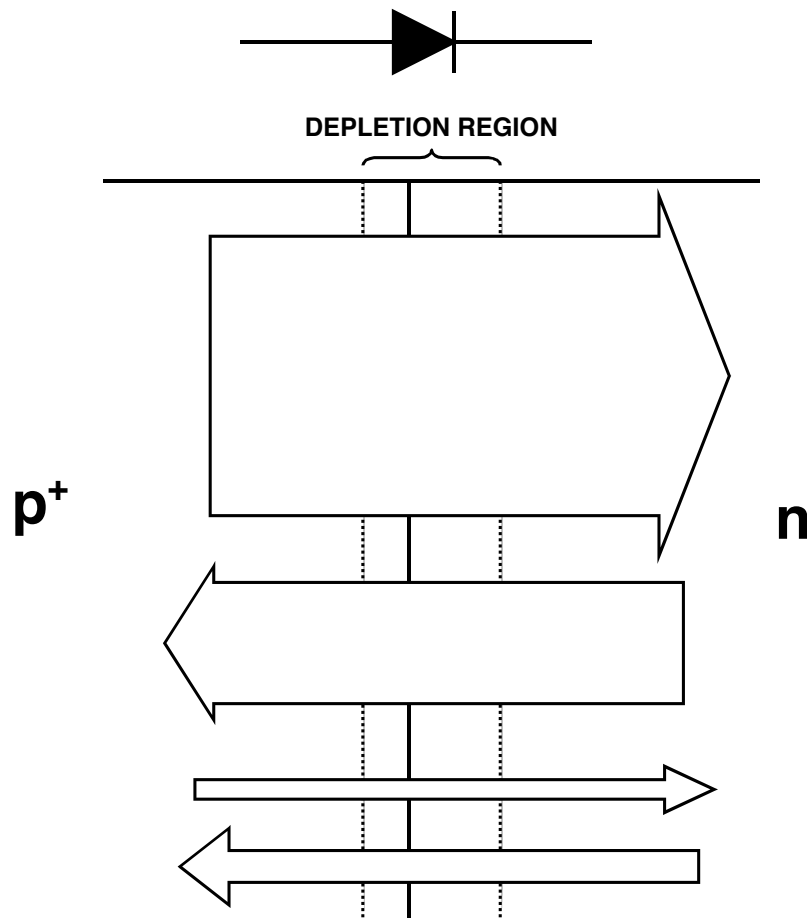


ECE3901 p-n Junction Diode Current Component "One Minute Quiz"

Arrows in the diagram below indicate carrier motion

- Does this represent forward bias, zero bias (equilibrium), or reverse bias?
- For each arrow, identify whether it corresponds to hole or e^- motion
- For each arrow, identify whether it corresponds to drift or diffusion
- Find at least 3 characteristics that indicate $N_A \gg N_D$



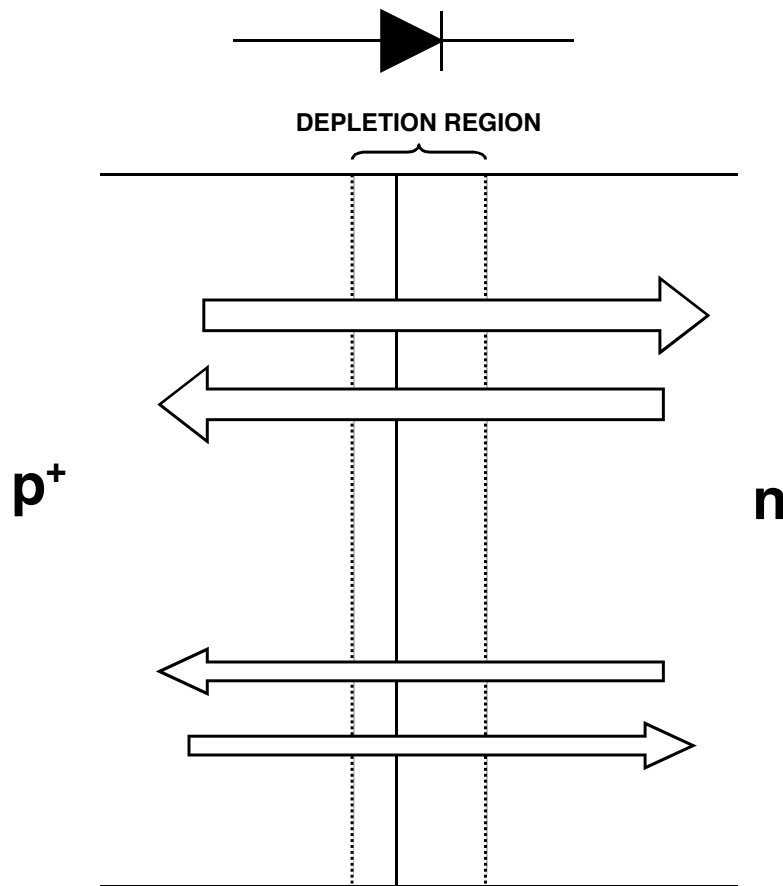
- In the space below indicate the current density components corresponding to each carrier motion arrow

Arrows in the diagram below indicate carrier motion

a) Does this represent forward bias, zero bias (equilibrium), or reverse bias?

b) For each arrow, identify whether it corresponds to hole or e^- motion

c) For each arrow, identify whether it corresponds to drift or diffusion



d) In the space below indicate the current density components corresponding to each carrier motion arrow