KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

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

Q.1 For a non-ideal transformer connected to a resistive load, which sentence is absolutely correct? (3 points)

a. The primary-voltage lags the secondary-voltage.

b. The primary-voltage is in-phase with the secondary-voltage.

c. The primary-voltage leads the secondary-voltage.

Q.2 The equation below is for calculating the primary current of non-idea transformers when using (4 points)

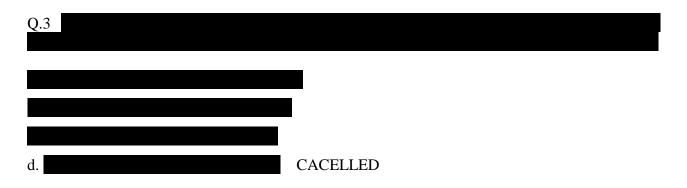
$$I_p = I_s / a + [(1/R_c) + (1/jX_m)] * V_p$$

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.



Q.4 The voltage regulation of an ideal transformer connected to an inductive load has (3 points)

a. Zero percentage.

- b. Positive Zero percentage.
- c. Negative percentage.
- d. A very high (infinite) value.