EE113 Semiconductor Tutorial 10 Topic 6

1. Explain in detail how *Ion Implantation* occurs, and the issues associated with this process.
2. What effect does annealing have on a wafer and when is this process undertaken?
3. Describe how the sputtering process works and what it is used for in the manufacture of semiconductor ICs?
4. From what process would you associate the term ‘lattice damage’? how does damage occur?
5. Contrast the wet and dry etch process in terms of etch profile.
6. Describe how to manufacture a resistor on a semiconductor wafer? What is the downside of making resistors on a wafer?
7. How do you manufacture a capacitor on a wafer? Where else would you find capacitance on a wafer? Is this a good or bad thing from a performance view point? Defend your answer.