**Round 0**

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| **Discipline** | CSE,IT,CSIT, EE |
| **Lab** | Computer Organization and Architecture Lab |
| **Experiment** | 1.Implementing 8x1 MULTIPLEXER |

**About the Lab:** In this Lab we will experiment with the circuit like multiplexer, adder, Decoder etc.

**About the experiment:** The understanding of the multiplexer of size 8X1 and its applications

**Target Audience:** B.Tech 2ndyear CSE,IT, CSIT, EE

**Course Alignment:** B.Tech CSE, IT, CSIT, EE 3rd semester

**University Mapped:**

Dr. A.P.J. Abdul Kalam Technical University, Sec-11, Jankipuram Vistar, Lucknow, Uttar Pradesh India

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**Mentor Details**

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**Contributor List:**

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**Round 1**

**Discipline**: CSE, IT, CSIT , EE

**Lab**: Computer Organization and Architecture Lab

**Experiment**: 1.Implementing 8x1 MULTIPLEXER

**1. Focus Area:** The user will be able to understand use of 8X1 multiplexer

**2. Learning objective and Cognitive level**

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| **Sr. No** | **Learning objective** | **cognitive level** | **action verb** |
| 1. | User will be able to :  Understand designing of multiplexer of 8 input | Understand | Describe |
| 2. | User will be able to:  Understand use of selection lines | Apply | Experimental |
| 3. | User will be able to:  Test flow of input on passing different input | Apply | Experimental |

**Instrumental Strategy:**

###### **Method:** Problem-based Laboratory Experiment Design

###### **Assessment Method**: Practical

**Description: We will use multiplexer circuit of 8 input and test it**

**Simulation: ORCAD capture tool**

**4. Task & Assessment:**

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| **Sr. No.** | **Learning Objective** | **Task to be performed by student in the simulator** | **Assessment Questions as per LO & Task** |
| **1.** | Understand the principle of designing multiplexer with 8 input | On the simulator student will input values | Student will understand use of logic gates like AND , OR , Ex-OR and NOT |
| **2.** | Understand Waveform generated after input | On the simulator student will read waveform | Working of multiplexer |

**5. Simulator Interaction:**

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| **Sr. No.** | **What student will do?** | **What simulator will do?** | **Purpose of task** |
| 1. | Install ORCAD tool | Simulator will be ready to work | To design multiplexer |
| 2. | Input to circuit | Simulator will generate waveform | To test multiplexer |