

Homework #4

1. **What are the building block molecules for proteins, DNAs, and lipids? What type of molecules can be found in the cell membranes? What is a bilayer structure?**
2. **For the three dimensional structure of proteins, what are the primary, secondary and tertiary structures? What types of interactions are responsible for maintaining these structures?**
3. **What is the central dogma? Please describe in detail how proteins are synthesized in cells.**
4. **Compare the α -helix and β -sheet structure, why the difference?**
5. **Polarity, pH, solubility and structure all play a role in amino acid chemistry. There are four different kinds of amino acids, please group them according to the polarity and charge.**