HOMEWORK 3

Due November 7, 2022

1. Find the transfer function of a Chebyshev lowpass filter with the following specifications:

Passband 0-20 kHz, ripple 0.3 dB

Stopband over 50 kHz, gain below -22 dB

Suggest a circuit realizing this filter. It may contain passive as well as active stages.

2. Find the transfer function of the Rauch filter. What is the dc gain? What are the zeros and poles? What is the pole Q?