

TV  
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Course - MCA

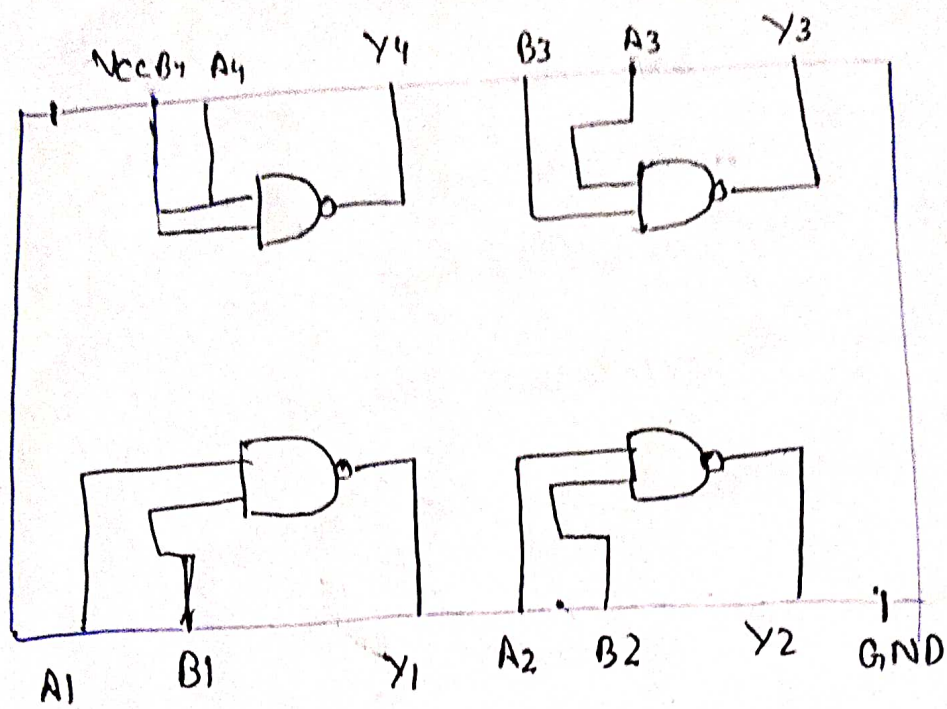
Section - B

Roll No - 02

Q1 Discuss the working of NAND gate.

Sol - A NAND gate is a logic gate that produces a low output (0) only if all its inputs are true and high outputs (1). The NAND gate performs the logical NAND operation. NAND gates are known as universal gates (along with NOR gates) which means they are a type of logic gate which can implement any Boolean functions without the need to use any other gate type.





TRUTH TABLE

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



This is a two-input NAND gate IC has 14 pins. The IC consists of 4 independent gates where each gate performs Negated AND logic gate functionality. The gates work on advanced silicon gate CMOS technology to gain high higher functional speeds utilizing minimal power and every gate has buffered outputs.

The inputs of every gate in the IC are safeguarded from damage because of static discharge by internally present diode clamps to the power supply and ground.