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A R T N O T E B O O K



FIFTH EDITION

BIOLOGY

Sylvia S. Mader

McGraw-Hill WCB McGraw-Hill

Boston, Massachusetts Burr Ridge, Illinois Dubuque, Iowa
Madison, Wisconsin New York, New York San Francisco, California St. Louis, Missouri

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LISBN 0-697-28182-5

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Printed in the United States of America

10 9 8 7 6 5 4 3

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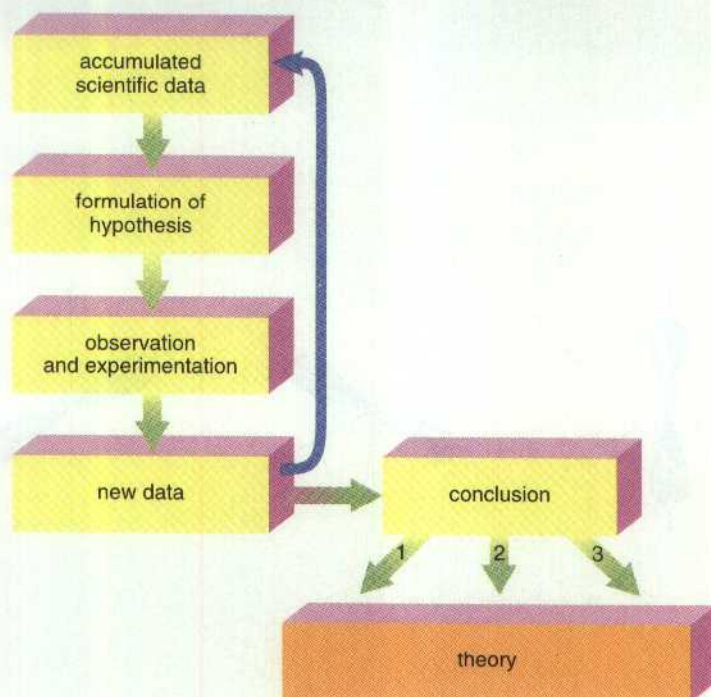
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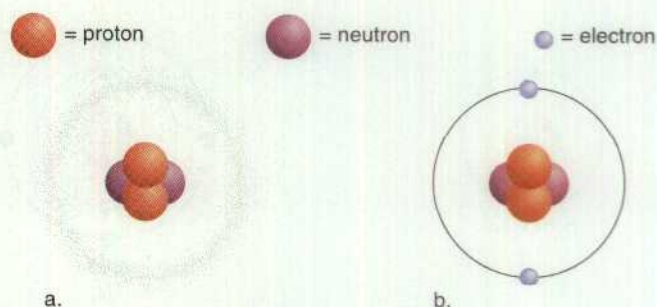
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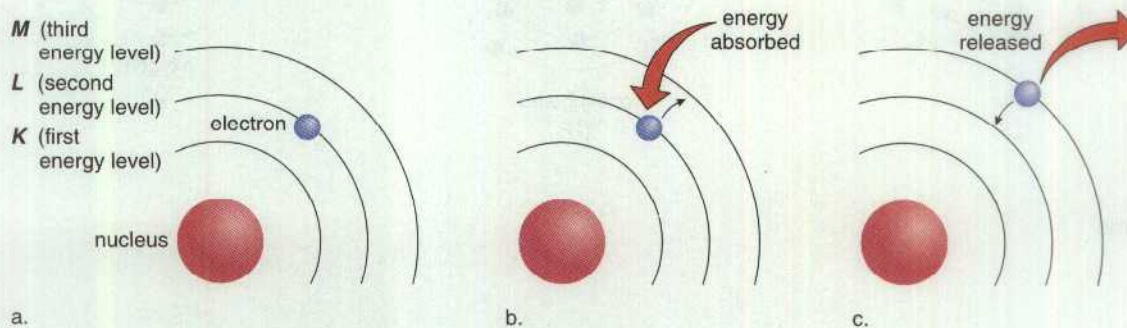
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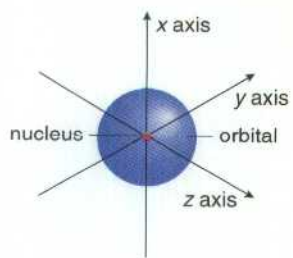
Scientific Method
Figure 2.1



Helium Atom
Figure 3.2

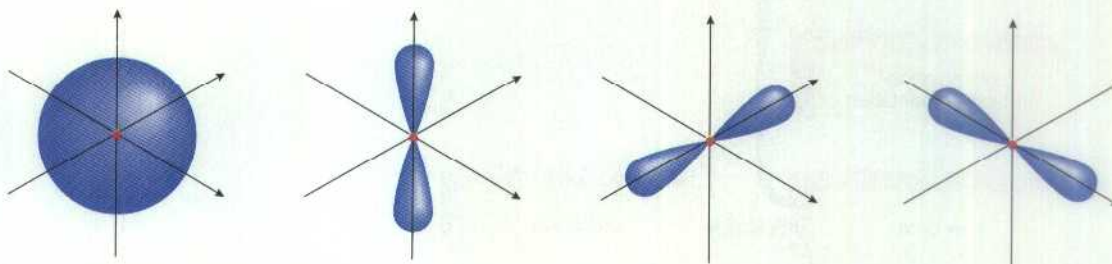


Electron Energy Levels
Figure 3.4

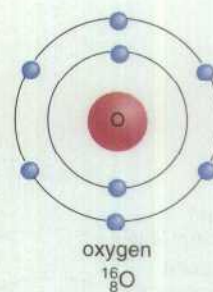
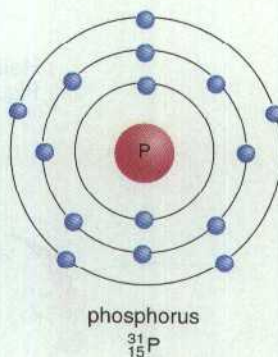
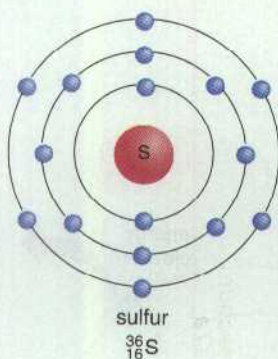
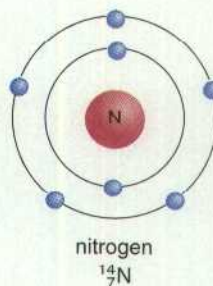
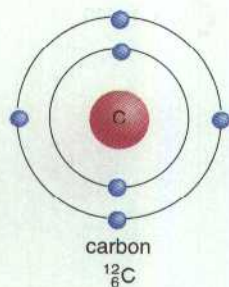


a. First energy level

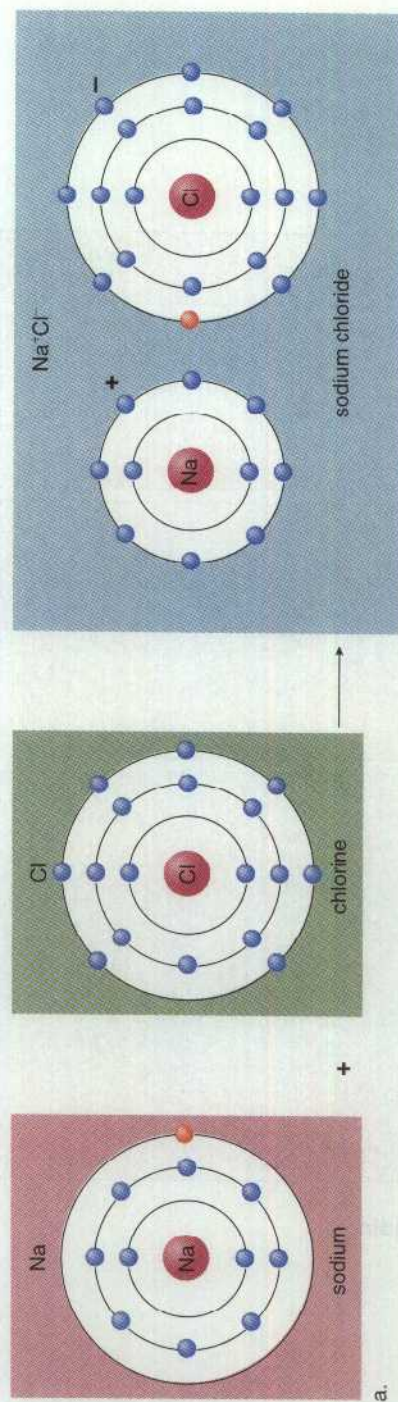
b. Second energy level



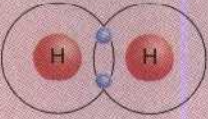
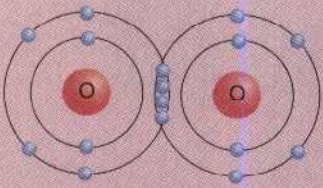
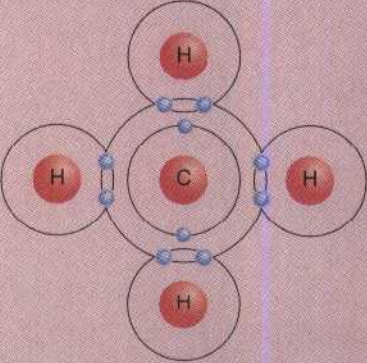
Electron Orbitals
Figure 3.5



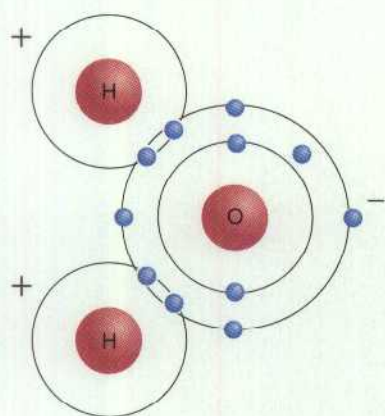
Bohr Models of Atoms
Figure 3.6



Ionic Reaction
Figure 3.7a

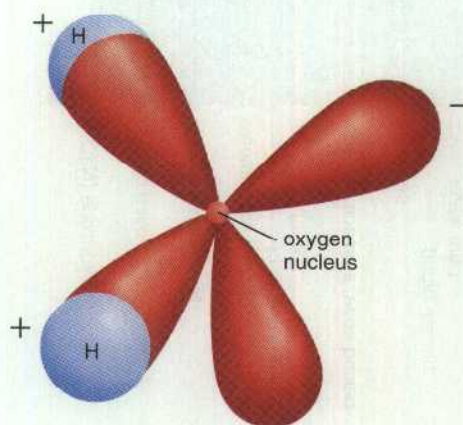
Electron Model	Structural Formula	Molecular Formula
a. 	H-H	H ₂
b. 	O=O	O ₂
c. 	$\begin{array}{c} \text{H} \\ \\ \text{H}-\text{C}-\text{H} \\ \\ \text{H} \end{array}$	CH ₄

Covalent Bonding
Figure 3.9

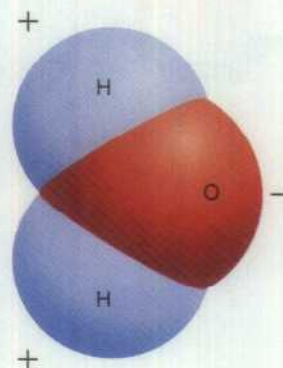


Electron Model

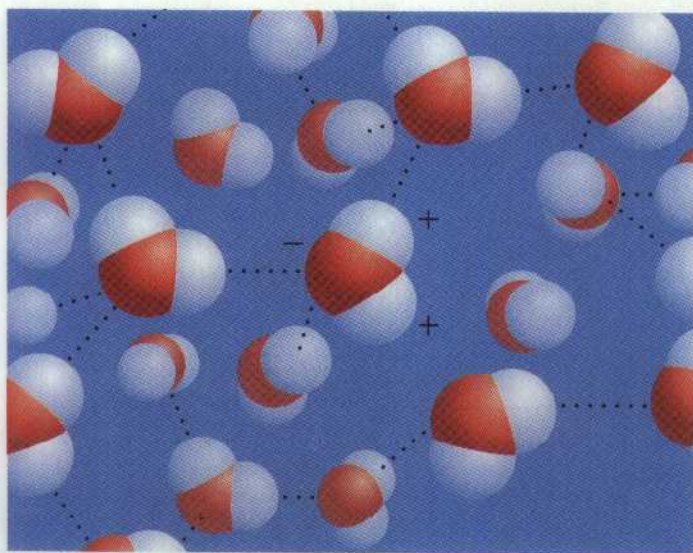
a.



Orbital Model

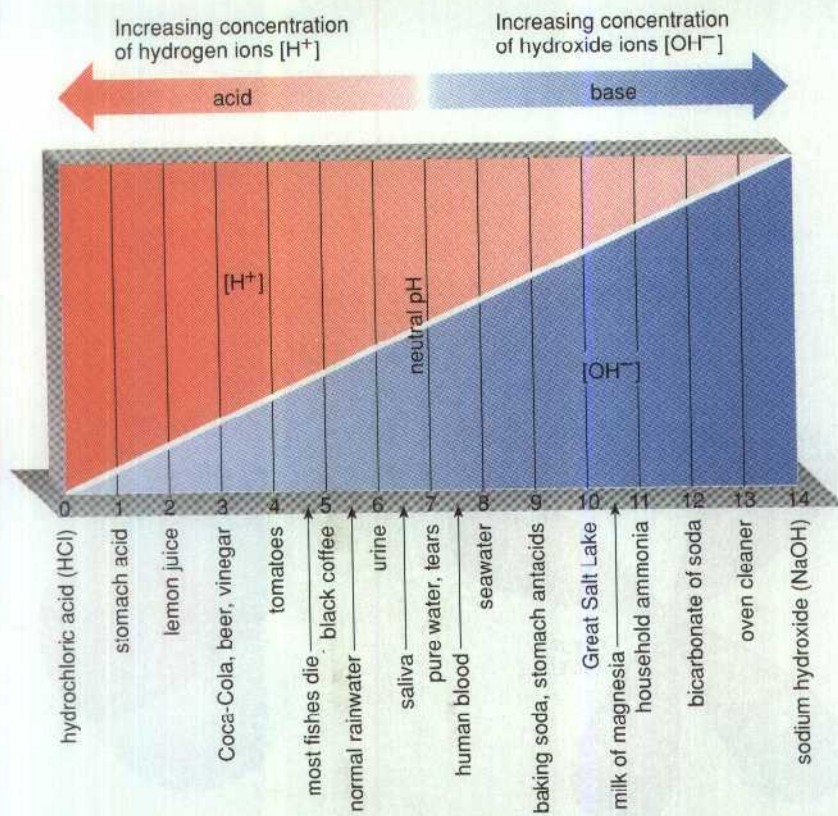


Space-Filling Model

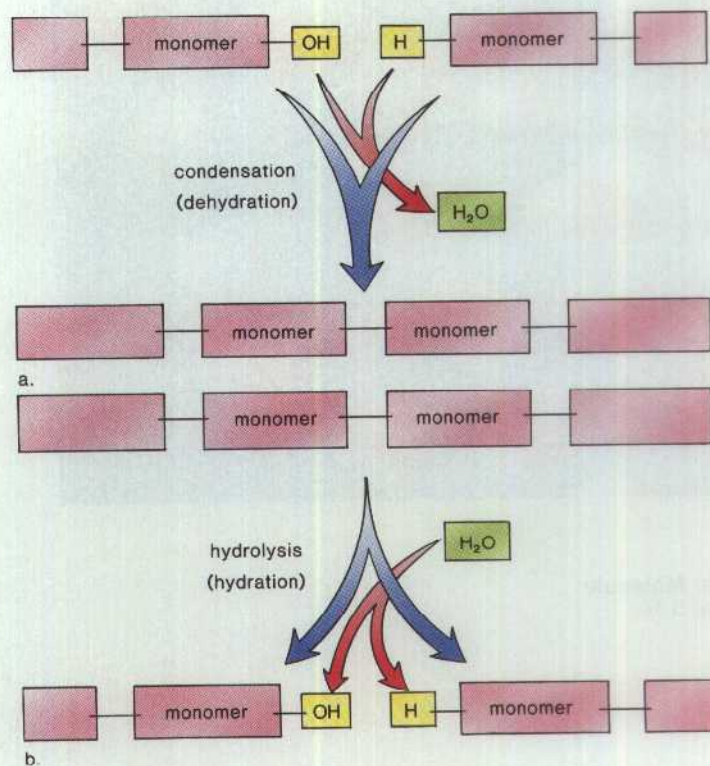


b.

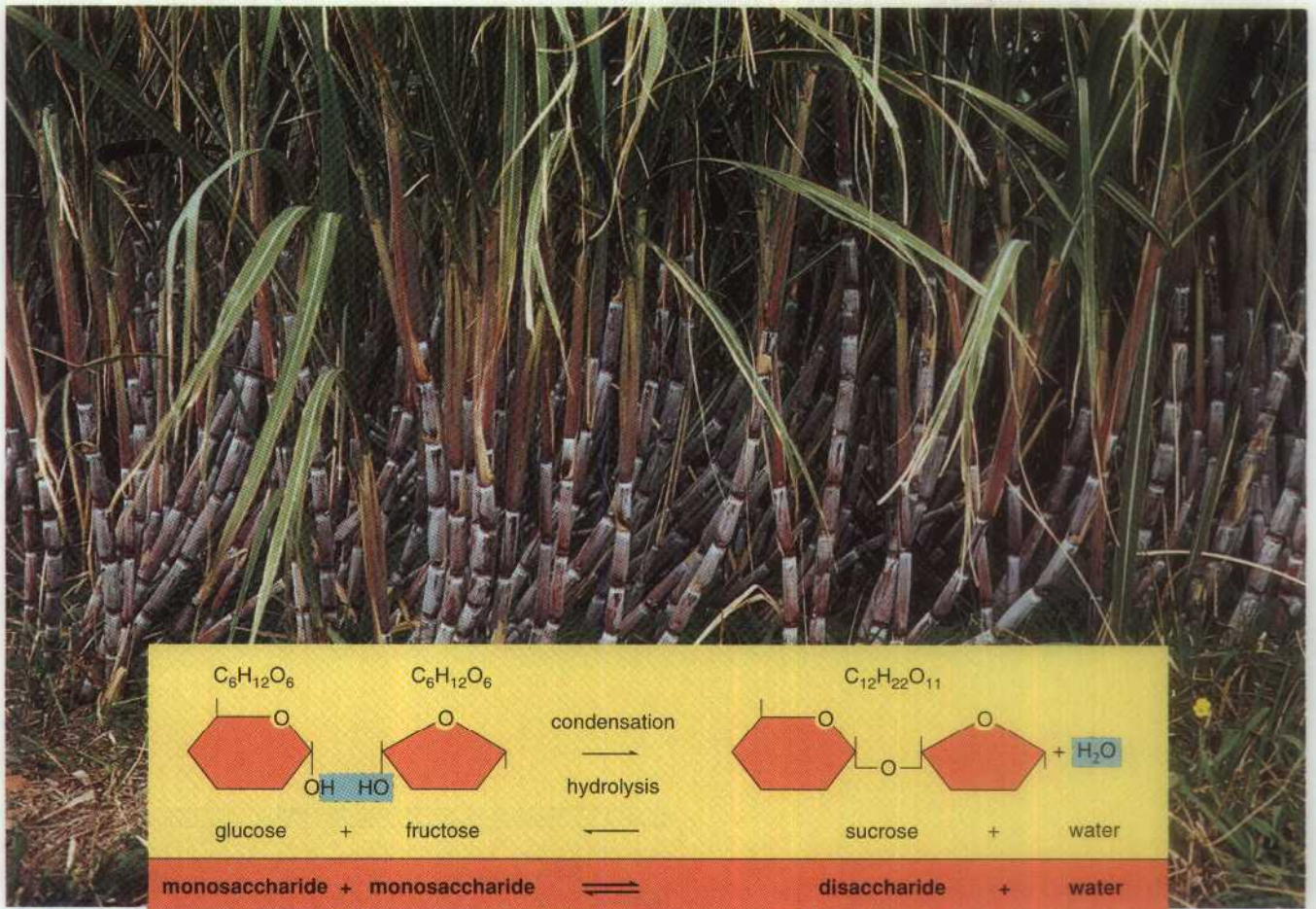
Water Molecule
Figure 3.10



pH Scale
Figure 3.14

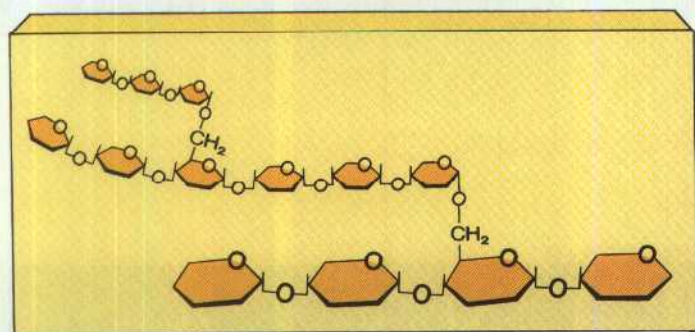


Synthesis and Breakdown of Polymers
Figure 4.4



b.

Disaccharide Formation and Breakdown
Figure 4.6

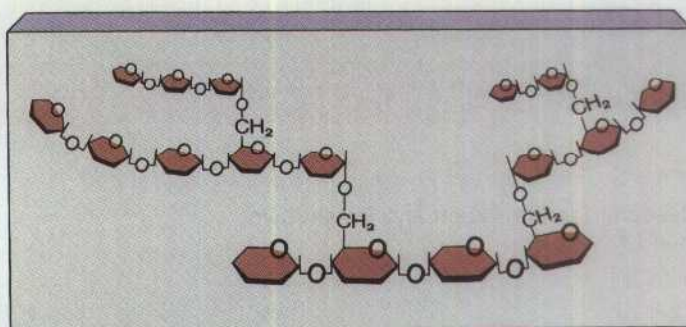


starch granule

cell wall

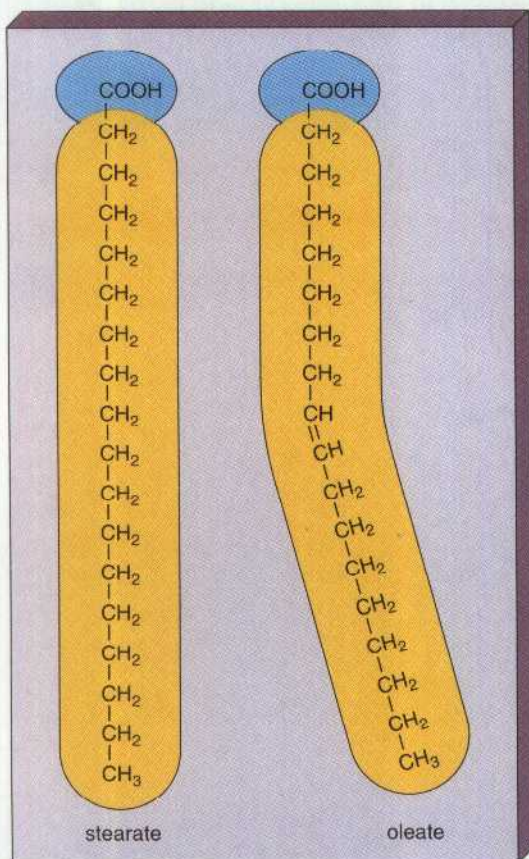
250 μm

a. Starch Structure
Figure 4.7

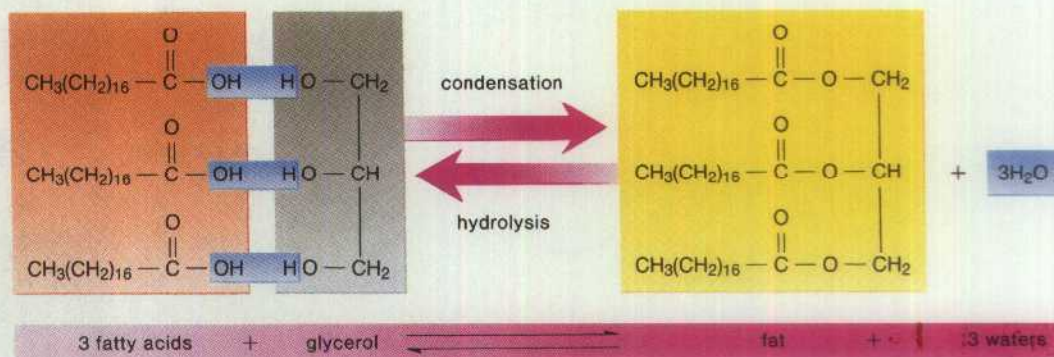


glycogen granules

b. Glycogen Structure
Figure 4.7b



Fatty Acid Structure
Figure 4.9



Formation of a Neutral Fat
Figure 4.10