KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

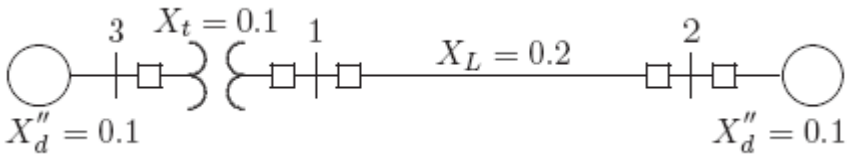
Dr. Ibrahim O. Habiballah

EE-463 - 131

Key Solutions

Quiz 3 ser#: I.D.: Name:

The one-line diagram of a simple power system is shown below. All impedances are expressed in per unit on a common MVA base. The generators are operating on no load at their rated voltage with their emfs in phase. A three-phase fault occurs at bus 1 through a fault impedance of $Z_f = j0.08$ per unit.



1) Using Th´evenin's theorem, the impedance to the point of fault is

a) j 0.3 pu

b) j 0.2 pu

c) j 0.12 pu

d) j 0.08 pu

2) The voltage on bus 2 due to the fault at bus 1 is

a) 0.0 pu

b) 0.4 pu

c) 0.7 pu

d) 0.8 pu