**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. | CourseCode | Course Title | Contact Hours/Week | Cred-its | Evaluation |
| SessionalTest-I | SessionalTest-II | Total Sessional Marks (Max. 40) | Semester EndExamination | Max.Total Marks |
| **THEORY** | L | P | T |  | Durationin Hours | Max.Marks | Durationin Hours | Max.Marks | 0.8(Better of two sessional tests)+0.2(Other) | Durationin 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.*

**13CE22P2 - FLUID MECHANICS & HYDRAULIC MACHINERY LABORATORY**

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| --- | --- | --- | --- |
| **Course category:** | Program core | **Credits:** | 2 |
| **Course Type:** | Theory | **Lecture - Tutorial - Practical:** | 0 - 0 - 3 |
| **Prerequisite:** | Fluid Mechanics | **Sessional Evaluation :****Univ.Exam Evaluation:****Total Marks:** | 4060100 |

|  |  |  |
| --- | --- | --- |
| **Course Outcomes** |  |  |
| CO1 | Calibration of Orifice and Mouthpiece  |
| CO2 | Determination of efficiency of Notchs, Venturimeter and Orifice Meter |
| CO3 | Evaluate the Major and Minor losses in pipe network |
| CO4 | Evaluate the performance characteristics of pump |
| CO5 | Evaluate the performance characteristics of Turbine |
| **Course Content** |  **I. EXPERIMENTS ON CALIBRATION OF** 1. Orifice
2. Mouth piece
3. Notch
4. Venturimeter
5. Orifice meter
6. Bend meter
7. Friction loss through a pipe
8. Gate valve
9. Bend loss
10. Sudden contraction
11. Sudden Expansion

**II. EXPERIMENTS ON PERFORMANCE CHARACTERISTICS OF** 1. Turbines
2. Pumps
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