

\$15.00

---

# Kentucky Class Notes

*Earn an A+ with Class Notes*  
*<http://KentuckyClassNotes.com>*

---

*BIO 350 Palmer*

*Test 1*

This packet is a supplement to regular class attendance and is not designed to replace regular class attendance and participation. This packet is not required material for any class or by any staff or faculty member. This packet does not warrant any type of refund or return policy of any kind. The information presented in this packet is an interpretation of a lecture class and is not a direct copy of any professor's material. The layout and design of this packet is © 2009 Kentucky Class Notes LLC. Any reproduction of this packet is forbidden under federal copyright law.

1-14-10

## Structure Function Relationships

- In simple terms it can be said that if you understand the structure of a cell, tissue, or organ, you will understand its function.
- There are many levels of structure function relationships. They include molecular, macromolecular, cell, tissue, organ system, and organism.
- A closer look at cells gives a good example of a structure function relationship. Cells contain a nucleus. A euchromatic nucleus actively transcribes DNA whereas a heterochromatic nucleus has little or no DNA transcription. Cells also contain cytoplasm. Within the cytoplasm, you can find extensive Golgi which is important for lipid synthesis. Extensive ribosomes are important for protein synthesis. Extensive mitochondria are important for a high metabolic rate.
- Another example would be tissues. All parts of the body are made up of cells. Groups of similar cells make up tissues. Specifically we can define tissues as a population of cells that are morphological and functionally similar.
- There are four types of tissues which include epithelia, connective, muscle, and nerve tissue.
- Epithelia tissue covers all surfaces and lines all cavities. It can be remembered by knowing that anything entering or leaving the body must cross epithelia. It has many functions including protection, absorption, secretion, sensory, and contractility. It protects you from mechanical or chemical injury and radiation. Your skin acts as a barrier to many things. The sensory function refers to the neuro-epithelium which is a part of your ears, eyes, and skin as well. The contractility function refers to the myoepithelium.