F2018 MTE220 Assignment 5

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(1) A sensor with $50\,\Omega$ output impedance supplies an output signal in the frequency range 1.00 Hz to 100 Hz range of up to 1.00 mV riding on a 2.50 V DC signal. Due to noise in the plant the signal arriving at the signal conditioning circuit contains 1.00 V of noise in 10.0 kHz and above range. A signal conditioning circuit is required with low output impedance to raise the desired signal to the 1.00 V range across 1.00 Hz to 100 Hz range and attenuate the undesired signal to 1.00 mV or lower. You have available 5% PVNS resistors and capacitors, a $\pm 15$ V power supply, as well as, general purpose opamps.