

Study Guide: Biochemistry exam 1

Lecture 2:

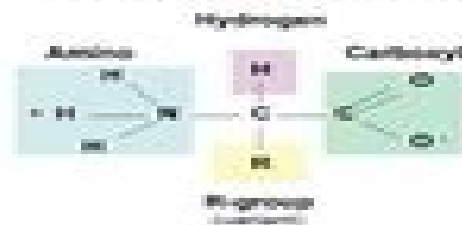
1. Define or describe the "Central Dogma" in relation to the storage & retrieval of genetic information, the creation of proteins and the expression of traits:

- ✦ "Central Dogma" explains the storage, retrieval, & expression of genetic information.
- ✦ Replication: duplication of DNA to make an identical copy.
- ✦ Transcription: reading of a gene & its transcription into RNA.
- ✦ Translation: translation of RNA sequence into the corresponding sequence of amino acids to form a protein.
- ✦ "Information processing": information flow from DNA to protein structure -
 - DNA undergoes replication → transcribed into RNA → RNA translated into a protein → proteins develop into traits.

2. Illustrate and/or describe the general structural, physical and/or chemical characteristics of amino acids.

- ✦ There are 20 standard amino acids.
- ✦ Each amino acid has an amino group, and a carboxyl group joined at the alpha carbon.
- ✦ The "R" group is the unique feature for each amino acid.

Amino Acid Structure



- ✦ There's an O⁻ on the carboxyl group b/c the H⁺ goes to amino-group, making NH₃⁺ at a certain pH.
- ✦ There are 4 main groups of amino acids:
 - **Neutral non-polar:** no charge, hydrophobic
 - **Neutral polar:** no charge, hydrophilic
 - **Acidic:** extra carboxyl in R-group, can be - charged
 - **Basic:** extra amino in R-group, can be + charged.
- ✦ **Charges occur in R groups!**
- ✦ **Amphoteric:** when an amino acid can act as an acid or base (depending on the pH).
- ✦ Amino acids are "zwitterionic" meaning they can carry both a + and - charge on the same molecule.
- ✦ The alpha carbon is "asymmetric" if all 4 attached groups are different.

3. Describe and/or illustrate the titration of an amino acid, including the pI's or pKa's of ionizable groups.

- ✦ Begin titration by adding a base, and watch the pH change.
- ✦ You can increase the pH by adding a base, thus giving COOH the time to give up its proton.
- ✦ pKa reflects the dissociation of an acid.
- ✦ pI is a point where 100% of the molecule has a 0 charge.

Essential Biochemistry Study Guide

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Essential Biochemistry Study Guide:

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immigration is renationalizing politics. There is a ... Immigration Tests New Order By Sassen: A Comparative ... The book targets a specialized audience with previous knowledge and particular interest in the topic of the migration crisis. It was published in 1995 by ... Immigration tests the new order sassen - resp.app Mar 25, 2023 — Yeah, reviewing a book immigration tests the new order sassen could be credited with your close associates listings. This is just one of the ... Reading free Immigration tests the new order sassen ... Aug 14, 2023 — Yeah, reviewing a books immigration tests the new order sassen could accumulate your near links listings. This is just one of the solutions ... The Repositioning of Citizenship by S Sassen · 2003 · Cited by 183 — issue is that of the historicity and the embeddedness of both categories, citizenship and the national state, rather than their purely formal features. The Repositioning of Citizenship: Emergent Subjects and ... by S Sassen · 2002 · Cited by 400 — SASSEN: REPOSITIONING OF CITIZENSHIP 1 1 ethnicity, religion, sex, sexual ... instance, prior to the new immigration law passed in 1996 who could prove ... saskia sassen The new immigration is further characterized by the immigrants' tendency to cluster in a few key U.S. regions. This was true as well of earlier immigration ... Losing Control?: Sovereignty in an Age of Globalization Sassen argues that a profound transformation is taking place, a partial denationalizing of national territory seen in such agreements as NAFTA and the European ... 2 The de facto Transnationalizing of Immigration Policy Discussions cover the operation of states under a new rule of law, the two cornerstones of immigration policy in developed countries — the border and individual ... Saskia Sassen by S Sassen · Cited by 159 — Next I briefly examine the question of immigrant remittances as one lens into the broader subject of the formation of alternative political economies and how ... International Business: The New Realities (3rd ... An innovative text that captures the spirit of International Business. Based on the authors' collective teaching and working experience—as well as ... Results for "Cavusgil International-Business-The-New- ... International Business: The New Realities, Global Edition. 5th Edition. S Tamer Cavusgil, Gary Knight, John R. Riesenberger. Multiple ISBNs available. International Business: The New Realities, 3rd Ed. by ST Cavusgil · 2013 · Cited by 621 — Original language, English. Place of Publication, Upper Saddle River, NJ. Publisher, Pearson Prentice Hall. ISBN (Print), 9780132991261. S. Tamer Cavusgil: Books International Business: The New Realities (3rd Edition). by S. Tamer Cavusgil · 3.93.9 out of ... International Business: The New Realities The Third Edition has been completely revised and continues to reflect the new realities of today's international business environment for tomorrow's managers. International Business: The New Realities (3rd Edition) Product details · ISBN-13: 9780132991261 · ISBN: 0132991268 · Edition: 3 · Publication Date: 2013 · Publisher: Prentice Hall. AUTHOR. International Business: The New Realities (3rd Edition) International Business: The New Realities (3rd Edition). by S. Tamer Cavusgil, Gary Knight, John ... The New Realities by Cavusgil 3rd ED-'Ship ... International Business: The New Realities by Cavusgil 3rd ED-'Ship from USA' ; Item Number. 114676490383 ; Cover-Design : May Differ from Original Picture shown ... International Business: The New Realities ... International Business: the New Realities (3rd Edition) (Hardcover) by Gary ... International Business:

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