QUIZ / Curriculum / Advanced Applications/ Relays and PWMs

NAME DATE CLASS PERIOD

Put a check in the o *next to the correct answer.*

1. **When attaching the relay cable to the microcontroller, where should the red wire go?**
   - o **analog/digital port 3**
   - o analog/digital port 4
   - o **motor port 2**
   - o **motor port 3**
2. **When attaching the PWM cable to the microcontroller, where should the cable go?**
   - o **analog/digital port 3**
   - o **analog/digital port 4**
   - o motor port 2
   - o **motor port 3**
3. **The microcontroller communicates with the relay through electronic pulses. How large are these signals?**
   - o **1 Volt**
   - o **2 Volts**
   - o 5 Volts
   - o **10 Volts**
4. **Which of the following devices works on the principle of square waves?**
   - o PWM
   - o **Relay**
   - o **Vex microcontroller**
   - o **Cable for microcontroller/PWM**
5. **Which of the following devices works by opening or closing a second circuit after the current in an original circuit exceeds a certain level?**
   - o **PWM**
   - o Relay
   - o **Vex microcontroller**
   - o **Cable for microcontroller/PWM**
6. **Which of the following would result from lowering the duty cycle of a PWM?**
   - o Decrease in motor speed
   - o **Increase in the amount of time the motor is powered**
   - o **Opening of a second circuit in a system**
   - o **Closing of a second circuit in a system**

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7. **Which port bank on the Vex microcontroller is used to send signals to the relay?**
   - o **Motor**
   - o Analog/Digital
   - o **Interrupts**
   - o **None of the above**
8. **How many male pins are on the cable that connects the microcontroller to the relay?**
   - o **0**
   - o **3**
   - o **5**
   - o 6
9. **According to the ROBOTC program provided for the lesson, what happens to the relay motor when both up buttons are pressed on the back of the transmitter?**
   - o **Full Speed Forward**
   - o **Full Speed Reverse**
   - o **Half Speed Forward**
   - o Motor Stop
10. **Imagine you wished to alter the ROBOTC program so that you could change which transmitter buttons control the relay. What line would you need to edit?**
    - o const tSensors relay1 = (tSensors) in3;
    - o motor[port2] = vexRT[Ch2];
    - o if(vexRT[Ch5] == 127)
    - o SensorValue(relay2) = 1;