Pre - Lab Homework:

1. Explain how a p-n junction or diode work? when does it conduct?
A diode (P-N) junction in a electrical circuit allows current to flow more easily in one diffrenent than another. Forward biasing means putting a voltage across a diode that allows current to flow easily. while reverse biasing means putting a voltage across a diode in the opposite direction.
The transfer of electrons from the N side of the junction to holes annihilated on the P side of the junction produces a barrier voltage. This is 0.6 to 0.7 V in silicon and varies with other semiconductors. A forward-biased PN junction conducts a current once the barrier voltage is overcome.

2. What is a wired logic?
Wired logic a from of digital logic in which some logic functions are implemented by directly connecting together the outputs of one or more logic gates. The success of this technique depends on the electronic characteristics of the gates involved.

3. Explain the operation of depletion region for different biasing conductions.
Depletion region is an insulating region within a conductive, doped semiconductor material where the mobile charge carries have been diffused away or have been forced away by an electric field. The only elements left in the depletion region are ionized donor or aceptor impurities.
The region of uncovered positive and negative ions called the depletion region due to the depletion of carries in this region. It is formed from a conducting region by removal of all free charge carries, leaving none to carry a current.