

ECE 150 Digital Logic Design, Fall 2022  
Quiz 1, September 14th 2022

**Problem 1.**

- (a) Write the Hexadecimal number,  $C12_{16}$ , as a sum of symbols (their equivalent decimal value) times weighting-factors.
- (b) Convert  $C12_{16}$  to binary and compute its sum with  $0011\ 0000\ 1111_2$ .

**Problem 2.** Simplify the following boolean expression using a Karnaugh-Map.

$$X = B\bar{C}\bar{D} + \bar{A}B\bar{C}D + AB\bar{C}D + \bar{A}BCD + ABCD$$