IC Design

Assignment 1:

Part 1

NMOS

|  |  |
| --- | --- |
| Threshold Voltage V\_th | 0.6 V |
| Subthreshold swing | 85mV/dec |
| DIBL | 17.1mV |
| Ioff | 11.1pA |
| Channel Length Coefficient | 0.118 |

Effect of temperature on On and Off current and threshold voltage

Graph

Effect of body voltage on threshold voltage=0.9

PMOS

|  |  |
| --- | --- |
| Threshold Voltage V\_th | 0.49 V |
| Subthreshold swing | 90mV/Dec |
| DIBL | 16.9mV |
| Ioff | -5.33pA |
| Channel Length Coefficient | 0.218 |

Effect of temperature on On and Off current and threshold voltage

Graph

Effect of body voltage on threshold voltage- Increasing the body voltage decreases the threshold voltage

Part 2

