

## **Test #2 Extra Credit Review Sheet**

**7-1, 7-2, 7-3, 7-4, 35-1**

1. What three statements describe the cell theory? List the 3 structures that all cells have.
2. What are three differences between prokaryotic cells and eukaryotic cells? What are the similarities and differences between the SEM, TEM and light microscope?
3. Describe the functions of the parts of the cell. (Just like your flashcards!) How is a cell like a factory? Using this analogy, what parts of the cell are like a factory? (ribosome is the assembly line ... nucleus is the boss ... )
4. Describe the basic structure of a cell membrane. What is it made out of? Describe two functions for both the cell membrane and cell wall. How would the cell be different if they were not there?
5. Define equilibrium. Provide an analogy of how something is at equilibrium.
6. Describe the process of diffusion. Do the particles go from L  $\rightarrow$  H concentration or H  $\rightarrow$  L? When does diffusion stop? Does diffusion require energy (ATP)? Does diffusion go 'down' or against' a concentration gradient?
7. Describe the process of facilitated diffusion. Do the particles go from L  $\rightarrow$  H concentration or H  $\rightarrow$  L? When does facilitated diffusion stop? Does facilitated diffusion require energy (ATP)? Does facilitated diffusion go 'down' or against' a concentration gradient?
8. Describe the process of active transport. Do the particles go from L  $\rightarrow$  H concentration or H  $\rightarrow$  L? When does active transport stop? Does active transport require energy (ATP)? Does active transport go 'down' or against' a concentration gradient?
9. Describe the process of osmosis. Do the water particles go from L  $\rightarrow$  H concentration or H  $\rightarrow$  L? When does osmosis stop? Does osmosis require energy (ATP)? Does osmosis go 'down' or against' a concentration gradient?
10. What is the 1 difference between osmosis and diffusion? What are 3 similarities?
11. What is the difference between phagocytosis and pinocytosis?
12. List the levels of biological organization in multicellular organisms from most simple to most complex.
13. How are unicellular organisms similar to multicellular organisms? How are they different? Provide 3 for each.
14. What is homeostasis? Describe the functions of each of the eleven organ systems. What are the four types of tissue?
15. Know the structures/functions of the microscope! (Write them out!)