1. A: Channel Width
   B: Channel/Gate Length
2. Power is proportional to Vdd^2 * f (P = CL * Vdd^2 * f). Since 2.5GHz is greater than 2 GHz and 1.5 V is greater than 1.2 V, the microprocessor block of 2.5 GHz will consume more power when operating.
3.
   a. Delay: t = (CL * Vdd) / (Ion)
      If Vdd increases, t (delay) would also increase
      Active Power: Pactive = Cl * Vdd^2 * f
      If Vdd increases, Pactive (active power) would also increase
   b. Delay: t = (CL * Vdd) / (Ion) = (CL * Vdd) / (μ Cox * W/2L * (Vdd - Vt)^2)
      If doping density increases, the threshold voltage would increase, which causes Ion to decrease, which increases the delay
      Active Power: Pactive = E * f = E * 1/t
      When Nd increases, the delay increases, which decreases the frequency, causing the active power to decrease

4. When Vdd increases, the channel length decreases due to channel length modulation. The decrease in channel length causes the drain current to increase. The output resistance would also decrease due to the decrease in channel length. The decrease in output resistance would be beneficial for high power applications where high current is needed.