



Faculty of Electrical & Electronics Engineering
DEE3133 Basic Electrical Machine & Power System

Name: _____

ID: _____

Section: _____

Date: _____

(Failed to complete all the particulars above will be penalized 2 marks)

QUIZ 3

Draw the per-unit equivalent circuit diagram of the system as shown in Figure 1. Assumed base values are 100MVA and 100kV at transmission line.

The generator, transformers and load are rated as follows:

G1: 50MVA, 12.2kV, $X_{G1} = 0.10$ pu

G2: 20MVA, 13.8kV, $X_{G2} = 0.10$ pu

T1: 80MVA, 12.2/132kV, $X_{T1} = 0.10$ pu

T2: 40MVA, 132/13.8kV, $X_{T2} = 0.10$ pu

Load: 50MVA, 0.8pf lagging operating at 124kV.