**NBKR INSTITUTE OF SCIENCE & TECHNOLOGY :: VIDYANAGAR**

*(AUTONOMOUS)*

**CIVIL ENGINEERING**

SCHEME OF INSTRUCTION AND EVALUATION

(With effect from the batch admitted in the academic year 2013-2014)

**III YEAR OF FOUR YEAR B.TECH. DEGREE COURSE – II SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.No. | Course  Code | Course Title | Contact  Hours/  Week | | | Credits | Evaluation | | | | | | | | | |
| Sessional  Test-I | | Sessional  Test-II | | | Total Sessional Marks (Max. 40) | Semester  End Examination | | Max.  Total Marks | |
| **THEORY** | L | P | T |  | Duration  in Hours | Max.  Marks | Duration  in Hours | | Max.  Marks | 0.8(Better of two sessional tests)  +  0.2(Other) | Duration  in Hours | Max.  Marks |  | |
| 1 | 13CE3201 | R.C.C. Structural Design - II | 3 | - | 1 | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 2 | 13CE3202 | Hydrology | 4 | - | - | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 3 | 13CE3203 | Structural Analysis -II | 3 | - | 1 | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 4 | 13CE3204 | Concrete Technology | 4 | - | - | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 5 | 13CE3205 | Environmental Engineering - I | 4 | - | - | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 6 | 13CE32EX | Elective –I | 4 | - | - | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
|  | | **PRACTICALS** |  |  | | | | | | | |  |  | | | |
| 1 | 13SH32P1 | Advanced Communication Skills Laboratory | - | 3 | - | 2 | - | - | | - | - | Day-to-day Evaluation and a test | 3 | 60 | | 100 |
| 2 | 13CE32P1 | Highway Materials Laboratory | - | 3 | - | 2 | - | - | | - | - | 3 | 60 | | 100 |
|  |  | **TOTAL** | **22** | **06** | **02** | **28** |  |  | |  |  |  |  | | **800** |

**Elective I:**

13CE32E1 Industrial Steel Structural Design

13CE32E2 Advanced Foundation Engineering

13CE32E3 Transportation Planning

13CE32E4 Industrial Waste and Waste Water Management

13CE32E5 Ground Water Hydrology

**13CE32P1 – HIGWAY MATERIALS LABORATORY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course category:** | Program core | **Credits:** | 2 |
| **Course Type:** | Theory | **Lecture - Tutorial - Practical:** | 0 - 0 - 3 |
| **Prerequisite:** | **TRANSPORTATION ENGG – I** | **Sessional Evaluation :**  **Univ.Exam Evaluation:**  **Total Marks:** | 40  60  100 |

|  |  |  |
| --- | --- | --- |
| **Course Outcomes** | CO1 | Be able to determine various properties of highway materials. |
| CO2 | Be able to conduct various test for highway materials. |
| CO3 | Be able to assess the quality of highway materials. |
| CO4 | Be able to choose the required material based on field conditions. |
| CO5 | Be able to evaluate the quality of the highway materials. |
| **Course Content** | **CYCLE – I: TESTS ON AGGREGATES**   1. Specific Gravity and Water Absorption Test. 2. Aggregate Impact Test 3. Elongation Index Test 4. Flakiness Index Test 5. Angularity Number Test 6. Los Angles Abrasion Test 7. Aggregate Crushing Test   **CYCLE – II: TESTS ON BITUMEN**   1. Flash & Fire Point Test 2. Softening Point Test 3. Specific Gravity Test 4. Penetration Test 5. Ductility Test 6. Stripping Value Test | |