

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solutions

Quiz 1 Sec.: 4 I.D.: Name:

Q.1 Three identical impedances of $4 - j3$ Ohm are delta-connected and tied to a three-phase 208-V power line. The active and reactive powers absorbed by the load are

- a. **$P = 20.77 \text{ kW}$** ; **$Q = - 15.58 \text{ kVAR}$**
- b. $P = 6.92 \text{ kW}$; $Q = - 5.19 \text{ kVAR}$
- c. $P = 20.77 \text{ kW}$; $Q = 15.58 \text{ kVAR}$
- d. $P = 6.92 \text{ kW}$; $Q = 5.19 \text{ kVAR}$

Q.2 Three identical impedances of $4 - j3$ Ohm are Y-connected and tied to a three-phase 208-V power line. The active and reactive powers absorbed by the load are

- a. $P = 20.77 \text{ kW}$; $Q = - 15.58 \text{ kVAR}$
- b. **$P = 6.92 \text{ kW}$** ; **$Q = - 5.19 \text{ kVAR}$**
- c. $P = 20.77 \text{ kW}$; $Q = 15.58 \text{ kVAR}$
- d. $P = 6.92 \text{ kW}$; $Q = 5.19 \text{ kVAR}$