1. Record Nr. UNINA9910785807603321

Autore	Ladiwala G. D
Titolo	Physics-II [[electronic resource]] : theory and experiments / / G.D. Ladiwala, S.S. Sharma
Pubbl/distr/stampa	New Delhi, : New Age International Publishers, 2011
ISBN	81-224-3493-2
Descrizione fisica	1 online resource (327 p.)
Altri autori (Persone)	SharmaS. S
Soggetti	Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Cover ""; ""Preface ""; ""Chapter 1 Applications of Schrodinger's Equation and Band Theory ""; ""1.1 Introduction ""; ""1.2 The Particle in a Three Dimensional Box ""; ""1.2.1 Degeneracy of Energy Levels""; ""1.3 The Potential Barrier (Tunnel effect) ""; ""1.4 Theory of a-Decay ""; ""1.5 Sommerfeld's Free Electron Gas Model of Solids (Metals) ""; ""1.5.1 Postulates of Sommerfeld Model""; ""1.5.2 Density of Energy States and Fermi Energy""; ""1.5.3 The Fermi Distribution Function and Effect of Temperature on it""; ""1.5.4 Mean Energy of Electron Gas at Absolute Zero"" ""1.6 Band Theory of Solids """"""1.6.1 Classification of Solids""; ""Questions and Problems ""; ""Chapter 2 Laser and Holography ""; ""2.1 Laser ""; ""2.1.1 Comparison of Laser Source with Ordinary Source""; ""2.2 Absorption, Spontaneous Emission and Induced Emission of Radiation ""; ""2.3 Principle of Laser ""; ""2.3.1 Pumping and Population Inversion""; ""2.3.2 Cavity Resonators and Shaping of a Beam (Operation of Laser)""; ""2.4 The Helium-Neon Laser ""; ""2.5 Semiconductor Laser ""; ""2.5.1 Introduction""; ""2.5.2 Theory of Semiconductor""; ""2.5.3 Homojunction Laser"" ""2.5.4 Construction""""""2.5.5 Principle of Operation""; ""2.5.6 Heterojunction Laser""; ""2.5.7 Double Heterostructure Laser""; ""2.6 Applications of Laser ""; ""2.7 Characteristics of The Laser Light ""; ""2.8 Q-Switching ""; ""2.8.1 Principle of Q-Switching""; ""2.8.2 Evolution of a Q-Switched Laser Pulse""; ""2.8.3 Types of Q-Switching""; ""2.8.4 Applications""; ""2.9 Mode Locking ""; ""2.9.1 Longitudinal Modes of the

Laser Cavity""; ""2.9.2 Mode Locking Theory""; ""2.9.3 Mode-Locking Methods""; ""2.9.4 Application of Mode Locked Laser Output""; ""2.10 Introduction ""
""2.11 The Basic Principle of Holography """"""2.11.1 Obtaining a Hologram (Construction of Hologram""; ""2.11.2 Viewing the object (Reconstruction of an image from Hologram)""; ""2.12 Types of Holograms ""; ""2.13 Holography Versus Photography ""; ""2.14 Basic Requirements of a Holographic Laboratory ""; ""2.15 Some Special Features of a Hologram ""; ""2.16 Applications of Holography ""; ""2.16.1 Holographic Interferometry""; ""2.16.2 Holographic Microscopy""; ""2.16.3 Acoustic Holography""; ""Questions and Problems ""; ""Chapter 3 Coherence and Optical Fibres ""; ""3.1 Coherence ""
""3.1.1 Spatial Coherence""""""3.1.2 Temporal Coherence""; ""3.2 Detailed Concept of Temporal and Spatial Coherence ""; ""3.2.1 Temporal Coherence and Monochromaticity of the Source""; ""3.2.2 Spatial Coherence and Size of the Source""; ""3.3 Visibility as a Measure of Coherence ""; ""3.4 Optical Fibre ""; ""3.4.1 Importance of Optical Fibres""; ""3.4.2 Structure of Optical Fibre""; ""3.5 Propagation of Light Waves Through Fibre ""; ""3.5.1 Mechanism""; ""3.5.2 Conditions""; ""3.6 Types of Optical Fibre ""; ""3.6.1 Step Index (SI) Optical Fibre""; ""3.6.2 Graded Index (GRIN) Optical Fibre""
""3.7 Acceptance Angle and Acceptance Cone of A Step Index Fibre ""