Curriculum Pre/Post Test Unit 7

1. What is the name of the field dealing with the study of the bodies in motion?
A. Statics
B. Classical Mechanics
C. Physics
D. Aeronautics

2. What is the equation to calculate the speed of an object?
A. Velocity / Distance
B. Velocity / Time
C. Rotational Cycles / Distance
D. Distance / Time

3. Which of the following is not used in calculating Rotational Speed?
A. Time
B. Degrees
C. Rotational Cycles
D. Distance

4. What is the speed of a robot that travels across a 12 ft field in 4 seconds?
A. 3 FPS
B. 6 FPS
C. 8 FPS
D. 16 FPS

5. Which of the following parameters are not used to calculate Torque?
A. Force
B. Distance
C. Velocity
D. Diameter

6. What is the torque of a 3 ft tall mechanical arm holding a 4 pound ball 2 ft away from its base?
A. 6 ft-lbs
B. 8 ft-lbs
C. 12 ft-lbs
D. 24 ft-lbs

7. _____ is the rate at which work is performed
A. Kinetic Energy
B. Power
C. Acceleration
D. Velocity

8. As the speed of a motor increases, the _____ decreases.
A. Force
B. Acceleration
C. Velocity
D. Torque

9. Which of the following is not a key motor characteristic when designing robots?
A. Stall Torque
B. Free Speed
C. Free Voltage
D. Stall Current

10. If a motor is spinning at 50 RPM at 6 Volts, what would be the speed if the voltage was increased to 9 Volts?
A. 25 RPM
B. 50 RPM
C. 75 RPM
D. 100 RPM