Chapter 1: General Principles of Motor Control

TRUE/FALSE

1. One of the main considerations when installing a machine is the power source.

   ANS: T PTS: 1 REF: Installation of Motors and Control Equipment

2. Manual control may be accomplished by simply connecting a switch in series with the motor.

   ANS: T PTS: 1 REF: Types of Control Systems

3. With automatic control, an operator has to initiate certain actions.

   ANS: F PTS: 1 REF: Types of Control Systems

4. High voltage surges are harmless and cannot damage electronic components connected to the power line.

   ANS: F PTS: 1 REF: Functions of Motor Control

5. Diodes are used to suppress the voltage spikes produced by coils that operate on direct current.

   ANS: T PTS: 1 REF: Functions of Motor Control

COMPLETION

1. The conductor size, fuse or circuit breaker size, and overload size are generally determined using the _____ Code® and/or local codes.

   ANS: National Electrical

   PTS: 1 REF: Installation of Motors and Control Equipment

2. Insurance companies established the _____ organization in an effort to reduce the number of fires caused by electrical equipment.

   ANS:
   Underwriters Laboratories
   Underwriters Laboratories (UL)
   UL

   PTS: 1 REF: Installation of Motors and Control Equipment

3. _____ control is characterized by the use of push buttons, limit switches, pressure switches, and other sensing devices to control the operation of a magnetic contractor or starter.

   ANS: Semiautomatic

   PTS: 1 REF: Types of Control Systems

4. Fuses and circuit breakers are generally employed for _____ protection.

ANS: circuit

PTS: 1 REF: Functions of Motor Control

5. The current flow through the MOV is called _____ current and is so small that it does not affect the operation of the circuit.

ANS: leakage

PTS: 1 REF: Functions of Motor Control

SHORT ANSWER

1. What does Underwriters Laboratories (UL) do?

ANS:
UL tests equipment to determine if it is safe under different conditions.

PTS: 1 REF: Installation of Motors and Control Equipment

2. What are manual controllers?

ANS:
Manual controllers are generally very simple devices that connect the motor directly to the line.

PTS: 1 REF: Types of Control Systems

3. What is a wiring diagram?

ANS:
A wiring diagram is basically a pictorial representation of the control components with connecting wires.

PTS: 1 REF: Types of Control Systems

4. What does a schematic diagram show?

ANS:
A schematic diagram shows components in their electrical sequence without regard for physical location.

PTS: 1 REF: Types of Control Systems

5. What is the difference between jogging and inching?

ANS:
The difference between jogging and inching is that jogging is accomplished by momentarily connecting the motor to full line voltage and inching is accomplished by momentarily connecting the motor to reduced voltage.

PTS: 1 REF: Functions of Motor Control