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| Anatomy & Physiology 12 **Biochemistry Review** | Name:Block:Date: |

1. Compare and contrast Negative and Positive feedback with an example.
2. Draw and label a water molecule.
3. Explain with the aid of a drawing why water is polar. Describe the type of bonds formed due to this polarity.
4. Use an example to explain the difference between adhesion and cohesion.
5. Why is water a universal solvent?
6. How do we know if an acid is a strong acid? How do we know if a base is a strong base?
7. What does the pH scale represent?
8. Explain how buffers work in our bodies. Use a specific example with the aid of chemical equations.
9. What are the four polymers and their subunits?
10. Describe the difference between a dehydration synthesis reaction and a hydrolysis reaction.
11. Draw and label an amino acid
12. Draw a reaction of two amino acids and their products. What type of reaction is this?
13. What type of reaction would cause a protein to break into its subunits, amino acids?
14. Name, describe and draw the four levels of organization of proteins.
15. What happens during denaturation? What are the three main causes of this?
16. Use examples to explain the three major functions of proteins.
17. Explain the two main functions of carbohydrates?
18. Show the chemical reaction of two glucose molecules. What type of reaction is this?
19. Compare the polysaccharides: starch, glycogen and cellulose.
20. What are the three types of fats?
21. Describe the difference between a triglyceride (neutral fat) and phospholipid.
22. Explain the why phospholipids have a hydrophobic and hydrophilic end.
23. What is the difference between saturated and unsaturated fats?
24. How do you determine if something is a steroid? Name an example from class.
25. Explain the three major functions of DNA.
26. What are the two types of bases? Which bases belong to each?
27. Describe the difference in structure between purines and pyrimidine’s.
28. Using 10 bases, create one side of a DNA structure. Now pair these bases up with their correct base pair.
29. Compare and contrast DNA and RNA
30. Compare ATP and ADP. Explain how energy is released during cellular respiration.