

Name:

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**COE 202, Term 142  
Digital Logic Design**

**Quiz# 2**

Date: Sunday, Feb. 22

**Q1** Use Boolean algebra to solve the following questions. Show clearly all your steps.

a. Reduce  $A' + AB + AC' + AB'C'$  to 3 literals

b. Reduce  $[(CD)' + A]' + AB + C'D + B'CD$  to 3 literals

**Q2.** Given the Boolean function  $F(X, Y, Z) = (XY + Z)(\bar{X}\bar{Y} + \bar{Z})$ :

a. Express F as a **product-of-Maxterms**,  $F = \prod M$ .

b. Find the **algebraic sum-of-minterms** expression for F.