

LIST OF CHAPTERS

- 1 An Historical Review 3
- 2 Chemical Elements and Biogeochemical Cycles 15
- 3 Water as the Solvent of Life 25
- 4 Some Basic Aspects of the Chemistry of Life 41
- 5 Cells: Biological Units of Molecular Organization 51
- 6 Proteins I: Amino Acid Components and Structural Features 67
- 7 Proteins II: Determination of Amino Acid Sequences 87
- 8 Proteins III: Structure and Function 105
- 9 Proteins IV: Enzymes 129
- 10 B-Vitamins as Coenzymes 163
- 11 Carbohydrates 183

12	Lipids and Membranes	205
13	Nucleic Acids	225
14	Energy and Life	251
15	Anaerobic Synthesis of ATP (Glycolysis) and Pentose Phosphate Pathway	267
16	Aerobic Synthesis of ATP I: Tricarboxylic Acid Cycle	297
17	Aerobic Synthesis of ATP II: Electron Transport and Oxidative Phosphorylation	315
18	Photosynthesis: Sine Qua Non of Life	341
19	Lipid Biosynthesis	367
20	Nitrogen Metabolism	395
21	Molecular Insights into DNA	437
22	Genetic Information: Transcription and Its Control	473
23	Translation of Genetic Information	503
24	Hormones: Intercellular Chemical Messengers	537
25	Basic Aspects of Human Nutrition	567
26	Recombinant DNA Research	597
	Answers	625
	Index	635