**Semester 1 Final Study Guide 2019-2020**

Biology

1) What is the difference between cohesion and adhesion?

2) Which has a higher pH, acids or bases?

3) What is a buffer?

4) Describe the relationship between polymers and monomers.

5) List the 3 types of polysaccharides we learned about and their function in living things.

6) What is the difference between saturated and unsaturated lipids?

7) What are the monomers that form DNA?

8) What are the monomers that form protein?

9) Most enzymes are which type of macromolecule?

10) List all of the functions of proteins.

11) Which has a nucleus, prokaryotic or eukaryotic cells?

12) Where are ribosomes found?

13) Which organelles contain their own DNA and a double membrane?

14) What is another name for the cell membrane?

15) Draw a membrane lipid and label which parts are polar and nonpolar.

16) Describe how molecules move in a protein pump?

17) List the types of passive transport. Do they require energy?

18) List the types of active transport. Do they require energy?

19) Describe what happens to cells in the following solutions:

A) hypertonic

B) hypotonic

C) isotonic

20) What is facilitated diffusion? Is it passive or active transport? Does it require energy?

Wha

21) Describe the structure of DNA.

22) Cell respiration uses glucose to make \_\_\_\_\_\_\_\_\_\_\_\_\_.

23) The Kreb’s cycle uses \_\_\_\_\_\_\_\_\_\_\_\_\_ to produce NADH and FADH2?

24) What does the electron transport chain make?

25) Which is higher energy, ATP or ADP?

26) Where do each of the following reactions occur? Electron transport chain, the Kreb’s Cycle, glycolysis, ferementation

27) What is the first step in both aerobic and anaerobic respiration?