

Contents

283
284
285
286
287
288
289

SO. The Electron—JAMES CLERK MAXWELL
Abbe's
1. The Electromagnetic Field—JAMES CLERK MAXWELL
2. The Quantum Hypothesis—MAX PLANCK
3. The Theory of Relativity—ALBERT EINSTEIN
4. Hydrogen Atom—Niels BOHR
5. The Compton Effect—ARTHUR COMPTON

Index

CHAPTER

PAGE

1. Introduction	1
2. Accelerated Motion—GALILEO GALILEI	13
3. Boyle's Law: Pressure-volume Relations in a Gas— ROBERT BOYLE	36
4. The Laws of Motion—ISAAC NEWTON	42
5. The Laws of Electric and Magnetic Force—CHARLES COULOMB	59
6. The Law of Gravitation—HENRY CAVENDISH	75
7. The Interference of Light—THOMAS YOUNG	93
8. The Diffraction of Light—AUGUSTIN FRESNEL	108
9. Electromagnetism—HANS CHRISTIAN OERSTED	121
10. Electromagnetic Induction and Laws of Electrolysis— MICHAEL FARADAY	128
11. Lenz's Law—HEINRICH LENZ	159
12. The Mechanical Equivalent of Heat—JAMES JOULE	166
13. Electromagnetic Waves—HEINRICH HERTZ	184
14. X-Rays—WILHELM K. ROENTGEN	198
15. Natural Radioactivity—HENRI BECQUEREL	210
16. The Electron—J. J. THOMSON	216
17. The Photoelectric Effect—ALBERT EINSTEIN	232
18. The Elementary Electric Charge—ROBERT A. MILLIKAN	238
19. Induced Transmutation—ERNEST RUTHERFORD	250

20. The Neutron—JAMES CHADWICK	266
Appendix	281
1. The Electromagnetic Field—JAMES CLERK MAXWELL	283
2. The Quantum Hypothesis—MAX PLANCK	301
3. The Theory of Relativity—ALBERT EINSTEIN	315
4. The Hydrogen Atom—NIELS BOHR	329
5. The Compton Effect—ARTHUR COMPTON	348
Index	359