


Electrical Drawing Practice Exam

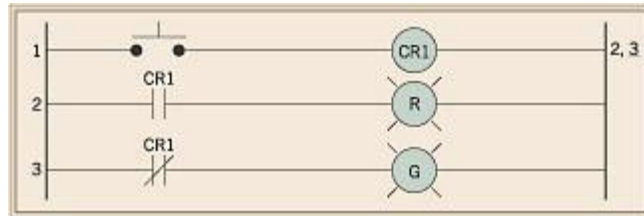
Part 1. Answer the following questions by marking the best answer among the choices given: [4 points each]

- Examples of passive components include ...
 - Transistor
 - Diode
 - Variable capacitance
- The component shown is classified as ... component.
 - Through-hole
 - Surface-mounted
 - PGA
- The ... resistors have limited accuracy to 1%.
 - Wire-wound
 - Carbon
 - Metal film
- In E12 series resistors, one can find a resistor value of ...
 - 4.7 k Ω
 - 24.1 Ω
 - 3.1 M Ω
- A resistance with 4 color bands: brown, red, orange and gold (from left to right) has a value of ...
 - 34 M $\Omega \pm 2\%$
 - 12 k $\Omega \pm 5\%$
 - 60 $\Omega \pm 10\%$
- A resistance labeled as 8K2K in a schematic diagram has an actual value of ...
 - 8.2 k $\Omega \pm 10\%$
 - 82 k $\Omega \pm 5\%$
 - 82 $\Omega \pm 2\%$
- Rheostats have ... terminals.
 - One
 - Two
 - Three
- Particular types of ... capacitors are used when 1kV DC voltage must be supported.
 - Mica
 - Ceramic
 - Paper
- Varactors are ...
 - Variable diodes
 - Diodes that work as a variable capacitor
 - Capacitors that work as diodes
- A LED is basically a p-n junction diode that emits light when ...
 - Forward biased
 - Reverse biased
 - Not biased

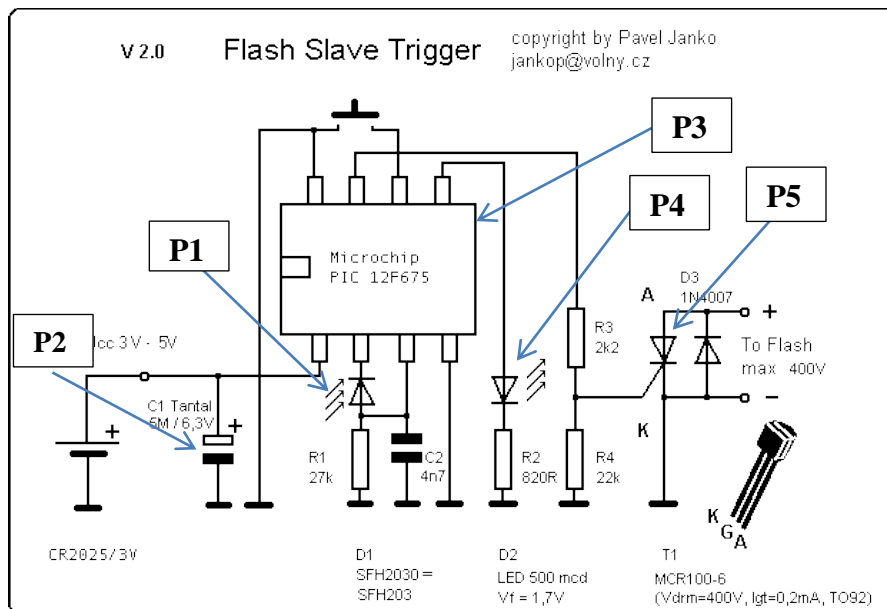
Part 2. Mark the following statement as either True (T) or False (F): [2 Point each]

11. High current inductors wound around a large core are used in signal filters.
12. All components are polarized and have positive and negative leads.
13. Passive components contribute no power gain to a circuit.
14. Integrated circuits have standard symbols when represented in a schematic diagram.
15. Resistor networks can be obtained in SIL package.
16. Pots can be found in tandem form with 2 pots controlled by one spindle.
17. It is possible to find resistors that change their values with light.
18. Resistors that change with temperature have inherently linear relationship with temperature.
19. Avalanche voltage of Zener diodes ranges above several hundred volts.
20. 2N2222A transistor is a high-gain transistor.

Part 3.[20 Points] Describe the components of the ladder diagram below (that is, provide a list of the components included in the diagram labeled by their name). Describe what happens when the switch is (a) turned on and (b) turned off.



Part 4.[20 Points] In the schematic drawing below, determine the type of the components labeled P1 through P5. Also, determine the value of the components C2, R2, and R3.



Best of Luck!