

About Pearson

Pearson is the world's learning company, with presence across 70 countries worldwide. Our unique insights and world-class expertise comes from a long history of working closely with renowned teachers, authors and thought leaders, as a result of which, we have emerged as the preferred choice for millions of teachers and learners across the world.

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» Pharmacy.....2.1-2.60



Nursing

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Nursing Foundations

Kozier & Erb's Fundamentals of Nursing

Audrey Berman, Shirlee J. Snyder, GERALYN FRANDSEN

Pages: 1624

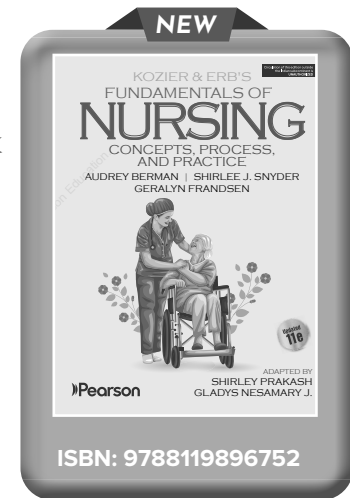
Year: 2025



4 Colour Edition

About the Book

Pearson introduces the updated eleventh edition of one of its most revered text for nursing foundations—Kozier & Erb's Fundamentals of Nursing—a gold standard that helps students embark on their careers in nursing. For years, this impeccable text set the foundation for nursing excellence with its clear and approachable writing style. The book prepare readers to become effective nurses with its balanced coverage of the key concepts of contemporary nursing, as well as the latest nursing evidence, standards, and competencies. The book also includes legal aspects of nursing in India; INC standards of care; and code of ethics and code of professional conduct for nurses in India. Health care delivery, community nursing care and home care in the Indian scenario have also been discussed in detail.



Features

- New! Coverage of Safety and First aid and Biomedical waste management
- Updated! Over 445 chapter review questions based on frequently asked questions in university examinations
- Expanded! QSEN competencies and specified expectations appear throughout the text and guide students to learn and maintain safety and quality in their provision of nursing care
- Updated! Evidence-Based Practice boxes highlight relevant research and implications for nursing care, guided by current nursing literature
- Updated! Enhanced photo program shows procedural steps and the latest equipment.
- Expanded! Increasing emphasis on aging, wellness, safety, and home- and community-based care is reflected within the text
- Home Care Assessment—focuses on educating the client, family, and community to recognize what is needed for care at home
- Safety Alerts—correlate to the Patient Safety Goals and identify other crucial safety issues

Contents

UNIT 1: THE NATURE OF NURSING

1. Historical and Contemporary Nursing Practice
2. Evidence-Based Practice and Research in Nursing
3. Legal Aspects of Nursing
4. Values, Ethics, and Advocacy

UNIT 2: CONTEMPORARY HEALTH CARE

5. Healthcare Delivery Systems
6. Community Nursing and Care Continuity
7. Home Health Nursing Care
8. Electronic Health Records and Information Technology

UNIT 3: THE NURSING PROCESS

9. Critical Thinking and Clinical Reasoning
10. Assessing
11. Diagnosing
12. Planning
13. Implementing and Evaluating
14. Documenting and Reporting

UNIT 4: Integral Aspects of Nursing

15. Caring
16. Communicating

17. Teaching

18. Leading, Managing, and Delegating

UNIT 5: HEALTH BELIEFS AND PRACTICES

19. Health Promotion
20. Health, Wellness, and Illness
21. Culturally Responsive Nursing Care
22. Complementary and Alternative Healing Modalities

UNIT 6: LIFESPAN DEVELOPMENT

23. Concepts of Growth and Development
24. Promoting Health from Conception Through Adolescence
25. Promoting Health in Young and Middle-Aged Adults
26. Promoting Health in Older Adults
27. Promoting Family Health

UNIT 7: ASSESSING HEALTH

28. Vital Signs
29. Health Assessment
30. Pain Assessment and Management

UNIT 8: INTEGRAL COMPONENTS OF CLIENT CARE

31. Asepsis and Infection Prevention

32. Safety
33. Hygiene
34. Diagnostic Testing
35. Medication Administration
36. Skin Integrity and Wound Care
37. Perioperative Nursing

UNIT 9: PROMOTING PSYCHOSOCIAL HEALTH

38. Sensory Perception
39. Self-Concept
40. Sexuality
41. Spirituality
42. Stress and Coping

43. Loss, Grieving, and Death

UNIT 10: PROMOTING PHYSIOLOGIC HEALTH

44. Activity and Exercise
45. Sleep
46. Nutrition
47. Urinary Elimination
48. Fecal Elimination
49. Oxygenation
50. Circulation
51. Fluid, Electrolyte, and Acid–Base Balance
- Appendix A Answers to Test Your Knowledge
- Appendix B Review Questions

About the Author(s)

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Skills in Clinical Nursing, 8e

Audrey Berman, Shirlee J. Snyder

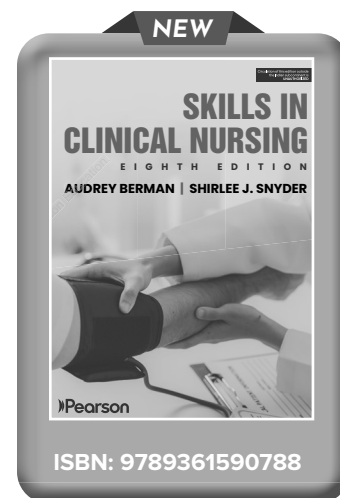
Pages: 860

Year: 2025



About the Book

Skills in Clinical Nursing, Eighth Edition brings together the 166 most important skills performed by nurses, including all common variations, organized from the simplest to the most complex. This edition has been revised, restructured, and updated to reflect current practice, responding to extensive feedback from clinical nurses, market surveys, and the authors' own teaching and practice experience. Each chapter contains concise introductory material, placing skills in the context of anatomy, physiology, and pathophysiology, and clearly explaining their purpose and rationale. Each skill is then presented in exceptional step-by-step detail, with 800+ illustrations. Skills coverage is complemented by critical-thinking insights on using assessment data, and essential guidance on appropriate delegation to unlicensed assistive personnel (UAP).



Features

- Provide a clear, approachable introduction. Consistency and approachability are key for new nursing students. A very clear, approachable writing style makes this book popular with students and instructors.
- Step-by-step instructions are organized into a coherent, easy-to-understand nursing process framework.
- NEW: QSEN competencies and specific expectations in special QSEN features will guide students to learn and maintain safety and quality in their provision of nursing care by providing specific examples of how they relate to everyday practice.
- NEW: Help students succeed in any care facility or environment. Ambulatory and Community Settings features provide information about performing skills in diverse healthcare facilities and settings.

Contents

UNIT 1 Introduction

1. Foundational Skills

UNIT 2 Health Assessment

2. Vital Signs
3. Health Assessment
4. Diagnostic Testing

UNIT 3 Assisting with Client Hygiene and Comfort

5. Client Hygiene
6. Bed-Making
7. Infection Prevention
8. Heat and Cold Measures
9. Pain Management

UNIT 4 Mobility and Safety

10. Positioning the Client
11. Mobilizing the Client
12. Fall Prevention and Restraints
13. Maintaining Joint Mobility

UNIT 5 Medication Administration

14. Drug Calculations
15. Administering Oral and Enteral Medications
16. Administering Topical Medications
17. Administering Parenteral Medications

18. Administering Intravenous Therapy

UNIT 6 Nutrition and Elimination

19. Feeding Clients
20. Assisting with Urinary Elimination
21. Assisting with Fecal Elimination
22. Caring for the Client with Peritoneal Dialysis

UNIT 7 Circulatory and Ventilatory Support

23. Promoting Circulation
24. Breathing Exercises
25. Oxygen Therapy
26. Suctioning
27. Caring for the Client with a Tracheostomy
28. Assisting with Mechanical Ventilation
29. Caring for the Client with Chest Tube Drainage
30. Administering Emergency Measures to the Hospitalized Client

UNIT 8 Wounds and Injury Care

31. Performing Wound and Pressure Ulcer Care
32. Orthopedic Care
33. Performing Perioperative Care
34. End-of-Life Care

About the Author(s)

Audrey Berman, Nevada State College

Shirlee J. Snyder, Nevada State College

Nursing Foundations, Volume-I

Shirley Prakash, Gladys J.

Pages: 744

Year: 2025



About the Book

Building confident, compassionate, and skilled nurses from Day One This carefully crafted textbook brings the revised Indian Nursing Council (INC) BSc Nursing syllabus to life, turning foundational nursing concepts into clear, memorable, and practical knowledge. Spanning 14 carefully structured chapters, it guides students from the history and ethics of nursing to essential hands-on skills like health assessment, infection control, vital signs, patient safety, mobility, education, and first aid. Written in crisp, student-friendly language, each chapter combines the science of nursing with real-world application. Tables, colour illustrations, photographs, and step-by-step procedures simplify complex topics, while evidence-based insights and critical thinking prompts encourage deeper understanding. With its exam-oriented structure, engaging pedagogy, and visual richness, Nursing Foundations – I is your roadmap from core concepts to competent, compassionate care.

Features

- Strictly aligned to the latest INC BSc Nursing syllabus
- 400+ review questions and MCQs for self-assessment
- 400+ colour illustrations and real-life photographs
- Learning objectives, chapter highlights, and quick-reference information boxes
- Step-by-step procedures with updated best practices
- Designed for easy recall, practical application, and exam readiness

Contents

Unit I Health, Wellness, Illness, Nature of Nursing

1. Introduction to Health and Illness
2. Health Care Delivery Systems – Introduction of Basic Concepts and Meanings
3. History of Nursing and Nursing as a Profession

Unit II Communication, Documentation and Reporting

4. Communication and Nurse Patient Relationship
5. Documentation and Reporting
6. Vital Signs
7. Equipment and Linen

Unit III Components of Patient Care

8. Introduction to Infection Control in Clinical Setting
9. Comfort, Rest & Sleep and Pain
10. Promoting Safety in Health Care Environment
11. Hospital Admission, Discharge and Transfer
12. Mobility and Immobility
13. Patient Education

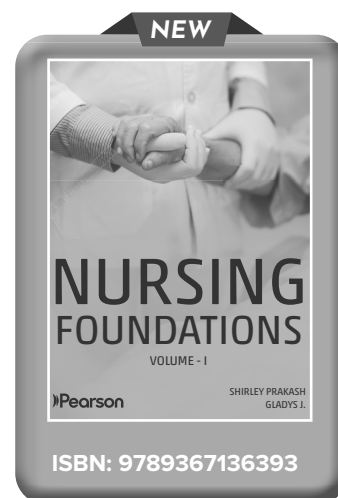
Unit IV First Aid and Emergencies

14. First Aid

About the Author(s)

Shirley Prakash, Principal, Westfort College of Nursing, Kerala

J Gladys, Vice Principal, Westfort College of Nursing, Kerala



Nursing Theories : The Base for Professional Nursing Practice, 6/e

Julia B. George



Pages: 704

Year: 2019

About the Book

Nursing Theories: The Base for Professional Nursing Practice, Sixth Edition, is designed to help nurses apply concepts and theories to practice. This useful resource considers the ideas of well-known nursing theorists and relates the work of each to the clinical nursing practice. Chapters are organized to relate the theorist's work to the nursing metaparadigm, clinical nursing practice, characteristics of a theory, and strengths and limitations of the theory.

Features

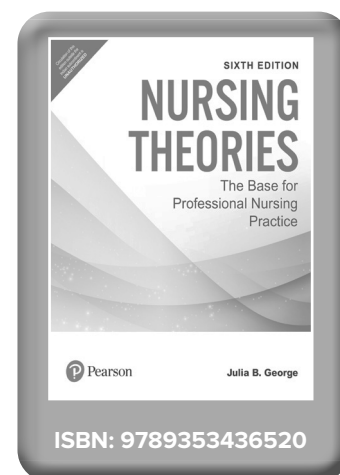
- **An emphasis on the use of nursing theory in clinical practice**—applies theoretical content to every day practice making the text more interactive and practical for students.
- **Chapter on interdisciplinary practice**—demonstrates to students how nursing theory is related to widely used collaborative practice models.
- **Published examples of theory strategies**—help students visualize how theoretical strategies are developed and implemented.
- **Strengths and weaknesses are identified for each model/theory**—teaches students how to critically analyze nursing theories.
- **The application of abstract models and theories to nursing practice situations**—clarifies complex content that is often difficult to conceptualize.
- **International contingent of theorists**—reflects the diverse global aspects of nursing practice.

Contents

1. An Introduction to Nursing Theory
2. Nursing Theory and Clinical Practice
3. Environmental Model: Florence Nightingale
4. Interpersonal Relations in Nursing: Hildegard E. Peplau
5. Definition and Components of Nursing: Virginia Henderson
6. Self-Care Deficit Nursing Theory: Dorothea Elizabeth Orem
7. Behavioral System Model: Dorothy E. Johnson
8. Nursing Process Discipline: Ida Jean Orlando
9. Other Theories from the 1950s and 1960s
10. The Conservation Principles: A Model For Health: Myra Estrin Levine
11. Conceptual System and Theory of Goal Attainment: Imogene M. King
12. Science of Unitary Human Beings: Martha E. Rogers
13. The Roy Adaptation Model: Sister Callista Roy
14. The Neuman Systems Model: Betty Neuman
15. Other Theories from the 1970s
16. Theory of Culture Care Diversity and Universality: Madeleine M. Leininger
17. Health as Expanding Consciousness: Margaret A. Newman
18. Theory of Transpersonal Caring: Jean Watson
19. Human Becoming School of Thought: Rosemarie Rizzo Parse
20. The Modeling and Role-Modeling Theory: Helen Lorraine (Cook) Erickson, Evelyn M. Tomlin, and Mary Ann P. Swain
21. Health Promotion Model: Nola J. Pender
22. Philosophy of Caring and Expert Nursing Practice: Patricia Benner
23. Other Theories of the 1980s
24. Other Nursing Theories from the 1990s

About the Author

Julia B. George, California State University, Fullerton



English for Nurses

Nitin Bhatnagar

Pages: 128

Year: 2012



About the Book

Basic Approach

This book addresses the need for nurses to communicate effectively in English. Combining the essentials of communication with language learning, it provides all the necessary skills for professionals in healthcare. English for Nurses puts equal emphasis on all the four aspects of learning the language—listening, speaking, reading and writing through a variety of exercises and assessment modules. It provides plenty of practice in functional grammar and also for pronunciation and fluency in speaking.

Features

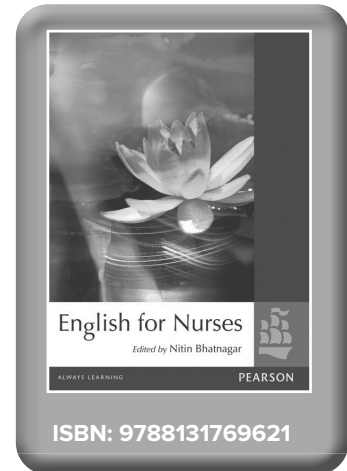
- Reading Comprehension: Objective and Subjective Questions
- Vocabulary and glossary
- Grammar exercises that are graded
- Functional grammar based on practical situations that a nurse faces.
- Common problems of pronunciation and speaking skills have been addressed
- Writing skills based on the needs of the nurses have been addressed

Contents

1. Edith Cavell: And Bravely Fought the Nurse
 2. The Story of a British Nurse in India (Margaret Ledger)
 3. A doctor for all seasons: The story of Noshir H Antia (Kavita Nambsian)
 4. Aarohi: Ascent in Healthcare
 5. Communication in healthcare: The perspective of a Nurse
 6. Private and Public Partnership in Healthcare (Bharathi Ghanshyam)
 7. Managing Pain
 8. The story of a British Nurse (Stress in Nursing, Pratibha P. Kane; from a journal)
 9. The Quiet Soldiers of Compassion: Prakash and Mandakini Amte
 10. The Story of a Caribbean Nurse
- Appendix: Report Writing

About the Author

Nitin Bhatnagar is Professor and Head, Institute of Applied Sciences and Humanities, GLA University, Mathura.



Microbiology

Applied Microbiology and Infection Control including Safety

V. Deepa Parvathi, R. Sumitha

Pages: 488

Year: 2025



About the Book

Applied Microbiology and Infection Control including Safety approaches, in a systematic way, the portals and transmission of pathogenic microorganisms and their clinical indications on the human body. Designed to fully address the needs of nursing students taking up a curriculum on microbiology, infection control and safety, the book conforms to the syllabus prescribed by the Indian Nursing Council. With ample review questions and multiple-choice questions to enable easy recapitulation and vibrant color illustrations to appeal to the visual learner, this book presents the theoretical concepts of the subject from a professional nursing perspective.

Features

- Systematic approach towards learning the fundamentals of sources, portals and transmission of infection of pathogenic organisms
- Exhaustive coverage of asepsis, sterilization and disinfection
- Precise information on PPE, Patient safety indicators, and International Patient Safety Goals to educate the nursing personnel adequately on international standards
- Focus on hospital acquired infections, hospital safety measures and biomedical waste management
- Concise and easy-to-follow presentation of techniques for collection and handling of specimens, immunization and vaccination

Contents

SECTION A

Unit 1: Introduction

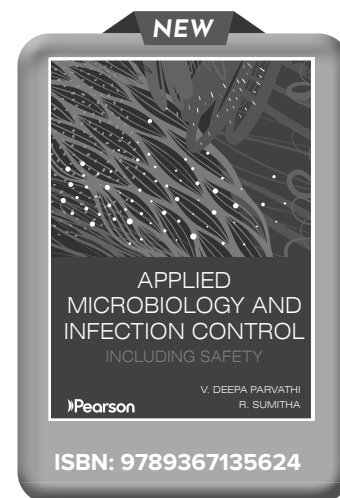
1. Importance of Microbiology and Its Relevance to Nursing
2. Historical Perspective
3. Terminologies
4. Principles of Microbiology

Unit 2: General Characteristics of Microbes

5. Structure and Classification of Microbes
6. Morphology—Size and Forms
7. Motility
8. Colonization, Growth and Nutrition of Microbes, Temperature, Moisture, Blood and Body Fluids
9. Good Laboratory Practices
10. Types of Staining
11. Culture and Media Preparation
12. Pure Culture Techniques

Unit 3: Pathogenic organisms

13. Sources, Portals, and Transmission of Infections
14. Bacteria
15. Viruses
16. Fungi: Superficial and Deep Mycoses



17. Parasites
18. Rodents and Vectors

Unit 4: Immunology

19. Immunity—Classification
20. Antigen and Antibody Reaction
21. Hypersensitivity Reaction
22. Serological Tests
23. Immunoglobulins
24. Vaccines and Immunization Schedule

SECTION B

1. HAI (Hospital Acquired Infection)
2. Isolation, Precaution and use of Personal Protective Equipment (PPE)
3. H and Hygiene
4. Disinfection and Sterilization
5. Principle of Specimen Collection
6. Biomedical Waste Management
7. Antibiotic Stewardship
8. Patients Safety Indicators
9. IPSG (International Patient Safety Goals)
10. Safety Protocols
11. Employee Safety Indicators

About the Author(s)

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R. Sumitha, Faculty of Biomedical Sciences and Technology, Department of Biomedical Sciences, Sri Ramachandra Institute of Higher Education and Research (Deemed to be University) Chennai, India

Medical Surgical Nursing

Gerontological Nursing, 4/e

Patricia A. Tabloski

Pages: 792

Year: 2024



About the Book

Gerontological Nursing is a comprehensive, research-based guide to the nursing care of older adults. It addresses normal and pathophysiological changes of aging, as well as psychosocial, cultural and public health influences. With a focus on “adding life to years,” not just extending life, the text explores evidence and best practices that promote safe and effective assessment, diagnosis and outcomes. The 4th Edition provides new evidence and standards affecting the care of aging populations. New practice opportunities help students respond to complex patient-care scenarios and prepare for success on the NCLEX-RN® exam.

Features

- Normal changes and common diseases (acute and chronic) of aging are covered in clinical chapters, as a basis for nursing assessment and care.
- Complementary and alternative therapies, and how they interact with more traditional therapies, are another point of focus.
- Best Practices feature presents an assessment instrument, protocol or nursing intervention identified as the best course of care for an older patient with a given health problem.
- Ethical Dilemma critical-thinking questions now follow case studies to help students apply clinical reasoning to the scenarios they may encounter in the care of older patients.
- American Geriatrics Society Beers Criteria for potentially inappropriate medication use in older adults, plus related guidelines, are covered in a new appendix. Excellent Pedagogy
- Nursing care plans
- Case studies
- Evidence-based practice guidelines
- Patient-family teaching guidelines
- Healthy-Aging Tips
- NCLEX®-style multiple-choice review questions

Contents

PART 1: Foundations of Nursing Practice

1. Principles of Gerontology
2. Contemporary Gerontological Nursing
3. Principles of Geriatrics

PART 2: Challenges of Aging and the Cornerstones of Excellence in Nursing Care

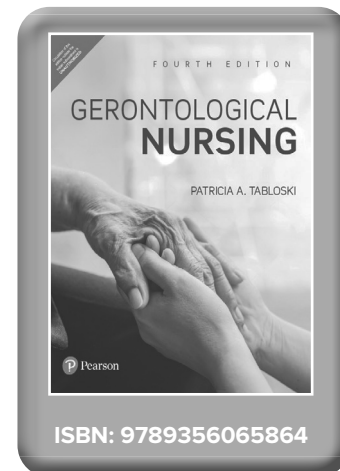
4. Cultural Diversity
5. Nutrition and Aging
6. Pharmacology and Older Adults
7. Psychological and Cognitive Function
8. Sleep and the Older Adult
9. Pain Management
10. Violence and Elder Mistreatment
11. Care at the End of Life

PART 3: Physiological Basis of Practice

12. The Integument
13. The Mouth and Oral Cavity
14. Sensation: Hearing, Vision, Taste, Touch, and Smell
15. The Cardiovascular System
16. The Respiratory System
17. The Genitourinary and Renal Systems
18. The Musculoskeletal System
19. The Endocrine System
20. The Gastrointestinal System
21. The Hematologic System
22. The Neurologic System
23. The Immune System
24. Caring for Frail Older Adults with Comorbidities

About the Author

Patricia A. Tabloski Boston College, School of Nursing



Understanding the Essentials of Critical Care Nursing, 3/e

Kathleen Perrin, Carrie Ed MacLeod



Pages: 648

Year: 2024

About the Book

An introduction to critical care that helps nurses deliver safe, effective care that optimizes patients' outcomes. Understanding the Essentials of Critical Care Nursing provides novice critical care nurses with a firm foundation so that they are able to understand the complexities of care; deliver safe, effective care; and begin their transition to expert nurses. It identifies concepts and techniques that are unique to critical care nursing and focuses on the essentials of providing care to patients with disorders that are commonly seen in critical care settings. Evidence-based practices, safety initiatives, commonly used medications, and leading technologies for providing better care are highlighted throughout the book. By concentrating on the problems that the new critical care nurse is most likely to encounter, the text establishes the groundwork students need to become increasingly effective nurses capable of offering advanced care.

Features

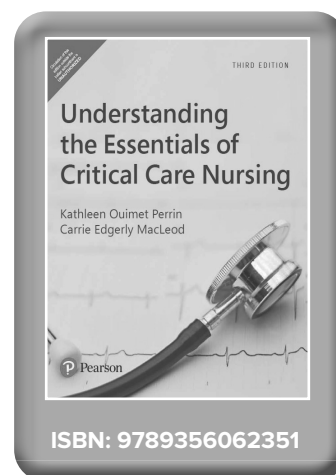
- Reflects a patient-centered approach that helps beginning critical care nurses deliver safe, effective care that optimizes patients' outcomes.
- Keeps readers current with new recommendations for practice with significant changes in the provision of sedation and pain medication as well as the management of ventilation, heart failure, stroke, blood, or volume resuscitation in trauma, palliative care, and sepsis.
- Gerontologic and Bariatric Considerations in every chapter highlight the unique needs of the elderly and overweight.
- Building Technology Skills sections focus on the technologies nurses are most likely to encounter when caring for patients experiencing the conditions discussed in each chapter.
- Prepares students for the uniquely difficult challenges of caring for patients at the end of life.
- Essentials explore specific opportunities to promote comfort, provide nutrition, enhance communication, and maintain safety—reflecting the areas identified by the Robert Wood Johnson Foundation's Nurse of the Future initiative.

Contents

1. What is Critical Care?
2. Care of the Critical Ill Patient
3. Care of the Patient with Respiratory Failure
4. Interpretation and Management of Basic Dysrhythmias
5. Cardiodynamics and Hemodynamic Regulation
6. Care of the Patient Experiencing Shock
7. Care of the Patient Experiencing Heart Failure
8. Care of the Patient Experiencing Acute Coronary Syndrome
9. Care of the Patient Following Traumatic Injury
10. Care of the Patient Experiencing an Intracranial Dysfunction
11. Care of the Patient With a Cerebral or Cerebrovascular Disorder
12. Care of the Critically Ill Patient Experiencing Alcohol Withdrawal and/or Liver Failure
13. Care of the Patient With an Acute Gastrointestinal Bleed or Pancreatitis
14. Care of the Patient with Problems in Glucose Metabolism
15. Care of the Patient with Acute Kidney Injury
16. Care of the Organ Donor and Transplant Recipient
17. Care of the Acutely Ill Burn Patient
18. Care of the Patient with Sepsis
19. Care of the ICU Patient at the End of Life

About the Author(s)

Kathleen Ouimet Perrin, PhD, RN, CCRN, is professor emerita and adjunct professor of nursing at Saint Anselm College in Manchester, New Hampshire, where she has taught critical care nursing, professional nursing, ethics, health assessment and understanding suffering. While teaching at the college, she received the AAUP award for Excellence in Teaching. She received her bachelor's degree from the University of Massachusetts, Amherst, her master's degree from Boston College, and her PhD from Union Institute and University in Cincinnati, Ohio. She has been a practicing critical care nurse for more than 40 years, and has been a member of the American Association of Critical Care (AACN) Nurses for nearly as long. Kathleen has served on the



board of the Southern New Hampshire AACN and is a past president of the chapter. She has been on numerous review panels for the national AACN. She was a member of the board of directors and President of the Epsilon Tau chapter of Sigma Theta Tau International. She has published and presented in the areas of critical care nursing, nursing ethics, nursing history, suffering experienced by patients and health care providers, and conflict among members of the health care team. She has written two other nursing texts: *Nursing Concepts: Ethics and Conflict*, and *Palliative Care Nursing: Caring for Suffering Patients*, which won an AJN Book of the Year Award in 2011.

Carrie Edgerly MacLeod PhD, APRN-BC, currently works as a nurse practitioner in Cardiac Surgery Intensive Care in Massachusetts. She has also worked in critical care settings at major teaching institutions in New Hampshire and New York. She received her bachelor's degree from Saint Anselm College and both her master's degree and PhD from the William F. Connell School of Nursing, Boston College. She has served as a faculty member at both at Saint Anselm and Boston College where she taught pharmacology, pathophysiology, and critical care nursing. She has published in the areas of patients' and family caregivers' experiences after cardiac surgery. Dr. MacLeod has lectured on management of the critically ill client at many symposiums across the United States. She has received both academic and clinical awards for her contributions to critical care nursing and client care.

Pharmacology

Introducing Pharmacology: For Nursing and Healthcare, 2/e

Roger McFadden

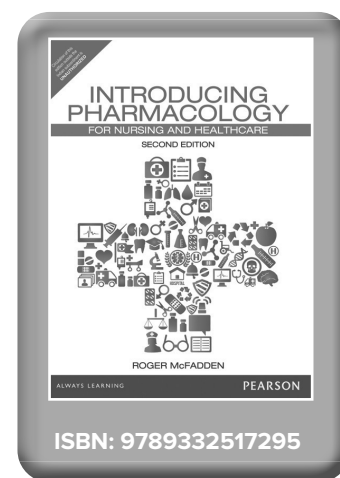
Pages: 368

Year: 2014

About the Book

This new edition of *Introducing Pharmacology* remains an accessible and relevant introduction for nursing and healthcare students who are new to pharmacology, as well as anyone looking to refresh their knowledge of the subject.

Focused and engaging, the text balances accessibility with depth. Coverage of anatomy and physiology as well as pathophysiology helps to relate the subject to practical realities and makes this text stand out.



Features

- Extend coverage of the pharmacopoeia with a completely new chapter on anti-cancer drugs.
- New sections, including general anaesthetics, hay-fever and prescribing for special groups such as children, pregnant women and the elderly.
- Fully updated with the Recommended International Non-proprietary Names (rINN) for drugs as used in the British National Formulary.
- Inclusion of a new glossary of key terms and definitions.

Contents

Part 1 Principles of pharmacology

1. Let's start at basics: cells and how they work
2. Protein targets for drugs
3. Side-effects, interactions and pharmacokinetics

Part 2 The major drug groups

4. The cardiovascular system I: drugs used in the management of coronary artery disease
5. The cardiovascular system II: hypertension and antihypertensive drugs
6. Inflammation and the management of pain
7. Disorders and drugs of the digestive system
8. Infection and anti-microbial drugs

9. Disorders and drugs of the respiratory system
10. Disorders and drugs of the endocrine system
11. Drugs used in the treatment of mental health and neurological disorders
12. Drugs used in the treatment of Cancers and Chemotherapy

About the Author

Roger McFadden is Senior Lecturer in Applied Physiology at Birmingham City University

Understanding Pharmacology for Health Professionals, 6/e

Susan M. Turley



Pages: 560

Year: 2024

About the Book

Understanding Pharmacology for Health Professionals simplifies the vast world of drugs and pharmaceuticals. It groups drug categories by therapeutic effects and the disease they're used to treat. The text streamlines drug data through an A-Z Drug Reference along with other resources.

Features

- Every chapter and each appendix has been updated with the most current generic and trade name drugs. Drug categories and drug information are current right up to the date of publication.
- This edition has more illustrations and photographs of real drugs. The images picture drug forms, drug packages, drug labels and drugs being administered to patients.
- "See-and-say" drug pronunciations appear after every generic drug in the chapters and appendices. The A-Z Drug Reference includes pronunciations for both generic and trade name drugs.
- Word part and meaning boxes helps students see how a complex word can be broken down into its word parts and meanings. This helps deepen their understanding of medical terminology.
- Chapter-ending review has been expanded. It now includes additional types of questions: matching, true or false, and fill in the blank.

Contents

Unit I: Introduction to Pharmacology

1. Introduction to Pharmacology
2. Drug Testing, Drug Forms, and Drug Measurements
3. Prescriptions and Using Drugs Therapeutically

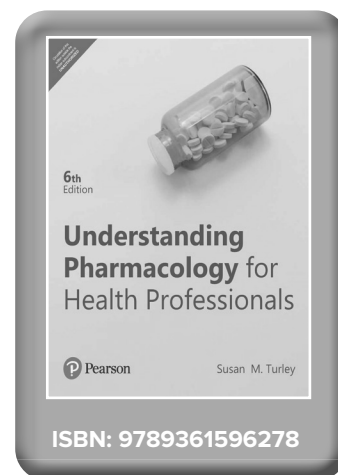
Unit II: Drugs Related to a Body System

4. Gastrointestinal Drugs
5. Analgesic Drugs and Musculoskeletal Drugs
6. Respiratory Drugs
7. Cardiovascular Drugs

8. Hematologic Drugs
9. Anti-Infective Drugs
10. Urinary Drugs
11. Reproductive Drugs
12. Neurologic Drugs
13. Psychiatric Drugs
14. Endocrine Drugs
15. Integumentary and Ophthalmic Drugs

About the Author

Susan M. Turley, MA (Educ), BSN, RN, RHIT, is an experienced educator and practitioner in many areas of health care. She has a Master of Arts degree in adult education, a Bachelor of Science degree in nursing and national certification in the field of health information management. As a nurse, Susan has worked and administered drugs in neonatal and pediatric intensive care units, physician office settings and a plasmapheresis center. She has also worked in an administrative capacity in managed



care and long-term care, as a quality manager, health information manager, physician office auditor and infection control officer. She has also created physician credentialing databases. As an educator, Susan has been an adjunct professor, teaching an introductory pharmacology course for students in the pharmacy technician, medical assisting and respiratory therapy programs at a community college. She also taught medical terminology and medical transcription courses there for many years, and she developed the bachelor's and master's curricula for the International Institute of Original Medicine. Susan was the co-leader for many medical transcription instructor training sessions, sponsored by Health Professions Institute. She was also a guest speaker at several seminars to prepare students to take health information management national certification examinations, sponsored by Stevens College.

Genetics

Genetics for Nurses, 2/e

V. Deepa Parvathi

Pages: 276

Year: 2023



About the Book

Genetics for Nurses aims to provide a clear, comprehensive, rigorous, and balanced introduction to genetics at the college level. Designed for the core subject on genetics offered to undergraduate students of nursing, this book presents the theoretical concepts in a lucid style along with colour illustrations, numerous review questions and case-specific problems pertaining to genetic disorders that help students identify and diagnose clinical conditions. The content of this book has been framed based on the curriculum designed by the Nursing Council of India. The topics have been grouped into five units in such a way that the book takes the students from classical genetics through clinical genetics and diagnosis to the latest advances in genetics, adding emphasis to social and ethical issues.

Features

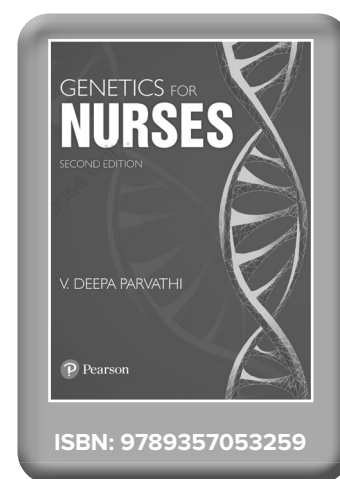
- Detailed coverage of prenatal genetic testing and diagnosis
- Comprehensive coverage of spontaneous abortion and conditions affecting the pregnant mother, with special emphasis on teratogens
- Lucid and elaborate explanation of the cell division cycles- mitosis and meiosis
- Patterns of inheritance and mutation dealt in detail
- New sections on Huntington's disease, rare genetic disorders and protocols for genetic diagnosis

Contents

1. Nature, Principles and Perspectives of Heredity
2. Maternal, Prenatal and Genetic Influences on Development of Defects and Diseases
3. Screening Methods for Genetic Defects and Diseases in Neonates and Children
4. Genetic Disorders in Adolescents and Adults
5. Role of Nurse in Genetic Services and Counselling

About the Author

V. Deepa Parvathi, Department of Biomedical Sciences, Sri Ramachandra Institute of Higher Education and Research (D.U.) Chennai, Tamil Nadu

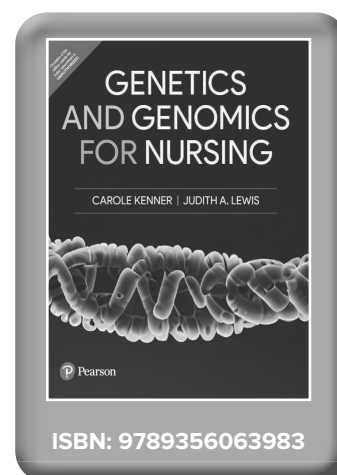


Genetics and Genomics for Nursing

Carole Kenner, Judith A. Lewis

Pages: 408

Year: 2024



About the Book

This book brings together the genetics and genomics knowledge nurses need to provide safe and effective care in today's "genomic era." It teaches through small, modular units, each with pretests, section quizzes, and post-tests. Answers are provided to help students check their knowledge, and Emerging Evidence and Critical Thinking checkpoints encourage them to apply it. The text first places modern genetics in context, introduces its essential principles, and outlines its deep ethical, legal, social, and public policy implications. Next, readers learn how to take family genetic histories and assess risks; utilize immunogenetics and cancer genetics in cancer prevention and treatment; apply genetics in public health promotion; recognize the role of genes in psychiatric illnesses and in aging; and much more.

Features

- Helps students link genetics to all facets of safe and effective patient care—including patient engagement, patient safety, quality, and outcomes
- Provides multiple opportunities for students to check and reinforce their learning—including Pre and Post tests, coupled with review questions after each section of each chapter
- Helps students identify the latest evidence-based trends related to genetic medicine and healthcare—presenting up-to-the-minute information in Emerging Evidence boxes throughout the text
- Explains the critical importance of genetics in public health—with a full section on public health genetics, including a chapter on environmental interactions with genes
- Illuminates new gene-related insights into psychiatric disorders—explaining recent progress in understanding depression, addictions, autism, and other mental health problems.

Contents

Part 1: Back to the Basics

1. Genetics and Genomics: Definitions and Trends
2. Essential Competencies in Genetics and Genomics
3. Family Context of Clinical Genetics

Part 2: Basic Genetic Concepts

4. Genes & Chromosomes; Meiosis and Mitosis
5. Aneuploidy
6. Mosaicism
7. Mendelian Inheritance
8. Genetics and Fetal Development

Part 3: Ethical, Legal, and Social Implications

9. Ethical, Legal, & Social Implications of the Human Genome Project
10. Prenatal Testing/Screening
11. Newborn Screening and Genetic Testing: Ethical Considerations
12. Genetic Information Nondiscrimination Act (GINA) Legislation

Part 4: Assessment

13. Family History Tool Module
14. Risk Assessment.

Part 5: Cancer Genetics

- 15. Immunogenetics
- 16. Cancer Genetics

Part 6: Public Health Genetics

- 17. Impact of Environment on Health: Interaction with Genes
- 18. Common Diseases with Genetic Linkages

Part 7: Psychiatric Disorders

- 19. Bipolar Disease and Genetic Linkages.
- 20. Depression and Genetic Linkages
- 21. Addictive Behaviors and Genetic Linkages
- 22. Autism

Part 8: Special Topics

- 23. Pharmacogenomics
- 24. Genetics and Aging Resources

About the Author(s)

Carole A. Kenner, PhD, RNC-NIC, NNP, FAAN, is nationally and internationally known for her policy-setting work to establish rights of the neonate, standards for the care of the neonate and the reduction of infant mortality worldwide. Dr. Kenner holds many titles, including Dean/Professor, School of Nursing, and Associate Dean, Bouve College of Health Sciences, at Northeastern University, Boston, and Adjunct Professor, Case Western Reserve University, Cleveland. She also serves as President, Consultants with Confidence, Inc., West Roxbury, MA; Consultant, Excelsior University Online Program, Albany, NY; and Trainer, End-of-Life Nursing Education Consortium in Pediatric Palliative Care (ELNEC), Washington, DC. She has published > 75 peer-reviewed journal articles, 30 books, and at least 80 book chapters. Dr. Kenner has participated as PI, Co-PI or Consultant on nearly 60 research grants. She is a member of four honorary organizations, including the AAN (elected 1994) and is a member of numerous review panels, editorial boards, and consultant groups.

Judith A. Lewis (Ph.D., University of Michigan) retired in 2008 from Governors State University, where she served as Professor and Chair of Addictions Studies and Behavioral Health. A licensed psychologist in Illinois, she is a past president of the American Counseling Association (ACA) and the International Association of Marriage and Family Counselors.

Nursing Research and Statistics

Nursing Research and Statistics

Nursing Research Society of India

Pages: 424

Year: 2012



About the Book

Nursing Research and Statistics provides a clear understanding of the principles and processes of nursing research, which is an essential subject for nursing students. This is a comprehensive text, written by eminent members of the Nursing Research Society of India (NRSI), that also looks into the methods of data collection, its analysis and presentation. Based on the Indian Nursing Council syllabus, this textbook is specially designed to meet the needs of B.Sc. students of nursing.

Features

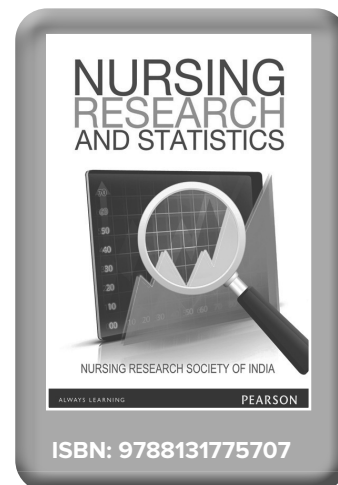
- Student-friendly
- Original content written by experienced members of NRSI
- Covers 'Fundamentals of Statistics' in a separate chapter
- Covers both Qualitative and Quantitative studies in Sampling
- Based on INC syllabus
- Foreword by Prof. Reena Bose (Former President of NRSI and Principal of Sister Florence College of Nursing)

Contents

1. Introduction to Nursing Research
2. Research Process
3. Research Problem
4. Review of literature
5. Theoretical and Conceptual Framework
6. Ethics in Research
7. Quantitative and Qualitative Research Approaches and Designs
8. Population, Sampling and Data Collection Methods in Qualitative Research
9. Population and Sampling in Quantitative Studies
10. Development of Research Tool
11. Data Analysis and Interpretation
12. Critique of Nursing Research Studies
13. Communication of Research Results-Oral and Written
14. Research Utilization and Evidence-based Nursing Practice
15. Fundamentals of Statistics

About the Author

The **Nursing Research Society of India (NRSI)** was established in May 1986. From its inception, it has been working continuously to promote research within and around the nursing environment. NRSI also supports the development of nursing research activities in universities and provides nursing care standards to nursing health-care institutions.

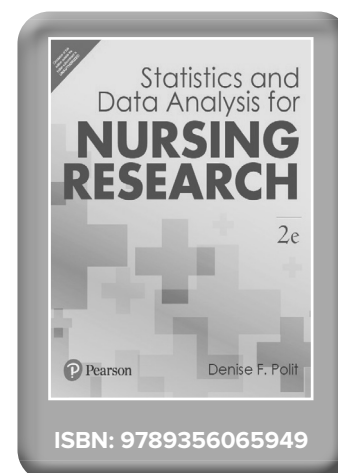


Statistics and Data Analysis for Nursing Research, 2/e

Denise F. Polit

Pages: 456

Year: 2024



About the Book

The second edition of *Statistics and Data Analysis for Nursing Research*, uses a conversational style to teach students how to use statistical methods and procedures to analyze research findings. Students are guided through the complete analysis process from performing a statistical analysis to the rationale behind doing so. In addition, management of data, including how and why to recode variables for analysis, how to “clean” data, and how to work around missing data, is discussed.

Features

- Research Examples – are used to illustrate key points in the text and to stimulate students’ thinking about research questions and analytic options.
- Clear, “user friendly” style – used in this book was designed to make the content digestible and non-intimidating. Concepts are introduced carefully and systematically, difficult ideas are presented clearly.
- Specific practical tips on performing analyses – every chapter includes several tips for applying the chapter’s lessons to real-life situations.
- Guidance on presenting statistical results – indicates what information to report in the text versus in tables and figures, and includes exemplary tables that can be used as templates for many statistical analyses.
- Exercises – Student exercises are included at the end of every chapter.
- Further aids to student learning – bolded terms when new concepts are introduced; succinct, bulleted summaries at the end of each chapter; and tables and figures that provide examples and graphic materials in support of the text discussion.

Contents

1. Introduction to Data Analysis in an Evidence-Based Practice Environment
2. Frequency Distribution: Tabulating and Displaying Data
3. Central Tendency, Variability, and Location
4. Correlation, Cross tabulation, and Risk Indexes: Describing Relationships
5. Statistical Inference
6. *t*-Tests
7. Analysis of Variance
8. Chi Square and Other Non-parametric Tests
9. Correlation and Simple Regression
10. Multiple Regression
11. Analysis of Covariance, MANOVA, and Other Related Multivariate Techniques
12. Using Logistic Regression
13. Factor Analysis and Internal Consistency Reliability Analysis
14. Missing Values

About the Author

Denise F. Polit Humanalysis, Inc., Saratoga Springs, NY

Foundations in Nursing Research, 6/e

Rose Marie Nieswiadomy

Pages: 344

Year: 2020



About the Book

This engaging, learner-friendly text illuminates all steps of the nursing research process, helping students critique research and determine whether study findings are ready to apply in practice. To illustrate specific aspects of the research process, the author extensively excerpts from published studies, including research performed outside the U.S. Pedagogical features include chapter outlines, objectives, definitions of key terms, summaries, class activities, and self-tests.

This Sixth Edition has been revised with up-to-date information and references throughout; more coverage of both quantitative and qualitative research; greater focus on evidence-based practice; and an all-new chapter on nursing research and health care economics that helps nurses clearly understand the financial value of the services they offer, and communicate that value more effectively to colleagues and stakeholders.



Features

- **Excerpts from 85 nursing research studies drawn from 60 nursing journals**—including recent studies conducted by nurses in the U.S. and around the world.
- **Up-to-the-minute coverage of Web-based research techniques**—including new examples of Internet mega search engines, coverage of all four online CINAHL databases, the free Clinical Trials online database, and information on accessing OJIN.
- **More than 300 terms, with clear definitions**—demystifying the language of research by presenting all new terms in bold, and clearly defining them on first reference.
- **“Get Involved” Activities**—including structured simulations that challenge students to collaborate realistically with other students or colleagues.
- **New! Includes all-new appendix on critiquing research studies**—providing a reference to a recent research article in a clinical nursing journal, with specific questions to use in evaluating it.

Contents

Part I Introduction to Nursing Research

1. Development of Nursing Research
2. Ethical Issues in Nursing Research
3. An Overview of Quantitative Research
4. An Overview of Qualitative Research

Part II Preliminary Steps in the Research Process

5. Identifying Nursing Research Problems
6. Review of the Literature
7. Theory and Nursing Research
8. Hypotheses

Part III Research Designs

9. Quantitative Research Designs
10. Qualitative Research Designs

Part IV Obtaining Study Participants and Collection of Data

11. Populations and Samples
12. Measurement and Collection of Data
13. Data Collection Methods

Part V Data Analysis

14. Descriptive Statistics
15. Inferential Statistics.
16. Presentation and Discussion of Study Findings
17. Part VI Research Findings and Nursing Practice
18. Communication and Utilization of Nursing Research
19. Evidence-Based Nursing Practice
20. Nursing Research and Health Care Economics
21. Critique of Research Reports

About the Author(s)

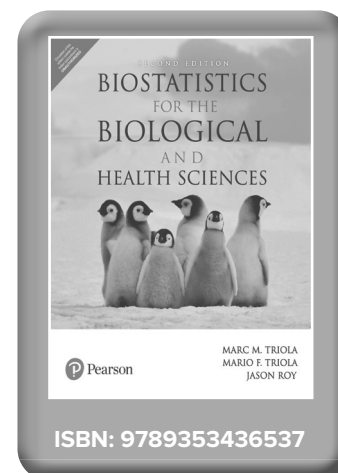
Rose Marie Nieswiadomy, PhD, RN, Professor emerita, Texas Woman's University, College of Nursing.
Catherine Bailey, PhD, RN, CNE, Associate Professor, Texas Woman's University, College of Nursing.

Biostatistics for the Biological and Health Sciences, 2/e

Marc M. Triola, Mario F. Triola

Pages: 728

Year: 2020



About the Book

Biostatistics for the Biological and Health Sciences uses a variety of real-world applications to bring statistical theories and methods to life. Through these examples and a friendly writing style, the **2nd Edition** ensures that students understand concepts and develop skills in critical thinking, technology, and communication. The result of collaboration between two biological sciences experts and the author of the #1 statistics book in the US, this text provides an excellent introduction to statistics for students studying the biological, life, medical, and health sciences.

Features

- **Latest and best methods** used by professional statisticians are incorporated.
- **New examples, exercises, and Chapter Problems** provide relevant and interesting real-world statistical applications, including biometric security, self-driving cars, smartphone data speeds, and the use of drones for delivery.
 - **More than 1,600 exercises** are included in the text, and nearly 85% are brand new!
 - **More than 200 examples** are scattered throughout the book, and almost 85% are new!
- **EXPANDED! Larger data sets** give students a more comprehensive look at concepts.
- **UPDATED! Real Data Sets:** 89% of the exercises in the text use real data, and 87% of the examples feature real statistics.
- **Easy-to-assign exercises** are graded by difficulty, and exercises that are particularly difficult or involve a new concept appear at the end of exercise sets and are marked by an asterisk, making it easy for instructors to assign homework.
- **Statistical Software:** SPSS, SAS, STATDISK, MINITAB, Excel, and TI-83/84 Plus output appear throughout the text.

Excellent Pedagogy

- | | | |
|----------------------------|--------------------------------|---|
| ■ Chapter-Opening Features | ■ Review Exercises | ■ From Data to Decision: Critical Thinking Projects |
| ■ Margin Essays | ■ Cumulative Review Exercises | |
| ■ Flow Charts | ■ Technology Projects | |
| ■ Chapter Quick Quizzes | ■ Cooperative Group Activities | |

Contents

- | | |
|---|--|
| 1. Introduction to Statistics | 8. Hypothesis Testing |
| 2. Exploring Data with Tables and Graphs | 9. Inferences from Two Samples |
| 3. Describing, Exploring, and Comparing Data | 10. Correlation and Regression |
| 4. Probability | 11. Goodness-of-Fit and Contingency Tables |
| 5. Discrete Probability Distributions | 12. Analysis of Variance |
| 6. Normal Probability Distributions | 13. Nonparametric Tests |
| 7. Estimating Parameters and Determining Sample Sizes | 14. Survival Analysis |

About the Author

Dr. Triola is the associate dean for educational informatics and an associate professor of medicine at NYU Langone Health, where he is also the founding director of the Institute for Innovations in Medical Education, known as IIME.

Biostatistics and Mathematical Biology

Felix Bast

Pages: 372

Year: 2023



About the Book

A comprehensive textbook of biostatistics targeted at non-mathematicians at an advanced bachelor level and above.

The book sequentially covers basic mathematics topics essential for biologists, such as scientific methodology, levels of measurement, and explores more advanced concepts, including Bayes Theorem and Non-linear regression, thereby complying with the biostatistics syllabus of various universities as well as competitive examinations. This application oriented book focuses on the decision-making process during statistical tests and graphing, which test/graph to use, how much would be the minimum sample size, how to interpret the results, and so on. Authored by Prof. Felix Bast, whose course in UGC SWAYAM, “Biostatistics and Mathematical Biology” had been ranked the 7th best MOOC worldwide in 2020”.

Features

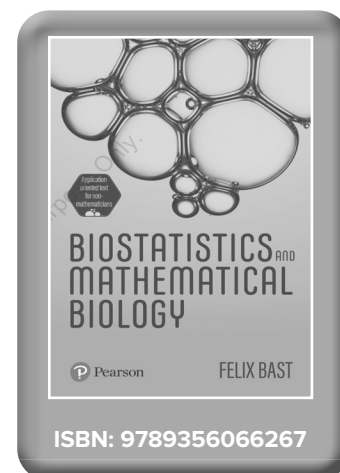
- Concise yet comprehensive textbook on the fundamental concepts of statistics.
- Focused on choosing the correct statistical test and interpreting the results.
- Non-mathematical approach; suitable for biologists and medical students.
- Clear-cut recommendations for various statistical tests and their variations.

Contents

1. Introduction to Biostatistics and Mathematical Biology
2. Types of Studies
3. Levels of Measurements
4. Summarizing Data: Tabular Presentation
5. Summarizing Data: Graphical Presentation
6. Charting with Excel
7. Descriptive Statistics: Point Estimates
8. Descriptive Statistics: Interval Estimates
9. Error Bars
10. Moments, Normality Tests and Outliers
11. Concepts of Population, Sample and Confidence Intervals
12. Statistical Hypothesis Testing
13. Statistical Significance and P-Values
14. Relationship between Confidence Intervals and Statistical Significance
15. Statistical Power and Choosing the Right Sample Size
16. t-distribution and Tests of Significance Based on t-distribution
17. F-distribution and Tests of Significance Based on the F-distribution
18. Post-Hoc Tests
19. χ^2 -distribution and Tests of Significance Based on χ^2 -distribution
20. Comparing Proportions
21. Gaussian, Lognormal, Binomial and Poisson Distributions
22. Pearson's Correlation
23. Simple Linear Regression
24. Non-linear Regression, Multiple Regression, and Logistic Regression
25. Non-parametric Tests
26. Permutations and Combinations
27. Probability
28. Likelihood and Bayes' Theorem
29. Key Concepts of Statistics and Statistical Pitfalls to Avoid

About the Author

Prof. Felix Bast is an award-winning Indian Science Communicator and a public educator working currently as a full Professor at Central University of Punjab, India. He is an expert panelist of Paris-based International Science Council, an elected fellow of Linnean Society of London, and a member of IUCN, Geneva. He holds Ph.D. in Marine Biology from MEXT, Japan (alumnus of Monbukagakusho:MEXT Japanese Govt. international doctoral fellowship), and served as expedition scientist in Indian Antarctic Mission.



Emergency and Medical Care

International Trauma Life Support, 9/e

Roy L. Alson, Kyee H. Han, John E. Campbell

Pages: 448

Year: 2022

About the Book

A decades-long leader in trauma education For over 30 years, International Trauma Life Support for Emergency Care Providers has been at the forefront of trauma education for all levels of prehospital emergency care worldwide. This complete resource is filled with practical, hands-on training that guides readers through the how's and the why's of all the skills needed for rapid assessment, resuscitation, stabilization, and transportation of the trauma patient. The 9th edition reflects the latest and most effective approaches to prehospital trauma care, including a more functional approach to assessment and management.

Features

- The text conforms to the latest guidelines on trauma care from the American Heart Association, International Liaison Committee on Resuscitation, and Committee on Trauma of the American College of Surgeons.
- Revised - The text has been completely reorganized to reflect a more functional approach to the assessment and management of the trauma patient. It is now divided into four sections:
 - Essential Information
 - Foundational Knowledge
 - Special Populations
 - Appendices
- Expanded - Chapter 1 now discusses changes put forth by the Hartford Consensus with regard to scene safety and team-based, multidisciplinary trauma care.
- Expanded - Chapter 19 now examines how advancing age increases mortality and identifies it as an independent risk factor for needing trauma care.
- Updated - Chapter 4 now includes updated techniques for managing hemorrhage, some of which reflect the latest experiences of the military during recent conflicts.
- Updated - Chapters 11 and 12 now incorporate the current science and evolution of when to apply spinal motion restriction based on published guidelines.
- Expanded - Chapter 13 now includes pelvic fractures, as associated with concurrent abdominal injuries.

Contents

Section 1: Essential Information

1. Introduction to Traumatic Disease
2. Trauma Assessment and Management
3. Assessment Skills
4. Hemorrhage Control and Shock

Section 2: Foundational Knowledge

8. Thoracic Trauma
9. Thoracic Trauma Skills
10. Spinal Trauma and Spinal Motion Restriction
11. Spine Management Skills
12. Head Trauma and Traumatic Brain Injury

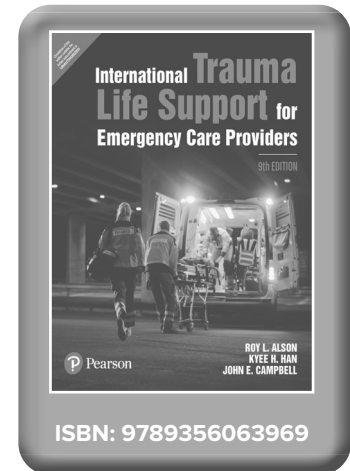
Section 3: Special Populations

17. Burns
18. Pediatric Trauma
19. Geriatric Trauma
20. Trauma in Pregnancy

5. Shock and Hemorrhage Control Skills
6. Airway Management
7. Airway Skills

13. Abdominal Trauma
14. Extremity Trauma
15. Extremity Trauma Skills
16. Traumatic Arrest

21. The Impaired Patient



About the Author(s)

Roy L. Alson, PhD, MD, FACEP, FAEMS, is a professor of emergency medicine at Wake Forest University School of Medicine and the former director of the Office of Prehospital and Disaster Medicine, also at Wake Forest.

Kyee H. Han, MBBS, FRCS, FRCER, is a consultant in trauma and emergency medicine at the James Cook University Hospital, in Middlesbrough, which is a regional major trauma center in the North East of England. He is also honorary medical director to the North East Ambulance Service NHS Foundation Trust. Dr. Han completed his undergraduate medical training at the Institute of Medicine in Rangoon, Burma, in 1976.

John E. Campbell, MD, FACEP (deceased), received his BS degree in pharmacy from Auburn University in 1966 and his medical degree from the University of Alabama at Birmingham in 1970. He practiced emergency medicine for 40 years, in Alabama, Georgia, New Mexico, and Texas. Dr. Campbell became interested in prehospital care in 1972 when he was asked to teach a basic EMT course to members of the Clay County Rescue Squad.

Sociology

Sociology for Nurses, 3/e

I Clement

Pages: 512

Year: 2023



About the Book

In its pursuit to bring about an awakening among students of nursing about human social behaviour, this third edition of **Sociology for Nurses** continues to build on sociological theories that are of relevance to the nursing community. Conforming to the syllabus prescribed by the Indian Nursing Council and catering to the needs of B.Sc. Nursing students in their first year, for the paper on Applied Sociology, this book provides jargon-free explanation of even the most difficult concepts for student's benefit.

Features

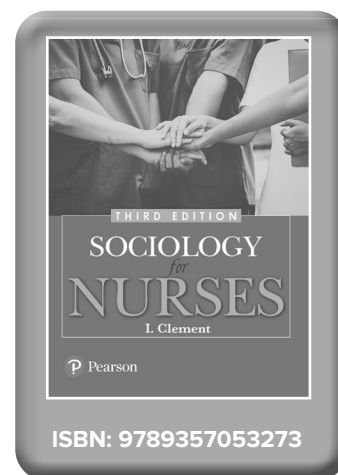
- New topics as per Indian Nursing Council syllabus have been included in the units on Social structure, Culture, Social stratification and Social organization and disorganization.
- New unit on Clinical sociology has been added.
- Additional emphasis provided to sociological concepts and their applications from the standpoint of the practising nurse.
- Core concepts have been exemplified with vivid illustrations and reinforced by rich pedagogy.
- Each chapter has been supplemented with numerous end-of-chapter review questions and objective-type questions.

Contents

1. CHAPTER 1 Introduction to Sociology
2. CHAPTER 2 Social Structure
3. CHAPTER 3 Culture
4. CHAPTER 4 Family and Marriage
5. CHAPTER 5 Social Stratification
6. CHAPTER 6 Social Organization and Disorganization
7. CHAPTER 7 Clinical Sociology

About the Author

I. Clement, Professor & Principal, Sparsh College of Nursing, Bengaluru.



Computer Fundamentals

Computer Fundamentals for Nursing, Paramedical and Medical Students

Amit Dumka, Ravi Dumka, Ankur Dumka



Pages: 372

Year: 2023

About the Book

This book provides the basics of computer technologies that are useful for nursing, paramedical and medical students and any reader who want to learn the different applications of computers. Spread across eleven chapters, the book covers all the aspects of the subject from basics of computers to its application in healthcare in a student-friendly manner. It also explains the ways data, knowledge and information can be used for effective healthcare.

Features

- Demonstrates the use of computer and technology in patient care, nursing education, practice, administration and research.
- Describes the principles of health informatics and its use in developing efficient healthcare.
- Numerous screenshots to aid follow and practice approach

Contents

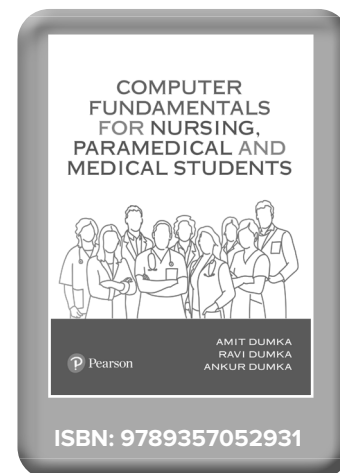
1. Chapter 1 Basic Concepts of Computers
2. Chapter 2 Operating System
3. Chapter 3 An Introduction to MS-Word
4. Chapter 4 An Introduction to MS-Excel
5. Chapter 5 An Introduction to PowerPoint
6. Chapter 6 An Introduction to Microsoft Access
7. Chapter 7 Application of Internet and e-Mail
8. Chapter 8 An Introduction to Multimedia
9. Chapter 9 Statistical Packages: Usages and Types
10. Chapter 10 Hospital Management System (HMS): Types and Usage
11. Chapter 11 Application of Computers in Medical Education and Health Informatics (Nursing/Health Informatics)

About the Author(s)

Amit Dumka, Government Medical College Haldwani, India,

Ravi Dumka, HP India Sales Pvt. Ltd.,

Ankur Dumka, Women Institute of Technology Dehradun, Uttarakhand Graphic Era Deemed to be University Dehradun, Uttarakhand.



Handbook of Informatics for Nurses & Healthcare Professionals, 7/e

Toni Hebda, Melody Rose

Pages: 528

Year: 2024



About the Book

Handbook of Informatics for Nurses and Healthcare Professionals examines key issues in adopting and applying healthcare IT and nursing informatics. The contributing authors cover the concepts, skills, and tasks needed to achieve the goals of transforming healthcare delivery. The 7th Edition reflects rapid changes in healthcare IT and informatics. It looks at how the global pandemic has forced a re-examination of healthcare and healthcare delivery, escalated the deployment of IT to track infection and support care, and paved the way for a greater role for nursing and healthcare informatics.

Features

- Includes new Topics in Healthcare IT and Informatics:
- Chapter Updates: New Chapter 3 addresses the challenges of technology in healthcare, while Chapter 20 explores the future directions of nursing informatics on a national and international scale.
- Emerging Content: Includes topics on equitable and inclusive healthcare, genomics for population health, international collaborations, and combating structural, systemic, and institutional racism.
- Chapters have been thoroughly revised to reflect the current and evolving practice of healthcare IT and informatics.
- Presents content on information systems training and presents it within the context of workforce development.

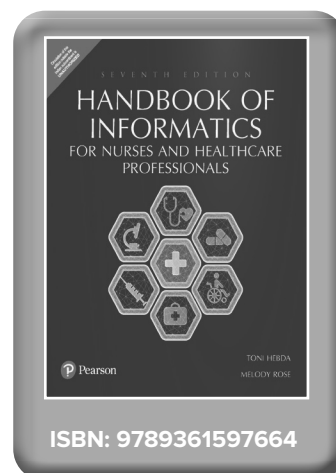
Contents

1. An Overview of Informatics in Healthcare
2. Informatics Theory and Practice
3. The Challenges of Technology in Healthcare
4. Electronic Resources for Healthcare Professionals
5. Using Informatics to Support Evidence-Based Practice and Research
6. Policy, Legislation, and Regulation Issues for Informatics Practice
7. Electronic Health Information and Record Systems
8. Strategic Planning and Project Management Concepts for HIT and Quality Improvement Initiatives
9. Healthcare Information Technology: Implementation, Maintenance, and Evaluation
10. Improving the Usability of Health Informatics Applications
11. Information Networks and Information Exchange
12. Workforce Development
13. Information Security and Confidentiality
14. Continuity Planning and Management and Disaster Recovery
15. The Role of Standardized Terminology and Language in Informatics
16. Using Informatics to Educate
17. Consumer Health Informatics
18. Connected Healthcare (Telehealth and Technology-Enabled Healthcare)
19. Public Health Informatics
20. A Glimpse into the Future of Nursing Informatics

About the Author(s)

Toni Hebda, PhD, RN-C, CNE, is a professor with the Chamberlain College of Nursing MSN Program, teaching in the nursing informatics track. She has held several academic and clinical positions over the years and worked as a system analyst. Her interest in informatics provided a focus for her dissertation, and subsequently led her to help establish a regional nursing informatics group, obtain a graduate degree in information science, and conduct research related to informatics. She is a reviewer for the Online Journal of Nursing Informatics. She is a member of informatics groups and has presented and published in the field.

Melody Rose, DNP, RN, CPHIMS, is an adjunct instructor with Franklin University in the MS Health Informatics and DS Healthcare Administration programs, as well as a practicing clinician in the field of Healthcare Informatics. She is a 2014 graduate of Duke University School of Nursing DNP program and a 2011 graduate of Walden University School of Nursing MSN, Informatics Specialty. Dr. Rose has organized health informatics seminars, presented implementation strategy lectures for a major pharmaceutical company, and lectured internationally in the field of Nursing Informatics.



Nutrition

Nutrition: An Applied Approach, 6/e

Melinda Manore, Janice Thompson

Pages: 700

Year: 2025



About the Book

Nutrition: An Applied Approach links nutrition concepts to functional benefits, empowering you to evaluate the nutrition information and decisions you encounter every day. This friendly narrative connects the facts to your circumstances, lifestyle, and goals. Focusing on long-term learning instead of memorization, its key focus areas include functions of vitamins and minerals in the body, fluid and electrolyte balance, antioxidant function, bone health, energy metabolism, and blood health.

Features

- Enhanced DEI Integration: Updated throughout with a Diversity, Equity, and Inclusivity lens, featuring more inclusive language, examples, and visuals.
- Expanded and Updated Content: New and reorganized chapters on Functional Foods, Nutrients for Key Body Functions and Healthy Tissues, and Food Equity & Sustainability.
- Interactive Learning Enhancements: New Critical Thinking and Nutrition Application questions, and links to tested, affordable recipes from Oregon State University's Food Hero program.
- Updated Clinical Coverage: Revised discussions on BMI, energy intake and expenditure, and differences among people of various backgrounds and body types.

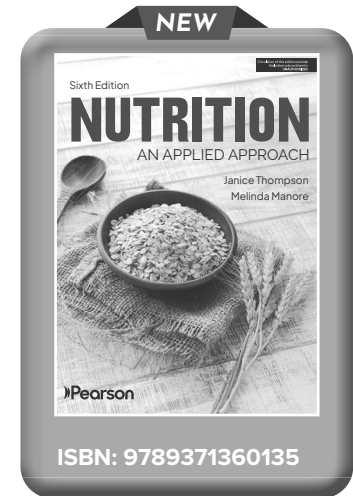
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1. Nutrition: Linking Food and Health In Depth
2. Designing a Healthful Diet In Depth
3. The Human Body: Are We Really What We Eat? In Depth
4. Carbohydrates: Plant-Derived Energy Nutrients In Depth
5. Fats: Essential Energy-Supplying Nutrients In Depth
6. Proteins: Crucial Components of all Body Tissues In Depth
7. Nutrients Essential to Fluid and Electrolyte Balance In Depth
8. Nutrients Essential to Key Body Functions In Depth
9. Nutrients Essential to Healthy Tissues In Depth
10. Achieving and Maintaining a Healthful Body Weight In Depth
11. Nutrition and Physical Fitness: Keys to Good Health In Depth
12. Food Safety and Technology: Protecting our Food In Depth
13. Food Equity, Sustainability, and Quality: The Challenge of "Good Food" In Depth
14. Nutrition Through the Life Cycle: Pregnancy and the First Year of Life In Depth
15. Nutrition Through the Life Cycle: Childhood to Late Adulthood In Depth

About the Author(s)

Janice Thompson, University of Birmingham

Melinda Manore, Oregon State University





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9789356066267	Bast	Biostatistics and Mathematical Biology	620	20
9789361590788	Berman, Snyder	Skills in Clinical Nursing, 8/e	1050	2
9788119896752	Berman, Snyder, Frandsen	Kozier & Erb's Fundamentals of Nursing	2290	1
9788131769621	Bhatnagar	English for Nurses	370	6
9789357053273	Clement	Sociology for Nurses, 3/e	650	22
9789353436520	George	Nursing Theories : The Base for Professional Nursing Practice, 6/e	1170	5
9789361597664	Hebda / Rose	Handbook of Informatics for Nurses & Healthcare Professionals, 7/e	769	24
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9789356062351	Perrin / MacLeod	Understanding the Essentials of Critical Care Nursing, 3/e	910	10
9789356065949	Polit	Statistics and Data Analysis for Nursing Research, 2/e	680	17
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9789356065864	Tabloski	Gerontological Nursing, 4/e	1090	9
9789353436537	Triola / Triola	Biostatistics for the Biological and Health Sciences, 2/e	990	19
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*All Prices are subject to change without notice



Pharmacy

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Human Anatomy and Physiology-I

Fundamentals of Anatomy and Physiology, 12/e

Frederic H. Martini, Judi L. Nath, Edwin F. Bartholomew

Pages: 1284

Year: 2025



About the Book

Fundamentals of Anatomy & Physiology addresses the needs of today's A&P students with an easy-to-understand narrative, precise visuals and steadfast accuracy. The authors incorporate research that explores how students use and process visual information, guiding them through complex figures to deconstruct and better understand complicated processes. The 12th Edition features thoroughly updated content and enhanced art and figures to provide the most recent research and to support student learning. An extensive diversity, equity and inclusion review ensures the content reflects the experiences of all students.

Features

- Side-by-Side Figures provide multiple views of the same structure, pairing an illustration with a cadaver photo and comparing a drawing to an actual photo from the laboratory or operating room.
- Step-by-Step Figures show multifaceted processes as step-by-step illustrations that follow the narrative descriptions.
- Macro-to-Micro Figures bridge the gap between familiar and unfamiliar structures of the body, sequencing anatomical views from whole organs or structures to their smaller parts.
- Build Your Knowledge Figures show how each body system influences others and how all body systems work together to maintain homeostasis
- Clinical Cases open the chapter with a story-based case and conclude with a Clinical Case Wrap-Up that incorporates knowledge gained from the chapter.

Contents

UNIT 1: LEVELS OF ORGANIZATION

1. An Introduction to Anatomy and Physiology
2. The Chemical Level of Organization
3. The Cellular Level of Organization
4. The Tissue Level of Organization

UNIT 2: SUPPORT AND MOVEMENT

5. The Integumentary System
6. Bones and Bone Structure
7. The Axial Skeleton
8. The Appendicular Skeleton
9. Joints
10. Muscle Tissue

11. The Muscular System

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12. Nervous Tissue
13. The Spinal Cord, Spinal Nerves and Spinal Reflexes
14. The Brain and Cranial Nerves
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16. The Autonomic Nervous System and Higher Order Functions
17. The Special Senses
18. The Endocrine System

UNIT 4: FLUIDS AND TRANSPORT

19. Blood
20. The Heart

21. Blood Vessels and Circulation

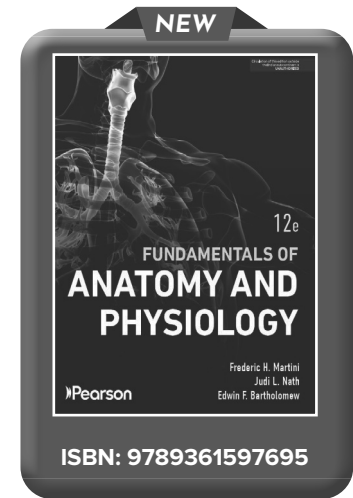
22. The Lymphatic System and Immunity

UNIT 5: ENVIRONMENTAL EXCHANGE

23. The Respiratory System
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26. The Urinary System
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UNIT 6: CONTINUITY OF LIFE

28. The Reproductive System
29. Development and Inheritance



About the Author(s)

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Judi L. Nath,
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Edwin F. Bartholomew,
Lahainaluna High School.

Endocrinology, 6/e

Mac E. Hadley, Jonathan Levine

Pages: 608

Year: 2009



About the Book

Appropriate for one-semester junior-graduate level courses in Endocrinology, Endocrine Physiology, as well as courses in medicine, dentistry, pharmacology, nutrition, nursing and other related medical or animal sciences where endocrinology is the focus. Hadley provides comprehensive coverage of endocrinology, centralizing on the critical roles of glands, hormones, receptors, and molecular signaling pathways in the control of physiological processes. This up-to-date Sixth Edition reviews the basic concepts, research methodologies, and the “state-of-the-art” scientific understanding of each of the major endocrine systems, in examples designed specifically for premedical and related professional courses.

Features

- **Emphasizes that all aspects of hormone function—synthesis, secretion, delivery, action and disposal—are of great physiological significance.**
- **Special reference to the roles of chemical messengers in the control of homeostatic systems**—In the overall discussion of homeostasis.
- **Coverage of the most recent molecular, genetic, and physiological**—As well as the more classical methodologies.
- **Traces the evolution of hormone structure**—In relation to the comparative endocrinology of neurohypophysial hormones.

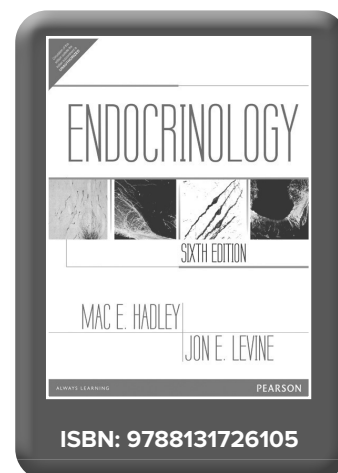
Contents

1. Introduction to Endocrinology.
2. The Vertebrate Endocrine System.
3. General Mechanisms of Hormone Action.
4. Endocrine Methodologies.
5. Pituitary Hormones.
6. The Endocrine Hypothalamus.
7. Neurohypophysial Hormones.
8. Melanotropic Hormones.
9. Hormonal Control of Calcium Homeostasis.
10. Gastrointestinal Hormones.
11. Pancreatic Hormones and Metabolic Regulation.
12. Growth Hormones.
13. Thyroid Hormones.
14. Catecholamines and the Sympathoadrenal System.
15. Adrenal Steroid Hormones.
16. Endocrinology of Sex Differentiation and Development.
17. Hormones and Male Reproductive Physiology.
18. Hormones and Female Reproductive Physiology.
19. Endocrinology of Pregnancy, Parturition and Lactation.
20. Endocrine Role of the Pineal Gland.

About the Author(s)

Mac E. Hadley, A prominent figure in endocrinology, often cited as the lead or primary author on major editions of the textbook.

Jonathan Levine, A key contributor, often listed as co-author, focusing on the integration of neurophysiology and hormones (neuroendocrinology).



Vogel's Qualitative Inorganic Analysis, 7/e

G. Svehla, B. Sivasankar

Pages: 384

Year: 2013



About the Book

Vogel's Qualitative Inorganic Analysis (in its seventh edition) follows the current trends and techniques in the field of analytical chemistry. Written for undergraduate and postgraduate students of chemistry, this revised and updated edition treats each concept and principle systematically to make the subject comprehensible to beginners as well as advanced learners.

Features

- Updated nomenclature
- Addition of tests for metals based on flame atomic emission and atomic absorption spectrometry
- New classification of mixtures of common and less common ions
- Marginalia highlighting important facts
- Elaborate discussions on preliminary tests, dissolution and fusion of samples
- Health and hazard warnings throughout the text
- Details on the preparation of reagents provided in the appendix

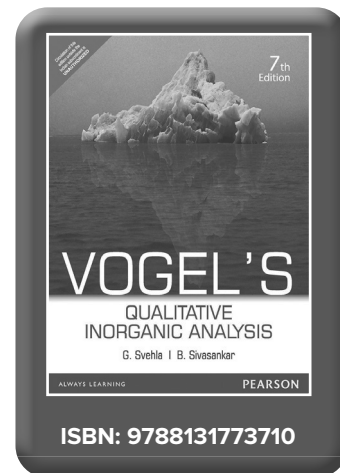
Contents

1. Introduction
2. Experimental Techniques
3. Reactions of the Cations
4. Reactions of the Anions
5. Selected Tests and Separations
6. Reactions of Some Less Common Ions

About the Author(s)

G. Svehla is a formerly professor from the department of chemistry, University College, York, Ireland.

B. Sivasankar is a visiting professor from the department of chemistry, Anna University, Chennai, Tamilnadu.



Vogel's Quantitative Chemical Analysis, 6/e

J. Mendham, David J. Barnes, R.C. Denney, M. J. K. Thomas

Pages: 836

Year: 2009



About the Book

Dr. Vogel's classic introduction to analytical methods has provided generations of chemists worldwide with a basis for teaching, learning and applying analytical chemistry. This 60th anniversary edition - the first for a decade - reflects major changes in the subject. Analysts need to understand the concepts behind methods and *Vogel's Quantitative Chemical Analysis* provides clear introductions to all the key analytical methods including those involving advanced computerised equipment available in many analytical laboratories. The editors have built further on the work of Dr Vogel, modernising the approach while retaining the analytical concepts and ideas which were built into the original work. This new edition has been extensively revised to take into account developments in instrumental procedures and coupled techniques whilst maintaining the book's focus on quantitative chemical and problem-specific analyses. With excellent cross-referencing this book provides a wealth of examples and tables of data.

Features

- Comprehensive coverage of methods with detailed easy-to-follow practical experiments.
- Basic analytical theory which is essential for understanding the subject.
- Greatly expanded sections on instrumental analysis including aspects of miniaturisation.
- Increased emphasis on minor/trace component analysis and revised statistical handling of data.
- New chapters on sampling, mass spectrometry and nuclear magnetic resonance.

Contents

Preface to First Edition.

Preface to Sixth Edition.

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4. Fundamental Theoretical Principles of Reactions in Solution.
5. Common Apparatus & Basic Techniques.
6. Statistics, Introduction to Chemometrics.
7. Sampling.
8. The Basis of Separative Methods.
9. Thin Layer Chromatography.
10. Liquid Chromatography.
11. Gas Chromatography.
12. Titrimetric Analysis.
13. Gravimetric Analysis.
14. Thermal Analysis.
15. Direct Electroanalytical Methods.
16. Nuclear Magnetic Resonance Spectroscopy.
17. Atomic Absorption Spectroscopy.
18. Atomic Emission Spectroscopy.
19. Molecular Electronic Spectroscopy.
20. Vibrational Spectroscopy.
21. Mass Spectrometry.

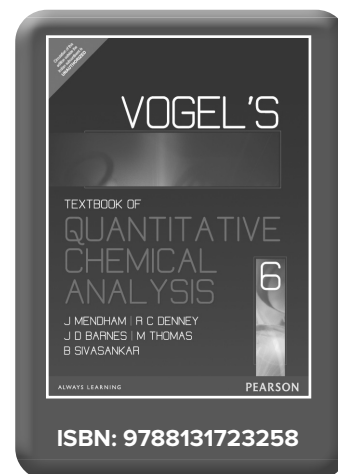
About the Author(s)

R.C. Denney, Consultant Forensic Scientist

J. Mendham, Consultant Analytical Chemist

J. D. Barnes, University of Greenwich.

M.J.K. Thomas, University of Greenwich



Essentials of Analytical Chemistry

Shobha Ramakrishnan, Banani Mukhopadhyay

Pages: 400

Year: 2018



About the Book

The book elucidates the principles of analytical methods such as volumetric analysis, gravimetric analysis, statistical methods of analysis, electro-analytical, and thermoanalytical techniques. It also presents the basic principles and instrumentation of UV, IR, NMR, Mass and ESR spectral methods, accompanied by a discussion on the spectra of a number of molecules, intended to develop the skill of the reader and to interpret the spectra of common organic molecules. This text will benefit those preparing for competitive examinations such as NET, SLET, GATE, and the UPSC Civil Services exam.

Features

- Includes up-to-date developments in the field
- Detailed illustration of AES, AAS, and Flame Photometry
- Numerous review questions, solved problems and end of chapter exercises:

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UNIT II Quantitative Analysis

2. Volumetric (Titrimetric) Analysis
3. Gravimetric Analysis

UNIT III Thermal Methods of Analysis

4. Thermogravimetric Analysis
5. Differential Thermal Analysis
6. Thermometric Titration

UNIT IV Electroanalytical Techniques

7. Electrogravimetry
8. Polarography

UNIT V Atomic Spectroscopy

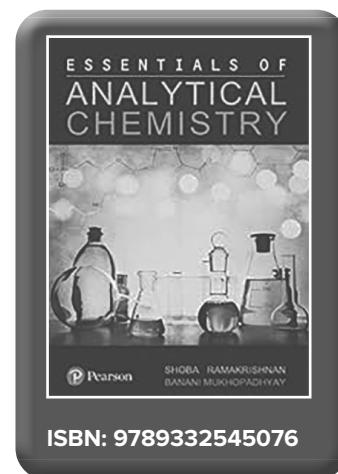
9. Atomic Emission Spectroscopy
10. Flame Emission Spectroscopy or Flame Photometry
11. Atomic Absorption Spectroscopy

UNIT VI Molecular Spectroscopy

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About the Author(s)

Shoba Ramakrishnan was Former Professor and Head, Department of Chemistry, Women's Christian College, Chennai, Tamil Nadu.

Banani Mukhopadhyay is Assistant Professor, Department of Chemistry, Women's Christian College, Chennai, Tamil Nadu.

Pharmaceutics-I

Pharmaceutics-I Practicals

K. Elango

Pages: 208

Year: 2021



About the Book

This text is intended for the undergraduate students of B.Pharmacy for the practical course on Pharmaceutics-I as per the latest PCI syllabus. The book includes solid dosage forms, semisolid dosage forms and liquid dosage forms, including fundamental unit operations required for manufacturing of pharmaceutical products. Written in a simple and lucid fashion, the experiments are sequenced in a logical order. It also features basic theoretical notes correlating to the different formulations dealt, which gives a clear understanding of the subject to the reader.

Features

- Unambiguous classification of the various dosage forms
- Contains relevant prescriptions, formulae, procedures and labels for the individual preparations
- Stepwise approach to calculations for easy comprehension

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| 2. Definitions of Pharmaceutical Dosage Forms | 19. Lotions |
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| | 35. Suppositories |

About the Author

K. Elango is Retired Professor and Head, Department of Pharmaceutics, College of Pharmacy, Madras Medical College, Chennai. With a teaching experience spanning over 33 years, and an industrial experience of 3 years, he is an accomplished teacher at both undergraduate and postgraduate levels



The ACE of Soft Skills: Attitude, Communication and Etiquette for Success

Gopalaswamy Ramesh, Mahadevan Ramesh

Pages: 472

Year: 2010



About the Book

Our world is witnessing a major change in communication patterns, with expanding social spheres, openness in communication and professionals working in multicultural environments. It is crucial, therefore, that India's workforce remains world-class, through re-training and continuous improvement, to remain competent, competitive and successful. To create and nurture successful professionals, the acquisition, cultivation and fine-tuning of soft skills are highly essential in the given business paradigm. **The ACE of Soft Skills** is a part of this educational process that produces top-notch professionals. Divided into three parts "Attitude, Communication and Etiquette" this unique book provides a broad-based coverage of what constitute soft skills. The foundations of soft skills lie in a strong attitude; this attitude gets manifested as communication, which gets further refined as etiquette. This book covers a wide range of topics "a gamut of nearly 40 essential soft skills" including personal accountability, listening skills, business proposals, and the role of small talk and humour at work. The numerous case studies, cartoons, figures, tables and quotations not only offer an insightful, practical and well-rounded perspective into soft skills, but also make reading a joyful experience.

Contents

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8. Performance Expectations Management
9. The Art of Time Management
10. Stepping Up to the Plate
11. When Things Go Way Wrong at the Workplace
12. Tying It All Together: Work Your Way to Success

Part II: Communication

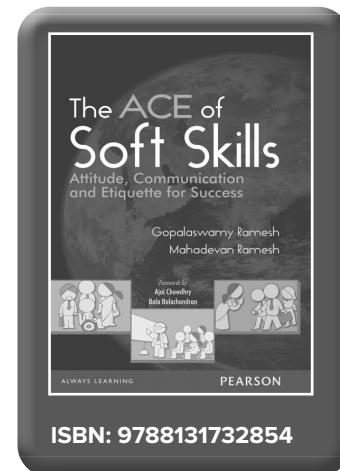
13. Understanding the Communication Cycle
14. Distortion in Communication
15. The 'Why' and 'To Whom' Parts of Communication:
16. Knowing the Objective of Communication and Audience Analysis
17. Preparing for the Communication
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19. Body Language

20. Vocal Variety: Using the Voice Channel

21. Visual Aids
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36. The Big Deal About Small Talk
37. Respecting Privacy
38. Learning to Say 'No'
39. The Role of Humour in the Workplace
40. English-language Skills
41. Reach for the Moon



About the Author(s)

Professor *Gopalaswamy Ramesh* has 30 years of international experience and is an independent consultant and Adjunct Professor at the International Institute of Information Technology Bangalore (IIIT-B), SSN School of Management and Computer Applications, Chennai, and Amrita School of Business, Coimbatore. He has also taught at the Indian Institute of Management Bangalore; Anna University, Chennai; Great Lakes Institute of Management, Chennai, and XLRI Jamshedpur. His vast industry experience covers both India and abroad. He played a key role in the establishment of Oracle India Development Center and was its former Senior Director. He is the author of the National Award “winning book *Managing Global Software Projects*, and has also authored *Software Testing Principles and Practices* and *Software Maintenance*. Two of these books have also been translated into Chinese. His most recent book is *The ACE of Soft Skills: Attitude, Communication and Etiquette for Success*. He currently offers consultancy services in the areas of project management and soft skills to several companies in India and abroad. He holds an MS in engineering management from Stanford University, California; MS in computer science from IIT Madras and BE from IISc Bangalore.

Mahadevan Ramesh graduated from IIT Kanpur (five-year integrated MSc degree in Physics) and earned a PhD (Physics) from the Ohio State University, USA. Following a research stint in the electrical and computer engineering department in Carnegie Mellon University, Pittsburgh, he worked for Storage Technology Corporation (now a part of Sun Microsystems/Oracle), and for Maxtor Corporation (now a part of Seagate Technologies) at Colorado, USA. He held leadership positions in global product teams and spent considerable time on the factory floor in Singapore, working with stakeholders from many different cultures, and learnt first hand the importance of soft skills. He is currently an adjunct professor in the SSN School of Management and Computer Applications, and he also consults on management and engineering, specializing in production and operations management.

Organizational Behavior, Updated, 18/e

Stephen P. Robbins, Timothy A. Judge, Neharika Vohra

Pages: 796

Year: 2022



About the Book

The bestseller title Organizational Behavior 18e is now revised and updated. This updated 18th edition reflects the most recent research and business events within the field of organizational behavior, while maintaining its hallmark features – a clear writing style, cutting-edge content, and intuitive pedagogy. The text is lucid and makes current, relevant research come alive for readers. The book holds significance as a textbook for students of management and practicing professionals in organizations with engaging, cutting-edge material that aids to understand and connect with organizational behavior.

Features

- Employability Skills Matrix to support the development of skills employers are looking for in today's business graduates.
- Updated - Opening-Chapter Vignettes bring current business trends and events to the forefront
- Career Objectives in every chapter provide advice, in a question-and-answer format to help students think through issues they may face in the workforce today.
- Updated - End-of-Chapter Experiential Activities, Ethical Dilemmas, and Cases.
- Real-world examples of organizational behavior
- Includes latest Indian case studies and research

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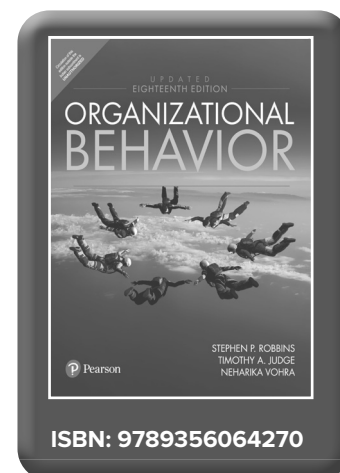
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| 14. Power and Politics | |

About the Author(s)

Stephen P. Robbins, San Diego State University.

Timothy A. Judge; The Ohio State University.

Neharika Vohra; Indian Institute of Management Ahmedabad.



Effective Communication and Soft Skills

Nitin Bhatnagar, Mamta Bhatnagar

Pages: 448

Year: 2011



About the Book

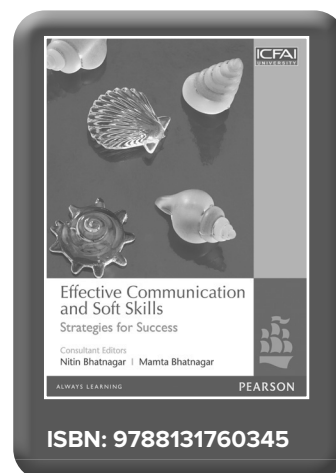
This book provides a clear understanding of the attributes of good communication vis-à-vis soft skills and hard skills. It guides you through each set of skills and provides practice and assessment modules to sharpen learning, while covering all the four tenets of language learning, listening, speaking, reading and writing. Covering all the topics essential for teachers and students of BCom, BBA and MBA and mass communications, as well as professionals in all industries, *Soft Skills and Communication Skills* is a complete manual to grooming yourself for inter-personal communication in the professional world.

Features

- Situational case studies, illustrations and flow charts for clear grasp of concepts
- Model questions for practice and guidelines for answering difficult problems
- Highlights the linkages between soft skills and hard skills, illustrating the manner in which they can be utilized together in professional situations

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7. Models of Communication
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9. Pedagogy and Communication
10. Communication Skills
11. Communication: Spoken English
12. Communication: Written English
13. Emotional Skills
14. Interpersonal Effectiveness
15. Assertiveness Skills
16. Conflict Management and Negotiation Skills
17. Team-building Skills
18. Time-management Skills
19. Model Question Papers



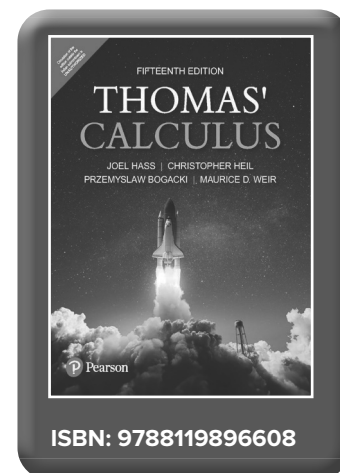
Remedial Mathematics

Thomas' Calculus, 15/e

Maurice D. Weir, Joel Hass, Christopher Heil,
Przemyslaw Bogacki

Pages: 1220

Year: 2024



About the Book

Thomas' Calculus, goes beyond memorizing formulas and routine procedures to help students develop deeper understanding. It guides students to a level of mathematical proficiency and maturity needed for the course, with support for those who require it through its balance of clear and intuitive explanations, current applications and generalized concepts. The 15th Edition meets the needs of students with increasingly varied levels of readiness for the calculus sequence. This revision also adds exercises, revises figures and narrative for clarity, and updates many applications with modern topics.

Features

- Many narrative clarifications and revisions have been made throughout the text.
- A new appendix on Determinants and Gradient Descent has been added, covering many topics relevant to students interested in Machine Learning and Neural Networks.
- Many updated graphics and figures have been enhanced to bring out clear visualization and mathematical correctness.
- Many exercise instructions have been clarified, such as suggesting where the use of a calculator may be needed.
- Notation of inverse trig functions has been changed throughout the text to favor $\arcsin$ notation over $\sin^{-1}$, etc.

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| 5. Integrals | Answers to Odd-Numbered Exercises |
| 6. Applications of Definite Integrals | Applications Index |
| 7. Transcendental Functions | Subject Index |
| 8. Techniques of Integration | A Brief Table of Integrals |
| 9. First-Order Differential Equations | Credits |

About the Author(s)

George B. Thomas, Jr. (late) of the Massachusetts Institute of Technology, was a professor of mathematics for thirty-eight years; he served as the executive officer of the department for ten years and as graduate registration officer for five years. Thomas held a spot on the board of governors of the Mathematical Association of America and on the executive committee of the mathematics division of the American Society for Engineering Education.

Joel Hass received his PhD from the University of California Berkeley. He is currently a professor of mathematics at the University of California Davis. He has co-authored widely used calculus texts as well as calculus study guides. He is currently on the editorial board of several publications, including the Notices of the American Mathematical Society.

Christopher Heil received his PhD from the University of Maryland. He is currently a professor of mathematics at the Georgia Institute of Technology.

Maurice D. Weir (late) of the Naval Postgraduate School in Monterey, California was Professor Emeritus as a member of the Department of Applied Mathematics. He held a DA and MS from Carnegie-Mellon University and received his BS at Whitman College.

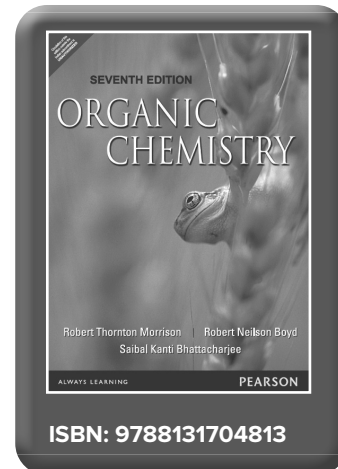
Pharmaceutical Organic Chemistry

Organic Chemistry, 7/e

Robert Thornton Morrison, Robert Neilson Boyd,
Saibal Kanti Bhattacharjee

Pages: 1508

Year: 2010



About the Book

As in the earlier editions, the book conveys the important fundamentals and principles of the subject in a simple and easily understandable manner.

Contents

Part 1: Fundamentals of Organic Chemistry

1. Structures of Organic Compounds
2. Structural Theory
3. Symmetry of Organic Molecules (Molecular Dissymmetry)
4. Types of Reactions of Organic Compounds
5. Alkanes, Cycloalkanes and Aromatic Hydrocarbons
6. Part 2: Chemistry of Functional Groups Alkenes
7. Alkynes
8. Alkyl Halides Nucleophilic Substitutions, SN Reactions
9. Aryl Halides Nucleophilic Aromatic Substitution (SNAr Reactions)
10. Alcohols and Ethers
11. Phenols
12. Aldehydes and Ketones Nucleophilic Addition
13. Carboxylic Acids
14. Functional Derivatives of Carboxylic Acids Nucleophilic Acyl Substitution
15. Amines

Part 3: Special Topics

16. Heterocyclic Compounds
17. Purification and Identification of Organic Compounds: Spectroscopic Analysis of Organic Compounds
18. Organic Synthesis
19. Oxidation and Reduction Electroorganic Synthesis
20. Molecular Orbitals; Orbital Symmetry (Pericyclic

Reactions)

21. Organic Photochemistry
22. Synthetic Organic Compounds of Commercial Importance: Synthetic Dyes and Macromolecules
23. Symphoria (Anchimeric Assistance) Neighboring Group Effects. Catalysis by Transition Metal Complexes
24. Introduction to Supramolecular Chemistry Host–Guest Chemistry

Part 4: (Biomolecules and Bioorganic Chemistry)

25. Lipids Fats, Steroids, Terpenes, and Prostaglandins
26. Carbohydrates I: Monosaccharides. Carbohydrates II: Disaccharides and Polysaccharides
27. Alkaloids
28. Amino Acids and Proteins Molecular Biology
29. Enzymes, Co-Enzymes and Vitamins
30. Nucleic Acids Nucleotides, Polynucleotides and Nucleosides
31. Drugs Chemotherapeutic and Pharmacodynamic Agents

Part 5: Contemporary and Future Organic Chemistry

32. Nanoparticles (Size-Dependent Chemistry)
33. Future Devices and Challenges of Chemistry of this Century Molecular Machines or Nanomachines

About the Author(s)

Robert Thornton Morrison, New York University

Robert Neilson Boyd, New York University

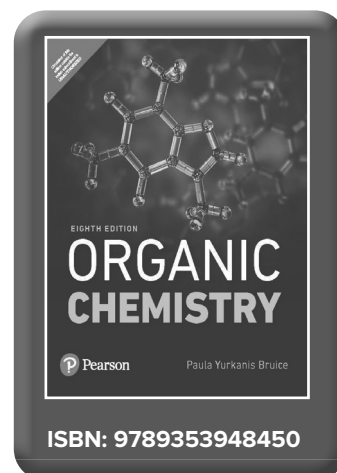
Saibal Kanti Bhattacharjee, Gauhati University

Organic Chemistry, 8/e

Paula Yurkanis Bruice

Pages: 1368

Year: 2020



About the Book

Paula Bruice's presentation in organic chemistry, eighth edition provides mixed-science majors with the conceptual foundations, chemical logic, and problem-solving skills they need to reason their way to solutions for diverse problems in synthetic organic chemistry, biochemistry, and medicine. The eighth edition builds a strong framework for thinking about organic chemistry by unifying principles of reactivity that students will apply throughout the course, discouraging memorization. With more applications than any other textbook, Dr. Bruice consistently relates structure and reactivity to what occurs in our own cells and reinforces the fundamental reason for all chemical reactions—electrophiles react with nucleophiles. New streamlined coverage of substitution and elimination, updated problem-solving strategies, synthesis skill-building applications and tutorials guide students throughout fundamental and complex content in both the first and second semesters of the course.

Features

The textbook bridges the gap between organic chemistry and biochemistry. Because bioorganic chemistry is the bridge between organic chemistry and biochemistry, the text emphasizes that the organic reactions that chemists carry out in the laboratory are similar to those performed by nature inside a cell. These connections are especially important to biological science majors. -Revised, accuracy-checked text provides increased exam relevancy. -Improved visuals and organization engage students with difficult subject matter, organizes the chapter content and improves ease of use. -Strengthened emphasis on the strategies needed to solve problems and master the content. -New and restructured features give students additional conceptual and skill building support. -Organizing What We Know about the reactions of organic Compounds Table. -Content Updates and Revisions to the Table of Contents streamline and improve clarity in the presentation.

Contents

PART ONE: An Introduction to the Study of Organic Chemistry

1. Remembering General Chemistry: Electronic Structure and Bonding
2. Acids and Bases: Central to Understanding Organic Chemistry
3. An Introduction to Organic Compounds: Nomenclature, Physical Properties, and Structure
4. Isomers: The Arrangement of Atoms in Space
5. Alkenes: Structure, Nomenclature, and an Introduction to Reactivity • Thermodynamics and Kinetics
6. The Reactions of Alkenes • The Stereochemistry of Addition Reactions
7. The Reactions of Alkynes • An Introduction to Multistep Synthesis
8. Delocalized Electrons: Their Effect on Stability, pKa, and the Products of a Reaction • Aromaticity and Electronic Effects: An Introduction to the Reactions of Benzene

PART THREE: Substitution and Elimination Reactions

9. Substitution and Elimination Reactions of Alkyl Halides
10. Reactions of Alcohols, Ethers, Epoxides, Amines, and

Sulfur-Containing Compounds

11. Organometallic Compounds
12. Radicals

PART FOUR: Identification of Organic Compounds

13. Mass Spectrometry; Infrared Spectroscopy; and UV/Vis Spectroscopy

14. NMR Spectroscopy

PART FIVE: Carbonyl Compounds

15. Reactions of Carboxylic Acids and Carboxylic Acid Derivatives
16. Reactions of Aldehydes and Ketones • More Reactions of Carboxylic Acid Derivatives
17. Reactions at the α -Carbon

PART SIX: Aromatic Compounds

18. Reactions of Benzene and Substituted Benzenes
19. More About Amines • Reactions of Heterocyclic Compounds

PART SEVEN: Bioorganic Compounds

20. The Organic Chemistry of Carbohydrates
21. Amino Acids, Peptides, and Proteins

22. Catalysis in Organic Reactions and in Enzymatic Reactions
23. The Organic Chemistry of the Coenzymes, Compounds Derived from Vitamins
24. The Organic Chemistry of the Metabolic Pathways
25. The Organic Chemistry of Lipids
26. The Chemistry of the Nucleic Acids
- PART EIGHT: Special Topics in Organic Chemistry
27. Synthetic Polymers
28. Pericyclic Reactions Appendices

About the Author(s)

Paula Yurkanis Bruice is from the University of California, Santa Barbara. Bruice earned her Ph.D. in chemistry from the University of Virginia. She then received an NIH postdoctoral fellowship for study in the Department of Biochemistry at the University of Virginia Medical School and held a postdoctoral appointment in the Department of Pharmacology at the Yale School of Medicine. Paula has been a member of the faculty at the University of California, Santa Barbara since 1972, where she has received the Associated Students Teacher of the Year Award, the Academic Senate Distinguished Teaching Award, two Mortar Board Professor of the Year Awards, and the UCSB Alumni Association Teaching Award. Her research interests center on the mechanism and catalysis of organic reactions, particularly those of biological significance

Organic Chemistry, Volume 1, 6/e

I. L. Finar

Pages: 966

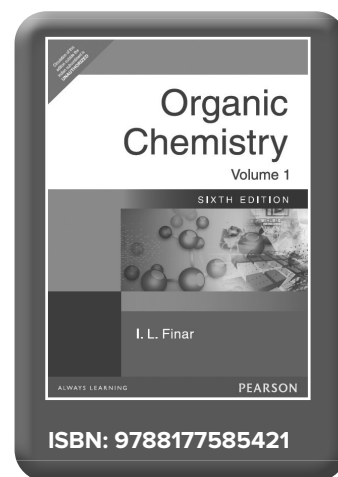
Year: 2005

About the Book

In the sixth edition of Dr. Finar's best-selling student text, a great deal of material has been rewritten and many new topics have been added. The arrangement of the subject matter is based on homologous series and SI units have been used throughout the text.

Contents

1. Determination of Structure
2. Properties of Molecules
3. Alkanes
4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
13. Nitrogen compounds
14. Aliphatic compounds of sulphur, phosphorus, silicon and boron
15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
21. Aromatic halogen compounds
22. Aromatic nitro-compounds
23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry



About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.

Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

Pages: 956

Year: 2005

About the Book

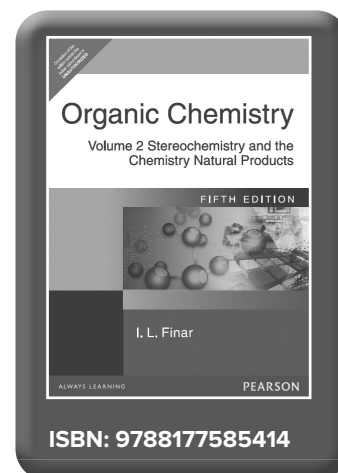
Organic Chemistry is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Fundamental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and chemical structures, and then proceeds to a detailed account of stereochemistry. The later chapters are devoted to the most typical compounds of natural products and the problems involved. A selected number of reading references are given at the end of each chapter.

Contents

1. Physical properties and chemical constitution
2. Optical isomerism
3. Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
4. Geometrical isomerism, stereochemistry of alicyclic compounds
5. Stereochemistry of biphenyl compounds
6. Stereochemistry of some elements other than carbon
7. Carbohydrates
8. Terpenoids
9. Carotenoids
10. Polycyclic aromatic hydrocarbons
11. Steroids
12. Heterocyclic compounds containing two or more hetero-atoms
13. Amino-acids and proteins
14. Alkaloids
15. Anthocyanins
16. Purines and nucleic acids
17. Vitamins
18. Chemotherapy
19. Haemoglobin, chlorophyll and phthalocyanines

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Problems and Their Solution in Organic Chemistry

I. L. Finar

Pages: 360

Year: 2006

About the Book

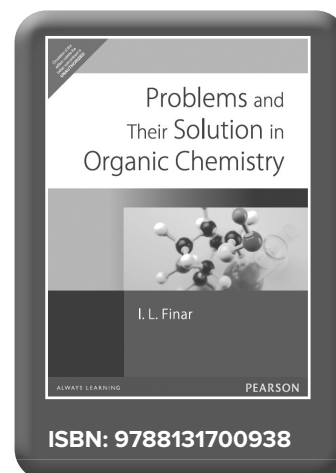
The first part of this book collects together the questions set out at end of each chapter in the authors Textbook of Organic Chemistry, Volume 1 (sixth edition). The second part of this book gives the possible solutions, which are linked with an explanation of the sort of reasoning used in order to arrive at one of the answers. In many cases, several answers are given for one question; and in each set of questions, there is at least one which involves the completion of equations. The result is a book which can be used independently of the main volume. This book helps in acquiring a better understanding of the basic principles of organic chemistry and in revising a large amount of the subject matter quickly.

Contents

1. Determination of Structure
2. Properties of Molecules
3. Alkanes
4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
13. Nitrogen compounds
14. Aliphatic compounds of sulphur, phosphorus, silicon and boron
15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
21. Aromatic halogen compounds
22. Aromatic nitro-compounds
23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

About the Author(s)

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Vogel's Textbook of Practical Organic Chemistry, 5/e

Brian S. Furniss, Antony J. Hannaford, Peter W.G. Smith, Austin R. Tatchell

Pages: 1544

Year: 2006

About the Book

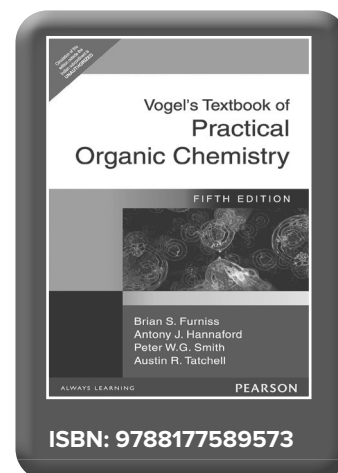
Still recognized as the definitive text on practical topics related to organic chemistry, this text is relied upon by undergraduates, postgraduate students, and professional organic chemists. Topics covered include the structural and theoretical principles required when designing a synthesis; the disconnection or synthon approach; the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds; and developments in reaction techniques.

Features

- An introductory chapter on the structural and theoretical principles required when designing a synthesis.
- The disconnection on synthon approach now integrated into the text, and the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds.
- Synthesis methodology is expanded to cover a range of new reagents, including oxidants and reductants; reagents for asymmetric synthesis; and those derived from lithium, boron, silicon, phosphorous and sulphur.
- Recent developments in reaction techniques which include: handling of air-sensitive and moisture-sensitive compounds; new chromatographic procedures; phase transfer catalysis; and solid support reagents.
- Over 100 new experiments selected from the literature to illustrate new reagents and techniques, and the operation of protection, selectivity and control in synthesis.
- A more detailed treatment of carbon-13 n.m.r. spectroscopy, and the interpretation of spectroscopic data for many of synthesized compounds.

Contents

1. Organic Synthesis.
2. Experimental Techniques.
3. Spectroscopic Methods and the Interpretation of Spectra.
4. Solvents and Reagents.
5. Aliphatic Compounds.
6. Aromatic Compounds.
7. Selected Alicyclic Compounds.
8. Selected Heterocyclic Compounds.
9. Investigation and Characterization of Organic Compounds.
10. Physical Constants of Organic Compounds.



Practical Organic Chemistry

F. G. Mann, B. C. Saunders

Pages: 600

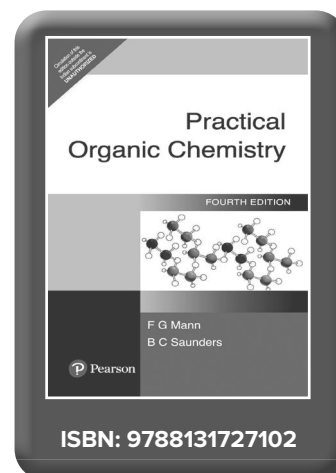
Year: 2009

About the Book

This book has proved useful for research as well as for teaching purpose. The fourth edition of this book was distinguished from its predecessors by a greater emphasis on semi-micro methods and modern techniques and reactions. While updating the book in several important aspects, namely, chromatography, reaction mechanism, and safety and first-aid measures.

Contents

Part I: Methods and Manipulation
Part II: Preparations
Part III: Reactions and Identification of Organic Compounds
Part IV: Quantitative Analysis
Part V: Simple Enzyme Reactions



Organic and Bio-Organic Mechanisms

Michael I. Page, Andrew Williams

Pages: 312

Year: 2009

About the Book

This text provides a comprehensive and detailed discussion of the investigation of organic and bioorganic reaction mechanisms. It addresses questions such as: 'How are bonds between atoms rearranged?', 'What sort of structural changes take place to cause bond fission and formation?' and 'How do catalysts lower the activation energies of reactions?'

Features

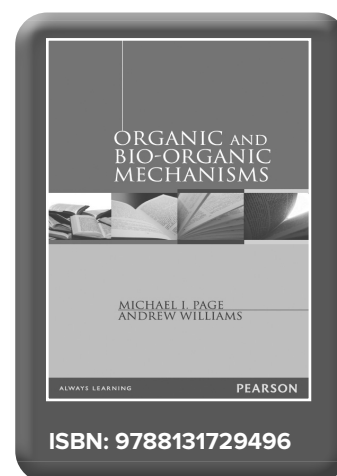
- Techniques for diagnosis of mechanism not previously compiled from research literature.
- An important bridge between fundamental studies and mechanisms in solution.
- Key references from classic papers to the latest research literature.

Contents

1. The Transition State
2. Kinetics and Mechanism
3. The Effect of Changes in Reactant Structure
4. Kinetic and Equilibrium Isotope Effects
5. Transition States from External Effects
6. Transition State Structures - Anomalies
7. Bioorganic Group Transfer Reactions
8. Catalysis
9. Complexation Catalysis
10. Some Enzyme Systems

About the Author (s)

Michael I. Page, Huddersfield University
Andrew Williams, University of Kent at Canterbury



A Guidebook to Mechanism in Organic Chemistry, 6/e

Peter Sykes

Pages: 428

Year: 2005

About the Book

This classic textbook on mechanistic organic chemistry, characterized by its clarity, careful choice of examples, and its general approach designed to lead to a greater understanding of the subject matter. The book is aimed clearly at the needs of the student, with a thorough understanding of, and provision for, the potential conceptual difficulties he or she is likely to encounter. The book's success in achieving these goals is reflected in the opinion of one reviewer who says, "Sykes remains the bible of mechanistic organic chemistry for thousands of undergraduates, and there is certainly no English language publication of which I am aware which comes even close to challenging it in terms of clarity and coverage."

Features

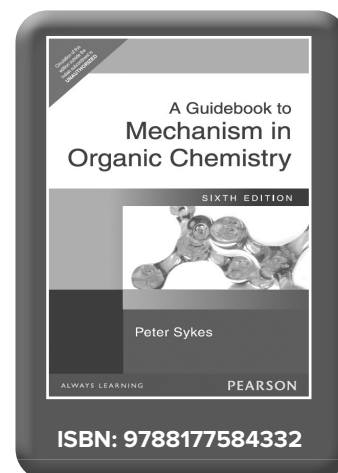
- New – topics introduced in this edition : ipso aromatic substitution; the mechanistic borderline in nucleophilic substitution; more use of activation parameters; Dimorth's ET parameter; Hammett's σ^+ and spectroscopic data; and ^{13}C n.m.r. in biogenesis.
- New – thoroughly revised text with improved explanations, more examples and increased clarity.

Contents

1. Structure, Reactivity, and Mechanism.
2. Energetics, Kinetics, and the Investigation of Mechanism.
3. The Strengths of Acids and Bases.
4. Nucleophilic Substitution at a Saturated Carbon Atom.
5. Carbocations, Electron-deficient N and O Atoms and Their Reactions.
6. Electrophilic and Nucleophilic Substitution in Aromatic Systems.
7. Electrophilic and Nucleophilic Addition to $\text{C}=\text{C}$.
8. Nucleophilic Addition to $\text{C}=\text{O}$.
9. Elimination Reactions.
10. Carbanions and Their Reactions.
11. Radicals and Their Reactions.
12. Symmetry Controlled Reactions.
13. Linear Free Energy Relationships.

About the Author

Peter Sykes, Christ's College, Cambridge



Elementary Practical Organic Chemistry: Small Scale Preparations Part 1, 2/e

Arthur I. Vogel

Pages: 456

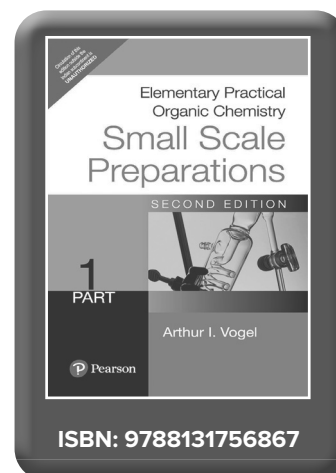
Year: 2010

Features

- Experimental Techniques
- Mechanism of all reactions described
- Introduction of a number of reactions and experimental procedures of general interest

Contents

1. Theory of General Technique
2. Experimental Technique
3. Aliphatic Compounds
4. Aromatic Compounds
5. Miscellaneous Compounds and Miscellaneous Reactions



Elementary Practical Organic Chemistry: Qualitative Organic Analysis Part 2, 2/e

Arthur I. Vogel

Pages: 448

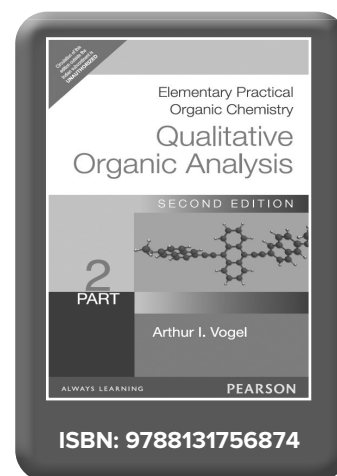
Year: 2010

About the Book

A dedicated chapter on “The use of spectroscopic methods in qualitative organic analysis” which includes the essentials from a practical viewpoint of ultraviolet and visible spectroscopy and infrared spectroscopy and mass spectroscopy. These spectroscopy techniques are now-days of such great importance that no book on qualitative organic analysis can be regarded complete without their inclusion.

Contents

1. Determination of physical constants
2. Qualitative analysis for the elements
3. The solubility classes
4. Reactions and characterization of selected classes of organic compounds
5. Class reactions
6. The preparation of derivatives
7. Qualitative analysis of mixtures of organic compounds
8. The use of spectroscopic methods in qualitative organic analysis
9. Physical constants of organic compounds



Elementary Practical Organic Chemistry: Quantitative Organic Analysis Part 3, 2/e

Arthur I. Vogel

Pages: 382

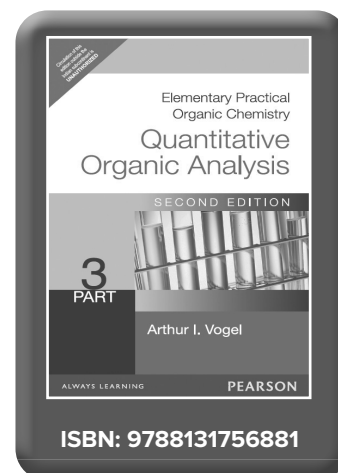
Year: 2010

Features

- Numerous Experiments
- Coverage of quantitative organic analysis through the medium of functional groups

Contents

- | | |
|---|--|
| 1. Determination of selected elements in organic compounds | 14. Carbohydrates (Sugars) |
| 2. General discussion of titrations in non-aqueous solvents | 15. Nitro, Nitrates and azo groups |
| 3. Hydroxyl groups (Alcohols) | 16. Unsaturation |
| 4. Adjacent hydroxyl groups | 17. Alkoxyl groups |
| 5. Hydroxyl groups (Phenols) | 18. C-Methyl, O-acetyl and N-acetyl groups |
| 6. Amino groups | 19. Active Hydrogen |
| 7. Salts of amines | 20. Enols |
| 8. Amino acids | 21. Imides |
| 9. Carboxyl groups | 22. Sulphonamides, Thiols, Sulphides and disulphides |
| 10. Salts of carboxylic acids | 23. Determination using ION exchange resins |
| 11. Anhydrides of carboxylic acids | 24. Some application of the karl fischer reagent |
| 12. Esters of carboxylic acids | 25. Alpha-epoxy groups |
| 13. Aldehydes and ketones | 26. Miscellaneous determinations |



Organic Chemistry, 9/e

Leroy G. Wade, Jr., Jan William Simek, Maya Shankar Singh

Pages: 1578

Year: 2020

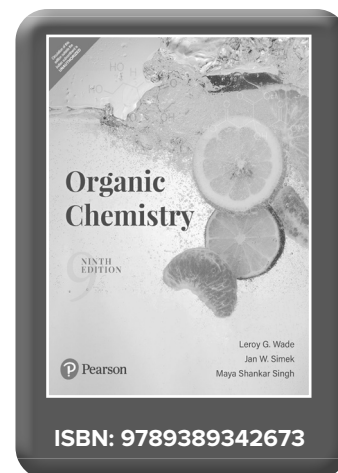


About the Book

Organic Chemistry, Ninth Edition gives students a contemporary overview of organic principles and the tools for organizing and understanding reaction mechanisms and synthetic organic chemistry with unparalleled and highly refined pedagogy. This text presents key principles of organic chemistry in the context of fundamental reasoning and problem solving. Authored to complement how students use a textbook today, new Problem Solving Strategies, Partially Solved Problems, Visual Reaction Guides and Reaction Starbursts encourage students to use the text before class as a primary introduction to organic chemistry as well as a comprehensive study tool for working problems and/or preparing for exams.

Features

- New chapters on Phenols and Quinones and Asymmetric Synthesis.
- Green Chemistry is emphasized with presentation of less-toxic, and environmentally friendly reagents.
- Enriched and updated treatment of Acid/Base Chemistry, Study of Chemical Reactions, Stereochemistry, Alkyl Halides, Alkenes, Dienes, Alkynes, Thiols, Aromatic Compounds, Amines, and Polymers.



- Over 100 new problems include more synthesis problems and problems based on recent literature.
- Over 80 Mechanism boxes help students understand how specific reactions occur by zooming in on each individual step in detail.
- Updated art throughout to provide consistency and clarity in the text, giving detailed representations of molecular and orbital art.

Contents

Preface

- | | |
|---|--|
| 1. Introduction to Organic Chemistry | 18. Condensations and Alpha Substitutions of Carbonyl Compounds |
| 2. Structure and Properties of Organic Molecules: Acids and Bases | 19. Phenols and Quinones |
| 3. The Study of Chemical Reactions | 20. Amines |
| 4. Structure and Stereochemistry of Alkanes and Cycloalkanes | 21. Carbohydrates |
| 5. Structure and Synthesis of Alkenes | 22. Amino Acids, Peptides, Proteins and Nucleic Acids |
| 6. Reactions of Alkenes and Dienes | 23. Polymeric Materials |
| 7. Alkynes | 24. Asymmetric Synthesis |
| 8. Alkyl Halides; Nucleophilic Substitution and Elimination | 25. Conjugated Systems, Orbital Symmetry, and Ultraviolet Spectroscopy |
| 9. Alcohols and Thiols: Structure and Synthesis | 26. Infrared Spectroscopy and Mass Spectrometry |
| 10. Reactions of Alcohols | 27. Nuclear Magnetic Resonance Spectroscopy |
| 11. Ethers and Thioethers | 28. Lipids |
| 12. Stereochemistry | Appendices |
| 13. Aromatic Compounds | Brief Answers to Selected Problems |
| 14. Reactions of Aromatic Compounds | Photo Credits |
| 15. Ketones and Aldehydes | Index |
| 16. Carboxylic Acids | Color Illustrations |
| 17. Carboxylic Acid Derivatives | |

About the Author(s)

Leroy G. Wade, Whitman College

Jan W. Simek, Cal Poly State University

Maya Shankar Singh Department of Chemistry, Institute of Science, Banaras Hindu University

Heterocyclic Chemistry, 3/e

Thomas L. Gilchrist

Pages: 432

Year: 2006

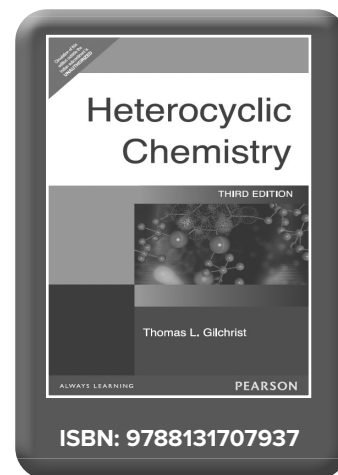


About the Book

This popular text has been completely revised to reflect recent advances in the subject. Deals with the properties of ring systems and general methods of synthesis, providing a unique overview of the subject area. Includes a guide to the naming of the ring systems, invaluable to those unfamiliar with the area.

Features

- Includes recent examples of organometallic reagents which are increasingly used in the synthesis and reactions of heterocyclic compounds.
- New reaction schemes illustrating the use of heterocycles as synthetic intermediates.



Contents

1. Introduction
2. Aromatic Heterocycles
3. Nonaromatic Heterocycles
4. Methods of Ring Synthesis
5. Six-membered Rings
6. Five-membered Rings with One Heteroatom
7. Six-membered Rings with Two or More Heteroatoms
8. Five-membered Rings with Two or More Heteroatoms
9. Three and Four Membered Rings
10. Seven and Larger Membered Ring Compounds
11. Nomenclature

About the Author(s)

Thomas L. Gilchrist is an academic researcher from University of Liverpool.

Biochemistry

Introduction to Biochemistry and Metabolism

D. Anandhi

Pages: 416

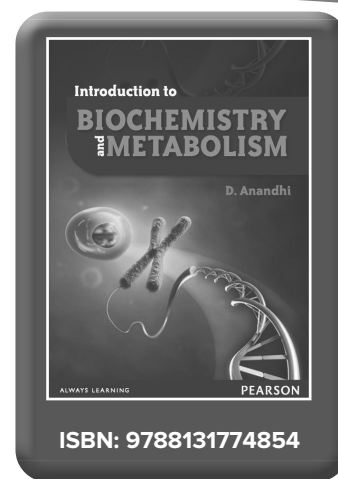
Year: 2014



About the Book

Designed as per the UGC curriculum, Introduction to Biochemistry and Metabolism meets the syllabus requirements of all universities offering a course on biochemistry and metabolism.

The subject, a core paper for the students of botany, zoology, biotechnology and bioinformatics, is dealt with in detail across 13 chapters with emphasis on the metabolism of amino acids, carbohydrates, lipids and high energy compounds. Replete with illustrations and schematic representations, the book reinforces theoretical concepts with its concise, easy-to-follow approach making it an ideal textbook on the subject.



Features

- Comprehensive coverage of free radicals, antioxidation and proteins.
- Focus on enzymes, fatty acids and their metabolic activities.
- Elucidation of the detoxification mechanism.
- Disseminates information on diseases caused due to enzyme deficiencies.
- 150 illustrations and schematics to help readers understand how biochemical reactions and metabolic pathways work
- Includes laboratory techniques for qualitative and quantitative lipid analysis and estimation of proteins in food samples.

Contents

- Preface
1. Chapter 1 Cell
 2. Chapter 2 Carbohydrates
 3. Chapter 3 Amino acids
 4. Chapter 4 Lipids
 5. Chapter 5 Nucleic acid
 6. Chapter 6 Enzymes
 7. Chapter 7 High energy compounds
 8. Chapter 8 Introduction to metabolism
 9. Chapter 9 Amino acid metabolism
 10. Chapter 10 Lipid metabolism
 11. Chapter 11 Nucleotide metabolism
 12. Chapter 12 Detoxication mechanism
 13. Chapter 13 Antibiotics
- Index

About the Author

D Anandhi is from the department of biochemistry, D G Vaishnav College, Chennai.

Introduction to Bioinformatics

Teresa Attwood, David J. Parry-Smith, Dr Samiron Phukan

Pages: 920

Year: 2007



About the Book

Bioinformatics, the application of computers in the biological sciences, especially analysis of biological sequence data, is becoming an essential tool in molecular biology as genome projects generate vast quantities of data. With new sequences being added to DNA databases on an average of once a minute, there is a pressing need to convert this information into biochemical and biophysical knowledge by deciphering the structural, functional and evolutionary clues encoded in the language of biological sequences.

Features

- Unique guide to bioinformatics linked to an interactive practical on the World Wide Web
- Introduces key databases, tools and resources, and outlines pitfalls of methods
- The Web link integrates conventional and Web-based publishing, allowing interactive exploration of concepts discussed in the book
- Includes numerous Further Reading suggestions, Web references and a useful Glossary

Contents

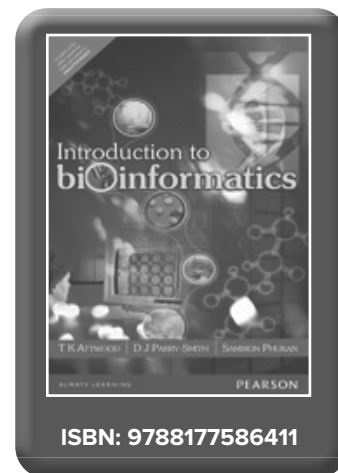
1. Overview
2. Introduction
3. Information networks
4. Protein information resources
5. Genome information resources
6. DNA sequence analysis
7. Pairwise alignment techniques
8. Multiple sequence alignment
9. Secondary database searching
10. Building a sequence search protocol
11. Analysis packages
12. Probability and statistics

About the Author(s)

Dr Teresa K. Attwood is a Royal Society University Research fellow and Senior Lecturer in the School of Biological Sciences, University of Manchester, UK, Visiting Fellow at the European Bioinformatics Institute, and author and curator of the PRINTS protein fingerprint database.

Dr David J. Parry-Smith is Informatics Director at Cambridge Drug Discovery Limited, Cambridge, UK, and works mainly with algorithm development.

Dr Samiron Phukan is Senior Scientist, SDMD Drug Discovery at Jubilant Biosys Limited, Bangalore, India.



Environmental Studies

Anindita Basak

Pages: 920

Year: 2009



About the Book

This book covers the course requirements for Environmental Studies for undergraduate students of all disciplines. It aims to educate the readers about nature, ecosystems, natural resources, biodiversity, pollution, and the current challenges faced by environmentalists. It integrates the social impact associated with environmental issues through national and international case studies.

Features

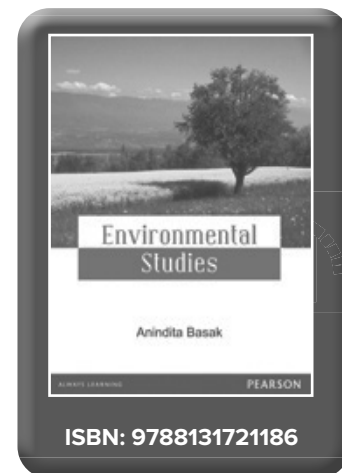
- This book completely follows the UGC model curriculum.
- Discusses current topics in the global environment scenario such as ecological footprint, carbon trading, and emission trading
- Equipped with a complete list of ISO standards for environment management systems
- Entire unit devoted to field work with more than 10 experiments for quantitative evaluation of ecosystems
- Has more than 30 case studies to illustrate environmental issues
- An updated list of international conventions and protocols
- Comprehensive glossary for quick recapitulation of technical terms
- Updated statistical information on air quality standards, permissible exhaust limit, and so on.

Contents

1. Definition, scope and importance, need for public awareness, environment and its components
2. Natural resources: Renewable and non-renewable resources Natural Resources and associated problems
3. Ecosystems
4. Biodiversity and its conservation
5. Environmental pollution
6. Social Issues and the environment
7. Human population and the environment
8. Field work

About the Author(s)

Dr. Anindita Basak is presently Reader in Chemistry at Sushilavati Government Women's College, Rourkela. She was also deputed as a visiting scientist at National Institute of Technology, Rourkela from 2004 to 2006. She has published 16 papers in journals of national and international repute. She has extensive research experience in different fields of chemistry, polymer science, and environmental science.



Environmental Studies

D. L. Manjunath

Pages: 920

Year: 2007



About the Book

Environmental Studies, focuses in clear and simple language, on the basic scientific content necessary to understand environmental issues. It details the latest developments in the field and reflects several major shifts in environmental science education this century. Designed as a foundational text for environmental science courses and spread over eleven chapters, the book includes various aspects of ecology such as ecosystems, environmental impacts, and current environmental issues.

Features

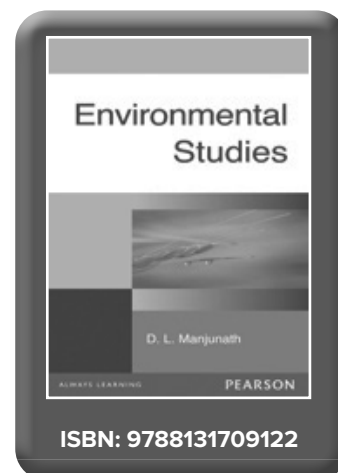
- Pedagogical treatment of the subject to help students grasp fundamentals
- A strong focus on statistical data that illustrates the deterioration of our surroundings, with emphasis on environmental abuse
- Images that portray the current degeneration of our environment

Contents

1. The Earth, Fact File
2. Environment and Ecology
3. Environmental Impacts of Human Activities
4. Water Resources and Water Quality
5. Mineral Resources and Mining
6. Forests
7. Bio-Geo-Chemical Cycles
8. Matter and Energy Fundamentals
9. Environmental Pollution
10. Current Environmental Issues of Importance
11. Environmental Protection

About the Author(s)

D. L. Manjunath, Head, Department of Civil Engineering, Malnad College of Engineering, Hassan



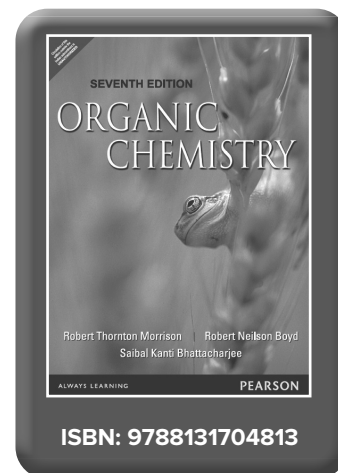
Pharmaceutical Organic Chemistry-II

Organic Chemistry, 7/e

Robert Thornton Morrison, Robert Neilson Boyd,
Saibal Kanti Bhattacharjee

Pages: 1508

Year: 2010



About the Book

As in the earlier editions, the book conveys the important fundamentals and principles of the subject in a simple and easily understandable manner.

Contents

Part 1: Fundamentals of Organic Chemistry

1. Structures of Organic Compounds
2. Structural Theory
3. Symmetry of Organic Molecules (Molecular Dissymmetry)
4. Types of Reactions of Organic Compounds
5. Alkanes, Cycloalkanes and Aromatic Hydrocarbons

Part 2: Chemistry of Functional Groups Alkenes

6. Alkynes
7. Alkyl Halides Nucleophilic Substitutions, SN Reactions
8. Aryl Halides Nucleophilic Aromatic Substitution (SNAr Reactions)
9. Alcohols and Ethers
10. Phenols
11. Aldehydes and Ketones Nucleophilic Addition
12. Carboxylic Acids
13. Functional Derivatives of Carboxylic Acids Nucleophilic Acyl Substitution
14. Amines

Part 3: Special Topics

15. Heterocyclic Compounds
16. Purification and Identification of Organic Compounds: Spectroscopic Analysis of Organic Compounds
17. Organic Synthesis
18. Oxidation and Reduction Electroorganic Synthesis
19. Molecular Orbitals; Orbital Symmetry (Pericyclic Reactions)
20. Organic Photochemistry

21. Synthetic Organic Compounds of Commercial Importance: Synthetic Dyes and Macromolecules
22. Symphoria (Anchimeric Assistance) Neighboring Group Effects. Catalysis by Transition Metal Complexes
23. Introduction to Supramolecular Chemistry Host–Guest Chemistry

Part 4: (Biomolecules and Bioorganic Chemistry)

24. Lipids Fats, Steroids, Terpenes, and Prostaglandins
25. Carbohydrates I: Monosaccharides. Carbohydrates II: Disaccharides and Polysaccharides
26. Alkaloids
27. Amino Acids and Proteins Molecular Biology
28. Enzymes, Co-Enzymes and Vitamins
29. Nucleic Acids Nucleotides, Polynucleotides and Nucleosides
30. Drugs Chemotherapeutic and Pharmacodynamic Agents

Part 5: Contemporary and Future Organic Chemistry

31. Nanoparticles (Size-Dependent Chemistry)
32. Future Devices and Challenges of Chemistry of this Century Molecular Machines or Nanomachines

About the Author(s)

Robert Thornton Morrison, New York University

Robert Neilson Boyd, New York University

Saibal Kanti Bhattacharjee, Gauhati University

Organic Chemistry, Volume 1, 6/e

I. L. Finar

Pages: 966

Year: 2005

About the Book

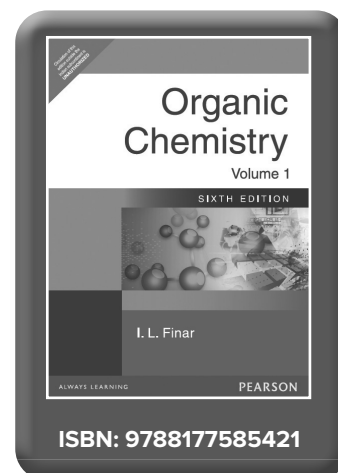
In the sixth edition of Dr. Finar's best-selling student text, a great deal of material has been rewritten and many new topics have been added. The arrangement of the subject matter is based on homologous series and SI units have been used throughout the text.

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4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
13. Nitrogen compounds
14. Aliphatic compounds of sulphur, phosphorus, silicon and boron
15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
21. Aromatic halogen compounds
22. Aromatic nitro-compounds
23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Vogel's Textbook of Practical Organic Chemistry, 5/e

Brian S. Furniss, Antony J. Hannaford, Peter W.G. Smith, Austin R. Tatchell

Pages: 1544

Year: 2006

About the Book

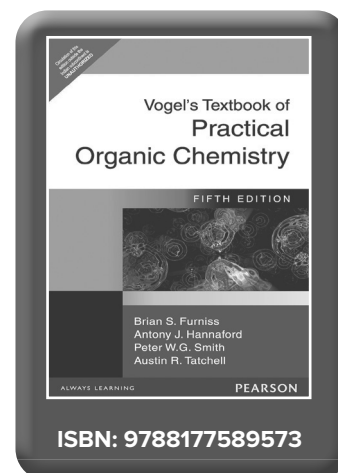
Still recognized as the definitive text on practical topics related to organic chemistry, this text is relied upon by undergraduates, postgraduate students, and professional organic chemists. Topics covered include the structural and theoretical principles required when designing a synthesis; the disconnection or synthon approach; the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds; and developments in reaction techniques.

Features

- An introductory chapter on the structural and theoretical principles required when designing a synthesis.
- The disconnection on synthon approach now integrated into the text, and the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds.
- Synthesis methodology is expanded to cover a range of new reagents, including oxidants and reductants; reagents for asymmetric synthesis; and those derived from lithium, boron, silicon, phosphorous and sulphur.
- Recent developments in reaction techniques which include: handling of air-sensitive and moisture-sensitive compounds; new chromatographic procedures; phase transfer catalysis; and solid support reagents.
- Over 100 new experiments selected from the literature to illustrate new reagents and techniques, and the operation of protection, selectivity and control in synthesis.
- A more detailed treatment of carbon-13 n.m.r. spectroscopy, and the interpretation of spectroscopic data for many of synthesized compounds.

Contents

1. Organic Synthesis.
2. Experimental Techniques.
3. Spectroscopic Methods and the Interpretation of Spectra.
4. Solvents and Reagents.
5. Aliphatic Compounds.
6. Aromatic Compounds.
7. Selected Alicyclic Compounds.
8. Selected Heterocyclic Compounds.
9. Investigation and Characterization of Organic Compounds.
10. Physical Constants of Organic Compounds.



Pharmaceutical Physical Chemistry : Theory and Practices

Dr S K Bhasin

Pages: 920

Year: 2012

About the Book

Physical Chemistry is a compulsory paper offered to all the students of Pharmacy. There is a dearth of good books that exclusively cover the syllabi of physical chemistry offered to pharmacy courses. Pharmaceutical Physical Chemistry has been designed considering their requirements laid down by AICTE and other premier institutes/universities. Apart from the theory 20 most common laboratory experiments have been included to make this book a unique offering to the students of pharmacy.

Features

- 20 Most common laboratory experiments
- 350 Review questions
- 125 Solved problems
- 280 MCQs
- 152 Line Diagrams
- 35 Tables

Contents

Preface

Part A

- | | |
|-----------------------------|--|
| 1. Behaviour of Gases | 9. Ionic Equilibria |
| 2. The Liquid state | 10. Distribution Law |
| 3. Solution | 11. Electrochemistry |
| 4. Thermodynamic | 12. Electromotive Force and Oxidation–Reduction System |
| 5. Adsorption and Catalysis | 13. Solid State (Crystalline State) |
| 6. Photochemistry | 14. Chemical Bonding |
| 7. Chemical Kinetics | 15. Phase Equilibria |
| 8. Quantum Mechanics | |

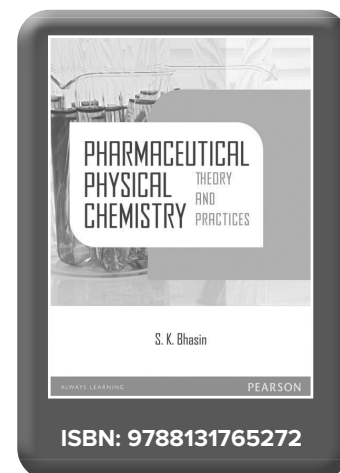
Part B

16. Experiments

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About the Author

Dr S K Bhasin is the Director and Professor of Chemistry at Himalayan Group of Professional institute, Kala Amb, Ambala, Haryana. He has been teaching undergraduate and postgraduate students for more than 40 years.



Bioprocess Engineering: Basic Concepts, 2/e

Michael L. Shuler

Pages: 984

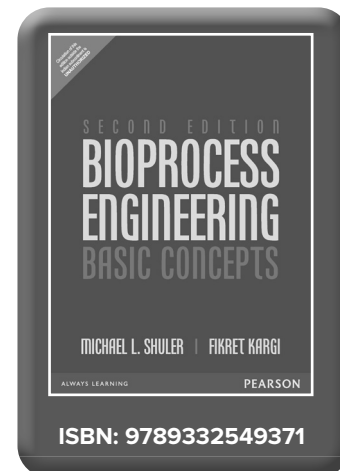
Year: 2015

About the Book

This is the definitive, up-to-the-minute guide to systems management for every IT professional responsible for maintaining stable, responsive IT production environments. Top IT system management expert Rich Schiesser illuminates both the theoretical and practical aspects of systems management, using methods and examples drawn from decades of professional experience in roles ranging from data center leadership to infrastructure design. Schiesser covers every systems management discipline, every type of IT environment, and all elements of success: technology, processes, and people. This edition adds detailed new coverage of the popular IT Infrastructure Library, showing how ITIL's 10 processes align with the 12 processes Schiesser presents. Another new chapter addresses key issues related to ethics, legislation, and outsourcing. Additional new coverage ranges from managing wireless networks, VoIP, and "ultra-speed" Internet to strategic security and new approaches to facilities management

Features

- NEW - Concepts of validation and Good Manufacturing Practice (GMP) are introduced.
 - Helps students to better understand regulatory constraints on bioprocess development.
- NEW - Updated coverage of concepts.
 - Shows students the connection between traditional ideas and emerging areas, such as tissue engineering and gene therapy.
- NEW - Material on functional genomics and cellular engineering.
 - Provides students with new developments in biology as they impact bioprocess engineering.
- NEW - Expanded discussion of modeling approach.
 - Presents students with a clarified section on models in continuous cultures and adds cybernetic modeling.
- NEW - Expanded coverage of chromatography.
 - Introduces students to discussions of IMAC (immobilized metal affinity chromatography), use of fusion proteins, and porous supports.
- NEW - Expanded sections on metabolic engineering, animal cell culture, and protein processing.
 - Offers students information on analysis of metabolic pathways, bioreactor considerations for animal cells, and includes some recent examples.
- NEW - Additional examples and homework problems, e.g., on topics such as enzyme reaction; reactor operation and scale-up; purification; waste treatment; and genetically engineered cells.
 - Enables students to more thoroughly test their understanding of applied concepts.
- NEW - Reorganized coverage.
 - Gives students a more logical presentation of genetic instability, strategies for genetic engineering, and then an approach to selection of host expression system for production of a heterologous protein.
- Emphasis on novel bioprocessing technologies.
 - Provides students with discussions on metabolic pathways and regulation, bioreactors, and separation processes.
- Coverage on production of proteins from recombinant DNA technology.
 - Allows students to critically compare and evaluate the various techniques involved.
- Applications—To special systems and the particular characteristics of mixed cultures; genetically engineered cells; and plant and animal cells.
 - Reinforces the previously covered engineering and biological concepts while providing more detailed information about important new biological systems.
- Chapter-end suggested readings.
 - Encourages students to obtain a more in-depth understanding of key biological



Contents

I. INTRODUCTION.

1. What is a Bioprocess Engineer?

Introductory Remarks. Biotechnology and Bioprocess Engineering. Biologists and Engineers Differ in Their Approach to Research. The Story of Penicillin: How Biologists and Engineers Work Together. Bioprocesses: Regulatory Constraints. Suggestions for Further Reading. Problems.

II. THE BASICS OF BIOLOGY: AN ENGINEER'S PERSPECTIVE.

2. An Overview of Biological Basics.

Are All Cells the Same? Cell Construction. Cell Nutrients. Summary. Suggestions for Further Reading. Problems.

3. Enzymes.

Introduction. How Enzymes Work. Enzyme Kinetics. Immobilized Enzyme Systems. Large-scale Production of Enzymes. Medical and Industrial Utilization of Enzymes. Summary. Suggestions for Further Reading. Problems.

4. How Cells Work.

Introduction. The Central Dogma. DNA Replication: Preserving and Propagating the Cellular Message. Transcription: Sending the Message. Translation: Message to Product. Metabolic Regulation. How the Cell Senses Its Extracellular Environment. Summary. Appendix: Examples of Regulation of Complex Pathways. Suggestions for Further Reading. Problems.

5. Major Metabolic Pathways.

Introduction. Bioenergetics. Glucose Metabolism: Glycolysis and the TCA Cycle. Respiration. Control Sites in Aerobic Glucose Metabolism. Metabolism of Nitrogenous Compounds. Nitrogen Fixation. Metabolism of Hydrocarbons. Overview of Biosynthesis. Overview of Anaerobic Metabolism. Overview of Autotrophic Metabolism. Summary. Suggestions for Further Reading. Problems.

6. How Cells Grow.

Introduction. Batch Growth. Quantifying Growth Kinetics. How Cells Grow in Continuous Culture. Summary. Suggestions for Further Reading. Problems.

7. Stoichiometry of Microbial Growth and Product Formation.

Introduction. Some Other Definitions. Stoichiometric Calculations. Theoretical Predictions of Yield Coefficients. Summary. Suggestions for Further Reading. Problems.

8. How Cellular Information is Altered.

Introduction. Evolving Desirable Biochemical Activities through Mutation and Selection. Natural Mechanisms for Gene Transfer and Rearrangement. Genetically Engineering Cells. Genomics. Summary. Suggestions for Further Reading. Problems.

III. ENGINEERING PRINCIPLES FOR BIOPROCESSES.

9. Operating Considerations for Bioreactors for Suspension and Immobilized Cultures.

Introduction. Choosing the Cultivation Method. Modifying Batch and Continuous Reactors. Immobilized Cell Systems. Solid-state Fermentations. Summary. Suggestions for Further Reading. Problems.

10. Selection, Scale-Up, Operation, and Control of Bioreactors.

Introduction. Scale-up and Its Difficulties. Bioreactor Instrumentation and Control. Sterilization of Process Fluids. Summary. Suggestions for Further Reading. Problems.

11. Recovery and Purification of Products.

Strategies to Recover and Purify Products. Separation of Insoluble Products. Cell Disruption. Separation of Soluble Products. Finishing Steps for Purification. Integration of Reaction and Separation. Summary. Suggestions for Further Reading. Problems.

IV. APPLICATIONS TO NONCONVENTIONAL BIOLOGICAL SYSTEMS.

12. Bioprocess Considerations in Using Animal Cell Cultures.

Structure and Biochemistry of Animal Cells. Methods Used for the Cultivation of Animal Cells. Bioreactor Considerations for Animal Cell Culture. Products of Animal Cell Cultures. Summary. Suggestions for Further Reading. Problems.

13. Bioprocess Considerations in Using Plant Cell Cultures.

Why Plant Cell Cultures? Plant Cells in Culture Compared to Microbes. Bioreactor Considerations. Economics of Plant Cell Tissue Cultures. Summary. Suggestions for Further Reading. Problems.

14. Utilizing Genetically Engineered Organisms.

Introduction. How the Product Influences Process Decisions. Guidelines for Choosing Host-Vector Systems. Process Constraints: Genetic Instability. Considerations in Plasmid Design to Avoid Process Problems. Predicting Host-Vector

Interactions and Genetic Instability. Regulatory Constraints on Genetic Processes. Metabolic Engineering. Protein Engineering. Summary. Suggestions for Further Reading. Problems.

15. Medical Applications of Bioprocess Engineering.

Introduction. Tissue Engineering. Gene Therapy Using Viral Vectors. Bioreactors. Summary. Suggestions for Further Reading. Problems.

16. Mixed Cultures.

Introduction. Major Classes of Interactions in Mixed Cultures. Simple Models Describing Mixed-culture Interactions. Mixed Cultures in Nature. Industrial Utilization of Mixed Cultures. Biological Waste Treatment: An Example of the Industrial Utilization of Mixed Cultures. Summary. Suggestions for Further Reading. Problems.

17. Epilogue.

Appendix: Traditional Industrial Bioprocesses.

Anaerobic Bioprocesses. Aerobic Processes.

Suggestions for Further Reading.

About the Author(s)

DR. MICHAEL L. SHULER is Professor in the School of Chemical Engineering, Cornell University. His areas of research include structured models, heterologous protein expression systems, cell culture analogs for pharmacokinetic models, in-vitro toxicology, plant-cell tissue culture, microbial functional genomics, and bioremediation.

DR. FIKRET KARGI is Professor of Environmental Engineering at Dokuz Eylul University in Ismir, Turkey. His current research includes bioprocessing of wastes for production of commercial products, development of novel technologies for biological treatment of problematic wastewaters, nutrient removal, and novel biofilm reactor development.

Transport Processes and Separation Process Principles (Includes Unit Operations)

Christie John Geankoplis

Pages: 984

Year: 2015

About the Book

Appropriate for one-year transport phenomena (also called transport processes) and separation processes course. First semester covers fluid mechanics, heat and mass transfer second semester covers separation process principles (includes unit operations).

The title of this Fourth Edition has been changed from Transport Processes and Unit Operations to Transport Processes and Separation Process Principles (Includes Unit Operations). This was done because the term Unit Operations has been largely superseded by the term Separation Processes which better reflects the present modern nomenclature being used. The main objectives and the format of the Fourth Edition remain the same. The sections on momentum transfer have been greatly expanded, especially in the sections on fluidized beds, flow meters, mixing, and non-Newtonian fluids. Material has been added to the chapter on mass transfer. The chapters on absorption, distillation, and liquid-liquid extraction have also been enlarged. More new material has been added to the sections on ion exchange and crystallization. The chapter on membrane separation processes has been greatly expanded especially for gas-membrane theory.

Features

- The comprehensive, unified, up-to-date guide to transport and separation processes.
- A more thorough coverage of momentum, heat, and mass transport processes and new coverage of separation process applications.
- Greatly expanded coverage of momentum transfer, including fluidized beds and non-Newtonian fluids.
- More detailed discussions of mass transfer, absorption, distillation, liquid-liquid extraction, and crystallization.

Contents

Preface

I. TRANSPORT PROCESSES: MOMENTUM, HEAT, AND MASS.

1. Introduction to Engineering Principles and Units.
2. Principles of Momentum Transfer and Overall Balances.
3. Principles of Momentum Transfer and Applications.
4. Principles of Steady-State Heat Transfer.
5. Principles of Unsteady-State Heat Transfer.
6. Principles of Mass Transfer.
7. Principles of Unsteady-State and Convective Mass Transfer.

II. SEPARATION PROCESS PRINCIPLES (INCLUDES UNIT OPERATIONS).

8. Evaporation.
9. Drying of Process Materials.

10. Stage and Continuous Gas-Liquid Separation Processes.
11. Vapor-Liquid Separation Processes.
12. Liquid-Liquid and Fluid-Solid Separation Processes.
13. Membrane Separation Processes.
14. Mechanical-Physical Separation Processes.

Appendices.

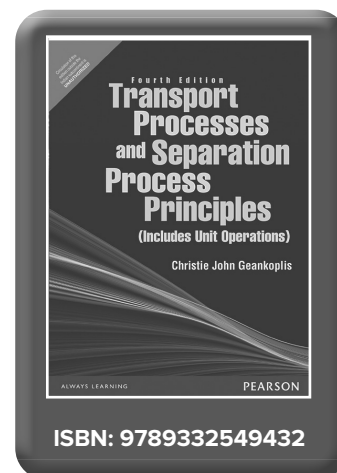
Appendix A.1. Fundamental Constants and Conversion Factors.

Appendix A.2. Physical Properties of Water.

Appendix A.3. Physical Properties of Inorganic and Organic Compounds.

Appendix A.4. Physical Properties of Foods and Biological Materials.

Appendix A.5. Properties of Pipes, Tubes, and Screens.



About the Author(s)

CHRISTIE JOHN GEANKOPLIS is a Professor of Chemical Engineering and Materials Science at the University of Minnesota. His current research interests involve transport processes, biochemical reactor engineering, mass transfer in liquid solutions, and diffusion and/or reaction in porous solids. He holds a Ph.D. in Chemical Engineering from the University of Pennsylvania.

Pharmaceutical Organic Chemistry-III

Organic Chemistry, Volume 1, 6/e

I. L. Finar

Pages: 966

Year: 2005

About the Book

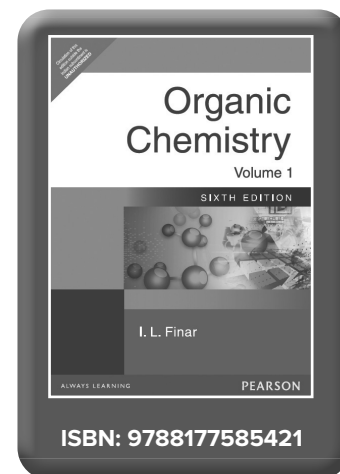
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23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

Pages: 956

Year: 2005

About the Book

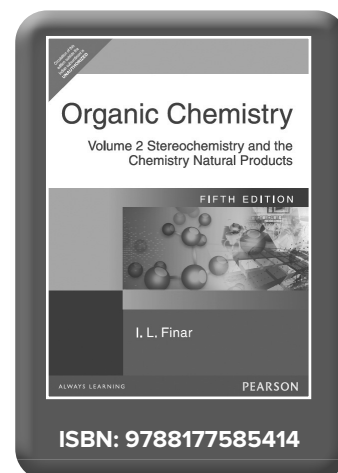
Organic Chemistry is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Fundamental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and chemical structures, and then proceeds to a detailed account of stereochemistry. The later chapters are devoted to the most typical compounds of natural products and the problems involved. A selected number of reading references are given at the end of each chapter.

Contents

1. Physical properties and chemical constitution
2. Optical isomerism
3. Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
4. Geometrical isomerism, stereochemistry of alicyclic compounds
5. Stereochemistry of biphenyl compounds
6. Stereochemistry of some elements other than carbon
7. Carbohydrates
8. Terpenoids
9. Carotenoids
10. Polycyclic aromatic hydrocarbons
11. Steroids
12. Heterocyclic compounds containing two or more hetero-atoms
13. Amino-acids and proteins
14. Alkaloids
15. Anthocyanins
16. Purines and nucleic acids
17. Vitamins
18. Chemotherapy
19. Haemoglobin, chlorophyll and phthalocyanines

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Organic Chemistry, 7/e

Robert Thornton Morrison, Robert Neilson Boyd,
Saibal Kanti Bhattacharjee

Pages: 1508

Year: 2010



About the Book

As in the earlier editions, the book conveys the important fundamentals and principles of the subject in a simple and easily understandable manner.

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14. Functional Derivatives of Carboxylic Acids Nucleophilic Acyl Substitution
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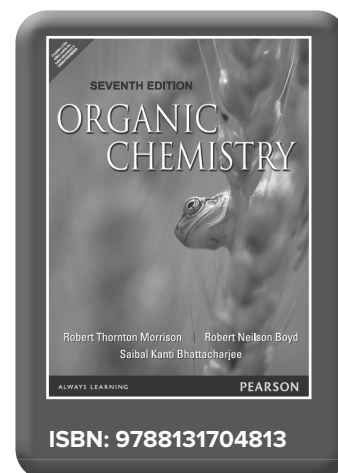
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28. Amino Acids and Proteins Molecular Biology
29. Enzymes, Co-Enzymes and Vitamins
30. Nucleic Acids Nucleotides, Polynucleotides and Nucleosides
31. Drugs Chemotherapeutic and Pharmacodynamic Agents

Part 5: Contemporary and Future Organic Chemistry

32. Nanoparticles (Size-Dependent Chemistry)
33. Future Devices and Challenges of Chemistry of this Century Molecular Machines or Nanomachines



About the Author(s)

Robert Thornton Morrison, New York University

Robert Neilson Boyd, New York University

Saibal Kanti Bhattacharjee, Gauhati University

Heterocyclic Chemistry, 3/e

Thomas L. Gilchrist

Pages: 432

Year: 2006



About the Book

This popular text has been completely revised to reflect recent advances in the subject. Deals with the properties of ring systems and general methods of synthesis, providing a unique overview of the subject area. Includes a guide to the naming of the ring systems, invaluable to those unfamiliar with the area.

Features

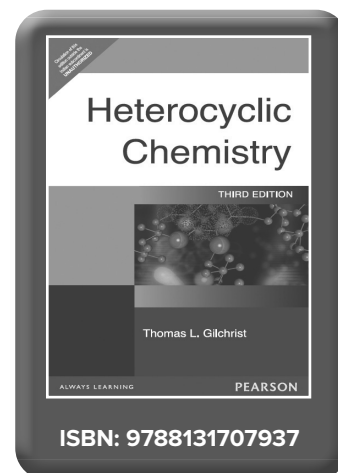
- Includes recent examples of organometallic reagents which are increasingly used in the synthesis and reactions of heterocyclic compounds.
- New reaction schemes illustrating the use of heterocycles as synthetic intermediates.

Contents

1. Introduction
2. Aromatic Heterocycles
3. Nonaromatic Heterocycles
4. Methods of Ring Synthesis
5. Six-membered Rings
6. Five-membered Rings with One Heteroatom
7. Six-membered Rings with Two or More Heteroatoms
8. Five-membered Rings with Two or More Heteroatoms
9. Three and Four Membered Rings
10. Seven and Larger Membered Ring Compounds
11. Nomenclature

About the Author(s)

Thomas L. Gilchrist is an academic researcher from University of Liverpool.



Medicinal Chemistry-I

Medicinal Chemistry: The Modern Drug Discovery Process

Erland Stevens

Pages: 436

Year: 2025



About the Book

Emphasizing applications of chemistry while reinforcing theory — especially in the areas of organic and physical chemistry — this new text prepares students for career success in the pharmaceutical, medical, and biotech industries. Medicinal Chemistry: The Modern Drug Discovery Process delivers a comprehensive introduction to medicinal chemistry at an appropriate level of detail for a diverse range of undergraduate students (pharmaceutical, chemical engineering, premed, biotechnology). By highlighting the concepts and skills related to drug discovery, Stevens deepens students' understanding of the knowledge and techniques necessary for their careers.

Features

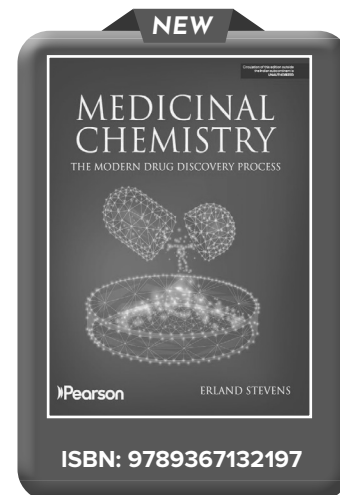
- Case Studies in each chapter demonstrate real life applications of newly introduced ideas.
- End-of-chapter summaries provide a synopsis of the chapter's material.
- Highlighted keywords are collectively listed and defined in the glossary.
- Sample Calculations throughout each chapter demonstrate the use of equations to analyze quantitative data.

Contents

1. A Brief History of Drug Discovery
2. The Modern Drug Process
3. A Trip through the Body
4. Enzymes as Drug Targets
5. Receptors as Drug Targets
6. Oligonucleotides as Drug Targets
7. Pharmacokinetics
8. Metabolism
9. Molecular Structure and Diversity
10. Lead Discovery
11. Lead Optimization- Traditional Methods
12. Lead Optimization- Hansch Analysis
13. Aspects in Pharmaceutical Synthesis

About the Author(s)

Erland Stevens, Davidson College in Davidson, NC, USA

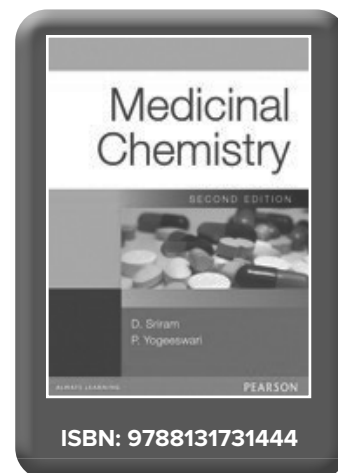


Medicinal Chemistry 2/e

Sriram, Yogeeswari

Pages: 712

Year: 2010



About the Book

The second edition of Medicinal Chemistry is based on the core module of Pharmacy syllabi of various technical universities, and targets undergraduate B.Pharm students across India.

The current edition has been designed by authors based on the opinion of the experts to include the latest developments in the field of medicinal chemistry, detailed synthesis mechanism of the drugs and their mode of action inside the body.

Features

- Complex reactions broken down into intermediary steps
- A variety of exercises to test the cognitive level of students
- New pedagogical features:
 - Learning objectives
 - Further Reading guidelines
 - Coloured illustrations
 - Data tables
- New chapters on drug design and development, principles of drug action, CADD and a chapter on miscellaneous drugs

Contents

- | | | |
|--|---|---|
| 1. Drug Discovery and Development | 13. Miscellaneous CNS Agents | Dihydrofolate |
| 2. Principles of Drug Action | 14. Antihistamines and Anti-Ulcer Agents | 25. Inhibitors |
| 3. Drug Metabolism and Prodrugs | 15. Diuretics | 26. Quinolone Antibacterials |
| 4. Computer-aided Drug Design | 16. Antihypertensive Agents | 27. Antibiotics |
| 5. General Anaesthetics | 17. Antiarrhythmic Drugs | 28. Antitubercular Agents |
| 6. Local Anaesthetics | 18. Antihyperlipidemic Agents | 29. Antifungal Agents |
| 7. Sedatives, Hypnotics, and Anxiolytic Agents | 19. Antianginal Drugs | 30. Antiviral Agents |
| 8. Anti-Epileptic Drugs | 20. Insulin and Oral Hypoglycaemic Agents | 31. Antiprotozoal Agents |
| 9. Antipsychotic Agents | 21. Oral Anticoagulants | 32. Anticancer Agents |
| 10. Antidepressants | 22. Adrenergic Drugs | 33. Prostaglandins |
| 11. Narcotic Analgesics | 23. Cholinergic Drugs | 34. Steroids |
| 12. Antipyretics and Non-Steroidal Anti-Inflammatory Drugs | 24. Sulphonamides, Sulphones, and | 35. Miscellaneous Agents |
| | | 36. Nomenclature of Medicinal Compounds |

About the Author(s)

D. Sriram is presently Senior Professor at Pharmacy Group, Birla Institute of Technology and Science-Pilani, Hyderabad Campus. He received his Ph.D. in 2000 from Banaras Hindu University, Varanasi.

P. Yogeeswari is presently Senior Professor at Pharmacy Group, Birla Institute of Technology and Science-Pilani, Hyderabad Campus. She received her Ph.D. degree in 2001 from Banaras Hindu University, Varanasi.

Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

Pages: 956

Year: 2005

About the Book

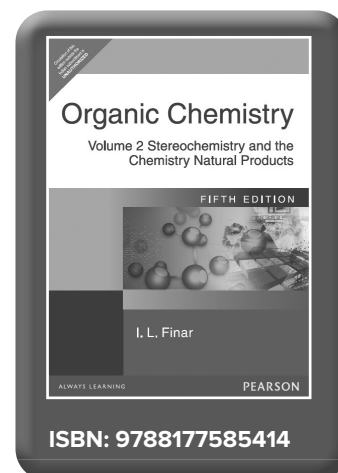
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Contents

1. Physical properties and chemical constitution
2. Optical isomerism
3. Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
4. Geometrical isomerism, stereochemistry of alicyclic compounds
5. Stereochemistry of biphenyl compounds
6. Stereochemistry of some elements other than carbon
7. Carbohydrates
8. Terpenoids
9. Carotenoids
10. Polycyclic aromatic hydrocarbons
11. Steroids
12. Heterocyclic compounds containing two or more hetero-atoms
13. Amino-acids and proteins
14. Alkaloids
15. Anthocyanins
16. Purines and nucleic acids
17. Vitamins
18. Chemotherapy
19. Haemoglobin, chlorophyll and phthalocyanines

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Pharmaceutical Physical Chemistry : Theory and Practices

Dr S K Bhasin

Pages: 956

Year: 2012

About the Book

Physical Chemistry is a compulsory paper offered to all the students of Pharmacy. There is a dearth of good books that exclusively cover the syllabi of physical chemistry offered to pharmacy courses. Pharmaceutical Physical Chemistry has been designed considering their requirements laid down by AICTE and other premier institutes/universities. Apart from the theory 20 most common laboratory experiments have been included to make this book a unique offering to the students of pharmacy.

Features

- 20 Most common laboratory experiments
- 350 Review questions
- 125 Solved problems
- 280 MCQs
- 152 Line Diagrams
- 35 Tables

Contents

Preface

Part A

- | | |
|-----------------------------|--|
| 1. Behaviour of Gases | 9. Ionic Equilibria |
| 2. The Liquid state | 10. Distribution Law |
| 3. Solution | 11. Electrochemistry |
| 4. Thermodynamic | 12. Electromotive Force and Oxidation–Reduction System |
| 5. Adsorption and Catalysis | 13. Solid State (Crystalline State) |
| 6. Photochemistry | 14. Chemical Bonding |
| 7. Chemical Kinetics | 15. Phase Equilibria |
| 8. Quantum Mechanics | |

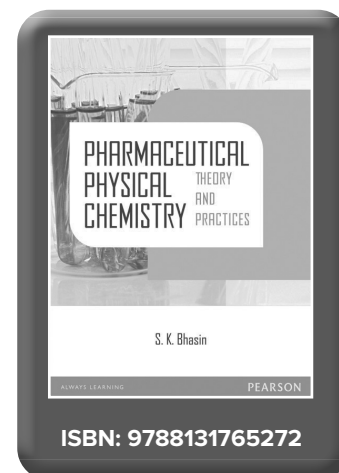
Part B

16. Experiments

Index

About the Author

Dr S K Bhasin is the Director and Professor of Chemistry at Himalayan Group of Professional institute, Kala Amb, Ambala, Haryana. He has been teaching undergraduate and postgraduate students for more than 40 years.



Pharmacology-I

Introducing Pharmacology: For Nursing and Healthcare, 2/e

Roger McFadden

Pages: 368

Year: 2014



About the Book

This new edition of Introducing Pharmacology remains an accessible and relevant introduction for nursing and healthcare students who are new to pharmacology, as well as anyone looking to refresh their knowledge of the subject.

Focused and engaging, the text balances accessibility with depth. Coverage of anatomy and physiology as well as pathophysiology helps to relate the subject to practical realities and makes this text stand out.

Features

- Extend coverage of the pharmacopoeia with a completely new chapter on anti-cancer drugs.
- New sections, including general anaesthetics, hay-fever and prescribing for special groups such as children, pregnant women and the elderly.
- Fully updated with the Recommended International Non-proprietary Names (rINN) for drugs as used in the British National Formulary.
- Inclusion of a new glossary of key terms and definitions.

Contents

Part 1 Principles of pharmacology

1. Let's start at basics: cells and how they work
2. Protein targets for drugs
3. Side-effects, interactions and pharmacokinetics

Part 2 The major drug groups

4. The cardiovascular system I: drugs used in the management of coronary artery disease
5. The cardiovascular system II: hypertension and antihypertensive drugs
6. Inflammation and the management of pain
7. Disorders and drugs of the digestive system
8. Infection and anti-microbial drugs
9. Disorders and drugs of the respiratory system
10. Disorders and drugs of the endocrine system
11. Drugs used in the treatment of mental health and neurological disorders
12. Drugs used in the treatment of Cancers and Chemotherapy

About the Author

Roger McFadden is Senior Lecturer in Applied Physiology at Birmingham City University



Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

Pages: 956

Year: 2005

About the Book

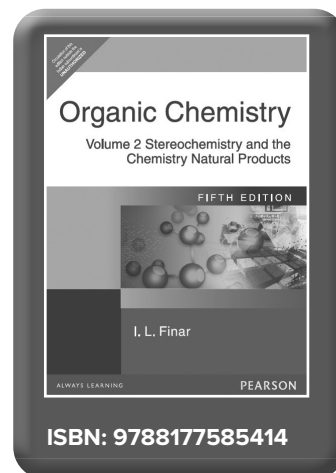
Organic Chemistry is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Fundamental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and chemical structures, and then proceeds to a detailed account of stereochemistry. The later chapters are devoted to the most typical compounds of natural products and the problems involved. A selected number of reading references are given at the end of each chapter.

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2. Optical isomerism
3. Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
4. Geometrical isomerism, stereochemistry of alicyclic compounds
5. Stereochemistry of biphenyl compounds
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7. Carbohydrates
8. Terpenoids
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11. Steroids
12. Heterocyclic compounds containing two or more hetero-atoms
13. Amino-acids and proteins
14. Alkaloids
15. Anthocyanins
16. Purines and nucleic acids
17. Vitamins
18. Chemotherapy
19. Haemoglobin, chlorophyll and phthalocyanines

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Vogel's Textbook of Practical Organic Chemistry, 5/e

Brian S. Furniss, Antony J. Hannaford, Peter W.G. Smith, Austin R. Tatchell

Pages: 1544

Year: 2006

About the Book

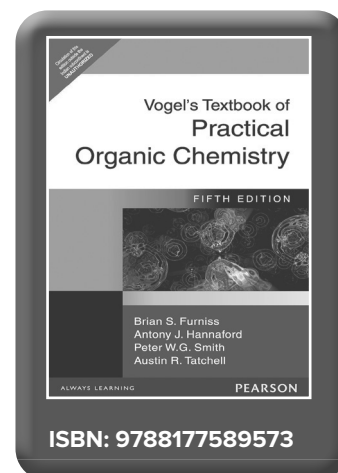
Still recognized as the definitive text on practical topics related to organic chemistry, this text is relied upon by undergraduates, postgraduate students, and professional organic chemists. Topics covered include the structural and theoretical principles required when designing a synthesis; the disconnection or synthon approach; the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds; and developments in reaction techniques.

Features

- An introductory chapter on the structural and theoretical principles required when designing a synthesis.
- The disconnection on synthon approach now integrated into the text, and the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds.
- Synthesis methodology is expanded to cover a range of new reagents, including oxidants and reductants; reagents for asymmetric synthesis; and those derived from lithium, boron, silicon, phosphorous and sulphur.
- Recent developments in reaction techniques which include: handling of air-sensitive and moisture-sensitive compounds; new chromatographic procedures; phase transfer catalysis; and solid support reagents.
- Over 100 new experiments selected from the literature to illustrate new reagents and techniques, and the operation of protection, selectivity and control in synthesis.
- A more detailed treatment of carbon-13 n.m.r. spectroscopy, and the interpretation of spectroscopic data for many of synthesized compounds.

Contents

1. Organic Synthesis.
2. Experimental Techniques.
3. Spectroscopic Methods and the Interpretation of Spectra.
4. Solvents and Reagents.
5. Aliphatic Compounds.
6. Aromatic Compounds.
7. Selected Alicyclic Compounds.
8. Selected Heterocyclic Compounds.
9. Investigation and Characterization of Organic Compounds.
10. Physical Constants of Organic Compounds.



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I. L. Finar

Pages: 956

Year: 2005

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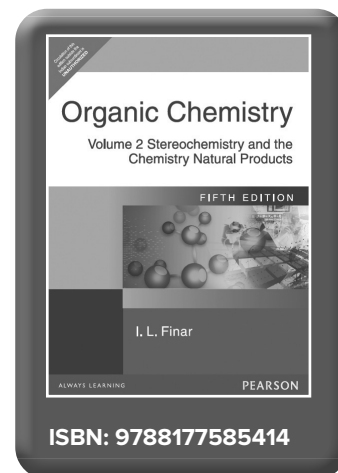
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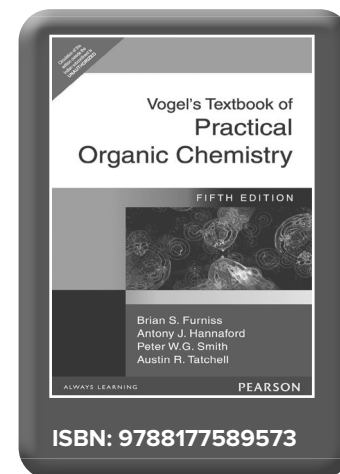
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8. Selected Heterocyclic Compounds.
9. Investigation and Characterization of Organic Compounds.
10. Physical Constants of Organic Compounds.



The Elements of Immunology

Fahim Halim Khan

Pages: 508

Year: 2009



About the Book

The Elements of Immunology is designed to introduce readers to the exciting world of immunology, the people who populate it and foster a curiosity to question and know more. The book is supported by a consistent, colourful art programme. The detailed explanation of concepts and terms, and the deconstruction of complex molecular mechanisms into simple, easy-to-remember steps help students focus on the fundamentals without any distractions. Packed with extensive Web-based supplements, the book enables students to visualize concepts, thereby enriching the learning process. The book, comprising twenty chapters, has numerous pedagogical elements built into it. Margin snippets present interesting and relevant information without breaking the flow of the text. Margin definitions highlight the key terms for easy identification and recollection. Each chapter talks about a relevant molecular biology technique, thus providing an insight into the practical aspect of immunology as well. A glossary at the end of the book lists out the important terms used.

Features

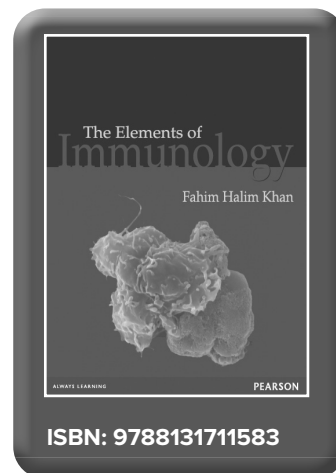
- Simple and lucid language explaining core concepts
- Rich pedagogy that facilitates learning
- Colourful and consistent art programme comprising over 300 four-colour illustrations that helps to visualize and comprehend concepts better
- 400 end-of-chapter questions help revise the key concepts
- Discussion of the latest developments in the area of immunology such as MHC haplotype matching for cell transplantation, latest antiretroviral drugs developed against HIV, etc.
- Description of key contributors, researchers and their landmark experiments
- Packed with supplements and media resources
 - Over 30 animations that depict key concepts in three dimensions
 - A question bank containing over 400 questions and clinical case studies along with lecture slides including artwork from the book, as supplements to the text, specifically for the instructors

Contents

- | | |
|--|--|
| 1. Introduction to the Immune System | 11. Antigen Processing and Presentation |
| 2. Cells and Organs of the Immune System | 12. Cell-mediated Immunity |
| 3. Antigens | 13. Hypersensitivity |
| 4. Antibodies | 14. Cell Migration and Inflammatory Response |
| 5. Generation of Antibody Diversity | 15. Immune Response to Infectious Agents |
| 6. Major Histocompatibility Complex | 16. Vaccines |
| 7. T-cell Receptor | 17. Transplantation Immunology |
| 8. T-cell Development and Activation | 18. Cancer and the Immune System |
| 9. B-cell Development and Activation | 19. Primary and Secondary Immunodeficiencies |
| 10. Complement System | 20. Autoimmunity and Autoimmune Diseases |

About the Author

Fahim Halim Khan is an assistant professor of biochemistry at the Aligarh Muslim University.



Instrumental Methods of Analysis

Vogel's Quantitative Chemical Analysis, 6/e

J. Mendham, David J. Barnes, R.C. Denney, M. J. K. Thomas

Pages: 836

Year: 2009

About the Book

Dr. Vogel's classic introduction to analytical methods has provided generations of chemists worldwide with a basis for teaching, learning and applying analytical chemistry. This 60th anniversary edition - the first for a decade - reflects major changes in the subject. Analysts need to understand the concepts behind methods and *Vogel's Quantitative Chemical Analysis* provides clear introductions to all the key analytical methods including those involving advanced computerised equipment available in many analytical laboratories. The editors have built further on the work of Dr Vogel, modernising the approach while retaining the analytical concepts and ideas which were built into the original work. This new edition has been extensively revised to take into account developments in instrumental procedures and coupled techniques whilst maintaining the book's focus on quantitative chemical and problem-specific analyses. With excellent cross-referencing this book provides a wealth of examples and tables of data.

Features

- Comprehensive coverage of methods with detailed easy-to-follow practical experiments.
- Basic analytical theory which is essential for understanding the subject.
- Greatly expanded sections on instrumental analysis including aspects of miniaturisation.
- Increased emphasis on minor/trace component analysis and revised statistical handling of data.
- New chapters on sampling, mass spectrometry and nuclear magnetic resonance.

Contents

- | | | |
|---|--------------------------------------|--|
| 1. Preface to First Edition. | | |
| 2. Preface to Sixth Edition. | | |
| 3. Safety; Units. | | |
| 4. Reagent Purity. | | |
| 5. Introduction. | | |
| 6. Fundamental Theoretical Principles of Reactions in Solution. | | |
| 7. Common Apparatus & Basic Techniques. | | |
| 8. Statistics, Introduction to | | |
| | Chemometrics. | |
| | 9. Sampling. | |
| | 10. The Basis of Separative Methods. | |
| | 11. Thin Layer Chromatography. | |
| | 12. Liquid Chromatography. | |
| | 13. Gas Chromatography. | |
| | 14. Titrimetric Analysis. | |
| | 15. Gravimetric Analysis. | |
| | 16. Thermal Analysis. | |
| | | 17. Direct Electroanalytical Methods. |
| | | 18. Nuclear Magnetic Resonance Spectroscopy. |
| | | 19. Atomic Absorption Spectroscopy. |
| | | 20. Atomic Emission Spectroscopy. |
| | | 21. Molecular Electronic Spectroscopy. |
| | | 22. Vibrational Spectroscopy. |
| | | 23. Mass Spectrometry |

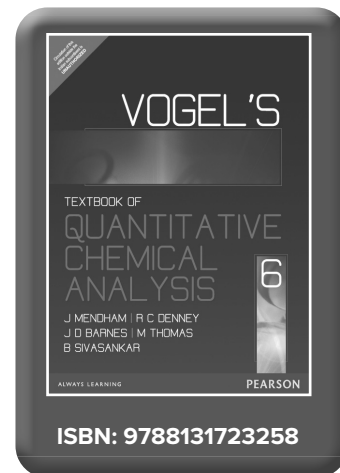
About the Author(s)

R.C. Denney, Consultant Forensic Scientist

J. Mendham, Consultant Analytical Chemist

J. D. Barnes, University of Greenwich.

M.J.K. Thomas, University of Greenwich



Organic Chemistry, Volume 1, 6/e

I. L. Finar

Pages: 966

Year: 2005

About the Book

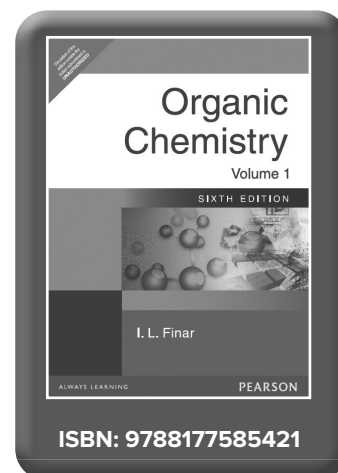
In the sixth edition of Dr. Finar's best-selling student text, a great deal of material has been rewritten and many new topics have been added. The arrangement of the subject matter is based on homologous series and SI units have been used throughout the text.

Contents

1. Determination of Structure
2. Properties of Molecules
3. Alkanes
4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
13. Nitrogen compounds
14. Aliphatic compounds of sulphur, phosphorus, silicon and boron
15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
21. Aromatic halogen compounds
22. Aromatic nitro-compounds
23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

Pages: 956

Year: 2005

About the Book

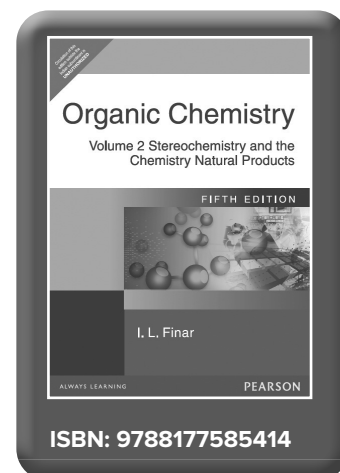
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About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Biostatistics and Research Methodology

Biostatistics and Mathematical Biology

Felix Bast

Pages: 372

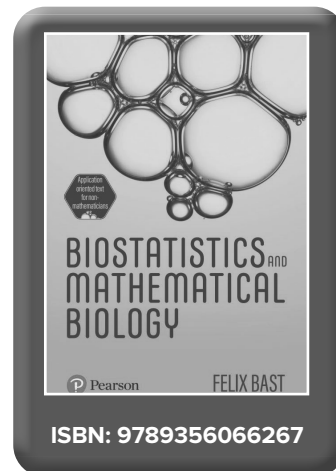
Year: 2023



About the Book

A comprehensive textbook of biostatistics targeted at non-mathematicians at an advanced bachelor level and above.

The book sequentially covers basic mathematics topics essential for biologists, such as scientific methodology, levels of measurement, and explores more advanced concepts, including Bayes Theorem and Non-linear regression, thereby complying with the biostatistics syllabus of various universities as well as competitive examinations. This application oriented book focuses on the decision-making process during statistical tests and graphing, which test/graph to use, how much would be the minimum sample size, how to interpret the results, and so on. Authored by Prof. Felix Bast, whose course in UGC SWAYAM, "Biostatistics and Mathematical Biology" had been ranked the 7th best MOOC worldwide in 2020".



Features

- Concise yet comprehensive textbook on the fundamental concepts of statistics.
- Focused on choosing the correct statistical test and interpreting the results.
- Non-mathematical approach; suitable for biologists and medical students.
- Clear-cut recommendations for various statistical tests and their variations.

Contents

1. Introduction to Biostatistics and Mathematical Biology
2. Types of Studies
3. Levels of Measurements
4. Summarizing Data: Tabular Presentation
5. Summarizing Data: Graphical Presentation
6. Charting with Excel
7. Descriptive Statistics: Point Estimates
8. Descriptive Statistics: Interval Estimates
9. Error Bars
10. Moments, Normality Tests and Outliers
11. Concepts of Population, Sample and Confidence Intervals
12. Statistical Hypothesis Testing
13. Statistical Significance and P-Values
14. Relationship between Confidence Intervals and Statistical Significance
15. Statistical Power and Choosing the Right Sample Size
16. t-distribution and Tests of Significance Based on t-distribution
17. F-distribution and Tests of Significance Based on the F-distribution
18. Post-Hoc Tests
19. χ^2 -distribution and Tests of Significance Based on χ^2 -distribution
20. Comparing Proportions
21. Gaussian, Lognormal, Binomial and Poisson Distributions
22. Pearson's Correlation
23. Simple Linear Regression
24. Non-linear Regression, Multiple Regression, and Logistic Regression
25. Non-parametric Tests
26. Permutations and Combinations
27. Probability
28. Likelihood and Bayes' Theorem
29. Key Concepts of Statistics and Statistical Pitfalls to Avoid

About the Author

Prof. Felix Bast is an award-winning Indian Science Communicator and a public educator working currently as a full Professor at Central University of Punjab, India. He is an expert panelist of Paris-based International Science Council, an elected fellow of Linnean Society of London, and a member of IUCN, Geneva. He holds Ph.D. in Marine Biology from MEXT, Japan (alumnus of Monbukagakusho:MEXT Japanese Govt. international doctoral fellowship), and served as expedition scientist in Indian Antarctic Mission.

Biostatistical Analysis, 5/e

Jerrold H. Zar

Pages: 760

Year: 2014



About the Book

Zar's *Biostatistical Analysis, Fifth Edition*, is the ideal textbook for graduate and undergraduate students seeking practical coverage of statistical analysis methods used by researchers to collect, summarize, analyze and draw conclusions from biological research. The latest edition of this best-selling textbook is both comprehensive and easy to read. It is suitable as an introduction for beginning students and as a comprehensive reference book for biological researchers and for advanced students.

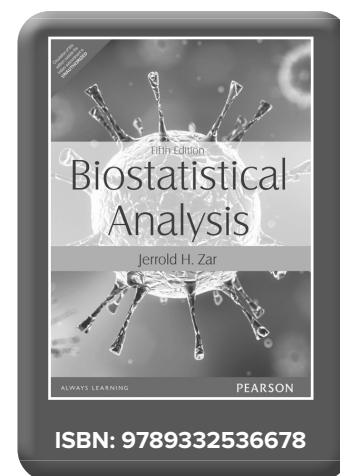
This book is appropriate for a one- or two-semester, junior or graduate-level course in biostatistics, biometry, quantitative biology, or statistics, and assumes a prerequisite of algebra.

Features

- A broad collection of data-analysis procedures and techniques are presented, covering a wide variety of biological research, such as physiology, genetics, ecology, behavior, morphology.
- The most comprehensive treatment available includes coverage of the basics of statistical analysis, and also the following topics rarely or never found in statistics books for biologists:
 - Diversity
 - Polynomial regression
 - Multidimensional contingency tables
 - Stepwise regression
 - Nonparametric multiple comparisons
 - Higher order factorial analyses of variance
 - Circular distributions
 - Power and sample size determinations.
- An orderly organization and presentation of topics, with cross-referencing as appropriate.
- The readable and accessible approach allows students with no previous statistical background or mathematical expertise beyond simple algebra to understand the material presented.
- The thoughtful presentation encourages students to think about the value of each statistical technique, as opposed to merely plugging numbers into formulae.
- The exposition considers complex procedures such as factorial analysis of variance and multiple regression in terms of the interpretation of typical computer output.
- A wealth of graphs and other figures are integrated to visually support concepts under discussion.
- A uniquely comprehensive set of statistical tables—more than 40 in all—facilitates statistical analyses without having to consult a separate book. This includes tables that are unique to this book.
- Worked examples for all major procedures guide readers step-by-step through the techniques, demonstrating each of the important concepts.
- An extensive bibliography directs readers to further relevant literature.

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- | | | |
|---|--|--|
| 1. Data: Types and Presentations | 12. Two-Factor Analysis of Variance | 21. Polynomial Regression |
| 2. Populations and Samples | 13. Data Transformations | 22. Testing for Goodness of Fit |
| 3. Measures of Central Tendency | 14. Multiway Factorial Analysis of Variance | 23. Contingency Tables |
| 4. Measures of Variability and Dispersion | 15. Nested (Hierarchical) Analysis of Variance | 24. Dichotomous Variables |
| 5. Probabilities | 16. Multivariate Analysis of Variance | 25. Testing for Randomness |
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| 10. Multisample Hypotheses and the Analysis of Variance | | |
| 11. Multiple Comparisons | | |



About the Author

Jerrold H. Zar received his undergraduate degree in Biological Sciences from Northern Illinois University in 1962. He later earned his M.S. and Ph.D. degrees in biology and zoology from the University of Illinois at Urbana-Champaign. Zar then returned to Northern Illinois University for 34 years to serve in a variety of capacities. He joined the faculty at NIU as an Assistant Professor in 1968 and quickly rose through the ranks of associate and full professor to become Chair of the Department of Biological Sciences in 1978. He served two terms as Chair of the Department and then, became the Vice Provost for Graduate Studies and Research and Dean of the Graduate School. He was a founder of the Illinois Minority Graduate Incentive Program and the Illinois Consortium for Educational Opportunities Program, where he helped create and protect fellowship opportunities for minority graduate students at universities across the state. Zar is a member of 17 professional scientific societies, including being an elected fellow of the American Association for the Advancement of Science. His many research publications cover a range of topics, from statistical analysis to physiological adaptations of animals to their environment.

Advanced Instrumentation Techniques

Vogel's Quantitative Chemical Analysis, 6/e

J. Mendham, David J. Barnes, R.C. Denney, M. J. K. Thomas

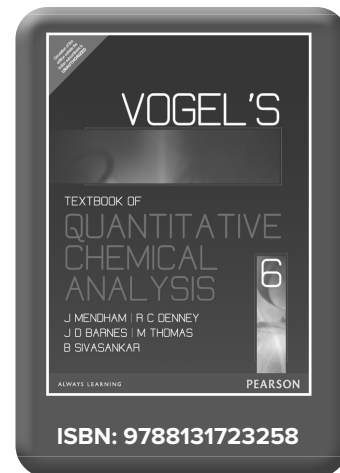
Pages: 836

Year: 2009



About the Book

Dr. Vogel's classic introduction to analytical methods has provided generations of chemists worldwide with a basis for teaching, learning and applying analytical chemistry. This 60th anniversary edition - the first for a decade - reflects major changes in the subject. Analysts need to understand the concepts behind methods and *Vogel's Quantitative Chemical Analysis* provides clear introductions to all the key analytical methods including those involving advanced computerised equipment available in many analytical laboratories. The editors have built further on the work of Dr Vogel, modernising the approach while retaining the analytical concepts and ideas which were built into the original work. This new edition has been extensively revised to take into account developments in instrumental procedures and coupled techniques whilst maintaining the book's focus on quantitative chemical and problem-specific analyses. With excellent cross-referencing this book provides a wealth of examples and tables of data.



Features

- Comprehensive coverage of methods with detailed easy-to-follow practical experiments.
- Basic analytical theory which is essential for understanding the subject.
- Greatly expanded sections on instrumental analysis including aspects of miniaturisation.
- Increased emphasis on minor/trace component analysis and revised statistical handling of data.
- New chapters on sampling, mass spectrometry and nuclear magnetic resonance.

Contents

Preface to First Edition.

Preface to Sixth Edition.

1. Safety; Units.
2. Reagent Purity.
3. Introduction.
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17. Atomic Absorption Spectroscopy.
18. Atomic Emission Spectroscopy.
19. Molecular Electronic Spectroscopy.
20. Vibrational Spectroscopy.
21. Mass Spectrometry.

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M.J.K. Thomas, University of Greenwich

Organic Chemistry, Volume 1, 6/e

I. L. Finar

Pages: 966

Year: 2005

About the Book

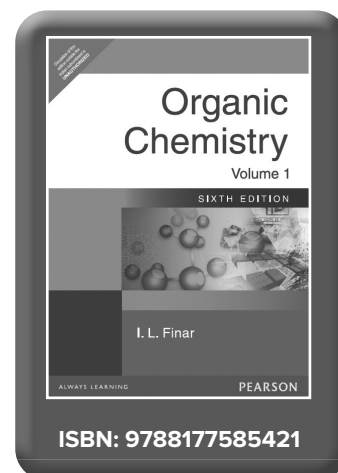
In the sixth edition of Dr. Finar's best-selling student text, a great deal of material has been rewritten and many new topics have been added. The arrangement of the subject matter is based on homologous series and SI units have been used throughout the text.

Contents

1. Determination of Structure
2. Properties of Molecules
3. Alkanes
4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
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15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
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23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

Pages: 956

Year: 2005

About the Book

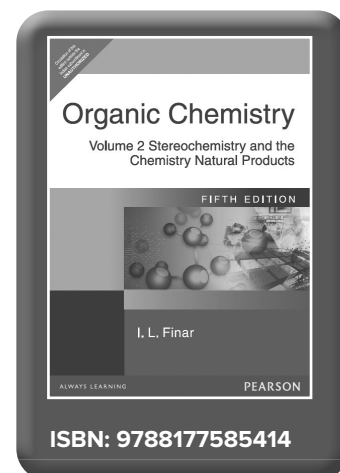
Organic Chemistry is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Fundamental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and chemical structures, and then proceeds to a detailed account of stereochemistry. The later chapters are devoted to the most typical compounds of natural products and the problems involved. A selected number of reading references are given at the end of each chapter.

Contents

1. Physical properties and chemical constitution
2. Optical isomerism
3. Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
4. Geometrical isomerism, stereochemistry of alicyclic compounds
5. Stereochemistry of biphenyl compounds
6. Stereochemistry of some elements other than carbon
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About the Author

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



Computer fundamentals

Computer Fundamentals for Nursing, Paramedical and Medical Students

Amit Dumka, Ravi Dumka, Ankur Dumka

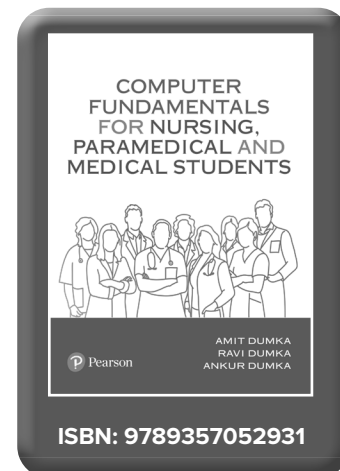
Pages: 372

Year: 2023



About the Book

This book provides the basics of computer technologies that are useful for nursing, paramedical and medical students and any reader who want to learn the different applications of computers. Spread across eleven chapters, the book covers all the aspects of the subject from basics of computers to its application in healthcare in a student-friendly manner. It also explains the ways data, knowledge and information can be used for effective healthcare.



Features

- Demonstrates the use of computer and technology in patient care, nursing education, practice, administration and research.
- Describes the principles of health informatics and its use in developing efficient healthcare.
- Numerous screenshots to aid follow and practice approach

Contents

1. Chapter 1 Basic Concepts of Computers
2. Chapter 2 Operating System
3. Chapter 3 An Introduction to MS-Word
4. Chapter 4 An Introduction to MS-Excel
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7. Chapter 7 Application of Internet and e-Mail
8. Chapter 8 An Introduction to Multimedia
9. Chapter 9 Statistical Packages: Usages and Types
10. Chapter 10 Hospital Management System (HMS): Types and Usage
11. Chapter 11 Application of Computers in Medical Education and Health Informatics (Nursing/Health Informatics)

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Ravi Dumka HP India Sales Pvt. Ltd.

Ankur Dumka Women Institute of Technology Dehradun, Uttarkhand Graphic Era Deemed to be University Dehradun, Uttarakhand.

Supply Chain Management

Supply Chain Management in Pharmaceutical Industry

Avadhut C. Sukhtankar, Sanjiv M. Haldankar,
P. M. Wadekar, Neel Sharma, Rajeev P. Patil

Pages: 528

Year: 2024



About the Book

Supply Chain Management in Pharmaceutical Industry is a comprehensive textbook tailored for Pharma MBA students, part-time MBA students specializing in Pharma, and SCM enthusiasts. With 36 insightful chapters divided into 5 parts, this book delves into the core principles, strategies, and emerging trends essential for navigating the dynamic landscape of pharmaceutical supply chains. Designed as both a textbook and a reference guide, it serves as a valuable resource for management trainees, mentors, teachers, and trainers in SCM, offering practical insights and real-world case studies. Beyond the pharmaceutical sector, professionals from diverse functions within the industry, such as Maintenance Engineers, Accounts Officers, and Marketing Professionals, will find valuable insights for job and career development. Moreover, this comprehensive guide extends its applicability to related industries such as Nutraceuticals, Foods, and Beverages, making it an indispensable resource for anyone involved in optimizing supply chains across the broader healthcare and consumer goods landscape.

Contents

1. Introduction to Pharmaceutical Industry in India
2. Introduction to Supply Chain Management
3. Value Chain in Pharmaceutical Industry
4. Supply Chain in the Pharmaceutical Industry
5. Demand Generation and Forecasting
6. Inventory Management in the Pharma Industry
7. Procurement in Pharma
8. Vendor Development/Management
9. Warehousing in Pharma Industry
10. Procurement of Capital Equipment and Spares
11. Supply Chain Planning and Strategies
12. Order Processing and Fulfillment
13. Transportation Strategy in Supply Chain
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15. Regulatory Requirements in Pharmaceutical Industry
16. Introduction to Logistics and Distribution
17. Primary Distribution
18. Secondary Distribution
19. Good Warehousing Practices
20. Transportation of Pharmaceutical Products
21. Reverse Logistics in Pharmaceutical
22. Role of Trade Bodies in Pharma
23. Goods and Service Tax (GST)
24. Three PL and Four PL
25. Online Sales in Pharmaceutical Industry
26. Total Cost Approach in Distribution
27. Financial Aspects in Supply Chain
28. Outsourcing in the Pharmaceutical Industry
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31. International Trade
32. Information Technology in Pharma Supply Chain
33. Cold Chain Pharmaceutical Products
34. Supply Chain Performance Measure
35. Supply Chain Issues and Challenges in Pharmaceutical Industry
36. Critical Success Factors in Supply Chain in Pharmaceutical Industry

About the Author(s)

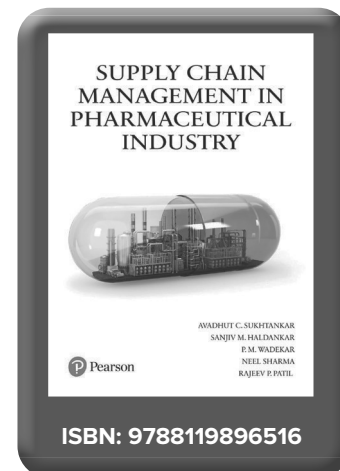
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Pharma Marketing Management

Pharma Marketing Management

Vinita Srivastava, Jugal Kishore

Pages: 168

Year: 2024



About the Book

Pharma Marketing Management offers a comprehensive exploration of the concurrent dynamics of pharmaceutical marketing in India. With six insightful chapters, dealing with pharmaceutical market management concepts and principles, product decisions, promotion, pharmaceutical marketing channels, pricing, and regulatory framework, this book delves into essential topics crucial for understanding and navigating the complexities of the pharmaceutical industry. Designed to cater to a diverse audience, including students of management, pharmaceutical sciences, marketing, economics, pharmacology, public health, and legislation, this book serves as an indispensable resource for anyone seeking to deepen their understanding of pharmaceutical marketing management concepts and practices.

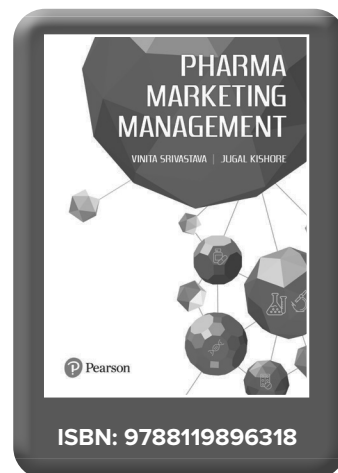
Contents

1. Marketing Management and Pharmaceutical Marketing Management
2. Product Decision
3. Promotion
4. Pharmaceutical Marketing Channels
5. Pricing
6. Regulatory Framework

About the Author(s)

Vinita Srivastava, is presently a faculty member at Jaipuria Institute of Management, Noida,

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