Concept Question 3-1: Is the uniqueness property of the Laplace transform unidirectional or bidirectional? Why is that significant?

Bidirectional, provided we restrict the time domain signal $x(t)$ to be causal. It can be shown that the bilateral Laplace transforms of $e^{-at} u(t)$ and $-e^{at} u(-t)$ are both $1/(s + a)$, so only if $x(t) = 0$ for $t < 0$ is uniqueness guaranteed. The significance is that inverse Laplace transforms can be computed using a table lookup, instead of the complex integral given by Eq. (3.5).