

**SCHEME -2013**  
**CIVIL ENGINEERING ( C )**

**Combined I and II Semesters**

| Course No    | Name of subject   | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|---|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |   |           | L                  | T        | D/P      |            |                   |               |             |
| 13.101       | Engineering Mathematics - I (ABCEFHMNPRSTU)                   | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.102       | Engineering Physics (ABCEFHMNPRSTU)                           | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.103       | Engineering Chemistry (ABCEFHMNPRSTU)                         | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.104       | Engineering Graphics (ABCEFHMNPRSTU)                          | 6         | 1                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.105       | Engineering Mechanics (ABCEFHMNPRSTU)                         | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.106       | Building Technology (C)                                       | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.107       | Basic Mechanical Engineering (ACEFRT)                         | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.108       | Basic Electrical Engineering (ABCHMNPSTU)                     | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.109       | Basic Electronics Engineering (BCEHMNPSU)                     | 6         | 2                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.110       | Mechanical Engineering Workshops (ABCEFHMNPRSTU)              | 2         | -                  | -        | 1        | 25         | 3                 | 50            | 75          |
| 13.111       | Electrical & Electronics Engineering Workshop (ABCEFHMNPRSTU) | 2         | -                  | -        | 1        | 25         | 3                 | 50            | 75          |
| <b>Total</b> |   | <b>58</b> | <b>17</b>          | <b>8</b> | <b>4</b> | <b>500</b> |                   | <b>1000</b>   | <b>1500</b> |

**Third Semester**

| Course No    | Name of subject                                 | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|---|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |   |           | L                  | T        | D/P      |            |                   |               |             |
| 13.301       | Engineering Mathematics II (ABCEFHMNPRSTU)      | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.302       | Mechanics of Structures (C)                     | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.303       | Fluid Mechanics I (C)                           | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.304       | Concrete Technology & Advanced Construction (C) | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.305       | Surveying I (C)                                 | 5         | 4                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.306       | Engineering Geology (C)                         | 4         | 3                  | 1        |          | 50         | 3                 | 100           | 150         |
| 13.307       | Building Drawing (C)                            | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.308       | Practical Surveying I (C)                       | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| <b>Total</b> |   | <b>29</b> | <b>19</b>          | <b>6</b> | <b>4</b> | <b>400</b> |                   | <b>800</b>    | <b>1200</b> |

#### Fourth Semester

| Course No    | Name of subject                        | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|--|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |  |           | L                  | T        | D/P      |            |                   |               |             |
| 13.401       | Engineering Mathematics III (BCHMNPSU) | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.402       | Humanities (ACHPT)                     | 3         | 3                  | -        | -        | 50         | 3                 | 100           | 150         |
| 13.403       | Structural Analysis - I (C)            | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.404       | Fluid Mechanics II (C)                 | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.405       | Surveying II (C)                       | 5         | 4                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.406       | Building Planning & Drawing (C)        | 5         | 3                  |          | 2        | 50         | 3                 | 100           | 150         |
| 13.407       | Strength of Materials Lab. (C)         | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.408       | Fluid Mechanics Lab. (C)               | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| <b>Total</b> |  | <b>29</b> | <b>19</b>          | <b>4</b> | <b>6</b> | <b>400</b> |                   | <b>800</b>    | <b>1200</b> |

#### Fifth Semester

| Course No    | Name of subject                      | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|--------------------------------------|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |                                      |           | L                  | T        | D/P      |            |                   |               |             |
| 13.501       | Engineering Mathematics - IV (CMPSU) | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.502       | Environmental Engineering I (C)      | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.503       | Structural Analysis II (C)           | 5         | 4                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.504       | Geotechnical Engineering I (C)       | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.505       | Transportation Engineering I (C)     | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.506       | Water Resources Engineering (C)      | 4         | 3                  | 1        |          | 50         | 3                 | 100           | 150         |
| 13.507       | Practical Surveying II (C)           | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.508       | Concrete Lab. (C)                    | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| <b>Total</b> |                                      | <b>29</b> | <b>19</b>          | <b>6</b> | <b>4</b> | <b>400</b> |                   | <b>800</b>    | <b>1200</b> |

### Sixth Semester

| Course No    | Name of subject                                | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|--|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |  |           | L                  | T        | D/P      |            |                   |               |             |
| 13.601       | Design of Hydraulic Structures (C)             | 5         | 3                  | -        | 2        | 50         | 4                 | 100           | 150         |
| 13.602       | Design of Reinforced Concrete Structures (C)   | 5         | 3                  | 2        | -        | 50         | 3                 | 100           | 150         |
| 13.603       | Environmental Engineering II (C)               | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.604       | Geo-technical Engineering II (C)               | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.605       | Transportation Engineering II (C)              | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.606       | Computer Programming and Numerical Methods (C) | 3         | 3                  | -        |          | 50         | 3                 | 100           | 150         |
| 13.607       | Transportation Engineering Lab. (C)            | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.608       | Computer Aided Design & Drafting Lab. (C)      | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| <b>Total</b> |  | <b>29</b> | <b>18</b>          | <b>5</b> | <b>6</b> | <b>400</b> |                   | <b>800</b>    | <b>1200</b> |

### Seventh Semester

| Course No    | Name of subject  | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|--|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |  |           | L                  | T        | D/P      |            |                   |               |             |
| 13.701       | Design of Steel Structures (C)                           | 5         | 3                  | 2        | -        | 50         | 3                 | 100           | 150         |
| 13.702       | Design and Drawing of Reinforced concrete structures (C) | 5         | 3                  | -        | 2        | 50         | 4                 | 150           | 200         |
| 13.703       | Advanced Structural Analysis (C)                         | 4         | 2                  | 2        | -        | 50         | 3                 | 100           | 150         |
| 13.704       | Elective – I   | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.705       | Elective – II  | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.706       | Environmental Engineering Lab. (C)                       | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.707       | Geotechnical Engineering Lab. (C)                        | 2         | -                  | -        | 2        | 50         | 3                 | 100           | 150         |
| 13.708       | (a) Seminar<br>(b) Survey Camp & Industrial Visit        | 3         | -                  | -        | 3        | 150        |                   |               | 150         |
| <b>Total</b> |  | <b>29</b> | <b>14</b>          | <b>6</b> | <b>9</b> | <b>500</b> |                   | <b>750</b>    | <b>1250</b> |

### Eighth Semester

| Course No    | Name of subject                          | Credits   | Weekly load, hours |          |          | C A Marks  | Exam Duration Hrs | U E Max Marks | Total Marks |
|--------------|--|-----------|--------------------|----------|----------|------------|-------------------|---------------|-------------|
|              |  |           | L                  | T        | D/P      |            |                   |               |             |
| 13.801       | Quantity Surveying and Valuation (C)     | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.802       | Design & Drawing of Steel Structures (C) | 5         | 3                  | -        | 2        | 50         | 4                 | 150           | 200         |
| 13.803       | Urban Planning and Architecture (C)      | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.804       | Construction Management (C)              | 3         | 3                  | -        | -        | 50         | 3                 | 100           | 150         |
| 13.805       | Elective - III                           | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.806       | Elective - IV                            | 4         | 3                  | 1        | -        | 50         | 3                 | 100           | 150         |
| 13.807       | Project, Viva-Voce (C)                   | 5         | -                  | -        | 5        | 200        |                   | 100           | 300         |
| <b>Total</b> |  | <b>29</b> | <b>18</b>          | <b>4</b> | <b>7</b> | <b>500</b> |                   | <b>750</b>    | <b>1250</b> |

### ELECTIVE -I

|           |   |
|-----------|---|
| 13.704.1  | Structural Analysis for Dynamic Loads (C)             |
| 13.704.2  | Advanced Design of Reinforced Concrete Structures (C) |
| 13.704.3  | Earth dam Engineering (C)                             |
| 13.704.4  | Soil Exploration (C)                                  |
| 13.704.5  | Geoinformatics (C)                                    |
| 13.704.6  | Free Surface Flow (C)                                 |
| 13.704.7  | Air Quality Management (C)                            |
| 13.704.8  | Highway and Airfield Pavement Materials (C)           |
| 13.704.9  | Sustainable Development (C)                           |
| 13.704.10 | Coastal Engineering (C)                               |
| 13.704.11 | Environmental Science and Management (C)              |
| 13.704.12 | Modern Construction Materials (C)                     |

**ELECTIVE -II**

|           |  |
|-----------|--|
| 13.705.1  | Pre-stressed Concrete (C)                  |
| 13.705.2  | Mechanics of Composite Materials (C)       |
| 13.705.3  | Ground Improvement (C)                     |
| 13.705.4  | Geo Environmental Engineering (C)          |
| 13.705.5  | Ground Water Engineering (C)               |
| 13.705.6  | Solid Waste Management (C)                 |
| 13.705.7  | Transportation Planning (C)                |
| 13.705.8  | Advanced Computational Methods (C)         |
| 13.705.9  | Optimization Techniques in Engineering (C) |
| 13.705.10 | Design of Offshore Structures (C)          |
| 13.705.11 | Transportation System Management (C)       |

**ELECTIVE -III**

|          |   |
|----------|---|
| 13.805.1 | Earthquake Resistant Design of Structures (C)           |
| 13.805.2 | Wind Loading on Structures (C)                          |
| 13.805.3 | Deep Foundations (C)                                    |
| 13.805.4 | Earthquake Geotechnical Engineering (C)                 |
| 13.805.5 | Urban Water Management and Environmental Hydraulics (C) |
| 13.805.6 | Environmental Impact Assessment (C)                     |
| 13.805.7 | Design and Construction of pavements (C)                |
| 13.805.8 | Repair & Rehabilitation of Structures (C)               |

**ELECTIVE -IV**

|          |  |
|----------|--|
| 13.806.1 | Finite Element Methods (C)                         |
| 13.806.2 | Design of Bridges (C)                              |
| 13.806.3 | Reinforced Earth (C)                               |
| 13.806.4 | Advanced Foundation Engineering (C)                |
| 13.806.5 | Irrigation and Drainage Engineering (C)            |
| 13.806.6 | Industrial Waste Water Management (C)              |
| 13.806.7 | Traffic Engineering (C)                            |
| 13.806.8 | Valuation of Real Properties (C)                   |
| 13.806.9 | Design of Port, Harbour and Coastal Structures (C) |