

# DRONACHARYA

## College of Engineering

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: Civil Engineering

Academic Session: 2017-18 (Jan-June 2018)

Lesson Plan for the Semester started w.e.f 08.01.2018

Subject with code: Design of Concrete Structures-II (CE-302-F)

Name of Faculty with designation : Gaurav Thakur (Assistant Prof.)

| Month   | Date & Day           | Sem-Class | Unit                | Topic/Chapter covered   | Academic activity | Test / assignment                         |  |
|---------|----------------------|-----------|---------------------|---|-------------------|---|--|
| January | 09.01.2018 Tuesday   | VI-CE     | I (Section-A)       | Introduction to the subject, Application of the subject and its various units, syllabus, books to be referred, Introduction to Unit-I |                   | Assignment of 02 Ques.                    |  |
| January | 10.01.2018 Wednesday | VI-CE     | I                   | <b>Continuous Beams</b> - Basic assumptions, moment of inertia, settlements   |                   | Assignment of 02 Ques.                    |  |
| January | 12.01.2018 Friday    | VI-CE     | I                   | Modification of moments, maximum moments and shear  |                   | Assignment of 02 Ques.                    |  |
| January | 16.01.2018 Tuesday   | VI-CE     | I                   | Beams curved in plan- analysis for torsion  |                   | Assignment of 02 Ques.                    |  |
| January | 17.01.2018 Wednesday | VI-CE     | I                   | Redistribution of moments for single and multi-span beams, design examples  |                   | Assignment of 02 Ques.                    |  |
| January | 19.01.2018 Friday    | VI-CE     | II (Section-A)      | <b>Flat Slabs:</b> advantages of flat slabs, general design considerations, approximate direct design method (45 min.)                |                   | Class Test-1 on Unit-I (45 min. duration) |  |
| January | 23.01.2018 Tuesday   | VI-CE     | II                  | Design of flat slabs- Numerical   |                   | Assignment of 02 Ques.                    |  |
| January | 24.01.2018 Wednesday | VI-CE     | II                  | Design of flab slabs- Numerical   |                   | Assignment of 02 Ques.                    |  |
| January | 26.01.2018 Friday    | VI-CE     | <b>Republic Day</b> |   |                   |   |  |

| Month    | Date & Day           | Sem-Class | Unit                              | Topic/Chapter covered                                     | Academic activity       | Test / assignment                                 |
|----------|----------------------|-----------|-----------------------------------|---|-------------------------|---|
| January  | 30.01.2018 Tuesday   | VI-CE     | II                                | Design of various types of staircases                     |                         | Assignment of 02 Ques.                            |
| January  | 31.01.2018 Wednesday | VI-CE     | <b>Guru Ravidas Birthday</b>      |   |                         |   |
| February | 02.02.2018 Friday    | VI-CE     |                                   |   | <b>Industrial Visit</b> |   |
| February | 06.02.2018 Tuesday   | VI-CE     | II                                | Design examples of design of staircases                   |                         | Assignment of 02 Ques.                            |
| February | 07.02.2018 Wednesday | VI-CE     | III (Section-B)                   | Foundations- combined footings, raft foundation (45 min.) |                         | <b>Class Test-2 on Unit-II (45 min. duration)</b> |
| February | 09.02.2018 Friday    | VI-CE     | III                               | Design of pile cap and piles                              |                         | Assignment of 02 Ques.                            |
| February | 13.02.2018 Tuesday   | VI-CE     | <b>1st Sessional Examinations</b> |   |                         |   |
| February | 14.02.2018 Wednesday | VI-CE     |                                   |   |                         |   |
| February | 16.02.2018 Friday    | VI-CE     |                                   |   |                         |   |
| February | 20.02.2018 Tuesday   | VI-CE     | III                               | Under-reamed piles, design examples                       |                         | Assignment of 02 Ques.                            |

| Month    | Date & Day           | Sem-Class | Unit                              | Topic/Chapter covered  | Academic activity | Test / assignment                                  |
|----------|----------------------|-----------|-----------------------------------|--|-------------------|--|
| February | 21.02.2018 Wednesday | VI-CE     | IV (Section-B)                    | <b>Water Tanks, Silos and Bunkers:</b> Estimation of wind and earthquake forces (45 min.)                                    |                   | <b>Class Test-3 on Unit-III (45 min. duration)</b> |
| February | 23.02.2018 Friday    | VI-CE     | IV                                | Design requirements, design of rectangular underground and overhead tanks  |                   | <b>Assignment of 02 Ques.</b>                      |
| February | 27.02.2018 Tuesday   | VI-CE     | IV                                | Design of cylindrical underground and overhead tanks   |                   | <b>Assignment of 02 Ques.</b>                      |
| February | 28.02.2018 Wednesday | VI-CE     | IV                                | Intz tanks, design considerations and design examples  |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 02.03.2018 Friday    | VI-CE     | <b>Holi Break</b>                 |  |                   |  |
| March    | 06.03.2018 Tuesday   | VI-CE     | IV                                | Silos and Bunkers- various theories, bunkers with sloping bottoms and with high sidewalls                                    |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 07.03.2018 Wednesday | VI-CE     | IV                                | Battery of bunkers, design examples  |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 09.03.2018 Friday    | VI-CE     | V (Section-C)                     | <b>Prestressed Concrete-</b> Basic principles, classification of prestressed members, various prestressing systems (45 min.) |                   | <b>Class Test-4 on Unit-IV (45 min. duration)</b>  |
| March    | 13.03.2018 Tuesday   | VI-CE     | V                                 | Losses in prestress, initial and final stress conditions   |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 14.03.2018 Wednesday | VI-CE     | V                                 | Analysis and design of sections for flexure and shear, Load balancing concept, IS specifications                             |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 16.03.2018 Friday    | VI-CE     | V                                 | End Blocks- analysis of stresses, Magnel's method, Guyon's method  |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 20.03.2018 Tuesday   | VI-CE     | <b>2nd Sessional Examinations</b> |  |                   |  |
| March    | 21.03.2018 Wednesday | VI-CE     |                                   |  |                   |  |
| March    | 23.03.2018 Friday    | VI-CE     |                                   |  |                   |  |
| March    | 27.03.2018 Tuesday   | VI-CE     | V                                 | Bursting and spalling stresses, design examples  |                   | <b>Assignment of 02 Ques.</b>                      |
| March    | 28.03.2018 Wednesday | VI-CE     | VI (Section-C)                    | <b>Building frames-</b> Introduction, member stiffness, loads (45 min.)  |                   | <b>Class Test-5 on Unit-V (45 min. duration)</b>   |
| March    | 30.03.2018 Friday    | VI-CE     | VI                                | Analysis for vertical and lateral loads  |                   | <b>Assignment of 02 Ques.</b>                      |

| Month   | Date & Day           | Sem-Class | Unit   | Topic/Chapter covered   | Academic activity | Test / assignment                          |
|---|----------------------|-----------|--|---|-------------------|--|
| April   | 03.04.2018 Tuesday   | VI-CE     | VI   | Ductility of beams, Design and detailing for ductility, Design examples |                   | Assignment of 02 Ques.                     |
| April   | 04.04.2018 Wednesday | VI-CE     | VII (Section-D)  | Yield Line Theory- Basic assumptions, methods of analysis (45 min.)     |                   | Class Test-6 on Unit-VI (45 min. duration) |
| April   | 06.04.2018 Friday    | VI-CE     | VII  | Yield line patterns and failure mechanisms                              |                   | Assignment of 02 Ques.                     |
| April   | 10.04.2018 Tuesday   | VI-CE     | VII  | Analysis of one way rectangular and non-rectangular slabs               |                   | Assignment of 02 Ques.                     |
| April   | 11.04.2018 Wednesday | VI-CE     | VII  | Analysis of two way rectangular and non-rectangular slabs               |                   | Assignment of 02 Ques.                     |
| April   | 13.04.2018 Friday    | VI-CE     | VII  | Effect of top corner steel in square slabs, design examples             |                   | Assignment of 02 Ques.                     |
| April   | 17.04.2018 Tuesday   | VI-CE     | <b>Pre-University Examinations</b>   |   |                   |  |
| April   | 18.04.2018 Wednesday | VI-CE     |  |   |                   |  |
| April   | 20.04.2018 Friday    | VI-CE     |  |   |                   |  |
| April   | 24.04.2018 Tuesday   | VI-CE     | Revision of each units or(and) completion of syllabus (if incomplete due to unforeseen conditions) will be done in these three days accompanied by class tests (including Class Test-7 on Unit VII) and assignments. |   |                   |  |
| April   | 25.04.2018 Wednesday | VI-CE     |  |   |                   |  |
| April   | 27.04.2018 Friday    | VI-CE     |  |   |                   |  |
| May   | May 01 to 10, 2018   | IV-CE     | <b>External Practical Exams</b>  |   |                   |  |
| May   | 14.05.2018 Onwards   | IV-CE     | <b>University Theory Examinations</b>  |   |                   |  |
|   |                      |           |  |   |                   |  |
| <b>NOTE: Other industrial visits (which are not mentioned in the session plan) will be conducted on Saturdays due to time constraint to complete the syllabus</b> |                      |           |  |   |                   |  |
|   |                      |           |  |   |                   |  |