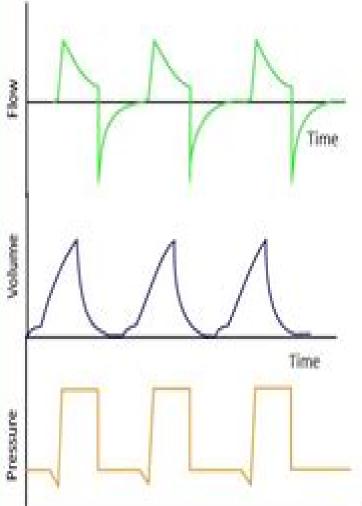
VENTILATOR WAVEFORMS



Time

Scalers and Loops

- 1. Phases of mechanical breath
- 2. Wave form
 - Scalers (Pressure, flow, volume time)
 - Loops (Pressure volume, Flow volume)
- 3. Different shapes of scalers
 - 1. Square

- 4. Exponential rise
- 2. Ascending ramp
- 5. Exponential Decay
- Descending ramp
- 6. Sinusoidal

Ventilator Waveforms Manual

Raveendra Shankaranarayana Ubaradka,Nishkarsh Gupta,Prasanna Udupi Bidkar,Debendra Kumar Tripathy,Anju Gupta

Ventilator Waveforms Manual:

Critical Care Manual of Clinical Nursing Procedures Suzanne Bench, Nicki Credland, Chris Hill, 2024-10-30 Critical Care Manual of Clinical Nursing Procedures The second edition of Critical Care Manual of Clinical Nursing Procedures is a practical overview of essential procedures for the care of critically ill patients Beginning with chapters outlining the current scope of critical care the book adopts a systematic stage by stage approach from admission to discharge At each stage it provides insights into physiology key procedures and the relevant evidence base Now fully updated to incorporate the latest research and best practices this volume is poised to remain an indispensable resource for the next generation of critical care providers Readers of the second edition will find In depth beat by beat analysis of key procedures in critical care Interventions underpinned by the latest evidence Content aligned with the National Critical Care Competency Framework and endorsed by the British Association of Critical Care Nurses Critical Care Manual of Clinical Nursing Procedures is ideal for nurses working in a critical care unit nurses undertaking post qualification specialist courses in critical care or other healthcare professionals working as part of a critical care team Manual of Pediatric Intensive Care Haresh Kirpalani, 2009 The Manual of Pediatric Intensive Care distills the salient information required to provide state of the art care for the acutely ill and injured child into a concise readily useful guide Providing timely and appropriate care is a daunting challenge for fontline caregivers early response and transport teams and pediatric and critical care trainees This manual delivers the basic information and practical advice needed by those who provide urgently needed care to children in a format that occupies the middle ground between the voluminous highly detailed textbook and the to do lists that provide no physiological background for the approach presented An introduction for beginners and a valuable aid for those already engaged in the care of acutely ill children the Manual of Pediatric Intensive Care comprises contributions from specialists from around the world including doctors nurses pharmacists and respiratory therapists Handbook of Mechanical Ventilation B Umesh Kumar, 2016-01-30 Handbook of Mechanical Ventilation is the new edition of this illustrated guide for respiratory specialists physiotherapists nurses and other paramedical staff The book is divided into fourteen chapters each thoroughly revised and updated from the previous edition The early chapters cover the basic principles of mechanical ventilation pulmonary anatomy and physiology and respiratory pathophysiology Subsequent chapters provide important technical information on arterial blood gas analysis modes of ventilation waveform analysis and ventilator graphics Guidance on airway management pulmonary rehabilitation and chest physiotherapy make this a vital reference for all staff involved in the management of patients requiring mechanical ventilation Handbook of Mechanical Ventilation is enhanced by over 100 images illustrations and tables many in full colour Key Points New edition of illustrated guide to mechanical ventilation Previous edition published 2010 9789380704746 All chapters thoroughly revised and updated with the latest clinical information in the field 107 images illustrations and tables many in full colour **Monitoring Mechanical Ventilation**

Using Ventilator Waveforms Jean-Michel Arnal, 2018-02-21 This book discusses the interpretation of mechanical ventilator waveforms Each page shows a screenshot from a real patient and explains one or two messages It starts with basic information about the waveforms and goes on to address passive and spontaneous ventilation non invasive ventilation and specific measurements such as pressure volume curves and esophageal pressure Step by step readers learn about advanced monitoring of patient ventilator synchronisation This unique teaching approach has been adapted to this topic Covering the entire field of mechanical ventilation it is of particular interest to physicians and respiratory therapist working in emergency departments anesthesiology intensive care and respiratory units The Anesthesia Technician and Technologist's Manual Glenn Woodworth, Jeffrey R. Kirsch, Shannon Sayers-Rana, 2012-10-22 The Anesthesia Technician and Technologist s Manual is a comprehensive review of the core knowledge necessary for the day to day workflow of an anesthesia technician or technologist The text is arranged into seven sections Careers in Anesthesia Technology Anatomy Physiology and Pharmacology Principles of Anesthesia Equipment Setup Operation and Maintenance Operating Room and Hospital Environment Operating Room Emergencies and Acronyms and Abbreviations This is also an ideal resource for those preparing for the ASATT certifying examination The Airway Manual Raveendra Shankaranarayana Ubaradka, Nishkarsh Gupta, Prasanna Udupi Bidkar, Debendra Kumar Tripathy, Anju Gupta, 2023-02-15 The book provides up to date and easy to understand information on airway management with special emphasis on practical management along with required theory background and key points It covers all aspects of airway management including education training audit controversies recent advances case discussion etc The book covers all the techniques of airway management like the use of video laryngoscopy fibre optic intubation and retrograde intubation Further the book includes a chapter on airway management during transmittable infectious diseases such as COVID 19 The book also includes separate chapters on the available guidelines discussion of interesting cases neonatal airway and out of hospital airway management The book is written by experienced authors keeping in mind the unique problems and situations related to this specialized and vital area of patient management It presents summary and key points in each chapter Overall this book provides practical specialty oriented and patient centered approach to airway management The book is a useful resource for postgraduate students residents and fellows in anesthesia emergency medicine critical care medicine It is also relevant for anesthesiologists intensivists emergency physicians and internal medicine physicians Manual of Neonatal Respiratory Care Steven M. Donn, Mark C. Mammel, Anton H.L.C. van Kaam, 2022-05-09 Respiratory care is the largest overall component of neonatal intensive care and the fifth edition of the Manual of Neonatal Respiratory Care is the leading bedside guide for all aspects of respiratory care in the neonatal intensive care unit Its easy to read outline format is simple yet comprehensive and covers all aspects of lung disease in the newborn infant including embryology principles of mechanical ventilation procedures and techniques monitoring devices adjunctive therapies management of respiratory illness complications outcomes and related issues The

latest edition includes fully revised and updated information coverage on new equipment and devices and an expanded authorship to enhance its international appeal The new edition also features two new co editors Dr Mark Mammel and Dr Anton Van Kaam internationally recognized experts in the field who bring a fresh perspective to the manual Divided into sixteen sections the book begins with a section on lung development and maldevelopment specifically covering the development of the respiratory system malformations deformations disorders of the neonatal airway and developmental lung anomalies The second section reviews the principles of mechanical ventilation with coverage on such topics as spontaneous breathing oxygen therapy oxygen toxicity pulmonary mechanics and ventilator parameters. The third section of the manual outlines procedures and techniques including neonatal resuscitation laryngoscopy and endotracheal intubation and tracheostomy. The following section dives into the monitoring of the ventilated patient specifically focusing on continuous monitoring techniques clinical controversies in pulse oximetry and echocardiography The next section spotlights noninvasive ventilatory techniques such as nasal interfaces humidified high flow nasal cannula therapy and sustained inflation The sixth section of the manual focuses on ventilatory modes and modalities with coverage on intermittent mandatory ventilation pressure support ventilation and pressure control ventilation. The following section segues into high frequency ventilation reviewing general concepts high frequency jet ventilation and high frequency oscillatory ventilation. The eighth section centers around commonly used neonatal ventilators such as the DRAEGER VN500 ventilator the AVEA ventilator and the Twinstream ventilator The ninth section reviews adjunctive therapies including hemodynamic support nutritional support the use of sedation and analgesia inhaled nitric oxide therapy and ECMO The tenth section shifts gears to spotlight the management of common neonatal respiratory diseases with chapters on mechanisms of respiratory failure tissue hypoxia respiratory distress syndrome persistent pulmonary hypertension and pulmonary hypoplasia agensis among others Section eleven reviews the etiology pathogenesis and management of bronchopulmonary dysplasia as well as the long term outcome of newborns with this chronic lung disease The next section presents complications associated with mechanical ventilation such as thoracic air leaks neonatal pulmonary hemorrhage and neurologic complications. The following two sections spotlights ethical legal and other considerations among them nursing care of the ventilated infant long term ventilator dependency home ventilation withdrawal of ventilatory support and medical liability and risk management The fifteenth section focuses on research and literature with coverage on interpreting medical literature data collection and assessment of respiratory outcomes and contemporary classics in neonatal respiratory care The final section presents ventilatory case studies The text also features over 300 high yield radiographic images figures tables and algorithms 12th Asian-Pacific Conference on Medical and Biological Engineering Guangzhi Wang, Dezhong Yao, Zhongze Gu, Yi Peng, Shanbao Tong, Chengyu Liu, 2024-02-25 This book presents cutting edge research and developments in the field of medical and biological engineering which a special emphasis on activities carried out in the Asian Pacific region Gathering the

proceedings of the 12th Asian Pacific Conference on Medical and Biological Engineering APCMBE 2023 held on May 18 21 2023 in Suzhou China this second volume of a two volume set covers advances in computer aided surgery biomechanics and micro nanoengineering health informatics and health engineering as well as computational modeling and simulation as well as AI applications in biology and medicine It addresses a broad audience of researchers and professionals active in biomedical engineering biomechanics medical biophysics and health informatics Elsevier's Clinical Skills Manual, Medical-Surgical Nursing, 1SAE, e-Book Daisy Thomas, 2020-09-03 Dr Daisy Thomas is currently working as Assistant Professor at Raj Kumari Amrit Kaur College of Nursing Lajpat Nagar New Delhi She has completed her Masters in Nursing with distinction from Delhi University and Doctorate in Nursing from IGNOU She has also held the position of Registrar Delhi Nursing Council from 2016 to 2019 She is an experienced nursing teacher of Medical Surgical Nursing and has been tutoring graduate and postgraduate students of Delhi University for the past three decades She is the research guide for postgraduate students of Delhi University She has been examiner for many universities of India and have presented papers at state and national level workshops and conferences She has several publications to her credit both as single author as well as co author and has published in national and international journals She has been the adaptation editor for the First South Asia edition of Potter Perry's Fundamentals of Nursing Fully compliant with the new syllabus prescribed by the Indian Nursing Council Content organized in sections and chapters text presented in points Steps of procedures are based on current and best practices Chapter content presented under heads like Overview Supplies Child and Family Education Assessment and Preparation Procedure Monitoring and Care Expected Outcomes and Documentation Content richly supported by figures and tables ideos related to the procedures available on the MedEnact website **Mechanical Ventilation** David C. Shelledy, Jay I. Peters, 2019-03-28 Mechanical Ventilation provides students and clinicians concerned with the care of patients requiring mechanical ventilatory support a comprehensive guide to the evaluation of the critically ill patient assessment of respiratory failure indications for mechanical ventilation initiation of mechanical ventilatory support patient stabilization monitoring and ventilator discontinuance. The text begins with an introduction to critical respiratory care followed by a review of respiratory failure to include assessment of oxygenation ventilation and acid base status A chapter is provided which reviews principles of mechanical ventilation and commonly used ventilators and related equipment Indications for mechanical ventilation are next discussed to include invasive and non invasive ventilation Ventilator commitment is then described to include establishment of the airway choice of ventilator mode of ventilation and initial ventilator settings Patient stabilization is then Advanced Monitoring and Procedures for Small Animal Emergency and Critical Care Jamie M. Burkitt discu Creedon, Harold Davis, 2012-04-03 Advanced Monitoring and Procedures for Small Animal Emergency and Critical Care is a comprehensive yet practical reference providing hands on information essential to veterinarians and veterinary technicians involved in emergency and critical care Written by an expert team of veterinarians and veterinary technicians this well

referenced book offers step by step protocols for performing advanced emergency and critical care procedures and monitoring techniques Packed with practical guidance in an easy to use format this book is ideally suited for guick access in emergency rooms or intensive care units Organized primarily by body system each chapter covers general principles indications equipment techniques basic interpretation troubleshooting and contraindications Standardized protocols supply equipment lists and step by step instructions throughout and a companion website offers images from the book in PowerPoint and protocols as downloadable Word files Advanced Monitoring and Procedures for Small Animal Emergency and Critical Care is a valuable resource for any veterinary staff member with an interest in improving the standard of care in emergency and critical care medicine Egan's Fundamentals of Respiratory Care - E-Book James K. Stoller, Albert J. Heuer, David L. Vines, Robert L. Chatburn, Eduardo Mireles-Cabodevila, 2024-01-19 Selected for Doody's Core Titles 2024 with Essential Purchase designation in Respiratory Therapy Master the principles and skills you ll need to succeed as a respiratory therapist Egan's Fundamentals of Respiratory Care 13th Edition provides a solid foundation in respiratory care and covers the latest advances in this dynamic field For more than 50 years this text has been the go to resource to understand the role of the respiratory therapist the scientific basis for treatment and clinical applications Comprehensive chapters prepare you for clinical and exam success by correlating to the 2020 NBRC Exam matrices The 13th Edition includes updated coverage of COVID 19 the latest AARC clinical practice guidelines and a new enhanced eBook version included with print purchase NEW Enhanced eBook version is included with print purchase allowing you to access all the text figures and references with the ability to search customize content make notes and highlights and have content read aloud plus videos animations an English Spanish glossary and lecture notes NEW AND UPDATED All chapters reflect the latest advances in respiratory care Patient ventilator interaction chapter contains all new content and chapters on e Medicine pulmonary infections neonatal and pediatric care ventilator physiology and ICU patient monitoring have been fully revised and updated UPDATED Coverage of the latest advancements in respiratory care research and patient care addresses key topics including COVID 19 and other related viruses Focus on exam preparation with content linked to NBRC credentialing exam matrices and clinical simulations Expert authorship and a focus on each chapter by and for respiratory therapists helps improve utility and readability Excerpts of the AARC's Clinial Practice Guidelines CPGs provide important information regarding indications contraindications hazards and complications assessment of need assessment of outcome and monitoring Mini Clinis short critical thinking case scenarios with Q A encourage you to solve realistic problems commonly encountered during patient care Sample Therapist Driven Protocol TDP algorithms and coverage expose you to the use of decision trees developed by hospitals to promote assessment and evaluation skills in patient care Rules of Thumb features in each chapter highlight rules formulae and key points important to clinical practice and are marked with a special icon for easy identification Learning Objectives align exactly with the Summary Checklist at the end of each chapter paralleling the three areas tested on the

2020 NBRC Therapist Multiple Choice Examination recall analysis and application End of textbook glossary includes key terms and definitions necessary for comprehension of key concepts Pilbeam's Mechanical Ventilation E-Book James M. Cairo, 2019-09-05 Ensure you understand one of the most sophisticated areas of respiratory care with Pilbeam's Mechanical Ventilation Physiological and Clinical Applications 7th Edition Known for its simple explanations and in depth coverage of patient ventilator management this evidence based text walks you through the most fundamental and advanced concepts surrounding mechanical ventilation and helps you understand how to properly apply these principles to patient care This new edition is an excellent reference for all critical care practitioners and features coverage of the physiological effects of mechanical ventilation on different cross sections of the population Additionally student friendly features promote critical thinking and clinical application such as key points AARC clinical practice guidelines critical care concepts updated learning objectives which address ACCS exam topics and are currently mandated by the NBRC for the RRT ACCS credential Brief patient case studies list important assessment data and pose a critical thinking question to you Critical Care Concepts are presented in short questions to help you apply knowledge to difficult concepts UNIQUE Chapter on ventilator associated pneumonia provides in depth comprehensive coverage of this challenging issue Clinical scenarios cover patient presentation assessment data and treatment options to acquaint you with different clinical situations Key Point boxes highlight need to know information Logical chapter sequence builds on previously learned concepts and information Bulleted end of chapter summaries help you to review and assess your comprehension Excerpts of Clinical Practice Guidelines developed by the AARC American Association for Respiratory Care make it easy to access important information regarding indications contraindications hazards and complications assessment of need assessment of outcome and monitoring Chapter outlines show the big picture of each chapter's content Glossary of mechanical ventilation terminology includes definitions to highlighted key terms in each chapter NBRC exam style assessment questions at the end of each chapter offer practice for the certification exam NEW Interprofessional education and practice concepts integrated throughout text and within respective chapters NEW Enhanced content on the physiological effects of mechanical ventilation application provides in depth coverage of patient concerns UPDATED Content on ventilator modes in Selecting the Ventilator Mode and Initial Ventilator Settings chapters NEW Revised Basic Concepts of Noninvasive Positive Pressure Ventilation chapter includes the latest practics in this area of respiratory care NEW Learning Objectives and end of chapter Review Questions reflect the updated content and the latest NBRC RRT ACCS exam topics Handbook of Physics in Medicine and Biology Robert Splinter, 2010-04-05 In considering ways that physics has helped advance biology and medicine what typically comes to mind are the various tools used by researchers and clinicians We think of the optics put to work in microscopes endoscopes and lasers the advanced diagnostics permitted through magnetic x ray and ultrasound imaging and even the nanotools that a Hough's Cardiorespiratory Care Alexandra Hough, 2017-11-23 The latest edition of this must have text book promises an

evidence based and practical approach covering the very latest in cardiorespiratory care The textbook covers a wide range of cardiorespiratory conditions and discusses treatment of patients in different clinical settings such as critical care the ward area and out patient departments. It begins with physiology and pathology and progresses into a detailed patient assessment section and a discussion of specific respiratory and cardiac conditions. The final section covers different groups of people who may require physiotherapy such as infants children and adults with specific conditions including a considered section on palliative care Critical thinking is facilitated by clinical reasoning boxes in the text and problem solving is aided by case studies at the end of each chapter. There are also relevant practice tips to enable transfer of learning into the clinical environment. The text is supported by over 280 line drawings and diagrams along with over 70 x rays and photographs to further illustrate the points under discussion Q A case studies with scans and x rays Outcome measures for problems and diseases. Boxes with learning and practice tips to encourage reflection Tables with definitions normal values and comparisons Practical techniques described with precision Expanded cardiovascular section Updated practical details on physiotherapy techniques Extra chapters on surgical complications and interventions Comprehensive coverage of Critical Care procedures and rehabilitation Practicalities of the management of children and infants Update on the evaluation of outcomes

Respiratory Care: Principles and Practice Hess, Neil R. MacIntyre, William F. Galvin, Shelley C. Mishoe, 2015-04-06 With contributions from over 75 of the foremost experts in the field the third edition represents the very best in clinical and academic expertise Taught in leading respiratory care programs in the U S it continues to be the top choice for instructors and students alike The Third Edition includes numerous updates and revisions that provide the best foundational knowledge available as well as new helpful instructor resources and student learning tools A complete and up to date exploration of the technical and professional aspects of respiratory care With foundations in evidence based practice this essential resource reviews respiratory assessment respiratory therapeutics respiratory diseases basic sciences and their application to respiratory care the respiratory care profession and much more With content cross references the NBRC examination matrices Respiratory Care Principles and Practice Third Edition is the definitive resource for today s successful RT The Anesthesia Technologist's Manual Emily Guimaraes, Matthew Davis, Glenn Woodworth, Jeffrey R. Kirsch, 2018-08-14 Publisher s Note Products purchased from 3rd Party sellers are not guaranteed by the Publisher for quality authenticity or access to any online entitlements included with the product This unique manual is an ideal resource for anesthesia technicians and technologists and those studying for certification CerATT in the field It offers well illustrated comprehensive coverage of every aspect of day to day practice and workflow with sections on Anatomy Physiology and Pharmacology Anesthesia Practice Anesthesia Equipment and Technology Emergencies and more From explanations of who s who in the operating room to detailed step by step instructions on equipment maintenance this practical manual ensures that readers will have current complete information on the core knowledge they need to know in anesthesia technology Goldsmith's Assisted Ventilation

of the Neonate - E-Book Martin Keszler, Kanekal Gautham, Jay P. Goldsmith, 2021-12-24 A must have reference for the entire NICU Goldsmith's Assisted Ventilation of the Neonate 7th Edition is the only fully comprehensive evidence based guide to all aspects of this fast changing field Easy to use and multidisciplinary in scope this trusted reference provides authoritative guidance on contemporary management of neonatal respiratory diseases with an emphasis on evidence based pharmacologic and technologic advances that improve outcomes and quality of life in newborns It s an outstanding resource for neonatologists and NICU professionals to acquire new knowledge and techniques in this critical area of neonatal care Covers all aspects of both basic and advanced respiratory management of neonates general principles and concepts assessment diagnosis and monitoring methods therapeutic respiratory interventions adjunctive interventions and special situations and outcomes Provides updated content on rapidly changing technology and guidelines for assisted ventilation with up to date descriptions of bedside methodologies and the rationale for providing all types of ventilator care in infants Contains new chapters on respiratory gas conditioning diagnosis and management of PPHN care of the infant with CDH gaps in knowledge and future directions Includes significant updates on cardiovascular assessment and management as well as complications of respiratory support Provides extensive full color visual support with photographs drawings charts and diagrams and radiographic images throughout Features more than 30 appendices that help you quickly find normal values assessment charts ICU flow charts procedure steps and other useful printable forms Enhanced eBook version included with purchase Your enhanced eBook allows you to access all of the text figures and references from the book on a variety of devices

Pilbeam's Mechanical Ventilation - E-Book James M. Cairo, 2015-09-07 Learn everything you need to safely and compassionately care for patients requiring ventilator support with Pilbeam's Mechanical Ventilation Physiological and Clinical Applications 6th Edition Known for its simple explanations and in depth coverage of patient ventilator management this evidence based text walks readers through the most fundamental and advanced concepts surrounding mechanical ventilation and guides them in properly applying these principles to patient care This new edition features a completely revised chapter on ventilator graphics additional case studies and clinical scenarios plus all the reader friendly features that promote critical thinking and clinical application like key points AARC clinical practice guidelines and critical care concepts that have helped make this text a household name among respiratory care professionals UNIQUE Chapter on ventilator associated pneumonia provides in depth comprehensive coverage of this challenging issue Brief patient case studies list important assessment data and pose a critical thinking question to readers Critical Care Concepts are presented in short questions to engage readers in applying knowledge to difficult concepts Clinical scenarios cover patient presentation assessment data and treatment options to acquaint readers with different clinical situations NBRC exam style assessment questions at the end of each chapter offer practice for the certification exam Key Point boxes highlight need to know information Logical chapter sequence builds on previously learned concepts and information Bulleted end of chapter

summaries help readers to review and assess their comprehension Excerpts of Clinical Practice Guidelines developed by the AARC American Association for Respiratory Care make it easy to access important information regarding indications contraindications hazards and complications assessment of need assessment of outcome and monitoring Chapter outlines show the big picture of each chapter s content Glossary of mechanical ventilation terminology includes definitions to highlighted key terms in each chapter NEW Completely revised chapter on ventilator graphics offers a more practical explanation of ventilator graphics and what readers need to know when looking at abnormal graphics NEW Additional case studies and clinical scenarios cover real life scenarios that highlight the current trends in pathologies in respiratory care

Complications in Anesthesia E-Book Lee A. Fleisher, Stanley H. Rosenbaum, 2017-09-29 Using a unique problem solving approach Complications in Anesthesia 3rd Edition walks you through effective solutions to common complications in anesthesia and critical care This practical reference uses a highly structured clearly illustrated format to bring you up to date with what s new in the field help you anticipate potential challenges and guide you through life saving solutions Presents content in an updated logical organization covering various types of complications drugs testing intubation line insertion surgical procedures etc followed by differential diagnosis and treatment of signs of complications intraoperative such as hypoxia or hypotension and postoperative such as MI Follows a problem based practice oriented approach throughout case synopses are followed by concise coverage of recognition risk assessment implications management and prevention Allows you to review the case reports contemplate the implications then check your response against what the experts have to say Includes numerous photographs diagrams flow charts and tables that illustrate key concepts Ideal as a clinical reference and as a study tool when preparing for oral boards Brings you up to date with new safety standards and the latest ASA guidelines Expert ConsultTM eBook version included with purchase This enhanced eBook experience allows you to search all of the text figures and references from the book on a variety of devices

Whispering the Strategies of Language: An Psychological Journey through Ventilator Waveforms Manual

In a digitally-driven world where displays reign supreme and quick interaction drowns out the subtleties of language, the profound secrets and psychological nuances hidden within phrases often go unheard. Yet, set within the pages of **Ventilator Waveforms Manual** a charming fictional value pulsating with organic emotions, lies a fantastic quest waiting to be undertaken. Composed by a talented wordsmith, that marvelous opus invites visitors on an introspective journey, softly unraveling the veiled truths and profound affect resonating within ab muscles fabric of each and every word. Within the mental depths of this poignant review, we will embark upon a genuine exploration of the book is core styles, dissect its charming writing type, and yield to the strong resonance it evokes heavy within the recesses of readers hearts.

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