

Biochemistry Study Guide

1. Organic molecules
 1. **Macromolecules:** Large complex molecules found only in living organisms.
 2. Define the term organic molecule. **Molecules that ave carbon at the center**
 3. Organic molecules are organized around central carbon skeleton.
2. Hydrocarbons
 1. Carbon atoms have four electron in their valence shell, so they can form up to four covalent bonds with other atoms.
 2. Define the term hydro-carbon. **Organic molecules consisting entirely of hydrogen and carbon**
 3. Why are hydrocarbons hydrophobic and insoluble in water? **Hydrocarbons are non polar due to slightly differing electronegativities between carbon and hydrogen**
 4. Describe the difference between aliphatic hydrocarbons and aromatic hydrocarbons. Be able to recognize the structural formula of each. **Aliphatic contain a conjugated bond system, while aromatic do not**
3. Organic molecules are important for living organisms, because of their complex structure.
 1. Organic molecules can form isomers. Define the term isomer. **A molecule that hase the same molecular formula but in different structural formulas**
 2. Organic molecules can form covalent bonds with functional groups. Define the term functional group. **A group of atoms that are attached to the carbon skeleton of an organic molecule**
 3. Be able to name the seven functional groups listed in Figure 2.27 on p. 53, and to recognize their structure.
 4. Be able to recognize each of the seven functional groups within a larger organic molecule.
 5. Macromolecules can be very large.
 6. Name the four groups of macromolecules. **Carbohydrates, protiens, nucleic acids, and lipids**
 7. Carbohydrates, proteins, and nucleic acids can be very large, because they are **polymers** that are built from monomers.
 8. Monomers are linked together during a **dehydration synthesis**. A water molecule is always a product of a dehydration synthesis.

Biology Biochemistry Study Guide

Pasquale De Marco



Biology Biochemistry Study Guide:

Biochemistry Basics Milin Kurup, 2020-12-21 The Biochemistry Basics Biochemistry and Molecular Biology Study Guide was created by a renowned student from the University of Florida and includes all notes diagrams and study guides for all the important subjects covered in Biochemistry Molecular Biology Genetics and Microbiology Milin Kurup is a double major in B S Microbiology and Cognitive and Behavioral Neuroscience student from the University of Florida In addition to his degree Milin is a UF Biochemistry BCH4024 Study Instructor Group Leader a Microbiology MCB3020L Teaching Assistant a Genetics PCB4522 Teaching Assistant and a Neuroscience Research Assistant at the University of Florida While many of these classes cover high density material this study guide hopes to organize and condense the whole curriculum into short page review sheets In the author s time of instruction and study he organized a collection of all reactions mechanisms processes and concepts all studied in Biochemistry Genetics and Microbiology Overall this biochemistry study guide covers topics such as biomolecule structures Protein Carbohydrate Nucleic Acids and Lipids biomolecules function biomolecule metabolism Protein Metabolism Carbohydrate Metabolism Nucleic Acid Metabolism and Lipid Metabolism physiological biochemical relationships genetics and biological microbiological biochemical processes Overall the guide is organized into 13 page summaries of each specific topic and acts as a study guide for those who hope to study individual concepts in detail All sections include detailed diagrams color coded notes labeled illustration and detailed descriptions for effective comprehension In addition to class studies many students also have used this study guide as an MCAT review guide The short and condensed review pages have helped many student organize and categorize important topics as they continue to study for the MCAT Ultimately this organized set can be extremely useful for students review especially before class exams school projects standardized test and much more [Study Guide to Cell Biology](#) Cybellium ,2024-10-26 Designed for professionals students and enthusiasts alike our comprehensive books empower you to stay ahead in a rapidly evolving digital world Expert Insights Our books provide deep actionable insights that bridge the gap between theory and practical application Up to Date Content Stay current with the latest advancements trends and best practices in IT AI Cybersecurity Business Economics and Science Each guide is regularly updated to reflect the newest developments and challenges Comprehensive Coverage Whether you re a beginner or an advanced learner Cybellium books cover a wide range of topics from foundational principles to specialized knowledge tailored to your level of expertise Become part of a global network of learners and professionals who trust Cybellium to guide their educational journey www.cybellium.com **Ultimate Study Guide for USMLE Step 1: Master the Exam with Confidence** Pasquale De Marco, 2025-04-07 Embark on a transformative journey towards USMLE Step 1 success with the ultimate study guide meticulously designed to empower you with the knowledge strategies and confidence you need to excel in this pivotal exam This comprehensive guidebook is your trusted companion leading you through the vast landscape of medical knowledge and providing you with the tools to conquer

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