Exercise 8
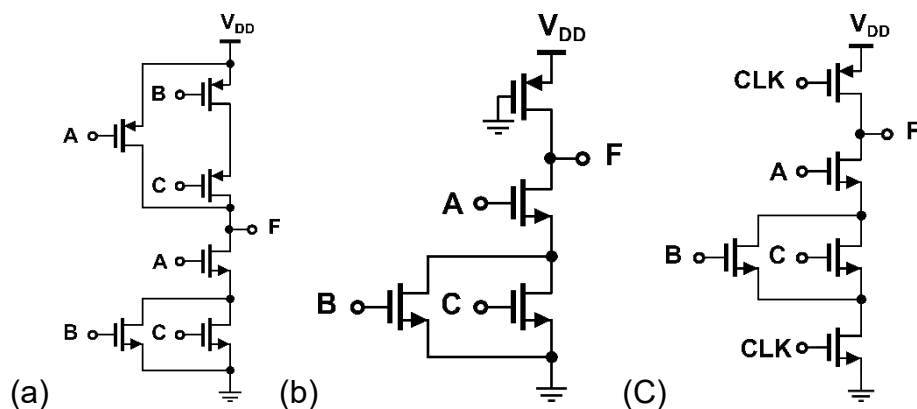
8-1 Sketch 3-input gates F = (A · (B + C))' using each of the following circuit techniques:

(a) Static CMOS.

(b) Pseudo-nMOS.

(c) Dynamic Gates.

Answer:

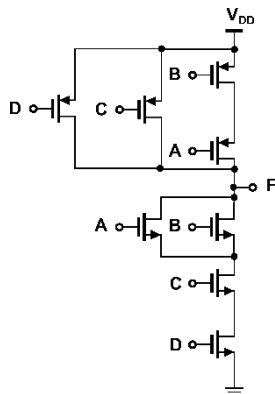
8-2 Consider the circuit of Fig 8.1.

Fig.8.1

(a) What is the logic function implemented by the CMOS transistor network?

Answer:

(a) The logic function is : $F = \overline{(A + B)CD}$.

8-3 Implement the function $S = ABC + AB'C' + A'B'C + A'BC'$, which gives the sum of two inputs with a carry bit, using NMOS pass transistor logic.

Answer: