

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

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

Q.1 In a Delta-connected acb-sequence system, the line current I_{ac} lags the phase current I_{an} by 30° (4-points)

- a. TRUE.
- b. FALSE.

Q.2 A three-phase load consumes 200-MVA at 0.6 power factor lagging. The load's active power is (---), and reactive power is (---). (3-points)

- a. 120 MW, -160 MVAR
- b. 120 MW, 160 MVAR
- c. 160 MW, -120 MVAR
- d. 160 MW, 120 MVAR

Q.3 In a Y-connected source feeding directly a Delta-connected resistive-load, (3-points)

- a. phase-current magnitude of the load is the source line-current magnitude.
- b. phase-current magnitude of the load is the source phase-current magnitude.
- c. phase-current magnitude of the load is the source line-current magnitude divided by $\sqrt{3}$.
- d. phase-current magnitude of the load is the source line-current magnitude multiplied by $\sqrt{3}$.