**17CE22P2 - FLUID MECHANICS & HYDRAULIC MACHINERY LABORATORY**

**(Civil Engineering)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Category**  | Professional Core | **Credits**  | 2 |
| **Course Type**  | Theory | **Lecture - Tutorial - Practical**  | 0-0-3 |
| **Prerequisite**  | Fluid Mechanics | **Sessional Evaluation**  | 40 |
| **Semester End Exam. Evaluation**  | 60 |
| **Total Marks**  | 100 |

|  |  |
| --- | --- |
| **Course Objective(s)** | To understand and apply the principles of fluid mechanics for analyzing the fluid flow and performance of hydraulic machines. |
| **Course Outcomes** | CO1 | Calibration of orifice and mouthpiece. |
| CO2 | Determination of efficiency of notches, 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. |
| CO6 | Evaluate the Chezy’s and Manning’s coefficient in open channel flow. |
| **Course Content** | **LIST OF EXPERIMENTS****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
 |