b) Find the response of the overall system to the input $x[n] = \delta[n] - \delta[n-1]$

$y[n] = x[n] * h[n] = ~~x[n]~~$ ~~($\delta[n] - \delta[n-1]$) * ($\delta[n] + 5\delta[n-1] + 10\delta[n-2] + 11\delta[n-3] + 8\delta[n-4]$~~

~~$h[n] * h_2$~~ $= (\delta[n] ~~m~~ \delta[n-1]) * (\delta[n] + 5\delta[n-1] + 10\delta[n-2] + 11\delta[n-3] + 8[n-4] + 4\delta[n-5] + \delta[n-6]) =$

$= h_1[n] - h_1[n-1] = $ ~~$\delta[n]\delta[n]$~~ $\boxed{\delta[n] + 4\delta[n-1] + 5\delta[n-2] + \delta[n-3] - 3\delta[n-4] - 4\delta[n-5] - 3\delta[n-6] ~~m~~ \delta[n-7]}$