

... C.E1. (3)

5) Change the input to  $v_o(t) = \cos(\omega t)$  and calculate the output.

$$v_o(t) = 4 \cdot 10^8 \cdot \operatorname{Re} \left( \frac{e^{j(\omega t - \frac{\pi}{2})}}{8 \cdot 10^{-3} j \cdot \omega^2 + 3.6 \cdot 10^3 \cdot \omega - 5 \cdot 10^8 j} \right)$$

Time is up!