

Students Name	Digital Logic Design 1/11/2023	Student ID
	Quiz 2 11-points	

Q1: Find the complement of the following expression:

$$F = (A\bar{B} + C)\bar{D} + E$$

$$\bar{F} = \overline{(A\bar{B} + C)\bar{D} + E}$$

$$= (\overline{(A\bar{B} + C)\bar{D}}) \bar{E}$$

$$= ((\bar{A} + B)C + D)\bar{E}$$

$$\bar{F} =$$

Q2: Consider the truth table shown to the right.

Express the function F as:

Sum of Minterms

$$F = \bar{A}\bar{B}\bar{C} + A\bar{B}\bar{C} + A\bar{B}C$$

$$= m_2 + m_4 + m_5$$

$$= \sum m(2, 4, 5)$$

Product of Maxterms

$$F = (A + B + C)(A + B + \bar{C})(A + \bar{B} + \bar{C})(\bar{A} + \bar{B} + C)$$

$$= M_0 M_1 M_3 M_6 M_7$$

$$= \prod M(0, 1, 3, 6, 7)$$

A	B	C	F
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	0