KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
ELECTRICAL ENGINEERING DEPARTMENT
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EE-360
Key Solution

Quize # 6   Serial #   Name: I.D.#

Circle the correct answer.

1) The pullout torque of a polyphase IM occures when the slip is (…..) and the pushover torque occurs when the slip is (…..).

a. $s = 1.0$ $s = 0.0$

b. $1.0 > s > 0.0$ $s < 0.0$

c. $s > 1.0$ $s < 0.0$

d. $1.0 > s > 0.0$ $s > 1.0$ (3 Marks)

2) The maximum torque of a 25-hp, 4-pole, 60-Hz, 440-V, 3-phase, induction motor is 174 N-m. When the rotor resistance reduces by 50 %, its maximum torque become

a.   348   N-m.

b.   174   N-m.

c.   87   N-m.

d.   none of above.   (2 Marks)

3) The rotor speed of a 4-pole, 50-Hz, 3-phase, induction motor with slip of 5% is:

a.   1500 rmp

b.   1800 rmp

c.   1710 rmp

d.   1425 rmp   (3 Marks)

4) When applied rated voltage per phase is reduced by 50 %, the starting torque of an induction motor becomes (…..) of the starting torque at rated voltage.

a.   4

b.   2

c.   1 / 2

d.   1 / 4   (2 Marks)