EELE 2133 Electronic Communications
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For the system shown in the figure. Assume $h(t) = 10\text{sinc}(10t)$. Answer the following:

1. If $x(t) = 2\text{sinc}(2t)$, find the output signal $y(t)$. Find the energy of the output signal, $y(t)$.
2. If $x(t) = 20\text{sinc}(20t)$, find the output signal $y(t)$. Find the energy of the output signal, $y(t)$.
3. If $x(t) = \text{sinc}(t)\cos(2\pi \times 5t)$. Plot $X(f)$. Find and plot $Y(f)$. Find the output signal $y(t)$. Find the energy of the output signal, $y(t)$ and the energy of the input signal $x(t)$.