

EECS20n, Quiz 2, 2/10/03

Please print your name and lab time here:

Last Name _____ First _____ Lab time _____

A channel has input alphabet $Inputs = \{0, 1\}$ and output alphabet $Outputs = \{0, 1, \perp\}$. The channel operates as follows. When the input symbol is 0(1), the channel outputs 0(1) or the erase symbol \perp . The channel erases *at most three* consecutive input symbols.

1. What is the space of input signals?
2. What is the space of output signals?
3. What are the possible output signals when the input signal is $(0, 0, \dots)$?
4. Construct a nondeterministic state machine model of the channel. Give your answer as a transition diagram.