***Lab No.11 (b)***

***Design of combinational logic using PLC implementation of NAND Gate***

**11.1b Objectives:**

**11.2b Apparatus:**

* Personal computer.
* WinproLadder Editor Software.
* PLC Trainer.
* Programming cable.

**11.3b Procedure:**

1. Run the Winpro ladder editor.
2. Open the file menu.
3. Open new project in sub menu.
4. Select project name.
5. Select FBs-24MA in PLC type.
6. Click OK.
* ***Attach the screen shots for the above steps:***

7. Click symbols to design the required ladder logic.

8. Select PLC in main menu.

9. Select On-line option.

10. Select Run PLC.

11. Operate the switches as described in table and observe the output.

12. Record the result in table.

13. Record your result in conclusion.

**11.4b Circuit diagram implementation on winProLadder:**

**11.5b Logic implementation on PLC:**

**11.6b Table**

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

**11.7b Conclusion:**

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

(AND, OR, NOT, NAND)

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

***Teacher remarks:*** *Submitted ON TIME / LATE.*

***Absent / Present.***

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