

**LESSION PLANS FOR**  
**A.Y: 2023-24**  
**SEM – II**

**LESSON PLAN for CONSTRUCTION MATERIALS AND CONCRETE  
TECHNOLOGY, 2023-24, I/II, Civil-B. Dr. V. SOWJANYA VANI**


| Contact Hour<br>(Cumulative) | Unit No. | Topic   | Teaching Methodology | Remarks                  |
|------------------------------|----------|---|----------------------|--------------------------|
| 1                            | I        | Classification of stones  | PPT                  |                          |
| 2                            | I        | Stone quarrying -precautions in blasting, dressing of stone                         | PPT                  |                          |
| 3                            | I        | Bricks: composition of good brick earth, various methods of manufacturing of bricks | PPT                  |                          |
| 4                            | I        | Characteristics of good brick   | PPT                  |                          |
| 5                            | I        | Timber: Classification of various types of woods used in buildings                  | PPT                  |                          |
| 6                            | I        | Defects in timber   | PPT                  |                          |
| 7                            | I        | Alternative materials for wood and Aggregates: Classification                       | PPT                  |                          |
| 8                            | I        | Alternative materials for wood and Aggregates: Classification                       | PPT                  |                          |
| 9                            | I        | properties and selection criteria   | PPT                  |                          |
| 10                           | I        | Cement-Types of cement  | PPT                  |                          |
| 11                           | I        | Composition and Properties  | PPT                  |                          |
| 12                           | I        | Uses-Chemical and Mineral admixtures  | PPT                  |                          |
| 13                           | I        | Acceleration, Retarders   | PPT                  |                          |
| 14                           | I        | Plasticizers, Water proofers  | PPT                  |                          |
| 15                           | I        | Mineral admixtures like Fly ash, and  | PPT                  |                          |
| 16                           | I        | Silica fume. Ground Granulated Blast Furnace slag(GGBS)                             | PPT                  |                          |
| 17                           | I        | Makaoline.  | PPT                  |                          |
| 18                           | I        | Effects on concrete properties.   | PPT                  | Unit-I will be completed |
| 19                           | II       | Fresh concrete: Workability – Factors affecting workability                         | PPT                  |                          |
| 20                           | II       | Measurement of workability by different tests                                       | PPT                  |                          |
| 21                           | II       | Measurement of workability by different tests                                       | PPT                  |                          |
| 22                           | II       | Measurement of workability by different tests                                       | PPT                  |                          |
| 23                           | II       | Setting times of concrete – Effect of time and temperature on workability           | PPT                  |                          |
| 24                           | II       | Segregation & bleeding  | PPT                  |                          |

**LESSON PLAN for CONSTRUCTION MATERIALS AND CONCRETE TECHNOLOGY, 2023-24, I/II, Civil-B. Dr. V. SOWJANYA VANI**

| Contact Hour<br>(Cumulative) | Unit No. | Topic   | Teaching Methodology | Remarks                   |
|------------------------------|----------|---|----------------------|---------------------------|
| 25                           | II       | Mixing and vibration of concrete  | PPT                  |                           |
| 26                           | II       | Steps in manufacture of concrete  | PPT                  |                           |
| 27                           | II       | Quality of mixing water.  | PPT                  | Unit-2 will be completed  |
| 28                           | III      | Hardened concrete : Water / Cement ratio – Abram's Law – Gelspace ratio     | PPT                  |                           |
| 29                           | III      | Nature of strength of concrete – Maturity concept                           | PPT                  |                           |
| 30                           | III      | Strength in tension & compression – Factors affecting strength              | PPT                  |                           |
| 31                           | III      | Relation between compression & tensile strength - Curing.                   | PPT                  | 1 <sup>st</sup> Mid Exams |
| 32                           | III      | Testing of hardened concrete: Compression tests Factors affecting strength  | PPT                  |                           |
| 33                           | III      | Flexure tests   | PPT                  |                           |
| 34                           | III      | Splitting tests   | PPT                  |                           |
| 35                           | III      | Non-destructive testing methods – codal provisions for NDT.                 | PPT                  |                           |
| 36                           | III      | Non-destructive testing methods – codal provisions for NDT.                 | PPT                  | Unit-3 will be completed  |
| 37                           | IV       | Types of Concrete: Ready mix concrete                                       | PPT                  |                           |
| 38                           | IV       | Shotcrete   | PPT                  |                           |
| 39                           | IV       | Light weight aggregate concrete, cellular concrete, Nofines concrete        | PPT                  |                           |
| 40                           | IV       | High density concrete   | PPT                  |                           |
| 41                           | IV       | Fibre reinforced concrete, Different types of fibres, Factors effecting FRC | PPT                  |                           |
| 42                           | IV       | Polymer concrete  | PPT                  |                           |
| 43                           | IV       | High performance concrete   | PPT                  |                           |
| 44                           | IV       | Self compacting concrete  | PPT                  |                           |
| 45                           | IV       | Self healing concrete   | PPT                  | Unit-4 will be completed  |
| 46                           | V        | Mix design: Factors in the choice of mix proportions                        | PPT                  |                           |
| 47                           | V        | Durability of concrete  | PPT                  |                           |
| 48                           | V        | Quality Control of concrete – Statistical methods – Acceptance criteria     | PPT                  |                           |

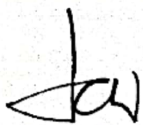
| LESSON PLAN for CONSTRUCTION MATERIALS AND CONCRETE TECHNOLOGY, 2023-24, I/II, Civil-B. Dr. V. SOWJANYA VANI |          |  |                      |                          |
|--|----------|--|----------------------|--------------------------|
| Contact Hour<br>(Cumulative)   | Unit No. | Topic  | Teaching Methodology | Remarks                  |
| 49   | V        | Proportioning of concrete mixes by various methods | PPT                  |                          |
| 50   | V        | BIS method of mix design                           | Chalk & Talk         |                          |
| 51   | V        | BIS method of mix design                           | Chalk & Talk         |                          |
| 52   | V        | Example  | Chalk & Talk         |                          |
| 53   | V        | Example  | Chalk & Talk         |                          |
| 54   | V        | Example  | Chalk & Talk         | Unit-5 will be completed |

V.S. Vani

  
 Head of the Department  
 Department of Civil Engineering  
 AITAM, TEKKALI.

| SUBJECT : CM&CT          |         |  |                          |         |
|--------------------------|---------|--|--------------------------|---------|
| Faculty name: m sai babu |         |  |                          |         |
| A.Y 2023-24              |         | I-II   | SEM-I                    |         |
| cum hr                   | UNIT NO | TOPIC  | TEACHING (*) METHODOLOGY | REMARKS |
| 1                        | 1       | Introductions to Construction Materials                    | class                    |         |
| 2                        | 1       | classification of stones – stone quarrying                 | Class                    |         |
| 3                        | 1       | precautions in blasting, dressing of stone,                | class                    |         |
| 4                        | 1       | composition of good brick earth,                           | class                    |         |
| 5                        | 1       | various methods of manufacturing of bricks                 | PPT                      |         |
| 6                        | 1       | Characteristics of good brick                              | class                    |         |
| 7                        | 1       | Classification of various types of woods used in buildings | class                    |         |
| 8                        | 1       | Defects in timber.   | ppt                      |         |
| 9                        | 1       | Alternative materials for wood and Aggregates              | class                    |         |
| 10                       | 1       | Classification, properties and selection criteria          | class                    |         |
| 11                       | 1       | Introductions to Cement-Types of cement                    | Class                    |         |
| 12                       | 1       | Properties, Uses of cement                                 | class                    |         |
| 13                       | 1       | Chemical and Mineral admixtures                            | ppt                      |         |
| 14                       | 1       | Acceleration, Retarders, Plasticizers, Water proofers,     | ppt                      |         |
| 15                       | 1       | Fly ash, Silica fume. Ground Granulated                    | PPT                      |         |
| 16                       | 1       | Blast Furnace slag (GGBS) and Metakaoline                  | PPT                      |         |
| 17                       | 1       | Effects on concrete properties.                            | class                    |         |
| 18                       | 2       | Introduction to Fresh concrete and Workability             | class                    |         |
| 19                       | 2       | Factors affecting workability                              | class                    |         |
| 20                       | 2       | Measurement of workability by different tests              | ppt                      |         |
| 21                       | 2       | Slump cone, vee bee, flow test                             | ppt                      |         |
| 22                       | 2       | Setting times of concrete – Effect of time and temperature | class                    |         |
| 23                       | 2       | Segregation & bleeding                                     | ppt                      |         |
| 24                       | 2       | Mixing and vibration of concrete                           | class                    |         |
| 25                       | 2       | Steps in manufacture of concrete                           | class                    |         |
| 26                       | 2       | Quality of mixing water.                                   | class                    |         |
| 27                       | 3       | Introduction to hardened concrete                          | class                    |         |
| 28                       | 3       | Water / Cement ratio – Abram's Law – Gelspace ratio        | class                    |         |
| 29                       | 3       | Nature of strength of concrete – Maturity concept          | class                    |         |

|    |   |   |       |  |
|----|---|---|-------|--|
| 30 | 3 | Strength in tension & compression                         | class |  |
| 31 | 3 | Factors affecting strength                                | class |  |
| 32 | 3 | Relation between compression & tensile strength - Curing. | class |  |
| 33 | 3 | Testing of hardened concrete                              | PPT   |  |
| 34 | 3 | Compression tests – Tension tests                         | PPT   |  |
| 35 | 3 | Factors affecting strength                                | class |  |
| 36 | 3 | Flexure tests –Splitting tests                            | Class |  |
| 37 | 3 | Non-destructive testing methods                           | PPT   |  |
| 38 | 3 | codal provisions for NDT.                                 | class |  |
| 39 | 4 | Types of Concrete   | class |  |
| 40 | 4 | Ready mix concrete, Shotcrete ,Light weight aggregate     | class |  |
| 41 | 4 | Nofines concrete, High density concrete, Fibre reinforced | class |  |
| 42 | 4 | Different types of fibres, Factors effecting FRC,         | class |  |
| 43 | 4 | Polymer concrete, High performance concrete               | class |  |
| 44 | 4 | Self compacting concrete, Self healing concrete.          | class |  |
| 45 | 5 | Mix design: Factors in the choice of mix proportions      | class |  |
| 46 | 5 | Durability of concrete – Quality Control of concrete      | PPT   |  |
| 47 | 5 | Statistica lmethods – Acceptance criteria                 | class |  |
| 48 | 5 | Proportioning of concrete mixes by various methods        | class |  |
| 49 | 5 | BIS method of mix design                                  | class |  |
| 50 | 5 | BIS method of mix design                                  | class |  |

  
 Head of the Department  
 Department of Civil Engineering  
 AITAM, TEKKALI.

## LESSON PLAN

| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic  | Teaching(*)<br>Methodology | Ren |
|------------------------------|-------------|--|----------------------------|-----|
| 1                            | 1           | Introduction to Statics & Kinematic indeterminacy  | CR/BB                      |     |
| 2                            | 1           | Analysis of pin jointed frames - force determinate | "                          |     |
| 3                            | 1           | Plane, pin jointed, perfect trusses                | "                          |     |
| 5                            | 1           | Method of joints                                   | "                          |     |
| 7                            | 1           | Method of sections                                 | "                          |     |
| 9                            | 1           | Analysis of Cantilever trusses                     | "                          |     |
| 11                           | 1           | Analysis of Simply supported truss                 | "                          |     |
| 12                           | 2           | Propped Cantilever Beams                           | "                          |     |
| 13                           | 2           | Analysis of beams with UDL                         | "                          |     |
| 14                           | 2           | Analysis of beams with Centric & eccentric loads   | "                          |     |
| 16                           | 2           | SFD, BMD.  | "                          |     |
| 18                           | 2           | Fixed Beams  | "                          |     |
| 19                           | 2           | Analysis of beams with UDL                         | "                          |     |
| 20                           | 2           | Analysis of beams with Centric & eccentric loads   | "                          |     |
| 22                           | 2           | SFD BMD  | "                          |     |
| 23                           | 3           | Strain Energy - Axial load                         | "                          |     |
| 24                           | 3           | Strain energy - Shear force                        | "                          |     |
| 26                           | 3           | Strain energy - BM.                                | "                          |     |
| 27                           | 3           | Castigliano's theorem-I                            | "                          |     |
| 28                           | 3           | Castigliano's theorem-II                           | "                          |     |

\*Black Board / LCD / OHP / Other Method

# LESSON PLAN

| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic  | Teaching(*)<br>Methodology | Rem |
|------------------------------|-------------|--|----------------------------|-----|
| 30                           | 3           | problems - strain energy                               | CR/BB.                     |     |
| 31                           | 4           | Three Hinged Arch -                                    | "                          |     |
| 32                           | 4           | Elastic theory of arches                               | "                          |     |
| 33                           | 4           | Eddy's theorem   | "                          |     |
| 35                           | 4           | Horizontal thrust, BM,<br>Normal thrust & Radial shear | "                          |     |
| 36                           | 4           | Parabolic arches<br>with point load & UDL              | "                          |     |
| 37                           | 4           | hinged supports of<br>same level                       | "                          |     |
| 39                           | 4           | two hinged arches                                      | "                          |     |
| 40                           | 4           | Horizontal thrust, BM,<br>Normal thrust, Radial        | "                          |     |
| 41                           | 4           | Shear - parabolic arches                               | "                          |     |
| 43                           | 4           | With point load &<br>UDL                               | "                          |     |
| 44                           | 5           | Analysis of Continuous<br>Beams                        | "                          |     |
| 46                           | 5           | Clapeyron's theorem of<br>three moments                | "                          |     |
| 47                           | 5           | Analysis of beams -<br>problems                        | "                          |     |
| 49                           | 5           | Moment of Inertia constant<br>and - one & more ends    | "                          |     |
| 50                           | 5           | fixed - Continuous beams                               | "                          |     |
| 51                           | 5           | with over hang.  | "                          |     |
| 52                           | 5           | Continuous beam with<br>different moment of            | "                          |     |
| 54                           | 5           | Inertia - Shear - BMD                                  | "                          |     |
| 55                           | 5           | SFD  | "                          |     |

\*Black Board / LCD / OHP / Other Method



# LESSON PLAN

| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic  | Teaching(*)<br>Methodology | Rev |
|------------------------------|-------------|--|----------------------------|-----|
| 57                           | 6           | Moving Load - Maximum                              | CR/BB.                     |     |
| 58                           | 6           | SF and BM at section                               | "                          |     |
| 59                           | 6           | Absolute Max. BM & SF<br>due to single point       | "                          |     |
| 60                           | 6           | load.  | ✓                          |     |
| 61                           | 6           | UDL longer than span<br>UDL shorter than span      | "                          |     |
| 62                           | 6           | Influence lines, line<br>sections                  | "                          |     |
| 63                           | 6           | ILD for SF   | "                          |     |
| 64                           | 6           | ILD for BM   | "                          |     |
| 65                           | 6           | Load position for maximum                          | "                          |     |
| 66                           | 6           | SF at sections                                     | "                          |     |
| 67                           | 6           | Load position for maximum<br>BM at sections Single | "                          |     |
| 68                           | 6           | point load.<br>Consideration.                      | "                          |     |
| Total: 68                    |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |
|                              |             |  |                            |     |

\*Black Board / LCD / OHP / Other Method




A

Aditya Institute of Technology and Management  
Lesson Plan for Geotechnical Engineering Lab(II-II)(2023-24)

B Harish

| S.No  | Name of the Experiment  | Hours |
|-------|---|-------|
| 1     | Introduction to Geotechnical Engineering Lab<br>Atterberg's Limits. | 3     |
| 2     | Grain size analysis - Sieve Analysis                                | 3     |
| 3     | Field Density-Core cutter   | 3     |
| 4     | Field Density- Sand replacement methods                             | 3     |
| 5     | Relative Density of Sand  | 3     |
| 6     | Permeability of soil - Constant                                     | 3     |
| 7     | Permeability of soil - Variable head tests                          | 3     |
| 8     | Compaction test   | 3     |
| 9     | CBR test  | 3     |
| 10    | Unconfined Compression test   | 3     |
| 11    | Direct Shear test.  | 3     |
| 12    | Vane Shear test.  | 3     |
| Total |   | 36    |

  
Head of the Department  
Department of Civil Engineering  
AITAM, TELUKALLI

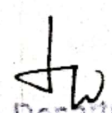
## LESSON PLAN

Course Name: Python Programming  
Branch: CIVIL

Class / Semester: II/I

Code: 20ESI204  
Academic Year:2023-24

| Period | Unit No.   | Topic  | Teaching Methodology | Remarks |
|--------|------------|--|----------------------|---------|
|        | <b>I</b>   | <b>Introduction to Python Control Structures</b>               |                      |         |
| 1      |            | History  | PPT                  |         |
| 2      |            | Features, Installing   | PPT                  |         |
| 3      |            | Operators  | PPT                  |         |
| 4      |            | Operators  | PPT                  |         |
| 5      |            | Statements and Expressions                                     | PPT                  |         |
| 6      |            | Conditional Statements   | PPT                  |         |
| 7      |            | Conditional Statements   | PPT                  |         |
| 8      |            | Loops  | PPT                  |         |
|        | <b>II</b>  | <b>Data Types</b>  |                      |         |
| 9      |            | Mutable vs immutable data type                                 | PPT                  |         |
| 10     |            | Introduction to Numbers, Integers, Floating Point Real Numbers | PPT                  |         |
| 11     |            | Complex Numbers, Operators                                     | PPT                  |         |
| 12     |            | Built-in Functions   | PPT                  |         |
| 13     |            | Related Modules  | PPT                  |         |
| 14     |            | Sequences - Strings  | PPT                  |         |
| 15     |            | Lists  | PPT                  |         |
| 16     |            | Tuples   | PPT                  |         |
| 17     |            | Dictionaries   | PPT                  |         |
| 18     |            | Set Types  | PPT                  |         |
|        | <b>III</b> | <b>Functions &amp; File Handling</b>                           |                      |         |
| 19     |            | Definitions, Declaration                                       | PPT                  |         |
| 20     |            | Parameter passing  | PPT                  |         |
| 21     |            | calling functions  | PPT                  |         |
| 22     |            | creating a file, opening a file                                | PPT                  |         |
| 23     |            | I/O with file (read, write, append),                           | PPT                  |         |
| 24     |            | closing a file   | PPT                  |         |
| 25     |            | Programs   | PPT                  |         |
| 26     |            | Programs   | PPT                  |         |
|        | <b>IV</b>  | <b>Modules</b>   |                      |         |
| 27     |            | Modules and Files  | PPT                  |         |
| 28     |            | Namespaces   | PPT                  |         |
| 29     |            | Importing Modules  | PPT                  |         |
| 30     |            | Importing Module Attributes                                    | PPT                  |         |
| 31     |            | Module Built-in Functions                                      | PPT                  |         |

  
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|    |           |  |     |  |
|----|-----------|--|-----|--|
| 32 |           | Packages   | PPT |  |
| 33 |           | Other Features of Modules                              | PPT |  |
| 34 |           | Other Features of Modules                              | PPT |  |
|    | <b>V</b>  | <b>Classes in Python</b>                               |     |  |
| 35 |           | Principles of Object Orientation                       | PPT |  |
| 36 |           | Creating Classes, Instance Methods and Special Methods | PPT |  |
| 37 |           | Class Variables and Inheritance                        | PPT |  |
| 38 |           | Data base connectivity                                 | PPT |  |
| 39 |           | Programs demonstrating on oops                         | PPT |  |
| 40 |           | Programs demonstrating on oops                         | PPT |  |
|    | <b>VI</b> | <b>Regular Expressions</b>                             |     |  |
| 41 |           | Introduction to Regular Expressions                    | PPT |  |
| 42 |           | Special Symbols  | PPT |  |
| 43 |           | Characters   | PPT |  |
| 44 |           | Res and Python   | PPT |  |
| 45 |           | Res and Python   | PPT |  |
| 46 |           | Programs   | PPT |  |
| 47 |           | Programs   | PPT |  |
| 48 |           | Programs   | PPT |  |

**BB: CLASS ROOM**

**PPT: POWER POINT PRESENTATION**

**LCD**

### **TEXT BOOKS**

1. Wesley J .C hun "Core Python Applications Programming", 3<sup>rd</sup> Edition, 2012, Prentice Hall.
2. Brian jones, David Beazley —Python Cookbook I, 3<sup>rd</sup> Edition.

### **REFERENCES BOOKS**

1. Mark Lutz "Programming Python, 4th Edition" O'Reilly Media.
2. Think Python, Allen Downey, Green Tea Press

### **Web Links**

- <https://docs.python.org/3/tutorial/index.html>  
<https://pythonprogramminglanguage.com>

## LESSON PLAN

Course Name: Python Programming

Branch: CEC Class / Semester: II/II

Academic Year: 2023-24

| Period | Unit No.   | Topic  | Teaching Methodology | Remarks |
|--------|------------|--|----------------------|---------|
|        | <b>I</b>   | <b>Introduction to Python Control Structures</b>               |                      |         |
| 1      |            | History  | PPT                  |         |
| 2      |            | Features, Installing   | PPT                  |         |
| 3      |            | Operators  | PPT                  |         |
| 4      |            | Operators  | PPT                  |         |
| 5      |            | Statements and Expressions                                     | PPT                  |         |
| 6      |            | Conditional Statements   | PPT                  |         |
| 7      |            | Conditional Statements   | PPT                  |         |
| 8      |            | Loops  | PPT                  |         |
|        | <b>II</b>  | <b>Data Types</b>  |                      |         |
| 9      |            | Mutable vs immutable data type                                 | PPT                  |         |
| 10     |            | Introduction to Numbers, Integers, Floating Point Real Numbers | PPT                  |         |
| 11     |            | Complex Numbers, Operators                                     | PPT                  |         |
| 12     |            | Built-in Functions   | PPT                  |         |
| 13     |            | Related Modules  | PPT                  |         |
| 14     |            | Sequences - Strings  | PPT                  |         |
| 15     |            | Lists  | PPT                  |         |
| 16     |            | Tuples   | PPT                  |         |
| 17     |            | Dictionaries   | PPT                  |         |
| 18     |            | Set Types  | PPT                  |         |
|        | <b>III</b> | <b>Functions &amp; File Handling</b>                           |                      |         |
| 19     |            | Definitions, Declaration                                       | PPT                  |         |
| 20     |            | Parameter passing  | PPT                  |         |
| 21     |            | calling functions  | PPT                  |         |
| 22     |            | creating a file, opening a file                                | PPT                  |         |
| 23     |            | I/O with file (read, write, append),                           | PPT                  |         |
| 24     |            | closing a file   | PPT                  |         |
| 25     |            | Programs   | PPT                  |         |
| 26     |            | Programs   | PPT                  |         |
|        | <b>IV</b>  | <b>Modules</b>   |                      |         |
| 27     |            | Modules and Files  | PPT                  |         |
| 28     |            | Namespaces   | PPT                  |         |
| 29     |            | Importing Modules  | PPT                  |         |
| 30     |            | Importing Module Attributes                                    | PPT                  |         |
| 31     |            | Module Built-in Functions                                      | PPT                  |         |
| 32     |            | Packages   | PPT                  |         |
| 33     |            | Other Features of Modules                                      | PPT                  |         |
| 34     |            | Other Features of Modules                                      | PPT                  |         |

|    | V  | Classes in Python                                      |     |  |
|----|----|--|-----|--|
| 35 |    | Principles of Object Orientation                       | PPT |  |
| 36 |    | Creating Classes, Instance Methods and Special Methods | PPT |  |
| 37 |    | Class Variables and Inheritance                        | PPT |  |
| 38 |    | Data base connectivity                                 | PPT |  |
| 39 |    | Programs demonstrating on oops                         | PPT |  |
| 40 |    | Programs demonstrating on oops                         | PPT |  |
|    | VI | Regular Expressions                                    |     |  |
| 41 |    | Introduction to Regular Expressions                    | PPT |  |
| 42 |    | Special Symbols  | PPT |  |
| 43 |    | Characters   | PPT |  |
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LCD

#### TEXT BOOKS

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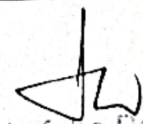
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2. Think Python, Allen Downey, Green Tea Press

#### Web Links

<https://docs.python.org/3/tutorial/index.html>  
<https://pythonprogramminglanguage.com>


| LESSON PLAN for GEOTECHNICAL ENGINEERING, 2023-24, II/II, (A)<br>B.Harish |             |   |                         |                          |
|---|-------------|---|-------------------------|--------------------------|
| Contact Hour<br>(Cumulative)  | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks                  |
| 1   | I           | Introduction to Geotechnical Engineering                                  | BB                      |                          |
| 2   | I           | Soil formation, Geological cycle  | BB                      |                          |
| 3   | I           | Inter-relationships and Soil Characterization, Types of soil              | BB                      |                          |
| 4   | I           | Phase diagrams, Basic terms   | BB&LCD                  |                          |
| 5   | I           | Functional relationships based on index properties                        | BB                      |                          |
| 6   | I           | Physical characterization of soil Dry and Wet sieve analysis              | BB                      |                          |
| 7   | I           | Water content and specific gravity  | BBB                     |                          |
| 8   | I           | Atterberg's Indices,  | BB&LCD                  |                          |
| 9   | I           | Soil Structures, Soil Water and its types                                 | BB&LCD                  |                          |
| 10  | I           | Standard nomenclature & IS Soil Classification                            | BB                      |                          |
| 11  | I           | NUMERICALS  | BB                      |                          |
| 12  | I           | Numericals.   | BB                      | Unit-1 will be completed |
| 13  | II          | Introduction to permeability Darcy's law and its validity,                | BB                      |                          |
| 14  | II          | Factors affecting permeability,   | BB                      |                          |
| 15  | II          | Laboratory permeability tests,  | BB                      |                          |
| 16  | II          | Permeability of stratified soil masses,                                   | BB                      |                          |
| 17  | II          | Seepage pressure, 2-D flow and Laplace's equation, Flow net construction, | BB                      |                          |
| 18  | II          | Quick condition, Piping Failure.  | BB                      |                          |
| 19  | III         | Numericals  | BB                      | Unit-2 will be completed |
| 20  | III         | Introduction to the stress on the soil                                    | BB                      |                          |
| 21  | III         | Numericals  | BB                      |                          |
| 22  | III         | Stresses when No Flow Takes Place Through the Saturated Soil Mass         | BB                      |                          |

  
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| Contact Hour<br>(Cumulative) | Unit<br>No. |  |                        | Remarks                     |
|------------------------------|-------------|--|------------------------|-----------------------------|
| 23                           | III         | Stresses When Flow Takes Place<br>Through the Soil from Bottom to Top, | BB                     |                             |
| 24                           | III         | numericals   | BB                     | Unit-3 will be<br>completed |
| 25                           | III         | Effective Pressure Due to Capillary                                    |                        |                             |
| 26                           | IV          | Introduction to compressibility  | BB                     |                             |
| 27                           | IV          | Definitions, Differentiate between<br>compaction and consolidation,    | BB                     |                             |
| 28                           | IV          | Compaction mechanism and proctor<br>tests,                             | BB                     |                             |
| 29                           | IV          | field compactions methods, factors<br>affecting compaction             | BB                     |                             |
| 30                           | IV          | Consolidation mechanism through<br>spring analogy                      | BB& Student<br>Seminar |                             |
| 31                           | IV          | fundamental definitions and<br>numericals                              | BB                     |                             |
| 32                           | IV          | Terzaghi's one dimensional<br>consolidation theory                     | BB                     |                             |
| 33                           | IV          | Time factor, preconsolidation pressure                                 | BB                     | Unit-4 will be<br>completed |
| 34                           | V           | Causes of stresses in soil,  | BB                     |                             |
| 35                           | V           | Boussinesque's equation for Point<br>load                              | BB & LCD               |                             |
| 36                           | V           | Boussinesque's equation for Strip<br>Load                              | BB & LCD               |                             |
| 37                           | V           | Boussinesque's equation for circular<br>Load                           | BB                     |                             |
| 38                           | V           | Westergard's equation  | BB                     |                             |
| 39                           | V           | Pressure Bulb  | BB                     |                             |
| 40                           | V           | Stress distribution on horizontal and<br>vertical planes               | BB                     |                             |
| 41                           | V           | Stresses due to different shapes of<br>footings                        | BB                     |                             |
| 42                           | V           | Newmark's influence chart  | BB                     |                             |
| 43                           |             | Numericals   | BB                     |                             |
| 44                           | V           | Numericals   | BB                     | Unit-5 will be<br>completed |
| 45                           | VI          | Introduction to shear strength of Soil                                 | BB                     |                             |
| 46                           | VI          | Mohr's strength theory,  | BB                     |                             |
| 47                           | VI          | Mohr- coulomb's strength theory,<br>Modified Mohr coulomb's theory,    | BB                     |                             |

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|    |    |   |    |                          |
|----|----|---|----|--------------------------|
| 48 | VI | shears parameters through lab and field tests based on drainage conditions, | BB |                          |
| 49 | VI | Direct Shear test   | BB |                          |
| 50 | VI | Triaxial test   | BB |                          |
| 51 | VI | Numericals  | BB |                          |
| 52 | VI | Numericals  | BB | Unit-6 will be completed |

  
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| LESSON PLAN for GROUND IMPROVEMENT TECHNIQUES, A.Y 2023-24, III/II,<br>Civil-B. Sri G. Anil Kumar |             |   |                         |                             |
|---|-------------|---|-------------------------|-----------------------------|
| Contact Hour<br>(Cumulative)  | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks                     |
| 1   | I           | Insitu densification methods<br>in granular Soils | PPT                     |                             |
| 2   | I           | Vibration at the ground surface                   | PPT                     |                             |
| 3   | I           | Vibration at depth                                | PPT & Chalk &<br>Talk   |                             |
| 4   | I           | Impact at the<br>Ground Surface and at depth      | PPT & Chalk &<br>Talk   |                             |
| 5   | I           | Impact at depth                                   | PPT & Chalk &<br>Talk   |                             |
| 6   | I           | Insitu densification methods in<br>Cohesive soils | PPT & Chalk &<br>Talk   |                             |
| 7   | I           | Preloading  | PPT & Chalk &<br>Talk   |                             |
| 8   | I           | Vertical drains                                   | PPT & Chalk &<br>Talk   |                             |
| 9   | I           | Sand Drains and geodrains                         | PPT & Chalk &<br>Talk   |                             |
| 10  | I           | Stone columns                                     | PPT & Chalk &<br>Talk   |                             |
| 11  | II          | thermal methods                                   | PPT & Chalk &<br>Talk   | Unit-1 will be<br>completed |
| 12  | II          | <b>Stabilization of Soils</b>                     | Chalk & Talk            |                             |
| 13  | II          | Methods of stabilization-                         | Chalk & Talk            |                             |
| 14  | II          | cement- stabilization                             | Chalk & Talk            |                             |
| 15  | II          | Lime- stabilization                               | Chalk & Talk            |                             |
| 16  | II          | bituminous and polymer<br>stabilization           | Chalk & Talk            |                             |
| 17  | II          | chemical stabilization with calcium<br>chloride   | Chalk & Talk            |                             |
| 18  | II          | sodium silicate stabilization                     | Chalk & Talk            |                             |
| 19  | II          | Gypsum stabilization                              | Chalk & Talk            |                             |
| 20  | II          | mechanical- stabilization                         | Chalk & Talk            | Unit-2 will be<br>completed |
| 21  | III         | <b>Dewatering Introduction</b>                    | Chalk & Talk            |                             |

  
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**LESSON PLAN for GROUND IMPROVEMENT TECHNIQUES, A.Y 2023-24, III/II,  
Civil-B. Sri G. Anil Kumar**

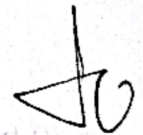
| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks   |
|------------------------------|-------------|---|-------------------------|---|
| 22                           | III         | Dewatering- by sumps and interceptor<br>ditches                           | Chalk & Talk            |   |
| 23                           | III         | single and multi stage well points<br>system of dewatering                | Chalk & Talk            |   |
| 24                           | III         | vacuum well point-system  | Chalk & Talk            |   |
| 25                           | III         | Horizontal wells-criteria for selection<br>of fill material around drains | Chalk & Talk            |   |
| 26                           | III         | electro osmosis method of dewatering                                      | Chalk & Talk            | Unit-3 will be<br>completed<br>1 <sup>st</sup> Mid<br>Exams |
| 27                           | IV          | <b>Geosynthetics:</b> Types, functions                                    | Chalk & Talk            |   |
| 28                           | IV          | functions & applications of geotextiles<br>(woven; nonwoven; knitted)     | Chalk & Talk            |   |
| 29                           | IV          | functions & applications geogrids,<br>geonet,                             | Chalk & Talk            |   |
| 30                           | IV          | functions & applications<br>geomembranes, gabions,                        | Chalk & Talk            |   |
| 31                           | IV          | functions & applications geocells and<br>geosynthetic clay liners.        | Chalk & Talk            | Unit-4 will be<br>completed                                 |
| 32                           | V           | <b>Reinforce earth</b> – introduction                                     | Chalk & Talk            |   |
| 33                           | V           | principles – components of reinforced<br>earth                            | Chalk & Talk            |   |
| 34                           | V           | design principles<br>of reinforced earth walls                            | Chalk & Talk            |   |
| 35                           | V           | stability checks-reinforced earth   | Chalk & Talk            |   |
| 36                           | V           | soil nailing & its applications   | Chalk & Talk            | Unit-5 will be<br>completed                                 |
| 37                           | V           | soil nailing methods  | Chalk & Talk            |   |
| 38                           | VI          | <b>Grouting introduction</b>  | Chalk & Talk            |   |
| 39                           | VI          | Objectives of grouting  | Chalk & Talk            |   |
| 40                           | VI          | grouts and their applications-  | Chalk & Talk            |   |
| 41                           | VI          | grouting methods-   | Chalk & Talk            |   |

| LESSON PLAN for GROUND IMPROVEMENT TECHNIQUES, A.Y 2023-24, III/II,<br>Civil-B. Sri G. Anil Kumar |             |  |                         |                              |
|---|-------------|--|-------------------------|------------------------------|
| Contact Hour<br>(Cumulative)  | Unit<br>No. | Topic                                    | Teaching<br>Methodology | Remarks                      |
| 42  | VI          | stages of grouting                       | Chalk & Talk            |                              |
| 43  | VI          | Hydraulic fracturing in soils and rocks- | Chalk & Talk            |                              |
| 44  | VI          | post grout test.                         | Chalk & Talk            | Unit-5 will be<br>completed  |
| 45  |             | Grand Test                               |                         | 2 <sup>nd</sup> Mid<br>Exams |

  
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| LESSON PLAN for FOUNDATION ENGINEERING, 2023-24 III/II, Civil- A<br>Sri. B.HARISH |             |  |                         |                             |
|---|-------------|--|-------------------------|-----------------------------|
| Contact Hour<br>(Cumulative)  | Unit<br>No. | Topic  | Teaching<br>Methodology | Remarks                     |
| 1   | I           | Methods of site exploration  | BB                      |                             |
| 2   | I           | soil samplers  | BB                      |                             |
| 3   | I           | sampling procedures  | BB                      |                             |
| 4   | I           | trial pits   | BB & LCD                |                             |
| 5   | I           | borings  | BB & LCD                |                             |
| 6   | I           | Penetration tests  | BB& Student<br>Seminar  |                             |
| 7   | I           | Plate load test  | BB                      |                             |
| 8   | I           | Analysis of borehole logs  | BB                      |                             |
| 9   | I           | geophysical investigation methods  | BB                      |                             |
| 10  | I           | Preparation of soil investigation report.  | BB                      | Unit-1 will be<br>completed |
| 11  | II          | Stability of Slopes - Introduction   | BB                      |                             |
| 12  | II          | types of slopes  | BB                      |                             |
| 13  | II          | types of failures and their failure<br>mechanisms  | BB                      |                             |
| 14  | II          | factor of safety   | BB                      |                             |
| 15  | II          | analysis of finite and infinite slopes   | BB                      |                             |
| 16  | II          | wedge failure  | BB                      |                             |
| 17  | II          | Swedish circle method  | BB                      |                             |
| 18  | II          | friction circle method   | BB                      |                             |
| 19  | II          | Bishop's Simplified method   | BB                      |                             |
| 20  | II          | Taylor's stability number and Stability<br>of slopes of earth dams under different<br>conditions | BB                      | Unit-2 will<br>be completed |
| 23  | III         | Rankine's theory of earth pressure   | BB                      |                             |
| 26  | III         | earth pressures in layered soils   | BB                      |                             |
| 27  | III         | Coulomb's earth pressure theory  | BB                      |                             |
| 29  | III         | Culmann's graphical method   | BB                      | Unit-3 will be<br>completed |
| 30  | IV          | Types - choice of foundation - Location<br>of depth  | BB                      |                             |
| 31  | IV          | Factors effecting bearing capacity   | BB                      |                             |
| 32  | IV          | Gross, net, Safe Bearing   | BB                      |                             |
| 34  | IV          | Terzaghi and IS Methods,   | BB                      |                             |
| 35  | IV          | effect of water table-   | BB                      |                             |
| 37  | IV          | Safe bearing pressure based on N- value<br>- allowable bearing pressure;                         | BB                      |                             |
| 38  | IV          | safe bearing capacity and settlement<br>from plate load test                                     | BB                      |                             |

|    |    |   |          |                          |
|----|----|---|----------|--------------------------|
| 39 | IV | allowable settlements of structures.  | BB       | Unit-4 will be completed |
| 40 | V  | Pile foundation: Types of piles   | BB       |                          |
| 42 | V  | Load carrying capacity of piles based on static pile formulae                         | BB       |                          |
| 44 | V  | Dynamic pile formulae   | BB & LCD |                          |
| 45 | V  | Pile load tests   | BB       |                          |
| 47 | V  | Load carrying capacity of pile groups in sands and clays – Settlement of pile groups. | BB       | Unit-5 will be completed |
| 48 | VI | Types – Different shapes of wells   | BB & LCD |                          |
| 50 | VI | Different shapes of wells   | BB       |                          |
| 52 | VI | Components of wells   | BB & LCD |                          |
| 55 | VI | Sinking of wells – Tilts and shifts.  | BB & LCD | Unit-6 will be completed |

  
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| LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2023-24,<br>III/II, Civil- <del>A</del> , Sri. S. Ramlal |             |  |                         |   |
|--|-------------|--|-------------------------|---|
| Contact Hour<br>(Cumulative)   | Unit<br>No. | Topic  | Teaching<br>Methodology | Remarks   |
| 25   | III         | Circular slab design – Simply supported conditions with Uniformly Distributed Loads  | Chalk & Talk            |   |
| 26   | III         | Circular slab design – Fixed end conditions with Uniformly Distributed Loads         | Chalk & Talk            |   |
| 27   | III         | Circular slab design – Fixed end conditions with Uniformly Distributed Loads         | Chalk & Talk            |   |
| 28   | III         | Flat slab design   | Chalk & Talk            |   |
| 29   | III         | Flat slab design   | Chalk & Talk            |   |
| 30   | III         | Flat slab design   | Chalk & Talk            | Unit-3 will be completed<br>1 <sup>st</sup> Mid Exams |
| 31   | IV          | Piles and pile caps: Design of bored cast-in-situ piles (bearing and friction types) | Chalk & Talk            |   |
| 32   | IV          | Design of bored cast-in-situ piles (bearing and friction types)                      | Chalk & Talk            |   |
| 33   | IV          | Design of bored cast-in-situ piles (bearing and friction types)                      | Chalk & Talk            |   |
| 34   | IV          | Design of bored cast-in-situ piles (bearing and friction types)                      | Chalk & Talk            |   |
| 35   | IV          | Design of Pile cap for three piles using bending method                              | Chalk & Talk            |   |
| 36   | IV          | Design of Pile cap for three piles using bending method                              | Chalk & Talk            |   |
| 37   | IV          | Design of Pile cap for three piles using bending method                              | Chalk & Talk            |   |
| 38   | IV          | Design of Pile cap for four piles using bending method                               | Chalk & Talk            |   |
| 39   | IV          | Design of Pile cap for four piles using bending method                               | Chalk & Talk            |   |
| 40   | IV          | Design of Pile cap for four piles using bending method                               | Chalk & Talk            | Unit-4 will be completed                              |
| 41   | V           | Multistory building system –detailing for Ductility                                  | Chalk & Talk            |   |
| 42   | V           | Multistory building system –detailing for Ductility                                  | Chalk & Talk            |   |
| 43   | V           | Multistory building system –detailing for Ductility                                  | Chalk & Talk            |   |

| LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2023-24,<br>III/II, Civil-B. Sri. S. Ramlal |             |   |                         |                          |
|---|-------------|---|-------------------------|--------------------------|
| Contact Hour<br>(Cumulative)  | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks                  |
| 1   | I           | Retaining walls introduction  | Chalk & Talk            |                          |
| 2   | I           | Design of cantilever retaining wall   | Chalk & Talk            |                          |
| 3   | I           | Design of cantilever retaining wall   | Chalk & Talk            |                          |
| 4   | I           | Design of cantilever retaining wall   | Chalk & Talk            |                          |
| 5   | I           | Design of counterfort retaining wall  | Chalk & Talk            |                          |
| 6   | I           | Design of counterfort retaining wall  | Chalk & Talk            |                          |
| 7   | I           | Design of counterfort retaining wall  | Chalk & Talk            |                          |
| 8   | I           | Design of counterfort retaining wall  | Chalk & Talk            |                          |
| 9   | I           | Design of combined footing  | Chalk & Talk            |                          |
| 10  | I           | Design of combined footing  | Chalk & Talk            | Unit-1 will be completed |
| 11  | II          | Design of RCC water tanks on ground-introduction                                    | Chalk & Talk            |                          |
| 12  | II          | Design of RCC water tanks on ground-circular  | Chalk & Talk            |                          |
| 13  | II          | Design of RCC water tanks on ground-circular  | Chalk & Talk            |                          |
| 14  | II          | Design of RCC water tanks on ground-circular  | Chalk & Talk            |                          |
| 15  | II          | Design of RCC water tanks on ground-square  | Chalk & Talk            |                          |
| 16  | II          | Design of RCC water tanks on ground-square  | Chalk & Talk            |                          |
| 17  | II          | Design of RCC water tanks on ground-square  | Chalk & Talk            |                          |
| 18  | II          | Design of RCC water tanks on ground-rectangle                                       | Chalk & Talk            |                          |
| 19  | II          | Design of RCC water tanks on ground-rectangle                                       | Chalk & Talk            |                          |
| 20  | II          | Design of RCC water tanks on ground-rectangle                                       | Chalk & Talk            |                          |
| 21  | III         | Slabs: Yield line theory of slabs   | Chalk & Talk            | Unit-2 will be completed |
| 22  | III         | Yield line theory of slabs  | Chalk & Talk            |                          |
| 23  | III         | Circular slab design – Simply supported conditions with Uniformly Distributed Loads | Chalk & Talk            |                          |
| 24  | III         | Circular slab design – Simply supported conditions with Uniformly Distributed Loads | Chalk & Talk            |                          |

**LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2023-24,  
III/II, Civil-A. Sri. S. Ramlal**

| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks                      |
|------------------------------|-------------|---|-------------------------|------------------------------|
| 44                           | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 45                           | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 46                           | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 47                           | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 48                           | V           | Design of wind forces                                       | Chalk & Talk            |                              |
| 49                           | V           | Design of wind forces                                       | Chalk & Talk            |                              |
| 50                           | V           | Design of wind forces                                       | Chalk & Talk            | Unit-5 will be<br>completed  |
| 51                           | VI          | Different types of loadings on bridges<br>according to IRC  | Chalk & Talk            |                              |
| 52                           | VI          | Design of RCC Culvert-deck slab for IRC<br>Class AA loading | Chalk & Talk            |                              |
| 53                           | VI          | Design of RCC Culvert-deck slab for IRC<br>Class AA loading | Chalk & Talk            |                              |
| 54                           | VI          | Design of RCC Culvert-deck slab for IRC<br>Class AA loading | Chalk & Talk            |                              |
| 55                           | VI          | Design of RCC Culvert-deck slab for IRC<br>Class A loading  | Chalk & Talk            |                              |
| 56                           | VI          | Design of RCC Culvert-deck slab for IRC<br>Class A loading  | Chalk & Talk            |                              |
| 57                           | VI          | Design of RCC Culvert-deck slab for IRC<br>Class A loading  | Chalk & Talk            | Unit-6 will be<br>completed  |
| 58                           |             | Grand Test  |                         | 2 <sup>nd</sup> Mid<br>Exams |

  
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**LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2023-24,  
III/II, Civil-A. Dr. V. SOWJANYA VANI**

| Contact Hour<br>(Cumulative) | Unit No. | Topic   | Teaching Methodology | Remarks                  |
|------------------------------|----------|---|----------------------|--------------------------|
| 1                            | I        | Retaining walls introduction  | Chalk & Talk         |                          |
| 2                            | I        | Design of cantilever retaining wall   | Chalk & Talk         |                          |
| 3                            | I        | Design of cantilever retaining wall   | Chalk & Talk         |                          |
| 4                            | I        | Design of cantilever retaining wall   | Chalk & Talk         |                          |
| 5                            | I        | Design of counterfort retaining wall  | Chalk & Talk         |                          |
| 6                            | I        | Design of counterfort retaining wall  | Chalk & Talk         |                          |
| 7                            | I        | Design of counterfort retaining wall  | Chalk & Talk         |                          |
| 8                            | I        | Design of counterfort retaining wall  | Chalk & Talk         |                          |
| 9                            | I        | Design of combined footing  | Chalk & Talk         |                          |
| 10                           | I        | Design of combined footing  | Chalk & Talk         | Unit-1 will be completed |
| 11                           | II       | Design of RCC water tanks on ground-introduction                                    | Chalk & Talk         |                          |
| 12                           | II       | Design of RCC water tanks on ground-circular  | Chalk & Talk         |                          |
| 13                           | II       | Design of RCC water tanks on ground-circular  | Chalk & Talk         |                          |
| 14                           | II       | Design of RCC water tanks on ground-circular  | Chalk & Talk         |                          |
| 15                           | II       | Design of RCC water tanks on ground-square  | Chalk & Talk         |                          |
| 16                           | II       | Design of RCC water tanks on ground-square  | Chalk & Talk         |                          |
| 17                           | II       | Design of RCC water tanks on ground-square  | Chalk & Talk         |                          |
| 18                           | II       | Design of RCC water tanks on ground-rectangle                                       | Chalk & Talk         |                          |
| 19                           | II       | Design of RCC water tanks on ground-rectangle                                       | Chalk & Talk         |                          |
| 20                           | II       | Design of RCC water tanks on ground-rectangle                                       | Chalk & Talk         | Unit-2 will be completed |
| 21                           | III      | Slabs: Yield line theory of slabs   | Chalk & Talk         |                          |
| 22                           | III      | Yield line theory of slabs  | Chalk & Talk         |                          |
| 23                           | III      | Circular slab design – Simply supported conditions with Uniformly Distributed Loads | Chalk & Talk         |                          |
| 24                           | III      | Circular slab design – Simply supported conditions with Uniformly Distributed Loads | Chalk & Talk         |                          |

**LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2023-24,  
III/II, Civil-A, Dr. V. SOWJANYA VANI**

| Contact Hour<br>(Cumulative) | Unit No. | Topic  | Teaching Methodology | Remarks   |
|------------------------------|----------|--|----------------------|---|
| 25                           | III      | Circular slab design – Simply supported conditions with Uniformly Distributed Loads  | Chalk & Talk         |   |
| 26                           | III      | Circular slab design – Fixed end conditions with Uniformly Distributed Loads         | Chalk & Talk         |   |
| 27                           | III      | Circular slab design – Fixed end conditions with Uniformly Distributed Loads         | Chalk & Talk         |   |
| 28                           | III      | Flat slab design   | Chalk & Talk         |   |
| 29                           | III      | Flat slab design   | Chalk & Talk         |   |
| 30                           | III      | Flat slab design   | Chalk & Talk         | Unit-3 will be completed<br>1 <sup>st</sup> Mid Exams |
| 31                           | IV       | Piles and pile caps: Design of bored cast-in-situ piles (bearing and friction types) | Chalk & Talk         |   |
| 32                           | IV       | Design of bored cast-in-situ piles (bearing and friction types)                      | Chalk & Talk         |   |
| 33                           | IV       | Design of bored cast-in-situ piles (bearing and friction types)                      | Chalk & Talk         |   |
| 34                           | IV       | Design of bored cast-in-situ piles (bearing and friction types)                      | Chalk & Talk         |   |
| 35                           | IV       | Design of Pile cap for three piles using bending method                              | Chalk & Talk         |   |
| 36                           | IV       | Design of Pile cap for three piles using bending method                              | Chalk & Talk         |   |
| 37                           | IV       | Design of Pile cap for three piles using bending method                              | Chalk & Talk         |   |
| 38                           | IV       | Design of Pile cap for four piles using bending method                               | Chalk & Talk         |   |
| 39                           | IV       | Design of Pile cap for four piles using bending method                               | Chalk & Talk         |   |
| 40                           | IV       | Design of Pile cap for four piles using bending method                               | Chalk & Talk         | Unit-4 will be completed                              |
| 41                           | V        | Multistorey building system –detailing for Ductility                                 | Chalk & Talk         |   |
| 42                           | V        | Multistorey building system –detailing for Ductility                                 | Chalk & Talk         |   |
| 43                           | V        | Multistorey building system –detailing   | Chalk & Talk         |   |

|   |             | for Ductility   |                         |                              |
|---|-------------|---|-------------------------|------------------------------|
| <b>LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2023-24,<br/>III/II, Civil-A. Dr. V. SOWJANYA VANI</b> |             |   |                         |                              |
| Contact Hour<br>(Cumulative)  | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks                      |
| 44  | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 45  | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 46  | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 47  | V           | Design for earthquake                                       | Chalk & Talk            |                              |
| 48  | V           | Design of wind forces                                       | Chalk & Talk            |                              |
| 49  | V           | Design of wind forces                                       | Chalk & Talk            |                              |
| 50  | V           | Design of wind forces                                       | Chalk & Talk            | Unit-5 will<br>be completed  |
| 51  | VI          | Different types of loadings on bridges<br>according to IRC  | Chalk & Talk            |                              |
| 52  | VI          | Design of RCC Culvert-deck slab for IRC<br>Class AA loading | Chalk & Talk            |                              |
| 53  | VI          | Design of RCC Culvert-deck slab for IRC<br>Class AA loading | Chalk & Talk            |                              |
| 54  | VI          | Design of RCC Culvert-deck slab for IRC<br>Class AA loading | Chalk & Talk            |                              |
| 55  | VI          | Design of RCC Culvert-deck slab for IRC<br>Class A loading  | Chalk & Talk            |                              |
| 56  | VI          | Design of RCC Culvert-deck slab for IRC<br>Class A loading  | Chalk & Talk            |                              |
| 57  | VI          | Design of RCC Culvert-deck slab for IRC<br>Class A loading  | Chalk & Talk            | Unit-6 will<br>be completed  |
| 58  |             | Grand Test  |                         | 2 <sup>nd</sup> Mid<br>Exams |

  
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# LESSON PLAN

| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic   | Teaching(*)<br>Methodology | Remarks |
|------------------------------|-------------|---|----------------------------|---------|
| 1                            | I           | Bolted / riveted connections,<br>Types of bolts, Types of   | B, B                       |         |
| 2                            | I           | bolted joints, failure<br>of bolted joints.   | B, B                       |         |
| 3                            | I           | specifications of bolted<br>joints  |                            |         |
| 4                            | I           | design of - foundation bolts  | B, B                       |         |
| 5                            |             | <u>Welded connections</u><br>Introduction, Advantages<br>& disadvantages of welding                                 | B, B                       |         |
| 6                            | I           | Strength of welds   |                            |         |
| 7                            |             | Butt & fillet welds   | B, B                       |         |
| 8                            | I           | IS code requirements  |                            |         |
| 9                            | I           | Design of fillet welds<br>subjected to moment acting<br>in the plane & at right angle<br>to the plane of the joints | B, B                       |         |
| 10                           |             |   |                            |         |
| 11                           | II          | Residual stresses<br>Allowable stresses   | B, B                       |         |

\*Black Board / OHP / Projector / Video / etc.



# TEACHERS DIARY

| Contact Hour (Cumulative) | Date  | Unit No. | Topic  | Remarks |
|---------------------------|-------|----------|--|---------|
| 2                         | 24/11 | I        | Bolted / riveted connections   |         |
|                           |       | I        | Types of bolts, Types of bolted joints, failure of bolted joints                 |         |
| 4                         | 29/11 | I        | Specifications of Bolted joints  |         |
|                           |       | I        | Design of foundation bolts   |         |
| 6                         | 30/11 |          | <u>Welded connections</u>  |         |
|                           |       |          | Introduction, Advantages & disadvantages of welding                              |         |
| 8                         | 4/12  | I        | Strength of welds  |         |
|                           |       |          | Butt & fillet weld.  |         |
|                           |       | I        | IS code requirements   |         |
| 9                         | 6/12  | I        | Design of fillet welds   |         |
|                           |       |          | Subjected to moment acting in the plane & at right angles to the plane of joint. |         |
| 10                        | 7/12  |          |  |         |
| 12                        | 11/12 | II       | <u>Beams</u>   |         |
|                           |       |          | Allowable stresses   |         |

| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic   | Teaching /<br>Methodology | Remarks |
|------------------------------|-------------|---|---------------------------|---------|
| 12                           | II          | Design requirements<br>as per IS code                               | B.B                       |         |
| 13                           | II          | Design of laterally<br>supported beam                               | B.B                       |         |
| 14                           | II          | Design of laterally<br>unsupported beam                             |                           |         |
| 15                           | II          | Design of laterally<br>unsupported beam                             |                           |         |
| 16                           | II          | Design of plated Beams  | B.B                       |         |
| 17, 18                       | II          |   |                           |         |
| 19                           | III         | <u>Tension members</u><br>Introduction, Types of<br>Tension members | B.B                       |         |
| 20                           | III         | Net sectional Area  | B.B                       |         |
| 21                           | III         | problems on effective<br>net area                                   |                           |         |
| 22                           | III         |   |                           |         |
| 23                           | III         | Design of tension<br>members  | B.B                       |         |
| 24                           | III         |   |                           |         |
| 25                           | III         | problems on Design  |                           |         |
| 26                           | III         |   |                           |         |
| 27                           | IV          | <u>Design of Compression<br/>members</u>                            | B.B                       |         |

# TEACHERS DIARY

| Contact Hour<br>(Cumulative) | Date  | Unit<br>No. | Topic  | Remarks |
|------------------------------|-------|-------------|--|---------|
| 13                           | 14/12 | I           | Design requirements as per IS code.                              |         |
| 16                           | 21/1  | II          | Design of laterally supported beam                               |         |
|                              |       | III         | Design of laterally unsupported beam                             |         |
| 18                           | 4/1   | II          | Design of plated beams   |         |
| 19                           | 6/1   | III         | <u>Tension Members</u><br>Introduction, Types of Tension members |         |
| 20                           | 8/1   | II          | Net sectional Area   |         |
| 22                           | 10/1  | III         | problems on effective net area                                   |         |
| 23                           | 20/1  | III         | Design of Tension members  |         |
| 24                           | 22/1  | III         | problems on Design of Tension members                            |         |
| 26                           | 25/1  | IV          | Design of Compression  |         |
| 27                           | 29/1  |             | members.   |         |

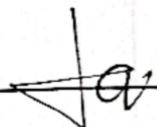
| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic   | Method |
|------------------------------|-------------|---|--------|
| 28                           | IV          | Introduction  | B B    |
| 29                           |             | Effective length of column<br>slenderness Ratio                                 |        |
| 30                           | IV          | Design of compression<br>members  | B B    |
| 31                           |             |   |        |
| 32                           | IV          | Built up sections   |        |
| 33                           | IV          | Design of lacing &<br>battens   | B B    |
| 34/35                        |             |   |        |
| 36                           | IV          | Design principles of<br>eccentrically loaded<br>column & splicing of<br>column. | B B    |
| 37                           |             |   |        |
| 38                           |             |   |        |
|                              |             |   |        |
| 39                           | V           | <u>Gantry Girdes</u>  | B B    |
| 40                           |             | Introduction  |        |
| 41                           |             | loads   |        |
| 42/43                        | V           | Design of gantry<br>girder  | B B    |
| 44                           | V           | Roof Elements   | B B    |
| 45/46                        | V           | Design of purlins   |        |

\*Black Board / LCD / OHP / Other Method

# TEACHERS DIARY

| Contact Hour<br>(Cumulative) | Date | Unit<br>No. | Topic  | Remarks |
|------------------------------|------|-------------|--|---------|
| 30                           | 1/2  | <u>III</u>  | Introduction                                 |         |
|                              |      |             | Effective length of column                   |         |
|                              |      |             | Slenderness Ratio                            |         |
| 31                           | 3/2  | <u>IV</u>   | Design of compression<br>members             |         |
| 32                           | 5/2  | <u>IV</u>   | Built up sections                            |         |
| <del>34</del>                | 8/2  | <u>IV</u>   | Design of lacing & battens                   |         |
| 35                           | 10/2 | <u>IV</u>   | Design principles of<br>eccentrically loaded |         |
| <del>37</del>                | 22/2 | <u>IV</u>   | columns & splicing of<br>columns.            |         |
| 38                           | 26/2 | <u>V</u>    | <u>Gantry Girders</u>                        |         |
|                              |      |             | Introduction                                 |         |
| <del>40</del>                | 1/3  |             | Loads  |         |
|                              |      | <u>V</u>    | Design of Gantry<br>girder                   |         |
| <del>41</del>                | 4/3  | <u>V</u>    | Roof Elements                                |         |
|                              |      | <u>V</u>    | Design of Purlins                            |         |

| LESSON PLAN                  |             |                          |                            |
|------------------------------|-------------|--------------------------|----------------------------|
| Contact Hour<br>(Cumulative) | Unit<br>No. | Topic                    | Teaching(*)<br>Methodology |
| 47                           | VI          | plate girdes             | B:B                        |
| 48                           |             | Introduction             |                            |
| 49                           |             | elements of plate girdes |                            |
| 50                           | VI          | Design Consideration     | B:B                        |
| 51                           |             | IS code recommendations  |                            |
| 52                           | VI          | Design of plate welded   |                            |
| 53                           |             | plate girdes             | B:B                        |
| 54                           | VI          | post critical method     |                            |
| 55,56                        | VI          | stiffness                |                            |

  
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## LESSON PLAN

**Lab Name: Design of Steel Structures**

**Branch: Civil Engineering**

**Year: 2023-2024**


**Sec-B**

**III B.Tech II Semester**

**Course Code:20CEI311**

**Faculty Name: V.Divyasari & B.Shanmuka Rao (B)**

| S.No. | Lab Lesson Plan  | No.ofHours |
|-------|--|------------|
| 1     | Design and Detailing of bolted connections of a lab joint.               | 3          |
| 2     | Design and Detailing of bolted connections of a double cover butt joint. | 3          |
| 3     | Detailing of framed connection between primary beam and secondary beam.  | 3          |
| 4     | Detailing of bracket welded connection in plane bending.                 | 3          |
| 5     | Design and Detailing of a framed connection between a column and beam.   | 3          |
| 6     | Design and Detailing of a framed connection between a column and beam.   | 3          |
| 7     | Design of lacing system.   | 3          |
| 8     | Design and Detailing of Ties and Struts in truss member                  | 3          |
| 9     | Detailing of a gantry girder   | 3          |
| 10    | Detailing of a gantry girder   | 3          |
| 11    | Design and Detailing of plate girder without stiffeners                  | 3          |
| 12    | Design and Detailing of plate girder with stiffeners                     | 3          |
|       | <b>Total Contact Hour</b>  | <b>36</b>  |

  
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## LESSON PLAN

**Lab Name:** Design of Steel Structures

**Branch:** Civil Engineering

**Year:** 2023-2024


**Sec-A**

**III B.Tech II Semester**

**Course Code:** 20CEI311

**FacultyName:**G.Gowrisankara Rao &Dr.G.Prasanna Kumar (A)

| S.No. | LabLesson Plan   | No.ofHours |
|-------|--|------------|
| 1     | Design and Detailing of bolted connections of a lab joint.               | 3          |
| 2     | Design and Detailing of bolted connections of a double cover butt joint. | 3          |
| 3     | Detailing of framed connection between primary beam and secondary beam.  | 3          |
| 4     | Detailing of bracket welded connection in plane bending.                 | 3          |
| 5     | Design and Detailing of a framed connection between a column and beam.   | 3          |
| 6     | Design and Detailing of a framed connection between a column and beam.   | 3          |
| 7     | Design of lacing system.   | 3          |
| 8     | Design and Detailing of Ties and Struts in truss member                  | 3          |
| 9     | Detailing of a gantry girder   | 3          |
| 10    | Detailing of a gantry girder   | 3          |
| 11    | Design and Detailing of plate girder without stiffeners                  | 3          |
| 12    | Design and Detailing of plate girder with stiffeners                     | 3          |
|       | <b>Total Contact Hour</b>  | <b>36</b>  |

  
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**Class: III-II [Section: A]**


**B. TECH (2023-24)**

**Subject: Design and Detailing of Irrigation Structures Lab (20CEL309)**

**Faculty Name: Dr. Sanjay Kumar Ray**

| S.No  | Name of the Experiment                 | Hours |
|-------|--|-------|
| 1     | Detailing of Surplus Weir.             | 6     |
| 2     | Detailing of Canal Drop.               | 6     |
| 3     | Detailing of Canal Regulator.          | 6     |
| 4     | Detailing of Under Tunnel.             | 6     |
| 5     | Detailing of Syphon Aqueduct Type-III. | 6     |
| 6     | Detailing of Syphon Well Drop          | 6     |
| Total |  | 36    |

  
**Sign of Faculty**

  
**Sign of HOD, Civil**

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**(AN AUTONOMOUS INSTITUTION)**

**Class: III-II [Section: B]**

**B. TECH (2023-24)**

**Subject: Design and Detailing of Irrigation Structures Lab (20CEL309)**

**Faculty Name: Dr. Sanjay Kumar Ray**

| S.No  | Name of the Experiment                 | Hours |
|-------|--|-------|
| 1     | Detailing of Surplus Weir.             | 6     |
| 2     | Detailing of Canal Drop.               | 6     |
| 3     | Detailing of Canal Regulator.          | 6     |
| 4     | Detailing of Under Tunnel.             | 6     |
| 5     | Detailing of Syphon Aqueduct Type-III. | 6     |
| 6     | Detailing of Syphon Well Drop          | 6     |
| Total |  | 36    |

  
**Sign of Faculty**


  
**Sign of HOD, Civil**

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III B.Tech II SEM - A, AY: 2023-24

**I & Water Resources Engineering**

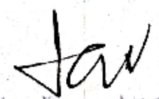
| PERIOD | UNIT | Topic  | Teaching methodology | Remarks                  |
|--------|------|--|----------------------|--------------------------|
| 1      | 1    | Introduction to engineering hydrology and its applications                                 | Chalk & Talk         |                          |
| 2      | 1    | water-budget equation, world water balance   | Chalk & Talk         |                          |
| 3      | 1    | Hydrologic cycle, types and forms of precipitation,  | Chalk & Talk         |                          |
| 5      | 1    | rainfall measurement, types of rain gauges   | Chalk & Talk         |                          |
| 7      | 1    | computation of average rainfall over a basin,  | Chalk & Talk         |                          |
| 8      | 1    | depth-area-duration relationships, maximum intensity/depth-duration-frequency relationship | Chalk & Talk         |                          |
| 9      | 1    | Probable Maximum Precipitation (PMP)   | Chalk & Talk         | Unit 1 will be completed |
| 10     | 2    | Abstraction from rainfall-evaporation, factors affecting evaporation,                      | Chalk & Talk         |                          |
| 12     | 2    | measurement of evaporation-evapotranspiration-consumptive use                              | Chalk & Talk         |                          |
| 13     | 2    | reservoir evaporation and methods for its reduction  | Chalk & Talk         |                          |
| 15     | 2    | Interception, depression storage, infiltration, infiltration capacity,                     | Chalk & Talk         |                          |
| 17     | 2    | factors affecting infiltration, measurement of infiltration,                               | Chalk & Talk         |                          |
| 18     | 2    | infiltration indices.  | Chalk & Talk         | Unit 2 will be completed |
| 19     | 3    | <b>Hydrograph:</b> hydrograph, factors affecting runoff hydrograph                         | Chalk & Talk         |                          |
| 20     | 3    | components of hydrograph ,   | Chalk & Talk         |                          |
| 22     | 3    | separation of base flow.   | Chalk & Talk         |                          |
| 23     | 3    | effective rainfall   | Chalk & Talk         |                          |
| 24     | 3    | Unit Hydrograph, definition, and limitations of applications of Unit hydrograph,           | Chalk & Talk         |                          |
| 25     | 3    | derivation of Unit Hydrograph, problem   | Chalk & Talk         |                          |
| 26     | 3    | S-hydrograph, problem  | Chalk & Talk         |                          |

|    |   |  |              |                          |
|----|---|--|--------------|--------------------------|
| 27 | 3 | Problems on hydrograph   | Chalk & Talk |                          |
| 28 | 3 | IUH  | Chalk & Talk | Unit 3 will be completed |
| 29 | 4 | Ground water Occurrence, types of aquifers, aquifer parameters,  | Chalk & Talk |                          |
| 30 | 4 | Sub surface distribution of water, ground water movement   | Chalk & Talk |                          |
| 31 | 4 | porosity, specific yield, permeability, transmissivity and storage coefficient, intrinsic permeability         | Chalk & Talk |                          |
| 32 | 4 | types of wells, Darcy's law, radial flow to wells in confined aquifers, problems                               | Chalk & Talk |                          |
| 33 | 4 | radial flow to wells in unconfined aquifers, problems  | Chalk & Talk |                          |
| 34 | 4 | Determination of hydraulic properties of aquifer, Well losses, specific capacity of well, and well efficiency, | Chalk & Talk |                          |
| 35 | 4 | pumping tests- Recuperation test method for determination of well yield.                                       | Chalk & Talk |                          |
| 36 | 4 | Problems   | Chalk & Talk | Unit 4 will be completed |
| 37 | 5 | Analysis of surface water supply   | Chalk & Talk |                          |
| 38 | 5 | Water requirement of crops, duty and delta   | Chalk & Talk |                          |
| 39 | 5 | Quality of irrigation water; Soil-water relationships  | Chalk & Talk |                          |
| 40 | 5 | root zone soil water, infiltration, consumptive use  | Chalk & Talk |                          |
| 41 | 5 | estimation of evapo-transpiration,   | Chalk & Talk |                          |
| 42 | 5 | Methods of applying water to the fields: surface, sub-surface  | Chalk & Talk |                          |
| 44 | 5 | sprinkler and trickle / drip irrigation  | Chalk & Talk |                          |
| 45 | 5 | Water logging: causes, effects and remedial measures.  | Chalk & Talk | Unit 5 will be completed |
| 46 | 6 | Classification of irrigation canals  | Chalk & Talk |                          |
| 47 | 6 | Canal alignment  | Chalk & Talk |                          |
| 48 | 6 | Regime theory – Kennedy's  | Chalk & Talk |                          |
| 50 | 6 | Regime theories – Lacey's  | Chalk & Talk |                          |
| 51 | 6 | river training, classification, and objectives   | Chalk & Talk |                          |
| 52 | 6 | types of CDW   | Chalk & Talk |                          |
| 53 | 6 | types of CDW   | Chalk & Talk | Unit 6 will be completed |

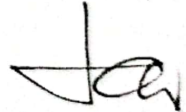
  
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| LESSON PLAN (I & WRE) (2023-24) |               |  |                          |         |
|---------------------------------|---------------|--|--------------------------|---------|
| Faculty Name                    | Dr. M. Suresh |  |                          |         |
| Contact Hour (cumulative)       | Unit No.      | Topic                                      | Teaching (*) Methodology | Remarks |
| 1                               | 1             | Hydrological Cycle                         | PPT                      |         |
| 2                               | 1             | Water - budget equation                    | BB                       |         |
| 3                               | 1             | World water balance, problems              | BB                       |         |
| 4                               | 1             | Problems                                   | BB                       |         |
| 5                               | 1             | Forms & measurement of precipitation       | BB                       |         |
| 6                               | 1             | Rain gauge network                         | PPT                      |         |
| 7                               | 1             | Mean area precipitation                    | BB                       |         |
| 8                               | 1             | Depth-area duration relationship           | BB                       |         |
| 9                               | 1             | Maximum intensity relationship             | BB                       |         |
| 10                              | 1             | Depth-duration frequency relationship      | BB                       |         |
| 11                              | 1             | Probable max precipitation                 | BB                       |         |
| 12                              | 1             | Probable max precipitation                 | BB                       |         |
| 13                              | 2             | Evaporation process frequency relationship | PPT                      |         |
| 14                              | 2             | Analytical methods of evaporation process  | BB                       |         |
| 15                              | 2             | Analytical methods of evaporation process  | BB                       |         |
| 16                              | 2             | Reservoir evaporation for its reduction    | BB                       |         |
| 17                              | 2             | Interception, depression storage           | BB                       |         |
| 18                              | 2             | Infiltration, infiltration capacity        | BB                       |         |
| 19                              | 2             | Infiltration capacity                      | BB                       |         |
| 20                              | 2             | Measurement of infiltration                | BB                       |         |
| 21                              | 2             | Classification of infiltration capacities  | PPT                      |         |
| 22                              | 2             | Infiltration indices                       | BB                       |         |
| 23                              | 3             | Hydrograph                                 | BB                       |         |
| 24                              | 3             | Factors affecting runoff hydrograph        | PPT                      |         |
| 25                              | 3             | Components of hydrograph                   | PPT                      |         |
| 26                              | 3             | Baseflow separation                        | BB                       |         |
| 27                              | 3             | Effective rainfall and unit hydrograph     | BB                       |         |
| 28                              | 3             | Effective rainfall and unit hydrograph     | BB                       |         |
| 29                              | 3             | Unit hydrograph                            | BB                       |         |
| 30                              | 3             | S-hydrograph, IVH                          | BB                       |         |
| 31                              | 4             | Forms of subsurface water                  | PPT                      |         |
| 32                              | 4             | saturated formation, aquifer properties    | PPT                      |         |
| 33                              | 4             | Geological formation of aquifers           | PPT                      |         |
| 34                              | 4             | Hydraulics                                 | BB                       |         |

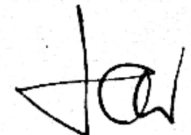
  
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|    |     |   |     |  |
|----|-----|---|-----|--|
| 35 | 4   | steady-state flow in wells                        | BB  |  |
| 36 | 4   | Equilibrium equations for confined and unconfined | BB  |  |
| 37 | 4   | Aquifer tests                                     | PPT |  |
| 38 | 5   | Water withdraws and uses introduction             | BB  |  |
| 39 | 5   | Analysis of surface water supply                  | BB  |  |
| 40 | 5   | Duty and delta problems soil water relationships  | BB  |  |
| 41 | 5   | Duty and delta problems soil water relationships  | BB  |  |
| 42 | 5   | Infiltration, problems                            | BB  |  |
| 43 | 5   | Estimation of evapotranspiration                  | PPT |  |
| 44 | 5   | Irrigation requirements                           | PPT |  |
| 45 | 5   | Methods of applying water to the fields           | PPT |  |
| 46 | 5   | waterlogging                                      | BB  |  |
| 47 | 6   | Design of channels introduction                   | PPT |  |
| 48 | 6   | Alluvial channels                                 | BB  |  |
| 49 | 6   | Kennedys and Lacey's theory                       | BB  |  |
| 50 | 6   | River and cross-drainage works                    | PPT |  |
| 51 | 6   | classification and objectives of river treatment  | PPT |  |
| 52 | 6   | Types of cross-drainage works                     | PPT |  |
| 53 | ALL | Revision and solving problems                     | BB  |  |
| 54 | ALL | Revision and solving problems                     | BB  |  |

  
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| LESSON PLAN for UPESC, AR 20 (II - II) |             |   |                         |                           |
|--|-------------|---|-------------------------|---------------------------|
| Contact Hour<br>(Cumulative)           | Unit<br>No. | Topic   | Teaching<br>Methodology | Remarks                   |
| 1                                      | I           | Basics of Urbanisation: Definition of Human settlement, Urban area, | BB                      |                           |
| 2                                      | I           | Town, City, Urbanisation, Sub urbanisation,                         | BB                      |                           |
| 3                                      | I           | Urban sprawl, Peri - urban areas, Central Business District (CBD)   | LCD & Interactive       |                           |
| 4                                      | I           | Classification of urban areas                                       | BB & LCD                |                           |
| 5                                      | I           | Trends of Urbanisation at International                             | BB& Student Seminar     |                           |
| 6                                      | I           | Trends of Urbanisation at National                                  | BB & LCD                |                           |
| 7                                      | I           | Trends of Urbanisation at Regional and State level.                 | BB & LCD                |                           |
| 8                                      | I           | Trends of Urbanisation at State level.                              | BB & LCD                | UNIT I will be completed  |
| 9                                      | II          | Urban Plan Formulation: Scope and Content of Regional Plan          | BB & LCD                |                           |
| 10                                     | II          | Master Plan   | BB                      |                           |
| 11                                     | II          | Detailed Development Plan   | BB& LCD                 |                           |
| 12                                     | II          | Development Control Rules   | BB& LCD                 |                           |
| 13                                     | II          | Transfer of Development Rights                                      | BB& Student Seminar     |                           |
| 14                                     | II          | Special Economic Zones-   | BB& LCD                 |                           |
| 15                                     | II          | Development of small town   | BB                      |                           |
| 16                                     | II          | smart cities - case studies   | BB                      | UNIT II will be completed |
| 17                                     | III         | Planning And Design Of Urban Development Projects: Site Analysis    | BB                      |                           |
| 18                                     | III         | Layout Design   | BB                      |                           |
| 19                                     | III         | Planning Standards  | BB& LCD                 |                           |
| 20                                     | III         | Project Formulation – Evaluation                                    | BB& Student Seminar     |                           |
| 21                                     | III         | Plan Implementation   | BB                      |                           |
| 22                                     | III         | Constraints and Implementation                                      | BB                      |                           |
| 23                                     | III         | Financing of Urban Development Projects                             | BB                      |                           |
| 24                                     | III         | Financing of Urban Development                                      | BB& LCD                 |                           |

|    |     | Projects  |                     |                            |
|----|-----|---|---------------------|----------------------------|
| 25 | III | Financing of Urban Development Projects         | BB& LCD             | UNIT III will be completed |
| 26 | II  | Overview of Smart Cities: Defining smart cities | BB                  |                            |
| 27 | III | Dimension                                       | BB                  |                            |
| 28 | III | components of smart cities.                     | BB                  |                            |
| 29 | III | categories of smart cities and Global Standards | BB                  |                            |
| 30 | III | performance benchmarksPractice codes.           | BB                  | UNIT IV will be completed  |
| 31 | III | Planning of Smart Cities:                       | BB                  |                            |
| 32 | III | General prerequisites of smart cities           | BB                  |                            |
| 33 | III | Policy frame work for smart cities.             | BB                  |                            |
| 34 | III | Policy frame work for smart cities.             | BB                  |                            |
| 35 | III | India 100 smart cities policy and mission       | BB                  |                            |
| 36 | IV  | India 100 smart cities policy and mission       | BB & LCD            |                            |
| 37 | IV  | India 100 smart cities policy and mission       | BB & LCD            | UNIT V will be completed   |
| 38 | IV  | Smart Governance: Definitions,                  | BB                  |                            |
| 39 | IV  | Functions of smart governance                   | BB                  |                            |
| 40 | IV  | objectives of smart Governance                  | BB                  |                            |
| 41 | IV  | benefits of smart Governance                    | BB& Student Seminar |                            |
| 42 | IV  | Infrastructure for smart governance             | BB & LCD            |                            |
| 43 | IV  | Initiatives of smart governance.                | BB & LCD            |                            |
| 44 | IV  | implementation stages of smart governance.      | BB & LCD            |                            |
| 45 | IV  | implementation stages of smart governance.      | BB & LCD            | UNIT VI will be completed  |

  
**Head of the Department**  
**Department of Civil Engineering**  
**AITAM, TEKKALI.**