

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

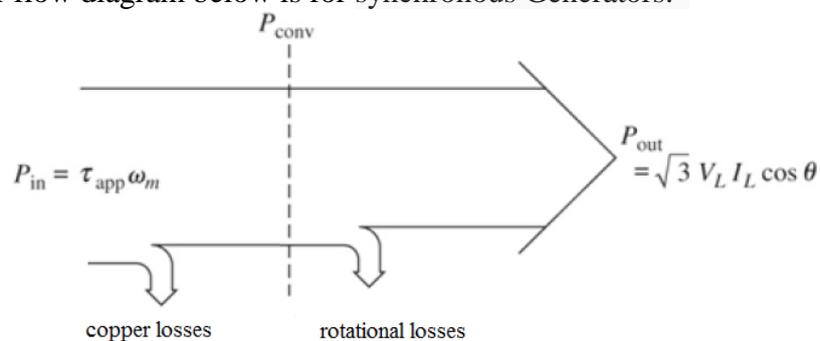
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EE-306

Key Solution

Quiz 5 Sec.: 7 I.D.: Ser#: Name:

Q.1 The power flow diagram below is for synchronous Generators. (2-points)



- a. True.
- b. False.

Q.2 The output power of a synchronous motor with negligible armature resistance is (2-points)

$$P_{out} = \frac{3|V_t||E_A|\sin\delta}{X_S}$$

- a. True.
- b. False.

Q.3 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.4 In synchronous motors with permanent magnet core, as the armature current decreases, the power factor becomes less lagging and more leading. (3-points)

- a. True.
- b. False.