

Certification Test



Induction Motor Basics

TRM901-MTR-MOTORBASICS (eLM.MTR.02.MotorBasics)

Taking the Certification Test

No demo unit is needed to take this test. Please record all answers on this answer sheet. Multiple-choice questions have **only one** correct answer, except where noted otherwise. Choose the best answer for each question.

A passing score is 90%.

Returning the Certification Test

Option 1: Fax this page to **Yaskawa Technical Training Services** at (847) 887-7185.

Option 2: E-mail the answers and **all** contact info below to training@yaskawa.com.

Receiving Your Score

You may review your answers only if a passing score is received. When the test is taken during class, you will receive your score as soon as it can be graded. When taken as a CLEP test or pre-requisite enrollment test, contact Technical Training Services via email or phone to receive your score.

Answer Sheet:

1. _____
2. _____
3. _____
4. _____
5. _____

Contact Information:

Name: _____ Title: _____

Company: _____ Email: _____

Address: _____

Phone Number: _____ Fax number: _____

Supervisor's Name/ Title: _____

Name of Yaskawa Rep: _____

Test Date: _____

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1. What are the two major components of a Three Phase Induction Motor?
 - A. Brushes and commutator
 - B. Rotor and Stator
 - C. Capacitor and shaded pole
 - D. Permanent magnet and Stator
2. Does the Rotor travel at the same RPM as the Stators Magnetic Field (in a positive torque application)?
 - A. True
 - B. False
3. What is the Synchronous Speed of a four pole induction motor? Sync Speed = $\frac{120f}{P}$
 - A. 900 RPM
 - B. 1200 RPM
 - C. 1800 RPM
 - D. 3600 RPM
4. What is the Rated Speed of a four pole motor at 60hz with a slip of .02?

$$\text{Rated Speed} = \frac{120f}{P} (1 - s)$$

- A. 1800 RPM
 - B. 1766 RPM
 - C. 1774 RPM
 - D. 1764 RPM
5. At what point does a NEMA B motor produce the most torque.
 - A. Locked Rotor Torque
 - B. Pull Up Torque
 - C. Breakdown Torque
 - D. Full Load Torque

