### **3rd Semester**

# Theory No: 3

Subject: BMCT(TH 03)

		•	subject.	DMC1(1U	. 03)	
	Week No	Per	iod	Numbers of		
S1 No		From	То	Classes to be Scheduled	Topics to be covered	Remarks
				5	1.1 Classification of rock, uses of stone, natural bed of stone,	
1 1	W 1	15-07-19	20-07-19		1.2 Qualities of good building stone,	
	1	10 0. 19	20 01 13		1.3 Dressing of stone	
					1.4 Characteristics of different types of stone and their uses	
			9 27-07-19		2.1 Brick earth – its composition	
	<b>117.</b> O	22-07-19		5	2.2 Brick making – Preparation of brick earth, Moulding, Drying,	
2	W 2				Burning in kilns (continuous Process)	
					2.3 Classification of bricks, size of traditional and modular bricks,	
					qualities of good huilding bricks	
					1.1Classification of bricks, size of traditional and modular bricks,	
					qualities of good building bricks	
					1.2Cement, Mortar and Concrete	
3	W 3	29-07-19	03-08-19	5	1.3Cement: Types of cements, Properties of cements, Manufacturing	
					of cement	
					1.4 Importance and application of blended cement with fly ash and	
					blast furnace slag.	

# Theory No: 3 Subject: BMCT(TH 03)

		Peri		Numbers of		
S1 No	Week No	From	То	Classes to be Scheduled	Topics to be covered	Remarks
4	W 4	05-08-19	10-08-19	5	1.1Mortar: Definition and types of mortar 1.2 Sources and classification of sand, Bulking of sand 1.3 Use of gravel, morrum and fly ash as different building material 1.4 Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete.	
5	W 5	12-08-19	17-08-19	5	4.3 Clay products and refractory materials – Definition and Classification.	12th and 15th Aug'19 are holiday
6	W 6	19-08-19	24-08-19	5	5.1 Composition of Paints, enamels, varnishes. 5.2 Types and uses of surface protective materials like Paints, Enamels, Varnishes, Distempers, Emulsion, French polish and Wax Polish.	23rd Aug'19 is Holiday
7	W 7	26-08-19	31-08-19	5	1.1 Buildings and classification of buildings based on occupancy 1.2 Different components of a building. 1.3 Site investigation – objectives, site reconnaissance and explorations 2.1 Concept of foundation and its purpose 2.2 Types of foundations – shallow and deep 2.3 Shallow foundation-constructional details of: Spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block	
8	W 8	02-09-19	07-09-19	5	2.4 Deep foundations: Pile foundations-their suitability, classification of piles based on materials, function and method of installation. 3.1 Purpose of walls 3.2 Classification of walls – load bearing, non-load bearing walls, retaining walls. 3.3 Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite masonry walls 3.4 Partition Walls: Suitability and uses of brick and wooden partition walls 3.5 Brick masonry: Definition of different terms	2nd and 3rd Sept'19 are holiday

#### **3rd Semester** Theory No: 3 Subject: BMCT(TH 03) Period Numbers of Week S1 No Classes to be Topics to be covered Remarks No To From Scheduled 3.6 Bond – meaning and necessity: English bond for 1 and 1-1/2 Brick thick walls. T, X and right angled corner junctions. Thickness for 1 and 1-1/2 brick square pillars in English bond 3.7 Stone Masonry 9th and 14th Sept'19 are 3.8 Glossary of terms -String course, corbel, cornice, block-in-5 W 9 09-09-19 14-09-19 holiday course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress 4.1 Glossary of terms used in doors and windows 4.2 Doors – different types of doors 4.4 Purpose of use of arches and lintels 5.1 Floors: Glossary of terms ,Types of floor finishes – cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring (Concept only) 5 W 10 16-09-19 21-09-19 5.2 Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs 5.3 Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, 5.4 Various types of stair case - straight flight, dog legged, open well, quarter turn, half turn (newel and geometrical stairs), bifurcated stair, spiral stair, cantilever stair, tread riser stair. Protective, Decorative Finishes, Damp and Termite Proofing W 11 11 23-09-19 28-09-19 5 28th Sept'19 is holiday 6.1 Plastering – purpose – Types of plastering, Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster etc. 6.2 Proportion of mortars used for different plasters, preparation of 6.6 Damp and Termite proofing - Materials and Methods. Green Buildings, Energy Management and Energy Audit Of Buildings & Project

7.3 Aims of energy management of buildings.

7.2 Introduction to Energy Management and Energy Audit of

7.4 Types of energy audit, Response energy audit questionnaire

2nd and 5th Oct'19 is

holiday

7.1 Concept of green building

Buildings.

5

W 12

30-09-19

05-10-19

3rd Semester											
	The	ory No:	3								
			BMCT(TH	MCT(TH 03)							
Week	Period		Numbers of								
No	From	То	Classes to be Scheduled		Topics to be covered	Remarks					
W 13	14-10-19	19-10-19	5	REVISION							
W 14	21-10-19	26-10-19	5	REVISION							
W 15	28-10-19	31-10-19	5	REVISION							
15			75								
	W 13 W 14 W 15	Week         Per           No         From           W 13         14-10-19           W 14         21-10-19           W 15         28-10-19	Subject:           Week No         Period           W 13         14-10-19         19-10-19           W 14         21-10-19         26-10-19           W 15         28-10-19         31-10-19	Week No         From         To         Numbers of Classes to be Scheduled           W 13         14-10-19         19-10-19         5           W 14         21-10-19         26-10-19         5           W 15         28-10-19         31-10-19         5	Theory No: 3  Subject: BMCT(TH 03)  Week No From To Numbers of Classes to be Scheduled  W 13 14-10-19 19-10-19 5 REVISION  W 14 21-10-19 26-10-19 5 REVISION  W 15 28-10-19 31-10-19 5 REVISION	Theory No: 3    Subject: BMCT(TH 03)					

### 3rd Semester

# Theory No: 2

# Subject: Geotechnical Engineering (Th 02)

			Jubjece.	acoccciii	icai Biigineering (111 02)	
	Week	Period		Numbers of		
S1 No	No	From	То	Classes to be Scheduled	Topics to be covered	Remarks
					1.1 Soil and Soil Engineering	
1	W 1	15-07-19	20-07-19	4	1.2 Scope of Soil Mechanics	
					1.3 Origin and formation of soil 1.4Soil as a three Phase system.	
		22-07-19	2-07-19 27-07-19	4	Water Content, Density, Specific gravity, Voids ratio, Porosity,	
2	W 2				Percentage of air voids, air content, degree of saturation, density	
	'' -	22 01 19			Index, Bulk/Saturated/dry/submerged density, Interrelationship of	
					various soil parameters	
					1.1 Water Content	
3	W 3	29-07-19	03-08-19	4	1.2 Specific Gravity	
					1.3 Particle size distribution: Sieve analysis, wet mechanical	

#### **3rd Semester** Theory No: 2 Subject: Geotechnical Engineering (Th 02) Period Numbers of Week S1 No Classes to be Topics to be covered Remarks No To From Scheduled 1.1Classification of Soil W 4 05-08-19 10-08-19 4 1.2I.S. Classification, Plasticity chart 1.1 I.S. Classification, Plasticity chart 12th and 15th Aug'19 are 17-08-19 4 W 5 12-08-19 1.2 Concept of Permeability, Darcy's Law, Co-efficient of holiday 1.1 Factors affecting Permeability. 1.2 Constant head permeability and falling head permeability Test. W 6 19-08-19 24-08-19 4 23rd Aug'19 is Holiday 1.1 Seepage pressure, effective stress, phenomenon of quick sand 1.2 Compaction and Consolidation W 7 26-08-19 31-08-19 4 1.3 Compaction: Compaction, Light and heavy compaction Test, Optimum Moisture Consolidation: Consolidation, distinction between compaction and 2nd and 3rd Sept'19 are 4 W 8 02-09-19 07-09-19 consolidation. holiday 1.1 Terzaghi's model analogy of compression/ springs showing the process of consolidation – field implications 1.2 Shear Strength 9th and 14th Sept'19 are W 9 09-09-19 14-09-19 4 holiday 1.3 Concept of shear strength, Mohr- Coulomb failure theory, Cohesion, Angle of internal friction, strength envelope for different type of soil Measurement of shear strength 1.1Direct shear test, triaxial shear test, unconfined compression test 4 W 10 16-09-19 21-09-19 10 and vane-shear test Earth Pressure on Retaining Structures 1.1 Active earth pressure, Passive earth pressure, Earth pressure at rest. 28th Sept'19 is holiday 23-09-19 28-09-19 11 W 11 4 1.2 Use of Rankine's formula for the following cases (cohesion-less soil only) (i) Rackfill with no surcharge (ii) hackfill with uniform surcharge 1.1Water conservation, rain water harvesting, water shed management. 2nd and 5th Oct'19 is W 12 30-09-19 1.2 Resettlement and rehabilitation of people; its problems nd 05-10-19 4 holiday concern. 1.3 Environmental ethics: issue and possible solutions 1.1 Functions of foundations, shallow and deep foundation, different type of shallow and deep foundations with sketches. Types of failure W 13 14-10-19 19-10-19

(General shear, Local shear & punching shear)

	3rd Semester										
		The	ory No:	2							
		\$	Subject:	Geotechnical Engineering (Th 02)							
	Week No	Per	iod	Numbers of							
S1 No		From	То	Classes to be Scheduled	Topics to be covered	Remarks					
14	W 14	21-10-19	26-10-19	4	Bearing capacity of soil, bearing capacity of soils using Terzaghi's formulae & IS Code formulae for strip, Circular and square footings, Effect water table on bearing capacity of soil.						
15	W 15	28-10-19	31-10-19		Plate load test and standard penetration test						
Total	15			60							

### **3rd Semester**

Theory No: 1

Subject: STRUCTURAL MECHANICS (TH 01)

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	Week	Per	riod	Numbers of						
S1 No	No	From	То	Classes to be Scheduled	Topics to be covered	Remarks				
1	W 1	15-07-19	20-07-19	5	1.1 Basic Principle of Mechanics: Force, Moment, support conditions, Conditions of equilibrium, C.G & MI, Free body diagram 1.2 Review of CG and MI of different sections 2.1 Simple Stresses and Strains Introduction to stresses and strains: Mechanical properties of materials – Rigidity, Elasticity, Plasticity, Compressibility, Hardness, Toughness, Stiffness, Brittleness, Ductility, Malleability, Creep, Fatigue, Tenacity, Durability					
2	W 2	22-07-19	27-07-19	5	Types of stresses -Tensile, Compressive and Shear stresses, Types of strains - Tensile, Compressive and Shear strains, Complimentary shear stress - Diagonal tensile / compressive Stresses due to shear, Elongation and Contraction, Longitudinal and Lateral strains, Poisson's Ratio, Volumetric strain, computation of stress, strain, Poisson's ratio, change in dimensions and volume etc, Hooke's law - Elastic Constants, Derivation of relationship between the elastic					
3	W 3	29-07-19	03-08-19	5	2.2 Application of simple stress and strain in engineering field: Behaviour of ductile and brittle materials under direct loads, Stress Strain curve of a ductile material, Limit of proportionality, Elastic					

#### **3rd Semester** Theory No: 1 Subject: STRUCTURAL MECHANICS (TH 01) Period Numbers of Week S1 No Classes to be Topics to be covered Remarks No To From Scheduled 2.3 Complex stress and strain Principal stresses and strains: Occurrence of normal and tangential stresses, Concept of Principal stress and Principal Planes, major and minor principal stresses and their orientations, Mohr's Circle and its 5 05-08-19 W 4 10-08-19 application to solve problems of complex stresses Stresses In Beams and Shafts 3.1 Stresses in beams due to bending: Bending stress in beams -Theory of simple bending Assumptions – Moment of resistance – Equation for Flexure– 12th and 15th Aug'19 are 5 12-08-19 17-08-19 W 5 Flexural stress distribution – Curvature of beam – Position of N.A. holiday 3.3 Stresses in shafts due to torsion: Concept of torsion, basic assumptions of pure torsion, torsion of solid and hollow circular sections, polar moment of inertia, torsional shearing stresses, angle of twist, torsional rigidity, equation of torsion Combined bending and direct stresses: Combination of stresses, 5 23rd Aug'19 is Holiday W 6 19-08-19 24-08-19 Combined direct and bending stresses, Maximum and Minimum stresses in Sections, Conditions for no tension, Limit of eccentricity, Middle third/fourth rule, Core or Kern for square, rectangular and circular sections, chimneys, dams and retaining walls 4.1 Columns and Struts, Definition, Short and Long columns, End conditions, Equivalent length / Effective length, Slenderness ratio, Axially loaded short and long column, Euler's theory of long columns, Critical load for Columns with different end conditions Shear Force and Bending Moment W 7 26-08-19 31-08-19 5 5.1 Types of loads and beams: Types of Loads: Concentrated (or) Point load, Uniformly Distributed load (UDL), Types of Supports: Simple support, Roller support, Hinged support, Fixed support, Types of Reactions: Vertical reaction, Horizontal reaction, Moment reaction, Types of Beams based on support conditions: Calculation 2nd and 3rd Sept'19 are W 8 5 8 02-09-19 07-09-19 holiday of support reactions using equations of static equilibrium.

#### **3rd Semester** Theory No: 1 Subject: STRUCTURAL MECHANICS (TH 01) Period Numbers of Week S1 No Classes to be Topics to be covered Remarks No To From Scheduled 5.2 Shear force and bending moment in beams: Shear Force and Bending Moment: Signs Convention for S.F. and B.M, S.F and B.M of general cases of determinate beams with 9th and 14th Sept'19 are 9 W 9 09-09-19 14-09-19 5 concentrated loads and udl only, S.F and B.M diagrams for holiday Cantilevers, Simply supported beams and Over hanging beams, Position of maximum BM, Point of contra flexure, Relation between intensity of load S.F. and R.M. Slope and Deflection 6.1 Introduction: Shape and nature of elastic curve (deflection 5 W 10 16-09-19 21-09-19 curve); Relationship between slope, deflection and curvature (No derivation). Importance of slope and deflection. 6.2 Slope and deflection of cantilever and simply supported beams W 11 23-09-19 28-09-19 5 28th Sept'19 is holiday 11 under concentrated and uniformly distributed load (by Double Integration method. Macaulav's method). 7.1 Indeterminacy in beams, Principle of consistent 2nd and 5th Oct'19 is 5 12 W 12 30-09-19 05-10-19 holiday deformation/compatibility, Analysis of propped cantilever, fixed and two span continuous beams by principle of superposition, 5 SF and BM diagrams (point load and udl covering full span) 13 W 13 14-10-19 19-10-19 8.1 Introduction: Types of trusses, statically determinate and 5 14 W 14 21-10-19 26-10-19 indeterminate trusses, degree of indeterminacy, stable and unstable trusses, advantages of trusses. 8.2 Analysis of trusses: Analytical method ( Method of joints, method W 15 5 28-10-19 31-10-19 15 of Section) 15 **75 Total**

## 3rd Semester

# Theory No: 4

Subject: Estimating and Cost Evaluation(TH 04)

	Period Numbers of										
	Week	Per	riod	Numbers of							
S1 No	No	From	То	Classes to be Scheduled	Topics to be Covered	Remarks					
1	W 1	15-07-19	20-07-19	4	1.1 Types of estimates – Plinth area, floor area / carpet area.1.2 Units and modes of measurements as per IS 1200.1.3 Accuracy of measurement for different item of work.2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.						
2	W 2	22-07-19	27-07-19	4	2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.						
3	W 3	29-07-19	03-08-19	4	2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.						

#### **3rd Semester** Theory No: 4 Subject: Estimating and Cost Evaluation(TH 04) Period Numbers of Week S1 No Classes to be **Topics to be Covered** Remarks No To From Scheduled 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it W 4 05-08-19 10-08-19 4 4 including staircase and mumty room. 2.2 Detailed estimate of single storied flat roof building with shallow 12th and 15th Aug'19 are W 5 12-08-19 17-08-19 4 foundation and RCC roof slab with leak proof treatment over it 5 holiday including staircase and mumty room. 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it 19-08-19 W 6 24-08-19 4 23rd Aug'19 is Holiday including staircase and mumty room. 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it W 7 26-08-19 31-08-19 4 including staircase and mumty room. 2.2 Detailed estimate of single storied flat roof building with shallow 2nd and 3rd Sept'19 are foundation and RCC roof slab with leak proof treatment over it W 8 02-09-19 07-09-19 4 8 holiday including staircase and mumty room. 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, 9th and 14th Sept'19 are W 9 09-09-19 14-09-19 9 4 Painting of doors and windows etc. as per OPWD. holiday 3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions) 3.3 Abstract of cost of estimate. 3.4 Valuation- Value and cost, scrap value, salvage value, assessed W 10 16-09-19 21-09-19 4 10 value, sinking fund, depreciation and obsolesce, methods of valuation. 3.3 Abstract of cost of estimate. 3.4 Valuation- Value and cost, scrap value, salvage value, assessed 23-09-19 28th Sept'19 is holiday 28-09-19 W 11 value, sinking fund, depreciation and obsolesce, methods of valuation.

#### **3rd Semester** Theory No: 4 Subject: Estimating and Cost Evaluation(TH 04) Period Numbers of Week S1 No **Topics to be Covered** Classes to be Remarks No To From Scheduled 3.3 Abstract of cost of estimate. 3.4 Valuation- Value and cost, scrap value, salvage value, assessed 2nd and 5th Oct'19 is W 12 30-09-19 05-10-19 4 12 value, sinking fund, depreciation and obsolesce, methods of holiday valuation. 3.3 Abstract of cost of estimate. 3.4 Valuation- Value and cost, scrap value, salvage value, assessed 4 13 W 13 14-10-19 19-10-19 value, sinking fund, depreciation and obsolesce, methods of valuation. 3.4 Valuation- Value and cost, scrap value, salvage value, assessed value, sinking fund, depreciation and obsolesce, methods of valuation.4.1 Administrative set-up and hierarchy of Engineering W 14 21-10-19 26-10-19 4 department in State Govt./Central Govt./PSUs/Private Sectors etc. Duties and responsibilities of Engineers at different positions /levels .4.1 Administrative set-up and hierarchy of Engineering department in State Govt./Central Govt./PSUs/Private Sectors etc. Duties and W 15 28-10-19 31-10-19 4 15 responsibilities of Engineers at different positions /levels. 15 Total 60

### **3rd Semester**

# Theory No: 5

# Subject: Environmental Studies (TH-05)

	Subject. Environmental Studies (111-05)										
	Week	Per	riod	Numbers of							
S1 No	No	From	То	Classes to be Scheduled	Topics to be covered	Remarks					
1	W 1	15-07-19	20-07-19	4	1.1The Multidisciplinary nature of environmental studies Definition, scope and importance, Need for public awareness.						
2	W 2	22-07-19	27-07-19	4	1.1Natural Resources Renewable and non renewable resources: Natural resources and associated problems. Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining, dams and their effects on forests and tribal people.  1.2Natural resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.  1.3 Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.  1.4Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers-pesticides problems, water logging, salinity, .  1.5 Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies.  1.6 Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification.						
3	W 3	29-07-19	03-08-19	4	1.1Role of individual in conservation of natural resources.						

#### **3rd Semester Theory No:** 5 Subject: Environmental Studies (TH-05) Period Numbers of Week S1 No Classes to be Topics to be covered Remarks No To From Scheduled 1.1Equitable use of resources for sustainable life styles.Concept of an eco system. W 4 05-08-19 10-08-19 4 1.2Nature and function of an eco system. 4 1.3Producers, consumers, decomposers. 1 4Energy flow in the eco systems 1.1Ecological succession. 12th and 15th Aug'19 are 17-08-19 4 W 5 12-08-19 1.2 Food chains, food webs and ecological pyramids.1.3 holiday 1.1Forest ecosystem: 1.1 Aquatic eco systems (ponds, streams, lakes, rivers, oceans, 23rd Aug'19 is Holiday W 6 19-08-19 24-08-19 4 estuaries). Introduction-Definition: genetics, species and ecosystem diversity. 1.2 Geogeographically classification of India 1.Value of biodiversity: consumptive use, productive use, social 4 W 7 26-08-19 31-08-19 ethical, aesthetic and optin values. 1.1Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts. Definition Causes, effects and control measures of: 2nd and 3rd Sept'19 are 1.2 Air pollution. W 8 02-09-19 07-09-19 4 holiday 1.3 water pollution. 1.4 Soil pollution 1.1Marine pollution 9th and 14th Sept'19 are 9 W 9 09-09-19 14-09-19 4 holiday 1.2Noise pollution. 1.1Thermal pollution W 10 16-09-19 21-09-19 4 10 1.2Nuclear hazards. 1.1Solid waste Management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution. 28th Sept'19 is holiday 11 W 11 23-09-19 28-09-19 4 Disaster management: Floods, earth quake, cyclone and land slides. Form unsustainable to sustainable development. 1 Ollrhan problems related to energy 1.1Water conservation, rain water harvesting, water shed management. 2nd and 5th Oct'19 is W 12 30-09-19 05-10-19 12 4 1.2 Resettlement and rehabilitation of people; its problems nd holiday concern.

1 3Environmental ethics issue and possible solutions

					3rd Semester				
		The	ory No:	5					
		\$	Subject:	Environn	Environmental Studies (TH-05)				
	Week	Per	iod	Numbers of					
S1 No	No	From	То	Classes to be Scheduled	Topics to be covered	Remarks			
13	W 13	14-10-19	19-10-19	4	1.1Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. 1.2Air (prevention and control of pollution) Act. 1.3Water (prevention and control of pollution) Act. 1.4Public awareness				
14	W 14	21-10-19	26-10-19	4	1.1Water conservation, rain water harvesting, water shed management. Resettlement and rehabilitation of people; its problems nd concern.  1.2Environmental ethics: issue and possible solutions.				
15	W 15	28-10-19	31-10-19	4	1.1Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. 1.2Air (prevention and control of pollution) Act. 1.3Water (prevention and control of pollution) Act. 1.4Public awareness				
Total	15			60					

	Department of Civil Engineering									
					3rd Semester					
		Pr	actical:	1						
		5	Subject:	CE Lab I	(Pr. O1)					
	Week	Period		Numbers of						
S1 No	No	From	То	Classes to be Scheduled	Topics to be covered	Remarks				
1	W 1	15-07-19	20-07-19	6	Determination of Young's Modulus of steel in a tensile testing machine.					
2	W 2	22-07-19	27-07-19	6	Determination of fineness of Cement by sieving.					
3	W 3	29-07-19	03-08-19	6	Determination of normal Consistency,					

#### **3rd Semester** Practical: 1 Subject: CE Lab I (Pr. 01) Period Numbers of Week S1 No Topics to be covered Classes to be Remarks No To From Scheduled 05-08-19 initial and final setting time of Cement W 4 10-08-19 6 Determination of soundness of Cement by Le-Chatelier apparatus. 12th and 15th Aug'19 are 17-08-19 6 W 5 12-08-19 holiday Determination of Compressive Strength of cement. 19-08-19 24-08-19 23rd Aug'19 is Holiday W 6 6 6 Determination of Compressive Strength of Burnt clay, Fly Ash Bricks 26-08-19 31-08-19 6 W 7 and Blocks. Grading of Fine & Coarse aggregate by sieving for concrete. 2nd and 3rd Sept'19 are 02-09-19 07-09-19 6 W 8 holiday Determination of Specific Gravity and Bulking of sand. 9th and 14th Sept'19 are 09-09-19 14-09-19 6 W 9 holiday Determination of Specific Gravity and Bulk density of coarse W 10 16-09-19 21-09-19 6 aggregate. 23-09-19 28th Sept'19 is holiday Grading of Road Aggregates. W 11 28-09-19 11 6 2nd and 5th Oct'19 is Determination of Crushing Value Test of aggregates. 30-09-19 W 12 05-10-19 6 12 holiday 14-10-19 19-10-19 Impact test of aggregate. 13 W 13 6 Determination of Compressive Strength of concrete cubes. W 14 21-10-19 26-10-19 14 6

b) Compaction Factor method.

W 15

15

28-10-19

15

Total

31-10-19

6

90

Determination of Workability of concrete by: a) Slump Cone method,

### **3rd Semester**

# Practical: 2

# Subject: CIVIL ENGINEERING DRAWING-I

	Week No	Per	riod	Numbers of						
S1 No		From	То	Classes to be Scheduled	Topics to be covered	Remarks				
1	W 1	15-07-19	20-07-19	5	1.1 Recap of the Draw, Format, Edit, Dimension, Modify commands 1.2 Draw 2D drawings of the following Building Components - Doors, Windows, Cross section through wall, Spread footing, Column footing, Stairs case, R.C.C. T-beam and slab					
2	W 2	22-07-19	27-07-19	5	1.1 Recap of the Draw, Format, Edit, Dimension, Modify commands 1.2 Draw 2D drawings of the following Building Components - Doors, Windows, Cross section through wall, Spread footing, Column footing, Stairs case, R.C.C. T-beam and slab					
3	W 3	29-07-19	03-08-19	5	1.3 Develop Isometric drawings of simple objects 1.4 Develop 3D drawings of simple objects.					

#### **3rd Semester** Practical: 2 Subject: CIVIL ENGINEERING DRAWING-I Period Numbers of Week S1 No Topics to be covered Classes to be Remarks No To From Scheduled 1.3 Develop Isometric drawings of simple objects W 4 05-08-19 10-08-19 5 4 1.4 Develop 3D drawings of simple objects. 1.3 Develop Isometric drawings of simple objects 12th and 15th Aug'19 are 5 12-08-19 17-08-19 W 5 1.4 Develop 3D drawings of simple objects. holiday 2.1 Plan at window sill level of a single storeyed R.C. roof slab building with elevation and sectional views form given line diagram and specification. 2.2 Detail drawing of Double storeyed pucca building with R.C.C. stair case 23rd Aug'19 is Holiday W 6 19-08-19 24-08-19 5 6 from line diagram and given specification. 2.3 Preparation of approval drawing of a residential building as per the norms of local approving authority with site plan, index plan etc. 5 W 7 26-08-19 31-08-19 2.3 Preparation of approval drawing of a residential building as per the norms 2nd and 3rd Sept'19 are 02-09-19 07-09-19 5 8 W 8 of local approving authority with site plan, index plan etc. holiday 2.3 Preparation of approval drawing of a residential building as per the norms 9th and 14th Sept'19 are 9 W 9 09-09-19 14-09-19 5 of local approving authority with site plan, index plan etc. holiday 2.3 Preparation of approval drawing of a residential building as per the norms W 10 16-09-19 21-09-19 5 10 of local approving authority with site plan, index plan etc. Detail drawing of inclined roof building from given line diagram and 23-09-19 28-09-19 5 28th Sept'19 is holiday W 11 11 specification. (gabbled / hipped) Detail drawing of inclined roof building from given line diagram and 2nd and 5th Oct'19 is W 12 30-09-19 05-10-19 5 12 specification. (gabbled / hipped) holiday 4.1 Planning of buildings for specific cost based on approximate plinth area W 13 14-10-19 19-10-19 5 13 4.2 Orientation of buildings, location of openings and living areas. W 14 21-10-19 26-10-19 5 14 4.3 Line plan of School, hostel, market complex and dispensary building. 5 15 W 15 28-10-19 31-10-19 **75 Total** 15

	Department of Civil Engineering  3rd Semester										
		Pr	actical:	3							
		\$	Subject:	<b>ESTIMAT</b>	ESTIMATING PRACTICE						
O1 N	Week No	Period		Numbers of	PD 1 1						
S1 No		From	То	Classes to be Scheduled	Topics to be covered	Remarks					
1	W 1	15-07-19	20-07-19	3	1.0 Preparation of plinth area estimate & detailed estimate for the following ;						
2	W 2	22-07-19	27-07-19	3	1.0 Preparation of plinth area estimate & detailed estimate for the following ;						
3	W 3	29-07-19	03-08-19	3	1.1 Single storeyed two roomed building with specification as per Orissa P.W.D. schedule of rates and analysis of rates						

#### **3rd Semester** Practical: 3 **Subject: ESTIMATING PRACTICE** Period Numbers of Week Topics to be covered S1 No Classes to be Remarks No To From Scheduled W 4 05-08-19 10-08-19 3 1.1 Single storeyed two roomed building with specification as per Orissa P.W.D. schedule of rates and analysis of rates 1.2 A two storeyed pucca Building with specification as per Orissa 12th and 15th Aug'19 are W 5 12-08-19 17-08-19 3 P.W.D. schedule of rates and analysis of rates holiday 1.2 A two storeyed pucca Building with specification as per Orissa 19-08-19 3 23rd Aug'19 is Holiday W 6 24-08-19 P.W.D. schedule of rates and analysis of rates 1.2 A two storeyed pucca Building with specification as per Orissa W 7 26-08-19 3 31-08-19 P.W.D. schedule of rates and analysis of rates 2.0 Analysis of rates in detail for the above items of works basing on 2nd and 3rd Sept'19 are 07-09-19 W 8 02-09-19 3 Orissa Govt. analysis of rate with help of MS Excel software. 8 holiday 2.0 Analysis of rates in detail for the above items of works basing on 9th and 14th Sept'19 are 9 W 9 09-09-19 14-09-19 3 Orissa Govt. analysis of rate with help of MS Excel software. holiday 2.0 Analysis of rates in detail for the above items of works basing on W 10 16-09-19 21-09-19 3 Orissa Govt. analysis of rate with help of MS Excel software. 10 3.0 Calculation of dry materials for different items of building basing 3 on Orissa Govt. analysis of rate with help of MS Excel software 28th Sept'19 is holiday W 11 23-09-19 28-09-19 11 3.0 Calculation of dry materials for different items of building basing 2nd and 5th Oct'19 is 30-09-19 W 12 05-10-19 3 on Orissa Govt. analysis of rate with help of MS Excel software 12 holiday 3.0 Calculation of dry materials for different items of building basing W 13 on Orissa Govt. analysis of rate with help of MS Excel software 14-10-19 19-10-19 3 13 4.0 Preparation of abstract of cost and bill of quantities of the 3 W 14 21-10-19 26-10-19 estimates as per item no. 1.0 above with help of MS Excel software 14 4.0 Preparation of abstract of cost and bill of quantities of the W 15 28-10-19 31-10-19 3 15 estimates as per item no. 1.0 above with help of MS Excel software 15 **Total** 45