**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)

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.  No. | | Course  Code | Course Title | Contact Hours/  Week | | | Cred-its | 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 | | 13CE2201 | Strength of materials | 3 | - | 1 | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 2 | | 13CE2202 | Fluid Mechanics - II | 3 | - | 1 | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 3 | | 13CE2203 | Soil Mechanics | 3 | - | 1 | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 4 | | 13CE2204 | Transportation Engineering - I | 4 | - | - | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 5 | | 13CE2205 | Building Planning & Drawing | 1 | 3 | - | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
| 6 | | 13CE2206 | Surveying - II | 3 | - | 1 | 4 | 2 | 40 | 2 | | 40 | 3 | 60 | 100 | |
|  | | | **PRACTICALS** |  |  | | | | | | | |  |  | | | |
| 1 | 13CE22P1 | | Surveying Laboratory - II | - | 3 | - | 2 | - | - | | - | - | Day-to-day Evaluation and a test | 3 | 60 | | 100 |
| 2 | 13CE22P2 | | Fluid Mechanics & Hydraulic Machinery Laboratory | - | 3 | - | 2 | - | - | | - | - | 3 | 60 | | 100 |
|  |  | | **TOTAL** | **17** | **09** | **04** | **28** |  |  | |  |  |  |  | | **800** |

**Note:-** *Survey camp for a duration of 10 days to be conducted before the last day of instruction for II B.Tech, II – Sem. This shall be evaluated as part of Survey Laboratory –II.*

**13CE22P1 - SURVEYING LABORATORY - II**

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

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| --- | --- | --- |
| **Course Outcomes** | CO1 | Use the theodolite along with chain/tape, compass on the field. |
| CO2 | Apply geometric and trigonometric principles of basic surveying calculations. |
| CO3 | Use the Total station instrument in basic engineering works. |
| CO4 | Plan a survey, taking accurate measurements, field booking, plotting and adjustment of errors. |
| CO5 | Apply field procedures in basic types of surveys, as part of a surveying team. |
| **Course Content** | **EXERCISE – 1**  Measurement of horizontal angles by Repetition and Reiteration methods; Measurement of vertical angles.  **EXERCISE -2**  To determine the distance between two inaccessible points using theodolite.  **EXERCISE-3**  To determine the elevation of an object (i) when the object and the instrument are in the same plane and (ii) when they are in different planes.  **EXERCISE -4**  To determine the tacheometric constants.  **EXERCISE -5**  To determine the distance and gradient between two inaccessible points using stadia tacheometry..  **EXERCISE -6**  To determine the distance between two inaccessible points using tangential tacheometry  **EXERCISE -7**  To set out simple curve using linear methods – Perpendicular offsets from long chord.  **EXERCISE -8**  To setout simple curve using Rankine’s deflection angles method.  **EXERCISE -9**  Demonstration of Total Station Instrument and GPS Receiver. To determine height of remote object, horizontal distance and co-ordinates of points using Total Station Instruments. | |