Instructions: Choose any twelve (12) of the following questions to answer about biological molecules. You may use your textbook or any online resource. You may not use a classmate’s answers. Do only 12 questions. You will need to complete the final task on the back of this sheet as well.

**Biomolecules Introduction**

1. What is dehydration synthesis (condensation synthesis). Write the equation.
2. What is hydrolysis? Write the equation.

**Carbohydrates**

1. What are carbohydrates?
2. What is ATP?
3. How can you determine the presence of monosaccharides in a sample?
4. What are the **functions** of monosaccharides and disaccharides in living organisms?
5. How is glucose regulated in the blood stream?
6. What is the role of insulin? Where is it produced?
7. What is the role of glucagon? Where is it produced?
8. What are storage polysaccharides and what are structural polysaccharides?
9. What is glycogen? What is its function?
10. Why do you want to break down sucrose into glucose?
11. Why can't humans use cellulose as a source of energy?

**Lipids**

1. Name the **two** major groups of lipids and the types included in each group.
2. What are the differences between saturated and unsaturated fatty acids?

16. What are the **functions** of triglycerides (fats) in living organisms?  
17. What are the **functions** of steroids in living beings?

Give examples of steroids.

18. What is cortisone? Explain how it works.

**Proteins**

19. Name the **functions** of proteins in living beings.  
20.  What are essential amino acids?  
21.  Describe a peptide bond.  
22. What is **denaturation** of a protein?  
23. How can you denature a protein?

**\*\*Please diagram an ENZYME & explain what this molecule does in chemical reactions. \*\***