



KLS'S GOGTE INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

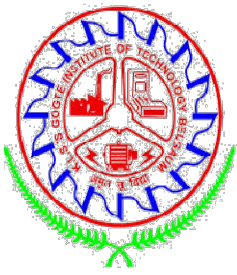


CREINTORS AUTOMATION SOLUTIONS PVT.LTD.

PRESENTS

HONOR'S PROGRAM IN PLC PROGRAMMING





Syllabus of Course



1. Basics of PLC

2. PLC Programming

3. SCADA Programming





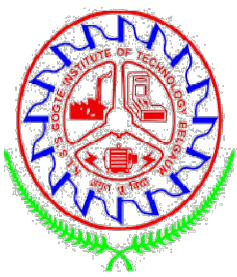
Logic Gates



Logic gates are Electronic circuits that operates one or more input signals to produce an output signal. The output signal of a gate is simple boolean operations of its input signal and any boolean function can be represented in the form of gate.

There are seven basic logic gates: AND, OR, XOR, NOT, NAND, NOR, and XNOR. The AND gate is so named because, if 0 is called "false" and 1 is called "true," the gate acts in the same way as the logical "and" operator.

INPUTS		OUTPUTS					
A	B	AND	NAND	OR	NOR	EXOR	EXNOR
0	0	0	1	0	1	0	1
0	1	0	1	1	0	1	0
1	0	0	1	1	0	1	0
1	1	1	0	1	0	0	1



Logic Gates

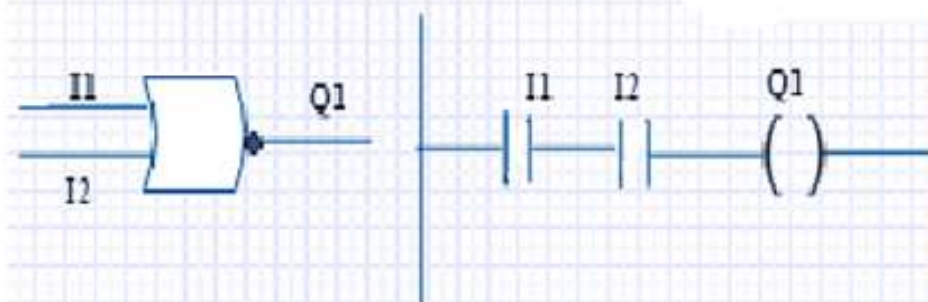


AND Logic

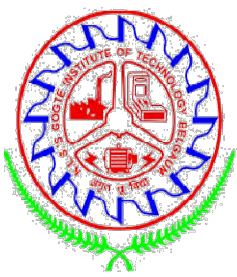


Input 1	Input 2	Output
0	0	0
0	1	0
1	0	0
1	1	1

0 → False
1 → True



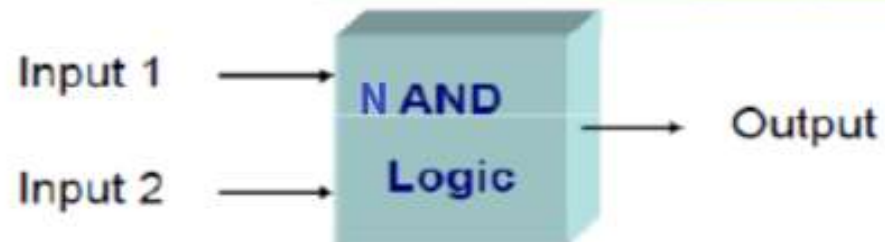
AND Gate represent in PLC



Logic Gates

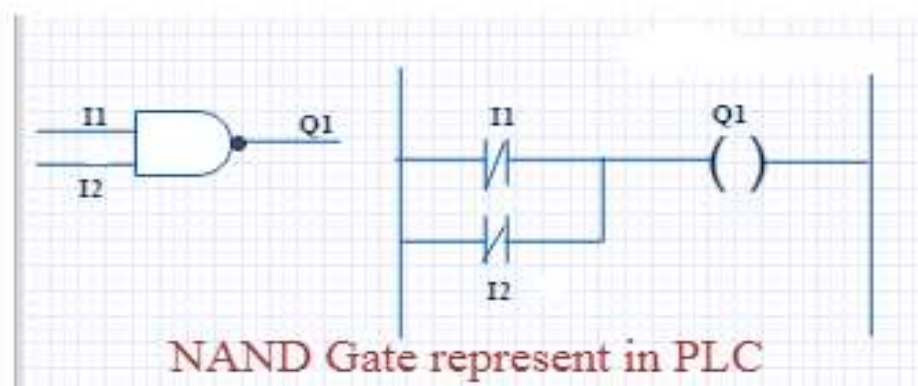


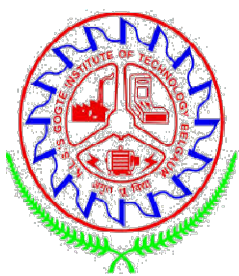
NAND Logic



Input 1	Input 2	Output
0	0	1
0	1	1
1	0	1
1	1	0

0 → False
1 → True

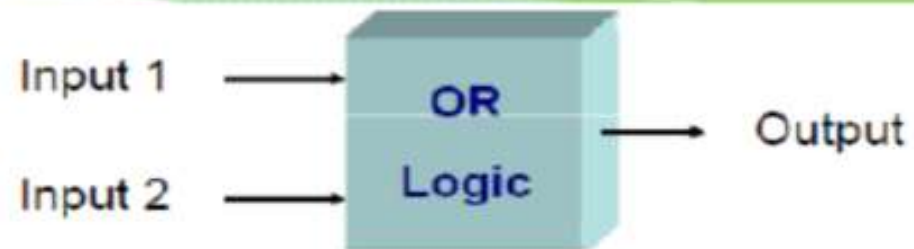




Logic Gates

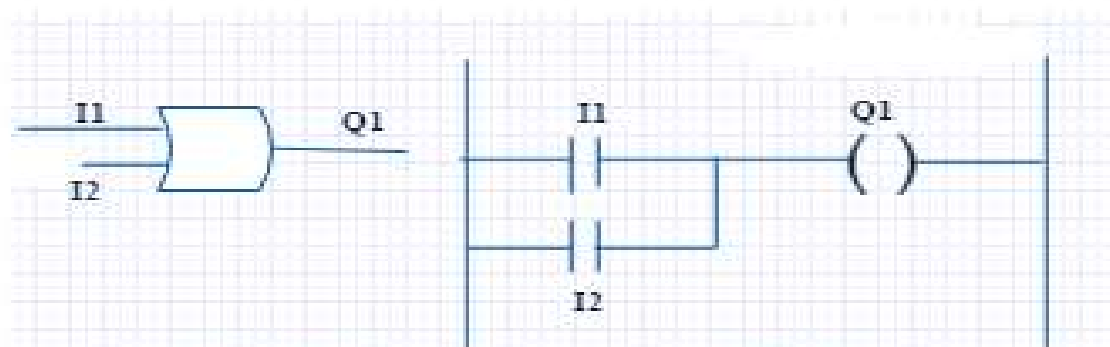


OR Logic

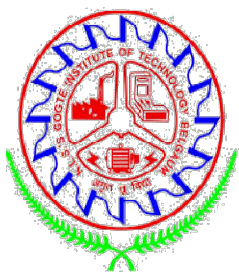


Input 1	Input 2	Output
0	0	0
0	1	1
1	0	1
1	1	1

0 → False
1 → True



OR Gate represent in PLC



Logic Gates

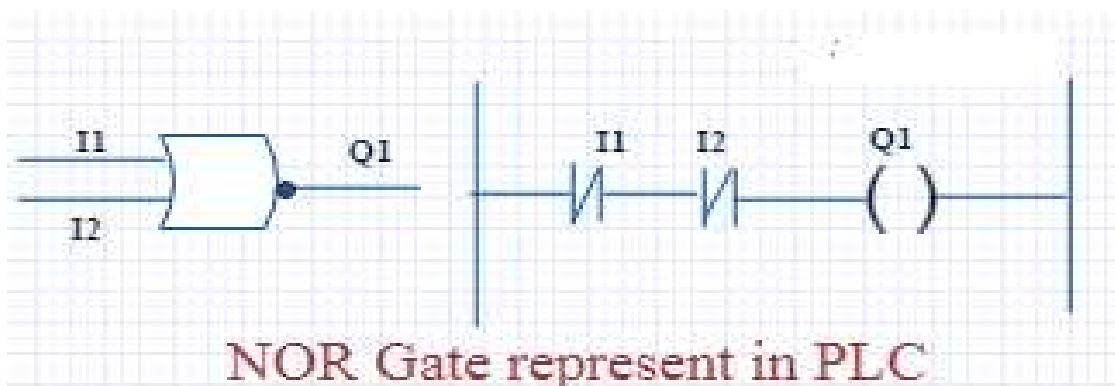


NOR Logic

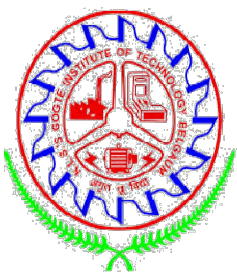


Input 1	Input 2	Output
0	0	1
0	1	0
1	0	0
1	1	0

0 → False
1 → True



NOR Gate represent in PLC



Logic Gates

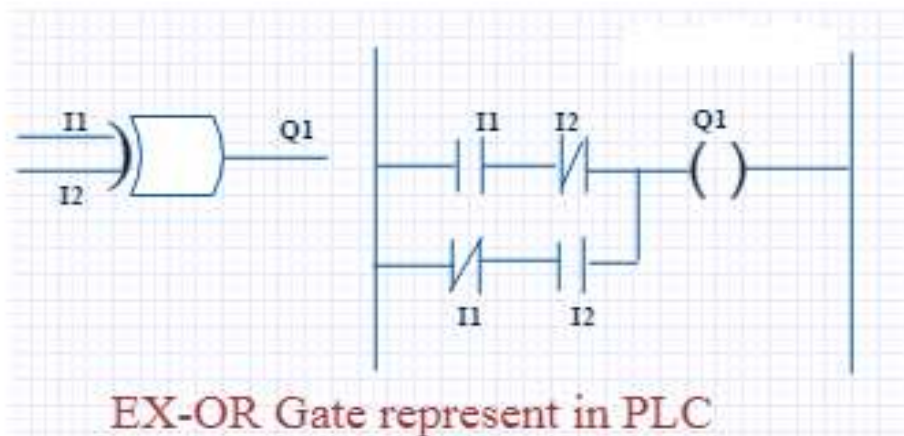


EX-OR Logic

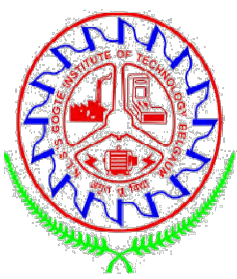


Input 1	Input 2	Output
0	0	0
0	1	1
1	0	1
1	1	0

0 → False
1 → True



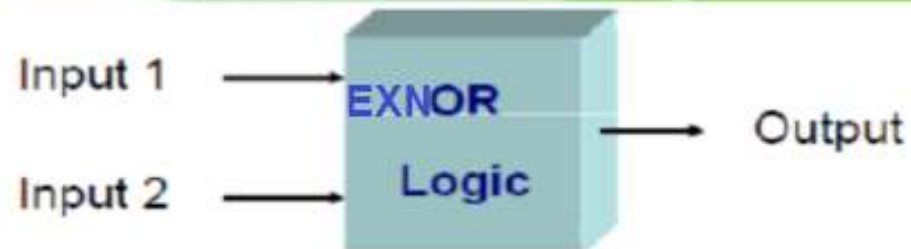
EX-OR Gate represent in PLC



Logic Gates

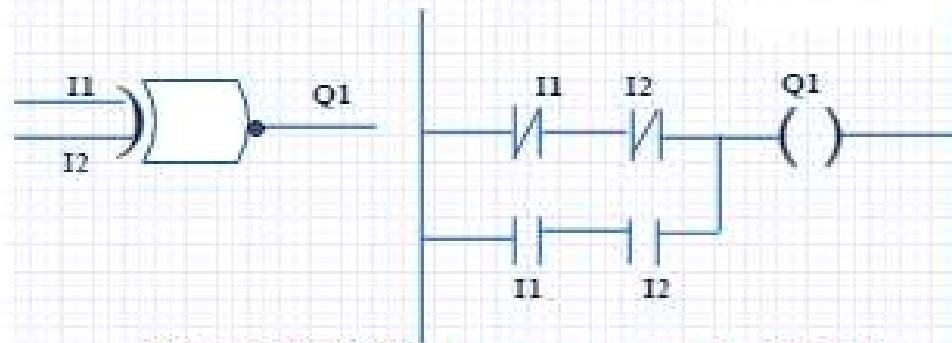


EX-NOR Logic

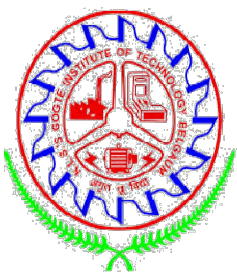


Input 1	Input 2	Output
0	0	1
0	1	0
1	0	0
1	1	1

0 → False
1 → True



EX-NOR Gate represent in PLC



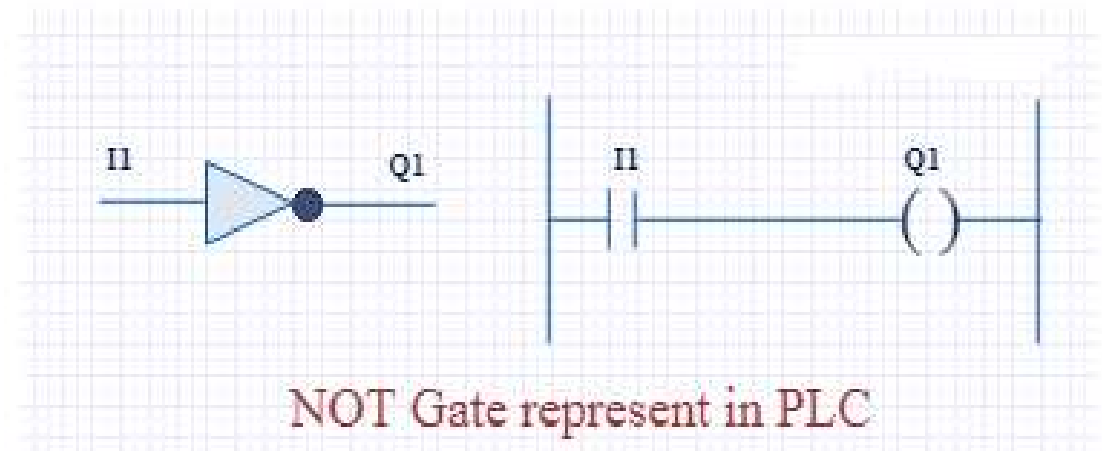
GATE Logic



NOT Gate

NOT gate is also called as Inverter or Buffer.

NOT Truth Table	
A	Q
0	1
1	0



A black and white photograph of a perforated metal surface, possibly a grate or a screen. The surface is covered with a grid of small, circular holes. The lighting is dramatic, with strong highlights and deep shadows, creating a textured appearance. The text "THANK YOU" is overlaid in the center in a bold, white, sans-serif font.

THANK YOU