

Name: _____

Date: _____

Quiz 4:**Problem 1:**

Are the following true or false?

Question**True False**

Proper transfer functions have more zeros than poles

☐☐The zero-state solution of the state equation is computed for $u \equiv 0$ ☐☐If p is a complex pole of a transfer function, then the conjugated complex number p^* is also a pole of the transfer function☐☐

The pole-zero plot does not contain all information about a transfer function

☐☐

Finite inputs lead to finite outputs for a BIBO stable system

☐☐**Problem 2:**

Which of the following transfer functions is instable? Justify your answer!

$$G_1(s) = \frac{(s-5)(s-7)}{(s+3)(s+2)}$$

$$G_2(s) = \frac{s+s}{s+7} - \frac{s+5}{s+2}$$

$$G_3(s) = \frac{1}{s^2 - 2s + 1}$$