

Microphone

(a) @ 500 Hz, $|G| = -46 \text{ dB} = 20 \log_{10} V$

$\Rightarrow V = 10^{-2.3} = 5 \times 10^{-3} \text{ @ } 500 \text{ Hz (It's Linear system)}$

(b) High-pass Filter

(c) Yes, resonance occurs @ 12,000 Hz

(d)

