

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

Quiz 1 Sec.: 6 I.D.: Ser#: Name:

Q.1 For a Wye-Delta balanced three-phase source-load connection (4-points)

- a. the source line-current magnitude equals the load phase-current magnitude.
- b. the source line-voltage magnitude equals the load phase-voltage magnitude.**
- c. the source phase-voltage magnitude equals the load line-voltage magnitude.
- d. all of the above

Q.2 A three-phase 208-V source supplies three identical resistors **wye-connected load** with 3 Ohm/phase through a 3-phase cable with 1 Ohm/phase. The line-current absorbed by the load is (3-points)

- a. $I_{ph} = 60.0 \text{ A}$
- b. $I_{ph} = 52.0 \text{ A}$
- c. $I_{ph} = 34.6 \text{ A}$
- d. $I_{ph} = 30.0 \text{ A}$**

Q.3 A three-phase 208-V source supplies three identical resistors **delta-connected load** with 3 Ohm/phase through a 3-phase cable with 1 Ohm/phase. The line-current absorbed by the load is (3-points)

- a. $I_{ph} = 60.0 \text{ A}$**
- b. $I_{ph} = 52.0 \text{ A}$
- c. $I_{ph} = 34.6 \text{ A}$
- d. $I_{ph} = 30.0 \text{ A}$