RAMCO INSTITUTE OF TECHNOLOGY

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Department of Civil Engineering

Academic Year 2022– 2023 (Even Semester)

Degree, Semester & Branch: IV semester B.E Civil Engineering

Course Code & Title: CE3401 & Applied Hydraulic Engineering

Name of the Faculty member (s): Mrs.R.Kalaimani

Innovative Practice Description

- **Unit / Topic: IV/ Turbine**
- **Course Outcome:** CO4
- **Topic Learning Outcome:** TLO12
- **Activity Chosen: Virtual Laboratory**
- **Justification:**
  - ✓ Apply the basic engineering concept in Turbine
  - ✓ Explain the working of Various types of turbine
- **Time Allotted for the Activity:** 15 minutes
- **Details of the Implementation:**
  45 students are participated totally in online virtual simulation lab. Virtual lab also enabled to
- **CO – PO / PSO mapping:**

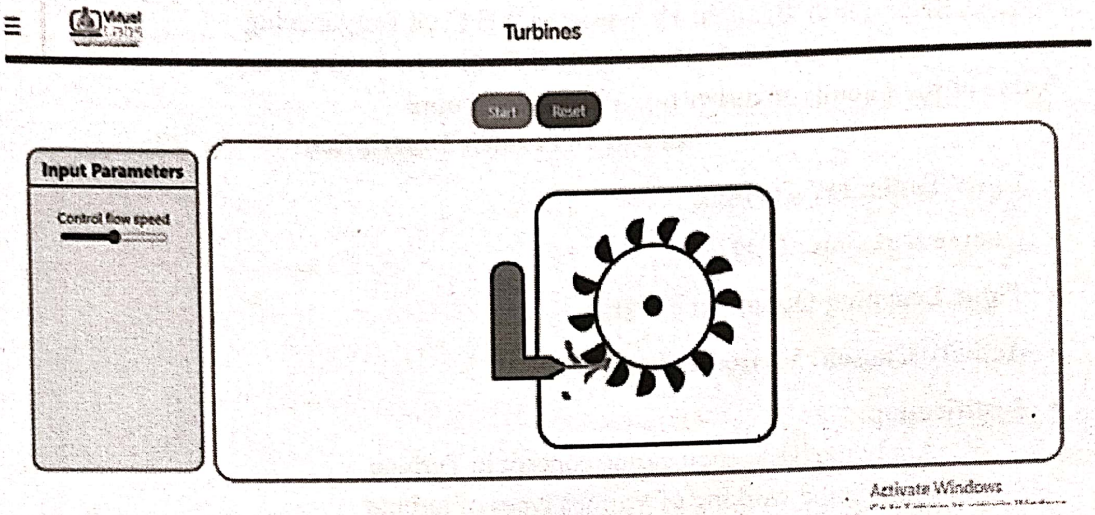
CO	PO1	PO2	PO5	PO9	PSO4
CO3	3	3	1	1	3

(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO5	PO9	PSO4
	3	3	1	1	3
Justification for correlation	To solve the problem the student will apply the mathematical, science and engineering fundamentals	Derive the formula using mathematics, natural science and engineering science to calculate the performance parameters	Calculate the performance parameters for turbine using virtual lab	The tutorial hours are conducted by the concept of peer learning at that time the student's individual and team work is improved	Provide necessary solutions to civil engineering problems

- **Images / Screenshot of the practice:**



- **Reflective Critique:**
  - ❖ ***Feedback of practice from students and other stakeholders:***

The overall feedback from the students were really good and students felt that it is very easy understand the real time operation of turbines

- ❖ ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
  - After completing this hand on session in virtual laboratory, the students were able to understand the turbines very clearly.
  - This virtual simulation also helps the students to know the stability of the system.
- ❖ ***Challenges faced in implementation:***

The output of simulation part can be better.

References:

❖ **http://fm-nitk.vlabs.ac.in/List%20of%20experiments.html**

Signature of Faculty Member

HOD