

QUESTION 1 (10%)

1.1.1. The following is a partial truth table for a function $f(x, y, z)$.

x	y	z	$f(x, y, z)$
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

1.1.2. Write the sum of products (SOP) expression for the function $f(x, y, z)$.

1.1.3. Write the product of sums (POS) expression for the function $f(x, y, z)$.

1.1.4. Write the canonical SOP expression for the function $f(x, y, z)$.

1.1.5. Write the canonical POS expression for the function $f(x, y, z)$.

1.1.6. Write the minimal SOP expression for the function $f(x, y, z)$.

1.1.7. Write the minimal POS expression for the function $f(x, y, z)$.

1.1.8. Write the minimal SOP expression for the function $f(x, y, z)$ using Karnaugh maps.

1.1.9. Write the minimal POS expression for the function $f(x, y, z)$ using Karnaugh maps.