Study Guide for Test 2 Biochemistry

(Use your notes and book to complete in full on a separate sheet of paper)

1. Define Chemistry
2. Define Biochemistry – what does it study?
3. Define and state all parts of an atom.
4. What is the difference between atomic mass and atomic number?
5. Explain ionic and covalent bonding?
6. Where would you find a hydrogen bond?
7. Define ion/isotope
8. Describe what makes molecules/compounds organic or inorganic
9. Explain why carbon is versatile?
10. Define macromolecule
11. All macromolecules are made of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. Monomers are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to each molecule.
13. Define monomer and polymer – state the difference.
14. State all four macromolecules and the elements composed in each.
15. State the monomer and polymer of each class of macromolecule.
16. Draw an example of all four macromolecules (how can you identify?)
17. Explain monosaccharide vs. disaccharide
18. What is a lipid composed of…..what makes up a triglyceride?
19. Explain the relationship between triglyceride and high cholesterol in your body?
20. State the difference between saturated and unsaturated.
21. If you wanted to run a long race in the morning – what might you eat for dinner and why?
22. In the macromolecule lab – state the test for all macromolecules – what happened in the presence of each? What chemicals were used?
23. Define water and why is it called the universal solvent? Why do we need water?
24. State the properties of water and give an example of each.
25. What determines if a compound will dissolve in water
26. Define pH scale
27. State the difference between acids and bases - identify 3 examples of each on the scale
28. Describe the role of an enzyme? What is a catalyst? Substrate and active site (make drawing and explain)
29. Construct an energy diagram that displays a reaction taking place with and without an enzyme.
30. Compare endothermic and exothermic reactions (chapter 2)
31. What is an amino acid? How many different AA are there?