

General Biology –Chapter 3 Review

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This review is meant to highlight basic concepts from Chapter 3. It does not cover all concepts presented by your instructor. Refer back to your notes, unit objectives, labs, handouts, etc. to further prepare for your exam.

1. Describe the general properties of an organic molecule.
2. Explain the difference between a monomer and polymer.
3. Fill in the missing information:

| Macromolecule/Biomolecule | Polymer | monomer |
|---------------------------|-------------|-------------|
| | Starch | |
| Nucleic acid | | |
| | polypeptide | |
| | | fatty acids |

4. Define and list differences between dehydration synthesis and hydrolysis, list an example of each.
5. Give the function of each macromolecule in #3.
6. Compare and contrast DNA and RNA.
7. Describe the four levels of protein structure:
 - a. Primary
 - b. Secondary
 - c. Tertiary
 - d. Quaternary

Fill in the blank/ True or False

8. Glucose is a monosaccharide. True or False?
9. Starch and glycogen are disaccharides. True or False?
10. Polysaccharides are joined together by hydrolysis. True or False?
11. Triglycerides function as long term energy storage molecules. True or False?
12. The main structural component of our cell membranes are _____.
13. Saturated fats are saturated with _____ atoms.
14. Unsaturated fats are solid at room temperature. True or False?
15. Cholesterol is important to the diet because it a precursor to many hormones. True or False?
16. Proteins aid in chemical reactions when they act as _____ to speed the rate of reactions.
17. When a protein loses its natural shape/structure, it is said to be _____.
18. If a protein becomes unfolded it will still function the same. True or False?
19. ATP is a special kind of nucleotide. True or False?
20. DNA codes for all four classes of organic molecules found in living systems. True or False?