**Lab No # 07**

**Introduction to PLC and ladder programing & simulate different logic gates on PLC**

**Objectives:**

**Learning Outcomes:**

**Tasks:**

1. Design of combinational logic using Macro PLC implementation of XOR Gate.
2. Design of combinational logic using Macro PLC implementation of XNOR Gate.
3. Design of combinational logic using Macro PLC implementation of NAND Gate

**Apparatus:**

**Procedure:**

* Run the PLC Software.
* Open the file menu.
* Open new project in sub menu.
* Select project name.
* Click symbols to design the required ladder logic.
* Select PLC in main menu.
* Select On-line option.
* Select Run PLC.
* Operate the switches and observe the output.
* Record the result in table.
* Record result in conclusion.

**Attach the screen shots for the above steps:**

**Logic implementation on PLC:**

**Table:**

|  |  |  |
| --- | --- | --- |
| **Status of X\_\_** | **Status of X\_\_\_** | **Status of Y\_\_\_** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Conclusion:**

Logical operation between X\_\_ and X\_\_\_ is …………………………… operation.

***Date:*** *\_\_\_\ \_\_\_\ 20\_\_\_\_*

***Obtained marks: \_\_\_\_\_ /*** *10*