ASSIGNMENT 6(2)

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1 QUESTION

The boolean expression F(X,Y,Z)=$\overline{X}Y\overline{Z}+X\overline{YZ}+XY\overline{Z}+XYZ$ converted into the canonical product of sum(POS) form is

2 ANSWER

2.1 table

X	Y	Z	F	maxterms
0	0	0	0	X+Y+Z
0	0	1	0	X+Y+$\overline{Z}$
0	1	0	1	-
0	1	1	0	$X+\overline{Y}+\overline{Z}$
1	0	0	1	-
1	0	1	0	$\overline{X}+Y+\overline{Z}$
1	1	0	1	-
1	1	1	1	-

Table 1: truth table

product of sum =(X+Y+Z)(X+Y+$\overline{Z}$)(X+$\overline{Y}+\overline{Z}$))($\overline{X}+Y+\overline{Z}$)