Quiz #1

Consider a discrete time SISO, LTI system, $O(\cdot)$, with impulse response,

$$h(\ell) = \begin{cases} 
\frac{1}{3}, & \ell \in \{-1, 0, 1\}, \\
0, & \text{otherwise.}
\end{cases}$$

1. Is the system causal? Explain/prove your answer.

2. What is the output of $O(h(\cdot))$? (I.e. the output when the impulse response is fed as input).

3. Give probabilistic reasoning for your answer to 2.