

| | |
|--|-----|
| 1 Introduction | 1 |
| PART I ATOMS MOLECULES CELLS TISSUES | |
| 2 The nature of Matter and the Constituents of Living Material | 12 |
| 3 Cells and Tissues | 43 |
| 4 Fine Structure of Cells and Associated Functions | 64 |
| 5 Sources and utilization of Energy | 86 |
| PART II VERTEBRATES | |
| 6 External Protection, Support, and Movement | 106 |
| 7 Digestion | 126 |
| 8 Respiration | 145 |
| 9 Circulation | 156 |
| 10 Excretion | 186 |
| 11 Cell Division | 199 |
| 12 Reproduction | 216 |
| 13 Development | 229 |
| 14 Nervous Coordination | 256 |
| 15 Sensory Perception | 281 |
| 16 Chemical Coordination | 296 |
| PART III ANIMAL CLASSIFICATION | |
| 17 The Naming and Classification of Animals | 314 |
| PART IV INVERTEBRATES | |
| 18 The Protozoa | 350 |
| 19 The Mesozoa | 382 |
| 20 The Sponges | 386 |
| 21 The Radiates | 395 |
| 22 The Acoelomates | 416 |
| 23 The Pseudocoelomates | 436 |
| 24 The Lophophorates | 452 |
| 25 The Mollusks | 478 |
| 26 The Annelid Allies | 478 |
| 27 The Annelids | 483 |
| 28 The Arthropod Allies | 496 |
| 29 The Chelicerate Arthropods | 502 |
| 30 The Mandibulate Arthropods | 515 |
| 31 The Echinoderms | 550 |
| 32 The Minor Deuterostomes | 563 |
| 33 The Protochordates | 570 |

| | |
|---|-----|
| 34 Invertebrate Phylogeny | 576 |
| PART V BASIC AND UNIFYING BIOLOGICAL CONCEPTS | |
| 35 General Genetics | 586 |
| 36 Genetics: Further Aspects | 612 |
| 37 Molecular Genetics and Developmental Biology | 630 |
| 38 Evidences of Evolution | 655 |
| 39 Further Evidences of Evolution; Evolution of Man | 665 |
| 40 The Mechanism of Evolution; Origin of Life | 688 |
| 41 Animal Behavior | 707 |
| 42 Ecology | 730 |
| Glossary | 774 |
| Index | 793 |