

# KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

## ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

### Key Solution

Quiz 1      Sec.: 5      I.D.:      Ser#:      Name:

Q.1 In a delta-connected negative-sequence system, the line voltage  $V_{ac}$  (-----) the line voltage  $V_{ab}$  by (-----) (5-points)

- a. Lags,  $60^\circ$ .
- b. Leads,  $60^\circ$ .**
- c. Lags,  $120^\circ$ .
- d. Leads,  $120^\circ$ .

Q.2 A three-phase substation delivers 160-MW to a three-phase load, at 0.8 power factor leading. The load is (---), and has (---) apparent power. (5-points)

- a. inductive, 200 MVA
- b. capacitive, 200 MVA**
- c. inductive, 120 MVA
- d. capacitive, 120 MVA