KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-463

Key Solution

Quiz # 6 Sec. 1 Serial # Name: I.D.#

A generator rated 100 MVA, 20 kV has X" = X_2 = 20% and X_0 = 5%. Its neutral is grounded trough a reactor of 0.32 Ohm. The generator is operating at rated voltage without load and is disconnected from the system when a single line-to-ground fault occurs at its terminals. Find the sub-transient current in the faulted phase.

Solution: