

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

Quiz 6 Sec.: 7 I.D.: Ser#: Name:

Q.1 A 4-pole, 60-Hz polyphase induction motor has a full-load rotor speed 1740 rpm. It's rotor speed, when the shaft torque is reduced by half, is (4-points)

- a. 1790 rpm.
- b. 1770 rpm.
- c. 1710 rpm.
- d. 870 rpm.

Q.2 A 4-pole, 50-Hz, 3-phase, induction motor has a full-load speed of 1440 rpm. The speed of the stator rotating magnetic field B_s with respect to the rotor is (3-points)

- a. 1500 rpm
- b. 1440 rpm
- c. 60 rpm
- d. 10 rpm

Q.3 The rotor speed of a 3-phase induction generator must be less than the synchronous speed when delivering its full-load. (3-points)

- a. TRUE.
- b. FALSE.