KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

Dr. Ibrahim O. Habiballah

EE-306

Key Solution

Quiz 3   Sec.: 3   I.D.:   Ser#:   Name:

Q1. For a non-ideal transformer connected to a resistive load, which sentence is absolutely correct?   (4 points)

a. The primary-current lags the primary-voltage.
b. The primary-current is in-phase with the primary-voltage.
c. The primary-current leads the primary-voltage.

Q2. The equation below is for calculating the primary current of non-idea transformers when using   (4 points)

$$I_p = I_s / a + [(1/R_c)+(1/jX_m)]* V_p$$

a. the approximate equivalent-circuit with magnetization-branch referred to the primary side.
b. the approximate equivalent-circuit with magnetization-branch referred to the secondary side.
c. the approximate equivalent-circuit without magnetization-branch referred to the primary side.
d. the approximate equivalent-circuit without magnetization-branch referred to the secondary side.

Q3. The magnetization reactance in the excitation-branch of non-ideal transformers can be obtained from the open-circuit test.   (2 points)

a. True.
b. False.