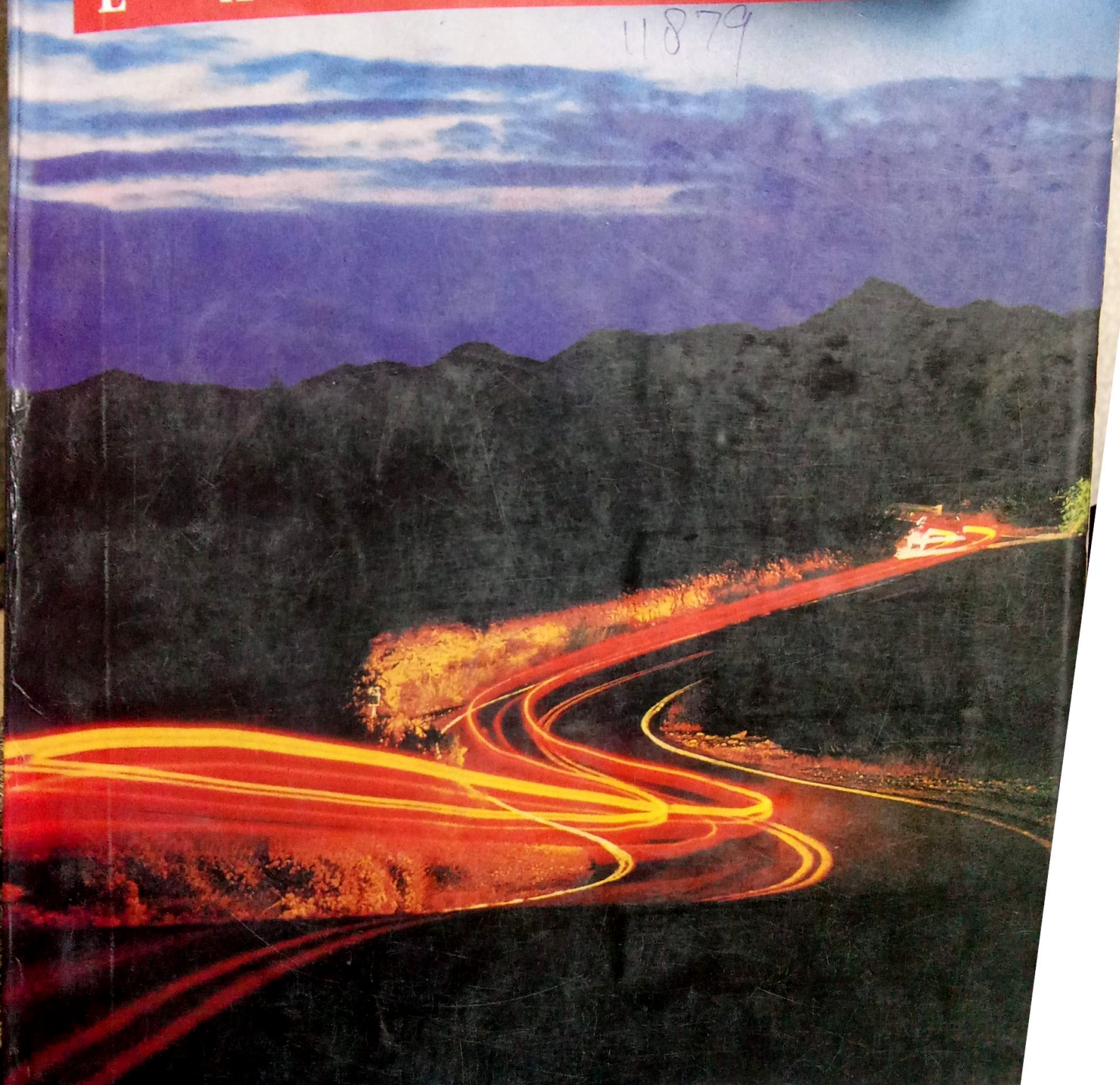


FOURTH EDITION
FUNDAMENTALS OF PHYSICS

E X T E N D E D

11879



DAVID HALLIDAY • ROBERT RESNICK • JEARL WALKER

BRIEF CONTENTS

CHAPTER 1 MEASUREMENT 1	CHAPTER 13 EQUILIBRIUM AND ELASTICITY 353
CHAPTER 2 MOTION ALONG A STRAIGHT LINE 15	CHAPTER 14 OSCILLATIONS 381
CHAPTER 3 VECTORS 45	CHAPTER 15 GRAVITATION 411
CHAPTER 4 MOTION IN TWO AND THREE DIMENSIONS 65	CHAPTER 16 FLUIDS 443
CHAPTER 5 FORCE AND MOTION—I 97	CHAPTER 17 WAVES—I 475
CHAPTER 6 FORCE AND MOTION—II 131	CHAPTER 18 WAVES—II 503
CHAPTER 7 WORK AND KINETIC ENERGY 159	CHAPTER 19 TEMPERATURE 533
CHAPTER 8 CONSERVATION OF ENERGY 187	CHAPTER 20 HEAT AND THE FIRST LAW OF THERMODYNAMICS 551
CHAPTER 9 SYSTEMS OF PARTICLES 225	CHAPTER 21 THE KINETIC THEORY OF GASES 575
CHAPTER 10 COLLISIONS 255	CHAPTER 22 ENTROPY AND THE SECOND LAW OF THERMODYNAMICS 605
CHAPTER 11 ROTATION 285	CHAPTER 23 ELECTRIC CHARGE 635
CHAPTER 12 ROLLING, TORQUE, AND ANGULAR MOMENTUM 319	

CHAPTER 24	
THE ELECTRIC FIELD	653
CHAPTER 25	
GAUSS' LAW	679
CHAPTER 26	
ELECTRIC POTENTIAL	707
CHAPTER 27	
CAPACITANCE	739
CHAPTER 28	
CURRENT AND RESISTANCE	765
CHAPTER 29	
CIRCUITS	789
CHAPTER 30	
THE MAGNETIC FIELD	817
CHAPTER 31	
AMPERE'S LAW	847
CHAPTER 32	
FARADAY'S LAW OF INDUCTION	873
CHAPTER 33	
INDUCTANCE	899
CHAPTER 34	
MAGNETISM AND MATTER	919
CHAPTER 35	
ELECTROMAGNETIC OSCILLATIONS	939
CHAPTER 36	
ALTERNATING CURRENTS	955
CHAPTER 37	
MAXWELL'S EQUATIONS	975

CHAPTER 38	
ELECTROMAGNETIC WAVES	987
CHAPTER 39	
GEOMETRICAL OPTICS	1011
CHAPTER 40	
INTERFERENCE	1049
CHAPTER 41	
DIFFRACTION	1075
CHAPTER 42	
RELATIVITY	1105
CHAPTER 43	
QUANTUM PHYSICS—I	1131
CHAPTER 44	
QUANTUM PHYSICS—II	1155
CHAPTER 45	
ALL ABOUT ATOMS	1179
CHAPTER 46	
CONDUCTION OF ELECTRICITY IN SOLIDS	1209
CHAPTER 47	
NUCLEAR PHYSICS	1231
CHAPTER 48	
ENERGY FROM THE NUCLEUS	
CHAPTER 49	
QUARKS, LEPTONS, AND THE BIG BANG	1283
APPENDICES	
ANSWERS TO ODD-NUMBERED EXERCISES AND PROBLEMS	A