Name = Kunal Rawat

Studentid = 21711010

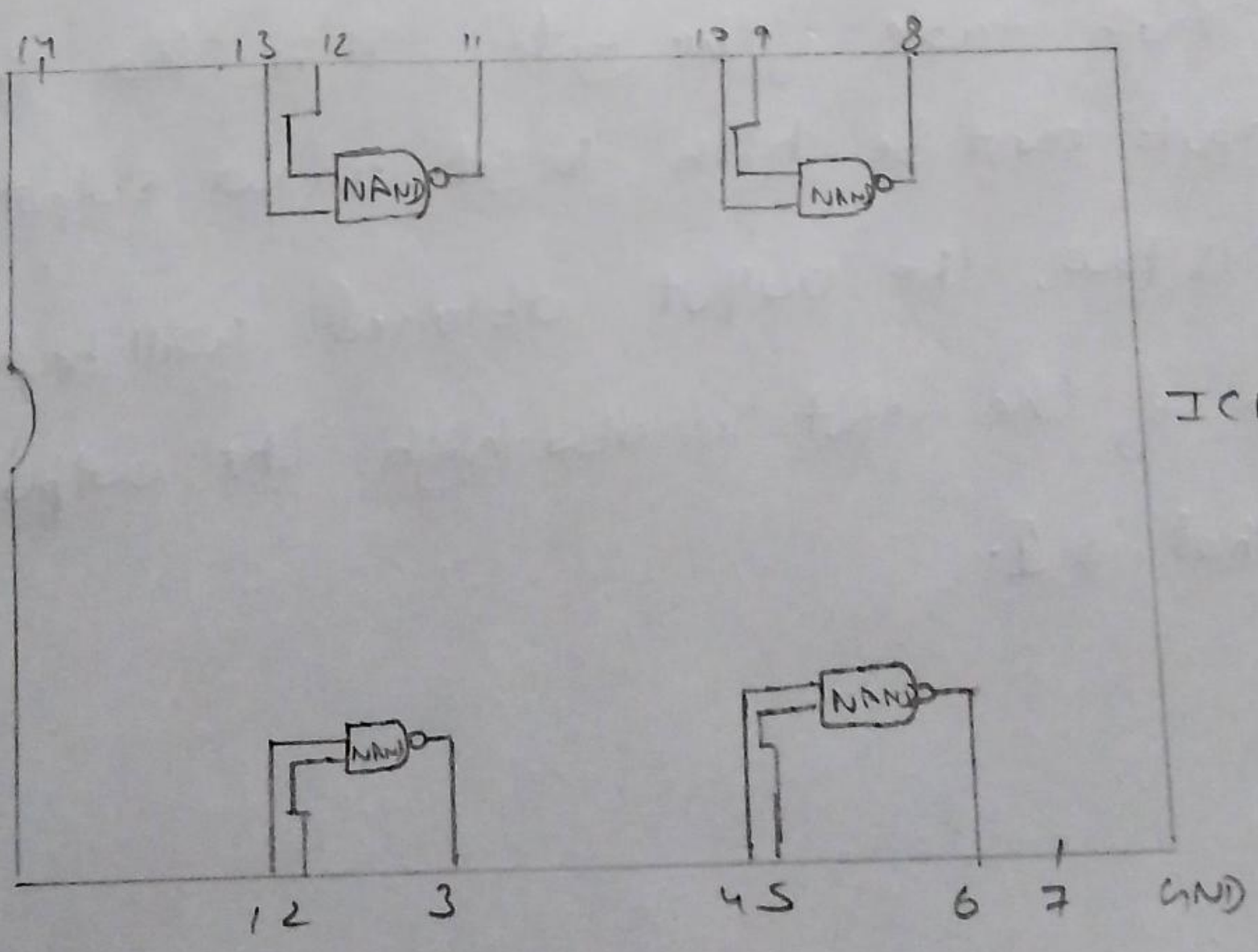
Course = MCA

Section = B

Ans 1 NAND gate is a logic gate which produces an output which is false only if all its inputs are true thus its output is complement to that of an AND gate. A low (0) output results only if all the inputs to the gate are High (1) if any input is low (0), a High (1) output results.

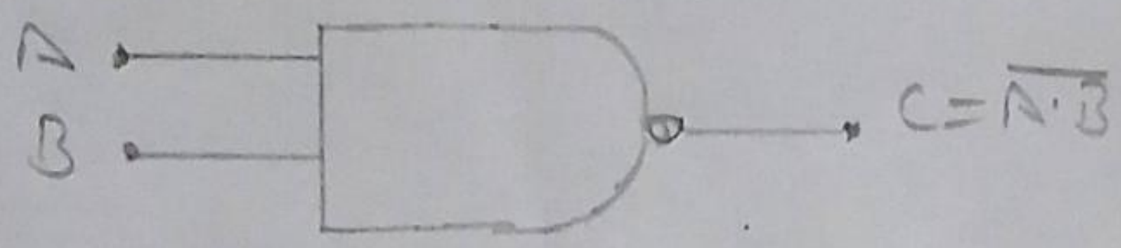
The basic logical Construction of the NAND gate.

IC Diagram




IC No. - 7400

## Logic diagram




## Truth Table

| Input | | output |
|---|---|---|
| A | B | C = $\overline{A \cdot B}$ |
| 0 | 0 | 1 |
| 1 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 1 | 0 |

From the truth table of the gate, it is clear that all the inputs must be high to get a low output and if any input is low, the output obtained will be high. if any one of the input is also high the output will be high that is 1.