**Questions to answer:**

1. How do enzymes catalyze chemical reactions (don’t just say “they lower the activation energy”, give me specific mechanisms).
2. Explain the significance of reaction coupling in living systems.  How is it used, and what does it allow living systems to do that they would not be able to do otherwise?
3. Why does the activation energy of many reactions in living systems need to be reduced for living systems to function?
4. Compare the “lock-and-key” model of enzyme function with the “induced fit” model of enzyme function.
5. Explain how each of the following affect enzyme structure and function:
6. Substrate concentration
7. Temperature
8. pH
9. salt concentration
10. cofactors and coenzymes
11. Explain the difference between a competitive inhibitor and a non-competitive inhibitor.
12. How is feedback regulation of enzyme reaction related to allosteric regulation of enzyme function?

**Things You Should Make Sure You Understand:**

* Why enzymes are classified as catalysts.
* Specific examples of enzymes used in all major metabolic pathways in living systems, and the reactions that they catalyze.