

## TENTATIVE LESSON PLAN: R1621011

|  |                          |                    |
|--|--------------------------|--------------------|
| Course Title: PROBABILITY AND STATISTICS |                          |                    |
| Section : CE - A                         | Date : 10/6/2019         | Page No : 01 of 04 |
| Revision No : 00                         | Prepared By : T.PRASANNA | Approved By : HOD  |

Tools : Black board

| No. of Periods | TOPIC | Date | Mode of Delivery |
|----------------|-------|------|------------------|
|----------------|-------|------|------------------|

### UNIT –I DISCRETE RANDOM VARIABLES AND DISTRIBUTIONS

CO1 To provide mathematical background and sufficient experience so that the student can read, write, and understand sentences in the language of discrete probability theory. To introduce students to the basic methodology of “probabilistic thinking” and to apply it to problems.

TB1 :: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

|     |   |           |                                       |
|-----|---|-----------|---------------------------------------|
| 1.  | Introduction to Random Variable, Types                    | 10/6/2019 | Lecture interspersed with discussions |
| 2.  | Probability Mass Function, Problems                       | 11/6/2019 |                                       |
| 3.  | Problems  | 12/6/2019 |                                       |
| 4.  | Distribution Function & Properties                        | 13/6/2019 |                                       |
| 5.  | Mathematical Expectation & Properties                     | 14/6/2019 |                                       |
| 6.  | Moment Generating Function & properties                   | 15/6/2019 |                                       |
| 7.  | Binomial Distribution-p.m.f, Properties, m.g.f., Problems | 17/6/2019 |                                       |
| 8.  | Problems  | 18/6/2019 |                                       |
| 9.  | Poisson Distribution-p.m.f, Properties, m.g.f.,Problems   | 19/6/2019 |                                       |
| 10. | Problems  | 20/6/2019 |                                       |
| 11. | Geometric Distribution-p.d.f, Properties, m.g.f.,         | 21/6/2019 |                                       |
| 12. | Problems  | 22/6/2019 |                                       |
| 13. | Revision  | 24/6/2019 |                                       |

### UNIT II – CONTINUOUS RANDOM VARIABLES AND DISTRIBUTIONS

CO2: To provide mathematical background and sufficient experience so that the student can read, write, and understand sentences in the language of continuous probability theory. To introduce students to the basic methodology of “probabilistic thinking” and to apply it to problems.

TB1: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

|     |   |           |                                       |
|-----|---|-----------|---------------------------------------|
| 14. | Continuos Random Variable, Probability Density function, problems | 25/6/2019 | Lecture interspersed with discussions |
| 15. | Problems  | 26/6/2019 |                                       |
| 16. | Distribution Function & Properties                                | 27/6/2019 |                                       |
| 17. | Mathematical Expectation & Properties                             | 28/6/2019 |                                       |
| 18. | Moment Generating Function & properties                           | 29/6/2019 |                                       |
| 19. | Uniform Distribution- p.d.f., properties, m.g.f.,                 | 1/7/2019  |                                       |

|     |  |           |  |
|-----|--|-----------|--|
| 20. | Problems   | 2/7/2019  |  |
| 21. | Exponential Distribution- p.d.f., properties, m.g.f., problems | 3/7/2019  |  |
| 22. | Problems   | 4/7/2019  |  |
| 23. | Normal Distribution- p.d.f., properties, m.g.f., problems      | 5/7/2019  |  |
| 24. | normal Approximation to Binomial distribution                  | 6/7/2019  |  |
| 25. | Problems   | 8/7/2019  |  |
| 26. | Gamma Distribution   | 9/7/2019  |  |
| 27. | Problems   | 10/7/2019 |  |
| 28. | Problems   | 11/7/2019 |  |
| 29. | Weibull Distribution   | 12/7/2019 |  |
| 30. | Problems   | 15/7/2019 |  |
| 31. | Revision   | 16/7/2019 |  |

### UNIT III- SAMPLING THEORY

CO3 : The aim of this course is to cover sampling design and analysis methods that would be useful for research and management in many field. A well designed sampling procedure ensures that we can summarize and analyze data with a minimum of assumptions and complications.

TB1 : PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

|     |  |                                     |                                       |
|-----|--|-------------------------------------|---------------------------------------|
| 32. | Introduction- Population, Sample, Types of Sampling, Parameter & Statistic | 17/7/2019                           | Lecture interspersed with discussions |
| 33. | Sampling Distribution of Mean with Known Variance, Problems                | 18/7/2019<br>19/7/2019<br>20/7/2019 |                                       |
| 34. | Central Limit theorem  | 21/7/2019<br>22/7/2019              |                                       |
| 35. | Sampling Distribution of Mean with Unknown Variance, Problems              | 23/7/2019                           |                                       |
| 36. | Sampling Distribution of Proportions, Problems                             | 24/7/2019                           |                                       |
| 37. | t - distribution   | 25/7/2019                           |                                       |
| 38. | F- distribution  | 26/7/2019                           |                                       |
| 39. | Chi- Square Distribution   | 27/7/2019                           |                                       |
| 40. | Point Estimation, Maximum Error Estimate - Problems                        | 29/7/2019                           |                                       |
| 41. | Interval Estimation - Problems   | 30/7/2019                           |                                       |
| 42. | Revision   | 31/7/2019                           |                                       |

### UNIT – IV TESTS OF HYPOTHESIS

CO4 : One of the most important uses of statistics is to be able to make conclusions and test Hypothesis. Your conclusions can never be absolutely sure but you can quantify of your measure of confidence in the results.

TB1 : PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

|     |  |                        |                                       |
|-----|--|------------------------|---------------------------------------|
| 43. | Introduction- Definations, Types of Errors, One tail,two-tail Test | 1/8/2019<br>2/8/2019   | Lecture interspersed with discussions |
| 44. | Test for Single Mean, Problems                                     | 3/8/2019               |                                       |
| 45. | Problems   | 5/8/2019<br>6/8/2019   |                                       |
| 46. | Test for Two Means, Problems                                       | 7/8/2019<br>8/8/2019   |                                       |
| 47. | Test for Single Proportion, Problems                               | 9/8/2019               |                                       |
| 48. | Problems   | 12/8/2019              |                                       |
| 49. | Test for Two Proportion, Problems                                  | 13/8/2019              |                                       |
| 50. | Problems   | 14/8/2019              |                                       |
| 51. | ANOVA One-way Classification, Problems                             | 16/8/2019<br>19/8/2019 |                                       |
| 52. | ANOVA Two-way Classification, Problems                             | 20/8/2019<br>21/8/2019 |                                       |
| 53. | Problems   | 22/8/2019              |                                       |
| 54. | Revision   | 26/8/2019              |                                       |

#### UNIT –V CURVE FITTING AND CORRELATION

CO 5: To prepare students for future courses having quantitative components.

TB1 : PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

|     |   |                        |                                       |
|-----|---|------------------------|---------------------------------------|
| 55. | Introduction to Curve Fitting               | 27/8/2019<br>28/8/2019 | Lecture interspersed with discussions |
| 59. | Fitting of Straight Line, Problems          | 29/8/2019              |                                       |
| 60  | Problems                                    | 30/8/2019              |                                       |
| 61  | Fitting of Second Degree Parabola, Problems | 31/8/2019              |                                       |
| 62  | Problems                                    | 3/9/2019               |                                       |
| 63  | Fitting of Power Curve, Problems            | 4/9/2019               |                                       |
| 64  | Problems                                    | 5/9/2019               |                                       |
| 65  | Fitting of Exponential Curve, Problems      | 6/9/2019               |                                       |
| 66  | Problems                                    | 9/9/2019               |                                       |
| 67  | Simple Correlation, Problems                | 12/9/2019              |                                       |
| 68  | Problems                                    | 13/9/2019              |                                       |
| 69  | Rank Correlation, Problems                  | 14/9/2019              |                                       |
| 70  | Regression Analysis, Problems               | 16/9/2019              |                                       |
| 71  | Problems                                    | 17/9/2019              |                                       |
| 72  | Revision                                    | 18/9/2019              |                                       |

#### UNIT –VI STATISTICAL QUALITY CONTROL

CO 6 : A comprehensive coverage of modern quality control techniques to include the design of statistical process control systems, acceptance sampling, and process improvement.

TB1 : PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand & Company Pvt. Ltd., 2014.

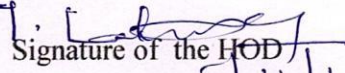
|    |   |                        |                           |
|----|---|------------------------|---------------------------|
| 73 | Introduction to SQC, Methods For Preparing Control Charts | 19/9/2019<br>20/9/2019 | Lecture interspersed with |
| 74 | X-Bar Chart, Problems                                     | 20/9/2019<br>23/9/2019 |                           |

|    |                    |           |             |
|----|--------------------|-----------|-------------|
| 75 | R-Chart, Problems  | 24/9/2019 | discussions |
| 76 | Problems           | 25/9/2019 |             |
| 77 | p-Chart, Problems  | 26/9/2019 |             |
| 78 | Problems           | 27/9/2019 |             |
| 79 | np-Chart, Problems | 28/9/2019 |             |
| 80 | Problems           | 30/9/2019 |             |
| 81 | c-Chart, Problems  | 1/10/2019 |             |
| 82 | Problems           | 3/10/2019 |             |
| 83 | Revision           | 4/10/2019 |             |

Prayama S  
25/11/19

Signature of the Faculty

  
PRINCIPAL

  
Signature of the HOD

25/11/19

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

## TENTATIVE LESSON PLAN: R1621011

|  |                          |                    |
|--|--------------------------|--------------------|
| Course Title: PROBABILITY AND STATISTICS |                          |                    |
| Section : CE - B                         | Date : 10/6/2019         | Page No : 01 of 04 |
| Revision No : 00                         | Prepared By : T.PRASANNA | Approved By : HOD  |

Tools : Black board

| No. of Periods   | TOPIC   | Date      | Mode of Delivery                      |
|--|---|-----------|---------------------------------------|
| <p><b>UNIT –I DISCRETE RANDOM VARIABLES AND DISTRIBUTIONS</b></p> <p>CO1 To provide mathematical background and sufficient experience so that the student can read, write, and understand sentences in the language of discrete probability theory. To introduce students to the basic methodology of “probabilistic thinking” and to apply it to problems.</p> <p>TB1 :: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand &amp; Company Pvt. Ltd., 2014.</p>      |   |           |                                       |
| 1.   | Introduction to Random Variable, Types                            | 10/6/2019 | Lecture interspersed with discussions |
| 2.   | Probability Mass Function, Problems                               | 11/6/2019 |                                       |
| 3.   | Problems  | 12/6/2019 |                                       |
| 4.   | Distribution Function & Properties                                | 13/6/2019 |                                       |
| 5.   | Mathematical Expectation & Properties                             | 14/6/2019 |                                       |
| 6.   | Moment Generating Function & properties                           | 15/6/2019 |                                       |
| 7.   | Binomial Distribution-p.m.f, Properties, m.g.f., Problems         | 17/6/2019 |                                       |
| 8.   | Problems  | 18/6/2019 |                                       |
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| 10.  | Problems  | 20/6/2019 |                                       |
| 11.  | Geometric Distribution-p.d.f, Properties, m.g.f.,                 | 21/6/2019 |                                       |
| 12.  | Problems  | 22/6/2019 |                                       |
| 13.  | Revision  | 24/6/2019 |                                       |
| <p><b>UNIT II – CONTINUOUS RANDOM VARIABLES AND DISTRIBUTIONS</b></p> <p>CO2: To provide mathematical background and sufficient experience so that the student can read, write, and understand sentences in the language of continuous probability theory. To introduce students to the basic methodology of “probabilistic thinking” and to apply it to problems.</p> <p>TB1: PROBABILITY AND STATISTICS By Dr. T.V.K. Iyengar, S. Chand &amp; Company Pvt. Ltd., 2014.</p> |   |           |                                       |
| 14.  | Continuos Random Variable, Probability Density function, problems | 25/6/2019 | Lecture interspersed with discussions |
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| 16.  | Distribution Function & Properties                                | 27/6/2019 |                                       |
| 17.  | Mathematical Expectation & Properties                             | 28/6/2019 |                                       |
| 18.  | Moment Generating Function & properties                           | 29/6/2019 |                                       |
| 19.  | Uniform Distribution- p.d.f., properties, m.g.f.,                 | 1/7/2019  |                                       |

|     |  |           |  |
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| 20. | Problems   | 2/7/2019  |  |
| 21. | Exponential Distribution- p.d.f., properties, m.g.f., problems | 3/7/2019  |  |
| 22. | Problems   | 4/7/2019  |  |
| 23. | Normal Distribution- p.d.f., properties, m.g.f., problems      | 5/7/2019  |  |
| 24. | normal Approximation to Binomial distribution                  | 6/7/2019  |  |
| 25. | Problems   | 8/7/2019  |  |
| 26. | Gamma Distribution   | 9/7/2019  |  |
| 27. | Problems   | 10/7/2019 |  |
| 28. | Problems   | 11/7/2019 |  |
| 29. | Weibull Distribution   | 12/7/2019 |  |
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| 31. | Revision   | 16/7/2019 |  |

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| 41. | Interval Estimation - Problems   | 30/7/2019                           |                                       |
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### UNIT – IV TESTS OF HYPOTHESIS

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| 44. | Test for Single Mean, Problems                                     | 3/8/2019               |                                       |
| 45. | Problems   | 5/8/2019<br>6/8/2019   |                                       |
| 46. | Test for Two Means, Problems                                       | 7/8/2019<br>8/8/2019   |                                       |
| 47. | Test for Single Proportion, Problems                               | 9/8/2019               |                                       |
| 48. | Problems   | 12/8/2019              |                                       |
| 49. | Test for Two Proportion, Problems                                  | 13/8/2019              |                                       |
| 50. | Problems   | 14/8/2019              |                                       |
| 51. | ANOVA One-way Classification, Problems                             | 16/8/2019<br>19/8/2019 |                                       |
| 52. | ANOVA Two-way Classification, Problems                             | 20/8/2019<br>21/8/2019 |                                       |
| 53. | Problems   | 22/8/2019              |                                       |
| 54. | Revision   | 26/8/2019              |                                       |

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| 59. | Fitting of Straight Line, Problems          | 29/8/2019              |                                       |
| 60  | Problems                                    | 30/8/2019              |                                       |
| 61  | Fitting of Second Degree Parabola, Problems | 31/8/2019              |                                       |
| 62  | Problems                                    | 3/9/2019               |                                       |
| 63  | Fitting of Power Curve, Problems            | 4/9/2019               |                                       |
| 64  | Problems                                    | 5/9/2019               |                                       |
| 65  | Fitting of Exponential Curve, Problems      | 6/9/2019               |                                       |
| 66  | Problems                                    | 9/9/2019               |                                       |
| 67  | Simple Correlation, Problems                | 12/9/2019              |                                       |
| 68  | Problems                                    | 13/9/2019              |                                       |
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| 70  | Regression Analysis, Problems               | 16/9/2019              |                                       |
| 71  | Problems                                    | 17/9/2019              |                                       |
| 72  | Revision                                    | 18/9/2019              |                                       |

#### UNIT –VI STATISTICAL QUALITY CONTROL

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|    |   |                        |                           |
|----|---|------------------------|---------------------------|
| 73 | Introduction to SQC, Methods For Preparing Control Charts | 19/9/2019<br>20/9/2019 | Lecture interspersed with |
| 74 | X-Bar Chart, Problems                                     | 20/9/2019<br>23/9/2019 |                           |

|    |                    |           |             |
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| 80 | Problems           | 30/9/2019 |             |
| 81 | c-Chart, Problems  | 1/10/2019 |             |
| 82 | Problems           | 3/10/2019 |             |
| 83 | Revision           | 4/10/2019 |             |

Prayame T  
25/11/19  
Signature of the Faculty

  
PRINCIPAL

T. C. Suresh  
Signature of the HOD  
25/11/19

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108




## TENTATIVE LESSON PLAN: R1621012

|  |  |                           |
|--|--|---------------------------|
| <b>Course Title: BASIC ELECTRICAL AND ELECTRONICS ENGINEERING (BEEE)</b> |  |                           |
| <b>Section : Sec A</b>   | <b>Date : 10-06-2019</b>               | <b>Page No : 01 of 02</b> |
| <b>Revision No : 00</b>  | <b>Prepared By: B.NAVAJEEVAN REDDY</b> | <b>Approved By : HOD</b>  |

Tools: Black board

| No. of Periods (Planned)   | TOPIC  | Date (Planned) | Mode of Delivery                      |
|--|--|----------------|---------------------------------------|
| <b>UNIT –I ELECTRICAL CIRCUITS</b><br><b>CO1:: learn the basic principles of electrical law's and analysis of networks.</b><br><b>TB :: Circuits and networks by A. Sudhakar , Shyammoan S Palli</b>   |  |                |                                       |
| 1  | Basic Definitions  | 10-06-19       | Lecture interspersed with Discussions |
| 2,3  | Types of network elements  | 11,12-06-19    |                                       |
| 4  | Ohms law   | 14-06-19       |                                       |
| 5  | Kirchhoff's law  | 14-06-19       |                                       |
| 6,7  | Inductive networks   | 15,17-06-19    |                                       |
| 8,9  | Capacitive networks  | 18,19-06-19    |                                       |
| 10,11,12,13  | Series, parallel circuits  | 21,22,24-06-19 |                                       |
| 14,15,16,17  | Star-delta and delta-star transformations                            | 25,26,28-06-19 |                                       |
| 18,19  | Numerical Problems   | 29,1-07-19     |                                       |
| 20   | Tutorial   | 2-07-19        |                                       |
| <b>UNIT –II DC MACHINES</b><br><b>CO2:: Understand the principle of operation and construction details of dc machines.</b><br><b>TB :: Electrical Technology by M S Naidu, S Kamakshaiah</b><br><b>TB:: Electrical Technology by U.A.Bakshi</b>    |  |                |                                       |
| 21   | Introduction   | 03-07-19       | Lecture interspersed with discussions |
| 22   | Principle of operation of DC generator                               | 05-07-19       |                                       |
| 23   | EMF equation   | 05-07-19       |                                       |
| 24,25  | Types of DC machine  | 06,08-07-19    |                                       |
| 26   | Torque equation  | 09-07-19       |                                       |
| 27   | Applications   | 10-07-19       |                                       |
| 28   | Three point starter  | 12-07-19       |                                       |
| 29,30  | Speed control methods of DC motor                                    | 12,15-07-19    |                                       |
| 31   | Swinburne's Test   | 16-07-19       |                                       |
| 32,33  | Numerical Problem  | 17,19-07-19    |                                       |
| 34,35  | Tutorial   | 19,20-07-19    |                                       |
| <b>UNIT - III TRANSFORMER</b><br><b>CO3:: Understand the principle of operation and construction details of transformers.</b><br><b>TB :: Electrical Technology by M S Naidu, S Kamakshaiah</b><br><b>TB:: Electrical Technology by U.A.Bakshi</b> |  |                |                                       |
| 36,37  | Principle of operation and construction of single phase transformers | 22,23-07-19    | Lecture interspersed with discussions |
| 38   | EMF equation   | 24-07-19       |                                       |
| 39   | Losses   | 26-07-19       |                                       |
| 40,41  | Efficiency and regulation  | 26,27-07-19    |                                       |
| 42,43,44   | Numerical Problem  | 29,30,31-07-19 |                                       |

|   |  |               |                                       |  |
|---|--|---------------|---------------------------------------|--|
| 45,46,47  | Tutorial   |               | 2,3-08-19                             |  |
| <b>UNIT – IV AC MACHINES</b>  |  |               |                                       |  |
| <b>CO4:: Understand the principle of operation and construction details of alternator and 3-phase induction motor</b> |  |               |                                       |  |
| <b>TB :: Electrical Technology by U.A.Bakshi</b>  |  |               |                                       |  |
| 48,49   | Principle of operation and construction of alternators | 13,14-08-19   | Lecture interspersed with discussions |  |
| 50,51   | Regulation by synchronous impedance method             | 16-08-19      |                                       |  |
| 52,53   | Principle of operation of 3-Phase induction motor      | 17,19-08-19   |                                       |  |
| 54,55   | Slip-torque characteristics                            | 20,21-08-19   |                                       |  |
| 56,57   | Efficiency   | 24,26-08-19   |                                       |  |
| 58  | Applications   | 27-08-19      |                                       |  |
| 59,60   | Numerical Problem                                      | 28,30-08-19   |                                       |  |
| 61,62   | Tutorial   | 30,31-08-19   |                                       |  |
| <b>UNIT – V RECTIFIERS &amp; LINEAR ICs</b>   |  |               |                                       |  |
| <b>CO5:: Study the operation of PN junction diode, half wave, full wave rectifiers and OP-AMPs.</b>                   |  |               |                                       |  |
| <b>TB :: Electronic Devices and circuits by S Salivahanan</b>   |  |               |                                       |  |
| <b>TB :: linear integrated circuits by D.Roy choudhury</b>  |  |               |                                       |  |
| 63,64,65  | PN junction diodes                                     | 2,3,4-09-19   | Lecture interspersed with discussions |  |
| 66,67,68  | Half wave, full wave rectifiers                        | 6,07-09-19    |                                       |  |
| 69,70   | Characteristics of Op-Amps                             | 9,11-09-19    |                                       |  |
| 71,72,73,74   | Applications of Op-Amp                                 | 3,16,17-09-19 |                                       |  |
| 75,76,77  | Tutorial   | 18,20-09-19   |                                       |  |
| <b>UNIT – VI TRANSISTORS</b>  |  |               |                                       |  |
| <b>CO6:: learn the operation of PNP and NPN transistors and various amplifiers.</b>                                   |  |               |                                       |  |
| <b>TB :: Electronic Devices and circuits by S Salivahanan</b>   |  |               |                                       |  |
| 78,79   | PNP and NPN transistor                                 | 21,23-09-19   | Lecture interspersed with discussions |  |
| 80,81   | Transistor as an amplifier                             | 24,25-09-19   |                                       |  |
| 82,83   | Single stage CE amplifier                              | 27-09-19      |                                       |  |
| 84  | Frequency response of CE amplifier                     | 28-09-19      |                                       |  |
| 85,86,87  | Concepts of feedback amplifier                         | 30,1,4-10-19  |                                       |  |
| 88,89   | Tutorial   | 4,5-10-19     |                                       |  |

  
Signature of the Faculty

  
Signature of the HOD  
10/6/19

PRINCIPAL  
SRK Institute of Technology  
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# TENTATIVE LESSON PLAN: R1621012

|  |                                |                           |
|--|--------------------------------|---------------------------|
| <b>Course Title: BASIC ELECTRICAL AND ELECTRONICS ENGINEERING (BEEE)</b> |                                |                           |
| <b>Section : Sec B</b>   | <b>Date : 10-06-2019</b>       | <b>Page No : 01 of 02</b> |
| <b>Revision No : 00</b>  | <b>Prepared By : B.INDRAJA</b> | <b>Approved By : HOD</b>  |

Tools : Black board

| No. of Periods (Planned)   | TOPIC  | Date (Planned) | Mode of Delivery                      |
|--|--|----------------|---------------------------------------|
| <b>UNIT –I ELECTRICAL CIRCUITS</b>   |  |                |                                       |
| <b>CO1:: learn the basic principles of electrical law's and analysis of networks.</b>        |  |                |                                       |
| <b>TB :: Circuits and networks by A. Sudhakar , Shyammohan S Palli</b>                       |  |                |                                       |
| 1  | Basic Definitions  | 10-06-19       | Lecture interspersed with Discussions |
| 2,3  | Types of network elements  | 11,12-06-19    |                                       |
| 4  | Ohms law   | 14-06-19       |                                       |
| 5  | Kirchhoff's law  | 14-06-19       |                                       |
| 6,7  | Inductive networks   | 15,17-06-19    |                                       |
| 8,9  | Capacitive networks  | 18,19-06-19    |                                       |
| 10,11,12,13  | Series, parallel circuits  | 21,22,24-06-19 |                                       |
| 14,15,16,17  | Star-delta and delta-star transformations                            | 25,26,28-06-19 |                                       |
| 18,19  | Numerical Problems   | 29,1-07-19     |                                       |
| 20   | Tutorial   | 2-07-19        |                                       |
| <b>UNIT –II DC MACHINES</b>  |  |                |                                       |
| <b>CO2:: Understand the principle of operation and construction details of dc machines.</b>  |  |                |                                       |
| <b>TB :: Electrical Technology by M S Naidu, S Kamakshaiah</b>                               |  |                |                                       |
| <b>TB:: Electrical Technology by U.A.Bakshi</b>  |  |                |                                       |
| 21   | Introduction   | 03-07-19       | Lecture interspersed with discussions |
| 22   | Principle of operation of DC generator                               | 05-07-19       |                                       |
| 23   | EMF equation   | 05-07-19       |                                       |
| 24,25  | Types of DC machine  | 06,08-07-19    |                                       |
| 26   | Torque equation  | 09-07-19       |                                       |
| 27   | Applications   | 10-07-19       |                                       |
| 28   | Three point starter  | 12-07-19       |                                       |
| 29,30  | Speed control methods of DC motor                                    | 12,15-07-19    |                                       |
| 31   | Swinburne's Test   | 16-07-19       |                                       |
| 32,33  | Numerical Problem  | 17,19-07-19    |                                       |
| 34,35  | Tutorial   | 19,20-07-19    |                                       |
| <b>UNIT - III TRANSFORMER</b>  |  |                |                                       |
| <b>CO3:: Understand the principle of operation and construction details of transformers.</b> |  |                |                                       |
| <b>TB :: Electrical Technology by M S Naidu, S Kamakshaiah</b>                               |  |                |                                       |
| <b>TB:: Electrical Technology by U.A.Bakshi</b>  |  |                |                                       |
| 36,37  | Principle of operation and construction of single phase transformers | 22,23-07-19    | Lecture interspersed with discussions |
| 38   | EMF equation   | 24-07-19       |                                       |
| 39   | Losses   | 26-07-19       |                                       |
| 40,41  | Efficiency and regulation  | 26,27-07-19    |                                       |
| 42,43,44   | Numerical Problem  | 29,30,31-07-19 |                                       |
| 45,46,47   | Tutorial   | 2,3-08-19      |                                       |

**UNIT – IV AC MACHINES****CO4:: Understand the principle of operation and construction details of alternator and 3-phase induction motor****TB :: Electrical Technology by U.A.Bakshi**

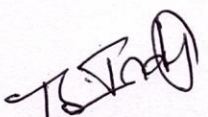
|       |  |             |                                       |
|-------|--|-------------|---------------------------------------|
| 48,49 | Principle of operation and construction of alternators | 13,14-08-19 | Lecture interspersed with discussions |
| 50,51 | Regulation by synchronous impedance method             | 16-08-19    |                                       |
| 52,53 | Principle of operation of 3-Phase induction motor      | 17,19-08-19 |                                       |
| 54,55 | Slip-torque characteristics                            | 20,21-08-19 |                                       |
| 56,57 | Efficiency   | 24,26-08-19 |                                       |
| 58    | Applications   | 27-08-19    |                                       |
| 59,60 | Numerical Problem                                      | 28,30-08-19 |                                       |
| 61,62 | Tutorial   | 30,31-08-19 |                                       |

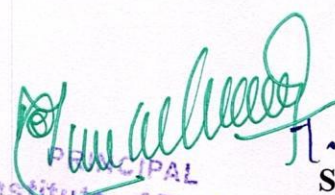
**UNIT – V RECTIFIERS & LINEAR ICs****CO5:: Study the operation of PN junction diode, half wave, full wave rectifiers and OP-AMPs.****TB :: Electronic Devices and circuits by S Salivahanan****TB :: linear integrated circuits by D.Roy choudhury**

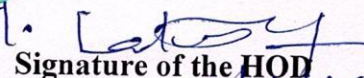
|             |                                 |               |                                       |
|-------------|---------------------------------|---------------|---------------------------------------|
| 63,64,65    | PN junction diodes              | 2,3,4-09-19   | Lecture interspersed with discussions |
| 66,67,68    | Half wave, full wave rectifiers | 6,07-09-19    |                                       |
| 69,70       | Characteristics of Op-Amps      | 9,11-09-19    |                                       |
| 71,72,73,74 | Applications of Op-Amp          | 3,16,17-09-19 |                                       |
| 75,76,77    | Tutorial                        | 18,20-09-19   |                                       |

**UNIT – VI TRANSISTORS****CO6:: learn the operation of PNP and NPN transistors and various amplifiers.****TB :: Electronic Devices and circuits by S Salivahanan**

|          |                                    |              |                                       |
|----------|------------------------------------|--------------|---------------------------------------|
| 78,79    | PNP and NPN transistor             | 21,23-09-19  | Lecture interspersed with discussions |
| 80,81    | Transistor as an amplifier         | 24,25-09-19  |                                       |
| 82,83    | Single stage CE amplifier          | 27-09-19     |                                       |
| 84       | Frequency response of CE amplifier | 28-09-19     |                                       |
| 85,86,87 | Concepts of feedback amplifier     | 30,1,4-10-19 |                                       |
| 88,89    | Tutorial                           | 4,5-10-19    |                                       |

  
Signature of the Faculty

  
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SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

  
Signature of the HOD  
10/10/19

**TENTATIVE LESSON PLAN: (R1621013)**

**Course Title: Strength of Materials-I (R1621013)**

|                         |                                |                           |
|-------------------------|--------------------------------|---------------------------|
| <b>Section : Sec A</b>  | <b>Date : 10/6/2019</b>        | <b>Page No : 01 of 04</b> |
| <b>Revision No : 00</b> | <b>Prepared By : G.Sahithi</b> | <b>Approved By : HOD</b>  |

**Tools : Black board, PPTs, Model**

| No. of Periods   | TOPIC   | Date      | Mode of Delivery                      |
|--|---|-----------|---------------------------------------|
| <p><b>UNIT –I SIMPLE STRESSES AND STRAINS AND STRAIN ENERGY</b><br/>                     CO1 The student will be able to understand the basic concepts of Strength of Materials and Principles of Elasticity and Plasticity Stress strain behavior of materials and their governing laws. Introduce student the moduli of Elasticity and their relations.</p> <p><b>T1 Strength of Materials by S.S Bhavikatti,</b><br/> <b>T2 Strength of Materials by R.K Bansal, Lakshmi Publications</b></p> |   |           |                                       |
| 1  | Introduction to elasticity and plasticity –Types of stresses                              | 12-6-2019 | Lecture interspersed with discussions |
| 2  | Types of strains – Hooke’s law  | 13-6-2019 |                                       |
| 3  | Stress – strain diagram for mild steel  | 14-6-2019 |                                       |
| 4  | Working stress – Factor of safety – Lateral strain, Poisson’s ratio and volumetric strain | 15-6-2019 |                                       |
| 5  | Problems related to stress, strain and elongation   | 17-6-2019 |                                       |
| 6  | Problems on relation between stress strain and youngs modulus                             | 18-6-2019 |                                       |
| 7  | Elastic moduli and the relationship between them  | 19-6-2019 |                                       |
| 8  | Problems on relation between elastic constants  | 20-6-2019 |                                       |
| 9  | Bars of varying section   | 21-6-2019 |                                       |
| 10   | Problems on bars of varying cross section   | 22-6-2019 |                                       |
| 11   | Description of composite bars   | 24-6-2019 |                                       |
| 12   | Problems on composite bars  | 26-6-2019 |                                       |
| 13   | Temperature stresses, problems  | 27-6-2019 |                                       |
| 14   | Strain Energy – Resilience – Gradual, sudden, impact and shock loadings                   | 28-6-2019 |                                       |
| 15   | Problems on strain energy   | 29-6-2019 |                                       |
| <p><b>UNIT –II SHEAR FORCE AND BENDING MOMENT</b><br/>                     CO2 The student will be able to draw the diagrams indicating the variation of the key performance features like bending moment and shear forces</p> <p><b>T1 Strength of Materials by S.S Bhavikatti,</b><br/> <b>T2 Strength of Materials by R.K Bansal, Lakshmi Publications</b></p>  |   |           |                                       |
| 16   | Definition of beam – Types of beams   | 1-7-2019  |                                       |
| 17   | Concept of shear force and bending moment   | 3-7-2019  |                                       |
| 18   | Diferrent types of loadings   | 3-7-2019  |                                       |
| 19   | Conversion of udl, uvl into point loads   | 4-7-2019  |                                       |
| 20   | S.F and B.M diagrams for simply Supported subjected to point loads, u.d.l loadings        | 5-7-2019  |                                       |
| 21   | S.F and B.M diagrams for simply   | 6-7-2019  |                                       |

**UNIT IV SHEAR STRESSES**

CO4 Make the student to understand shearing stresses developed in the section and calculation of the shearing stress and also the variation of it.

**T1 Strength of Materials by S.S Bhavikatti,**

**T2 Strength of Materials by R.K Bansal, Lakshmi Publication**

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 46 | Derivation of formula for shear stress  | 3-8-2019  | Lecture interspersed with discussions |
| 47 | Introduction to Shear stress distribution                                       | 5-8-2019  |                                       |
| 48 | Shear stress distribution across various beam sections like rectangular section | 6-8-2019  |                                       |
| 49 | Shear stress distribution across various beam sections like circular section    | 8-8-2019  |                                       |
| 50 | Shear stress distribution across various beam sections like triangular section  | 9-8-2019  |                                       |
| 51 | Shear stress distribution across I section                                      | 14-8-2019 |                                       |
| 52 | Shear stress distribution across T section                                      | 28-8-2019 |                                       |
| 53 | Shear stress distribution across built up section                               | 30-8-2019 |                                       |
| 54 | Problems on S.S.D across various standard sections                              | 31-8-2019 |                                       |
| 55 | Problems on S.S.D across various standard sections                              | 4-9-2019  |                                       |
| 56 | Determination of S.S.D in T section   | 5-9-2019  |                                       |
| 57 | Determination of S.S.D in I section   | 5-9-2019  |                                       |
| 58 | Determination of S.S.D in built up sections                                     | 6-9-2019  |                                       |

**UNIT – V DEFLECTION OF BEAMS**

CO5 The student will be able to calculate the deflections in beams under various loading and support conditions.

**T1 Strength of Materials by S.S Bhavikatti,**

**T2 Strength of Materials by R.K Bansal, Lakshmi Publication**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 59 | Bending into a circular arc – slope, deflection and radius of curvature – Differential equation for the elastic line of a beam | 7-9-2019  | Lecture interspersed with discussions |
| 60 | Double integration Method  | 9-9-2019  |                                       |
| 61 | Determination of slope and deflection for cantilever subjected to point loads,   | 11-9-2019 |                                       |
| 62 | Determination of slope and deflection for cantilever subjected to u.d.l  | 12-9-2019 |                                       |
| 63 | Determination of slope and deflection for cantilever subjected to u.v.l  | 13-9-2019 |                                       |
| 64 | Determination of slope and deflection for S.S.B subjected to point loads   | 17-9-2019 |                                       |
| 65 | Determination of slope and deflection for S.S.B subjected to u.d.l   | 18-9-2019 |                                       |
| 66 | Determination of slope and deflection for S.S.B subjected to u.v.l   | 19-9-2019 |                                       |
| 67 | Macaulay's methods and problems on it  | 20-9-2019 |                                       |
| 68 | Mohr's theorem and Moment area method  | 20-9-2019 |                                       |

**UNIT -VI THIN AND THICK CYLINDERS**

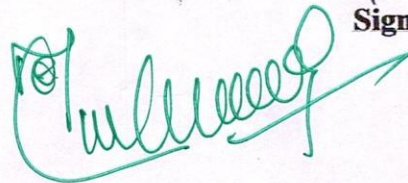
CO6 The student will be able to classify cylinders based on their thickness and to derive equations for measurement of stresses across the cross section when subjected to external pressure.

**T1 Strength of Materials by S.S Bhavikatti,**

**T2 Strength of Materials by R.K Bansal, Lakshmi Publication**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 69 | Introduction to Thin and thick cylinders               | 21-9-2019 | Lecture interspersed with discussions |
| 70 | Derivation of formula for hoop and longitudinal stress | 23-9-2019 |                                       |
| 71 | Volumetric strain                                      | 24-9-2019 |                                       |
| 72 | Changes in diameter volume in cylinders                | 25-9-2019 |                                       |
| 73 | Introduction to thin spherical shells and derivation   | 26-9-2019 |                                       |
| 74 | Lames theory derivation                                | 27-9-2019 |                                       |
| 75 | Hoop and radial stress                                 | 28-9-2019 |                                       |
| 76 | Design of thick cylinders                              | 28-9-2019 |                                       |
| 77 | Compound cylinders and problems                        | 28-9-2019 |                                       |
| 78 | Thick spherical shells                                 | 29-9-2019 |                                       |
| 79 | Problems on cylinders                                  | 29-9-2019 |                                       |
| 80 | Problems on cylinders                                  | 1-10-2019 |                                       |
| 81 | Problems on cylinders                                  | 1-10-2019 |                                       |
| 82 | Revision of previous papers                            | 1-10-2019 |                                       |

G. Sahithy  
10/6/19  
Signature of the Faculty



T. Lakshay  
10/6/19  
Signature of the HOD

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

**TENTATIVE LESSON PLAN: (R1621013)**

|   |                                |                           |
|---|--------------------------------|---------------------------|
| <b>Course Title: Strength of Materials-I (R1621013)</b> |                                |                           |
| <b>Section : Sec B</b>                                  | <b>Date : 10/6/2019</b>        | <b>Page No : 01 of 04</b> |
| <b>Revision No : 00</b>                                 | <b>Prepared By : G.Sahithi</b> | <b>Approved By : HOD</b>  |

**Tools : Black board, PPTs, Model**

| No. of Periods   | TOPIC   | Date      | Mode of Delivery                      |
|--|---|-----------|---------------------------------------|
| <b>UNIT –I SIMPLE STRESSES AND STRAINS AND STRAIN ENERGY</b>   |   |           |                                       |
| CO1 The student will be able to understand the basic concepts of Strength of Materials and Principles of Elasticity and Plasticity Stress strain behavior of materials and their governing laws. Introduce student the moduli of Elasticity and their relations. |   |           |                                       |
| T1 Strength of Materials by S.S Bhavikatti,<br>T2 Strength of Materials by R.K Bansal, Lakshmi Publications  |   |           |                                       |
| 1  | Introduction to elasticity and plasticity –Types of stresses                              | 12-6-2019 | Lecture interspersed with discussions |
| 2  | Types of strains – Hooke’s law  | 13-6-2019 |                                       |
| 3  | Stress – strain diagram for mild steel  | 14-6-2019 |                                       |
| 4  | Working stress – Factor of safety – Lateral strain, Poisson’s ratio and volumetric strain | 15-6-2019 |                                       |
| 5  | Problems related to stress, strain and elongation   | 17-6-2019 |                                       |
| 6  | Problems on relation between stress strain and youngs modulus                             | 18-6-2019 |                                       |
| 7  | Elastic moduli and the relationship between them  | 19-6-2019 |                                       |
| 8  | Problems on relation between elastic constants  | 20-6-2019 |                                       |
| 9  | Bars of varying section   | 21-6-2019 |                                       |
| 10   | Problems on bars of varying cross section   | 22-6-2019 |                                       |
| 11   | Description of composite bars   | 24-6-2019 |                                       |
| 12   | Problems on composite bars  | 26-6-2019 |                                       |
| 13   | Temperature stresses, problems  | 27-6-2019 |                                       |
| 14   | <b>Strain Energy</b> – Resilience – Gradual, sudden, impact and shock loadings            | 28-6-2019 |                                       |
| 15   | Problems on strain energy   | 29-6-2019 |                                       |
| <b>UNIT –II SHEAR FORCE AND BENDING MOMENT</b>   |   |           |                                       |
| CO2 The student will be able to draw the diagrams indicating the variation of the key performance features like bending moment and shear forces  |   |           |                                       |
| T1 Strength of Materials by S.S Bhavikatti,<br>T2 Strength of Materials by R.K Bansal, Lakshmi Publications  |   |           |                                       |
| 16   | Definition of beam – Types of beams   | 1-7-2019  |                                       |
| 17   | Concept of shear force and bending moment   | 3-7-2019  |                                       |
| 18   | Diferrent types of loadings   | 3-7-2019  |                                       |
| 19   | Conversion of udl, uvl into point loads   | 4-7-2019  |                                       |
| 20   | S.F and B.M diagrams for simply Supported subjected to point loads, u.d.l loadings        | 5-7-2019  |                                       |



|   |  |           |                                       |
|---|--|-----------|---------------------------------------|
| 21  | S.F and B.M diagrams for simply Supported subjected to u.v.l loadings                                      | 6-7-2019  | Lecture interspersed with discussion  |
| 22  | S.F and B.M diagrams for cantilever subjected to point loads, u.d.l loadings                               | 8-7-2019  |                                       |
| 23  | S.F and B.M diagrams for cantilever subjected to u.v.l loadings  | 9-7-2019  |                                       |
| 24  | overhanging beams, Relation between S.F., B.M and rate of loading at a section of a beam                   | 10-7-2019 |                                       |
| 25  | Problems on calculation of SFD,BMD for S.S.B subjected to point load                                       | 11-7-2019 |                                       |
| 26  | Problems on calculation of SFD,BMD for S.S.B subjected to u.d.l  | 12-7-2019 |                                       |
| 27  | Problems on calculation of SFD,BMD for S.S.B subjected to combination loadings                             | 15-7-2019 |                                       |
| 28  | Problems on calculation of SFD,BMD for cantilever subjected to u.d.l                                       | 16-7-2019 |                                       |
| 29  | Problems on calculation of SFD,BMD for cantilever subjected to combination load                            | 17-7-2019 |                                       |
| 30  | Problems on calculation of SFD,BMD for over hanging beams  | 18-7-2019 |                                       |
| 31  | Problems on calculation of SFD,BMD for over hanging subjected beams subjected to combination loading beams | 19-7-2019 |                                       |
| <p><b>UNIT –III FLEXURAL STRESSES</b><br/> CO3 The student will have knowledge of stresses developed in the cross section and bending equations, calculation of section modulus of section for different cross sections</p> <p><b>T1 Strength of Materials by S.S Bhavikatti,</b><br/> <b>T2 Strength of Materials by R.K Bansal, Lakshmi Publication</b></p> |  |           | Lecture interspersed with discussions |
| 32  | Theory of simple bending   | 20-7-2019 |                                       |
| 33  | Assumptions of simple bending  | 22-7-2019 |                                       |
| 34  | Derivation of bending equation: $M/I = f/y = E/R,$   | 23-7-2019 |                                       |
| 35  | Definition of bending stresses   | 24-7-2019 |                                       |
| 36  | Section Modulus  | 25-7-2019 |                                       |
| 37  | Section modulus of rectangular and circular sections (Solid and Hollow),                                   | 26-7-2019 |                                       |
| 38  | Section modulus of I,T sections  | 27-7-2019 |                                       |
| 39  | Section modulus of angle sections  | 29-7-2019 |                                       |
| 40  | Section modulus of channel sections  | 30-7-2019 |                                       |
| 41  | Problems on section modulus for standard sections  | 31-7-2019 |                                       |
| 42  | Problems on section modulus for standard sections  | 31-7-2019 |                                       |
| 43  | Problems on bending stresses   | 1-8-2019  |                                       |
| 44  | Problems on bending stresses   | 1-8-2019  |                                       |
| 45  | Problems on bending stresses   | 1-8-2019  |                                       |

#### UNIT IV SHEAR STRESSES

CO4 Make the student to understand shearing stresses developed in the section and calculation of the shearing stress and also the variation of it.

T1 Strength of Materials by S.S Bhavikatti,

T2 Strength of Materials by R.K Bansal, Lakshmi Publication

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 46 | Derivation of formula for shear stress  | 3-8-2019  | Lecture interspersed with discussions |
| 47 | Introduction to Shear stress distribution                                       | 5-8-2019  |                                       |
| 48 | Shear stress distribution across various beam sections like rectangular section | 6-8-2019  |                                       |
| 49 | Shear stress distribution across various beam sections like circular section    | 8-8-2019  |                                       |
| 50 | Shear stress distribution across various beam sections like triangular section  | 9-8-2019  |                                       |
| 51 | Shear stress distribution across I section                                      | 14-8-2019 |                                       |
| 52 | Shear stress distribution across T section                                      | 28-8-2019 |                                       |
| 53 | Shear stress distribution across built up section                               | 30-8-2019 |                                       |
| 54 | Problems on S.S.D across various standard sections                              | 31-8-2019 |                                       |
| 55 | Problems on S.S.D across various standard sections                              | 4-9-2019  |                                       |
| 56 | Determination of S.S.D in T section   | 5-9-2019  |                                       |
| 57 | Determination of S.S.D in I section   | 5-9-2019  |                                       |
| 58 | Determination of S.S.D in built up sections                                     | 6-9-2019  |                                       |

#### UNIT - V DEFLECTION OF BEAMS

CO5 The student will be able to calculate the deflections in beams under various loading and support conditions.

T1 Strength of Materials by S.S Bhavikatti,

T2 Strength of Materials by R.K Bansal, Lakshmi Publication

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 59 | Bending into a circular arc – slope, deflection and radius of curvature – Differential equation for the elastic line of a beam | 7-9-2019  | Lecture interspersed with discussions |
| 60 | Double integration Method  | 9-9-2019  |                                       |
| 61 | Determination of slope and deflection for cantilever subjected to point loads,   | 11-9-2019 |                                       |
| 62 | Determination of slope and deflection for cantilever subjected to u.d.l  | 12-9-2019 |                                       |
| 63 | Determination of slope and deflection for cantilever subjected to u.v.l  | 13-9-2019 |                                       |
| 64 | Determination of slope and deflection for S.S.B subjected to point loads   | 17-9-2019 |                                       |
| 65 | Determination of slope and deflection for S.S.B subjected to u.d.l   | 18-9-2019 |                                       |
| 66 | Determination of slope and deflection for S.S.B subjected to u.v.l   | 19-9-2019 |                                       |
| 67 | Macaulay's methods and problems on it  | 20-9-2019 |                                       |
| 68 | Mohr's theorem and Moment area method  | 20-9-2019 |                                       |

**UNIT –VI THIN AND THICK CYLINDERS**

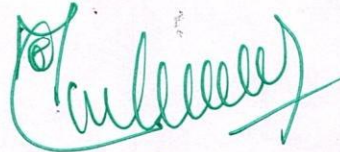
CO6 The student will be able to classify cylinders based on their thickness and to derive equations for measurement of stresses across the cross section when subjected to external pressure.

**T1 Strength of Materials by S.S Bhavikatti,**

**T2 Strength of Materials by R.K Bansal, Lakshmi Publication**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 69 | Introduction to Thin and thick cylinders               | 21-9-2019 | Lecture interspersed with discussions |
| 70 | Derivation of formula for hoop and longitudinal stress | 23-9-2019 |                                       |
| 71 | Volumetric strain                                      | 24-9-2019 |                                       |
| 72 | Changes in diameter volume in cylinders                | 25-9-2019 |                                       |
| 73 | Introduction to thin spherical shells and derivation   | 26-9-2019 |                                       |
| 74 | Lames theory derivation                                | 27-9-2019 |                                       |
| 75 | Hoop and radial stress                                 | 28-9-2019 |                                       |
| 76 | Design of thick cylinders                              | 28-9-2019 |                                       |
| 77 | Compound cylinders and problems                        | 28-9-2019 |                                       |
| 78 | Thick spherical shells                                 | 29-9-2019 |                                       |
| 79 | Problems on cylinders                                  | 29-9-2019 |                                       |
| 80 | Problems on cylinders                                  | 1-10-2019 |                                       |
| 81 | Problems on cylinders                                  | 1-10-2019 |                                       |
| 82 | Revision of previous papers                            | 1-10-2019 |                                       |

G. Sahithi  
10/6/19  
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J. Lakshmi  
10/6/19  
Signature of the HOD

## TENTATIVE LESSON PLAN: (CE)

| Course: BUILDING MATERIALS AND CONSTRUCTION(R1621014)   |  |                    |                                       |
|---|--|--------------------|---------------------------------------|
| Section: Sec A  | Date:10-6-2019   | Page no : 01 of 03 |                                       |
| RevisionNo:00   | Prepared By: A.KRISHNA PRIYA   | Approved By : HOD  |                                       |
| Tools: Black Board, PPTs, Model   |  |                    |                                       |
| No. of Periods  | TOPIC  | Implemented Dates  | Mode of Delivery                      |
| <b>UNIT –I STONES, BRICKS AND TILES</b>   |  |                    |                                       |
| CO1 Describe the types and properties of various building materials -stones, clay products, Timber, metals, cement and concrete and their applications in building industry |  |                    |                                       |
| TB1::BUILDING MATERIALS by S.K.Duggal, New Age Publishers   |  |                    |                                       |
| TB2:: BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009  |  |                    |                                       |
| 1   | Introduction of building stones  | 10-06-2019         | Lecture interspersed with discussions |
| 2   | Properties of building stones  | 12-06-2019         |                                       |
| 3   | Properties of building stones  | 13-06-2019         |                                       |
| 4   | Relation to their structural requirements  | 14-06-2019         |                                       |
| 5   | Classification of stones   | 14-06-2019         |                                       |
| 6   | Classification of stones   | 15-06-2019         |                                       |
| 7   | Stone quarrying  | 17-06-2019         |                                       |
| 8   | Precautions in blasting  | 19-06-2019         |                                       |
| 9   | Dressing of stones   | 20-06-2019         |                                       |
| 10  | Composition of good brick earth  | 21-06-2019         |                                       |
| 11  | various methods of manufacturing of bricks   | 21-06-2019         |                                       |
| 12  | various methods of manufacturing of bricks   | 22-06-2019         |                                       |
| 13  | Characteristics of good tiles  | 24-06-2019         |                                       |
| 14  | Manufacturing methods of tiles   | 26-06-2019         |                                       |
| 15  | Types of tiles   | 27-06-2019         |                                       |
| 16  | Uses of materials like Aluminum, Gypsum, glass, Bituminous materials & Their quality | 28-06-2019         |                                       |
| <b>UNIT –II MASONRY</b>   |  |                    |                                       |
| CO2 Select the appropriate construction methods to meet the local conditions  |  |                    |                                       |
| TB1::BUILDING MATERIALS by S.K.Duggal, New Age Publishers   |  |                    |                                       |
| TB2:: BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009  |  |                    |                                       |
| 17  | Introduction to masonry  | 29-06-2019         | Lecture interspersed with discussions |
| 17  | Types of masonry, English and Flemish bonds  | 01-07-2019         |                                       |
| 18  | Rubble Masonry   | 03-07-2019         |                                       |
| 19  | Ashlar Masonry   | 04-07-2019         |                                       |
| 20  | Cavity & partition walls &   | 05-07-2019         |                                       |
| 21  | WOOD: Structure  | 05-07-2019         |                                       |
| 22  | Properties of wood   | 06-07-2019         |                                       |
| 23  | Seasoning of timber  | 08-07-2019         |                                       |
| 24  | Classification of types of woods used in buildings                                   | 10-07-2019         |                                       |
| 25  | Defects in timber  | 11-07-2019         |                                       |
| 26  | Alternative materials for wood Fiber Reinforced Plastics                             | 12-07-2019         |                                       |

**UNIT –III****LIME AND CEMENT****TB1::BUILDING****MATERIALS by S.K.Duggal, New Age Publishers****TB2::BUILDING CONSTRUCTION by R.Shankar, Falcon publications**

|    |   |            |                                       |
|----|---|------------|---------------------------------------|
| 28 | Introduction  | 12-07-2019 | Lecture interspersed with discussions |
| 29 | Lime: Various ingredients of lime                         | 15-07-2019 |                                       |
| 30 | Constituents of limestone                                 | 17-07-2019 |                                       |
| 31 | classification of lime                                    | 18-07-2019 |                                       |
| 32 | various methods of manufacture of lime                    | 19-07-2019 |                                       |
| 33 | various methods of manufacture of lime                    | 19-07-2019 |                                       |
| 34 | Cement- portland cement, Chemical Composition of cement   | 20-07-2019 |                                       |
| 35 | Hydration Setting times & Fineness of cement              | 22-07-2019 |                                       |
| 36 | Various types of cement & their properties                | 24-07-2019 |                                       |
| 37 | A Various field & laboratory tests for Cement             | 25-07-2019 |                                       |
| 38 | Various ingredients of cement concrete & Their importance | 26-07-2019 |                                       |
| 39 | Various tests for concrete                                | 26-07-2019 |                                       |
| 40 | Tutorial  | 27-07-2019 |                                       |

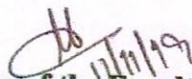
**UNIT –IV****BUILDING COMPONENTS****CO3 Describe the various components of buildings****Describe the various types expansion and construction joints and their construction****Describe the various types of stairs and stair cases and their locations, sizes and materials including fire escapes and also lifts and escalators.****T2 BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009**

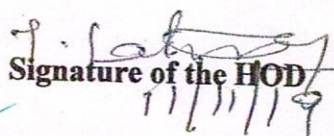
|    |  |            |                                       |
|----|--|------------|---------------------------------------|
| 41 | Introduction to building components, Lintels               | 14-08-2019 | Lecture interspersed with discussions |
| 42 | Arches   | 16-08-2019 |                                       |
| 43 | Arches   | 16-08-2019 |                                       |
| 44 | vaults   | 17-08-2019 |                                       |
| 45 | stair cases  | 19-08-2019 |                                       |
| 46 | Different types of stair cases                             | 21-08-2019 |                                       |
| 47 | Different types of floors                                  | 22-08-2019 |                                       |
| 48 | Concrete floor Mosaic floor, Terrazzo floor ,Pitched roofs | 24-08-2019 |                                       |
| 49 | Flat roofs   | 26-08-2019 |                                       |
| 50 | Lean to roofs  | 28-08-2019 |                                       |
| 51 | Coupled Roofs  | 29-08-2019 |                                       |
| 52 | King post Trusses, Queen post Trusses                      | 30-08-2019 |                                       |
| 53 | R.C.C Roofs, Madras Terrace                                | 30-08-2019 |                                       |
| 54 | Prefabricated Roofs  | 31-08-2019 |                                       |
| 55 | Tutorial   |            |                                       |


**UNIT –V****FINISHINGS****CO4 Describe the various methods of shuttering, scaffolding and centering****Select the appropriate' building materials to suit to the structural requirements including exposure conditions****TB BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009**

|    |   |            |  |
|----|---|------------|--|
| 56 | Introduction to finishing's                                 | 04-09-2019 |  |
| 57 | Damp Proofing materials and Water proofing materials , Uses | 05-09-2019 |  |

|  |  |            |                                       |
|--|--|------------|---------------------------------------|
| 59   | Pointing   | 06-09-2019 | Lecture interspersed with discussions |
| 60   | White washing  | 06-09-2019 |                                       |
| 61   | Distempering   | 07-09-2019 |                                       |
| 62   | Paints: Constituents of a paint ,Types of paints     | 09-9-2019  |                                       |
| 63   | Painting of new /old wood, Varnish                   | 11-09-2019 |                                       |
| 64   | Form Work, Scaffoldings                              | 12-09-2019 |                                       |
| <b>UNIT-VI AGGEGATES</b>                                       |  |            |                                       |
| <b>TB BUILDING MATERIALS by S.K.Duggal, New Age Publishers</b> |  |            |                                       |
| 65   | Classification of aggregate: Coarse& Fine aggregates | 16-09-2019 | Lecture interspersed with discussions |
| 66   | Particle shape & texture                             | 18-09-2019 |                                       |
| 67   | Strength of aggregates                               | 19-09-2019 |                                       |
| 68   | Specific gravity                                     | 20-09-2019 |                                       |
| 69   | Bulk Density   | 20-09-2019 |                                       |
| 70   | Porosity & Absorption                                | 21-09-2019 |                                       |
| 71   | Moisture content of Aggregate                        | 23-09-2019 |                                       |
| 72   | Bulking of sand                                      | 25-09-2019 |                                       |
| 73   | Sieve analysis                                       | 26-09-2019 |                                       |
| 74   | Tutorial   | 27-09-2019 |                                       |

  
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## TENTATIVE LESSON PLAN: (CE)

|   |   |                           |                                       |
|---|---|---------------------------|---------------------------------------|
| <b>Course Title:</b> BUILDING MATERIALS AND CONSTRUCTION(R1621014)  |   |                           |                                       |
| <b>Section: Sec B</b>   | <b>Date:10-6-2019</b>   | <b>Page no : 01 of 03</b> |                                       |
| <b>RevisionNo:00</b>  | <b>Prepared By: A.ANOOP KUMAR</b>   | <b>Approved By : HOD</b>  |                                       |
| <b>Tools: Black Board, PPTs</b>   |   |                           |                                       |
| <b>No. of Periods</b>   | <b>TOPIC</b>  | <b>Implemented Dates</b>  | <b>Mode of Delivery</b>               |
| <b>UNIT –I STONES, BRICKS AND TILES</b>   |   |                           |                                       |
| CO1 Describe the types and properties of various building materials -stones, clay products, Timber, metals, cement and concrete and their applications in building industry |   |                           |                                       |
| TB1::BUILDING MATERIALS by S.K.Duggal, New Age Publishers   |   |                           |                                       |
| TB2:: BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009  |   |                           |                                       |
| 1   | Introduction of building stones   | 10-6-2019                 | Lecture interspersed with discussions |
| 2   | Properties of building stones   | 11-6-2019                 |                                       |
| 3   | Properties of building stones   | 12-6-2019                 |                                       |
| 4   | Relation to their structural requirements   | 17-6-2019                 |                                       |
| 5   | Classification of stones  | 18-6-2019                 |                                       |
| 6   | Classification of stones  | 19-6-2019                 |                                       |
| 7   | Stone quarrying   | 20-6-2019                 |                                       |
| 8   | Precautions in blasting   | 21-6-2019                 |                                       |
| 9   | Dressing of stones  | 22-6-2019                 |                                       |
| 10  | Composition of good brick earth   | 24-6-2019                 |                                       |
| 11  | various methods of manufacturing of bricks  | 25-6-2019                 |                                       |
| 12  | various methods of manufacturing of bricks  | 26-6-2019                 |                                       |
| 13  | Characteristics of good tiles   | 27-6-2019                 |                                       |
| 14  | Manufacturing methods of tiles  | 28-6-2019                 |                                       |
| 15  | Types of tiles  | 29-6-2019                 |                                       |
| 16  | Uses of materials like Aluminum,Gypsum, glass, Bituminous materials & Their quality | 1-7-2019                  |                                       |
| <b>UNIT –II MASONRY</b>   |   |                           |                                       |
| CO2 Select the appropriate construction methods to meet the local conditions  |   |                           |                                       |
| TB1::BUILDING MATERIALS by S.K.Duggal, New Age Publishers   |   |                           |                                       |
| TB2:: BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009  |   |                           |                                       |
| 17  | Types of masonry, English and Flemish bonds   | 2-7-2019                  | Lecture interspersed with discussions |
| 18  | Rubble Masonry  | 3-7-2019                  |                                       |
| 19  | Ashlar Masonry  | 4-7-2019                  |                                       |
| 20  | Cavity & partition walls &  | 5-7-2019                  |                                       |
| 21  | WOOD: Structure   | 6-7-2019                  |                                       |
| 22  | Properties of wood  | 9-7-2019                  |                                       |
| 23  | Seasoning of timber   | 10-7-2019                 |                                       |
| 24  | Classification of types of woods used in buildings                                  | 11-7-2019                 |                                       |
| 25  | Defects in timber   | 12-7-2019                 |                                       |
| 26  | Alternative materials for wood Fiber  | 13-7-2019                 |                                       |

|  |  |           |                                       |
|--|--|-----------|---------------------------------------|
| 27   | Tutorial   | 18-7-2019 |                                       |
| <b>UNIT –III LIME AND CEMENT</b>   |  |           |                                       |
| <b>TB1::BUILDING MATERIALS by S.K.Duggal, New Age Publishers</b>   |  |           |                                       |
| <b>TB2::BUILDING CONSTRUCTION by R.Shankar, Falcon publications</b>  |  |           |                                       |
| 28   | Introduction   | 19-7-2019 | Lecture interspersed with discussions |
| 29   | Lime: Various ingredients of lime                          | 20-7-2019 |                                       |
| 30   | Constituents of limestone                                  | 22-7-2019 |                                       |
| 31   | classification of lime                                     | 23-7-2019 |                                       |
| 32   | various methods of manufacture of lime                     | 24-7-2019 |                                       |
| 33   | various methods of manufacture of lime                     | 25-7-2019 |                                       |
| 34   | Cement-portland cement, Chemical Composition of cement     | 26-7-2019 |                                       |
| 35   | Hydration Setting times & Fineness of cement               | 27-7-2019 |                                       |
| 36   | Various types of cement & their properties                 | 29-7-2019 |                                       |
| 37   | A Various field & laboratory tests for Cement              | 31-7-2019 |                                       |
| 38   | Various ingredients of cement concrete & Their importance  | 01-8-2019 |                                       |
| 39   | Various tests for concrete                                 | 02-8-2019 |                                       |
| 40   | Tutorial   | 03-8-2019 |                                       |
| <b>UNIT –IV BUILDING COMPONENTS</b>  |  |           |                                       |
| <b>CO3 Describe the various components of buildings</b>  |  |           |                                       |
| <b>Describe the various types expansion and construction joints and their construction</b>   |  |           |                                       |
| <b>Describe the various types of stairs and stair cases and their locations, sizes and materials including fire escapes and also lifts and escalators.</b> |  |           |                                       |
| <b>T2 BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009</b>   |  |           |                                       |
| 41   | Lintels  | 16-8-2019 | Lecture interspersed with discussions |
| 42   | Arches   | 19-8-2019 |                                       |
| 43   | vaults   | 20-8-2019 |                                       |
| 44   | stair cases  | 21-8-2019 |                                       |
| 45   | Different types of stair cases                             | 22-8-2019 |                                       |
| 46   | Different types of floors                                  | 24-8-2019 |                                       |
| 47   | Concrete floor Mosaic floor, Terrazzo floor ,Pitched roofs | 26-8-2019 |                                       |
| 48   | Flat roofs   | 27-8-2019 |                                       |
| 49   | Lean to roofs  | 28-8-2019 |                                       |
| 50   | Coupled Roofs  | 30-8-2019 |                                       |
| 51   | King post Trusses, Queen post Trusses                      | 31-8-2019 |                                       |
| 52   | R.C.C Roofs, Madras Terrace                                | 03-9-2019 |                                       |
| 53   | Prefabricated Roofs  | 04-9-2019 |                                       |
| 54   | Tutorial   | 05-9-2019 |                                       |
| <b>UNIT –V FINISHINGS</b>  |  |           |                                       |
| <b>CO4 Describe the various methods of shuttering, scaffolding and centering</b>   |  |           |                                       |
| <b>Select the appropriate' building materials to suit to the structural requirements including exposure conditions</b>                                     |  |           |                                       |
| <b>TB BUILDING CONSTRUCTION by B.C.Punmia, laxmi publications-2009</b>   |  |           |                                       |
| 55   | Introduction   | 06-9-2019 |                                       |



|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 56 | Damp proofing materials and water proofing materials , Uses | 07-9-2019 | Lecture interspersed with discussions |
| 57 | Plastering  | 09-9-2019 |                                       |
| 58 | Pointing  | 11-9-2019 |                                       |
| 59 | White washing   | 12-9-2019 |                                       |
| 60 | Distempering  | 13-9-2019 |                                       |
| 61 | Paints: Constituents of a paint ,Types of paints            | 16-9-2019 |                                       |
| 62 | Painting of new /old wood, Varnish                          | 17-9-2019 |                                       |
| 63 | Form Work, Scaffoldings                                     | 18-9-2019 |                                       |
| 64 | Tutorial  | 19-9-2019 |                                       |

**UNIT-VI                      AGGEGATES**  
**TB BUILDING MATERIALS by S.K.Duggal, New Age Publishers**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 65 | Classification of aggregate: Coarse& Fine aggregates | 20-9-2019 | Lecture interspersed with discussions |
| 66 | Particle shape & texture                             | 21-9-2019 |                                       |
| 67 | Strength of aggregates                               | 23-9-2019 |                                       |
| 68 | Specific gravity                                     | 24-9-2019 |                                       |
| 69 | Bulk Density   | 25-9-2019 |                                       |
| 70 | Porosity & Absorption                                | 26-9-2019 |                                       |
| 71 | Moisture content of Aggregate                        | 26-9-2019 |                                       |
| 72 | Bulking of sand                                      | 27-9-2019 |                                       |
| 73 | Sieve analysis                                       | 28-9-2019 |                                       |
| 74 | Tutorial   | 28-9-2019 |                                       |

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 10/6/19

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**Signature of the HOD**  
 10/6/19

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**ENIKEPADU, VIJAYAWADA-521 108**

## TENTATIVE LESSON PLAN: R1621015

|  |   |                           |                                       |
|--|---|---------------------------|---------------------------------------|
| <b>Course Title:</b> SURVEYING (R1621015)  |   |                           |                                       |
| <b>Section: Sec B</b>  | <b>Date:10-6-2019</b>                                     | <b>Page no : 01 of 03</b> |                                       |
| <b>RevisionNo:00</b>   | <b>Prepared By: R. DURGA RAO</b>                          | <b>Approved By : HOD</b>  |                                       |
| <b>Tools: Black Board, PPTs, Model</b>   |   |                           |                                       |
| <b>No. of Periods</b>  | <b>TOPIC</b>  | <b>Implemented Dates</b>  | <b>Mode of Delivery</b>               |
| <b>UNIT –I INTRODUCTION:</b><br><b>CO1: To demonstrate the basic surveying skills</b><br><b>TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers</b><br><b>TB2:: SURVEYING vol 1&amp;2 by B.C.Punmia</b>            |   |                           |                                       |
| 1  | Define of surveying, Over view of plane surveying( chain) | 10-6-2019                 | Lecture interspersed with discussions |
| 2  | Over view of plane surveying( compass)                    | 18-6-2019                 |                                       |
| 3  | Over view of plane surveying( plane table)                | 19-6-2019                 |                                       |
| 4  | Objectives of surveying                                   | 20-6-2019                 |                                       |
| 5  | Principles and classifications                            | 21-6-2019                 |                                       |
| 6  | Errors in survey measurements                             | 24-6-2019                 |                                       |
| 7  | Problems on chain   | 26-6-2019                 |                                       |
| 8  | Problems on chain   | 28-6-2019                 |                                       |
| 9  | Problems on chain   | 29-6-2019                 |                                       |
| 10   | Problems on errors in survey measurements                 | 1-7-2019                  |                                       |
| 11   | Problems on errors in survey measurements                 | 3-7-2019                  |                                       |
| <b>UNIT –II DISTANCES AND DIRECTIONS</b><br><b>CO2: To use various surveying instruments</b><br><b>TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers</b><br><b>TB2:: SURVEYING vol 1&amp;2 by B.C.Punmia</b>     |   |                           |                                       |
| 17   | Electronic distance measurements                          | 6-7-2019                  | Lecture interspersed with discussions |
| 18   | Principles of electro optical EDM                         | 7-7-2019                  |                                       |
| 19   | Errors and corrections to linear measurements             | 9-7-2019                  |                                       |
| 20   | Compass survey ,meridians, azimuths and bearings          | 10-7-2019                 |                                       |
| 21   | Declination and computation of angle                      | 10-7-2019                 |                                       |
| 22   | Traversing –purpose, types of traverse                    | 11-7-2019                 |                                       |
| 23   | Traverse computation- traverse adjustments                | 11-7-2019                 |                                       |
| 24   | Introduction to omitted measurements                      | 12-7-2019                 |                                       |
| 25   | Problems on compass (closed traverse and open traverse)   | 12-7-2019                 |                                       |
| 26   | Problems on compass                                       | 15-7-2019                 |                                       |
| 27   | Problems on distances and directions                      | 16-7-2019                 |                                       |
| <b>UNIT –III LEVELING AND COUNTOURING</b><br><b>CO3: To perform various methods of surveying</b><br><b>TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers</b><br><b>TB2:: SURVEYING vol 1&amp;2 by B.C.Punmia</b> |   |                           |                                       |
| 28   | Introduction  | 17-7-2019                 |                                       |

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 28 | Introduction                                    | 17-7-2019 | Lecture interspersed with discussions |
| 29 | Concept and terminology                         | 18-7-2019 |                                       |
| 30 | Leveling instrument                             | 19-7-2019 |                                       |
| 31 | Temporary and permanent adjustments of leveling | 20-7-2019 |                                       |
| 32 | Introduction of contours                        | 22-7-2019 |                                       |
| 33 | Characteristics and uses of contours            | 23-7-2019 |                                       |
| 34 | Methods conducting contour survey               | 25-7-2019 |                                       |
| 35 | Problems on HI method                           | 26-7-2019 |                                       |
| 36 | Problems on rise and fall method                | 27-7-2019 |                                       |
| 37 | Problems on distance and elevation method       | 29-7-2019 |                                       |
| 38 | Problems on distance and elevation method       | 1-8-2019  |                                       |

#### UNIT IV THEODOLITE

**CO4: To compute various data required for various methods of surveying**  
**TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers**  
**TB2:: SURVEYING vol 1&2 by B.C.Punmia**

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 41 | Description of theodolite   | 9-8-2019  | Lecture interspersed with discussions |
| 42 | Principles and uses   | 9-8-2019  |                                       |
| 43 | Adjustments-temporary and permanent                                 | 13-8-2019 |                                       |
| 44 | Measurements of horizontal angles                                   | 14-8-2019 |                                       |
| 45 | Measurements of vertical angles                                     | 16-8-2019 |                                       |
| 46 | Principles of electronic theodolite                                 | 17-8-2019 |                                       |
| 47 | Introduction to trigonometric leveling                              | 28-8-2019 |                                       |
| 48 | Tangential methods of tachometry                                    | 30-8-2019 |                                       |
| 49 | Distance and elevation formulae for staff held in vertical position | 30-8-2019 |                                       |
| 50 | Distance and elevation formulae for staff held in vertical position | 31-8-2019 |                                       |

#### UNIT – V CURVES

**CO5: To integrate the knowledge and produce topographical maps**  
**TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers**  
**TB2:: SURVEYING vol 1&2 by B.C.Punmia**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 55 | Introduction                           | 03-9-2019 | Lecture interspersed with discussions |
| 56 | Types of curves                        | 04-9-2019 |                                       |
| 57 | Design and setting out- simple curve   | 05-9-2019 |                                       |
| 58 | Design and setting out- compound curve | 6-9-2019  |                                       |
| 59 | Introduction to geodetic surveying     | 6-9-2019  |                                       |
| 60 | Total station and GPS                  | 9-9-2019  |                                       |
| 61 | Problems simple curve                  | 11-9-2019 |                                       |
| 62 | Problems compound curve                | 12-9-2019 |                                       |

#### UNIT –VI COMPUTATION OF AREAS AND VOLUMES

**CO6 : To integrate the knowledge and produce topographical maps**  
**TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers**  
**TB2:: SURVEYING vol 1&2 by B.C.Punmia**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 65 | Introduction :areas from field notes                 | 16-9-2019 | Lecture interspersed with discussions |
| 66 | Computation of areas along irregular boundaries      | 17-9-2019 |                                       |
| 67 | Computation of areas along regular boundaries        | 18-9-2019 |                                       |
| 68 | Embankments and cutting for a level section          | 19-9-2019 |                                       |
| 69 | Two level section with and without transverse slopes | 20-9-2019 |                                       |
| 70 | Determination of the capacity of reservoir           | 24-9-2019 |                                       |
| 71 | Volume of barrow pits                                | 25-9-2019 |                                       |
| 72 | Problems volume of barrow pits                       | 26-9-2019 |                                       |
| 73 | Problems volume of barrow pits                       | 27-9-2019 |                                       |

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T. Lakshmi  
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## TENTATIVE LESSON PLAN: (CE)

|  |   |                           |                                       |
|--|---|---------------------------|---------------------------------------|
| <b>Course Title:</b> SURVEYING (R1621015)  |   |                           |                                       |
| <b>Section: Sec B</b>  | <b>Date:10-6-2019</b>                                     | <b>Page no : 01 of 03</b> |                                       |
| <b>RevisionNo:00</b>   | <b>Prepared By: K. RUPA SRI</b>                           | <b>Approved By : HOD</b>  |                                       |
| <b>Tools: Black Board, PPTs, Model</b>   |   |                           |                                       |
| <b>No. of Periods</b>  | <b>TOPIC</b>  | <b>Implemented Dates</b>  | <b>Mode of Delivery</b>               |
| <b>UNIT –I INTRODUCTION:</b><br><b>CO1: To demonstrate the basic surveying skills</b><br><b>TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers</b><br><b>TB2:: SURVEYING vol 1&amp;2 by B.C.Punmia</b>        |   |                           |                                       |
| 1  | Define of surveying, Over view of plane surveying( chain) | 10-6-2019                 | Lecture interspersed with discussions |
| 2  | Over view of plane surveying( compass)                    | 18-6-2019                 |                                       |
| 3  | Over view of plane surveying( plane table)                | 19-6-2019                 |                                       |
| 4  | Objectives of surveying                                   | 20-6-2019                 |                                       |
| 5  | Principles and classifications                            | 21-6-2019                 |                                       |
| 6  | Errors in survey measurements                             | 24-6-2019                 |                                       |
| 7  | Problems on chain   | 26-6-2019                 |                                       |
| 8  | Problems on chain   | 28-6-2019                 |                                       |
| 9  | Problems on chain   | 29-6-2019                 |                                       |
| 10   | Problems on errors in survey measurements                 | 1-7-2019                  |                                       |
| 11   | Problems on errors in survey measurements                 | 3-7-2019                  |                                       |
| <b>UNIT –II DISTANCES AND DIRECTIONS</b><br><b>CO2: To use various surveying instruments</b><br><b>TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers</b><br><b>TB2:: SURVEYING vol 1&amp;2 by B.C.Punmia</b> |   |                           |                                       |
| 17   | Electronic distance measurements                          | 6-7-2019                  | Lecture interspersed with discussions |
| 18   | Principles of electro optical EDM                         | 7-7-2019                  |                                       |
| 19   | Errors and corrections to linear measurements             | 9-7-2019                  |                                       |
| 20   | Compass survey ,meridians, azimuths and bearings          | 10-7-2019                 |                                       |
| 21   | Declination and computation of angle                      | 10-7-2019                 |                                       |
| 22   | Traversing –purpose, types of traverse                    | 11-7-2019                 |                                       |
| 23   | Traverse computation- traverse adjustments                | 11-7-2019                 |                                       |
| 24   | Introduction to omitted measurements                      | 12-7-2019                 |                                       |
| 25   | Problems on compass (closed traverse and open traverse)   | 12-7-2019                 |                                       |
| 26   | Problems on compass                                       | 15-7-2019                 |                                       |
| 27   | Problems on distances and directions                      | 16-7-2019                 |                                       |
| <b>UNIT –III LEVELING AND COUNTOURING</b><br><b>CO3: To perform various methods of surveying</b><br><b>TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers</b>   |   |                           |                                       |

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 28 | Introduction                                    | 17-7-2019 | Lecture interspersed with discussions |
| 29 | Concept and terminology                         | 18-7-2019 |                                       |
| 30 | Leveling instrument                             | 19-7-2019 |                                       |
| 31 | Temporary and permanent adjustments of leveling | 20-7-2019 |                                       |
| 32 | Introduction of contours                        | 22-7-2019 |                                       |
| 33 | Characteristics and uses of contours            | 23-7-2019 |                                       |
| 34 | Methods conducting contour survey               | 25-7-2019 |                                       |
| 35 | Problems on HI method                           | 26-7-2019 |                                       |
| 36 | Problems on rise and fall method                | 27-7-2019 |                                       |
| 37 | Problems on distance and elevation method       | 29-7-2019 |                                       |
| 38 | Problems on distance and elevation method       | 1-8-2019  |                                       |

**UNIT IV THEODOLITE**

**CO4: To compute various data required for various methods of surveying**  
**TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers**  
**TB2:: SURVEYING vol 1&2 by B.C.Punmia**

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 41 | Description of theodolite   | 9-8-2019  | Lecture interspersed with discussions |
| 42 | Principles and uses   | 9-8-2019  |                                       |
| 43 | Adjustments-temporary and permanent                                 | 13-8-2019 |                                       |
| 44 | Measurements of horizontal angles                                   | 14-8-2019 |                                       |
| 45 | Measurements of vertical angles                                     | 16-8-2019 |                                       |
| 46 | Principles of electronic theodolite                                 | 17-8-2019 |                                       |
| 47 | Introduction to trigonometric leveling                              | 28-8-2019 |                                       |
| 48 | Tangential methods of tachometry                                    | 30-8-2019 |                                       |
| 49 | Distance and elevation formulae for staff held in vertical position | 30-8-2019 |                                       |
| 50 | Distance and elevation formulae for staff held in vertical position | 31-8-2019 |                                       |

**UNIT – V CURVES**

**CO5: To integrate the knowledge and produce topographical maps**  
**TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers**  
**TB2:: SURVEYING vol 1&2 by B.C.Punmia**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 55 | Introduction                           | 03-9-2019 | Lecture interspersed with discussions |
| 56 | Types of curves                        | 04-9-2019 |                                       |
| 57 | Design and setting out- simple curve   | 05-9-2019 |                                       |
| 58 | Design and setting out- compound curve | 6-9-2019  |                                       |
| 59 | Introduction to geodetic surveying     | 6-9-2019  |                                       |
| 60 | Total station and GPS                  | 9-9-2019  |                                       |
| 61 | Problems simple curve                  | 11-9-2019 |                                       |
| 62 | Problems compound curve                | 12-9-2019 |                                       |

**UNIT –VI COMPUTATION OF AREAS AND VOLUMES**

**CO6 : To integrate the knowledge and produce topographical maps**  
**TB1::TEXT BOOK OF SURVEYING by S.K.Duggal, New Age Publishers**  
**TB2:: SURVEYING vol 1&2 by B.C.Punmia**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 65 | Introduction :areas from field notes                 | 16-9-2019 | Lecture interspersed with discussions |
| 66 | Computation of areas along irregular boundaries      | 17-9-2019 |                                       |
| 67 | Computation of areas along regular boundaries        | 18-9-2019 |                                       |
| 68 | Embankments and cutting for a level section          | 19-9-2019 |                                       |
| 69 | Two level section with and without transverse slopes | 20-9-2019 |                                       |
| 70 | Determination of the capacity of reservoir           | 24-9-2019 |                                       |
| 71 | Volume of barrow pits                                | 25-9-2019 |                                       |
| 72 | Problems volume of barrow pits                       | 26-9-2019 |                                       |
| 73 | Problems volume of barrow pits                       | 27-9-2019 |                                       |

*K. Rupa Sri*

Signature of the Faculty

*J. Lakshmi*  
Signature of the HOD

20/11/19

*[Handwritten Signature]*

PRINCIPAL

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# TENTATIVE LESSON PLAN: CIVIL R1621016

## FLUID MECHANICS

|  |   |                          |
|--|---|--------------------------|
| <b>Course Title: FLUID MECHANICS (CIVIL)</b> |   |                          |
| <b>Section: Sec A</b>                        | <b>Date: 10-06-2019</b>                 | <b>Page No: 01 of 03</b> |
| <b>Revision No: 00</b>                       | <b>Prepared By: J PURNA CHANDRA RAO</b> | <b>Approved By: HOD</b>  |

**Tools: Black board, power point presentations**

| No. of Periods  | TOPIC   | Tentative date | Mode of Delivery                      |
|---|---|----------------|---------------------------------------|
| <b>UNIT 1: INTRODUCTION TO FLUID MECHANICS</b>  |   |                |                                       |
| <b>CO1: UNDERSTAND THE VARIOUS PROPERTIES OF FLUIDS AND THEIR INFLUENCE ON FLUID MOTION</b> |   |                |                                       |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>       |   |                |                                       |
| 1   | <b>Properties of fluid</b>                            | 12/06/2019     | Lecture interspersed with discussions |
| 2   | Gravity, viscosity, surface tension, vapour pressure  | 13/06/2019     |                                       |
| 3   | Numerical problems                                    | 17/06/2019     |                                       |
| 4   | Mechanics of fluid motion                             | 18/06/2019     |                                       |
| 5   | Pressure at point, Pascal's law                       | 19/06/2019     |                                       |
| 6   | Hydraulic law-atmospheric, gauge and vacuum pressures | 20/06/2019     |                                       |
| 7   | Numerical problems                                    | 24/06/2019     |                                       |
| 8   | Measurement of pressure                               | 25/06/2019     |                                       |
| 9   | Pressure gauges                                       | 26/06/2019     |                                       |
| 10  | Differential and Micro manometers                     | 27/06/2019     |                                       |
| 11  | Numerical problems                                    | 28/06/2019     |                                       |
| 12  | Mechanical gauges                                     | 29/06/2019     |                                       |
| 13  | Tutorial  | 01/07/2019     |                                       |
| <b>UNIT 2: HYDROSTATICS AND FLUID KINEMATICS</b>  |   |                |                                       |
| <b>CO2: CALCULATE THE FORCES THAT ACT ON SUBMERGED PLANES AND CURVES.</b>                   |   |                |                                       |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>       |   |                |                                       |
| 14  | <b>Hydrostatics- Introduction</b>                     | 02/07/2019     | Lecture interspersed with discussions |
| 15  | Hydrostatic law, Total Pressure Center of pressure    | 03/07/2019     |                                       |
| 16  | Moments of Inertia, Geometric properties              | 04/07/2019     |                                       |
| 17  | Hydrostatic forces on submerged plane-Horizontal      | 05/07/2019     |                                       |
| 18  | Hydrostatic forces on submerged plane-Vertical        | 06/07/2019     |                                       |
| 19  | Hydrostatic forces on submerged plane-Inclined        | 08/07/2019     |                                       |
| 20  | Hydrostatic forces on submerged Curved Surface        | 10/07/2019     |                                       |
| 21  | Numerical problems                                    | 11/07/2019     |                                       |
| 22  | Archimedes Principle, Metacenter                      | 12/07/2019     |                                       |
| 23  | Fluid flow, stream, streak, path line                 | 12/07/2019     |                                       |
| 24  | Classification of flows                               | 15/07/2019     |                                       |
| 25  | Continuity equation- 1,2,3 D                          | 16/07/2019     |                                       |



|  |   |            |  |
|--|---|------------|--|
| 26   | Flow Nets                                       | 17/07/2019 |  |
| 27   | Numerical problems                              | 18/07/2019 |  |
| 28   | Stream and velocity potential function          | 19/07/2019 |  |
| 29   | Tutorial  | 20/07/2019 |  |
| <b>UNIT 3: FLUID DYNAMICS</b>  |   |            |  |
| <b>CO3: IDENTIFY AND ANALYSE VARIOUS TYPES OF FLUID FLOWS.</b>   |   |            |  |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>  |   |            |  |
| 30   | <b>Fluid Dynamics</b> - Surface and body forces | 22/07/2019 | Lecture interspersed<br>with discussions |
| 31   | Euler's equation of motion                      | 23/07/2019 |  |
| 32   | Bernoulli's equation                            | 24/07/2019 |  |
| 33   | Numerical problems                              | 24/07/2019 |  |
| 34   | Momentum equation                               | 25/07/2019 |  |
| 35   | Forces on Pipe bend                             | 26/07/2019 |  |
| 36   | Numerical problems & Applications               | 29/07/2019 |  |
| 37   | Tutorials                                       | 30/07/2019 |  |
| <b>UNIT 4: LAMINAR FLOW, TURBULENT FLOW AND CLOSED CONDUIT FLOW</b>  |   |            |  |
| <b>CO4: APPLY THE INTEGRAL FORMS OF THE THREE FUNDAMENTAL LAWS OF FLUID MECHANICS TO TURBULENT AND LAMINAR FLOW THROUGH PIPES AND DUCTS IN ORDER TO PREDICT RELEVANT PRESSURES, VELOCITIES AND FORCES.</b> |   |            |  |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>  |   |            |  |
| 38   | <b>Flows</b> -Reynolds experiment               | 31/07/2019 | Lecture interspersed<br>with discussions |
| 39   | Characteristics of laminar and turbulent flow   | 31/07/2019 |  |
| 40   | Shear and velocity distribution                 | 01/08/2019 |  |
| 41   | Laws, Hagen Poiseuille's formula                | 02/08/2019 |  |
| 42   | Flow between plates                             | 03/08/2019 |  |
| 43   | Long tubes, problems                            | 05/08/2019 |  |
| 44   | Hydrodynamically smooth and rough boundary      | 06/08/2019 |  |
| 45   | Darcy's equation                                | 07/08/2019 |  |
| 46   | Flow through Pipes and Major, minor losses      | 08/08/2019 |  |
| 47   | Pipes in series, parallel                       | 09/08/2019 |  |
| 48   | Hardy Cross method                              | 13/08/2019 |  |
| 49   | TEL, HGL, moody chart                           | 14/08/2019 |  |
| 50   | Equivalent Pipes                                | 26/08/2019 |  |
| 51   | Numerical Problems                              | 27/08/2019 |  |
| 52   | Tutorials                                       | 28/08/2019 |  |
| <b>UNIT 5: MEASUREMENT OF FLOW</b>   |   |            |  |
| <b>CO5: MEASURE THE QUANTITIES OF FLUID FLOWING IN PIPES, TANK AND CHANNELS.</b>   |   |            |  |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>  |   |            |  |
| 53   | <b>Measurement Of Flow</b> -Pitot tube          | 29/08/2019 | Lecture interspersed<br>with discussions |
| 54   | Orificemeter                                    | 30/08/2019 |  |
| 55   | Venturimeter                                    | 31/08/2019 |  |
| 56   | Classification of orifice                       | 03/09/2019 |  |
| 57   | Flow over rectangular notch                     | 04/09/2019 |  |
| 58   | Problems  | 05/09/2019 |  |

|    |                      |            |  |
|----|----------------------|------------|--|
| 59 | V- notch             | 06/09/2019 |  |
| 60 | Problems             | 07/09/2019 |  |
| 61 | Trapezoidal, stepped | 09/09/2019 |  |
| 62 | Numerical Problems   | 11/09/2019 |  |
| 63 | Numerical Problems   | 12/09/2019 |  |
| 64 | Broad crested weir   | 16/09/2019 |  |
| 65 | Problems             | 17/09/2019 |  |
| 66 | Tutorial             | 18/09/2019 |  |

**UNIT 6: BOUNDARY LAYER THEORY**

**CO6: KNOW THE CONCEPT OF BOUNDARY LAYER THEORY**

**TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS**

|    |                                     |            |  |
|----|-------------------------------------|------------|--|
| 67 | <b>Boundary Layer Theory</b>        | 19/09/2019 | Lecture interspersed<br>with discussions |
| 68 | Concept, Prandtl contribution       | 20/09/2019 |  |
| 69 | Characteristics of B.L              | 21/09/2019 |  |
| 70 | Thickness of B.L                    | 23/09/2019 |  |
| 71 | Vonkarman Integral Equation         | 24/09/2019 |  |
| 72 | Seperation, control of B.L          | 25/09/2019 |  |
| 73 | Drag , lift, Magnus effect          | 25/09/2019 |  |
| 74 | Numerical Problems- Tutorial        | 26/09/2019 |  |
| 75 | Summary on FM & Old Question papers | 26/09/2019 |  |

*Jee*  
26/9/2019  
Signature of the Faculty

*T. Lakshay*  
Signature of the HOD  
26/9/19

*M. Srinivas*

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# TENTATIVE LESSON PLAN: CIVIL R1621016

## FLUID MECHANICS

|  |   |                          |
|--|---|--------------------------|
| <b>Course Title: FLUID MECHANICS (CIVIL)</b> |   |                          |
| <b>Section: Sec B</b>                        | <b>Date: 10-06-2019</b>                 | <b>Page No: 01 of 03</b> |
| <b>Revision No: 00</b>                       | <b>Prepared By: J PURNA CHANDRA RAO</b> | <b>Approved By: HOD</b>  |

**Tools: Black board, power point presentations**

| No. of Periods  | TOPIC   | Tentative date | Mode of Delivery                      |
|---|---|----------------|---------------------------------------|
| <b>UNIT 1: INTRODUCTION TO FLUID MECHANICS</b>  |   |                |                                       |
| <b>CO1: UNDERSTAND THE VARIOUS PROPERTIES OF FLUIDS AND THEIR INFLUENCE ON FLUID MOTION</b> |   |                |                                       |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>       |   |                |                                       |
| 1   | <b>Properties of fluid</b>                            | 12/06/2019     | Lecture interspersed with discussions |
| 2   | Gravity, viscosity, surface tension, vapour pressure  | 13/06/2019     |                                       |
| 3   | Numerical problems                                    | 17/06/2019     |                                       |
| 4   | Mechanics of fluid motion                             | 18/06/2019     |                                       |
| 5   | Pressure at point, Pascal's law                       | 19/06/2019     |                                       |
| 6   | Hydraulic law-atmospheric, gauge and vacuum pressures | 20/06/2019     |                                       |
| 7   | Numerical problems                                    | 24/06/2019     |                                       |
| 8   | Measurement of pressure                               | 25/06/2019     |                                       |
| 9   | Pressure gauges                                       | 26/06/2019     |                                       |
| 10  | Differential and Micro manometers                     | 27/06/2019     |                                       |
| 11  | Numerical problems                                    | 28/06/2019     |                                       |
| 12  | Mechanical gauges                                     | 29/06/2019     |                                       |
| 13  | Tutorial  | 01/07/2019     |                                       |
| <b>UNIT 2: HYDROSTATICS AND FLUID KINEMATICS</b>  |   |                |                                       |
| <b>CO2: CALCULATE THE FORCES THAT ACT ON SUBMERGED PLANES AND CURVES.</b>                   |   |                |                                       |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>       |   |                |                                       |
| 14  | <b>Hydrostatics- Introduction</b>                     | 02/07/2019     | Lecture interspersed with discussions |
| 15  | Hydrostatic law, Total Pressure Center of pressure    | 03/07/2019     |                                       |
| 16  | Moments of Inertia, Geometric properties              | 04/07/2019     |                                       |
| 17  | Hydrostatic forces on submerged plane-Horizontal      | 05/07/2019     |                                       |
| 18  | Hydrostatic forces on submerged plane-Vertical        | 06/07/2019     |                                       |
| 19  | Hydrostatic forces on submerged plane-Inclined        | 08/07/2019     |                                       |
| 20  | Hydrostatic forces on submerged Curved Surface        | 10/07/2019     |                                       |
| 21  | Numerical problems                                    | 11/07/2019     |                                       |
| 22  | Archimedes Principle, Metacenter                      | 12/07/2019     |                                       |
| 23  | Fluid flow, stream, streak, path line                 | 12/07/2019     |                                       |
| 24  | Classification of flows                               | 15/07/2019     |                                       |
| 25  | Continuity equation- 1,2,3 D                          | 16/07/2019     |                                       |

|  |   |            |  |
|--|---|------------|--|
| 26   | Flow Nets                                       | 17/07/2019 |  |
| 27   | Numerical problems                              | 18/07/2019 |  |
| 28   | Stream and velocity potential function          | 19/07/2019 |  |
| 29   | Tutorial  | 20/07/2019 |  |
| <b>UNIT 3: FLUID DYNAMICS</b>  |   |            |  |
| <b>CO3: IDENTIFY AND ANALYSE VARIOUS TYPES OF FLUID FLOWS.</b>   |   |            |  |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>  |   |            |  |
| 30   | <b>Fluid Dynamics - Surface and body forces</b> | 22/07/2019 | Lecture interspersed<br>with discussions |
| 31   | Euler's equation of motion                      | 23/07/2019 |  |
| 32   | Bernoulli's equation                            | 24/07/2019 |  |
| 33   | Numerical problems                              | 24/07/2019 |  |
| 34   | Momentum equation                               | 25/07/2019 |  |
| 35   | Forces on Pipe bend                             | 26/07/2019 |  |
| 36   | Numerical problems & Applications               | 29/07/2019 |  |
| 37   | Tutorials                                       | 30/07/2019 |  |
| <b>UNIT 4: LAMINAR FLOW, TURBULENT FLOW AND CLOSED CONDUIT FLOW</b>  |   |            |  |
| <b>CO4: APPLY THE INTEGRAL FORMS OF THE THREE FUNDAMENTAL LAWS OF FLUID MECHANICS TO TURBULENT AND LAMINAR FLOW THROUGH PIPES AND DUCTS IN ORDER TO PREDICT RELEVANT PRESSURES, VELOCITIES AND FORCES.</b> |   |            |  |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>  |   |            |  |
| 38   | <b>Flows-Reynolds experiment</b>                | 31/07/2019 | Lecture interspersed<br>with discussions |
| 39   | Characteristics of laminar and turbulent flow   | 31/07/2019 |  |
| 40   | Shear and velocity distribution                 | 01/08/2019 |  |
| 41   | Laws, Hagen Poiseuille's formula                | 02/08/2019 |  |
| 42   | Flow between plates                             | 03/08/2019 |  |
| 43   | Long tubes, problems                            | 05/08/2019 |  |
| 44   | Hydrodynamically smooth and rough boundary      | 06/08/2019 |  |
| 45   | Darcy's equation                                | 07/08/2019 |  |
| 46   | Flow through Pipes and Major, minor losses      | 08/08/2019 |  |
| 47   | Pipes in series, parallel                       | 09/08/2019 |  |
| 48   | Hardy Cross method                              | 13/08/2019 |  |
| 49   | TEL, HGL, moody chart                           | 14/08/2019 |  |
| 50   | Equivalent Pipes                                | 26/08/2019 |  |
| 51   | Numerical Problems                              | 27/08/2019 |  |
| 52   | Tutorials                                       | 28/08/2019 |  |
| <b>UNIT 5: MEASUREMENT OF FLOW</b>   |   |            |  |
| <b>CO5: MEASURE THE QUANTITIES OF FLUID FLOWING IN PIPES, TANK AND CHANNELS.</b>   |   |            |  |
| <b>TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS</b>  |   |            |  |
| 53   | <b>Measurement Of Flow-Pitot tube</b>           | 29/08/2019 | Lecture interspersed<br>with discussions |
| 54   | Orificemeter                                    | 30/08/2019 |  |
| 55   | Venturimeter                                    | 31/08/2019 |  |
| 56   | Classification of orifice                       | 03/09/2019 |  |
| 57   | Flow over rectangular notch                     | 04/09/2019 |  |
| 58   | Problems  | 05/09/2019 |  |

|    |                      |            |  |
|----|----------------------|------------|--|
| 59 | V- notch             | 06/09/2019 |  |
| 60 | Problems             | 07/09/2019 |  |
| 61 | Trapezoidal, stepped | 09/09/2019 |  |
| 62 | Numerical Problems   | 11/09/2019 |  |
| 63 | Numerical Problems   | 12/09/2019 |  |
| 64 | Broad crested weir   | 16/09/2019 |  |
| 65 | Problems             | 17/09/2019 |  |
| 66 | Tutorial             | 18/09/2019 |  |

**UNIT 6: BOUNDARY LAYER THEORY**

**CO6: KNOW THE CONCEPT OF BOUNDARY LAYER THEORY**

**TB: FLUID MECHANICS AND HYDRAULIC MECHANICS BY R.K. BANSAL -LAXMI PUBLICATIONS**

|    |                                     |            |  |
|----|-------------------------------------|------------|--|
| 67 | <b>Boundary Layer Theory</b>        | 19/09/2019 | Lecture interspersed<br>with discussions |
| 68 | Concept, Prandtl contribution       | 20/09/2019 |  |
| 69 | Characteristics of B.L              | 21/09/2019 |  |
| 70 | Thickness of B.L                    | 23/09/2019 |  |
| 71 | Vonkarman Integral Equation         | 24/09/2019 |  |
| 72 | Seperation, control of B.L          | 25/09/2019 |  |
| 73 | Drag , lift, Magnus effect          | 25/09/2019 |  |
| 74 | Numerical Problems- Tutorial        | 26/09/2019 |  |
| 75 | Summary on FM & Old Question papers | 26/09/2019 |  |

*Jee*  
26/9/2019  
Signature of the Faculty

*J. Lakshmi*  
Signature of the HOD  
26/9/19

*M. Lakshmi*  
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## TENTATIVE LESSON PLAN: R1631011

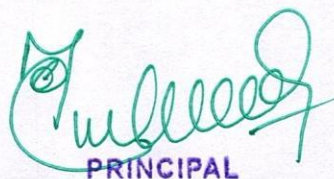
|   |                               |                          |
|---|-------------------------------|--------------------------|
| <b>Course Title: MANAGEMENT SCIENCE(R1631011)</b> |                               |                          |
| <b>Section: CIV-B</b>                             | <b>Date: 10-6-19</b>          | <b>Page No: 01 of 02</b> |
| <b>Revision No: 00</b>                            | <b>Prepared By: Indraja.M</b> | <b>Approved By: HOD</b>  |

Tools: Black board

| No. of Periods (Actual Taken)   | TOPIC                              | Date (Taught on) | Mode of Delivery                      |
|---|------------------------------------|------------------|---------------------------------------|
| <b>UNIT –I Introduction to Management</b>   |                                    |                  |                                       |
| <b>CO1::</b> Able to understand the concept and nature of management, evaluation of management theories, motivation and leadership styles                     |                                    |                  |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011.   |                                    |                  |                                       |
| 1   | Introduction to management         | 10-6-2019        | Lecture interspersed with discussions |
| 2   | Nature & importance of management  | 11-6-2019        |                                       |
| 3   | Generic function of management     | 12-6-2019        |                                       |
| 4   | Evaluation of management thoughts  | 13-6-2019        |                                       |
| 5   | Motivation theories                | 14-6-2019        |                                       |
| 6   | Decision making process            | 15-6-2019        |                                       |
| 7   | Designing organization structure   | 17-6-2019        |                                       |
| 8   | Principles & types of organization | 18-6-2019        |                                       |
| 9   | Organization typology              | 19-6-2019        |                                       |
| 10  | Global leadership                  | 20-6-2019        |                                       |
| 11  | Principals and types of management | 21-6-2019        |                                       |
| <b>UNI –II: Operations Management</b>   |                                    |                  |                                       |
| <b>CO2::</b> Able to equip with concepts of operations, project management and inventory control  |                                    |                  |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011.   |                                    |                  |                                       |
| 12  | Work study                         | 22-6-2019        | Lecture interspersed with discussions |
| 13  | Statistical quality control        | 24-6-2019        |                                       |
| 14  | Control charts                     | 25-6-2019        |                                       |
| 15  | Problems On Control Charts         | 26-6-2019        |                                       |
| 16  | Material Management                | 27-6-2019        |                                       |
| 17  | Need For Inventory Control         | 28-6-2019        |                                       |
| 19  | EOQ And ABC Analysis               | 29-6-2019        |                                       |
| 20  | Problems On EOQ                    | 1-7-2019         |                                       |
| <b>UNIT-III: Functional management</b>  |                                    |                  |                                       |
| <b>CO3:</b> Able to understand the different functional areas in an organization and their responsibilities- product life cycle and channels of distribution. |                                    |                  |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011  |                                    |                  |                                       |
| 21  | Concept of HRM, HRD and PMIR       | 4-7-2019         | Lecture interspersed with discussions |
| 22  | Functions of HRM                   | 5-7-2019         |                                       |
| 23  | Wage payment plans                 | 6-7-2019         |                                       |
| 24  | Job evolution Vs merit rating      | 8-7-2019         |                                       |
| 25  | Marketing management functions     | 9-7-2019         |                                       |
| 26  | Marketing strategies based on plc  | 9-7-2019         |                                       |
| 27  | Channels of distribution           | 9-7-2019         |                                       |
| 28  | Operational change management      | 12-7-2019        |                                       |
| 29  | Functions of marketing             | 15-7-2019        |                                       |
| <b>UNIT-IV: Project Management</b>  |                                    |                  |                                       |

|   |   |           |                                       |
|---|---|-----------|---------------------------------------|
| <b>CO4:</b> Able to equip with different techniques in project management, i.e, PERT and CPM and project crashing |   |           |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science'TMH 2011   |   |           |                                       |
| 30  | Introduction to PERT and CPM                      | 16-7-2019 | Lecture interspersed with discussions |
| 31  | Development of network diagram                    | 19-7-2019 |                                       |
| 32  | Difference between pert and CPM                   | 20-7-2019 |                                       |
| 33  | Identifying critical part                         | 22-7-2019 |                                       |
| 34  | Probability                                       | 23-7-2019 |                                       |
| 35  | Project crashing simple problems                  | 24-7-2019 |                                       |
| 36  | Problems  | 25-7-2019 |                                       |
| <b>UNIT-V:Strategic Management</b>  |   |           |                                       |
| <b>CO5::</b> Able to equip with the concept and practical issues relating to strategic management                 |   |           |                                       |
| <b>TB ::</b> Dr. A. R. Aryasri, Management Science'TMH 2011   |   |           |                                       |
| 37  | Vision,mission, goals and strategy                | 25-7-2019 | Lecture interspersed with discussions |
| 38  | Elements of corporate planning process            | 26-7-2019 |                                       |
| 39  | SWOT analysis                                     | 26-7-2019 |                                       |
| 40  | Steps in strategic formulation and implementation | 29-7-2019 |                                       |
| 41  | Generic strategy and global strategy              | 29-7-2019 |                                       |
| 42  | Theories of MNCs                                  | 30-7-2019 |                                       |
| 43  | Environmental scanning                            | 31-7-2019 |                                       |
| <b>UNIT-VI: Contemporary Management Practices</b>   |   |           |                                       |
| <b>CO6::</b> Able to equip with the contemporary management practices,  |   |           |                                       |
| <b>TB::</b> Dr. A. R. Aryasri, Management Science'TMH 2011  |   |           |                                       |
| 44  | Basic concepts of MIS                             | 1-8-2019  | Lecture interspersed with discussions |
| 45  | Total quality management                          | 2-8-2019  |                                       |
| 46  | Six sigma   | 3-8-2019  |                                       |
| 47  | Supply chain management                           | 13-8-2019 |                                       |
| 48  | Enterprise resource planning                      | 14-8-2019 |                                       |
| 49  | Business process outsources                       | 16-8-2019 |                                       |
| 50  | Business process re-engineering                   | 17-8-2019 |                                       |
| 51  | Bench Marking                                     | 19-8-2019 |                                       |
| 52  | Balanced Score Card                               | 20-8-2019 |                                       |
| 53  | Material Requirement Planning                     | 21-8-2019 |                                       |
| 54  | Total quality management                          | 22-8-2019 |                                       |

M. Indrajia  
Signature of the Faculty

  
PRINCIPAL

T. Lakshmi  
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## TENTATIVE LESSON PLAN: R1631011

|   |                               |                          |
|---|-------------------------------|--------------------------|
| <b>Course Title: MANAGEMENT SCIENCE(R1631011)</b> |                               |                          |
| <b>Section: CIV-A</b>                             | <b>Date:</b>                  | <b>Page No: 01 of 02</b> |
| <b>Revision No: 00</b>                            | <b>Prepared By: Indraja.M</b> | <b>Approved By: HOD</b>  |

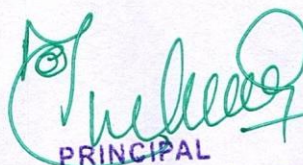
**Tools: Black board**

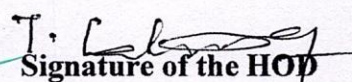
| No. of Periods (Actual Taken)   | TOPIC                              | Date (Taught on) | Mode of Delivery                      |
|---|------------------------------------|------------------|---------------------------------------|
| <b>UNIT –I Introduction to Management</b>   |                                    |                  |                                       |
| <b>CO1::</b> Able to understand the concept and nature of management, evaluation of management theories, motivation and leadership styles                     |                                    |                  |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011.   |                                    |                  |                                       |
| 1   | Introduction to management         | 10-6-2019        | Lecture interspersed with discussions |
| 2   | Nature & importance of management  | 11-6-2019        |                                       |
| 3   | Generic function of management     | 12-6-2019        |                                       |
| 4   | Evaluation of management thoughts  | 13-6-2019        |                                       |
| 5   | Motivation theories                | 14-6-2019        |                                       |
| 6   | Decision making process            | 15-6-2019        |                                       |
| 7   | Designing organization structure   | 17-6-2019        |                                       |
| 8   | Principles & types of organization | 18-6-2019        |                                       |
| 9   | Organization typology              | 19-6-2019        |                                       |
| 10  | Global leadership                  | 20-6-2019        |                                       |
| 11  | Principals and types of management | 21-6-2019        |                                       |
| <b>UNI –II: Operations Management</b>   |                                    |                  |                                       |
| <b>CO2::</b> Able to equip with concepts of operations, project management and inventory control  |                                    |                  |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011.   |                                    |                  |                                       |
| 12  | Work study                         | 22-6-2019        | Lecture interspersed with discussions |
| 13  | Statistical quality control        | 24-6-2019        |                                       |
| 14  | Control charts                     | 25-6-2019        |                                       |
| 15  | Problems On Control Charts         | 26-6-2019        |                                       |
| 16  | Material Management                | 27-6-2019        |                                       |
| 17  | Need For Inventory Control         | 28-6-2019        |                                       |
| 19  | EOQ And ABC Analysis               | 29-6-2019        |                                       |
| 20  | Problems On EOQ                    | 1-7-2019         |                                       |
| <b>UNIT-III: Functional management</b>  |                                    |                  |                                       |
| <b>CO3:</b> Able to understand the different functional areas in an organization and their responsibilities- product life cycle and channels of distribution. |                                    |                  |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011  |                                    |                  |                                       |
| 21  | Concept of HRM, HRD and PMIR       | 4-7-2019         | Lecture interspersed with discussions |
| 22  | Functions of HRM                   | 5-7-2019         |                                       |
| 23  | Wage payment plans                 | 6-7-2019         |                                       |
| 24  | Job evolution Vs merit rating      | 8-7-2019         |                                       |
| 25  | Marketing management functions     | 9-7-2019         |                                       |
| 26  | Marketing strategies based on plc  | 9-7-2019         |                                       |
| 27  | Channels of distribution           | 9-7-2019         |                                       |
| 28  | Operational change management      | 12-7-2019        |                                       |
| 29  | Functions of marketing             | 15-7-2019        |                                       |
| <b>UNIT-IV: Project Management</b>  |                                    |                  |                                       |



|   |   |           |                                       |
|---|---|-----------|---------------------------------------|
| <b>CO4:</b> Able to equip with different techniques in project management, i.e, PERT and CPM and project crashing |   |           |                                       |
| <b>TB:</b> Dr. A. R. Aryasri, Management Science' TMH 2011  |   |           |                                       |
| 30  | Introduction to PERT and CPM                      | 16-7-2019 | Lecture interspersed with discussions |
| 31  | Development of network diagram                    | 19-7-2019 |                                       |
| 32  | Difference between pert and CPM                   | 20-7-2019 |                                       |
| 33  | Identifying critical part                         | 22-7-2019 |                                       |
| 34  | Probability                                       | 23-7-2019 |                                       |
| 35  | Project crashing simple problems                  | 24-7-2019 |                                       |
| 36  | Problems  | 25-7-2019 |                                       |
| <b>UNIT-V: Strategic Management</b>   |   |           |                                       |
| <b>CO5::</b> Able to equip with the concept and practical issues relating to strategic management                 |   |           |                                       |
| <b>TB ::</b> Dr. A. R. Aryasri, Management Science' TMH 2011  |   |           |                                       |
| 37  | Vision, mission, goals and strategy               | 25-7-2019 | Lecture interspersed with discussions |
| 38  | Elements of corporate planning process            | 26-7-2019 |                                       |
| 39  | SWOT analysis                                     | 26-7-2019 |                                       |
| 40  | Steps in strategic formulation and implementation | 29-7-2019 |                                       |
| 41  | Generic strategy and global strategy              | 29-7-2019 |                                       |
| 42  | Theories of MNCs                                  | 30-7-2019 |                                       |
| 43  | Environmental scanning                            | 31-7-2019 |                                       |
| <b>UNIT-VI: Contemporary Management Practices</b>   |   |           |                                       |
| <b>CO6::</b> Able to equip with the contemporary management practices,  |   |           |                                       |
| <b>TB::</b> Dr. A. R. Aryasri, Management Science' TMH 2011   |   |           |                                       |
| 44  | Basic concepts of MIS                             | 1-8-2019  | Lecture interspersed with discussions |
| 45  | Total quality management                          | 2-8-2019  |                                       |
| 46  | Six sigma   | 3-8-2019  |                                       |
| 47  | Supply chain management                           | 13-8-2019 |                                       |
| 48  | Enterprise resource planning                      | 14-8-2019 |                                       |
| 49  | Business process outsources                       | 16-8-2019 |                                       |
| 50  | Business process re-engineering                   | 17-8-2019 |                                       |
| 51  | Bench Marking                                     | 19-8-2019 |                                       |
| 52  | Balanced Score Card                               | 20-8-2019 |                                       |
| 53  | Material Requirement Planning                     | 21-8-2019 |                                       |
| 54  | Total quality management                          | 22-8-2019 |                                       |

M. Indrajaa  
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PRINCIPAL

  
Signature of the HOD

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## TENTATIVE LESSON PLAN: CE R1631012

3-1

|  |  |                           |
|--|--|---------------------------|
| <b>Course Title: ENGINEERING GEOLOGY</b> |  |                           |
| <b>Section : Sec A</b>                   | <b>Date : 10-6-2019</b>                | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>                  | <b>Prepared By : Dr.T.Satyanaryana</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, PPTs**

| No. of Periods   | TOPIC   | Date      | Mode of Delivery                     |
|--|---|-----------|--------------------------------------|
| <b>UNIT –I Introduction</b>  |   |           |                                      |
| CO1 The student will be able to understand the basic concepts of Identify and classify the geological minerals   |   |           |                                      |
| T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,   |   |           |                                      |
| T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press  |   |           |                                      |
| 1  | Introduction  | 10-6-2019 | Lecture interspersed with discussion |
| 2  | Definition of geology and various Branches of Geology   | 11-6-2019 |                                      |
| 3  | Allied Branches of geology  | 12-6-2019 |                                      |
| 4  | Importance of Geology in Civil Engineering with case studies  | 13-6-2019 |                                      |
| 5  | Weathering  | 14-6-2019 |                                      |
| 6  | Weathering of rocks- physical weathering  | 15-6-2019 |                                      |
| 7  | Weathering of rocks- chemical weathering  | 17-6-2019 |                                      |
| 8  | Geological agents   | 18-6-2019 |                                      |
| 9  | River process-erosion   | 19-6-2019 |                                      |
| 10   | River process-Transportation  | 20-6-2019 |                                      |
| 11   | weathering process of Rock and their development  | 21-6-2019 |                                      |
| 12   | River valley development  | 22-6-2019 |                                      |
| 13   | Tutorial  |           |                                      |
| <b>UNIT –II Mineralogy And Petrology</b>   |   |           |                                      |
| CO2 The student will be able to understand the basic concepts Measure the rock strengths of various rocks .Classify and measure the earthquake prone areas to practice the hazard zonation |   |           |                                      |
| T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,   |   |           |                                      |
| T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press  |   |           |                                      |
| 14   | Definitions of mineral  | 24-6-2019 | Lecture interspersed with discussion |
| 15   | Structures of silicates and rock,   | 25-6-2019 |                                      |
| 16   | Different methods of study of mineral and rock,   | 26-6-2019 |                                      |
| 17   | The study of physical properties of minerals and rocks for megascopic study for the following minerals and rocks, | 27-6-2019 |                                      |
| 18   | Common rock forming minerals are Feldspar   | 28-6-2019 |                                      |
| 19   | Quartz Group  | 29-6-2019 |                                      |
| 20   | Olivine,  | 1-7-2019  |                                      |
| 21   | Augite,   | 2-7-2019  |                                      |
| 22   | Hornblende,   | 3-7-2019  |                                      |
| 23   | Mica Group,   | 3-7-2019  |                                      |
| 24   | Asbestos,   | 3-7-2019  |                                      |
| 25   | Talc,   | 4-7-2019  |                                      |
| 26   | Chlorite,   | 4-7-2019  |                                      |
| 27   | Kyanite,  | 4-7-2019  |                                      |
| 28   | Garnet,   | 5-7-2019  |                                      |
| 29   | Calcite,  | 5-7-2019  |                                      |
| 30   | other ore forming minerals are Pyrite, Hematite,  | 5-7-2019  |                                      |
| 31   | Magnetite,  | 6-7-2019  |                                      |
| 32   | Chlorite, Galena,   | 8-7-2019  |                                      |

|    |  |           |
|----|--|-----------|
| 33 | Pyrolusite, Graphite,  | 9-7-2019  |
| 34 | Chromite, Magnetite And Bauxite. Classification:   | 9-7-2019  |
| 35 | structures Pyrolusite, Graphite, Chromite,   | 9-7-2019  |
| 36 | Magnetite And Bauxite.   | 10-7-2019 |
| 37 | Classification, structures textures and forms of Igneous rocks                           | 10-7-2019 |
| 38 | Metamorphic rocks, and their megascopic study of granite varieties, (pink, gray, green). | 11-7-2019 |
| 39 |  |           |
| 40 | Pegmatite, Dolerite, Basalt etc.,  | 12-7-2019 |
| 41 | Shale, Sand Stone, Lime Stone,   | 15-7-2019 |
| 42 | Laterite, Quartzite, Gneiss,   | 16-7-2019 |
| 43 | Schist, Marble, Khondalite   | 19-7-2019 |
| 44 | and Slate and their importance in Civil Engineering                                      | 20-7-2019 |

### UNIT –III Structural Geology:

CO3 The student will be able to understand the basic Classify, monitor and measure the Landslides and subsidence • Prepares, analyses and interpret the Engineering Geologic maps

**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**

**T2. Engineering Geology, Subinoy Gangopadhyay, Oxford University press**

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 46 | Strike, Dip and Outcrop study of common geological structures | 22-7-2019 |                                       |
| 47 | associating with the rocks such as Folds                      | 23-7-2019 |                                       |
| 48 | Faults  | 24-7-2019 |                                       |
| 49 | Joints  | 25-7-2019 |                                       |
| 50 | Unconformities- parts   | 25-7-2019 |                                       |
| 51 | types   | 26-7-2019 |                                       |
| 52 | mechanism   | 26-7-2019 |                                       |
| 53 | their importance in Civil Engineering–Indian stratigraphy     | 29-7-2019 | Lecture interspersed with discussions |
| 54 | Aims of stratigraphy  | 29-7-2019 |                                       |
| 55 | Principles  | 30-7-2019 |                                       |
| 56 | Geological time scour   | 31-7-2019 |                                       |
| 57 | Geological division in India                                  | 1-8-2019  |                                       |
| 58 | Major stratigraphic units in India                            | 2-8-2019  |                                       |
| 59 | Tutorial  | 3-8-2019  |                                       |

### UNIT IV Ground Water

CO4 The student will be able to understand the basic Analyses the ground conditions through geophysical surveys

**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**

**T2. Engineering Geology, Subinoy Gangopadhyay, Oxford University press**

|    |  |           |                                       |
|----|--|-----------|---------------------------------------|
| 60 | Water table                                      | 13-8-2019 |                                       |
| 61 | Cone of depression                               | 14-8-2019 |                                       |
| 62 | Geological controls of Ground Water Movement     | 16-8-2019 |                                       |
| 63 | Ground Water Exploration Techniques              | 17-8-2019 |                                       |
| 64 | Earthquakes And Land Slides: Terminology         | 19-8-2019 |                                       |
| 65 | Classification                                   | 20-8-2019 |                                       |
| 66 | causes and effects                               | 21-8-2019 |                                       |
| 67 | Shield areas and Seismic belts,                  | 22-8-2019 |                                       |
| 68 | Richter scale intensity,.                        | 24-8-2019 |                                       |
| 69 | Precautions of building constructions in seismic | 26-8-2019 | Lecture interspersed with discussions |

|   | areas   |                       |                                       |
|---|---|-----------------------|---------------------------------------|
| 70  | Classification of Landslides,                               | 27-8-2019             | Lecture interspersed with discussions |
| 71  | Causes and Effects,   | 28-8-2019             |                                       |
| 72  | measures to be taken prevent their occurrence at Landslides | 30-8-2019             |                                       |
| 73  | Case studies  | 31-8-2019             |                                       |
| 74  | Tutorial  | 3-8-2019              |                                       |
| <b>UNIT –V Geophysics</b>   |   |                       |                                       |
| CO5 The student will be able to understand the Test the geological material and ground to check the suitability of civil engineering project construction   |   |                       |                                       |
| <b>T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,</b>   |   |                       |                                       |
| <b>T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press</b>  |   |                       |                                       |
| 75  | Importance of Geophysical methods,                          | 4-9-2019              |                                       |
| 76  | Classification  | 6-9-2019              |                                       |
| 77  | Principles of Geophysical study by Gravity method           | 7-9-2019              |                                       |
| 78  | Magnetic method,  | 9-9-2019              |                                       |
| 79  | Electrical methods  | 9-9-2019              |                                       |
| 80  | Seismic methods,  | 11-9-2019             |                                       |
| 81  | Radiometric method and Electrical resistivity,              | 12-9-2019             |                                       |
| 82  | Seismic refraction methods                                  | 13-9-2019             |                                       |
| 83  | Engineering properties of rocks                             | 17-9-2019             |                                       |
| 84  | Tutorial  | 18-9-2019             |                                       |
| <b>UNIT –VI : Geology of Dams, Reservoirs And Tunnels</b>   |   |                       |                                       |
| CO6 The student will be able to understand Investigate the project site for mega/mini civil engineering projects.Site selection for mega engineering projects like Dams, Tunnels, disposal sites etc... |   |                       |                                       |
| <b>T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,</b>   |   |                       |                                       |
| <b>T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press</b>  |   |                       |                                       |
| 85  | Types and purpose of Dams,                                  | 19-9-2019 & 20-9-2019 |                                       |
| 86  | Geological considerations in the selection of a Dam site..  | 21-9-2019 & 23-9-2019 |                                       |
| 87  | Life of Reservoirs Purpose of Tunnelling,                   | 24-9-2019             |                                       |
| 88  | effects,  | 25-9-2019             |                                       |
| 89  | Lining of Tunnels.  | 26-9-2019             |                                       |
| 90  | Influence of Geology for successful Tunnelling              | 27-9-2019             |                                       |
| 91  | Tutorial  | 28-9-2019             |                                       |

Signature of the Faculty  
18/11/19

PRINCIPAL

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Signature of the HOD  
18/11/19

## TENTATIVE LESSON PLAN: CE R1631012

|  |  |                           |
|--|--|---------------------------|
| <b>Course Title: ENGINEERING GEOLOGY</b> |  |                           |
| <b>Section : Sec B</b>                   | <b>Date : 10-6-2019</b>                | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>                  | <b>Prepared By : Dr.T.Satyanaryana</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, PPTs**

| No. of Periods  | TOPIC   | Date      | Mode of Delivery                     |
|---|---|-----------|--------------------------------------|
| <b>UNIT –I      UNIT –I      Introduction</b><br>CO1 The student will be able to understand the basic concepts of Identify and classify the geological minerals<br><b>T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,</b><br><b>T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press</b>  |   |           |                                      |
| 1   | Introduction  | 10-6-2019 | Lecture interspersed with discussion |
| 2   | Definition of geology and various Branches of Geology   | 11-6-2019 |                                      |
| 3   | Allied Branches of geology  | 12-6-2019 |                                      |
| 4   | Importance of Geology in Civil Engineering with case studies  | 13-6-2019 |                                      |
| 5   | Weathering  | 14-6-2019 |                                      |
| 6   | Weathering of rocks- physical weathering  | 15-6-2019 |                                      |
| 7   | Weathering of rocks- chemical weathering  | 17-6-2019 |                                      |
| 8   | Geological agents   | 18-6-2019 |                                      |
| 9   | River process-erosion   | 19-6-2019 |                                      |
| 10  | River process-Transportation  | 20-6-2019 |                                      |
| 11  | weathering process of Rock and their development  | 21-6-2019 |                                      |
| 12  | River valley development  | 22-6-2019 |                                      |
| 13  | Tutorial  |           |                                      |
| <b>UNIT –II Mineralogy And Petrology</b><br>CO2 The student will be able to understand the basic concepts Measure the rock strengths of various rocks .Classify and measure the earthquake prone areas to practice the hazard zonation<br><b>T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,</b><br><b>T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press</b> |   |           |                                      |
| 14  | Definitions of mineral  | 24-6-2019 | Lecture interspersed with discussion |
| 15  | Structures of silicates and rock,   | 25-6-2019 |                                      |
| 16  | Different methods of study of mineral and rock,   | 26-6-2019 |                                      |
| 17  | The study of physical properties of minerals and rocks for megascopic study for the following minerals and rocks, | 27-6-2019 |                                      |
| 18  | Common rock forming minerals are Feldspar   | 28-6-2019 |                                      |
| 19  | Quartz Group  | 29-6-2019 |                                      |
| 20  | Olivine,  | 1-7-2019  |                                      |
| 21  | Augite,   | 2-7-2019  |                                      |
| 22  | Hornblende,   | 3-7-2019  |                                      |
| 23  | Mica Group,   | 3-7-2019  |                                      |
| 24  | Asbestos,   | 3-7-2019  |                                      |
| 25  | Talc,   | 4-7-2019  |                                      |
| 26  | Chlorite,   | 4-7-2019  |                                      |
| 27  | Kyanite,  | 4-7-2019  |                                      |
| 28  | Garnet,   | 5-7-2019  |                                      |
| 29  | Calcite,  | 5-7-2019  |                                      |
| 30  | other ore forming minerals are Pyrite, Hematite,  | 5-7-2019  |                                      |
| 31  | Magnetite,  | 6-7-2019  |                                      |
| 32  | Chlorite, Galena,   | 8-7-2019  |                                      |

|    |   |           |
|----|---|-----------|
| 33 | Pyrolusite, Graphite,   |           |
| 34 | Chromite, Magnetite And Bauxite. Classification,  | 9-7-2019  |
| 35 | structures Pyrolusite, Graphite, Chromite,  | 9-7-2019  |
| 36 | Magnetite And Bauxite.  | 10-7-2019 |
| 37 | Classification, structures textures and forms of<br>Igneous rocks                           | 10-7-2019 |
| 38 | Metamorphic rocks, and their megascopic study of<br>granite varieties, (pink, gray, green). | 11-7-2019 |
| 39 |   |           |
| 40 | Pegmatite, Dolerite, Basalt etc.,   | 12-7-2019 |
| 41 | Shale, Sand Stone, Lime Stone,  | 15-7-2019 |
| 42 | Laterite, Quartzite, Gneiss,  | 16-7-2019 |
| 43 | Schist, Marble, Khondalite  | 19-7-2019 |
| 44 | and Slate and their importance in Civil Engineering   | 20-7-2019 |

### UNIT –III Structural Geology:

CO3 The student will be able to understand the basic Classify, monitor and measure the Landslides and subsidence • Prepares, analyses and interpret the Engineering Geologic maps

**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**

**T2. Engineering Geology, Subinoy Gangopadhyay, Oxford University press**

|    |  |           |  |
|----|--|-----------|--|
| 46 | Strike, Dip and Outcrop study of common geological<br>structures | 22-7-2019 |  |
| 47 | associating with the rocks such as Folds                         | 23-7-2019 |  |
| 48 | Faults   | 24-7-2019 |  |
| 49 | Joints   | 25-7-2019 |  |
| 50 | Unconformities- parts  | 25-7-2019 |  |
| 51 | types  | 26-7-2019 |  |
| 52 | mechanism  | 26-7-2019 |  |
| 53 | their importance in Civil Engineering–Indian<br>stratigraphy     | 29-7-2019 | Lecture<br>interspersed<br>with<br>discussions |
| 54 | Aims of stratigraphy   | 29-7-2019 |  |
| 55 | Principles   | 30-7-2019 |  |
| 56 | Geological time scour  | 31-7-2019 |  |
| 57 | Geological division in India                                     | 1-8-2019  |  |
| 58 | Major stratigraphic units in India                               | 2-8-2019  |  |
| 59 | Tutorial   | 3-8-2019  |  |

### UNIT IV Ground Water

CO4 The student will be able to understand the basic Analyses the ground conditions through geophysical surveys

**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**

**T2. Engineering Geology, Subinoy Gangopadhyay, Oxford University press**

|    |   |           |  |
|----|---|-----------|--|
| 60 | Water table   | 13-8-2019 |  |
| 61 | Cone of depression  | 14-8-2019 |  |
| 62 | Geological controls of Ground Water Movement              | 16-8-2019 |  |
| 63 | Ground Water Exploration Techniques                       | 17-8-2019 |  |
| 64 | Earthquakes And Land Slides: Terminology                  | 19-8-2019 |  |
| 65 | Classification  | 20-8-2019 |  |
| 66 | causes and effects  | 21-8-2019 |  |
| 67 | Shield areas and Seismic belts,                           | 22-8-2019 |  |
| 68 | Richter scale intensity,.                                 | 24-8-2019 |  |
| 69 | Precautions of building constructions in seismic<br>areas | 26-8-2019 | Lecture<br>interspersed<br>with<br>discussions |

| Sl No   | CLASSIFICATION OF LANDSLIDES,                               | DATE                  |                                       |
|---|---|-----------------------|---------------------------------------|
| 71  | Causes and Effects,   | 28-8-2019             | Lecture interspersed with discussions |
| 72  | measures to be taken prevent their occurrence at Landslides | 30-8-2019             |                                       |
| 73  | Case studies  | 31-8-2019             |                                       |
| 74  | Tutorial  | 3-8-2019              |                                       |
| <b>UNIT -V Geophysics</b>   |   |                       |                                       |
| CO5 The student will be able to understand the Test the geological material and ground to check the suitability of civil engineering project construction   |   |                       |                                       |
| <b>T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,</b>   |   |                       |                                       |
| <b>T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press</b>  |   |                       |                                       |
| 75  | Importance of Geophysical methods,                          | 4-9-2019              |                                       |
| 76  | Classification  | 6-9-2019              |                                       |
| 77  | Principles of Geophysical study by Gravity method           | 7-9-2019              |                                       |
| 78  | Magnetic method,  | 9-9-2019              |                                       |
| 79  | Electrical methods  | 9-9-2019              |                                       |
| 80  | Seismic methods,  | 11-9-2019             |                                       |
| 81  | Radiometric method and Electrical resistivity,              | 12-9-2019             |                                       |
| 82  | Seismic refraction methods                                  | 13-9-2019             |                                       |
| 83  | Engineering properties of rocks                             | 17-9-2019             |                                       |
| 84  | Tutorial  | 18-9-2019             |                                       |
| <b>UNIT -VI : Geology of Dams, Reservoirs And Tunnels</b>   |   |                       |                                       |
| CO6 The student will be able to understand Investigate the project site for mega/mini civil engineering projects.Site selection for mega engineering projects like Dams, Tunnels, disposal sites etc... |   |                       |                                       |
| <b>T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,</b>   |   |                       |                                       |
| <b>T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press</b>  |   |                       |                                       |
| 85  | Types and purpose of Dams,                                  | 19-9-2019 & 20-9-2019 |                                       |
| 86  | Geological considerations in the selection of a Dam site..  | 21-9-2019 & 23-9-2019 |                                       |
| 87  | Life of Reservoirs Purpose of Tunnelling,                   | 24-9-2019             |                                       |
| 88  | effects,  | 25-9-2019             |                                       |
| 89  | Lining of Tunnels.  | 26-9-2019             |                                       |
| 90  | Influence of Geology for successful Tunnelling              | 27-9-2019             |                                       |
| 91  | Tutorial  | 28-9-2019             |                                       |

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18/11/19

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18/11/19

*M. Subinoy*  
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## TENTATIVE LESSON PLAN: R1631013

|   |                              |                           |
|---|------------------------------|---------------------------|
| <b>Course Title: STRUCTURAL ANALYSIS-II</b> |                              |                           |
| <b>Section : Sec A</b>                      | <b>Date : 10-6-2019</b>      | <b>Page No : 01 of 02</b> |
| <b>Revision No : 00</b>                     | <b>Prepared By : K.KIRAN</b> | <b>Approved By : HOD</b>  |

Tools : Black board, PPTs, Model

| No. of Periods  | TOPIC  | Tentative Date | Implemented Date                      |
|---|--|----------------|---------------------------------------|
| <b>UNIT I Three Hinged Arches &amp; Two Hinged Arches</b><br><b>CO1: Differentiate Determinate and Indeterminate Structures</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b> |  |                |                                       |
| 1   | Three Hinged Arches: Elastic theory of arches                                    | 10-6-2019      | Lecture interspersed with discussions |
| 2   | – Eddy's theorem   | 11-6-2019      |                                       |
| 3   | Determination of horizontal thrust,  | 12-6-2019      |                                       |
| 4   | Determination of bending moment,   | 17-6-2019      |                                       |
| 5   | Determination of Normal thrust and radial shear.                                 | 18-6-2019      |                                       |
| 6   | Effect of temperature  | 19-6-2019      |                                       |
| 7   | Two Hinged Arches: Determination of horizontal thrust,                           | 20-6-2019      |                                       |
| 8   | Determination of horizontal thrust   | 21-6-2019      |                                       |
| 9   | Determination of bending moment,   | 22-6-2019      |                                       |
| 10  | Determination of Normal thrust and radial shear.                                 | 24-6-2019      |                                       |
| 11  | Rib shortening and temperature stresses,   | 25-6-2019      |                                       |
| 12  | Tied arches  | 26-6-2019      |                                       |
| 13  | Fixed arches   | 27-6-2019      |                                       |
| <b>UNIT –II Lateral Load Analysis Using Approximate Methods</b><br><b>CO2: Carryout lateral Load analysis of structures</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>     |  |                |                                       |
| 14  | Lateral Load Analysis Using Approximate Methods: Application to building frames. | 01-7-2019      | Lecture interspersed with discussions |
| 15  | (i) Portal method  | 02-7-2019      |                                       |
| 16  | (ii) Cantilever method.  | 07-7-2019      |                                       |
| <b>UNIT –III Cable Structures And Suspension Bridges</b><br><b>CO3: Analyze Cable and Suspension Bridge structures</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>          |  |                |                                       |
| 17  | Cable Structures And Suspension Bridges: Introduction                            | 13-7-2019      | Lecture interspersed with discussions |
| 18  | Characteristics of cable   | 15-7-2019      |                                       |
| 19  | Analysis of cables subjected to concentrated loads                               | 16-7-2019      |                                       |
| 20  | Analysis of cables subjected to uniformly distributed loads                      | 20-7-2019      |                                       |
| 21  | Anchor Cable,  | 23-7-2019      |                                       |



|   |  |            |                                       |
|---|--|------------|---------------------------------------|
| 22  | Temperature Stresses   | 24-7-2019  |                                       |
| 23  | Analysis of simple suspension bridge,  | 25-7-2019  |                                       |
| 24  | Three hinged suspension bridges.   | 27-7-2019  |                                       |
| 25  | Two hinged stiffening girder suspension bridges  | 30-7-2019  |                                       |
| <b>UNIT – IV Moment Distribution Method</b><br><b>CO4: Analyze structures using Moment Distribution</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b> |  |            |                                       |
| 26  | Stiffness over factors.  | 13-8-2019  | Lecture interspersed with discussions |
| 27  | Carry over factors.  | 014-8-2019 |                                       |
| 28  | Distribution factors   | 16-8-2019  |                                       |
| 29  | Analysis of continuous beams with sinking of supports                                    | 17-8-2019  |                                       |
| 30  | Analysis of continuous beams without sinking of supports                                 | 20-8-2019  |                                       |
| 31  | Portal frames – including Sway   | 22-8-2019  |                                       |
| 32  | Substitute frame analysis by two cycle   | 24-8-2019  |                                       |
| <b>UNIT – V Kani's Method</b><br><b>CO5: Analyze structures using Kani's Method</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>                     |  |            |                                       |
| 33  | Analysis of continuous beams   | 27-8-2019  | Lecture interspersed with discussions |
| 34  | Analysis of continuous beams – including settlement of supports                          | 29-8-2019  |                                       |
| 35  | Single bay portal frames with side sway.   | 3-9-2019   |                                       |
| 36  | Single bay portal frames without side sway.  | 6-9-2019   |                                       |
| <b>UNI – VI Introduction to Matrix Methods</b><br><b>CO6: Analyze structures using Matrix methods</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>   |  |            |                                       |
| 37  | Introduction to Matrix Methods   | 10-9-2019  | Lecture interspersed with discussions |
| 38  | Flexibility methods: Introduction  | 11-9-2019  |                                       |
| 39  | application to continuous beams (maximum of two unknowns) including support settlements. | 12-9-2019  |                                       |
| 40  | Stiffness method: Introduction,  | 19-9-2019  |                                       |
| 41  | application to continuous beams (maximum of two unknowns) including support settlements. | 20-9-2019  |                                       |

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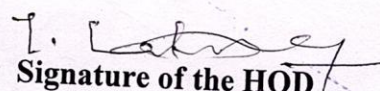
## TENTATIVE LESSON PLAN: R1631013

| <b>Course Title: STRUCTURAL ANALYSIS-II</b>   |  |                           |                                       |
|---|--|---------------------------|---------------------------------------|
| <b>Section : Sec B</b>  | <b>Date : 10-6-2019</b>  | <b>Page No : 01 of 02</b> |                                       |
| <b>Revision No : 00</b>   | <b>Prepared By : K.KIRAN</b>   | <b>Approved By : HOD</b>  |                                       |
| <b>Tools : Black board, PPTs, Model</b>   |  |                           |                                       |
| No. of Periods  | TOPIC  | Tentative Date            | Implemented Date                      |
| <b>UNIT I Three Hinged Arches &amp; Two Hinged Arches</b><br><b>CO1: Differentiate Determinate and Indeterminate Structures</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b> |  |                           |                                       |
| 1   | Three Hinged Arches: Elastic theory of arches                                    | 10-6-2019                 | Lecture interspersed with discussions |
| 2   | – Eddy's theorem   | 11-6-2019                 |                                       |
| 3   | Determination of horizontal thrust,  | 12-6-2019                 |                                       |
| 4   | Determination of bending moment,   | 17-6-2019                 |                                       |
| 5   | Determination of Normal thrust and radial shear.                                 | 18-6-2019                 |                                       |
| 6   | Effect of temperature  | 19-6-2019                 |                                       |
| 7   | Two Hinged Arches: Determination of horizontal thrust,                           | 20-6-2019                 |                                       |
| 8   | Determination of horizontal thrust   | 21-6-2019                 |                                       |
| 9   | Determination of bending moment,   | 22-6-2019                 |                                       |
| 10  | Determination of Normal thrust and radial shear.                                 | 24-6-2019                 |                                       |
| 11  | Rib shortening and temperature stresses,   | 25-6-2019                 |                                       |
| 12  | Tied arches  | 26-6-2019                 |                                       |
| 13  | Fixed arches   | 27-6-2019                 |                                       |
| <b>UNIT –II Lateral Load Analysis Using Approximate Methods</b><br><b>CO2: Carryout lateral Load analysis of structures</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>     |  |                           |                                       |
| 14  | Lateral Load Analysis Using Approximate Methods: Application to building frames. | 01-7-2019                 | Lecture interspersed with discussions |
| 15  | (i) Portal method  | 02-7-2019                 |                                       |
| 16  | (ii) Cantilever method.  | 07-7-2019                 |                                       |
| <b>UNIT –III Cable Structures And Suspension Bridges</b><br><b>CO3: Analyze Cable and Suspension Bridge structures</b><br><b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b><br><b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>          |  |                           |                                       |
| 17  | Cable Structures And Suspension Bridges: Introduction                            | 13-7-2019                 | Lecture interspersed with discussions |
| 18  | Characteristics of cable   | 15-7-2019                 |                                       |
| 19  | Analysis of cables subjected to concentrated loads                               | 16-7-2019                 |                                       |
| 20  | Analysis of cables subjected to uniformly distributed loads                      | 20-7-2019                 |                                       |

|   |  |           |                                       |
|---|--|-----------|---------------------------------------|
| 21  | Anchor Cable,  | 23-7-2019 |                                       |
| 22  | Temperature Stresses   | 24-7-2019 |                                       |
| 23  | Analysis of simple suspension bridge,  | 25-7-2019 |                                       |
| 24  | Three hinged suspension bridges.   | 27-7-2019 |                                       |
| 25  | Two hinged stiffening girder suspension bridges  | 30-7-2019 |                                       |
| <b>UNIT – IV Moment Distribution Method</b>                                 |  |           |                                       |
| <b>CO4: Analyze structures using Moment Distribution</b>                    |  |           |                                       |
| <b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b> |  |           |                                       |
| <b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>     |  |           |                                       |
| 26  | Stiffness over factors.  | 13-8-2019 | Lecture interspersed with discussions |
|   | Carry over factors.  | 14-8-2019 |                                       |
|   | Distribution factors   | 16-8-2019 |                                       |
| 29  | Analysis of continuous beams with sinking of supports                                    | 17-8-2019 |                                       |
| 30  | Analysis of continuous beams without sinking of supports                                 | 20-8-2019 |                                       |
| 31  | Portal frames – including Sway   | 22-8-2019 |                                       |
| 32  | Substitute frame analysis by two cycle   | 24-8-2019 |                                       |
| <b>UNIT – V Kani's Method</b>   |  |           |                                       |
| <b>CO5: Analyze structures using Kani's Method</b>                          |  |           |                                       |
| <b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b> |  |           |                                       |
| <b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>     |  |           |                                       |
| 33  | Analysis of continuous beams   | 27-8-2019 | Lecture interspersed with discussions |
| 34  | Analysis of continuous beams – including settlement of supports                          | 29-8-2019 |                                       |
| 35  | Single bay portal frames with side sway.   | 3-9-2019  |                                       |
| 36  | Single bay portal frames without side sway.  | 6-9-2019  |                                       |
| <b>UNI – VI Introduction to Matrix Methods</b>                              |  |           |                                       |
| <b>CO6: Analyze structures using Matrix methods</b>                         |  |           |                                       |
| <b>TB1:: Structural Analysis, C.S. Reddy, Tata Mc-Graw hill, New Delhi.</b> |  |           |                                       |
| <b>TB2:: Theory of structures, Ramamuratam, Dhanpatrai Publications</b>     |  |           |                                       |
| 37  | Introduction to Matrix Methods   | 10-9-2019 | Lecture interspersed with discussions |
| 38  | Flexibility methods: Introduction  | 11-9-2019 |                                       |
| 39  | application to continuous beams (maximum of two unknowns) including support settlements. | 12-9-2019 |                                       |
| 40  | Stiffness method: Introduction,  | 19-9-2019 |                                       |
| 41  | application to continuous beams (maximum of two unknowns) including support settlements. | 20-9-2019 |                                       |

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## TENTATIVE LESSON PLAN: R1631014

|   |  |                           |
|---|--|---------------------------|
| <b>Course Title: DESIGN AND DRAWING OF REINFORCED CONCRETE STRUCTURES</b> |  |                           |
| <b>Section : Sec B</b>  | <b>Date : 10-06-2019</b>                         | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>   | <b>Prepared By :<br/>CH.MALLIKA<br/>CHOWDARY</b> | <b>Approved By : HOD</b>  |

**Tools:**

|  | TOPIC  | DATE      | MODE OF DELIVERY                                     |
|--|--|-----------|--|
| <b>UNIT – I Introduction:</b><br><b>CO1: Work on different types of design philosophies</b><br><b>TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai &amp; Devdas Menon, Tata McGraw Hill, New Delhi.</b><br><b>TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher</b>                             |  |           |  |
| 1.   | <b>UNIT-I:Introduction:</b><br>Working stress method                                   | 10/6/2019 | Lectures interspersed with discussions & Black board |
| 2.   | Design codes and handbooks,  | 12/6/2019 |  |
| 3.   | Loading standards – Dead, live, wind and earthquake loads                              | 14/6/2019 |  |
| 4.   | Elastic theory   | 17/6/2019 |  |
| 5.   | Design constants   | 18/6/2019 |  |
| 6.   | Modular ratio, neutral axis depth and moment of resistance,                            | 21/6/2019 |  |
| 7.   | Balanced, under-reinforced and over-reinforced sections,                               | 22/6/2019 |  |
| 8.   | Working stress method of design of singly and doubly reinforced beams.                 | 24/6/2019 |  |
| 9.   | Limit State Design: Concepts of limit state design                                     | 26/6/2019 |  |
| 10.  | Basic statistical principles   | 27/6/2019 |  |
| 11.  | Characteristic loads –Characteristic strength  | 28/6/2019 |  |
| 12.  | Partial load and safety factors  | 01/7/2019 |  |
| 13.  | Representative stress-strain curves for cold worked deformed bars and mild steel bars. | 02/7/2019 |  |
| 14.  | Assumptions in limit state design – stress - block parameters                          | 03/7/2019 |  |
| 15.  | Limiting moment of Resistance.   | 04/7/2019 |  |
| <b>UNIT – II Design for Flexure:</b><br><b>CO2: Carryout analysis and design of flexural members and detailing</b><br><b>TB:: TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai &amp; Devdas Menon, Tata McGraw Hill, New Delhi.</b><br><b>TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher</b> |  |           |  |
| 1.   | <b>UNIT-II:Design for Flexure:</b><br>Limit state analysis                             | 5/7/2019  | Lectures   |
| 2.   | Design of singly reinforced sections   | 6/7/2019  |  |
| 3.   | Effective depth  | 8/7/2019  |  |

|   |  |                        |  |  |
|---|--|------------------------|--|--|
| 4.  | Moment of Resistance   | 9/7/2019               | interspersed with discussions & Black board          |  |
| 5.  | Doubly reinforced beam sections  | 10/7/2019              |  |  |
| 6.  | Flanged (T and L) beam sections  | 11/7/2019              |  |  |
| 7.  | Minimum depth for a given capacity   | 12/7/2019              |  |  |
| 8.  | Limiting Percentage of Steel   | 13/7/2019              |  |  |
| 9.  | Minimum Tension Reinforcement  | 15/7/2019              |  |  |
| 10.   | Maximum Flexural Steel   | 16/7/2019              |  |  |
| 11.   | Design of Flanged Sections (T&L)   | 17/7/2019              |  |  |
| 12.   | Effective width of flange - Behavior   | 18/7/2019              |  |  |
| 13.   | Analysis and Design.   | 19/7/2019              |  |  |
|   | <b>UNIT-III: Design for Shear, Torsion and Bond:</b><br>Limit state analysis for shear and torsion | 19/7/2019              |  | Lectures interspersed with discussions & Black board |
| 1.  | Design of section for shear and torsion  | 20/7/2019              |  |  |
| 2.  | Concept of bond, anchorage and development length  | 22/7/2019              |  |  |
| 3.  | I.S. code provisions.  | 23/7/2019              |  |  |
| 4.  | Design examples in simply supported beams, detailing.  | 24/7/2019              |  |  |
| 5.  | Design examples in continuous beams, detailing.  | 25/7/2019              |  |  |
| 6.  | <b>Limit state design for serviceability:</b><br>Deflection, and code provision,                   | 26/7/2019              |  |  |
| 7.  | Cracking and code provision  | 27/7/2019              |  |  |
| 8.  | Design of formwork for beams and slabs   | 29/7/2019<br>30/7/2019 |  |  |
| <b>UNIT – VI Slabs</b>  |  |                        |  |  |
| <b>CO6: Design different type of Slabs</b>  |  |                        |  |  |
| <b>TB:: TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai &amp; Devdas Menon, Tata McGraw Hill, New Delhi.</b> |  |                        |  |  |
| <b>TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher</b>   |  |                        |  |  |
| 1.  | <b>UNIT-VI: Slabs: Classification of slabs</b>   | 31/7/2019              | Lectures interspersed with discussions & Black board |  |
| 2.  | Design of one - way slabs using IS Coefficients  | 01/8/2019              |  |  |
| 3.  | Design of one - way slabs using IS Coefficients  | 02/8/2019              |  |  |
| 4.  | Design of two - way slabs using IS Coefficients  | 13/8/2019              |  |  |
| 5.  | Design of two - way slabs using IS Coefficients  | 14/08/2019             |  |  |
| 6.  | Design of continuous slabs using IS Coefficients   | 19/8/2019              |  |  |
| 7.  | Design of continuous slabs using IS Coefficients   | 20/8/2019              |  |  |
| 8.  | Design of continuous slabs using IS Coefficients   | 24/8/2019              |  |  |
| 9.  | Design of waist-slab staircase.  | 26/8/2019              |  |  |
| 10.   | Design of waist-slab staircase.  | 27/8/2019              |  |  |
| <b>UNIT – IV Design of Compression members:</b>   |  |                        |  |  |
| <b>CO4: Design different type of compression members</b>  |  |                        |  |  |

|   |  |                        |  |  |
|---|--|------------------------|--|--|
| 4.  | Moment of Resistance   | 9/7/2019               | interspersed<br>with<br>discussions<br>& Black board             |  |
| 5.  | Doubly reinforced beam sections  | 10/7/2019              |  |  |
| 6.  | Flanged (T and L) beam sections  | 11/7/2019              |  |  |
| 7.  | Minimum depth for a given capacity   | 12/7/2019              |  |  |
| 8.  | Limiting Percentage of Steel   | 13/7/2019              |  |  |
| 9.  | Minimum Tension Reinforcement  | 15/7/2019              |  |  |
| 10.   | Maximum Flexural Steel   | 16/7/2019              |  |  |
| 11.   | Design of Flanged Sections (T&L)   | 17/7/2019              |  |  |
| 12.   | Effective width of flange - Behavior   | 18/7/2019              |  |  |
| 13.   | Analysis and Design.   | 19/7/2019              |  |  |
|   | <b>UNIT-III: Design for Shear, Torsion and Bond:</b><br>Limit state analysis for shear and torsion | 19/7/2019              |  | Lectures<br>interspersed<br>with<br>discussions<br>& Black board |
| 1.  | Design of section for shear and torsion  | 20/7/2019              |  |  |
| 2.  | Concept of bond, anchorage and development length  | 22/7/2019              |  |  |
| 3.  | I.S. code provisions.  | 23/7/2019              |  |  |
| 4.  | Design examples in simply supported beams, detailing.  | 24/7/2019              |  |  |
| 5.  | Design examples in continuous beams, detailing.  | 25/7/2019              |  |  |
| 6.  | <b>Limit state design for serviceability: Deflection, and code provision,</b>                      | 26/7/2019              |  |  |
| 7.  | Cracking and code provision  | 27/7/2019              |  |  |
| 8.  | Design of formwork for beams and slabs   | 29/7/2019<br>30/7/2019 |  |  |
| <b>UNIT – VI Slabs</b>  |  |                        |  |  |
| <b>CO6: Design different type of Slabs</b>  |  |                        |  |  |
| <b>TB:: TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai &amp; Devdas Menon, Tata McGraw Hill, New Delhi.</b> |  |                        |  |  |
| <b>TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher</b>   |  |                        |  |  |
| 1.  | <b>UNIT-VI:Slabs: Classification of slabs</b>  | 31/7/2019              | Lectures<br>interspersed<br>with<br>discussions<br>& Black board |  |
| 2.  | Design of one - way slabs using IS Coefficients  | 01/8/2019              |  |  |
| 3.  | Design of one - way slabs using IS Coefficients  | 02/8/2019              |  |  |
| 4.  | Design of two - way slabs using IS Coefficients  | 13/8/2019              |  |  |
| 5.  | Design of two - way slabs using IS Coefficients  | 14/08/2019             |  |  |
| 6.  | Design of continuous slabs using IS Coefficients   | 19/8/2019              |  |  |
| 7.  | Design of continuous slabs using IS Coefficients   | 20/8/2019              |  |  |
| 8.  | Design of continuous slabs using IS Coefficients   | 24/8/2019              |  |  |
| 9.  | Design of waist-slab staircase.  | 26/8/2019              |  |  |
| 10.   | Design of waist-slab staircase.  | 27/8/2019              |  |  |
| <b>UNIT – IV Design of Compression members:</b>   |  |                        |  |  |
| <b>CO4: Design different type of compression members</b>  |  |                        |  |  |

**TB:: TB:: 'Reinforced Concrete Structures' by S. Unnikrishna Pillai & Devdas Menon, Tata McGraw Hill, New Delhi.**

**TB:: N.Krishna Raju, "Reinforced Concrete Design", 2014, New age Publisher**

|     |  |                        |  |
|-----|--|------------------------|--|
| 1.  | <b>UNIT-IV: Design of Compression members:</b><br>Effective length of a column | 28/8/2019              | Lectures interspersed with discussions & Black board |
| 2.  | Design of short and long columns – under axial loads                           | 29/8/2019              |  |
| 3.  | Design of short and long columns – under uniaxial bending                      | 30/8/2019              |  |
| 4.  | Design of short and long columns – under biaxial bending                       | 31/8/2019              |  |
| 5.  | Braced and un-braced columns – I S Code provisions.                            | 03/9/2019              |  |
| 6.  | Braced and un-braced columns – I S Code provisions.                            | 04/9/2019              |  |
| 7.  | Braced and un-braced columns – I S Code provisions.                            | 05/9/2019              |  |
| 8.  | Braced and un-braced columns – I S Code provisions.                            | 06/9/2019              |  |
| 9.  | Braced and un-braced columns – I S Code provisions.                            | 07/9/2019              |  |
| 10. | Braced and un-braced columns – I S Code provisions.                            | 09/9/2019<br>13/9/2019 |  |

**UNIT – V Footings:**

**CO5: Design different type of footings**

**TB:: TB:: 'Reinforced Concrete Structures' by S. Unnikrishna Pillai & Devdas Menon, Tata McGraw Hill, New Delhi.**

**TB:: N.Krishna Raju, "Reinforced Concrete Design", 2014, New age Publisher**

|   |  |                        |  |
|---|--|------------------------|--|
| 1 | <b>UNIT-VI:</b><br><br><b>Footings:</b><br>Different types of footings | 16/9/2019<br>17/9/2019 | Lectures interspersed with discussions & Black board |
| 2 | Design of isolated footings  | 21/9/2019              |  |
| 3 | Design of combined footings  | 23/9/2019              |  |
| 4 | Design of rectangular footings subjected to axial loads                | 25/9/2019              |  |
| 5 | Design of rectangular footings subjected to uni-axial bending moments  | 26/9/2019              |  |
| 6 | Design of rectangular footings subjected to bi-axial bending moments   | 27/9/2019              |  |
| 7 | Design of circular footings subjected to axial loads,                  | 28/9/2019              |  |
| 8 | Design of circular footings subjected to bi-axial bending moments      | 29/9/2019              |  |
| 9 | Design of circular footings subjected to bi-axial bending moments      | 01/10/2019             |  |

**SIGNATURE OF FACULTY**

**SIGNATURE OF HOD**

**PRINCIPAL**

**SRK Institute of Technology**  
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## TENTATIVE LESSON PLAN: R163101/4

|   |   |                    |
|---|---|--------------------|
| <b>Course Title: DESIGN AND DRAWING OF REINFORCED CONCRETE STRUCTURES</b> |   |                    |
| Section : Sec A   | Date : 10-06-2019                       | Page No : 01 of 03 |
| Revision No : 00  | Prepared By :<br>CH.MALLIKA<br>CHOWDARY | Approved By : HOD  |

**Tools:**

|  | TOPIC  | DATE      | MODE OF DELIVERY                                     |
|--|--|-----------|--|
| <b>UNIT – I Introduction:</b><br><b>CO1: Work on different types of design philosophies</b><br><b>TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai &amp; Devdas Menon, Tata McGraw Hill, New Delhi.</b><br><b>TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher</b>                             |  |           |  |
| 1.   | <b>UNIT-I:Introduction:</b><br>Working stress method                                   | 10/6/2019 | Lectures interspersed with discussions & Black board |
| 2.   | Design codes and handbooks,  | 12/6/2019 |  |
| 3.   | Loading standards – Dead, live, wind and earthquake loads                              | 14/6/2019 |  |
| 4.   | Elastic theory   | 17/6/2019 |  |
| 5.   | Design constants   | 18/6/2019 |  |
| 6.   | Modular ratio, neutral axis depth and moment of resistance,                            | 21/6/2019 |  |
| 7.   | Balanced, under-reinforced and over-reinforced sections,                               | 22/6/2019 |  |
| 8.   | Working stress method of design of singly and doubly reinforced beams.                 | 24/6/2019 |  |
| 9.   | Limit State Design: Concepts of limit state design                                     | 26/6/2019 |  |
| 10.  | Basic statistical principles   | 27/6/2019 |  |
| 11.  | Characteristic loads –Characteristic strength  | 28/6/2019 |  |
| 12.  | Partial load and safety factors  | 01/7/2019 |  |
| 13.  | Representative stress-strain curves for cold worked deformed bars and mild steel bars. | 02/7/2019 |  |
| 14.  | Assumptions in limit state design – stress - block parameters                          | 03/7/2019 |  |
| 15.  | Limiting moment of Resistance.   | 04/7/2019 |  |
| <b>UNIT – II Design for Flexure:</b><br><b>CO2: Carryout analysis and design of flexural members and detailing</b><br><b>TB:: TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai &amp; Devdas Menon, Tata McGraw Hill, New Delhi.</b><br><b>TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher</b> |  |           |  |
| 1.   | <b>UNIT-II:Design for Flexure:</b><br>Limit state analysis                             | 5/7/2019  | Lectures   |
| 2.   | Design of singly reinforced sections   | 6/7/2019  |  |
| 3.   | Effective depth  | 8/7/2019  |  |



|   |   |           |   |  |
|---|---|-----------|---|--|
| 4.  | Moment of Resistance  | 9/7/2019  | interspersed with discussions & Black board |  |
| 5.  | Doubly reinforced beam sections   | 10/7/2019 |   |  |
| 6.  | Flanged (T and L) beam sections   | 11/7/2019 |   |  |
| 7.  | Minimum depth for a given capacity  | 12/7/2019 |   |  |
| 8.  | Limiting Percentage of Steel  | 13/7/2019 |   |  |
| 9.  | Minimum Tension Reinforcement   | 15/7/2019 |   |  |
| 10.   | Maximum Flexural Steel  | 16/7/2019 |   |  |
| 11.   | Design of Flanged Sections (T&L)  | 17/7/2019 |   |  |
| 12.   | Effective width of flange - Behavior  | 18/7/2019 |   |  |
| 13.   | Analysis and Design.  | 19/7/2019 |   |  |
| <b>UNIT-III:Design for Shear, Torsion and Bond:</b> |   |           |   | Lectures interspersed with discussions & Black board |
| Limit state analysis for shear and torsion          |   | 19/7/2019 |   |  |
| 1.  | Design of section for shear and torsion                                       | 20/7/2019 |   |  |
| 2.  | Concept of bond, anchorage and development length                             | 22/7/2019 |   |  |
| 3.  | I.S. code provisions.   | 23/7/2019 |   |  |
| 4.  | Design examples in simply supported beams, detailing.                         | 24/7/2019 |   |  |
| 5.  | Design examples in continuous beams, detailing.                               | 25/7/2019 |   |  |
| 6.  | <b>Limit state design for serviceability:</b> Deflection, and code provision, | 26/7/2019 |   |  |
| 7.  | Cracking and code provision   | 27/7/2019 |   |  |
| 8.  | Design of formwork for beams and slabs  | 29/7/2019 |   |  |
|   |   | 30/7/2019 |   |  |

#### UNIT – VI Slabs

**CO6: Design different type of Slabs**

**TB:: TB:: ‘Reinforced Concrete Structures’ by S. Unnikrishna Pillai & Devdas Menon, Tata McGraw Hill, New Delhi.**

**TB:: N.Krishna Raju, “Reinforced Concrete Design”, 2014, New age Publisher**

|     |  |            |  |
|-----|--|------------|--|
| 1.  | <b>UNIT-VI:Slabs: Classification of slabs</b>    | 31/7/2019  | Lectures interspersed with discussions & Black board |
| 2.  | Design of one - way slabs using IS Coefficients  | 01/8/2019  |  |
| 3.  | Design of one - way slabs using IS Coefficients  | 02/8/2019  |  |
| 4.  | Design of two - way slabs using IS Coefficients  | 13/8/2019  |  |
| 5.  | Design of two - way slabs using IS Coefficients  | 14/08/2019 |  |
| 6.  | Design of continuous slabs using IS Coefficients | 19/8/2019  |  |
| 7.  | Design of continuous slabs using IS Coefficients | 20/8/2019  |  |
| 8.  | Design of continuous slabs using IS Coefficients | 24/8/2019  |  |
| 9.  | Design of waist-slab staircase.                  | 26/8/2019  |  |
| 10. | Design of waist-slab staircase.                  | 27/8/2019  |  |

#### UNIT – IV Design of Compression members:

**CO4: Design different type of compression members**

# TENTATIVE LESSON PLAN: RT1631015

|  |   |                           |
|--|---|---------------------------|
| <b>Course Title: TRANSPORTATION ENGINEERING - II</b> |   |                           |
| <b>Section : Sec B</b>                               | <b>Section : Sec B</b>                    | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>                              | <b>Revision No : 00</b> <i>ch. Suresh</i> | <b>Approved By : HOD</b>  |

Tools : Black board, PPTs, Model

| No. of Periods  | TOPIC                               | Date       | Mode of Delivery                       |
|---|-------------------------------------|------------|--|
| <b>UNIT - I : COMPONENTS OF RAILWAY ENGINEERING</b>                             |                                     |            |  |
| <b>CO 1 – To know various components and their functions in a railway track</b> |                                     |            |  |
| <b>TB: “Railway Engineering” by Satish Chandra &amp; M.M Aggarwal</b>           |                                     |            |  |
| 1   | Introduction to Railways            | 17/06/2019 | Lectures interspersed with Discussions |
| 2   | Components of Permanent way         | 17/06/2019 |  |
| 3   | Track gauge, Cross-section of track | 17/06/2019 |  |
| 4   | Functions of Rails                  | 18/06/2019 |  |
| 5   | Functions of Sleepers               | 18/06/2019 |  |
| 6   | Functions of Ballast                | 18/06/2019 |  |
| 7   | Functions of Fastenings             | 19/06/2019 |  |
| 8   | Creep of Rails, Theories of Creep   | 19/06/2019 |  |
| 9   | Adzing of sleepers, Sleeper density | 19/06/2019 |  |
| 10  | Rail joints                         | 20/06/2019 |  |
| 11  | Revision                            | 20/06/2019 |  |
| 12  | Revision                            | 22/06/2019 |  |
| <b>UNIT - II : GEOMETRIC DESIGN OF RAILWAY TRACK</b>                            |                                     |            |  |
| <b>CO2 – To Acquire Design Principles of Geometrics in a Railway Track</b>      |                                     |            |  |
| <b>TB: “Railway Engineering” by Satish Chandra &amp; M.M Aggarwal</b>           |                                     |            |  |
| 13  | Alignment of Track                  | 25/06/2019 | Lectures interspersed with Discussions |
| 14  | Engineering Surveys                 | 25/06/2019 |  |
| 15  | Gradients                           | 25/06/2019 |  |
| 16  | Grade Compensation                  | 26/06/2019 |  |
| 17  | Cant and Negative Super Elevation   | 01/07/2019 |  |
| 18  | Cant Deficiency                     | 02/07/2019 |  |
| 19  | Degree of curve                     | 02/07/2019 |  |
| 20  | Safe speed on curves                | 02/07/2019 |  |
| 21  | Transition Curves                   | 03/07/2019 |  |
| 22  | Compound curves                     | 04/07/2019 |  |
| 23  | Reverse curves                      | 04/07/2019 |  |
| 24  | Extra-clearance on curves           | 08/07/2019 |  |
| 25  | Widening of Gauge                   | 08/07/2019 |  |
| 26  | Vertical curves                     | 09/07/2019 |  |
| 27  | Cheek rail on curves                | 09/07/2019 |  |
| 28  | Problems – Unit II                  | 09/07/2019 |  |
| 29  | Problems – Unit II                  | 11/07/2019 |  |
| 30  | Problems – Unit II                  | 11/07/2019 |  |
| 31  | Revision                            | 11/07/2019 |  |
| 32  | Revision                            | 11/07/2019 |  |
| <b>UNIT - III : TURNOUTS AND CONTROLLERS</b>                                    |                                     |            |  |
| <b>CO3 – To know Various Techniques for movement of Trains</b>                  |                                     |            |  |
| <b>TB: “Railway Engineering” by Satish Chandra &amp; M.M Aggarwal</b>           |                                     |            |  |
| 33  | Track layouts, Switches             | 12/07/2019 | Lectures interspersed with             |
| 34  | Design of Tongue Rails              | 15/07/2019 |  |
| 35  | Crossings                           | 16/07/2019 |  |
| 36  | Turn-Outs                           | 17/07/2019 |  |
| 37  | Diamond Crossing                    | 18/07/2019 |  |
| 38  | Scissor Crossing                    | 19/07/2019 |  |
| 39  | Signaling                           | 20/07/2019 |  |

|  |   |            |  |
|--|---|------------|--|
| 40   | Fixed Signals                                   | 22/07/2019 | DISCUSSIONS                            |
| 41   | Stop Signals                                    | 23/07/2019 |  |
| 42   | Mechanical Signaling                            | 26/07/2019 |  |
| 43   | Electrical Signaling                            | 27/07/2019 |  |
| 44   | Modern Signaling                                | 02/08/2019 |  |
| <b>UNIT – IV : AIRPORT PLANNING AND DESIGN</b>   |   |            |  |
| <b>CO4 – To Acquire Design Principles of Airport Geometrics &amp; Pavements</b>          |   |            |  |
| <b>TB: “Airport Engineering” by Khanna &amp; Arora</b>                                   |   |            |  |
| 45   | Airport Planning                                | 13/08/2019 | Lectures interspersed with Discussions |
| 46   | Master Plan                                     | 13/08/2019 |  |
| 47   | Airport Site Selection                          | 14/08/2019 |  |
| 48   | Aircraft Characteristics                        | 17/08/2019 |  |
| 49   | Zoning Laws                                     | 19/08/2019 |  |
| 50   | Airport Classification                          | 20/08/2019 |  |
| 51   | Runway Orientation                              | 20/08/2019 |  |
| 52   | Wind-Rose Diagram                               | 21/08/2019 |  |
| 53   | Runway length                                   | 22/08/2019 |  |
| 54   | Taxiway Design                                  | 23/08/2019 |  |
| 55   | Terminal Area & Airport Layout                  | 23/08/2019 |  |
| 56   | Visual Aids & Air Traffic Control               | 24/08/2019 |  |
| 57   | Problems – Unit IV                              | 24/08/2019 |  |
| 58   | Revision  | 26/08/2019 |  |
| 59   | Revision  | 26/08/2019 |  |
| <b>UNIT – V : RUNWAY DESIGN</b>  |   |            |  |
| <b>CO5– To Acquire Design Principles of Airport Geometrics &amp; Pavements</b>           |   |            |  |
| <b>TB: “Airport Engineering” by Khanna &amp; Arora</b>                                   |   |            |  |
| 60   | Various Design factors                          | 27/08/2019 | Lectures interspersed with Discussions |
| 61   | Design Methods for Rigid Pavement               | 27/08/2019 |  |
| 62   | LCN system of Pavement Design                   | 31/08/2019 |  |
| 63   | Airfield Pavement Failures                      | 3/09/2019  |  |
| 64   | Maintenance & rehabilitation                    | 3/09/2019  |  |
| 65   | Airport Drainage                                | 6/09/2019  |  |
| <b>UNIT –VI : PLANNING, LAYOUT, CONSTRUCTION AND MAINTENANCE OF DOCKS &amp; HARBOURS</b> |   |            |  |
| <b>CO6 – To know the Planning, Construction and maintenance of docks &amp; Harbours</b>  |   |            |  |
| <b>TB: “Docks&amp;HarbourEngineering” by S.P. Bindra</b>                                 |   |            |  |
| 66   | Classification of Ports and Harbours            | 7/09/2019  | Lectures interspersed with Discussions |
| 67   | Dry & Wet Docks, Transition Sheds & Ware houses | 9/09/2019  |  |
| 68   | Quay walls, Wharves                             | 12/09/2019 |  |
| 69   | Jetties – Tides - Break Waters                  | 13/09/2019 |  |
| 70   | Dredging  | 17/09/2019 |  |
| 71   | Maintenance of Ports                            | 18/09/2019 |  |
| 72   | Navigational Aids                               | 19/09/2019 |  |
| 73   | Revision  | 21/09/2019 |  |
| 74   | Revision  | 24/09/2019 |  |

Signature of the Faculty

Signature of the HOD

|    |  |           |  |
|----|--|-----------|--|
|    | boundaries   |           | Lecture interspersed<br>with discussions |
| 67 | Computation of areas along regular boundaries        | 18-9-2019 |  |
| 68 | Embankments and cutting for a level section          | 19-9-2019 |  |
| 69 | Two level section with and without transverse slopes | 20-9-2019 |  |
| 70 | Determination of the capacity of reservoir           | 24-9-2019 |  |
| 71 | Volume of barrow pits                                | 25-9-2019 |  |
| 72 | Problems volume of barrow pits                       | 26-9-2019 |  |
| 73 | Problems volume of barrow pits                       | 27-9-2019 |  |

*Ch. Suresh*  
Signature of the Faculty

*[Handwritten Signature]*  
PRINCIPAL

*T. Lakshmi*  
Signature of the HOD

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

14-20  
Sem 2  
U-1

## TENTATIVE LESSON PLAN

|  |                                      |                           |
|--|--------------------------------------|---------------------------|
| <b>Course Title: ENVIRONMENTAL ENGINEERING II (R1641011)</b> |                                      |                           |
| <b>Section : Sec A</b>                                       | <b>Date : 10/06/2019</b>             | <b>Page No : 01 of 02</b> |
| <b>Revision No : 00</b>                                      | <b>Prepared By : N.KRANTHI REKHA</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, PPT, Models**

| No. of Periods  | TOPIC  | Date      | Mode of Delivery                      |
|---|--|-----------|---------------------------------------|
| <b>UNIT –I Introduction to sanitation</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO1: To know about collection and conveyance of waste water.</b> |  |           |                                       |
| 1   | System of sanitation                               | 12-6-2019 | Lecture interspersed with discussions |
| 2   | Relative merits and demerits                       | 13-6-2019 |                                       |
| 3   | Collection of ww                                   | 14-6-2019 |                                       |
| 4   | Conveyance of ww                                   | 15-6-2019 |                                       |
| 5   | Sewerage   | 17-6-2019 |                                       |
| 6   | Classification of sewerage systems                 | 18-6-2019 |                                       |
| 7   | Estimation of sewage flow                          | 19-6-2019 |                                       |
| 8   | Storm water drainage-fluctuations                  | 20-6-2019 |                                       |
| 9   | Types of sewers                                    | 21-6-2019 |                                       |
| 10  | Sewer appurtenances                                | 22-6-2019 |                                       |
| 11  | Cleaning and ventilation of sewers                 | 24-6-2019 |                                       |
| <b>UNIT –II</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO 2: To know about pumping system and house plumbing.</b>                                 |  |           |                                       |
| 12  | Pumping of ww and ps                               | 4-7-2019  | Lecture interspersed with discussions |
| 13  | Location , components of ps                        | 5-7-2019  |                                       |
| 14  | Types of pumps and their suitability               | 6-7-2019  |                                       |
| 15  | House plumbing                                     | 8-7-2019  |                                       |
| 16  | System of plumbing                                 | 9-7-2019  |                                       |
| 19  | Sanitary fittings                                  | 10-7-2019 |                                       |
| 18  | One pipe and two pipe system                       | 11-7-2019 |                                       |
| 19  | Design of building drainage                        | 12-7-2019 |                                       |
| <b>UNIT –III</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO 3: To know about preliminary and primary treatment.</b>                                |  |           |                                       |
| 20  | Sampling and analysis of ww                        | 20-7-2019 | Lecture interspersed with discussions |
| 21  | Physical   | 22-7-2019 |                                       |
| 22  | Chemical   | 23-7-2019 |                                       |
| 23  | Biological   | 24-7-2019 |                                       |
| 24  | Measurement of COD &BOD                            | 25-7-2019 |                                       |
| 25  | BOD equations                                      | 26-7-2019 |                                       |
| 26  | Treatment of sewage                                | 27-7-2019 |                                       |
| 27  | Primary treatment                                  | 29-7-2019 |                                       |
| 28  | Screens and grit chambers                          | 30-7-2019 |                                       |
| 29  | Grease traps and floatation                        | 31-7-2019 |                                       |
| 30  | Sedimentation                                      | 31-7-2019 |                                       |
| 31  | Designs of preliminary and primary treatment units | 1-8-2019  |                                       |
| <b>UNIT –IV</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO 4: To know about biological treatment of waste water.</b>                               |  |           |                                       |

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
|    |   | 3-8-2019  | Lecture interspersed with discussions |
| 32 | Secondary treatment                               | 5-8-2019  |                                       |
| 33 | Aerobic TU  | 5-8-2019  |                                       |
| 34 | Anaerobic TU                                      | 6-8-2019  |                                       |
| 35 | Suspended growth process                          | 8-8-2019  |                                       |
| 36 | ASPT  | 9-8-2019  |                                       |
| 37 | Principles, designs, operational problems         | 14-8-2019 |                                       |
| 38 | Oxidation ponds                                   | 28-8-2019 |                                       |
| 39 | Aerated lagoons                                   | 30-8-2019 |                                       |
| 40 | Attached growth process                           | 31-8-2019 |                                       |
| 41 | Trickling filters                                 | 4-9-2019  |                                       |
| 42 | Mechanism of impurities removal                   | 5-9-2019  |                                       |
| 43 | Classification, design, operation and maintenance | 5-9-2019  |                                       |
| 44 | RBCs  | 6-9-2019  |                                       |
|    | Fluidized bed reactors                            |           |                                       |

**Unit - V**

**TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE**

**CO 5: To know about advanced treatments of sewage.**

|    |                                   |           |                                       |
|----|-----------------------------------|-----------|---------------------------------------|
| 45 | Nitrification                     | 7-9-2019  | Lecture interspersed with discussions |
| 46 | De-nitrification                  | 9-9-2019  |                                       |
| 47 | Removal of phosphates             | 11-9-2019 |                                       |
| 48 | UASB                              | 12-9-2019 |                                       |
| 49 | Membrane reactor                  | 13-9-2019 |                                       |
| 50 | IFFR                              | 17-9-2019 |                                       |
| 51 | Septic tanks                      | 18-9-2019 |                                       |
| 52 | Imhoff tanks                      | 19-9-2019 |                                       |
| 53 | Designs                           | 20-9-2019 |                                       |
| 54 | Disposal of septic tank effluents | 20-9-2019 |                                       |

**UNIT - VI**

**TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE**

**CO 6: To know about sewage disposal and sludge disposal.**

|    |                             |           |                                       |
|----|-----------------------------|-----------|---------------------------------------|
| 55 | Sludge management           | 23-9-2019 | Lecture interspersed with discussions |
| 56 | Characteristics             | 24-9-2019 |                                       |
| 57 | Handling of sludge          | 25-9-2019 |                                       |
| 58 | Treatment of sludge         | 26-9-2019 |                                       |
| 59 | Sludge thickening           | 27-9-2019 |                                       |
| 60 | Aerobic digestion of sludge | 28-9-2019 |                                       |
| 61 | Disposal of sewage          | 28-9-2019 |                                       |
| 62 | Methods of disposal         | 28-9-2019 |                                       |
| 63 | Disposal into water bodies  | 29-9-2019 |                                       |
| 64 | Oxygen sag curve            | 29-9-2019 |                                       |
| 65 | Disposal on land            | 1-10-2019 |                                       |
| 66 | Sewage sickness             | 1-10-2019 |                                       |
|    |                             | 1-10-2019 |                                       |

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19/11/19

## TENTATIVE LESSON PLAN

|  |                                      |                           |
|--|--------------------------------------|---------------------------|
| <b>Course Title: ENVIRONMENTAL ENGINEERING II (R1641011)</b> |                                      |                           |
| <b>Section : Sec B</b>                                       | <b>Date : 10/06/2019</b>             | <b>Page No : 01 of 02</b> |
| <b>Revision No : 00</b>                                      | <b>Prepared By : N.KRANTHI REKHA</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, PPT, Models**

| No. of Periods  | TOPIC  | Date      | Mode of Delivery                      |
|---|--|-----------|---------------------------------------|
| <b>UNIT –I Introduction to sanitation</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO1: To know about collection and conveyance of waste water.</b> |  |           |                                       |
| 1   | System of sanitation                               | 12-6-2019 | Lecture interspersed with discussions |
| 2   | Relative merits and demerits                       | 13-6-2019 |                                       |
| 3   | Collection of ww                                   | 14-6-2019 |                                       |
| 4   | Conveyance of ww                                   | 15-6-2019 |                                       |
| 5   | Sewerage   | 17-6-2019 |                                       |
| 6   | Classification of sewerage systems                 | 18-6-2019 |                                       |
| 7   | Estimation of sewage flow                          | 19-6-2019 |                                       |
| 8   | Storm water drainage-fluctuations                  | 20-6-2019 |                                       |
| 9   | Types of sewers                                    | 21-6-2019 |                                       |
| 10  | Sewer appurtenances                                | 22-6-2019 |                                       |
| 11  | Cleaning and ventilation of sewers                 | 24-6-2019 |                                       |
| <b>UNIT –II</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO 2: To know about pumping system and house plumbing.</b>                                 |  |           |                                       |
| 12  | Pumping of ww and ps                               | 4-7-2019  | Lecture interspersed with discussions |
| 13  | Location , components of ps                        | 5-7-2019  |                                       |
| 14  | Types of pumps and their suitability               | 6-7-2019  |                                       |
| 15  | House plumbing                                     | 8-7-2019  |                                       |
| 16  | System of plumbing                                 | 9-7-2019  |                                       |
| 19  | Sanitary fittings                                  | 10-7-2019 |                                       |
| 18  | One pipe and two pipe system                       | 11-7-2019 |                                       |
| 19  | Design of building drainage                        | 12-7-2019 |                                       |
| <b>UNIT –III</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO 3: To know about preliminary and primary treatment.</b>                                |  |           |                                       |
| 20  | Sampling and analysis of ww                        | 20-7-2019 | Lecture interspersed with discussions |
| 21  | Physical   | 22-7-2019 |                                       |
| 22  | Chemical   | 23-7-2019 |                                       |
| 23  | Biological   | 24-7-2019 |                                       |
| 24  | Measurement of COD & BOD                           | 25-7-2019 |                                       |
| 25  | BOD equations                                      | 26-7-2019 |                                       |
| 26  | Treatment of sewage                                | 27-7-2019 |                                       |
| 27  | Primary treatment                                  | 29-7-2019 |                                       |
| 28  | Screens and grit chambers                          | 30-7-2019 |                                       |
| 29  | Grease traps and floatation                        | 31-7-2019 |                                       |
| 30  | Sedimentation                                      | 31-7-2019 |                                       |
| 31  | Designs of preliminary and primary treatment units | 1-8-2019  |                                       |
| <b>UNIT –IV</b><br><b>TB: WATER SUPPLY &amp; SANITATION ENGINEERING BY J.S.BIRDIE &amp; B.S.BIRDIE</b><br><b>CO 4: To know about biological treatment of waste water.</b>                               |  |           |                                       |

|    |   |           |                                       |
|----|---|-----------|---------------------------------------|
| 32 | Secondary treatment                               | 3-8-2019  | Lecture interspersed with discussions |
| 33 | Aerobic TU  | 5-8-2019  |                                       |
| 34 | Anaerobic TU                                      | 6-8-2019  |                                       |
| 35 | Suspended growth process                          | 8-8-2019  |                                       |
| 36 | ASPT  | 9-8-2019  |                                       |
| 37 | Principles, designs, operational problems         | 14-8-2019 |                                       |
| 38 | Oxidation ponds                                   | 28-8-2019 |                                       |
| 39 | Aerated lagoons                                   | 30-8-2019 |                                       |
| 40 | Attached growth process                           | 31-8-2019 |                                       |
| 41 | Trickling filters                                 | 4-9-2019  |                                       |
| 42 | Mechanism of impurities removal                   | 5-9-2019  |                                       |
| 43 | Classification, design, operation and maintenance | 5-9-2019  |                                       |
| 44 | RBCs  | 6-9-2019  |                                       |
|    | Fluidized bed reactors                            |           |                                       |

**Unit -V**

**TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE**

**CO 5: To know about advanced treatments of sewage.**

|    |                                   |           |                                       |
|----|-----------------------------------|-----------|---------------------------------------|
| 45 | Nitrification                     | 7-9-2019  | Lecture interspersed with discussions |
| 46 | De-nitrification                  | 9-9-2019  |                                       |
| 47 | Removal of phosphates             | 11-9-2019 |                                       |
| 48 | UASB                              | 12-9-2019 |                                       |
| 49 | Membrane reactor                  | 13-9-2019 |                                       |
| 50 | IFFR                              | 17-9-2019 |                                       |
| 51 | Septic tanks                      | 18-9-2019 |                                       |
| 52 | Imhoff tanks                      | 19-9-2019 |                                       |
| 53 | Designs                           | 20-9-2019 |                                       |
| 54 | Disposal of septic tank effluents | 20-9-2019 |                                       |

**UNIT - VI**

**TB: WATER SUPPLY & SANITATION ENGINEERING BY J.S.BIRDIE & B.S.BIRDIE**

**CO 6: To know about sewage disposal and sludge disposal.**

|    |                             |           |                                       |
|----|-----------------------------|-----------|---------------------------------------|
| 55 | Sludge management           | 23-9-2019 | Lecture interspersed with discussions |
| 56 | Characteristics             | 24-9-2019 |                                       |
| 57 | Handling of sludge          | 25-9-2019 |                                       |
| 58 | Treatment of sludge         | 26-9-2019 |                                       |
| 59 | Sludge thickening           | 27-9-2019 |                                       |
| 60 | Aerobic digestion of sludge | 28-9-2019 |                                       |
| 61 | Disposal of sewage          | 28-9-2019 |                                       |
| 62 | Methods of disposal         | 28-9-2019 |                                       |
| 63 | Disposal into water bodies  | 29-9-2019 |                                       |
| 64 | Oxygen sag curve            | 29-9-2019 |                                       |
| 65 | Disposal on land            | 1-10-2019 |                                       |
| 66 | Sewage sickness             | 1-10-2019 |                                       |
|    |                             | 1-10-2019 |                                       |

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19/11/19



## TENTATIVE LESSON PLAN: R1641012

|  |                                   |                           |
|--|-----------------------------------|---------------------------|
| <b>Course Title: Water resources engineering - II ( R1641012 )</b> |                                   |                           |
| <b>Section : Sec A</b>   | <b>Date : 10/06/19</b>            | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>  | <b>Prepared By : E. USHA SREE</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, power point presentations**

| No. of Periods   | TOPIC  | Implemented Date | Mode of Delivery                      |
|--|--|------------------|---------------------------------------|
| <b>UNIT –I IRRIGATION</b>  |  |                  |                                       |
| <b>CO 1: To enable the student to estimate the irrigation water requirements</b> |  |                  |                                       |
| <b>TB: Water resources engineering, Dr. K.R. Arora</b>                           |  |                  |                                       |
| 1  | Necessity and importance   | 17-06-2019       | Lecture interspersed with discussions |
| 2  | Crop seasons and types   | 18-06-2019       |                                       |
| 3  | Methods of application   | 19-06-2019       |                                       |
| 4  | Soil water plant relationships                                     | 20-06-2019       |                                       |
| 5  | Soil moisture constants  | 21-06-2019       |                                       |
| 6  | Consumptive use and estimation of consumptive use                  | 22-06-2019       |                                       |
| 7  | Crop water requirement   | 24-06-2019       |                                       |
| 8  | Duty and delta, factors affecting duty                             | 25-06-2019       |                                       |
| 9  | Depth and frequency of irrigation                                  | 26-06-2019       |                                       |
| 10   | Irrigation efficiencies  | 27-06-2019       |                                       |
| 11   | Water logging and drainage   | 29-06-2019       |                                       |
| 12   | Irrigation water standards and crop rotation                       | 01-07-2019       |                                       |
| 13   | <b>Tutorial</b>  | 02-07-2019       |                                       |
| <b>UNIT –II CANALS</b>   |  |                  |                                       |
| <b>CO 2: To make the student to design irrigation canals and canal network</b>   |  |                  |                                       |
| <b>TB: Irrigation and water power engineering, B. C. Punmia</b>                  |  |                  |                                       |
| 14   | Design of non - erodible canals                                    | 03-07-2019       | Lecture interspersed with discussions |
| 15   | Methods of economic section and maximum permissible velocity       | 05-07-2019       |                                       |
| 16   | Economics of canal lining  | 06-07-2019       |                                       |
| 17   | Kennedy's silt theory  | 08-07-2019       |                                       |
| 18   | Lacey's regime theory  | 09-07-2019       |                                       |
| 19   | Balancing depth of cutting   | 10-07-2019       |                                       |
| 20   | <b>Tutorial</b>  | 11-07-2019       |                                       |
| <b>UNIT –III CANAL STRUCTURES</b>  |  |                  |                                       |
| <b>CO 3: To make the student to design irrigation canal structures</b>           |  |                  |                                       |
| <b>TB: Irrigation and water power engineering, B. C. Punmia</b>                  |  |                  |                                       |
| 21   | Canal falls: types and location                                    | 12-07-2019       | Lecture interspersed with discussions |
| 22   | Design principles of sarda type fall                               | 17-07-2019       |                                       |
| 23   | Problems on sarda type fall  | 18-07-2019       |                                       |
| 24   | Design of straight glacis fall                                     | 19-07-2019       |                                       |
| 25   | Canal regulators: head and cross regulators                        | 20-07-2019       |                                       |
| 26   | Design principles  | 22-07-2019       |                                       |
| 27   | Cross drainage works: types and selection                          | 23-07-2019       |                                       |
| 28   | Design principles of aqueduct                                      | 24-07-2019       |                                       |
| 29   | Siphon aqueduct and super passage                                  | 25-07-2019       |                                       |
| 30   | Canal outlets: types, proportionality, sensitivity and flexibility | 26-07-2019       |                                       |
| 31   | River training objectives  | 27-07-2019       |                                       |
| 32   | River training approaches  | 29-08-2019       |                                       |
| 33   | <b>Tutorial</b>  | 03-08-2019       |                                       |

|  |   |            |                                       |
|--|---|------------|---------------------------------------|
| <b>UNIT -IV DIVERSION HEAD WORKS</b>   |   |            | Lecture interspersed with discussions |
| <b>CO 4: To make the student to plan and design diversion head works</b>                             |   |            |                                       |
| <b>TB : Irrigation and water power engineering, B. C. Punmia</b>                                     |   |            |                                       |
| 32   | Weirs and barrages                                    | 16-08-2019 |                                       |
| 33   | Layout of diversion head works and components         | 19-08-2019 |                                       |
| 34   | Causes and failures of weirs on permeable foundations | 20-08-2019 |                                       |
| 35   | Bligh's creep theory                                  | 21-08-2019 |                                       |
| 36   | Khosla's theory                                       | 23-08-2019 |                                       |
| 37   | Design of impervious floors for sub surface flow      | 26-08-2019 |                                       |
| 38   | Exit gradient   | 27-08-2019 |                                       |
| 39   | <b>Tutorial</b>                                       | 28-08-2019 |                                       |
| <b>UNIT -V RESERVOIR PLANNING, DAMS AND GRAVITY DAMS</b>   |   |            | Lecture interspersed with discussions |
| <b>CO 5: To make the student to analyze stability of gravity dams</b>                                |   |            |                                       |
| <b>TB: Irrigation and water power engineering, B. C. Punmia</b>                                      |   |            |                                       |
| 40   | Reservoir planning: introduction                      | 01-09-2019 |                                       |
| 41   | Investigations, site selections, zones of storage     | 02-09-2019 |                                       |
| 42   | Yield and storage capacity of reservoir               | 02-09-2019 |                                       |
| 43   | Reservoir sedimentation                               | 03-09-2019 |                                       |
| 44   | Dams: types of dams, selection                        | 04-09-2019 |                                       |
| 45   | Selection of site for dam                             | 05-09-2019 |                                       |
| 46   | Gravity dams: forces acting on gravity dams           | 06-09-2019 |                                       |
| 47   | Causes of failures of gravity dams                    | 06-09-2019 |                                       |
| 48   | Problems  | 09-09-2019 |                                       |
| 49   | Elementary profile of dam                             | 11-09-2019 |                                       |
| 50   | Practical profile of dam                              | 11-09-2019 |                                       |
| 51   | Limiting height of dam                                | 11-09-2019 |                                       |
| 52   | Stability analysis                                    | 12-09-2019 |                                       |
| 53   | Drainage galleries and grouting                       | 12-09-2019 |                                       |
| 54   | <b>Tutorial</b>                                       | 13-09-2019 |                                       |
| <b>UNIT - VI EARTH DAMS AND SPILLWAYS</b>  |   |            | Lecture interspersed with discussions |
| <b>CO 6 : To make the students to design earth dams, ogee spillways and energy dissipation works</b> |   |            |                                       |
| <b>TB: Irrigation and water power engineering, B. C. Punmia</b>                                      |   |            |                                       |
| 55   | Earth dams, types and causes of failures              | 16-09-2019 |                                       |
| 56   | Criteria for safe design                              | 16-09-2019 |                                       |
| 57   | Seepage control measures                              | 17-09-2019 |                                       |
| 58   | Filters and stability analysis                        | 18-09-2019 |                                       |
| 59   | Stability of d/s slope during steady seepage          | 19-09-2019 |                                       |
| 60   | Stability of u/s slope during sudden drawdown         | 20-09-2019 |                                       |
| 61   | Spillways: types                                      | 21-09-2019 |                                       |
| 62   | Design principles of ogee spillways                   | 23-09-2019 |                                       |
| 63   | Problems  | 24-09-2019 |                                       |
| 64   | Types of spillway crest gates                         | 26-09-2019 |                                       |
| 65   | Energy dissipation                                    | 27-09-2019 |                                       |
| 66   | Stilling basin and appurtenances                      | 28-09-2019 |                                       |
| 67   | <b>Tutorial</b>                                       | 01-10-2019 |                                       |

Signature of the Faculty

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Signature of the HOD

10/6/19

## TENTATIVE LESSON PLAN: R1641012

|  |                                   |                           |
|--|-----------------------------------|---------------------------|
| <b>Course Title: Water resources engineering - II ( R1641012 )</b> |                                   |                           |
| <b>Section : Sec B</b>   | <b>Date : 10/06/19</b>            | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>  | <b>Prepared By : E. USHA SREE</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, power point presentations**

| No. of Periods   | TOPIC  | Implemented Date | Mode of Delivery                      |
|--|--|------------------|---------------------------------------|
| <b>UNIT –I IRRIGATION</b>  |  |                  |                                       |
| <b>CO 1: To enable the student to estimate the irrigation water requirements</b> |  |                  |                                       |
| <b>TB: Water resources engineering, Dr. K.R. Arora</b>                           |  |                  |                                       |
| 1  | Necessity and importance   | 17-06-2019       | Lecture interspersed with discussions |
| 2  | Crop seasons and types   | 18-06-2019       |                                       |
| 3  | Methods of application   | 19-06-2019       |                                       |
| 4  | Soil water plant relationships                                     | 20-06-2019       |                                       |
| 5  | Soil moisture constants  | 21-06-2019       |                                       |
| 6  | Consumptive use and estimation of consumptive use                  | 22-06-2019       |                                       |
| 7  | Crop water requirement   | 24-06-2019       |                                       |
| 8  | Duty and delta, factors affecting duty                             | 25-06-2019       |                                       |
| 9  | Depth and frequency of irrigation                                  | 26-06-2019       |                                       |
| 10   | Irrigation efficiencies  | 27-06-2019       |                                       |
| 11   | Water logging and drainage   | 29-06-2019       |                                       |
| 12   | Irrigation water standards and crop rotation                       | 01-07-2019       |                                       |
| 13   | <b>Tutorial</b>  | 02-07-2019       |                                       |
| <b>UNIT –II CANALS</b>   |  |                  |                                       |
| <b>CO 2: To make the student to design irrigation canals and canal network</b>   |  |                  |                                       |
| <b>TB: Irrigation and water power engineering, B. C. Punmia</b>                  |  |                  |                                       |
| 14   | Design of non - erodible canals                                    | 03-07-2019       | Lecture interspersed with discussions |
| 15   | Methods of economic section and maximum permissible velocity       | 05-07-2019       |                                       |
| 16   | Economics of canal lining  | 06-07-2019       |                                       |
| 17   | Kennedy's silt theory  | 08-07-2019       |                                       |
| 18   | Lacey's regime theory  | 09-07-2019       |                                       |
| 19   | Balancing depth of cutting   | 10-07-2019       |                                       |
| 20   | <b>Tutorial</b>  | 11-07-2019       |                                       |
| <b>UNIT –III CANAL STRUCTURES</b>  |  |                  |                                       |
| <b>CO 3: To make the student to design irrigation canal structures</b>           |  |                  |                                       |
| <b>TB: Irrigation and water power engineering, B. C. Punmia</b>                  |  |                  |                                       |
| 21   | Canal falls: types and location                                    | 12-07-2019       | Lecture interspersed with discussions |
| 22   | Design principles of sarda type fall                               | 17-07-2019       |                                       |
| 23   | Problems on sarda type fall  | 18-07-2019       |                                       |
| 24   | Design of straight glacis fall                                     | 19-07-2019       |                                       |
| 25   | Canal regulators: head and cross regulators                        | 20-07-2019       |                                       |
| 26   | Design principles  | 22-07-2019       |                                       |
| 27   | Cross drainage works: types and selection                          | 23-07-2019       |                                       |
| 28   | Design principles of aqueduct                                      | 24-07-2019       |                                       |
| 29   | Siphon aqueduct and super passage                                  | 25-07-2019       |                                       |
| 30   | Canal outlets: types, proportionality, sensitivity and flexibility | 26-07-2019       |                                       |
| 31   | River training objectives  | 27-07-2019       |                                       |
| 32   | River training approaches  | 29-08-2019       |                                       |
| 33   | <b>Tutorial</b>  | 03-08-2019       |                                       |

## TENTATIVE LESSON PLAN: CIVIL R1641013

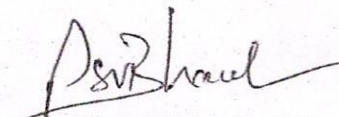
**Course Title: GEO TECHNICAL ENGINEERING-II (CIVIL)**

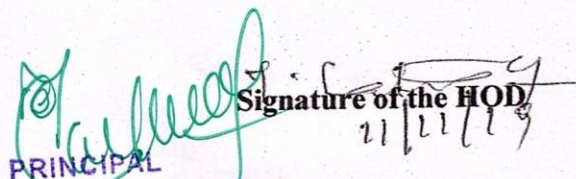
|                        |                                   |                          |
|------------------------|-----------------------------------|--------------------------|
| <b>Section: Sec A</b>  | <b>Date: 10-06-2019</b>           | <b>Page No: 01 of 02</b> |
| <b>Revision No: 00</b> | <b>Prepared By: P.S.V Bharath</b> | <b>Approved By: HOD</b>  |

**Tools: Black board, power point presentations**

| No. of Periods | TOPIC   | Tentative Dates | MODE OF DELIVERY                      |
|----------------|---|-----------------|---------------------------------------|
| <b>UNIT 1</b>  |   |                 |                                       |
| 1              | Geotechnical engineering I (recall)                                 | 20-06-2019      | Lecture interspersed with discussions |
| 2              | Geotechnical engineering II introduction                            | 21-06-2019      |                                       |
| 3              | Stability of slopes introduction                                    | 24-06-2019      |                                       |
| 4              | Infinite slopes   | 25-06-2019      |                                       |
| 5              | Infinite slopes   | 26-06-2019      |                                       |
| 6              | Finite slopes   | 27-06-2019      |                                       |
| 7              | Finite slopes   | 28-06-2019      |                                       |
| 8              | Types of failures   | 01-07-2019      |                                       |
| 9              | Factor of safety of infinite slopes                                 | 02-07-2019      |                                       |
| 10             | Stability analysis by swedish arc method                            | 03-07-2019      |                                       |
| 11             | Method of slices  | 04-07-2019      |                                       |
| 12             | Taylor stability number   | 05-07-2019      |                                       |
| 13             | Stability of slopes of dams   | 06-07-2019      |                                       |
| 14             | Stability of slopes of embankments and different conditions         | 08-07-2019      |                                       |
| <b>UNIT 2</b>  |   |                 |                                       |
| 15             | Rankines theory of earth pressure                                   | 09-07-2019      | Lecture interspersed with discussions |
| 16             | Rankines theory of earth pressure                                   | 11-07-2019      |                                       |
| 17             | Coulombs theory of earth pressure                                   | 12-07-2019      |                                       |
| 18             | Coulombs theory of earth pressure                                   | 12-07-2019      |                                       |
| 19             | Culmanns graphical method   | 15-07-2019      |                                       |
| 20             | Culmanns graphical method   | 15-07-2019      |                                       |
| 21             | Earth pressures in layered soil                                     | 16-07-2019      |                                       |
| <b>UNIT 3</b>  |   |                 |                                       |
| 22             | Types of foundations and factors to be considered in their location | 17-07-2019      | Lecture interspersed with discussions |
| 23             | Bearing capacity  | 18-07-2019      |                                       |
| 24             | Criteria for determination of bearing capacity                      | 19-07-2019      |                                       |
| 25             | Factors influencing bearing capacity                                | 22-07-2019      |                                       |
| 26             | Analytical methods to determine bearing capacity                    | 23-07-2019      |                                       |
| 27             | Terzaghi's theory   | 24-07-2019      |                                       |
| 28             | IS methods  | 25-07-2019      |                                       |
| 29             | Safe bearing pressure based on N value                              | 26-07-2019      |                                       |
| 30             | Allowable bearing pressure  | 27-07-2019      |                                       |
| 31             | Safe bearing capacity and settlement from plate load test           | 29-07-2019      |                                       |
| 32             | Types of foundation settlements and their determination             | 30-07-2019      |                                       |
| 33             | Allowable settlements of structures                                 | 31-07-2019      |                                       |

| UNIT 4 |  |            |                                       |
|--------|--|------------|---------------------------------------|
| 34     | Types of piles   | 31-07-2019 | Lecture interspersed with discussions |
| 35     | Load carrying capacity of piles based on static pile formulae      | 01-08-2019 |                                       |
| 36     | Load carrying capacity of piles based on static pile formulae      | 02-08-2019 |                                       |
| 37     | Dynamic pile formulae  | 03-08-2019 |                                       |
| 38     | Dynamic pile formulae  | 19-08-2019 |                                       |
| 39     | Pile load tests  | 20-08-2019 |                                       |
| 40     | Pile load tests  | 22-08-2019 |                                       |
| 41     | Load carrying capacity of pile group in sands                      | 24-08-2019 |                                       |
| 42     | Load carrying capacity of pile group in sands                      | 26-08-2019 |                                       |
| 43     | Load carrying capacity of pile group in clays                      | 27-08-2019 |                                       |
| 44     | Load carrying capacity of pile group in clays                      | 29-08-2019 |                                       |
| UNIT-5 |  |            |                                       |
| 45     | Types of well foundation   | 30-08-2019 | Lecture interspersed with discussions |
| 46     | Different shapes of well   | 03-09-2019 |                                       |
| 47     | Components of well   | 04-09-2019 |                                       |
| 48     | Functions of well foundation                                       | 05-09-2019 |                                       |
| 49     | Forces acting on well foundations                                  | 06-09-2019 |                                       |
| 50     | Forces acting on well foundations                                  | 07-09-2019 |                                       |
| 51     | Design criteria  | 09-09-2019 |                                       |
| 52     | Design criteria  | 11-09-2019 |                                       |
| 53     | Design criteria  | 13-09-2019 |                                       |
| 54     | Determination of steining thickness and plug                       | 16-09-2019 |                                       |
| 55     | Construction and sinking of wells                                  | 17-09-2019 |                                       |
| 56     | Tilt and shift   | 18-09-2019 |                                       |
| 57     | Tilt and shift   | 19-09-2019 |                                       |
| UNIT-6 |  |            |                                       |
| 58     | Need of soil exploration   | 20-09-2019 | Lecture interspersed with discussions |
| 59     | Methods of soil exploration  | 21-09-2019 |                                       |
| 60     | Boring and sampling methods  | 23-09-2019 |                                       |
| 61     | Boring and sampling methods  | 23-09-2019 |                                       |
| 62     | Field tests  | 24-09-2019 |                                       |
| 63     | Field tests  | 25-09-2019 |                                       |
| 64     | Penetration tests  | 25-09-2019 |                                       |
| 65     | Pressure meter   | 26-09-2019 |                                       |
| 66     | Planning of programme and preparation of soil investigation report | 27-09-2019 |                                       |
| 67     | Planning of programme and preparation of soil investigation report | 27-09-2019 |                                       |

  
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|  |  | to17-9-2019           |
|  |  | 18-9-2019             |
| 62   | Tutorial   |                       |
| <b>UNIT -VI Applications of Hydrology, Water Resources and Disaster Management:</b><br>CO6 The student will be able to understand the application of RS and GIS to Civil engineering<br><b>T1 RS&amp; GIS By BASUDED BHATTA,ORFORD PUBLISHERS</b><br><b>T2 Fundamentals of Remote Sensing, George Joseph, Universities Press</b> |  |                       |
| 63   | Flood zoning and mapping                                       | 19-9-2019 &20-9-2019  |
| 64   | groundwater prospects and potential recharge zones             | 21-9-2019&23-9-2019   |
| 65   | watershed management and disaster management with case studies | 24-9-2019 to26-9-2019 |
| 66   | Tutorial   | 27-9-2019             |
| 67   | Tutorial   | 28-9-2019             |

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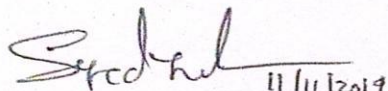
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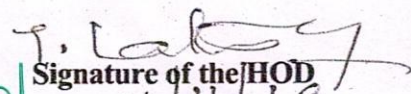
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|--|---|---------------------------|
| <b>Course Title: REMOTE SENSING AND GIS APPLICATIONS</b> |   |                           |
| <b>Section : Sec B</b>                                   | <b>Date : 10-6-2019</b>                 | <b>Page No : 01 of 03</b> |
| <b>Revision No : 00</b>                                  | <b>Prepared By :Syed Jakeer Hussain</b> | <b>Approved By : HOD</b>  |


Tools: Black board, PPTs

| No. of Periods                                 | TOPIC   | Date      | Mode of Delivery                     |
|--|---|-----------|--------------------------------------|
| <b>UNIT –I Introduction to remote sensing</b>  |   |           |                                      |
| 1  | Introduction  | 10-6-2019 | Lecture interspersed with discussion |
| 2  | Basic concepts of remote sensing,                               | 11-6-2019 |                                      |
| 3  | electromagnetic radiation                                       | 12-6-2019 |                                      |
| 4  | electromagnetic spectrum,                                       | 13-6-2019 |                                      |
| 5  | interaction with atmosphere                                     | 14-6-2019 |                                      |
| 6  | energy interaction with the earth surfaces                      | 15-6-2019 |                                      |
| 7  | Characteristics of remote sensing systems Sensors and platforms | 17-6-2019 |                                      |
| 8  | Introduction, types of sensors                                  | 18-6-2019 |                                      |
| 9  | airborne remote sensing   | 19-6-2019 |                                      |
| 10   | spaceborne remote sensing                                       | 20-6-2019 |                                      |
| 11   | image data characteristics                                      | 21-6-2019 |                                      |
| 12   | digital image data formats                                      | 22-6-2019 |                                      |
| 13   | band interleaved by pixel                                       | 24-6-2019 |                                      |
| 14   | band interleaved by line  | 25-6-2019 |                                      |
| 15   | band sequential   | 26-6-2019 |                                      |
| 16   | IRS, LANDSAT  | 27-6-2019 |                                      |
| 17   | SPOT  | 28-6-2019 |                                      |
| 18   | MODIS   | 29-6-2019 |                                      |
| 19   | ASTER   | 1-7-2019  |                                      |
| 20   | RISAT   | 2-7-2019  |                                      |
| 21   | CARTOSAT  | 3-7-2019  |                                      |
| 22   | Tutorial  | 4-7-2019  |                                      |
| 23   | Tutorial  | 5-7-2019  |                                      |
| <b>UNIT –II Image analysis:</b>                |   |           |                                      |
| 24   | Image analysis: Introduction                                    | 6-7-2019  |                                      |
| 25   | elements of visual interpretations                              | 8-7-2019  |                                      |
| 26   | digital image processing  | 9-7-2019  |                                      |
| 27   | image preprocessing   | 10-7-2019 |                                      |
| 28   | image enhancement   | 11-7-2019 |                                      |
| 29   | image classification  | 12-7-2019 |                                      |
| 30   | supervised classification                                       | 15-7-2019 |                                      |
| 31   | unsupervised classification                                     | 16-7-2019 |                                      |
| 32   | Different b/w supervised and unsupervised                       | 19-7-2019 |                                      |
| 33   | Tutorial  | 20-7-2019 |                                      |
| <b>UNIT –III Geographic Information System</b> |   |           |                                      |
| 33   | Geographic Information System: Introduction                     | 22-7-2019 |                                      |
| 34   | key components  | 23-7-2019 |                                      |
| 35   | application areas of GIS  | 24-7-2019 |                                      |
| 36   | map projections   | 25-7-2019 |                                      |
| 37   | Data entry and preparation:                                     | 26-7-2019 |                                      |
| 38   | spatial data input  | 29-7-2019 |                                      |
| 39   | raster data models  | 30-7-2019 | Lecture                              |

|   |  |                       |                                       |  |
|---|--|-----------------------|---------------------------------------|--|
| 40  | vector data model  | 31-7-2019             | interspersed with discussions         |  |
| 41  | Different b/w raster and vector model                          | 1-8-2019              |                                       |  |
| 42  | Tutorial   | 2-8-2019              |                                       |  |
| 43  | Tutorial   | 3-8-2019              |                                       |  |
| <b>UNIT IV Spatial data analysis</b>  |  |                       |                                       |  |
| 44  | Spatial data analysis: Introduction                            | 13-8-2019             | Lecture interspersed with discussions |  |
| 45  | overlay function-vector overlay operations                     | 14-8-2019             |                                       |  |
| 46  | raster overlay operations                                      | 16-8-2019             |                                       |  |
| 47  | arithmetic operators   | 17-8-2019             |                                       |  |
| 48  | comparison and logical operators                               | 19-8-2019             |                                       |  |
| 49  | conditional expressions  | 20-8-2019             |                                       |  |
| 50  | overlay using a decision table                                 | 21-8-2019             |                                       |  |
| 51  | network analysis-optimal path finding                          | 22-8-2019             |                                       |  |
| 52  | network allocation   | 24-8-2019             |                                       |  |
| 53  | network tracing  | 26-8-2019             |                                       |  |
| 54  | buffer analysis  | 27-8-2019             | Lecture interspersed with discussions |  |
| 55  | Tutorial   | 28-8-2019             |                                       |  |
| <b>UNIT -V RS and GIS applications General:</b>                                     |  |                       |                                       |  |
| 56  | Land cover and land use  | 30-8-2019&31-8-2019   |                                       |  |
| 57  | Agriculture  | 3-8-2019&4-9-2019     |                                       |  |
| 58  | Forestry   | 6-9-2019&7-9-2019     |                                       |  |
| 59  | Geology  | 9-9-2019 &11-9-2019   |                                       |  |
| 60  | Geomorphology  | 12-9-2019             |                                       |  |
| 61  | Urban applications   | 13-9-2019 to17-9-2019 |                                       |  |
| 62  | Tutorial   | 18-9-2019             |                                       |  |
| <b>UNIT -VI Applications of Hydrology, Water Resources and Disaster Management:</b> |  |                       |                                       |  |
| 63  | Flood zoning and mapping                                       | 19-9-2019 &20-9-2019  |                                       |  |
| 64  | groundwater prospects and potential recharge zones             | 21-9-2019&23-9-2019   |                                       |  |
| 65  | watershed management and disaster management with case studies | 24-9-2019 to26-9-2019 |                                       |  |
| 66  | Tutorial   | 27-9-2019             |                                       |  |
| 67  | Tutorial   | 28-9-2019             |                                       |  |

  
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## TENTATIVE LESSON PLAN: R164101B

| Course Title: Ground Improvement Techniques(R164101B) |   |                    |                                       |
|---|---|--------------------|---------------------------------------|
| Section: Sec A  | Date:10-6-2019  | Page no : 01 of 03 |                                       |
| RevisionNo:00   | Prepared By: V.CHINNI   | Approved By : HOD  |                                       |
| Tools: Black Board, PPTs, Model                       |   |                    |                                       |
| No. of Periods  | TOPIC   | Implemented Dates  | Mode of Delivery                      |
| <b>UNIT –I DENSIFICATION</b>                          |   |                    |                                       |
| 1   | Introduction on ground improvement methods                    | 10-6-2019          | Lecture interspersed with discussions |
| 2   | Insitu densification of granular soils:Blasting               | 11-6-2019          |                                       |
| 3   | Vibratory probe, vibratory compactors                         | 12-6-2019          |                                       |
| 4   | Vibro displacement :displacement piles                        | 17-6-2019          |                                       |
| 5   | Vibroflotation techniques                                     | 18-6-2019          |                                       |
| 6   | Dynamic (or) impact compaction at ground & depth              | 19-6-2019          |                                       |
| 7   | Insitu densification of cohesive soils: preloading ,surcharge | 20-6-2019          |                                       |
| 8   | Vertical drains: sand drains                                  | 21-6-2019          |                                       |
| 9   | Vertical drains: geo drains                                   | 22-6-2019          |                                       |
| 10  | Stone columns   | 24-6-2019          |                                       |
| 11  | Vertical drain design   | 25-6-2019          |                                       |
| 12  | Dynamic (or) impact compaction(T)                             | 26-6-2019          |                                       |
| 13  | Tutorial  | 27-6-2019          |                                       |
| <b>UNIT –II DEWATERING</b>                            |   |                    |                                       |
| 14  | Introduction on dewatering                                    | 2-7-2018           | Lecture interspersed with discussions |
| 15  | Ground water and seepage control                              | 3-7-2018           |                                       |
| 16  | Open sumps & interceptor ditches                              | 4-7-2018           |                                       |
| 17  | Well point systems-single stage                               | 5-7-2018           |                                       |
| 18  | Well point systems-multi stage                                | 6-7-2018           |                                       |
| 19  | Well points in braced excavation                              | 9-7-2018           |                                       |
| 20  | Vacuum dewatering system                                      | 10-7-2018          |                                       |
| 21  | Horizontal wells  | 11-7-2018          |                                       |
| 22  | Electro osmosis   | 12-7-2018          |                                       |
| 23  | Drains:open & closed drains                                   | 13-7-2018          |                                       |
| 24  | Foundation drains & blanket drains                            | 16-7-2018          |                                       |
| 25  | Criteria for choice of filler material around drains          | 17-7-2018          |                                       |
| 26  | Tutorial: Electro osmosis                                     | 18-7-2018          |                                       |
| <b>UNIT –III SOIL STABILIZATION</b>                   |   |                    |                                       |
| 27  | Soil stabilization : Introduction                             | 18-7-2019          | Lecture interspersed                  |
| 28  | Mechanical stabilization                                      | 22-7-2019          |                                       |
| 29  | Chemical stabilization  | 23-7-2019          |                                       |
| 30  | Lime stabilization-factors                                    | 25-7-2019          |                                       |
| 31  | Cement stabilization  | 26-7-2019          |                                       |
| 32  | Bitumen stabilization-factors                                 | 27-7-2019          |                                       |
| 33  | Polymer stabilization   | 29-7-2019          |                                       |

|                                  |   |           |                                       |
|----------------------------------|---|-----------|---------------------------------------|
| 34                               | Granulated blast furnace slag & flyash            | 30-7-2019 | with discussions                      |
| 35                               | Tutorial  | 01-8-2019 |                                       |
| <b>UNIT -IV REINFORCED EARTH</b> |   |           |                                       |
| 36                               | Reinforced earth –principles                      | 02-8-2019 | Lecture interspersed with discussions |
| 37                               | Components of Reinforced earth                    | 03-8-2019 |                                       |
| 38                               | Soil nailing- purpose & applications              | 16-8-2019 |                                       |
| 39                               | Soil nailing- material & machinerics              | 19-8-2019 |                                       |
| 40                               | Soil nailing- design principles                   | 20-8-2019 |                                       |
| 41                               | Design principles of Reinforced earth walls       | 21-8-2019 |                                       |
| 42                               | Stability checks                                  | 22-8-2019 |                                       |
| 43                               | Tutorial  | 24-8-2019 |                                       |
| <b>UNIT -V GEOSYNTHETICS</b>     |   |           |                                       |
| 44                               | Geosynthetics : introduction                      | 26-8-2019 | Lecture interspersed with discussions |
| 45                               | Classification of Geosynthetics                   | 27-8-2019 |                                       |
| 46                               | Geosynthetics: applications & properties          | 28-8-2019 |                                       |
| 47                               | Geotextiles –types                                | 29-8-2019 |                                       |
| 48                               | Functions, properties                             | 03-9-2019 |                                       |
| 49                               | Geotextiles-applications                          | 04-9-2019 |                                       |
| 50                               | Geogrids & nets                                   | 05-9-2019 |                                       |
| 51                               | Geomembrane - properties                          | 06-9-2019 |                                       |
| 52                               | Geomembrane- manufacturing,applications,functions | 07-9-2019 |                                       |
| 53                               | Gabions –properties ,applications                 | 09-9-2019 |                                       |
| 54                               | Tutorial  | 11-9-2019 |                                       |
| <b>UNIT-VI GROUTING</b>          |   |           |                                       |
| 55                               | Grouting-objectives                               | 13-9-2019 | Lecture interspersed with discussions |
| 56                               | Grouts and their applications                     | 16-9-2019 |                                       |
| 57                               | Methods of grouting                               | 17-9-2019 |                                       |
| 58                               | Stage of grouting                                 | 19-9-2019 |                                       |
| 59                               | Hydraulic fracturing in soils& rocks              | 20-9-2019 |                                       |
| 60                               | Post grout tests                                  | 21-9-2019 |                                       |
| 61                               | Stage of grouting                                 | 23-9-2019 |                                       |
| 62                               | Tutorial  | 25-9-2019 |                                       |

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**TENTATIVE LESSON PLAN**

|                                      |  |                           |
|--------------------------------------|--|---------------------------|
| <b>Course Title: GWDM (R164101I)</b> |  |                           |
| <b>Section : Sec A</b>               | <b>Date : 10/6/2019</b>                  | <b>Page No : 01 of 04</b> |
| <b>Revision No : 00</b>              | <b>Prepared By : K. CHANDRA PADMAKAR</b> | <b>Approved By : HOD</b>  |

**Tools: Black board, PPTs, Model**

| No. of Periods   | TOPIC  | Date     | Mode of Delivery                      |
|--|--|----------|---------------------------------------|
| <b>UNIT -I INTRODUCTION TO GROUNDWATER DEVELOPMENT</b>   |  |          |                                       |
| <b>T1 Groundwater Development by Gopala Ranjan,<br/>T2 Groundwater Development by DK. Todd</b> |  |          |                                       |
| <b>CO: Estimate Aquifer Parameters and Yield of Wells</b>                                      |  |          |                                       |
| 1  | GW in hydrological cycle                                       | 10/06/19 | Lecture interspersed with discussions |
| 2  | GW occurrence  | 11/06/19 |                                       |
| 3  | Aquifer parameters and their determination                     | 14/06/19 |                                       |
| 4  | General ground water flow equation                             | 14/06/19 |                                       |
| 5  | <b>Well Hydraulics-</b> steady radial flow in confined aquifer | 15/06/19 |                                       |
| 6  | Unsteady radial flow in unconfined aquifer                     | 17/06/19 |                                       |
| 7  | Theis solution, jacob and chow's methods                       | 18/06/19 |                                       |
| 8  | Leaky aquifers   | 19/06/19 |                                       |
| <b>UNIT -II WELL DESIGN</b>  |  |          |                                       |
| <b>T1 Groundwater Development by Gopala Ranjan,<br/>T2 Groundwater Development by DK. Todd</b> |  |          |                                       |
| <b>CO2: Radial Flow Towards well in Confined and Unconfined Wells</b>                          |  |          |                                       |
| 9  | <b>Well Design-</b> water well design- well diameter           | 24/06/19 | Lecture interspersed with discussions |
| 10   | Well depth   | 25/06/19 |                                       |
| 11   | Well screen-screen length, slot size, screen diameter          | 26/06/19 |                                       |
| 12   | Screen selection   | 28/06/19 |                                       |
| 13   | Design of collector wells                                      | 28/06/19 |                                       |
| 14   | Infiltration gallery   | 28/06/19 |                                       |

### UNIT –III WELL CONSTRUCTION AND DEVELOPMENT

**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

**CO3: Design wells and construction practices**

|    |  |         |                                       |
|----|--|---------|---------------------------------------|
| 15 | <b>Well Construction and Development-</b> Water wells    | 8/7/19  | Lecture interspersed with discussions |
| 16 | Drilling methods-rotary drilling, percussion drilling    | 9/7/19  |                                       |
| 17 | Well construction-installation of well screens           | 9/7/19  |                                       |
| 18 | Pull back method, open hole method,                      | 11/7/19 |                                       |
| 19 | Bail-down method   | 12/7/19 |                                       |
| 20 | Wash down methods  | 15/7/19 |                                       |
| 21 | Well development-mechanical surging using compressed air | 16/7/19 |                                       |
| 22 | High velocity getting of water                           | 22/7/19 |                                       |
| 23 | Over pumping and back washing                            | 24/7/19 |                                       |
| 24 | Well completion  | 26/7/19 |                                       |
| 25 | Well disinfection and maintenance                        | 29/7/19 |                                       |

### UNIT –IV ARTIFICIAL RECHARGE

**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

**CO4: Artificial Recharge for Increasing Groundwater Potential.**

|    |   |         |                                       |
|----|---|---------|---------------------------------------|
| 26 | <b>Artificial Recharge-</b> Introduction  | 30/7/19 | Lecture interspersed with discussions |
| 27 | Recharge methods-basin, stream-channel    | 1/8/19  |                                       |
| 28 | Ditch and furrow                          | 3/8/19  |                                       |
| 29 | Flooding and recharge well methods        | 19/8/19 |                                       |
| 30 | Recharge mounds and induced recharge      | 20/8/19 |                                       |
| 31 | <b>Saline Water Intrusion-</b> Occurrence | 21/8/19 |                                       |
| 32 | Ghyben-Herzberg relation                  | 22/8/19 |                                       |
| 33 | Shape of interface                        | 24/8/19 |                                       |
| 34 | Control of Saline water intrusion         | 26/8/19 |                                       |

### UNIT –V GEOPHYSICS

**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

**CO5: Geophysical Exploration data and scientific source finding of aquifer.**

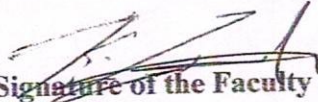
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|----|---|---------|---------------------------------------|
| 35 | <b>Geophysics-</b> Surface methods of exploration of GW | 27/8/19 | Lecture interspersed with discussions |
| 36 | Electrical resistivity and seismic refraction methods   | 29/8/19 |                                       |
| 37 | Subsurface methods                                      | 3/9/19  |                                       |
| 38 | Geophysical logging                                     | 4/9/19  |                                       |
| 39 | Resistivity logging, Aerial Photogrammetry applications | 6/9/19  |                                       |

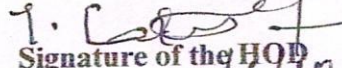
**UNIT -VI GROUNDWATER MODELLING**

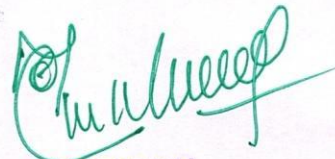
**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

**CO6: Apply Appropriate Measures for Groundwater Management**

|    |   |         |  |
|----|---|---------|--|
| 40 | Ground water Modelling and Management-<br>Basic principles    | 7/9/19  | Lecture<br>interspersed<br>with<br>discussions |
| 41 | Analog models-viscous fluid models and membrane<br>models     | 13/9/19 |  |
| 42 | Digital models-finite difference and finite element<br>models | 19/9/19 |  |
| 43 | Concepts of groundwater management                            | 20/9/19 |  |
| 44 | Basin management by conjunctive use-case studies              | 23/9/19 |  |

  
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**TENTATIVE LESSON PLAN**

| <b>Course Title: GWDM (R164101I)</b>   |  |                           |                                       |
|--|--|---------------------------|---------------------------------------|
| <b>Section : Sec B</b>   | <b>Date : 10/6/2019</b>  | <b>Page No : 01 of 04</b> |                                       |
| <b>Revision No : 00</b>  | <b>Prepared By : K. CHANDRA PADMAKAR</b>                       | <b>Approved By : HOD</b>  |                                       |
| <b>Tools: Black board, PPTs, Model</b>   |  |                           |                                       |
| <b>No. of Periods</b>  | <b>TOPIC</b>   | <b>Date</b>               | <b>Mode of Delivery</b>               |
| <b>UNIT –I INTRODUCTION TO GROUNDWATER DEVELOPMENT</b>   |  |                           |                                       |
| <b>T1 Groundwater Development by Gopala Ranjan,<br/>T2 Groundwater Development by DK. Todd</b> |  |                           |                                       |
| <b>CO: Estimate Aquifer Parameters and Yield of Wells</b>                                      |  |                           |                                       |
| 1  | GW in hydrological cycle                                       | 10/06/19                  | Lecture interspersed with discussions |
| 2  | GW occurrence  | 11/06/19                  |                                       |
| 3  | Aquifer parameters and their determination                     | 14/06/19                  |                                       |
| 4  | General ground water flow equation                             | 14/06/19                  |                                       |
| 5  | <b>Well Hydraulics-</b> steady radial flow in confined aquifer | 15/06/19                  |                                       |
| 6  | Unsteady radial flow in unconfined aquifer                     | 17/06/19                  |                                       |
| 7  | Theis solution, jacob and chow's methods                       | 18/06/19                  |                                       |
| 8  | Leaky aquifers   | 19/06/19                  |                                       |
| <b>UNIT –II WELL DESIGN</b>  |  |                           |                                       |
| <b>T1 Groundwater Development by Gopala Ranjan,<br/>T2 Groundwater Development by DK. Todd</b> |  |                           |                                       |
| <b>CO2: Radial Flow Towards well in Confined and Unconfined Wells</b>                          |  |                           |                                       |
| 9  | <b>Well Design-</b> water well design- well diameter           | 24/06/19                  | Lecture interspersed with discussions |
| 10   | Well depth   | 25/06/19                  |                                       |
| 11   | Well screen-screen length, slot size, screen diameter          | 26/06/19                  |                                       |
| 12   | Screen selection   | 28/06/19                  |                                       |
| 13   | Design of collector wells                                      | 28/06/19                  |                                       |
| 14   | Infiltration gallery   | 28/06/19                  |                                       |

### UNIT –III WELL CONSTRUCTION AND DEVELOPMENT

**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

**CO3: Design wells and construction practices**

|    |  |         |                                       |
|----|--|---------|---------------------------------------|
| 15 | <b>Well Construction and Development-</b> Water wells    | 8/7/19  | Lecture interspersed with discussions |
| 16 | Drilling methods-rotary drilling, percussion drilling    | 9/7/19  |                                       |
| 17 | Well construction-installation of well screens           | 9/7/19  |                                       |
| 18 | Pull back method, open hole method,                      | 11/7/19 |                                       |
| 19 | Bail-down method   | 12/7/19 |                                       |
| 20 | Wash down methods  | 15/7/19 |                                       |
| 21 | Well development-mechanical surging using compressed air | 16/7/19 |                                       |
| 22 | High velocity getting of water                           | 22/7/19 |                                       |
| 23 | Over pumping and back washing                            | 24/7/19 |                                       |
| 24 | Well completion  | 26/7/19 |                                       |
| 25 | Well disinfection and maintenance                        | 29/7/19 |                                       |

### UNIT –IV ARTIFICIAL RECHARGE

**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

**CO4: Artificial Recharge for Increasing Groundwater Potential.**

|    |   |         |                                       |
|----|---|---------|---------------------------------------|
| 26 | <b>Artificial Recharge-</b> Introduction  | 30/7/19 | Lecture interspersed with discussions |
| 27 | Recharge methods-basin, stream-channel    | 1/8/19  |                                       |
| 28 | Ditch and furrow                          | 3/8/19  |                                       |
| 29 | Flooding and recharge well methods        | 19/8/19 |                                       |
| 30 | Recharge mounds and induced recharge      | 20/8/19 |                                       |
| 31 | <b>Saline Water Intrusion-</b> Occurrence | 21/8/19 |                                       |
| 32 | Ghyben-Herzberg relation                  | 22/8/19 |                                       |
| 33 | Shape of interface                        | 24/8/19 |                                       |
| 34 | Control of Saline water intrusion         | 26/8/19 |                                       |

### UNIT –V GEOPHYSICS

**T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd**

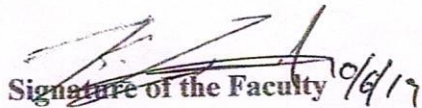
**CO5: Geophysical Exploration data and scientific source finding of aquifer.**

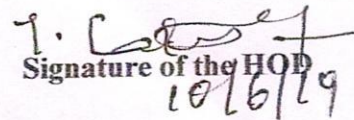
|    |   |         |                                       |
|----|---|---------|---------------------------------------|
| 35 | <b>Geophysics-</b> Surface methods of exploration of GW | 27/8/19 | Lecture interspersed with discussions |
| 36 | Electrical resistivity and seismic refraction methods   | 29/8/19 |                                       |
| 37 | Subsurface methods                                      | 3/9/19  |                                       |
| 38 | Geophysical logging                                     | 4/9/19  |                                       |
| 39 | Resistivity logging, Aerial Photogrammetry applications | 6/9/19  |                                       |

T1 Groundwater Development by Gopala Ranjan,  
T2 Groundwater Development by DK. Todd

**CO6: Apply Appropriate Measures for Groundwater Management**

|    |   |         |  |
|----|---|---------|--|
| 40 | Ground water Modelling and Management-<br>Basic principles    | 7/9/19  | Lecture<br>interspersed<br>with<br>discussions |
| 41 | Analog models-viscous fluid models and membrane<br>models     | 13/9/19 |  |
| 42 | Digital models-finite difference and finite element<br>models | 19/9/19 |  |
| 43 | Concepts of groundwater management                            | 20/9/19 |  |
| 44 | Basin management by conjunctive use-case studies              | 23/9/19 |  |

  
Signature of the Faculty 9/9/19

  
Signature of the HOD  
10/6/19



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