination of ground water level by Hvorselev's method	,,		
58	**7/1**	30.04.16	Control of ground water during excavation: Dewatering - Ditches and sumps, well point system.	PPT	Assignment -VII	
59	**8/1**	02.05.16	Vacuum method, Electro- Osmosis method	Board, chalk, duster		
60	**1/8**	03. 05.16	Proportioning shallow and pile foundations- Allowable Bearing Pressure, Factors influencing the selection of depth of foundation	,,		
61	**2/8**	04. 05.16	Factors influencing allowable bearing pressure, Classification of	,,		

			pile foundation.			
62	**3/8**	05. 05.16	Pile load capacity.	,,		
63	**4/8**	06. 05.16	Proportioning isolated, combined, strip and mat foundations.	,,	Assignment -VIII	
64	**5/8**	07. 05.16	Proportioning pile foundation.	,,		
65		10. 05.16	Revision			
66		11. 05.16	Revision			

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CMR
INSTITUTE OF
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DEPARTMENT OF CIVIL ENGINEERING

Lesson Plan for the even sem – 2016

Semester – 6

Subject Code : 10CV666 Subject Name : RURAL WATER SUPPLY & SANITATION

SEMESTER : VI
BRANCH : CIV
SUBJECT : RURAL WATER SUPPLY & SANITATION
SUBJECT CODE : 10CV666
NO OF HRS/ WK : 5

NAME OF THE FACULTY : Ms.Bhavya K.
DATE OF COMMENCEMENT : 25-01-2016
DATE OF CLOSING : 21-05-2016
CLASS STRENGTH : 29
TOTAL HRS : 58

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan (%)
1	1/1	01.02.16	Introduction and syllabus briefing	Chalk & Board		
2	2/1	02.02.16	**UNIT-1** Introduction	,,		12.5
3	3/1	03.02.16	Need for a protected water supply	,,		
4	4/1	04.02.16	Investigation and selection of water sources	,,		
5	5/1	08.02.16	Water borne diseases	,,		
6	6/1	09.02.16	Protection of well water	,,		
7	7/1	10.02.16	Drinking water quality standards	,,		
8		01.02.16		,,	*Class Test*	
9	1/2	11.02.16	**UNIT – 2** Types of pumps	Chalk & Board		25
10	2/2	12.02.16	Supply systems viz., BWS, MWS, PWS	,,		
11	3/2	15.02.16	Water treatment methods	,,		
12	4/2	16.02.16	Disinfection	,,		
13	5/2	17.02.16	Deflouridation	,,		
14	6/2	18.02.16	Hardness	,,		
15	7/2	22.02.16	Iron and manganese removal	,,		
16	8/2	24.02.16	Ground water contamination and control	PPT	Assignment -1	
17		25.02.16			*Class Test*	
18	1/3	26.02.16	**UNIT – 3** Public latrine			37.5
19	2/3	29.02.16	Concept of eco-sanitation	Chalk & Board		
20	3/3	01.03.16	Trenching and composting methods	,,		
21	4/3	03.03.16	Two pit latrines	,,		

22	5/3	04.03.16	Aqua privy	,,		
23	6/3	05.03.16	Septic tank	,,		
24	7/3	08.03.16	Soak pit	Chalk & Board		
25		09.03.16		,,	*Class Test*	
26	1/4	11.03.16	**UNIT – 4** Storm water disposal	,,		
27	2/4	17.03.16	Sullage disposal	,,		50
28	3/4	18.03.16	Rain water harvesting and uses	PPT	Assignment -2	
29		19.03.16			*Class Test*	
30	1/5	21.03.16	**UNIT – 5** Terminology	Chalk & Board		
31	2/5	23.03.16	Classifications	,,		
32	3/5	24.03.16	Methods of communication	PPT		62.5
33	4/5	28.03.16	General methods of control	Chalk & Board		
34		29.03.16			*Class Test*	
35	1/6	30.03.16	**UNIT – 6** Collection methods	,,		
36	2/6	01.04.16	Transportation	,,		
37	3/6	02.04.16	Disposal - Salvaging			
38	4/6	04.04.16	Dumping	Chalk & Board		
39	5/6	05.04.16	Manure pits	,,		75
40	6/6	06.04.16	Dumping in low lands	,,		
41	7/6	11.04.16	Composting	,,		
42	8/6	12.04.16	Dung disposal	,,		
43	9/6	13.04.16	Biogas plant	,,	Assignment -3	
44		15.04.16		,,	*Class Test*	
45	1/7	16.04.16	**UNIT – 7** Essentials	PPT		
46	2/7	20.04.16	Test for milk quality	,,		
47	3/7	21.04.16	Pasteurization	,,		
48	4/7	22.04.16	Quality control	,,		87.5
49	5/7	23.04.16	Cattle borne diseases	,,		
50	6/7	28.04.16	Planning for a cow shed	,,		
51		30.04.16			*Class Test*	
52	1/8	02.05.16	**UNIT – 8** House fly and mosquito-life cycle	PPT		
53	2/8	03.05.16	Diseases	,,		
54	3/8	04.05.16	Transmission	,,		100
55	4/8	05.05.16	Control measures	,,	Assignment -4	
56		07.05.16			*Class Test*	
57		10.05.16	Revision			
58		11.05.16	Revision			

Syllabus for Internal Assessment Tests (IAT)*

Sessional #	**Syllabus**

T1	Class # 01 – 24
T2	Class # 26 – 43
T3	Class # 45 - 55

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Textbook	TB1	Dr. B. C. Punmia "Wastewater Engineering"	2nd Edition Laxmi	8131805964, 9788131805961
Textbook	TB2	Joseph. A. Solveto "Environmental Sanitation"	22nd Edition Khanna	9788174092304
Reference	RB1	Park & Park "Preventive & Social Medicine"	5th Edition McGraw Hill	9780071122504

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CMR INSTITUTE
OF TECHNOLOGY

Department of Civil

Session wise – Course Plan

SEMESTER : VI
BRANCH: Civil
SUBJECT: TOE
SUBJECT CODE: 10CV661
NO OF HRS/WK: 5

NAME OF THE FACULTY: Mr. Naresh Dixit P S
DATE OF COMMENCEMENT: 25.01.2016
DATE OF CLOSING: 21.05.2016
CLASS STRENGTH: 54
TOTAL HRS: 60

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	Text book Referred	Assignments/ Tests planned for the chapter
1	**1/1**	25/01/2016	Basics of mathematics	Board, chalk, duster	RB1/RB2/TB1	Prerequisite Assignment
2	**2/1**	27/01/2016	Introduction to mathematical theory of elasticity	,,		
3	**3/1**	28/01/2016	Continuum, Stress and strain at a Point and tensors	,,		
4	**4/1**	30/01/2016	Generalised hookes law and strain-displacement relation	,,		Concept/Spot test
5	**5/1**	01/02/2016	St-Venant's principle Problems	,,		
6	**6/1**	02/02/2016	Problems	,,		
7	**1/2**	03/02/2016	Differential equations of equilibrium	,,		
8	**2/2**	04/02/2016	Differential equations of equilibrium, Boundary conditions	Board, chalk, duster		
9	**3/2**	08/02/2016	Compatibility condition- Plane stress problem	,,		
10	**4/2**	09/02/2016	Compatibility condition- Plane strain problem	,,	RB1/RB2/TB1	

11	**5/2**	10/02/2016	Airy's stress function, Problems	,,		
12	**6/2**	11/02/2016	Stress Polynomials	,,	TB1/TB2	
13	**7/2**	12/02/2016	Problems	,,		
14	**8/2**	15/02/2016	Test	,,		Spot Test
15	**9/2**	16/02/2016	Problems			Assignment- I
16	**1/3**	17/02/2016	Plane stress and plane strain condition		TB1/RB1	
17	**2/3**	18/02/2016	Principle stress and strain			
18	**3/3**	22/02/2016	Measurement of surface strain, Strain Rosettes	,,		
19	**4/3**	24/02/2016	Mohr's circle of stress and strain (analytical method)	,,		
20	**5/3**	25/02/2016	Test	,,		Concept and problems test
21	**1/4**	26/02/2016	Two dimensional problems in rectangular coordinates	,,	TB1/RB1/RB2	
22	**2/4**	29/02/2016	Two dimensional problems in rectangular coordinates	,,		
23	**3/4**	01/03/2016	Two dimensional problems in rectangular coordinates			
24	**4/4**	03/03/2016	Two dimensional problems in rectangular coordinates	Board, chalk, duster		
25	**5/4**	04/03/2016	Two dimensional problems in rectangular coordinates	,,		
26	**6/4**	05/03/2016	Two dimensional problems in rectangular coordinates	,,		
27	**7/4**	08/03/2016	Bending of beam subjected to end loads	,,		Assignment –II
28	**8/4**	09/03/2016	Effect of shear deformation in beams	,,		
29	**9/4**	11/03/2016	Simply supported beam subject to UDL	,,	TB1/RB1/RB2	
30	**10/4**	17/03/2016	Test	,,		Numerical test
31	**1/5**	18/03/2016	2-D problem in polar coordinates	,,	TB1/TB2	

32	**2/5**	19/03/2016	Strain displacement relation	,,		
33	**3/5**	21/03/2016	Equation of equilibrium	Board, chalk, duster		
34	**4/5**	23/03/2016	Compatibility equation- Plane stress	,,		
35	**5/5**	24/03/2016	Compatibility equation- Plane strain	,,		
36	**6/5**	28/03/2016	Stress functions	,,		
37	**7/5**	29/03/2016	Problems	,,		
38	**8/5**	30/03/2016	Test	,,		Spot test/Assignment- III
39	**1/6**	01/04/2016	Axi symmetric stress distribution	,,		
40	**2/6**	02/04/2016	Rotating Disc	,,		
41	**3/6**	04/04/2016	Lame's equation for thick cylinder	,,		
42	**4/6**	05/04/2016	Lame's equation for thick cylinder	,,		
43	**5/6**	06/04/2016	Problems	,,		
44	**1/7**	11/04/2016	Effect of circular hole on stress distribution- Tension	,,		
45	**2/7**	12/04/2016	Effect of circular hole on stress distribution- Tension	,,		
46	**3/7**	13/04/2016	Effect of circular hole on stress distribution- Compression	,,		
47	**4/7**	15/04/2016	Effect of circular hole on stress distribution- Comp	,,	TB1/TB2	
48	**5/7**	16/04/2016	Effect of circular hole on stress distribution- Shear	,,		
49	**6/7**	20/04/2016	Effect of circular hole on stress distribution- Shear	Board, chalk, duster		
50	**7/7**	21/04/2016	Stress concentration factor in tension compression and shear	,,		
51	**8/7**	22/04/2016	Test	,,		Stop Test/ Assignment- IV

52	**1/8**	23/04/2016	Torsion inverse and semi inverse method	,,	TB2/RB2	
53	**2/8**	28/04/2016	Torsion inverse and semi inverse method	,,		
54	**3/8**	30/04/2016	Stress functions	,,		
55	**4/8**	02/05/2016	Stress functions	,,		
56	**5/8**	03/05/2016	Torsion of circular and elliptic sections	,,		
57	**6/8**	04/05/2016	Torsion of circular and elliptic sections	,,		
58	**1-3**	05/05/2016	Revision/Test	,,		
59	**4-6**	07/05/2016	Revision/Test	,,		
60	**7-8**	10/05/2016	Revision/Test	,,		
61	**1-8**	11/05/2016	Problems Test			

Text Book/Reference Book	Text Book code	Publication Details	
		Publisher	ISBN
Theory of elasticity by Stephen Timoshenko and J N Goodier	TB1	TATA Mc-Grawhill	9780070701229
Applied stress analysis by Dr. Sadhu Singh	TB2	Khanna	9788174090762
Advanced Mechanics of solids by L S Srinath	RB1	Mc-Grawhill	9780070139886
A Treatise on Mathematical theory of elasticity Augustus Edward Hough Love	RB2	Newyork Dover	9780486464253

Internal assessment test 1- Unit 1- Unit 4 (only cantilever beam)
Internal assessment Test 2- Unit 5- Unit 4- Unit 8
Improvement Test- Unit 2, Unit 4, Unit 5, Unit 6
Assignment 1- Unit 1 and 2
Assignment 2- Unit 3 and Unit 4
Assignment 3- Unit 5
Assignment 4- Unit 6 and Unit 7

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CMR
INSTITUTE OF
TECHNOLOY

DEPARTMENT OF CIVIL ENGINEERING

Lesson Plan for the even sem – 2016

Semester – 6

Subject Code : 10CV667 Subject Name : TRAFFIC ENGINEERING

SEMESTER : VI
BRANCH : CIVIL
SUBJECT : TRAFFIC ENGINEERING
SUBJECT CODE : 10CV667
NO OF HRS/ WK : 5

NAME OF THE FACULTY : Dr Asha M Nair
DATE OF COMMENCEMENT : 23-01-2015
DATE OF CLOSING : 07-05-2016
CLASS STRENGTH : 61
TOTAL HRS : 68

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	01.02.2016	**Unit 1: Introduction** Definition, objectives of Traffic Engineering	White chalk and black board		
2	2/1	02.02.2016	Scope of Traffic Engineering			
3	1/2	03.02.2016	**Unit 2: Traffic Characteristics** Road user characteristics– Reaction time of driver –.			
4	2/2	04.02.2016	Vehicular characteristics – static and dynamic characteristics			
5	3/2	08.02.2016	Power performance of vehicles			

6	4/2	09.02.2016	Resistance to the motion of vehicles	White chalk and black board		
7	5/2	10.02.2016	Problems on above			
8	6/2	11.02.2016	Problems on above			
9	7/2	12.02.2016	Problems on above			
10	1/3	15.02.2016	**Unit 3: Traffic Studies** Various types of traffic engineering studies			
11	2/3	16.02.2016	Types of traffic engineering studies			
12	3/3	17.02.2016	Data collection, analysis objectives and method of study			
13	4/3	18.02.2016	Data collection, analysis objectives and method of study			
14	5/3	22.02.2016	Definition of study area			
15	6/3	24.02.2016	Sample size and analysis			
16	7/3	25.02.2016	**Unit 4: Interpretation of Traffic Studies** Classified traffic Volume at mid block and intersections			
17	8/3	26.02.2016	PCU, origin and destination,			
18	1/4	29.02.2016	Spot speed, speed and delay	White chalk and black board		
19	2/4	01.03.2016	Parking – on street parking, off street parking			
20	3/4	03.03.2016	Accident – causes, analysis measures to reduce accident			
21	4/4	04.03.2016	Problems on above			
22	5/4	05.03.2016	Problems on above			
23	6/4	08.03.2016	Revision for Unit 1			
24	7/4	09.03.2016	Revision for Unit 2			
25	8/4	11.03.2016	Revision for Unit 3			
26	1/5	17.03.2016	**Unit 5: Traffic Flow Theories** Traffic flow theory	White chalk and		

				black board		
27	2/5	18.03.2016	Green shield theory –			
28	3/5	19.03.2016	Goodness of fit, correlation and regression analysis			
29	4/5	21.03.2016	Problems on above			
30	5/5	23.03.2016	Problems on above			
31	6/5	24.03.2016	Queuing theory			
32	7/5	28.03.2016	Car following theory			
33	8/5	29.03.2016	Relevant problems on above.			
34	9/5	30.03.2016	Relevant problems on above.			
35	1/6	01.04.2016	**Unit 6: Statistical Analysis** Poisson's distribution and application to traffic engineering.	White chalk and black board		
36	2/6	02.04.2016	Problems			
37	3/6	04.04.2016	Problems			
38	4/6	05.04.2016	Normal Distribution			
39	5/6	06.04.2016	Problems			
40	6/6	11.04.2016	Problems			
41	7/6	12.04.2016	Significance tests for observed traffic data			
42	8/6	13.04.2016	Chi Square test			
43	9/6	15.04.2016	Problems on above.			
44	10/6	16.04.2016	Traffic forecast – simulation technique, Problems			
45	11/6	20.04.2016	Problems			
46	1/7	21.04.2016	**Unit 7: Traffic Regulation and Control** Driver, vehicle and road controls	White chalk and black board		
47	2/7	22.04.2016	Traffic regulations – one way – Traffic markings,.			

48	3/7	23.04.2016	Traffic signs, Traffic signals –			
49	4/7	28.04.2016	Vehicle actuated and synchronized signals			
50	5/7	29.04.2016	Signals co-ordination, Webster's method of signal design			
51	6/7	30.04.2016	Problems on signal design			
52	7/7	02.05.2016	Problems on signal design			
53	8/7	03.05.2016	IRC method, traffic rotary elements and designs,			
54	9/7	04.05.2016	Problems			
55	10/7	05.05.2016	Traffic operation			
56	11/7	07.05.2016	Street lighting, Road side furniture			
57	1/8	10.05.2016	**Unit 8: Intelligent Transportation System** Definition, Necessities	White chalk and black board		
58	2/8	11.05.2016	Application in the present traffic scenario.			

Syllabus for Internal Assessment Tests (IAT)*

Sessional #	Syllabus
T1	Class # 01 – 22
T2	Class # 23 - 45
Improvement Test	Class # 46 - 58

***** See calendar of events for the schedules of IATs.

TEXT BOOKS:

1. **Traffic Engineering & Transport Planning** – L.R. Kadiyali- Khanna Publishers.
2. **Highway Engineering Nemchand & Bros**- Khanna & Justo- Roorkee (UA).
3. **Traffic Engg.** - Matson & Smith:-Mc.Graw Hill and Co.
4. **Traffic flow theory** – Drew- Mc. Graw Hill and Co.

REFERENCE BOOKS:

1. **Traffic Engineering.** Pignataro- Prentice Hall.
2. **Highway Capacity Manual** – 2000.
3. **An introduction to traffic engineering**- Jotin Khistey and Kentlal- PHI.