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Subject Name – Computer organization and archietature
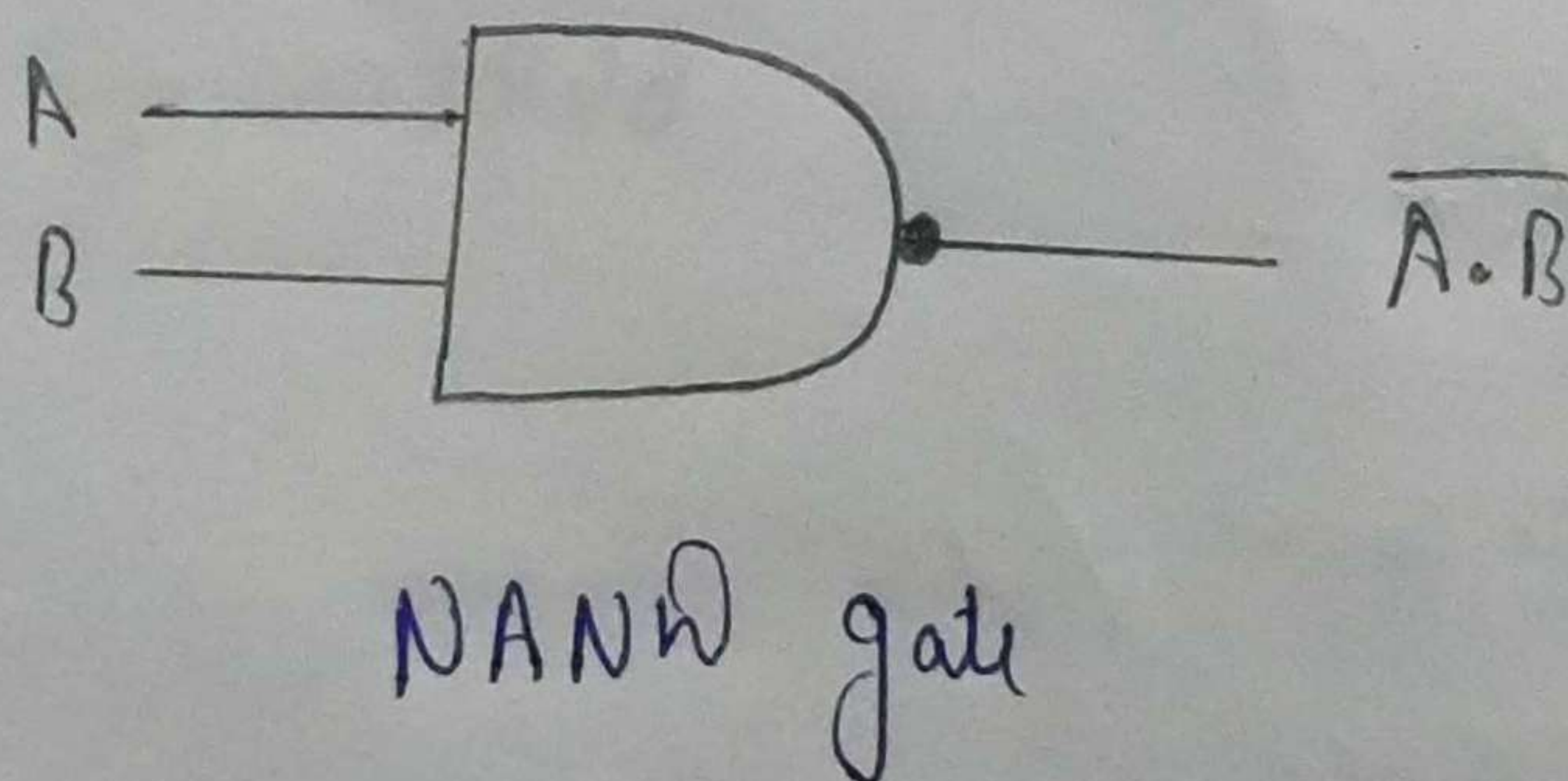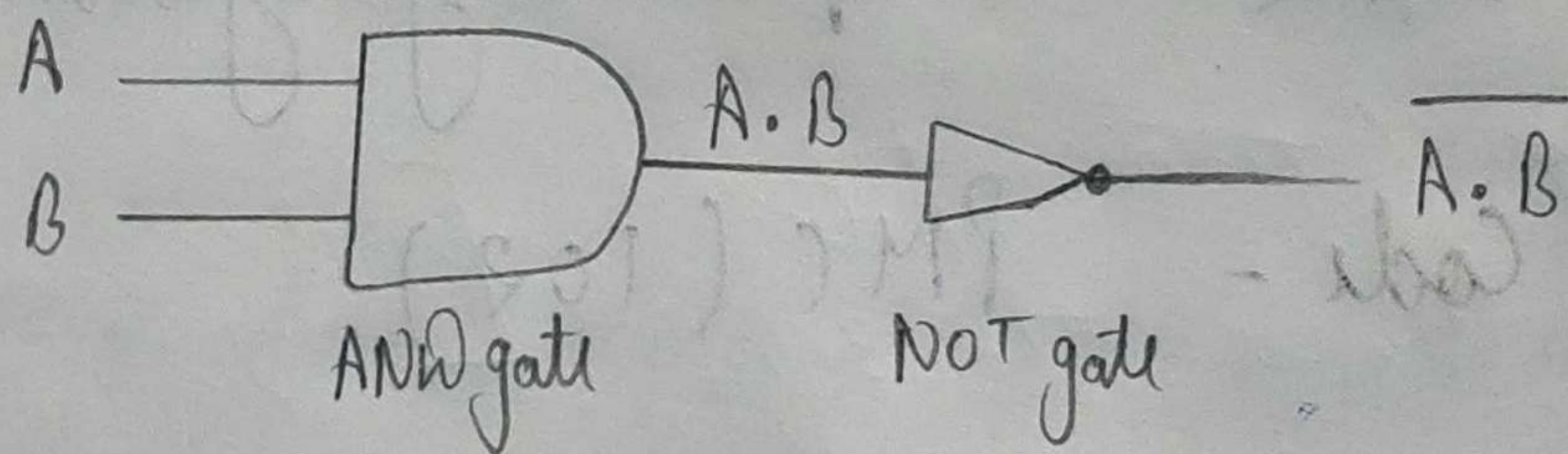
Subject Code – PMC(102)

Ans 1   NAND - A Nand gate ("not AND gate") is a logic gate that produces a low output (0) only if all its input are true, and high output (1) otherwise. Hence the NAND gate is the inverse of an AND gate, and its circuit is produced by connecting an AND gate to a NOT gate.

The basic logical construction of the NAND gate is shown below (you can see it is and AND gate followed by a NOT gate)

A ———□ A.B ———▷ $\overline{A.B}$
B ———
AND gate   NOT gate

A ———□ ———○——— $\overline{A.B}$
B ———

NAND gate

Truth table

Inputs		Output
A	B	$X = \overline{A.B}$
0	0	1
0	1	1
1	0	1
1	1	0