

Review Final

Exploratory Engineering & Design II

ZB/874

Schematic Diagram Symbols: 5 questions: matching

- Resistor
- Diode
- Motor
- Wire
- Battery
- Capacitor
- Switch
- Speaker
- Light

Resistor color Code: 5 questions: matching: chart included

- 1st digit band
- 2nd digit band
- 3rd multiplier band
- 4th tolerance band

Ohm's Law: 6 questions: multiple choice: $V = I \times R$; $I = V/R$; $R = V/I$

- Voltage = V
- Current = I
- Resistance = R

Series Circuit: 3 Questions: multiple choice - formula

- Resistance Total (R_t) in a series circuit = $R_1 + R_2 + R_3 \dots\dots\dots$

Parallel Circuit: 4 Questions: multiple choice -2 Formulae

- For Two Resistors: $R_t = R_1 \times R_2 / R_1 + R_2$
- For more than two Resistors: $R_t = 1 / (1/R_1 + 1/R_2 + 1/R_3)$

Battery Unit: 15 Questions: multiple choice

- Multi-meter
- Alessandro Volta
- Daniell Cell
- Voltaic Pile
- Bagdad batteries
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- Anode
- Cathode
- Load
- Nickel-cadmium battery
- Terminal / two metals in a lemon battery
- Electrolyte

Motor Unit: 25 questions: multiple choice and True & False

- Magnetic fields & wire
- Magnets and currents
- Fleming's left hand rule
- How to increase current in a motor
- Increasing an induced current
- Wire movements in a magnetic field
- Differences of a generator and a motor
- Reversing magnetic fields or current and its relationship to force.
- Converting electrical and mechanical energy
- What produces DC and AC
- DC
- AC
- Commutator
- induction
- Slip ring

Solar Power Unit: 20 questions: multiple choice and True & False

- Heat & light
- Reading a graph
- Reading section on thermal energy
- Type of current and solar power production
- Logical reasoning
- Light and energy
- When did solar power begin?
- Solar power and satellites