**COE 202, Term 151**
**Digital Logic Design**

**Quiz# 2**

Date: Thursday, Sep. 17

**Q1** Use Boolean algebra to simplify the following equations into the given number of literals in sum-of-product form. <u>Show clearly all your steps</u>.

a. Reduce $AB + A'C + BC' + B'C$ to 2 literals

b. Reduce $[A + BC]` + B$ to 2 literals

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

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

   b. Find the ***algebraic* <u>sum-of-minterms</u>** expression for $F$.