

Trainee Name: _____

Social Security Number: _____ Date: _____

- _____ 1. The output capacity of a motor is rated in _____.
a. amperes
b. Btus
c. horsepower
d. volts
- _____ 2. For a given number of poles, the _____ determines the speed of an AC motor.
a. voltage
b. current
c. frequency
d. frame size
- _____ 3. The synchronous speed at which a four-pole, 60Hz induction motor operates is _____ rpm.
a. 1,140
b. 1,800
c. 2,500
d. 6,900
- _____ 4. Both induction and synchronous motors operate on the principle of a rotating _____ field.
a. impedance
b. magnetic
c. capacitance
d. reactance
- _____ 5. The FLA rating of a motor will be found on the _____.
a. stator
b. rotor
c. nameplate
d. endplate
- _____ 6. The most common service factor appearing on a motor's nameplate is _____.
a. 1.15
b. 1.5
c. 115
d. 2
- _____ 7. The motor type that has the highest starting torque is the _____ motor.
a. split-phase
b. capacitor-start
c. universal
d. three-phase induction
- _____ 8. The best application for a shaded-pole motor is _____.
a. large HVAC air handling units
b. water pumps requiring five or more horsepower
c. air conditioning units
d. small fans

- _____ 9. In a split-phase motor, the starting torque is _____ of the full-load torque.
- a. 25% to 50%
 - b. 75% to 100%
 - c. 150% to 200%
 - d. 450% to 500%
- _____ 10. The _____ motor has low starting torque, low efficiency, and high noise.
- a. capacitive-start
 - b. shaded-pole
 - c. repulsion-start
 - d. split-phase induction
- _____ 11. The _____ represent(s) the stationary magnet of a DC motor.
- a. armature
 - b. field poles
 - c. commutator
 - d. rotor
- _____ 12. The _____ DC motor is used where the required starting torque is high and speed control is desirable.
- a. brushless
 - b. compound
 - c. series
 - d. shunt
- _____ 13. A(n) _____ enclosure is totally enclosed.
- a. drip-proof
 - b. splash-proof
 - c. explosion-proof
 - d. weather-protected

- _____ 14. There are _____ NEMA designated motor designs.
- a. 3
 - b. 4
 - c. 6
 - d. 8
- _____ 15. Of the following motors, a _____ motor is the best installation choice for an application requiring adjustable speeds.
- a. DC
 - b. squirrel cage induction
 - c. synchronous
 - d. capacitor start
- _____ 16. A _____ motor provides constant speed from no-load conditions to full-load conditions.
- a. series DC
 - b. squirrel cage induction
 - c. synchronous
 - d. shunt DC
- _____ 17. Motor circuits are covered in _____.
- a. **NEC Article 100**
 - b. **NEC Article 250**
 - c. **NEC Article 430**
 - d. **NEC Article 500**
- _____ 18. Any exposed live parts operating at _____ or more between terminals must be guarded.
- a. 15V
 - b. 50V
 - c. 240V
 - d. 600V

- _____ 19. The _____ rotor types are generally the most rugged.
- a. squirrel cage
 - b. wound
 - c. wye-connected
 - d. delta-connected

- _____ 20. The difference between the synchronous speed and the speed of the rotor in an induction motor is known as _____.
- a. slip
 - b. torque
 - c. starting current
 - d. induction