**Lesson Plan for the 7th semester started w.e.f. 1st August, 2019**

**Name of Institute : JMIETI Radaur**

**Name of teacher with designation : Amit Raheja (A.P)**

**Department : Civil Engg.**

**Subject : Design of Concrete Structure-II**

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| **Objective- Students will acquire the knowledge about the design of concrete structures like Beam, Slabs, Stair case, Water Tanks and Building Frames** |

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| **Month** | **Class** | **Topic/Chapter covered** | **Academic activity** | **Test/Assignment** |
| August | 7th Sem | Introduction to Design of Concrete Structure-II | Lecture |  |
| August | 7th Sem | IS code 456:2000 | Lecture |  |
| August | 7th Sem | Moment of inertia, settlements, Modification of moments | Lecture |  |
| August | 7th Sem | Maximum moments and shear, beams curved in plan-analysis for torsion | Lecture |  |
| August | 7th Sem | Redistribution of moments for single | Lecture |  |
| August | 7th Sem | Redistribution of moments for multi span beams | Lecture |  |
| August | 7th Sem | Design examples of Continous beams | Lecture |  |
| August | 7th Sem | Basic principles of Prestressed beam | Lecture | Assignment |
| August | 7th Sem | Classification of prestressed members, various prestressing systyems | Lecture |  |
| August | 7th Sem | Losses in prestress and various classifications of losses in prestress | Lecture |  |
| August | 7th Sem | Initial and final stress conditions, analysis and design of sections for flexure and shear | Lecture |  |
|  August | 7th Sem | Load balancing concept, I:S:Specifications | Lecture |  |
| September | 7th Sem | End blocks-Analysis of stresses | Lecture |  |
| September | 7th Sem | Analysis of stresses by Magnel's method, Guyon's method | Lecture |  |
| September | 7th Sem | Bursting and spalling stresses, design examples | Lecture |  |
| September | 7th Sem | Introduction and assumptions of Flat Slab | Lecture |  |
| September | 7th Sem | General design considerationsof flat slab | Lecture |  |
| September | 7th Sem | Approximate direct design method | Lecture | Assignment |
| September | 7th Sem | Step by step design procedure of flat slab | Lecture |  |
| September | 7th Sem | Design numerical of Flat slab | Lecture |  |
| September | 7th Sem | Opening in flat slab | Lecture |  |
| September | 7th Sem | Introduction of strair cases | Lecture |  |
| September | 7th Sem | Design of various types of staircases | Lecture |  |
| September | 7th Sem | Examples of stair cases | Lecture |  |
| October | 7th Sem | Examples of stair cases | Lecture | Assignment |
| October | 7th Sem | Foundations**,** Combined footings, raft foundation | Lecture |  |
| October | 7th Sem | Design of pile cap and piles | Lecture |  |
| October | 7th Sem | Under-reamed piles, design examples | Lecture |  |
| October | 7th Sem | Estimation of Wind and earthquake forces | Lecture |  |
| October | 7th Sem | Design requirements | Lecture |  |
| October | 7th Sem | Rectangular and Cylindrical underground water tanks | Lecture |  |
| October | 7th Sem | Design of overhead tanks | Lecture |  |
| October | 7th Sem | Design considerations of Intze tanks | Lecture |  |
| October | 7th Sem | Various theories of Silos and Bunkers | Lecture |  |
| October | 7th Sem | Bunkers with sloping bottoms and with high side walls | Lecture |  |
| October | 7th Sem | Step by Step Design procedure of Silos | Lecture |  |
| November  | 7th Sem | Design consideration of Bunkers and numerical problems | Lecture |  |
| November  | 7th Sem | Step by Step Design procedure of Silos  | Lecture |  |
| November | 7th Sem | Design examples of Silos | Lecture |  |
| November | 7th Sem | Introduction of Building frames | Lecture |  |
| November | 7th Sem | Member stiffnesses, Loads | Lecture |  |
| November | 7th Sem | Analysis for vertical and lateral loads by Portal Method | Lecture |  |
| November | 7th Sem | Numerical problems by Portal Method | Lecture |  |
| November | 7th Sem | Analysis for vertical and lateral loads by Cantilever Method | Lecture |  |
| November | 7th Sem | Numerical problems by Cantilever Method | Lecture |  |
| November | 7th Sem | Torsion in buildings,Design consideration for Ductility of beam, detailing for ductility | Lecture |  |
| November | 7th Sem | Basic assumptions of Yield Line theory, Methods of analysis, yield line patterns and failure mechanisms | Lecture |  |
| November | 7th Sem | Analysis of one way and two way rectangular and non-rectangular slabs | Lecture |  |

Course Outcomes

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| 1.Students will be able to study behavior in the Beam and Prestressed concrete –moments,shear and design of beam.  |

 2. Students will be able to design different types of Slabs,Stair case and Foundations

3 Students will be able to design of Water tanks, Silos and Bunkers.

4.Students will be able to analyze the frames structures

**Lesson Plan for the 7th semester started w.e.f. 1st August, 2019**

Name of Institute : JMIETI Radaur

Name of teacher with designation : Gaurav Dhiman(A.P)

Department : Civil Engg.

Subject : Irrigation -II

Objective- To Impart knowledge irrigation water requirement and ability to understand the hydraulic structures.

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| **Month** | **Class** | **Topic/Chapter covered** | **Academic activity** | **Test/Assignment** |
| August | 7th Sem | Regulation works: Canal falls-necessity and location,  | Lecture |  |
| August | 7th Sem | Development of falls, design of cistern element, | Lecture |  |
| August | 7th Sem | Roughening devices | Lecture |  |
| August | 7th Sem | Design of Sarda type fall | Lecture |  |
| August | 7th Sem | Design of straight Glacis fall | Lecture |  |
| August | 7th Sem | Off-take alignment, | Lecture |  |
| August | 7th Sem | Cross-regulator and distributory | Lecture |  |
| August | 7th Sem | Head regulators, devices | Lecture |  |
| August | 7th Sem | Cross drainage works: Classification and their selection | Lecture |  |
| August | 7th Sem | Hydraulic design aspects of aqueducts, syphon aqueducts | Lecture |  |
| August | 7th Sem | Super passage, canal syphon and level crossing, design of transitions | Lecture |  |
|  August | 7th Sem | Diversion canal headworks | Lecture |  |
| September | 7th Sem | Various components and their functions, | Lecture |  |
| September | 7th Sem | Layout plan, selection of site for diversion headworks | Lecture |  |
| September | 7th Sem | Bligh's creep theory, Khosla's method of independent variables | Lecture |  |
| September | 7th Sem | Use of Khosla's curves | Lecture |  |
| September | 7th Sem | Various corrections, silt excluders. | Lecture |  |
| September | 7th Sem | Dams-Types of dam | Lecture |  |
| September | 7th Sem | Selection of a site | Lecture |  |
| September | 7th Sem | Gravity dam-two dimensional design, forces acting | Lecture |  |
| September | 7th Sem | Stability criterion, elementary profile of a dam | Lecture |  |
| September | 7th Sem | Cutoffs and drainage galleries | Lecture |  |
| September | 7th Sem | Arch dams-constant angle  | Lecture |  |
| September | 7th Sem | Constant radius arch dam | Lecture |  |
| October | 7th Sem | Simple design most economical angle | Lecture |  |
| October | 7th Sem | Sketch most economical angle | Lecture |  |
| October | 7th Sem | Earth dam | Lecture |  |
| October | 7th Sem | Design principles, | Lecture |  |
| October | 7th Sem | Seepage through earth dams | Lecture |  |
| October | 7th Sem | Seepage line, control of seepage, | Lecture |  |
| October | 7th Sem | Design of filters. | Lecture |  |
| October | 7th Sem | Essential requirements of spillway | Lecture |  |
| October | 7th Sem | Spillway's capacity | Lecture |  |
| October | 7th Sem | Types of spillways | Lecture |  |
| October | 7th Sem | Spillways and their suitability | Lecture |  |
| October | 7th Sem | Ogee spillways, | Lecture |  |
| November  | 7th Sem | Chute spillways, | Lecture |  |
| November  | 7th Sem | Side channel | Lecture |  |
| November | 7th Sem | Shaft and syphon spillways | Lecture |  |
| November | 7th Sem | Energy dissipation below spillways | Lecture |  |
| November | 7th Sem | Stilling basins | Lecture |  |
| November | 7th Sem | USBR and I.S. Stilling Basins | Lecture |  |

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**Lesson Plan for the 7th semester started w.e.f. 1st August, 2019**

Name of Teacher: Sandeep Singh charak

Designation: Assistant Professor

Subject code: **CE-405N**

***Course Objective:*** *The study of safe and optimum geometric design of highways and fundamental*

 *parameters of highway materials*

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| **Month** | **Class** | **Topic/ Chapter covered** | **Academic activity** | **Test/ assignment** |
| Aug | 7th sem | Introduction to transportation engg | Teaching |  |
| Aug | 7th sem | ***Design of Flexible Pavements:*** *Types of pavements.* | Teaching |  |
| Aug | 7th sem | *Flexible and rigid pavements* | Teaching | Assignment |
| Aug | 7th sem | *Components of a pavement and their functions.* | Teaching |  |
| Aug | 7th sem | *Factors affecting design of pavements* | Teaching |  |
| Aug | 7th sem | *Design of thickness of a flexible pavement by Group Index method* | Teaching |  |
| Aug | 7th sem | Numerical on GI method | Teaching |  |
| Aug | 7th sem | *Design of thickness of a flexible pavement CBR method (including latest IRC guidelines),* | Teaching |  |
| Aug | 7th sem | *Tri axial method and Burmister’s method* | Teaching |  |
| Aug | 7th sem | ***Design Of Rigid Pavements:***  | Teaching |  |
| Aug | 7th sem | *Westergaard’s theory, critical locations of loading* | Teaching |  |
| Aug | 7th sem | *load and temperature stresses* | Teaching |  |
| Sep | 7th sem | *Critical combination of stresses.*  | Teaching | Assignment |
| Sep | 7th sem | *IRC guidelines for determination of thickness of a rigid pavement.*  | Teaching |  |
| Sep | 7th sem |  *Joints requirements, types, patterns.*  | Teaching |  |
| Sep | 7th sem | *Spacing of expansion and contraction joints.*  | Teaching |  |
| Sep | 7th sem | *Functions of dowel and tie bars* | Teaching | Test |
| Sep | 7th sem | ***Highway Construction : Non-Bituminous Pavements*** | Teaching |  |
| Sep | 7th sem | *Brief introduction to earthwork machinery: shovel, hoe, clamshell, dragline, bulldozers. Principles of field compaction of subgrade.*  | Teaching |  |
| Sep | 7th sem | *Compacting equipments. Granular roads.*  | Teaching |  |
| Sep | 7th sem | *WMM. Construction of cement concrete pavements.*  | Teaching |  |
| Sep | 7th sem | *Slip-form pavers.*  | Teaching | Assignment  |
| Sep | 7th sem | *Basic concepts of the following: soil stabilized roads,*  | Teaching |  |
| Sep | 7th sem | *use of geo-synthetics, reinforced cement concrete pavements* | Teaching |  |
| Sep | 7th sem | *prestress concrete pavements, roller compacted concrete pavements and*  | Teaching |  |
| Sep | 7th sem | *fibre reinforced concrete pavements* | Teaching |  |
| Sep | 7th sem | ***Highway Maintenance:*** *Pavement failures.*  | Teaching |  |
| Sep | 7th sem | *Maintenance operations.*  | Teaching | Assignment |
| Sep | 7th sem | *Maintenance of WBM, bituminous surfaces and cement concrete pavements.*  | Teaching |  |
| Sep | 7th sem | *Pavement evaluation..*  | Teaching |  |
| Sep | 7th sem | *Introduction to various types of overlays.****:***  | Teaching |  |
| Sep | 7th sem | *Surface drainage: types, brief design. Types of sub-surface drainage.*  | Teaching |  |
| Sep | 7th sem | *Special characteristics of hill roads: geometrics, ,*  | Teaching |  |
| Oct | 7th sem | *construction of hill roads, drainage of hill roads,*  | Teaching |  |
| Oct | 7th sem | *maintenance problems of hill roads*  | Teaching |  |
| Oct | 7th sem | *Benkleman beam* | Teaching |  |
| Oct | 7th sem | ***Highway Drainage and Hill Roads*** | Teaching | Assignment |
| Oct | 7th sem | *hair pin bends* | Teaching |  |
| Oct | 7th sem | *Special characteristics of hill roads: geometrics* | Teaching |  |

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| Oct | 7th Sem. | ***Construction of Bituminous Pavements:***  | Teaching |  |
| Oct | 7th Sem. | *Various types of bituminous constructions.*  | Teaching |  |
| Oct | 7th Sem. | *Prime coat, tack coat, seal coat and surface dressing.*  | Teaching |  |
| Oct | 7th Sem. | *Construction of BUSG,*  | Teaching |  |
| Oct | 7th Sem. | *Premix carpet* | Teaching |  |
| Oct | 7th Sem. | *BM, DBM and AC.*  | Teaching | Test |
| Oct | 7th Sem. | *Brief coverage of machinery for costruction of bituminous roads* | Teaching |  |
| Oct | 7th Sem. | *bitumen boiler, sprayer, pressure distributer,*  | Teaching | Assignment 1 |
| Oct | 7th Sem. | *Introduction hot-mix plant,* | Teaching |  |
| Oct | 7th Sem. | *Introduction and brief of cold-mix plant,*  | Teaching |  |
| Oct | 7th Sem. | *tipper trucks and other equipments*  | Teaching |  |
| Oct | 7th Sem. | *mechanical paver or finisher,*  | Teaching |  |
| Oct | 7th Sem. | *rollers. Mastic asphalt.*  | Teaching |  |
| Oct | 7th Sem. | *Introduction to various IRC and MORTH specifications* | Teaching |  |
| Nov  | 7th Sem. | ***Highway Economics and Finance:***  | Teaching |  |
| Nov | 7th Sem. | *Need of economic evaluation* | Teaching | Assignment 2 |
| Nov | 7th Sem. | *Highway user benefits and costs.*  | Teaching |  |
| Nov | 7th Sem. | *Methods of economic evaluation:.* | Teaching |  |
| Nov | 7th Sem. | *benefit cost ratio method,*  | Teaching |  |
| Nov | 7th Sem. | *net present value method,*  | Teaching |  |
| Nov | 7th Sem. | *internal rate of return method,*  | Teaching |  |
| Nov | 7th Sem. | *Comparison of different type of analysis* | Teaching |  |
| Nov | 7th Sem. | *Highway finance* | Teaching |  |
| Nov | 7th Sem. | Introduction to Tunnels | Teaching | Assignment 3 |
| Nov | 7th Sem. | *Sections of tunnels:*  | Teaching |  |
| Nov | 7th Sem. | *advantages, limitations and suitability of each section.*  | Teaching | Test |
| Nov | 7th Sem. | *Shaft. Pilot tunnel.*  | Teaching |  |
| Nov | 7th Sem. | *Driving tunnel in rocks:*  | Teaching |  |
| Nov | 7th Sem. | *sequence of construction operations,*  | Teaching | Assignment 4  |
| Nov | 7th Sem. | *full face method.* | Teaching |  |

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**JMIETI, Radaur**

Lesson Plan of **Sewerage and sewerage Treatment**

Deptt.Civil Engineering Semester w.e.f July 2019

Name of Teacher : Saurabh Jain

Designation : Assistant Professor

Subject with code :CE-407N

Objective of Course : 1.To study different methods of Collection of Sewage

 2.To study different Treatment methods of Sewage

 3.To study of Sewage Disposalmethods

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| **Week & Month** | **Topic / Chapter Covered** | **Academic Activity** | **Test/Assignment** |
| **Aug** | Introduction to sewerage and sewage treatment | **Lecture**  |  |
| **Aug** | Collection of sewage | **Lecture**  |  |
| **Aug** | Importance of sanitation | **Lecture**  |  |
| **Aug** | Systems of sewerage – separate, combined and partially separate | **Lecture**  |  |
| **Aug** | Quantity of sanitary sewage and variations | **Lecture**  |  |
| **Aug** | Shapes of sewer – circular and egg shaped | **Lecture**  |  |
| **Aug** | Design of sewers | **Lecture**  | **Assignments**  |
| **Aug** | Self-cleansing velocity and slopes | **Lecture**  |  |
| **Aug** | Construction and testing of sewer lines | **Lecture**  |  |
| **Aug** | Sewer materials. joints and appurtenances | **Lecture**  | **Sessional/Test** |
| **Aug** | Sewage Characterization: Quality parameters- BOD, COD | **Lecture**  |  |
| **Aug** | Solids, D.O., Oil & Grease | **Lecture**  |  |
|  **Sep** | Indian Standards for disposal of effluents into inland surface sources and on land | **Lecture**  |  |
| **Sep** | Sewage Treatment: Objectives, sequence and efficiencies of conventional treatment units | **Lecture**  | **Assignments** |
| **Sep** | Preliminary treatment: screening  | **Lecture**  |  |
| **Sep** | Grit removal units | **Lecture**  |  |
| **Sep** | Theory and design aspects of primary treatment | **Lecture**  | **Sessional/ Test** |
| **Sep** | Primary treatment | **Lecture**  |  |
| **Sep** | Primary treatment | **Lecture**  |  |
| **Sep** | Secondary Treatment | **Lecture**  |  |
| **Sep** | Activated Sludge Process & its modifications | **Lecture**  | **Assignments** |
| **Sep** | Tricking filter | **Lecture**  |  |
| **Oct** | Sludge digestion | **Lecture**  |  |
| **Oct** | Drying beds | **Lecture**  |  |
| **Oct** | Stabilization pond | **Lecture**  |  |
| **Oct** | Aerated lagoon | **Lecture**  |  |
| **Oct** | UASB process | **Lecture**  |  |
| **Oct** | Septic tank | **Lecture**  | **Assignments** |
| **Nov** | Imhoff tank | **Lecture**  |  |
| **Nov** | Disposal of Sewage | **Lecture**  |  |
| **Nov** | Disposal of sewage by dilution | **Lecture**  | **Sessional/ Test** |
| **Nov** | Self-purification of streams | **Lecture**  |  |
| **Nov** | Sewage disposal by irrigation  | **Lecture**  |  |
| **Nov** | Sewage treatment | **Lecture**  |  |

Outcome of Course:

1. Students will study the importance of sanitation and sewer design
2. Students will study the physical, chemical and bacteriological properties of Sewage
3. Students will study the methods of treatment of Sewage
4. Students will study the methods of safe Sewage disposal1.

**Lesson Planning for the 7th semester started w.e.f. 1st August, 2019**

Name of Institute : JMIETI, Radaur

Name of teacher with designation : Rajesh Sagwal ( A.P)

Department : Civil Engg.

Subject : Hydro Electric Power Development(CE-413 N)

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| **Month** | Class | **Topic/ Chapter covered** | **Academic activity** | **Test/ assignment** |
| August | 7th Sem. | Introduction: Sources of power, estimation of water power | Teaching |  |
| August | 7th Sem. | Necessity and importance of harnessing small hydro power | Teaching |  |
| August | 7th Sem. | Flow duration and power duration curves and their impact on hydro plant | Teaching |  |
| August | 7th Sem. | Load curve, load factors, capacity factors | Teaching |  |
| August | 7th Sem. | Utilization factors, firm and secondary power | Teaching | Assignment |
| August | 7th Sem. | Types of Hydro Power Plants, Elements of Hydro power, classification of hydro-power plants | Teaching |  |
| August | 7th Sem. | Run-of-river plants, storage plants diversion canal development, | Teaching |   |
| August | 7th Sem. | Pumped storage plants, tidal power plants | Teaching |  |
| August | 7th Sem. | Base load and peak load plants in a power grid.  | Teaching | Assignment |
| August | 7th Sem. | Intakes: Intake structures, functions and their types | Teaching |  |
| September | 7th Sem. | Components of intakes-forebay, trash racks, | Teaching |  |
| September | 7th Sem. | Gates and valves, force required to operate gates. | Teaching |  |
| September | 7th Sem. | Conveyance System: Penstocks, design criterion, | Teaching |  |
| September | 7th Sem. | Economical diameter anchor blocks, cradles and footings Intakes: Intake structures, functions and their types | Teaching |  |
| September | 7th Sem. | Run-of-river plants, storage plants diversion canal development, | Teaching |  |
| September | 7th Sem. | Water hammer, instantaneous closure of power canal | Teaching |  |
| September | 7th Sem. | Surge tank, surges in canals,types of surge, maintenance power | Teaching |  |
| September | 7th Sem. |  Elements of Hydro power, classification of hydro-power plants, run-of-river plants, storage plants | Teaching |  |
| September | 7th Sem. | Diversion canal development | Teaching |  |
| September | 7th Sem. | Turbines and their structural features | Teaching |  |
| September | 7th Sem. | Types of turbines, their utilization | Teaching | Assignment |
| October | 7th Sem. |  Specific speed and classification of turbines | Teaching |  |
| October | 7th Sem. | Synchronous speed, scroll casing | Teaching |  |
| October | 7th Sem. | Flumes and draft tubes | Teaching |  |
| October | 7th Sem. | Fimensions of scroll sassing and draft tubes | Teaching |  |
| October | 7th Sem. | Setting of turbines | Teaching |  |
| October | 7th Sem. | Cradles and footings Intakes: Intake structures | Teaching |  |
| October | 7th Sem. | Types of Hydro Power Plants: Elements of Hydro power, classification of hydro-power plants, run-of-river plants, storage plants diversion canal development, pumped storage plants, tidal power plants, base load and peak load | Teaching | Assignment |
| October | 7th Sem. | Power House: General layout and its application | Teaching |  |
| October | 7th Sem. | Arrangements of hydro-power number and size of units | Teaching |  |
| November | 7th Sem. | Utilization factors, firm and secondary power | Teaching |  |
| November | 7th Sem. | Specific speed and classification of turbines | Teaching |  |
| November | 7th Sem. | Sub-structure of the power plant and its measurement | Teaching |  |
| November | 7th Sem. | Spacing of super-structure, its limitation and consumption | Teaching |  |
| November | 7th Sem. | Snderground power stations and its construction | Teaching |  |
| November | 7th Sem. | Sources of power, classification based on natural resources  | Teaching |  |
| November | 7th Sem. | Advantages and disadvantages of the hydro power plant | Teaching |  |
| November | 7th Sem. | Uses of hydro power plant in modern system, underground power stations and its construction, Sources of power, classification based on natural resources | Teaching | Assignment |
| November | 7th Sem. | tidal power and its uses and application | Teaching |  |

**Lesson Planning for the 7th semester started w.e.f. 1st August, 2019**

Name of Institute : JMIETI Radaur

Name of teacher with designation : MEGHAV GUPTA ( A.P)

Department : Civil Engg.

Subject : Estimation and Accounts

Subject code : CE 439 N

Course Objective : The aim of study is to get knowledge about estimation of different civil works.

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| **Month** | **Class** | **Topic/Chapter covered** | **Academic activity** | **Test/Assignment** |
| August | 7th Sem | Estimate, Principles of estimation | Lecture |  |
| August | 7th Sem | Units of measurement , Units of payment | Lecture |  |
| August | 7th Sem | Items of work | Lecture |  |
| August | 7th Sem | Different kinds of estimates | Lecture |  |
| August | 7th Sem | Different methods of estimation | Lecture |  |
| August | 7th Sem | Estimation of materials in single room building, | Lecture |  |
| August | 7th Sem | Two roomed building with different sections of walls | Lecture |  |
| August | 7th Sem | Numerical based on I,T,E section  | Lecture |  |
| August | 7th Sem | Foundation, floors and roofs, R.B. and R.VC.C. works | Lecture |  |
| August | 7th Sem | Plastering, White-washing | Lecture |  |
| August | 7th Sem | Distempering and painting, doors and windows, | Lecture |  |
|  August | 7th Sem | Estimates of canals, roads  | Lecture |  |
| September | 7th Sem | Numerical based on Canal and road work | Lecture |  |
| September | 7th Sem | Specification, Necessity of specifications | Lecture |  |
| September | 7th Sem | Types of specifications, general specifications | Lecture |  |
| September | 7th Sem | Specification for bricks, cement, sand, | Lecture |  |
| September | 7th Sem | Specification or fwater, lime, reinforcement | Lecture |  |
| September | 7th Sem | Detailed specifications for Earthwork, | Lecture |  |
| September | 7th Sem | Cement, concrete, brick work, floorings, | Lecture |  |
| September | 7th Sem | D.P.C., R.C.C., cement plastering,  | Lecture |  |
| September | 7th Sem | Distempering, painting | Lecture |  |
| September | 7th Sem | White and colour washing | Lecture |  |
| September | 7th Sem | Rate analysis-Purpose, importance and requirements of rate analysis | Lecture |  |
| September | 7th Sem | Preparation of rate analysis, procedure of rate analysis | Lecture |  |
| October | 7th Sem | Rate analysis for- Earthwork, concrete works, R.C.C. works, reinforced brick work, | Lecture |  |
| October | 7th Sem | Rate analysis for- plastering, painting, finishing(white-washing, distempering). | Lecture |  |
| October | 7th Sem | Numerical based on Rate analysis  | Lecture |  |
| October | 7th Sem | Public Works Account -Function of P.W. department | Lecture |  |
| October | 7th Sem | Contract and guidelines,  | Lecture |  |
| October | 7th Sem | Tender and acceptance of tender,  | Lecture |  |
| October | 7th Sem | Retention money, performance guarantee,  | Lecture |  |
| October | 7th Sem | Secured advance, Mobilization advance,  | Lecture |  |
| October | 7th Sem | Examination and payment of bills,  | Lecture |  |
| October | 7th Sem | First and final bills, Measurement book, cash book | Lecture |  |
| October | 7th Sem | Maintenance of muster ROLL precaution filling preparation of pay bill, | Lecture |  |
| October | 7th Sem | Measurement of book for payment of contractors, | Lecture |  |
| November  | 7th Sem | Different types of payment, first & final, | Lecture |  |
| November  | 7th Sem | types of contracts, their advantages and disadvantages | Lecture |  |
| November | 7th Sem | Earnest money, security money,  | Lecture |  |
| November | 7th Sem | Administrative sanction, technical sanction | Lecture |  |
| November | 7th Sem | Payment of Contractors | Lecture |  |
| November | 7th Sem | Running advance and final payment | Lecture |  |

Course Outcomes –

1. Students will study the different methods of estimation

2. Students will study about different types of specification used in civil works

3. Students will study about rate analysis of different items

4. Students will study the terms used in civil works and public works accounts