

Name of Faculty:-		<b>ABHISHEK ARYA</b>	
Discipline:-		<b>CIVIL ENGINEERING</b>	
Semester:-		<b>B-Tech</b>	
Subject:		<b>F.M-I &amp; F.M-I Lab</b>	
Lesson Plan duration:- August 2018 to December 2018			
Week	Theory		Practical
	Lecture Day	Topic (including assignment/ test)	Experiment
1	1	<b>Introduction</b>	1 <b>Introduction to Fluid- Mechanics Lab</b>
	2	<b>Fluid properties, mass density, specific weight etc.</b>	
	3	<b>Surface tension, capillarity</b>	
	4	<b>Pressure inside a droplet</b>	
2	5	<b>Compressibility, viscosity</b>	2 <b>Verification of Bernoullis Theorem</b>
	6	<b>Newtonian and Non- Newtonian Fluids</b>	
	7	<b>Steady &amp; unsteady, uniform and non-uniform Flows</b>	
	8	<b>laminar &amp; turbulent flow</b>	
3	9	<b>one, two &amp; three dimensional flows</b>	3 <b>Verification of Bernoullis Theorem</b>
	10	<b>Numericals &amp; Problems</b>	
	11	<b>Class Test</b>	
4	12	<b>Stream lines, streak lines and path lines</b>	4 <b>Calibration of V notch</b>
	13	<b>continuity equation</b>	
	14	<b>Stream function and velocity potential Functions</b>	
	15	<b>Free &amp; forced vortex flow</b>	
5	16	<b>Graphical &amp; exp. methods of flow nets</b>	5 <b>Calibration of Rectangular Notch</b>
	17	<b>P-D-H relationship</b>	
	18	<b>Gauge and absolute pressure</b>	
	19	<b>Manometers and its types</b>	
6	20	<b>Centre of pressure</b>	6 <b>Calibration of Trapezoidal notch</b>
	21	<b>Buoyancy</b>	
	22	<b>Stability of immersed and floating bodies</b>	
	23	<b>Pressure on plane and curved surfaces</b>	
7	24	<b>Numericals</b>	7 <b>Revision</b>
	25	<b>Numericals</b>	
	26	<b>Problems</b>	
	27	<b>Revision</b>	
8		<b>SESSIONALS EXAM</b>	8 <b>SESSIONALS EXAM</b>
9	28	<b>Revision</b>	9 <b>Determination of Metacentric height</b>
	29	<b>Metacentric height</b>	
	30	<b>Fluid masses subjected to uniform acceleration</b>	
	31	<b>Euler 's equation of motion along a streamline</b>	
10	32	<b>Numericals on Euler 's equation of motion</b>	10 <b>Determination of Metacentric height</b>
	33	<b>Numericals on Bernoulli's equation</b>	
	34	<b>Bernoulli's equation its limitations</b>	
	35	<b>Numericals on Bernoulli's equation</b>	
11	36	<b>Pitot tubes</b>	11 <b>Calibration of Venturimeter</b>
	37	<b>Venturimeter</b>	
	38	<b>Orificemeter</b>	
	39	<b>Flow through orifices &amp; mouth pieces</b>	
12	40	<b>Flow through sharp crested weirs and notches</b>	12 <b>Revision</b>
	41	<b>Aeration of Nappe</b>	
	42	<b>Numericals</b>	
	43	<b>Problems</b>	
13		<b>SESSIONALS EXAM</b>	13 <b>SESSIONALS EXAM</b>
14	44	<b>Revision</b>	14 <b>Calibration of Orifice Plate</b>
	45	<b>Boundary layer analysis</b>	
	46	<b>Boundary layer thicknesses</b>	
	47	<b>Boundary layer over a flat plate</b>	
	48	<b>Laminar boundary layer</b>	
	49	<b>Turbulent boundary layer</b>	

15	50	<b>laminar sub-layer</b>	15	<b>Determination of surface tension of liquids</b>
	51	<b>Smooth and Rough Boundaries</b>		
	52	<b>Boundary Layer separation and its control.</b>		
16	53	<b>Buckingham theorem &amp; Dimensionless Numbers</b>	16	<b>Determination of surface tension of liquids</b>
	54	<b>Geometric, kinematic and dynamic similarity</b>		
	55	<b>Model studies</b>		
	56	<b>Physical modeling, similar and distorted models</b>		
17	57	<b>Numericals &amp; Problems</b>	17	<b>Revision</b>
	58	<b>Numericals &amp; Problems</b>		
	59	<b>Revision</b>		
	60	<b>Revision</b>		
18		<b>Pre University Exams</b>	18	<b>Pre University Exams</b>

Name of Faculty:-		<b>ABHISHEK ARYA</b>
Discipline:-		<b>CIVIL ENGINEERING</b>
Semester:-		<b>B-Tech (7th)</b>
Subject:		<b>H.P.E</b>
Lesson Plan duration:- August 2018 to December 2018		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	<b>Introduction</b>
	2	<b>Sources of energy</b>
	3	<b>Status of hydropower, thermal vs hydropower,</b>
	4	<b>Thermal vs hydropower</b>
2	5	<b>Class Test</b>
	6	<b>Advantages of hydropower</b>
	7	<b>Place of hydropower in power system</b>
	8	<b>Place of hydropower in power system</b>
3	9	<b>Problems</b>
	10	<b>Electrical load on hydro power, load curves</b>
	11	<b>Load factor</b>
	12	<b>Capacity factors, Utility factors</b>
4	13	<b>Diversity factors</b>
	14	<b>Load on hydropower stations</b>
	15	<b>Load curves</b>
	16	<b>Load curves</b>
5	17	<b>Class Test</b>
	18	<b>Load duration curves, firm power</b>
	19	<b>Load duration curves, firm power</b>
	20	<b>Firm power , Secondary power</b>
6	21	<b>Secondary power</b>
	22	<b>Prediction of loads</b>
	23	<b>Prediction of loads</b>
	24	<b>Problems</b>
7	25	<b>Class Test</b>
	26	<b>Revision</b>
	27	<b>Revision</b>
	28	<b>Problems</b>
8		<b>SESSIONALS EXAM</b>
9	29	<b>Types of hydropower stations-classification of hydropower stations</b>
	30	<b>Run of river plants</b>
	31	<b>General lay out of run of river plants</b>
	32	<b>Vlley dam plans</b>
10	33	<b>Storage and pondage.Examples</b>
	34	<b>Class Test</b>
	35	<b>Basic features of Hydropower plants-advantages of pumps storage plants</b>
11	36	<b>Storage plants, Types of pump storage plants</b>
	37	<b>Reversible turbines</b>
	38	<b>Efficiency of pump storage plants. Examples.</b>
	39	<b>Problems</b>
12	40	<b>Water Conveyance System-Classifications of penstocks</b>
	41	<b>Design criteria of penstocks, anchor blocks</b>
	42	<b>Types of valves, water hammer, surges in power channels, Examples</b>
	43	<b>Types of Surge shafts-surge analysis, design of surge shafts.Examples.</b>
13	44	<b>Problems</b>
		<b>SESSIONALS EXAM</b>
	45	<b>TURBINES-Types of turbines</b>
	46	<b>Criterion for selection, Specific speed of turbines</b>
14	47	<b>Unit power, unit discharge</b>
	48	<b>Cavitatin in turbines, design of draft tube. Examples</b>

15	49	<b>Design of draft tube. Examples</b>
	50	<b>Problems</b>
	51	<b>Class Test</b>
	52	<b>Types of power houses-types of power houses</b>
16	53	<b>lay out of power houses</b>
	54	<b>lay out of power houses</b>
	55	<b>ventilations</b>
	56	<b>under ground power houses, Advantages, Examples</b>
17	57	<b>Problems</b>
	58	<b>Class Test</b>
	59	<b>Revision</b>
	60	<b>Revision</b>
18		<b>Pre University Exams</b>

Name of Faculty:-	<b>ABHISHEK ARYA</b>
Discipline:-	<b>CIVIL ENGINEERING</b>
Semester:-	<b>M-Tech</b>
Subject:	<b>ADOS &amp; COMPUTATIONAL LAB</b>
Lesson Plan duration:- August 2018 to December 2018	

Week	Theory		Practical	
	Lecture Day	(including assignment/ test)	Practical Day	Experiment
1	1	<b>Single degree of freedom system</b>	1	<b>Computer programming in C++</b>
	2	<b>Equation of motion</b>		
	3	<b>Equation of motion</b>		
	4	<b>Numericals</b>		
2	5	<b>Damped and undamped free vibration</b>	2	<b>Computer programming in C++</b>
	6	<b>Damped and undamped free vibration</b>		
	7	<b>Numericals</b>		
	8	<b>Numericals</b>		
3	9	<b>Response to harmonic, periodic &amp; impulse load</b>	3	<b>Computer programming in C++</b>
	10	<b>Response to harmonic, periodic &amp; impulse load</b>		
	11	<b>Numericals</b>		
	12	<b>Numericals</b>		
4	13	<b>general dynamic load</b>	4	<b>Computer programming in C++</b>
	14	<b>general dynamic load</b>		
	15	<b>Numericals</b>		
	16	<b>Numericals</b>		
5	17	<b>Duhamel's Integral</b>	5	<b>Computer programming in C++</b>
	18	<b>Duhamel's Integral</b>		
	19	<b>Duhamel's Integral</b>		
	20	<b>Problems</b>		
6	21	<b>Multi-degrees of freedom system</b>	6	<b>Computer programming in C++</b>
	22	<b>Multi-degrees of freedom system</b>		
	23	<b>Equation of motion</b>		
	24	<b>Equation of motion</b>		
7	25	<b>Numericals</b>	7	<b>Computer programming in C++</b>
	26	<b>Problems</b>		
	27	<b>Seminar</b>		
	28	<b>Seminar</b>		
8	<b>SESSIONALS EXAM</b>		8	<b>SESSIONALS EXAM</b>
9	29	<b>Free vibration analysis</b>	9	<b>Autocad Introduction</b>
	30	<b>Free vibration analysis</b>		
	31	<b>Numericals</b>		
	32	<b>Numericals</b>		
10	33	<b>Dynamic response and modal analysis</b>	10	<b>Creating and editing 2D and 3D drawings</b>
	34	<b>Dynamic response and modal analysis</b>		
	35	<b>Numericals</b>		
	36	<b>Numericals</b>		
11	37	<b>Numericals</b>	11	<b>Creating and editing 2D and 3D drawings</b>
	38	<b>Seminar</b>		
	39	<b>Seminar</b>		
	40	<b>Seminar</b>		
12	41	<b>Seminar</b>	12	<b>Customising AutoCAD, extraction of quantities</b>
	42	<b>Seminar</b>		
	43	<b>Seminar</b>		
	44	<b>Seminar</b>		
13	<b>SESSIONALS EXAM</b>		13	<b>SESSIONALS EXAM</b>
14	45	<b>Free &amp; Forced vibration of distributed mass system</b>	14	<b>Applications for design and drawing of building components</b>
	46	<b>Free and Forced vibration of distributed mass system</b>		
	47	<b>Numericals</b>		
	48	<b>Numericals</b>		
15	49	<b>Beams Introduction</b>	15	<b>Applications for design and drawing of building components</b>
	50	<b>Presentations</b>		
	51	<b>Presentations</b>		
	52	<b>Presentations</b>		
16	53	<b>Analysis of structural response to Earthquakes</b>	16	<b>Drawing of connections and others</b>
	54	<b>Analysis of structural response to Earthquakes</b>		
	55	<b>Analysis of structural response to Earthquakes</b>		
	56	<b>Numericals</b>		

17	57	Problems	17	Drawing of connections and others
	58	Problems		
	59	Problems		
	60	Problems		
18		Pre University Exams	18	Pre University Exams

Name of Faculty:-		<b>NAVEEN HOODA</b>
Discipline:-		<b>CIVIL ENGINEERING</b>
Semester:-		<b>B-Tech (7th)</b>
Subject:		<b>ENVIRONMENTAL POLLUTION AND CONTROL (CE-411-F)</b>
Lesson Plan duration:- August 2018 to December 2018		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	<b>Introduction</b>
	2	<b>about EPC</b>
	3	<b>Principles involved in the protection of public health</b>
	4	<b>class test</b>
2	5	<b>need of town planning</b>
	6	<b>seminar</b>
	7	<b>sanitation of dwelling houses</b>
	8	<b>assignment work</b>
3	9	<b>planning &amp; scheduling</b>
	10	<b>principles of villages</b>
	11	<b>class test</b>
	12	<b>country planning</b>
4	13	<b>town planning</b>
	14	<b>need of plan</b>
	15	<b>class test</b>
	16	<b>scopes of planning</b>
5	17	<b>seminar</b>
	18	<b>environmental conditions</b>
	19	<b>land pollution</b>
	20	<b>class test</b>
6	21	<b>environemntal effects</b>
	22	<b>land pollution its control.</b>
	23	<b>Economics of environments</b>
	24	<b>assignment work</b>
7	25	<b>eveluations,natural resources</b>
	26	<b>Air borne diseases</b>
	27	<b>class test</b>
	28	<b>air borne disease control</b>
8		<b>SESSIONALS EXAMS</b>
9	29	<b>class test</b>
	30	<b>assignment work</b>
	31	<b>sources of pollution</b>
	32	<b>occupational health</b>
10	33	<b>Environmental management techniques</b>
	34	<b>sensifive analysis</b>
	35	<b>risk assessment</b>
	36	<b>class test</b>
11	37	<b>Water borne diseases</b>
	38	<b>river pollution</b>
	39	<b>control of water pollution</b>
	40	<b>Environmental Consideration of ventilation</b>
12	41	<b>assignment work</b>
	42	<b>air conditioning</b>
	43	<b>class test</b>
	44	<b>illumination</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>Environmental Auditing</b>
	46	<b>general methods</b>
	47	<b>class test</b>
	48	<b>audit process</b>
	49	<b>sampling collections &amp; devices</b>

15	50	seminar work
	51	class test
	52	mathematical modeling
16	53	Application of above in the design of hospitals
	54	designing of other public buildings
	55	class test
	56	Environmental management system standards-
17	57	revision
	58	revision
	59	revision
	60	revision
18		<b>PRE UNIVERSITY EXAMINATION</b>



Name of Faculty:- **NAVEEN HOODA**  
 Discipline:- **CIVIL ENGINEERING**  
 Semester:- **B-Tech (3rd)**  
 Subject: **S.A-I (CE-201-F) & S.A.-I Lab (CE-211-F)**  
 Lesson Plan duration:- August 2018 to December 2018

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/ test)	Practical Day	Experiment
1	1	<b>Introduction to structural analysis</b>	1	<b>Verification of reciprocal theorem of deflection using a simply supported beam</b>
	2	<b>Definition of determinate</b>		
	3	<b>indeterminate structure</b>		
	4	<b>degree of freedom</b>		
2	5	<b>concept of stress and strain</b>	2	<b>practical checking and test</b>
	6	<b>class test</b>		
	7	<b>Mohr' circle of stress and strain</b>		
	8	<b>numericals</b>		
3	9	<b>principle stress and strain examples</b>	3	<b>Verification of moment area theorem for slopes and deflections of the beam</b>
	10	<b>numericals</b>		
	11	<b>Stress - strain relationship hook's law</b>		
	12	<b>composite sections</b>		
4	13	<b>numericals</b>	4	<b>practical checking and test</b>
	14	<b>assignment work</b>		
	15	<b>Concept of bending stresses</b>		
	16	<b>numericals</b>		
5	17	<b>flexural formula</b>	5	<b>Deflections of a truss- horizontal deflections &amp; vertical deflections of various joints of a pin-jointed truss</b>
	18	<b>numericals</b>		
	19	<b>stress- strain diagram for beam</b>		
	20	<b>shear stress in beam</b>		
6	21	<b>numericals</b>	6	<b>Elastic displacements (vertical &amp; horizontal) of curved members</b>
	22	<b>s.stresses in beam wth diff. cross-section</b>		
	23	<b>Concept of torsion</b>		
	24	<b>numericals</b>		
7	25	<b>torsion in circular shaft</b>	7	<b>practical checking and test</b>
	26	<b>torsion equation</b>		
	27	<b>shear stress in shaft due to torsion</b>		
	28	<b>numericals</b>		
8		<b>SESSIONALS EXAM</b>	8	<b>SESSIONALS EXAM</b>
9	29	<b>Theory of column</b>	9	<b>Experimental and analytical study of 3 hinged arch and influence line for horizontal thrust</b>
	30	<b>slenderness ratio</b>		
	31	<b>numericals</b>		
	32	<b>end connections</b>		
10	33	<b>short column</b>	10	<b>Experimental and analytical study of behavior of struts with various end conditions</b>
	34	<b>numericals</b>		
	35	<b>Euler's critical buckling load</b>		
	36	<b>eccentric loaded short column</b>		
11	37	<b>numericals</b>	11	<b>practical checking and test</b>
	38	<b>introduction to cylindrical column</b>		
	39	<b>cylindrical column subjected to eccentric lo</b>		
	40	<b>numericals</b>		
12	41	<b>Introduction to bending moment diagram</b>	12	<b>To determine elastic properties of a beam</b>
	42	<b>Introduction to shear force diagram</b>		
	43	<b>sfd &amp; bmd in beams</b>		
	44	<b>numericals</b>		
13		<b>SESSIONALS EXAM</b>	13	<b>SESSIONALS EXAM</b>
	45	<b>introduction to slope and deflection in beam</b>		

14	46	<b>numericals</b>	14	<b>Uniaxial tension test for steel (plain &amp; deformed bars)</b>
	47	<b>moment- area method</b>		
	48	<b>numericals</b>		
15	49	<b>conjugate beam method</b>	15	<b>practical checking and test</b>
	50	<b>numericals</b>		
	51	<b>principle of virtual work</b>		
16	52	<b>numericals</b>	16	<b>Uniaxial compression test on concrete &amp; bricks specimens</b>
	53	<b>Maxwell law of reciprocal deflection</b>		
	54	<b>numericals</b>		
17	55	<b>Willot-Mohr diagram.</b>	17	<b>practical checking and test</b>
	56	<b>numericals</b>		
	57	<b>revision</b>		
	58	<b>revision</b>		
18	59	<b>revision</b>	18	<b>PRE UNIVERSITY EXAMINATION</b>
	60	<b>revision</b>		
18		<b>PRE UNIVERSITY EXAMINATION</b>	18	<b>PRE UNIVERSITY EXAMINATION</b>

**Name of Faculty:- NAVEEN HOODA**  
**Discipline:- CIVIL ENGINEERING**  
**Semester:- M-TECH 3RD**  
**Subject:- SEMINAR & TECHNICAL WRITING (MTSEC-304)**  
**Lesson Plan duration:- August 2018 to December 2018**

<b>Seminar and technical writing</b>	
<b>Week</b>	<b>Experiment</b>
<b>1</b>	<b>INTRODUCTION:- SEMINAR &amp; TECHNICAL WRITING</b>
<b>2</b>	<b>TOPIC SELECTION OTHER THAN DISSERTATION</b>
<b>3</b>	<b>RESEARCH WORK</b>
<b>4</b>	<b>SEMINAR WORK</b>
<b>5</b>	<b>APPROVAL OF SEMINAR TOPIC BY COMMITTEE</b>
<b>6</b>	<b>PREPARATION</b>
<b>7</b>	<b>PRESENTATION OF TOPIC</b>
<b>8</b>	<b>SESSIONALS EXAM</b>
<b>9</b>	<b>INTRODUCTION:- WRITING SKILLS</b>
<b>10</b>	<b>RESEARCH WORK</b>

<b>11</b>	<b>RESEARCH WORK</b>
<b>12</b>	<b>PREPARATION</b>
<b>13</b>	<b>SESSIONALS EXAM</b>
<b>14</b>	<b>PREPARATION</b>
<b>15</b>	<b>SUBMISSION OF HARD &amp; SOFT COPY OF FINAL TOPIC</b>
<b>16</b>	<b>SEMINAR</b>
<b>17</b>	<b>FINAL SEMINAR</b>
<b>18</b>	<b>PRE UNIVERSITY EXAMINATION</b>

**Name of Faculty:- NAVEEN HOODA**

**Discipline:- CIVIL ENGINEERING**

**Semester:- M-TECH 3RD**

**Subject:- DISSERTATION PHASE-1 (MTSEC-305)**

**Lesson Plan duration:- August 2018 to December 2018**

<b>DISSERTATION PHASE-1</b>	
<b>Week</b>	<b>Experiment</b>
<b>1</b>	<b>INTRODUCTION:- DISSERTATION PHASE-1</b>
<b>2</b>	<b>DISCUSSION &amp; RESEARCH OF DISSERTATION TOPIC</b>
<b>3</b>	<b>APPROVAL OF TOPIC BY RESEARCH COMMITTEE</b>
<b>4</b>	<b>FINAL SELECTION OF DISSERTATION TOPIC FOR RESEARCH WORK</b>
<b>5</b>	<b>RESEARCH STUDY</b>
<b>6</b>	<b>SEMINAR ON SCOPE OF RESEARCH WORK</b>
<b>7</b>	<b>RESEARCH WORK ON TOPIC</b>
<b>8</b>	<b><i>SESSIONALS EXAM</i></b>
<b>9</b>	<b>RESEARCH WORK ON TOPIC</b>
<b>10</b>	<b>RESEARCH WORK ON TOPIC</b>

11	<b>RESEARCH WORK ON TOPIC</b>
12	<b>RESEARCH WORK ON TOPIC</b>
13	<i>SESSIONALS EXAM</i>
14	<b>RESEARCH WORK ON TOPIC</b>
15	<b>SEMINAR</b>
16	<b>REPORT SUBMISSION OF FINAL DISSERTATION TOPIC</b>
17	<b>FINAL SEMINAR IN FRONT OF RESEARCH COMMITTEE</b>
18	<b>PRE UNIVERSITY EXAMINATION</b>

Name of Faculty:-		<b>Sandeep Malik</b>
Discipline:-		<b>CIVIL ENGINEERING</b>
Semester:-		<b>B-Tech (5th)</b>
Subject:		<b>Hydrology</b>
Lesson Plan duration:- July 2018 to December 2018		
Week	<b>Theory</b>	
	<b>Lecture Day</b>	<b>Topic (including assignment/ test</b>
1	1	<b>Hydrologic cycle, scope and application of hydrology</b>
	2	<b>drainage basins and its characteristics</b>
	3	<b>stream geometry, hypsometric curves</b>
	4	<b>stream geometry, hypsometric curves</b>
2	5	<b>Precipitation: Forms and types of precipitation,</b>
	6	<b>characteristics of precipitation in India</b>
	7	<b>measurement of precipitation</b>
	8	<b>recording and non recording raingages</b>
3	9	<b>raingage station, raingage network</b>
	10	<b>estimation of missing data, presentation of rainfall data</b>
	11	<b>mean precipitation, depth -area -duration relationship</b>
	12	<b>frequency of point rainfall, intensity -duration- frequency curves</b>
4	13	<b>probable max. precipitation</b>
	14	<b>Numericals</b>
	15	<b>Numericals</b>
	16	<b>Problems</b>
5	17	<b>Evaporation &amp; Transpiration</b>
	18	<b>Process, evaporimeters and empirical relationships</b>
	19	<b>analytical methods</b>
	20	<b>reservoir evaporation and methods of its control</b>
6	21	<b>transpiration &amp; evapo-transpiration</b>
	22	<b>Penman`s equation and potential evapo-transpiration</b>
	23	<b>Numericals</b>
	24	<b>Numericals</b>
7	25	<b>Revision</b>
	26	<b>Revision</b>
	27	<b>Revision</b>
	28	<b>Revision</b>
8	<b>SESSIONALS EXAMS</b>	
9	29	<b>Infiltration process,</b>
	30	<b>initial loss, infiltration capacity</b>
	31	<b>measurement of infiltration &amp; infiltration indices</b>
	32	<b>Factor affecting run-off</b>
10	33	<b>estimation of runoff, rainfall-run off relationships</b>
	34	<b>measurement of stage-staff gauge</b>
	35	<b>wire gauge, automatic stage recorder</b>
	36	<b>stage hydrograph, measurement of velocity-current meters</b>

11	37	<b>floats, area velocity method</b>
	38	<b>moving boat and slope area method,</b>
	39	<b>electromagnetic, ultrasonic and dilution methods of stream flow measurement</b>
	40	<b>Numericals</b>
12	41	<b>stage discharge relationship</b>
	42	<b>Numericals</b>
	43	<b>Problems</b>
	44	<b>Problems</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>Discharge hydrograph, components and factors affecting shape of hydrograph</b>
	46	<b>effective rainfall, unit hydrograph and its derivation</b>
	47	<b>Numericals</b>
	48	<b>Numericals</b>
15	49	<b>unit hydrograph of different durations, use and limitations of UH</b>
	50	<b>triangular UH, Snyder`s synthetic UH</b>
	51	<b>floods, rational methods, empirical formulae</b>
	52	<b>UH method, flood frequency methods, Gumbel`s method, graphical method, design flood</b>
16	53	<b>Ground Water Occurrence, types of aquifers, compressibility of aquifers</b>
	54	<b>water table and its effects on fluctuations</b>
	55	<b>wells and springs, movement of ground water, Darcy`s law</b>
	56	<b>permeability, porosity, specific yield, specific retention, storage coeff.&amp; transmissibility</b>
17	57	<b>Well Hydraulics: Steady state flow to wells in unconfined and confined aquifers.</b>
	58	<b>Numericals</b>
	59	<b>Numericals</b>
	60	<b>Revision</b>
18		<b>PRE UNIVERSITY EXAMINATION</b>



**Name of Faculty:-** Sandeep Malik / Sh. S.K Sehgal  
**Discipline:-** CIVIL ENGINEERING  
**Semester:-** B-Tech (7th)  
**Subject:** Irrigation engg. & Irrigation Drg Lab  
**Lesson Plan duration:-** August 2018 to December 2018

Week			Practical	
	Practical Day	Drawing	Practical Day	Experiment
1	1	Design of weirs and barrages on permeable foundation for surface and sub surface flow conditions.	1	Drawing of Aqueducts
2	2	Design of Guide Banks.	2	Earthen Dams and Concrete Dams drawings
3	3	Design of Guide Banks.	3	Earthen Dams and Concrete Dams drawings
4	4	Flood Routing using step by step method	4	Drawings of Spillways
5	5	Flood Routing using step by step method	5	Drawings of Spillways
6	6	Design of Syphon Aquaduct	6	Outlet, inlets drawings
7	7	Design of Syphon Aquaduct	7	Culverts
8		SESSIONALS EXAM	8	SESSIONALS EXAM
9	9	Design of Sarda type fall & sloping glacis fall.	9	Culverts
10	10	Seepage line in a homogeneous earth dams on impermeable foundation with horizontal drainage	10	HeadRegulartors
10	10	Seepage line in a homogeneous earth dams on impermeable foundation with horizontal drainage	11	HeadRegulartors

12	12	<b>Design of Ogee Spillway and stilling basin.</b>	12	<b>Drawings of Barrages and Weirs</b>
13	13	<b>SESSIONALS EXAM</b>	13	<b>SESSIONALS EXAM</b>
14	14	<b>Design of dams ,aqueducts,symphonic systems &amp; their inlets&amp;outlets ,design of spillway</b>	14	<b>Drawing of fall</b>
15	15	<b>Design of dams ,aqueducts,symphonic systems &amp; their inlets&amp;outlets ,design of spillway</b>	15	<b>Drawing of fall</b>
16	16	<b>Problems</b>	16	<b>Problems</b>
17	17	<b>Corrections and viva voice</b>	17	<b>Corrections and viva voice</b>
18	18	<b>PRE UNIVERSITY EXAMINATION</b>	18	<b>PRE UNIVERSITY EXAMINATION</b>

<b>Name of Faculty:-</b>		<b>Sandeep Malik</b>
<b>Discipline:-</b>		<b>CIVIL ENGINEERING</b>
<b>Semester:-</b>		<b>M.TECH 3rd SEMESTER</b>
<b>Subject:</b>		<b>T&amp;AS</b>
<b>Lesson Plan duration:- July 2018 to December 2018</b>		
<b>Week</b>	<b>Theory</b>	
	<b>Lecture Day</b>	<b>Topic (including assignment/ test)</b>
<b>1</b>	<b>1</b>	<b>Static indeterminacy and kinematic indeterminacy</b>
	<b>2</b>	<b>degree of freedom, coordinate system</b>
	<b>3</b>	<b>structure idealization stiffness and flexibility matrices</b>
	<b>4</b>	<b>Numericals</b>
<b>2</b>	<b>5</b>	<b>suitability element</b>
	<b>6</b>	<b>stiffness equations , elements flexibility equations</b>
	<b>7</b>	<b>stiffness equations , elements flexibility equations</b>
	<b>8</b>	<b>Numericals</b>
<b>3</b>	<b>9</b>	<b>mixed force , displacement equations</b>
	<b>10</b>	<b>mixed force , displacement equations</b>
	<b>11</b>	<b>For truss element, beam element and tensional element.</b>
	<b>12</b>	<b>Element stiffness matrix ,and load vector</b>
<b>4</b>	<b>13</b>	<b>local and global coordinates</b>
	<b>14</b>	<b>Assembly of stiffness matrix from element stiffness matrix</b>
	<b>15</b>	<b>Assembly of stiffness matrix from element stiffness matrix</b>
	<b>16</b>	<b>direct stiffness method</b>
<b>5</b>	<b>17</b>	<b>general procedure</b>
	<b>18</b>	<b>band matrix semi bandwidth</b>
	<b>19</b>	<b>Numericals</b>
	<b>20</b>	<b>Numericals</b>
<b>6</b>	<b>21</b>	<b>computer algorithm for assembly by direct stiffness</b>
	<b>22</b>	<b>matrix method</b>
	<b>23</b>	<b>Numericals</b>
	<b>24</b>	<b>Numericals</b>
<b>7</b>	<b>25</b>	<b>Problems</b>
	<b>26</b>	<b>Problems</b>
	<b>27</b>	<b>Problems</b>
	<b>28</b>	<b>Revision</b>
<b>8</b>		<b>SESSIONALS EXAMS</b>
<b>9</b>	<b>29</b>	<b>Continuous beam</b>
	<b>30</b>	<b>Continuous beam</b>
	<b>31</b>	<b>plane frame and grids by flexibility methods</b>

	32	plane frame and grids by flexibility methods
10	33	Analysis of plane truss
	34	Analysis of plane truss
	35	Numericals
	36	Numericals
11	37	continuous beam, plane frame and grids by stiffness methods
	38	continuous beam, plane frame and grids by stiffness methods
	39	continuous beam, plane frame and grids by stiffness methods
	40	Numericals
12	41	Static condensation
	42	Numericals
	43	Problems
	44	Problems
13		<b>SESSIONALS EXAMS</b>
14	45	sub structuring
	46	initial and thermal stresses
	47	initial and thermal stresses
	48	Shear walls: Necessity
15	49	structural behaviour of large frames with and without shear walls
	50	structural behaviour of large frames with and without shear walls
	51	Numericals
	52	Numericals
16	53	approximate methods of analysis of shear walls
	54	approximate methods of analysis of shear walls
	55	Numericals
	56	Numericals
17	57	Revision
	58	Revision
	59	Revision
	60	Revision
18		<b>PRE UNIVERSITY EXAMINATION</b>

<b>Name of Faculty:-</b>	<b>Sandeep Malik</b>	
<b>Discipline:-</b>	<b>CIVIL ENGINEERING</b>	
<b>Semester:-</b>	<b>M.TECH 3rd SEMESTER</b>	
<b>Subject:</b>	<b>ACTM</b>	
<b>Lesson Plan duration:- July 2018 to December 2018</b>		
<b>Week</b>	<b>Theory</b>	
	<b>Lecture Day</b>	<b>Topic (including assignment/ test</b>
<b>1</b>	<b>1</b>	<b>Sub Structure Construction</b>
	<b>2</b>	<b>Box jacking, pipe jacking</b>
	<b>3</b>	<b>under water construction of diaphragm walls and basement.</b>
	<b>4</b>	<b>Numericals</b>
<b>2</b>	<b>5</b>	<b>Tunneling techniques</b>
	<b>6</b>	<b>Tunneling techniques</b>
	<b>7</b>	<b>Piling techniques-driving well and caisson-sinking</b>
	<b>8</b>	<b>Piling techniques-driving well and caisson-sinking</b>
<b>3</b>	<b>9</b>	<b>cofferdam, cable anchoring and grouting</b>
	<b>10</b>	<b>cofferdam, cable anchoring and grouting</b>
	<b>11</b>	<b>driving diaphragm walls, sheet piles.</b>
	<b>12</b>	<b>Numericals</b>
<b>4</b>	<b>13</b>	<b>Seminars</b>
	<b>14</b>	<b>Seminars</b>
	<b>15</b>	<b>Laying operations for built up offshore system</b>
	<b>16</b>	<b>Laying operations for built up offshore system</b>
<b>5</b>	<b>17</b>	<b>Numericals</b>
	<b>18</b>	<b>Numericals</b>
	<b>19</b>	<b>shoring for deep cutting, large reservoir construction</b>
	<b>20</b>	<b>shoring for deep cutting, large reservoir construction</b>
<b>6</b>	<b>21</b>	<b>Numericals</b>
	<b>22</b>	<b>Problems</b>
	<b>23</b>	<b>well points, dewatering and stand by plant equipment</b>
	<b>24</b>	<b>well points, dewatering and stand by plant equipment</b>
<b>7</b>	<b>25</b>	<b>Problems</b>
	<b>26</b>	<b>Problems</b>
	<b>27</b>	<b>Problems</b>
	<b>28</b>	<b>Problems</b>
<b>8</b>	<b>SESSIONALS EXAMS</b>	
<b>9</b>	<b>29</b>	<b>Super Structure Construction</b>
	<b>30</b>	<b>Vacuum dewatering of concrete flooring</b>
	<b>31</b>	<b>Concrete paving Technology</b>
	<b>32</b>	<b>Numericals</b>
<b>10</b>	<b>33</b>	<b>Tech. of const. for c.c.o in tall buildings of various shapes and varying sections</b>
	<b>34</b>	<b>launching techniques, suspended formwork</b>
	<b>35</b>	<b>erection techniques of tall structures</b>

	36	<b>Numericals</b>
11	37	<b>launching tech. for heavy decks- in-situ pre-stressing in high rise structures</b>
	38	<b>aerial transporting ,handling &amp; erecting light weight components</b>
	39	<b>erection of lattice towers and rigging of transmission line structures.</b>
	40	<b>The Critical Path Method</b>
12	41	<b>calculations for critical path scheduling</b>
	42	<b>activity float and schedules, presenting project schedules</b>
	43	<b>critical path scheduling for activityon-node and with Leads.</b>
	44	<b>Problems</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>Calculations for Scheduling with Leads, Lags and Windows.</b>
	46	<b>scheduling with resource constraints and precedence's</b>
	47	<b>Numericals</b>
	48	<b>advanced scheduling techniques, scheduling with uncertain Duration</b>
15	49	<b>monte carlo schedule simulation, crashing and time/cost tradeoffs</b>
	50	<b>scheduling in poorly structured problems, improving the scheduling process.</b>
	51	<b>Equipment for excavating, dredging, trenching, tunneling, drilling</b>
	52	<b>Numericals</b>
16	53	<b>Erection Equipment, types of pumps used in construction</b>
	54	<b>equipment for dewatering and grouting, foundation and pile driving equipment</b>
	55	<b>forklifts and related equipment</b>
	56	<b>portable material, conveyors, hauling equipment.</b>
17	57	<b>Numericals</b>
	58	<b>Problems</b>
	59	<b>Problems</b>
	60	<b>Problems</b>
18		<b>PRE UNIVERSITY EXAMINATION</b>

Name of Faculty:-		Navneet
Discipline:-		CIVIL ENGINEERING
Semester:-		B-Tech (7th)
Subject:		DSS-II
Lesson Plan duration:- August 2018 to December 2018		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	Elementary Plastic Analysis and Design
	2	Introduction, Scope of plastic analysis,
	3	ultimate load carrying capacity of tension members and compression members
	4	flexural members, shape factor
2	5	Numericals
	6	mechanisms, plastic collapse
	7	plastic analysis applied to steel beams and simple portal frames and design.
	8	Numericals
3	9	Industrial Buildings: Loads, general arrangement
	10	stability & design considerations
	11	design of purlins
	12	design of roof trusses
4	13	industrial building frames,
	14	bracings and stepped columns
	15	Numericals
	16	Numericals
5	17	Design of Water Tanks
	18	Introduction, permissible stresses
	19	design of circular & rectangular steel tank
	20	design of circular & rectangular steel tank
6	21	pressed steel tanks including staging.
	22	pressed steel tanks including staging.
	23	Numericals
	24	Numericals
7	25	Problems
	26	Problems
	27	Problems
	28	Problems
8		SESSIONALS EXAMS
9	29	Design of Steel Stacks: Introduction
	30	various loads to be considered for the design of steel stacks
	31	various loads to be considered for the design of steel stacks
	32	Numericals
10	33	design of steel stacks including foundation
	34	design of steel stacks including foundation
	35	design of steel stacks including foundation
	36	Numericals

11	37	<b>Towers</b>
	38	<b>Transmission line towers</b>
	39	<b>microwave towers,</b>
	40	<b>Design loads &amp; classification</b>
12	41	<b>design procedure</b>
	42	<b>Specifications</b>
	43	<b>Problems</b>
	44	<b>Problems</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>Cold Formed Sections: Introduction</b>
	46	<b>brief description of various type of cold-formed sections</b>
	47	<b>brief description of various type of cold-formed sections</b>
	48	<b>Numericals</b>
15	49	<b>local buckling, concepts of effective width</b>
	50	<b>local buckling, concepts of effective width</b>
	51	<b>effective sections,</b>
	52	<b>Numericals</b>
16	53	<b>elements with stiffeners</b>
	54	<b>design of compression elements</b>
	55	<b>design of bending elements</b>
	56	<b>Numericals</b>
17	57	<b>Revision</b>
	58	<b>Revision</b>
	59	<b>Revision</b>
	60	<b>Revision</b>
18		<b>PRE UNIVERSITY EXAMINATION</b>



Name of Faculty:- Navneet  
 Discipline:- CIVIL ENGINEERING  
 Semester:- B-Tech (5th)  
 Subject: DSS-I & DSS Drg Lab

Lesson Plan duration:- August 2018 to December 2018

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test	Practical Day	Experiment
1	1	Properties of structural steel. I.S.Rolled sections and	1	Introduction DSS Drg.
	2	Properties of structural steel. I.S.Rolled sections and I.		
	3	I.S. specifications.		
	4	Importance, various types of connections		
2	5	welded connections.	2	Structural Drawings of various types of welded connections
	6	Design of Tension Members		
	7	types of tension members, net sectional areas		
3	8	Design of tension members, lug angles and splices.	3	Structural Drawings of various types of welded connections
	9	Numericals		
	10	Numericals		
	11	Numericals		
4	12	Problems	4	Structural Drawings of various types of welded connections
	13	Design of Compression Members		
	14	effective length and slenderness ratio		
	15	various types of sections used for columns, built up col		
5	16	battened columns	5	Beam to column connections
	17	design of lacing and battens		
	18	design of eccentrically loaded compression members		
	19	Numericals		
6	20	Numericals	6	Beam to column connections
	21	Numericals		
	22	Column Bases and Footings		
	23	types of column bases, design of slab base		
7	24	loading	7	Beam to column connections
	25	Numericals		
	26	design of grillage foundations.		
	27	Numericals		
8	28	problems	8	SESSIONALS EXAM
9	29	Design of Beams	9	Column bases – slab bases –gusset base and grillage foundations
	30	types of sections, general design criteria for beams		
	31	types of sections, general design criteria for beams		
	32	Numericals		
10	33	design of laterally supported beams	10	Column bases – slab bases –gusset base and grillage foundations
	34	design of laterally unsupported beams		
	35	Numericals		
	36	Numericals		
11	37	design of built up beams	11	Column bases – slab bases –gusset base and grillage foundations
	38	Numericals		
	39	Numericals		

	40	web buckling & web crippling		
12	41	Gantry Girders: Intro., various loads, specifications, de		Plate girders
	42	Numericals		
	43	Problems		
	44	Problems		
13		SESSIONALS EXAM	13	SESSIONALS EXAM
14	45	Plate Girder: Introduction	14	Roof trusses
	46	elements of plate girder, design steps of a plate girder		
	47	necessity of stiffeners in plate girder		
	48	Problems		
15	49	various types of stiffeners, web and flange splices	15	N MEMBERS AND COMPRESSION M
	50	Curtailement of flange plates		
	51	Numericals		
	52	Numericals		
16	53	design beam to column connections: Introduction	16	Strut joints,tie joints,purlin joints
	54	design of framed and seat connections		
	55	Numericals		
	56	Numericals		
17	57	Revision	17	Corrections and viva voice
	58	Revision		
	59	Revision		
	60	Revision		
18		PRE UNIVERSITY EXAMINATION	18	PRE UNIVERSITY EXAMINATION

<b>Name of Faculty:-</b>	Navneet	
<b>Discipline:-</b>	CIVIL ENGINEERING	
<b>Semester:-</b>	M.TECH 3rd SEMESTER	
<b>Subject:</b>	ASS	
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	Design of members subjected to lateral loads and axial loads.
	2	Design of members subjected to lateral loads and axial loads.
	3	Principles of analysis and design of Industrial buildings and bents
	4	Principles of analysis and design of Industrial buildings and bents
2	5	Principles of analysis and design of Industrial buildings and bents
	6	Numericals
	7	Numericals
	8	Problems
3	9	Crane gantry girders
	10	crane columns, bracing of industrial buildings and bents.
	11	crane columns, bracing of industrial buildings and bents.
	12	Numericals
4	13	Analysis and design of steel towers
	14	trestles and masts
	15	Design of industrial stacks
	16	Self supporting and guyed stacks lined and unlined
5	17	Numericals
	18	Numericals
	19	Problems
	20	stresses due to wind and earthquake
6	21	Design of foundations for shallow, deep and pile foundation
	22	Design of foundations for shallow, deep and pile foundation
	23	Numericals
	24	Numericals
7	25	Shape factors, Moment redistribution Static
	26	Kinematic and uniqueness theorems
	27	Combined mechanisms
	28	Revision
8	<b>SESSIONALS EXAMS</b>	
9	29	Analysis Portal frames
	30	Method of plastic moment
	31	moment resisting connections
	32	Numericals
10	33	Types of cross sections, local buckling and post buckling
	34	Types of cross sections, local buckling and post buckling
	35	Design of compression and tension members

	36	<b>beams, deflection of beams, combined stresses and connections.</b>
11	37	<b>beams, deflection of beams, combined stresses and connections.</b>
	38	<b>Numericals</b>
	39	<b>Numericals</b>
	40	<b>Numericals</b>
12	41	<b>Types of connections</b>
	42	<b>Problems</b>
	43	<b>Problems</b>
	44	<b>Problems</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>design of framed beam connections</b>
	46	<b>design of framed beam connections</b>
	47	<b>Numericals</b>
	48	<b>Numericals</b>
15	49	<b>seated beam connection, unstiffened</b>
	50	<b>stiffened seat connections</b>
	51	<b>continuous beam to beam connections</b>
	52	<b>Numericals</b>
16	53	<b>continuous beam to column connections</b>
	54	<b>connection both welded and bolted</b>
	55	<b>connection both welded and bolted</b>
	56	<b>Numericals</b>
17	57	<b>Revision</b>
	58	<b>Revision</b>
	59	<b>Revision</b>
	60	<b>Revision</b>
18		<b>PRE UNIVERSITY EXAMINATION</b>

<b>Name of Faculty:-</b>	Navneet	
<b>Discipline:-</b>	CIVIL ENGINEERING	
<b>Semester:-</b>	M.TECH 3rd SEMESTER	
<b>Subject:-</b>	ACTM	
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	Sub Structure Construction
	2	Box jacking, pipe jacking
	3	under water construction of diaphragm walls and basement.
	4	Numericals
2	5	Tunneling techniques
	6	Tunneling techniques
	7	Piling techniques-driving well and caisson-sinking
	8	Piling techniques-driving well and caisson-sinking
3	9	cofferdam, cable anchoring and grouting
	10	cofferdam, cable anchoring and grouting
	11	driving diaphragm walls, sheet piles.
	12	Numericals
4	13	Seminars
	14	Seminars
	15	Laying operations for built up offshore system
	16	Laying operations for built up offshore system
5	17	Numericals
	18	Numericals
	19	shoring for deep cutting, large reservoir construction
	20	shoring for deep cutting, large reservoir construction
6	21	Numericals
	22	Problems
	23	well points, dewatering and stand by plant equipment
	24	well points, dewatering and stand by plant equipment
7	25	Problems
	26	Problems
	27	Problems
	28	Problems
8	<b>SESSIONALS EXAMS</b>	
9	29	Super Structure Construction
	30	Vacuum dewatering of concrete flooring
	31	Concrete paving Technology
	32	Numericals
10	33	Tech. of const. for c.c.o in tall buildings of various shapes and varying sections
	34	launching techniques, suspended formwork
	35	erection techniques of tall structures

	36	Numericals
11	37	launching tech. for heavy decks- in-situ pre-stressing in high rise structures
	38	aerial transporting ,handling & erecting light weight components
	39	erection of lattice towers and rigging of transmission line structures.
	40	The Critical Path Method
12	41	calculations for critical path scheduling
	42	activity float and schedules, presenting project schedules
	43	critical path scheduling for activityon-node and with Leads.
	44	Problems
13		<b>SESSIONALS EXAMS</b>
14	45	Calculations for Scheduling with Leads, Lags and Windows.
	46	scheduling with resource constraints and precedence's
	47	Numericals
	48	advanced scheduling techniques, scheduling with uncertain Duration
15	49	monte carlo schedule simulation, crashing and time/cost tradeoffs
	50	scheduling in poorly structured problems, improving the scheduling process.
	51	Equipment for excavating, dredging, trenching, tunneling, drilling
	52	Numericals
16	53	Erection Equipment, types of pumps used in construction
	54	equipment for dewatering and grouting, foundation and pile driving equipment
	55	forklifts and related equipment
	56	portable material, conveyors, hauling equipment.
17	57	Numericals
	58	Problems
	59	Problems
	60	Problems
18		<b>PRE UNIVERSITY EXAMINATION</b>

Name of Faculty:-	<b>D</b>	
Discipline:-	<b>CIVIL ENGINEERING</b>	
Semester:-	<b>B-Tech (7th)</b>	
Subject:	<b>DISASTER MITIGATION AND MANAGEMENT</b>	
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
Week	Theory	
	Lecture Day	Topic (including assignment/ test)
1	1	Introduction to disaster Control –integrated approach
	2	role of engineer
	3	Hydrological, coastal and marine disaster
	4	Hydrological, coastal and marine disaster
2	5	class test
	6	Seminar
	7	Atmospheric Disaster
	8	Atmospheric Disaster
3	9	Revision
	10	assignment work
	11	class test
	12	Geological mass movement and land disasters
4	13	Effects of land disaster
	14	Case studies –Damage profile analysis –uttarkashi
	15	Case studies –Damage profile analysis –Bhuj
	16	Case studies –Damage profile analysis –LATUR
5	17	seminar
	18	Seminar
	19	seminar
	20	class test
6	21	Disaster mitigation
	22	Preventive measures
	23	Problems
	24	assignment work
7	25	Forest related disasters
	26	Wind and water driven disasters
	27	class test
	28	Revision
8	<b>SESSIONALS EXAMS</b>	
9	29	assignment work
	30	Mining disasters
	31	Mining disasters
	32	Major earthquake &causes
10	33	Major earthquake &causes
	34	Presentation
	35	Presentation
	36	class test

11	37	<b>Building codes &amp; other recommended practices- cyclones</b>
	38	<b>landslides –causes &amp;remedies</b>
	39	<b>seismic response of foundation &amp;soil behaviour</b>
	40	<b>seismic response of foundation &amp;soil behaviour</b>
12	41	<b>assignment work</b>
	42	<b>effects of cyclone</b>
	43	<b>Problems</b>
	44	<b>class test</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>failure –deformation</b>
	46	<b>Revision</b>
	47	<b>class test</b>
	48	<b>Hazard resistant construction</b>
15	49	<b>Introduction</b>
	50	<b>symmetry eccentric loading</b>
	51	<b>framed structure</b>
	52	<b>soft floors ,simple configurations</b>
16	53	<b>soft floors ,simple configurations</b>
	54	<b>Problems</b>
	55	<b>class test</b>
	56	<b>Revision</b>
17	57	<b>Revision</b>
	58	<b>Revision</b>
	59	<b>Revision</b>
	60	<b>revision</b>
18		<b>PRE UNIVERSITY EXAMINATION</b>



<b>Name of Faculty:-</b>		D / Sh. Tarachand		
<b>Discipline:-</b>		CIVIL ENGINEERING		
<b>Semester:-</b>		B-Tech (3rd)		
<b>Subject:</b>		BCM& B.Drg. LAB		
<b>Lesson Plan duration:- August 2018 to December 2018</b>				
Week	Theory	Practical		
	Lecture Day	Topic(including assignment/test	Practical Day Experiment	
1	1	Introduction, various terms used	1	typical drawing of a cavity wall
	2	stone masonry-Dressing of stones		
	3	Classifications of stone masonry		
2	4	Classifications of stone masonry	2	bond in brick work
	5	safe permissible loads		
	6	Introduction to green building concept and method		
3	7	Brick masonry-bonds in brick work	3	grillage foundation
	8	Brick masonry-bonds in brick work		
	9	laying brick work		
4	10	structural brick work-cavity and hollow walls	4	sheets checking
	11	structural brick work-cavity and hollow walls		
	12	reinforced brick work		
5	13	Defects in brick masonry	5	preparation of building drawingmentioning its salient features including the following details: ground floor plan
	14	composite stone and brick masonry		
	15	glass block masonry		
6	16	Problems	6	two sectional; elevation
	17	Class test		
	18	Cavity and Partition Walls		
7	19	Introduction	7	front and side elevation
	20	Advantages, position of cavity		
	21	Advantages, position of cavity		
8	22	types of non -bearing partitions	8	SESSIONALS EXAM
	23	types of non -bearing partitions		
	24	constructional details and precautions		
9	25	constructional details and precautions	9	sheets checking
	26	construction of masonry cavity wall		
	27	Revision		
10	28	class test	10	plan and sectional elevation of stairs- case
	29	Functions, types of shallow foundations		
	30	sub-surface investigations, geophysical methods		
11	31	general feature of shallow foundation	11	doors and windows
	32	foundations in water logged areas		
	33	design of masonry wall foundation		
	34	introduction to deep foundations i.e. pile and pier f		
	35	Types of roofs		
	36	various terms used		
	37	roof trusses -king post truss, queen post truss		
	38	Floor structures, ground, basement and upper, va		
	39	class test		
	40	Locations, sizes, types of doors and windows		

12	41	fixtures and fasteners for doors and windows		ventilators, floors and roofs
	42	fixtures and fasteners for doors and windows		
	43	Defects and causes of dampness		
	44	prevention of dampness		
13		SESSIONALS EXAM	13	SESSIONALS EXAM
14	45	materials used	14	repeat drawing sheets
	46	damp-proofing treatment in buildings		
	47	water- proofing treatment of roofs including pitches		
	48	Classification, measurement & transmission of sound		
15	49	Sound insulation of buildings, wall construction and	15	revision
	50	fire-resisting prop., fire resistant const. & requirements		
	51	revision		
	52	Classification, req. of good stone, quarrying, blasting		
16	53	dressing, sawing and polishing, prevention and sea	16	test
	54	Classification of bricks, constituents of good brick		
	55	manufacturing of tiles and terra-cotta, types & use		
	56	Classification, manufacturing, & testing of lime, stone		
17	57	composition, types, manufacturing & testing of cement	17	test
	58	Classification, structure, seasoning, defects & fire proofing		
	59	Basic constituents & types of paints, constituents & use		
	60	Revision		
18		PRE UNIVERSITY EXAMINATION	18	PRE UNIVERSITY EXAMINATION

<b>Name of Faculty:-</b>		<b>D</b>
<b>Discipline:-</b>		<b>CIVIL ENGINEERING</b>
<b>Semester:-</b>		<b>M.TECH 1ST SEMESTER</b>
<b>Subject:</b>		<b>BRIDGE ENGINEERING</b>
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
<b>Week</b>	<b>Theory</b>	
	<b>Lecture Day</b>	<b>Topic (including assignment/ test</b>
<b>1</b>	<b>1</b>	<b>Planning of bridges : Investigation for bridges</b>
	<b>2</b>	<b>need for investigation, selection of site</b>
	<b>3</b>	<b>economical span</b>
	<b>4</b>	<b>subsoil exploration</b>
<b>2</b>	<b>5</b>	<b>investigation report</b>
	<b>6</b>	<b>importance for proper investigation.</b>
	<b>7</b>	<b>Design of RCC bridges: IRC loading</b>
	<b>8</b>	<b>types of bridges</b>
<b>3</b>	<b>9</b>	<b>components of bridges</b>
	<b>10</b>	<b>analysis and design of slab bridges and box culvert</b>
	<b>11</b>	<b>analysis and design of slab bridges and box culvert</b>
	<b>12</b>	<b>Problems</b>
<b>4</b>	<b>13</b>	<b>class test</b>
	<b>14</b>	<b>Design of girder bridges: T-beam bridges</b>
	<b>15</b>	<b>Analysis and design of deck slab</b>
	<b>16</b>	<b>longitudinal girders and cross girders</b>
<b>5</b>	<b>17</b>	<b>longitudinal girders and cross girders</b>
	<b>18</b>	<b>, Pigeaud's method</b>
	<b>19</b>	<b>Courbon's method</b>
	<b>20</b>	<b>Morice and Little method</b>
<b>6</b>	<b>21</b>	<b>Morice and Little method</b>
	<b>22</b>	<b>Hendry, Jaegar method</b>
	<b>23</b>	<b>Hendry, Jaegar method</b>
	<b>24</b>	<b>prestressed concrete bridges( simply supported case only)</b>
<b>7</b>	<b>25</b>	<b>prestressed concrete bridges( simply supported case only)</b>
	<b>26</b>	<b>class test</b>
	<b>27</b>	<b>Revision</b>
	<b>28</b>	<b>Revision</b>
<b>8</b>		<b>SESSIONALS EXAMS</b>
<b>9</b>	<b>29</b>	<b>Bearings : Introduction to bearings</b>
	<b>30</b>	<b>Importance, bearings for slab bridges</b>
	<b>31</b>	<b>bearings for girder bridges</b>

	32	Design of elastomeric bearings
10	33	Joints and appurtenances
	34	Substructure: different types
	35	materials for piers and abutments
	36	substructure design: piers and abutments
11	37	shallow footings
	38	well foundation
	39	problems
	40	class test
12	41	assignment work
	42	repeat design of piers
	43	design of abutments
	44	class test
13		<b>SESSIONALS EXAMS</b>
14	45	Construction methods: Inspection
	46	maintenance and construction of bridges
	47	maintenance and construction of bridges
	48	case studies of recently constructed major bridges
15	49	case studies of recently constructed major bridges
	50	case studies of recently constructed major bridges
	51	critical studies of failure of major bridges
	52	critical studies of failure of major bridges
16	53	Features of suspension bridges and cable stay bridges
	54	Features of suspension bridges and cable stay bridges
	55	Problems
	56	class test
17	57	Revision
	58	Revision
	59	Revision
	60	Revision
18		<b>PRE UNIVERSITY EXAMINATION</b>

<b>Name of Faculty:-</b>	<b>D</b>	
<b>Discipline:-</b>	<b>CIVIL ENGINEERING</b>	
<b>Semester:-</b>	<b>M.TECH 3rd SEMESTER</b>	
<b>Subject:</b>	<b>ACTM</b>	
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	Sub Structure Construction
	2	Box jacking, pipe jacking
	3	under water construction of diaphragm walls and basement.
	4	Numericals
2	5	Tunneling techniques
	6	Tunneling techniques
	7	Piling techniques-driving well and caisson-sinking
	8	Piling techniques-driving well and caisson-sinking
3	9	cofferdam, cable anchoring and grouting
	10	cofferdam, cable anchoring and grouting
	11	driving diaphragm walls, sheet piles.
	12	Numericals
4	13	Seminars
	14	Seminars
	15	Laying operations for built up offshore system
	16	Laying operations for built up offshore system
5	17	Numericals
	18	Numericals
	19	shoring for deep cutting, large reservoir construction
	20	shoring for deep cutting, large reservoir construction
6	21	Numericals
	22	Problems
	23	well points, dewatering and stand by plant equipment
	24	well points, dewatering and stand by plant equipment
7	25	Problems
	26	Problems
	27	Problems
	28	Problems
8	<b>SESSIONALS EXAMS</b>	
9	29	Super Structure Construction
	30	Vacuum dewatering of concrete flooring
	31	Concrete paving Technology
	32	Numericals
10	33	Tech. of const. for c.c.o in tall buildings of various shapes and varying sections
	34	launching techniques, suspended formwork
	35	erection techniques of tall structures

	36	<b>Numericals</b>
11	37	<b>launching tech. for heavy decks- in-situ pre-stressing in high rise structures</b>
	38	<b>aerial transporting ,handling &amp; erecting light weight components</b>
	39	<b>erection of lattice towers and rigging of transmission line structures.</b>
	40	<b>The Critical Path Method</b>
12	41	<b>calculations for critical path scheduling</b>
	42	<b>activity float and schedules, presenting project schedules</b>
	43	<b>critical path scheduling for activityon-node and with Leads.</b>
	44	<b>Problems</b>
13		<b>SESSIONALS EXAMS</b>
14	45	<b>Calculations for Scheduling with Leads, Lags and Windows.</b>
	46	<b>scheduling with resource constraints and precedence's</b>
	47	<b>Numericals</b>
	48	<b>advanced scheduling techniques, scheduling with uncertain Duration</b>
15	49	<b>monte carlo schedule simulation, crashing and time/cost tradeoffs</b>
	50	<b>scheduling in poorly structured problems, improving the scheduling process.</b>
	51	<b>Equipment for excavating, dredging, trenching, tunneling, drilling</b>
	52	<b>Numericals</b>
16	53	<b>Erection Equipment, types of pumps used in construction</b>
	54	<b>equipment for dewatering and grouting, foundation and pile driving equipment</b>
	55	<b>forklifts and related equipment</b>
	56	<b>portable material, conveyors, hauling equipment.</b>
17	57	<b>Numericals</b>
	58	<b>Problems</b>
	59	<b>Problems</b>
	60	<b>Problems</b>
18		<b>PRE UNIVERSITY EXAMINATION</b>

Name of Faculty:- NITU

Discipline:- CIVIL ENGINEERING

Semester:- B-Tech (3rd)

Subject: SURVEYING AND SURVEY LAB

Lesson Plan duration:- August 2018 to December 2018

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/ test	Practical Day	Experiment
1	1	<b>Unit-I: Fundamental Principles of Surveying</b> Definition,objects classification fundamental principles	1	<b>chain surveying: chaining and chain traversing</b>
	2			
	3			
	4			
2	5	methods of fixing stations Measurement of distances Direct measurement instruments for measuring distance	2	<b>practical checking and test</b>
	6			
	7			
	8			
3	9	instruments for making stations chaining of line errors in chaining tape corrections examples	3	<b>compass traversing</b>
	10			
	11			
	12			
4	13	<b>Unit-III: Compass and Chain Traversing</b> Methods of traversing instruments for measurement of angles- prismatic and surveyor`s compass bearing of lines	4	<b>practical checking and test</b>
	14			
	15			
	16			
5	17	local attraction, examples Numericals <b>Unit-IV: Levelling:Definition of terms used in levelling,</b> types of levels and staff	5	<b>plane table surveying:methods of plane table surveying</b>
	18			
	19			
	20			
6	21	temporary adjustment of levels principles of levelling reduction of levels booking of staff readings, examples contouring, characteristics of contours lines	6	<b>two point problem</b>
	22			
	23			
	24			
7	25	locating contours, interpolation of contours Calculaions of volume of earth worksby means of countour lines numericals	7	<b>practical checking and test</b>
	26			
	27			
	28			
8		<b>SESSIONALS EXAM</b>	8	<b>SESSIONALS EXAM</b>
9	29	<b>Unit-V: Theodolite and Theodolite Traversing</b> Theodolites- introduction temporary adjustment of theodolite measurement of angles	9	<b>levelling: profile levelling and longitudinal section and cross section</b>
	30			
	31			
	32			

10	33	repetition and reiteration method	10	<b>permanent adjustment of level, reciprocal levelling</b>
	34	traverse surveying with theodolite		
	35	checks in traversing		
	36	adjustment of closed traverse, examples		
11	37	Electronic theodolite	11	<b>practical checking and test</b>
	38	Unit-VI: Plane Table Surveying		
	39	Plane table		
	40	methods of plane table surveying		
12	41	radiation, intersection	12	<b>contouring and preparation of contour map</b>
	42	traversing and resection		
	43	two point and three point problems		
	44	Problems		
13		<b>SESSIONALS EXAM</b>	13	<b>SESSIONALS EXAM</b>
14	45	Unit-VII: Tacheometry: Uses of tacheometry	14	<b>use of tangent clinometer</b>
	46	instruments used in tacheometry		
	47	systems of tacheometric surveying -stadia		
	48	system fixed hair method		
15	49	Unit-VIII: Curves: Definitions and technical terms	15	<b>practical checking and test</b>
	50	Classification of curves		
	51	elements of simple circular curve		
	52	location of tangent points-chain and tape methods		
16	53	instrumental methods	16	<b>rise and fall method</b>
	54	examples of simple curves		
	55	Transition Curves -Length and types of transition curves		
	56	length of combined curve, examples		
17	57	Vertical Curves: Necessity and types of vertical curves	17	<b>practical checking and test</b>
	58	description of types of curves		
	59	Revision		
	60	Revision		
18		<b>PRE UNIVERSITY EXAMINATION</b>	18	<b>PRE UNIVERSITY EXAMINATION</b>



Name of Faculty:-	NITU	
Discipline:-	CIVIL ENGINEERING	
Semester:-	B-Tech (5th)	
Subject:	WATER SUPPLY & TREATMENT	
Lesson Plan duration:- August 2018 to December 2018		
Week	Theory	
	Lecture Day	Topic (including assignment/ test
1	1	Unit-I: Water Quantity: introduction
	2	Importance and necessity of water supply scheme
	3	Water demands and its variations
	4	Estimation of total quantity of water requirement
2	5	Population forecasting
	6	Quality and quantity of surface and ground water sources
	7	Selection of a source of water supply
	8	Types of intakes
3	9	Numericals
	10	Unit-II: Water Quality:
	11	Impurities in water and their sanitary significance
	12	Physical analysis of water
4	13	chemical and bacteriological analysis of water
	14	water borne diseases
	15	water quality standards
	16	Problems
5	17	class test
	18	Unit-III: Water Treatment:
	19	Objectives
	20	treatment processes and their sequence in conventional treatment plant
6	21	sedimentation – plain and aided with coagulation
	22	Types, features and design aspects
	23	Mixing basins and Flocculation units
	24	Filtration – mechanism involved
7	25	design steps of sedimentation tank
	26	numericals
	27	revision
	28	class test
8	<b>SESSIONALS EXAMS</b>	
9	29	types of filters
	30	slow and rapid sand filtration units
	31	Disinfection principles and aeration
	32	Problems
10	33	Unit-IV: Water Conveyance System:

	<b>34</b>	<b>Conveyance of water</b>
	<b>35</b>	<b>Intake structures</b>
	<b>36</b>	<b>Rising and Gravity system</b>
<b>11</b>	<b>37</b>	<b>Dual systems</b>
	<b>38</b>	<b>Pumping Systems and pumping stations</b>
	<b>39</b>	<b>valves and appurtenances</b>
	<b>40</b>	<b>pipe materials and pipe fitting</b>
<b>12</b>	<b>41</b>	<b>O&amp;M and trouble shooting for conveyance system</b>
	<b>42</b>	<b>types of intake structures</b>
	<b>43</b>	<b>problems</b>
	<b>44</b>	<b>revision</b>
<b>13</b>		<b>SESSIONALS EXAMS</b>
<b>14</b>	<b>45</b>	<b>Unit-V: Water Distribution System:</b>
	<b>46</b>	<b>Layout of Distribution system – Dead End system</b>
	<b>47</b>	<b>Grid Iron system, Ring system</b>
	<b>48</b>	<b>Radial system, their merits and demerits</b>
<b>15</b>	<b>49</b>	<b>Distribution Reservoir- functions and determination of storage capacity</b>
	<b>50</b>	<b>Water Distribution Network</b>
	<b>51</b>	<b>analysis of distribution network, layout</b>
	<b>52</b>	<b>capacity and pressure requirements</b>
<b>16</b>	<b>53</b>	<b>leak detection</b>
	<b>54</b>	<b>Maintenance, Water supply in buildings and plumbing</b>
	<b>55</b>	<b>Problems</b>
	<b>56</b>	<b>class test</b>
<b>17</b>	<b>57</b>	<b>revision</b>
	<b>58</b>	<b>revision</b>
	<b>59</b>	<b>revision</b>
	<b>60</b>	<b>revision</b>
<b>18</b>		<b>PRE UNIVERSITY EXAMINATION</b>

Name of Faculty:-	NITU	
Discipline:-	CIVIL ENGINEERING	
Semester:-	M.TECH 1ST SEMESTER	
Subject:	ADVANCED CONCRETE TECHNOLOGY	
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
Week	Theory	
	Lecture Day	Topic (including assignment/ test)
1	1	Aggregate & Cement: Classification
	2	Testing of Aggregates
	3	fibres and its types.
	4	Cement : grade of Cement, chemical composition
2	5	Hydration of Cement, Structure of hydrated Cement,
	6	Special Cement
	7	Water, Chemical and Admixtures
	8	Problems
3	9	class test
	10	Principles of Concrete mix design: Introduction
	11	Methods of Concrete mix design
	12	Methods of Concrete mix design
4	13	Design of high strength and high performance concrete
	14	Design of high strength and high performance concrete
	15	Rheological behaviour of fresh Concrete
	16	Properties of fresh concrete
5	17	Properties of hardened concrete
	18	Problems
	19	Strength, Elastic properties
	20	Creep and Shrinkage, Variability of concrete strength
6	21	Creep and Shrinkage, Variability of concrete strength
	22	Numericals
	23	Non destructive testing
	24	Non destructive testing
7	25	Quality control
	26	Durability, corrosion protection and fire resistance
	27	Problems
	28	class test
8	<b>SESSIONALS EXAMS</b>	
9	29	Advanced Generation of Concrete
	30	Its Placement Techniques
	31	Introduction
	32	Self compacting concrete,

10	33	Self compacting concrete,
	34	vacuum dewatered concrete
	35	Numericals
	36	Numericals
11	37	Fly-ash Concrete
	38	Fly-ash Concrete
	39	Fibre reinforced Concrete,
	40	Polymer Concrete
12	41	Epoxy resins and screeds for rehabilitation
	42	Properties and application
	43	Emerging trends in replacement of fine aggregates
	44	<b>revision</b>
13		<b>SESSIONALS EXAMS</b>
14	45	Sessionals problems
	46	Methods of transportation:
	47	Placing and curing
	48	class test
15	49	Extreme weather concreting,
	50	Special concreting methods
	51	seminar
	52	seminar
16	53	seminar
	54	Under water concreting.
	55	problems
	56	revision
17	57	revision
	58	revision
	59	revision
	60	revision
18		<b>PRE UNIVERSITY EXAMINATION</b>

**Name of Faculty:- NITU**

**Discipline:- CIVIL ENGINEERING**

**Semester: M.TECH( 1ST SEMESTER)**

**Subject:- STRUCTURAL ENGINEERING LAB**

**Lesson Plan duration:- August 2018 to December 2018**

Week	Experiments
1	Mix design of concrete of different grades & using admixtures
2	Tensile and Flexural strength of concrete of different grades.
3	File checking and test
4	Tensile strength of different types of steel rebars, rolled steel sections
5	Testing of simply supported RCC beams for flexural failure
6	file checking and test
7	Testing of RCC column
8	<b>SESSIONALS EXAM</b>
9	Non-destructive testing of concrete including rebound hammer and ultrasonic pulse method
10	File checking and test
11	Vibration analysis of beams and plates

12	Repeat
13	<b>SESSIONALS EXAM</b>
14	Permeability of concrete
15	Buckling load of struts.
16	Revision
17	File checking
18	<b>PRE UNIVERSITY EXAMINATION</b>

<b>Name of Faculty:-</b>		<b>SANDEEP PANNU</b>
<b>Discipline:-</b>		<b>CIVIL ENGINEERING</b>
<b>Semester:-</b>		<b>B-Tech (7th)</b>
<b>Subject:</b>		<b>E &amp; C</b>
<b>Lesson Plan duration:- August 2018 to December 2018</b>		
Week	Theory	
	Lecture Day	Topic (including assignment/ test)
1	1	Introduction, Principle of estimation ,units ,item work
	2	Different kinds of estimates, different methods of estimation
	3	Estimation of materials in single room building ,two room building, Multi storey
	4	with different sections of walls, foundation ,floors and roofs
2	5	R.B and R.C.C works
	6	Class Test
	7	Plastering ,white washing ,Distempering and painting
	8	Doors and windows , lump sum items
3	9	Estimates of canals
	10	Estimates of dams ,barrages,Hilly roads etc.
	11	Numericals
	12	Necessity of specification types of specification
4	13	General specification
	14	Specification of bricks ,cement ,sand ,water, lime
	15	Reinforcement: detailed specification for earthwork,
	16	Concrete
5	17	Brickwork
	18	Flooring , D.P.C,R.C.C
	19	Cement , Plastering
	20	White and colour washing
6	21	Distempering
	22	Painting
	23	Numericals
	24	Numericals
7	25	Problems
	26	Revision
	27	Revision
	28	Revision
8	<b>SESSIONALS EXAM</b>	
9	29	Rate analysis, Purpose
	30	Importance and requirements of rate analysis
	31	Units of measurement preparation of rate analysis
	32	Procedure of rate analysis for items: Earth work
10	33	Concrete works
	34	R.C.C works
	35	Reinforce brick work
	36	Plastering
11	37	Painting
	38	Finishing (white washing ,distempering)
	39	Numericals
	40	Numericals
12	41	Problems
	42	Class Test
	43	Revision
	44	Revision
13	<b>SESSIONALS EXAM</b>	
14	45	Public Works Account- INTRODUCTION
	46	Tender and acceptance of tender
	47	Ernst money ,security money ,retention money
	48	Measurement book ,cash book
	49	Preparation ,examination and payment of bills, first and final bills

15	50	Administrative sanction ,technical sanction.
	51	Billing – maintenance of muster ROLL, preparation of pay bill
	52	Measurement of work for payment of contractors
16	53	Different types of payment –first &final, running advance and final payment
	54	Valuation Purpose of valuation, principles of valuation depreciation
	55	sinking fund, salvage & scrapvalue
	56	Valuation of a building –cost method ,rental –return method
17	57	Numericals
	58	Class Test
	59	Revision
	60	Revision
18		<b>Pre University Exams</b>



<b>Name of Faculty:-</b>		<b>SANDEEP PANNU</b>		
<b>Discipline:-</b>		<b>CIVIL ENGINEERING</b>		
<b>Semester:-</b>		<b>B-Tech (5th)</b>		
<b>Subject:</b>		<b>T.E-I &amp; T.E-I Lab</b>		
<b>Lesson Plan duration:- August 2018 to December 2018</b>				
Week	Theory		Practical Day	Experiment
	Lecture Day	Topic (including assignment/ test)		
1	1	Introduction,	1	Flakiness and elongation test
	2	Highway Plans, Highway Alignment and Surveys		
	3	Main features of 20 years road development plans in India.		
	4	Requirement of an ideal high way alignment.		
2	5	Factors affecting alignment, Surveys for high way alignments	2	Marshal Stability test
	6	Classifications of roads, Objectives of highway planning.		
	7	surveys Saturation system of planning		
3	8	Cross section elements and sight distance considerations.-Cr	3	C B R Valiue test
	9	Friction, carriage way, formation width, land width, camber,IRC		
	10	Types of terrain design speed, Sight distance ,ssd, overtaking sight		
	11	Overtaking zones, intermediate sight distance		
4	12	Sight distance at inter sections, head light sight distance	4	C B R Valiue test
	13	Set back distance		
	14	Cirtical locations for sight distance		
	15	Numericals		
5	16	Problems	5	Bulk density and Void test
	17	Class Test		
	18	Design of horizontal and vertical alignments		
6	19	Providing super elevation in the field.Radiuos of circular curves, l	6	Dorry Abrasion Test
	20	Type and length of transition curves.Gradiednt, Types, values.		
	21	Smmit curves and valley curves, their design criterions		
	22	Grade compensation on curves.		
7	23	Effects of centrifugal force. Design of super elevation.	7	Revision
	24	Assignment		
	25	Problems		
8	26	Class Test	8	SESSIONALS EXAM
	27	Revision		
	28	Revision		
9	<b>SESSIONALS EXAM</b>		9	Specific gravity test
	29	Traffic characteristics & traffic surveys, vehicular charact.		
	30	Traffic studies such as volume, speed and O & D studies.		
	31	Fundamental diagram of traffic flows. Level of service.PCU		
10	32	Causes and preventing measures for road accidents.	10	Specific gravity test
	33	High way materials , Sub grade soil evaluation, CBR test		
	34	Testing procedureds and IRC/IS specifications for suitability		
	35	Types of Bituminous materials. Tar, Cut back,emulsions		
11	36	testing procedureds and stability of bitu. Materials	11	Solubility Test
	37	Bitumenous mix, desirable properties, Marshall method		
	38	Basic concept of use of polymers&rubber modified bitumen		
12	39	System of rail ways ,permanents ways, gauge	12	Revision
	40	Rails, function of rails ,composition *types of rails, length of rail,		
	41	Coning and wheel,tilting,failure of rails, creeps, buckling		
	42	Sleepers,Types of sleepers Functions,Ballasts,Functions		
13	43	Quanties,fixure and fastening,function	13	SESSIONALS EXAM
	44	Plate bearing test, Desirable properties of aggregates		
	<b>SESSIONALS EXAM</b>			
14	45	Track geometries,gradients,super elevations, relation	14	Aggregate Hardness, Toughness,cementation, adhesiveness test
	46	Speed and radius of curves, pointing crossing, switches		
	47	Type of switches,crossings,type of crossing,junction,		
	48	Method of platting, relaying of track, method of relaying		
	49	Purpose, ,site selection		

15	50	Requirements,classification of stations	15	Shearing test on soil
	51	Yards,classification of yards, necessity of equipments		
	52	Level crossing,signals,classification of signals,interlocking		
16	53	Maintenance and drainage, classification of maintenance	16	Aggregate Water absorption Test
	54	Numericals		
	55	Tunnels-Necessity of tunnels, classification of tunnels,		
	56	Cross section of tunnels, surveying of tunnels		
17	57	Lining of tunnels, types of lining, construction of lining	17	Revision
	58	Maintenance and drainage of tunnels.		
	59	Problems		
	60	Revision		
18		Pre University Exams	18	Pre University Exams

Name of Faculty:-	<b>SANDEEP PANNU</b>	
Discipline:-	<b>CIVIL ENGINEERING</b>	
Semester:-	<b>M-Tech</b>	
Subject:	<b>Dissertation Phase-1</b>	
Lesson Plan duration:- August 2018 to December 2018		
Week	Theory	
		Topic (including assignment/ test)
1		<b>INTRODUCTION:- DISSERTATION PHASE-1</b>
2		<b>DISCUSSION &amp; RESEARCH OF DISSERTATION TOPIC</b>
3		<b>APPROVAL OF TOPIC BY RESEARCH COMMITTEE</b>
4		<b>FINAL SELECTION OF DISSERTATION TOPIC FOR RESEARCH WORK</b>
5		<b>RESEARCH STUDY</b>
6		<b>SEMINAR ON SCOPE OF RESEARCH WORK</b>
7		<b>RESEARCH WORK ON TOPIC</b>
8		<b>SESSIONALS EXAM</b>
9		<b>RESEARCH WORK ON TOPIC</b>
10		<b>RESEARCH WORK ON TOPIC</b>

10		<b>RESEARCH WORK ON TOPIC</b>
11		<b>RESEARCH WORK ON TOPIC</b>
12		<b>RESEARCH WORK ON TOPIC</b>
13		<b>SESSIONALS EXAM</b>
14		<b>RESEARCH WORK ON TOPIC</b>
15		<b>SEMINAR</b>
16		<b>REPORT SUBMISSION OF FINAL DISSERTATION TOPIC</b>
17		<b>FINAL SEMINAR IN FRONT OF RESEARCH COMMITTEE</b>
18		<b>Pre University Exams</b>