Assignment 9

1. Which materials are used for dental restoration? Show various parts of interest in dental restoration.
2. Provide the processing details of dental implants and list the issues involved in their design.
3. How are modern dental implants different from conventional dental implants?
4. Show various interfaces and material exposures that are critical in designing dental implants.
5. What is oral environment that must be considered while designing dental implants?
6. What are subperiosteal dental implants?
7. What are the concerns with tissue contacts in a dental implant?
8. Show hierarchical structure in the bone. Also provide the multi-length scale (with approximate length) that comprise each level of bone hierarchy.
9. State the role of various features of bone in handling mechanical, and biological stimuli (i.e. role of porosity, channels, crystalline matrix, etc in the remodeling of bone).
10. Describe the transverse isotropic and orthotropic nature of bone, and evolve with the stress versus strain (through stiffness matrix) in each.
11. Using Kelvin Voigt and Mawell model, describe the bone using dash-pot and springs.