EE2000 - Assignment 1

Q1. Use Boolean algebraic theorems to simplify the following logic expression in sum of product (SOP) form:

$$F(a,\ b,\ c,\ d) = (a \oplus b)(\overline{a} + c) + (\overline{c} + d)(a \oplus d)$$ [10 marks]

Q2. Use Boolean algebraic theorems to show $(a + t_1)(a' + t_2)(t_1 + t_2) = (a + t_1)(a' + t_2)$.
Use truth table method to show $at_1 + a't_2 + t_1t_2 = at_1 + a't_2$.

[10 marks]

Q3. Simplify the following functions:
(i) F (A, B, C) = (AB + AC)' + A'B'C
(ii) F (A, B, C, D, E, F) = ((A + B)C'D' + E + F')' ;
and draw the circuit diagrams for the simipfied functions.

[10 marks]

Submit your assignement through CANVAS on/before 17 Septemeber 2021.