Assignment 1

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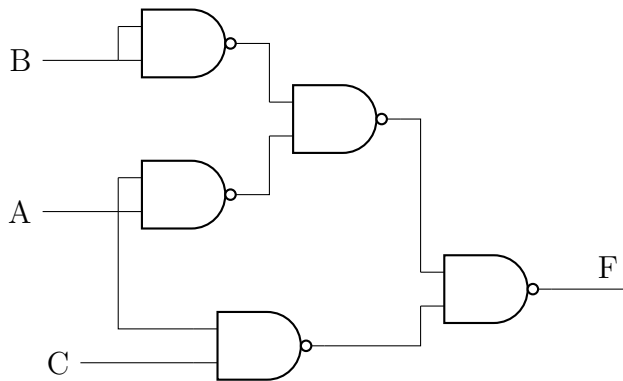
EE20RESCH11014

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1 Question:6(a)

Draw the Logic Circuit of the following Boolean Expression:

$$\bar{A}\bar{B} + AC \qquad (1)$$

2 Solution

The logic circuit for the boolean function $\bar{A}\bar{B} + AC$ can be drawn using only NAND gate as:

A	B	C	Output
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

TABLE 0: Truth Table

$$\text{F} = \overline{\overline{\bar{A}\bar{B}}\,\overline{AC}} \qquad (2)$$

$$\text{F} = \overline{\overline{\bar{A}\bar{B}}} + \overline{\overline{AC}} \qquad (3)$$

$$\text{F} = \bar{A}\bar{B} + AC \qquad (4)$$

3 Truth Table