

Part 2:

Formula for Corner Frequency: $\frac{1}{2\pi RC}$

A possible combination of a resistor and a capacitor would be a 3.2M F capacitor and a 1k Ω resistor.

$$\frac{1}{2\pi \cdot 3.2\text{MF} \cdot 1\text{k}\Omega} = 49.74\text{Hz}$$

This is very close to 50Hz, which means the frequency has decreased by 20dB.