

# Contents

<b>Part I Chemistry of Biological Compounds</b>	<b>1</b>
1. pH and Buffers	3
2. Carbohydrates	25
3. Lipids	57
4. Amino Acids and Proteins	73
5. Nucleic Acids and Their Components	111
6. Biochemical Energetics	137
7. Enzymes	157
8. Vitamins and Coenzymes	195
<b>Part II Metabolism of Energy-Yielding Compounds</b>	<b>245</b>
9. The Cell—Its Biochemical Organization	247
10. Anaerobic Carbohydrate Metabolism	279
11. Alternate Routes of Glucose Catabolism	317
12. The Tricarboxylic Acid Cycle	327
13. Lipid Metabolism	347
14. Electron Transport and Oxidative Phosphorylation	381
15. Photosynthesis	411
16. The Nitrogen and Sulfur Cycles	441
17. The Metabolism of Ammonia and Nitrogen-Containing Monomers	459

<b>Part III Metabolism of Informational Molecules</b>	<b>503</b>
18. Biosynthesis of Nucleic Acids	505
19. Biosynthesis of Proteins	527
20. Metabolic Regulation	557
<b>Appendix 1 Buffer and pH Problems</b>	<b>579</b>
<b>Appendix 2 Methods in Biochemistry</b>	<b>587</b>
<b>Index</b>	<b>I-1</b>