

# KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

## ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

### Key Solution

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

Q.1 In synchronous machines, the combination of the mechanical, copper, and stray losses are known as the rotational losses. (2-points)

- a. True.
- b. False.

Q.2 When a synchronous generator is connected to a capacitive-load, the phase angle  $\gamma$  needed to calculate the converted power is . (3-points)

- a.  $\gamma = \delta$
- b.  $\gamma = \theta + \delta$
- c.  $\gamma = \theta - \delta$
- d.  $\gamma = 0$

Q.3 In synchronous motors as the field current increases, the power factor becomes less leading and more lagging. (2-points)

- a. True.
- b. False.

Q.4 The speed of a synchronous generator is 720 rpm. It has (3-points)

- a. 6-poles
- b. 8-poles
- c. 10-poles
- d. 12-poles