

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
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**EE-360**

**Key Solution**

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

A 10 kVA, 4800/240 V, transformer has an equivalent impedance referred to the primary side as  $Z_{eq1} = 120 + j300\Omega$ . If the secondary side of the transformer supplies a resistive load the rated current at 220 V, the primary voltage terminal will be

- a)  $V_1 = 4692\angle 7.7^\circ V$
- b)  $V_1 = 5089\angle 7.1^\circ V$
- c)  $V_1 = 4723\angle 8.3^\circ V$
- d)  $V_1 = 236\angle 8.3^\circ V$