

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 Wye-connected source feeding a Delta-connected load, (4-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 $\sqrt{3}$.

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 phase-current absorbed by the load is (3-points)

- a. $I_{ph} = 60.0$ A
- b. $I_{ph} = 52.0$ A
- c. $I_{ph} = 34.6$ A
- d. $I_{ph} = 30.0$ 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 phase-current absorbed by the load is (3-points)

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