Name: Id#

COE 202, Term 141

Digital Logic Design

Quiz# 2

 Date: Thursday, Oct. 16

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

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| d. Express F in the logic diagram shown as a function of the input variables. Do not do any logic manipulations.   |

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

1. Express F as a **sum-of-minterms**, $F=\sum\_{}^{}m$.
2. Find the ***algebraic* product-of-Maxterms** expression for *F*.

**Q3.** Given $F(A,B,C)=\sum\_{}^{}m\left(0,3,5,7\right)$ and $ G\left(A,B,C\right)=\prod\_{}^{}M\left(1,2,4,7\right), $ express the function $F+\overbar{G}$ as a sum-of-minterms.