KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

Quiz 5 Sec.: 3 I.D.: Ser#: Name:

Q.1 The non-salient pole rotors in synchronous machines are used in low speed applications. (2-points)

a. True.
b. False.

Q.2 When a synchronous generator is connected to a resistive-load, the phase angle γ 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 with permanent magnet core, as the armature current increases, the power factor becomes less leading and more lagging. (2-points)

a. True.
b. False.

Q.4 A 6-poles synchronous generator is to be connected to another 4-poles 1500 rpm synchronous generator. The speed of the 6-pole generator must be (3-points)

a. 900 rpm
b. 1000 rpm
c. 1200 rpm
d. 1500 rpm