

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

Quiz 6 Sec.: 5 I.D.: Ser#: Name:

Q.1 A 50-Hz polyphase induction motor with a full-load speed of 1450 rpm has 4-poles.

True False

Q.2 The pushover torque in three-phase induction machines occurs when the slip is positive.

True False

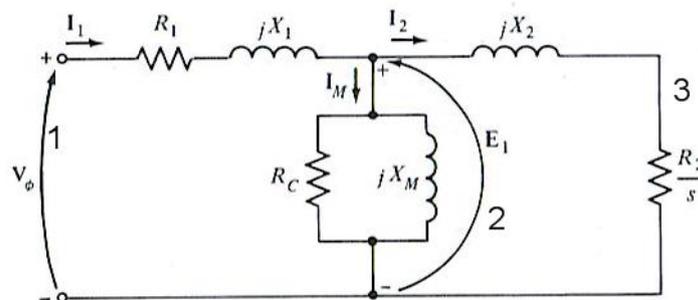
Q.3 A 2-pole, 60-Hz, 3-phase, induction motor has a full-load speed of 3555 rpm. At half-load, its synchronous speed is 3600 rpm.

True False

Q.4 A 4-pole, 60-Hz, 3-phase, induction motor has a full-load speed of 1740 rpm. At breakdown torque, its speed would be

- a. 1900 rpm
- b. 1750 rpm
- c. 1650 rpm**
- d. 0 rpm

Q.5 In the per-phase equivalent circuit of a polyphase induction motor shown below, number "1" is the (....) power, number "2" is the (.....) power, and number "3" is the (.....) power.



- a. electrical input ; converted ; mechanical output
- b. electrical input; air-gap; air-gap**
- c. electrical input; air-gap; converted
- d. mechanical input; converted; electrical output.