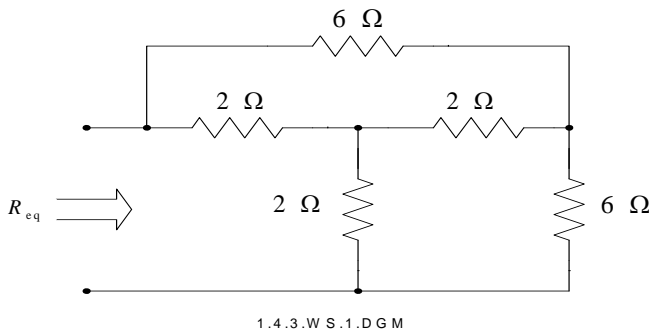
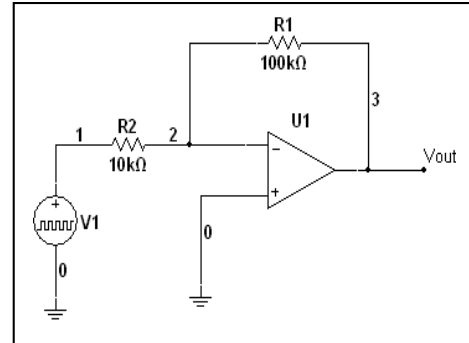


## EET Outcome Assessment Sample Questions

1. The unit of force in the International System of units (the SI system) is the:
  - a. Newton**
  - b. Kilogram
  - c. Joule
  - d. Slug
  
2. The work required to move a charge of 2 coulombs from one point in a circuit to another point is 10 Joules. Determine the potential difference or voltage (in volts) between the two points.
  - a. 20
  - b. 5**
  - c. 0.2
  - d. 100
  
3. Two sinusoidal voltages of the same frequency have peak values of 8V and 6V, respectively. They have a phase difference of  $90^\circ$ . Determine the peak value of the sum of the two voltages.
  - a. 2
  - b. 14
  - c. 10**
  - d. 48
  
4. Determine the equivalent resistance in ohms looking into the circuit shown below. Consider a wye-delta transformation to simplify the circuit.
  - a. 6.0
  - b. 3.0**
  - c. 8.4
  - d. 4.2
  
5. The gray code 11101000<sub>G</sub> is equivalent to the binary number:
  - a. 11101001<sub>2</sub>
  - b. 00010111<sub>2</sub>
  - c. 10110000<sub>2</sub>**
  - d. 10011100<sub>2</sub>



6. The input signal to the circuit shown below is a 0.5 volt<sub>peak</sub> 10Hz square wave with no DC component. Which of the following **BEST** describes the steady-state output signal?
  - a. an inverted 5.0 volt<sub>peak</sub> 100Hz square wave
  - b. an inverted 5.0 volt<sub>peak</sub> 10Hz square wave**
  - c. a non-inverted 10 volt<sub>peak</sub> 10Hz square wave
  - d. a non-inverted 5.0 volt<sub>peak</sub> 10Hz square wave



7. The purpose of a microprocessor assembler directive is to:
  - a. tell the assembler when to burn the program to the microprocessor
  - b. configure the microprocessor
  - c. define the microprocessor clock frequency
  - d. control the assembly process**
  
8. The input signal to the integrator circuit shown below is a 0.5 V<sub>peak</sub> 10Hz square wave with no DC component. The output is a square wave rather than a triangular wave. Which of the following **BEST** describes the reason?
  - a. The capacitor is too large
  - b. the input frequency is too low**
  - c. the amplitude of the source voltage is too large
  - d. the 100kohm resistor is too small

