**Review questions for last section of Bio 10 Please Note: Your final exam is cumulative, this review only represents the last few lectures, you need to review previous sections of the class as well.**

**Homeostasis and animal tissues:**

1. What is homeostasis? How is it maintained?

2. Explain how a negative feedback loop works, give an example.

3. Explain how positive feedback works, give an example.

4. List the four major animal tissue types and their subtypes, be able to give examples of each. (from reading only, not discussed in lecture)

**Animal Digestion:**

1. What are “essential” nutrients for animals?

2. What must happen to macromolecules before a cell absorbs them? How does this occur?

3. What are the 2 primary ways we use our food/nutrients?

4. Describe the entire human digestive system starting at the mouth and ending at the anus. You should be able to name each structure, describe its structure and function, and explain how the food moves through them (i.e.: peristalsis, swallowing reflex (what does the epiglottis do?), etc.)

5. How is the pancreas involved in digestion? The liver? The gall bladder?

6. What do all body structures that do absorption have in common?

7. Where do carbs start digestion? Fats? Proteins? Which enzymes are responsible for each?

**Animal Gas Exchange:**

1. Define the following: pharynx, larynx, trachea, bronchus, bronchi, bronchiole, alveoli, diffusion, lungs.

2. Why must animals breathe?

3. Describe the human respiratory system in detail. Starting from the nose and ending at the alveoli. You should be able to name each structure the air passes through, describe its function and how its structure is connected to its function (i.e. trachea is reinforced tube to prevent collapse, surface to volume ratio on alveoli, etc.)

4. Describe how oxygen leaves the respiratory system into the blood and how carbon dioxide does the reverse. (what process is involved)

5. How do you inhale and exhale? (which muscles are involved and what do they do?)

6. Be able to follow the path of a molecule of oxygen as it enters your nose and goes through your respiratory system, then on to the circulatory system, to the cells, and then follow the carbon dioxide back out to and through the respiratory system.

**Animal Circulation:**

1. Describe both the systemic and pulmonary circuit of blood flow in the mammalian circulatory system.

2. Compare and contrast the structure and functions of the veins, arteries, and capillaries.

3. What is the purpose of the heart valves?

Hang in there, you’re almost done! And don’t forget to get up and move while you study; it gets the blood flowing and the oxygen moving and the cell respiration going and the ATP forming which helps you think about all of these things!