Assume the following for an N-MOSFET:

\[ C_{inv} = 2.0 \, \mu F/cm^2 \]
\[ V_T = 0.25 \, V \]
\[ R_{SD} = 100 \, \Omega - \mu m \]
\[ V_{DD} = 1.0 \, V \]
\[ W = 1 \, \mu m \]

You may also assume that \( \nu_T = 1.14 \times 10^7 \, cm/s \).

1) Assuming that \( T_{SAT} = 0.80 \), what on-current would be measured?