

# CHAPTER 14 THE DIGESTIVE SYSTEM AND BODY METABOLISM

## ANSWER KEY

CHAPTER 14 THE DIGESTIVE SYSTEM AND BODY METABOLISM ANSWER KEY THE AMAZING JOURNEY OF DIGESTION UNLOCKING THE SECRETS OF YOUR BODY'S FUEL FACTORY YOUR BODY IS A COMPLEX MACHINE CONSTANTLY WORKING TO KEEP YOU ALIVE AND FUNCTIONING ONE OF ITS MOST VITAL PROCESSES IS DIGESTION A FASCINATING JOURNEY THAT TRANSFORMS THE FOOD YOU EAT INTO THE ENERGY AND BUILDING BLOCKS YOUR BODY NEEDS DIGESTION A JOURNEY OF TRANSFORMATION IMAGINE A COMPLEX ASSEMBLY LINE WHERE EACH STEP PLAYS A CRUCIAL ROLE IN THE FINAL PRODUCT THAT'S WHAT DIGESTION IS LIKE LET'S BREAK DOWN THIS INCREDIBLE PROCESS

**STEP 1: INGESTION** BRINGING FOOD IN YOUR JOURNEY BEGINS WITH THE MOUTH WHERE YOU TAKE THAT FIRST BITE CHEWING AND SALIVA MIX WITH FOOD BREAKING IT DOWN INTO SMALLER PARTICLES SALIVA CONTAINS AN ENZYME CALLED SALIVARY AMYLASE WHICH STARTS THE BREAKDOWN OF CARBOHYDRATES

**STEP 2: PROPULSION** MOVING FOOD ALONG ONCE SWALLOWED YOUR FOOD TRAVELS DOWN THE ESOPHAGUS A MUSCULAR TUBE THAT PROPELS IT TOWARDS THE STOMACH THIS MOVEMENT IS CALLED PERISTALSIS A COORDINATED WAVE OF MUSCLE CONTRACTIONS THAT PUSH FOOD ALONG

**STEP 3: MECHANICAL AND CHEMICAL DIGESTION IN THE STOMACH** THE STOMACH A MUSCULAR SAC MIXES FOOD WITH GASTRIC JUICES A POTENT COCKTAIL OF ENZYMES AND HYDROCHLORIC ACID (HCL) HCL BREAKS DOWN FOOD FURTHER WHILE ENZYMES LIKE PEPSIN TARGET PROTEINS PREPARING THEM FOR FURTHER DIGESTION THE STOMACH'S CHURNING ACTION FURTHER ENHANCES THE BREAKDOWN PROCESS

**STEP 4: DIGESTION CONTINUES IN THE SMALL INTESTINE** THE SMALL INTESTINE A LONG WINDING TUBE IS WHERE THE BULK OF DIGESTION AND ABSORPTION TAKES PLACE IT RECEIVES PARTIALLY DIGESTED FOOD FROM THE STOMACH ALONG WITH DIGESTIVE JUICES FROM THE PANCREAS, LIVER, AND GALLBLADDER

**2. THE PANCREAS** PROVIDES ENZYMES FOR BREAKING DOWN CARBOHYDRATES, FATS, AND PROTEINS THE LIVER PRODUCES BILE WHICH IS STORED IN THE GALLBLADDER AND RELEASED TO HELP DIGEST FATS WITH THE AID OF THESE DIGESTIVE JUICES FOOD IS BROKEN DOWN INTO ITS SMALLEST COMPONENTS: AMINO ACIDS, FATTY ACIDS, AND SIMPLE SUGARS READY FOR ABSORPTION

**STEP 5: ABSORPTION** TAKING IN THE NUTRIENTS THE SMALL INTESTINE IS EQUIPPED WITH TINY FINGERLIKE PROJECTIONS CALLED VILLI AND MICROVILLI WHICH INCREASE ITS SURFACE AREA FOR EFFICIENT NUTRIENT ABSORPTION ONCE ABSORBED NUTRIENTS ENTER THE BLOODSTREAM READY TO FUEL THE BODY'S CELLS AND TISSUES

**STEP 6: ELIMINATION** GETTING RID OF THE LEFTOVERS THE LARGE INTESTINE THE FINAL STOP IN THE DIGESTIVE JOURNEY ABSORBS REMAINING WATER AND ELECTROLYTES THE WASTE PRODUCTS THAT REMAIN FORM SOLID FECES WHICH ARE ELIMINATED FROM THE BODY THROUGH THE RECTUM AND ANUS

**BEYOND DIGESTION: BODY METABOLISM** THE POWERHOUSE OF LIFE DIGESTION IS JUST THE FIRST PART OF THE STORY THE NUTRIENTS YOU'VE ABSORBED NOW ENTER THE REALM OF METABOLISM THE COMPLEX SET OF CHEMICAL REACTIONS THAT KEEP YOUR BODY RUNNING SMOOTHLY

**METABOLISM: THE ENGINE ROOM**

**CATABOLISM** BREAKING DOWN FOR ENERGY YOUR BODY CONSTANTLY NEEDS ENERGY TO PERFORM ITS FUNCTIONS FROM BREATHING AND HEARTBEAT TO THINKING AND MOVING CATABOLISM IS THE PROCESS OF BREAKING DOWN LARGE MOLECULES LIKE CARBOHYDRATES, FATS, AND PROTEINS INTO SMALLER UNITS TO RELEASE ENERGY THIS ENERGY IS STORED IN A MOLECULE CALLED ATP (ADENOSINE TRIPHOSPHATE) THE BODY'S PRIMARY ENERGY CURRENCY

**ANABOLISM** BUILDING UP FOR GROWTH AND REPAIR ANABOLISM IS THE CONSTRUCTIVE SIDE OF METABOLISM WHERE SMALLER MOLECULES ARE USED TO BUILD AND REPAIR TISSUES, SYNTHESIZE HORMONES, AND CREATE NEW CELLS THIS PROCESS USES ENERGY FROM ATP TO BUILD UP YOUR BODY'S STRUCTURES

**METABOLIC RATES** UNDERSTANDING YOUR BODY'S ENERGY DEMANDS

**BASAL METABOLIC RATE (BMR)** THIS REFERS TO THE MINIMUM AMOUNT OF ENERGY YOUR BODY NEEDS TO PERFORM ITS BASIC FUNCTIONS AT REST IT ACCOUNTS FOR ABOUT 60-75% OF YOUR DAILY ENERGY EXPENDITURE

**FACTORS AFFECTING BMR**

**AGE** BMR DECREASES WITH AGE

**3. SEX** MEN GENERALLY HAVE A

HIGHER BMR THAN WOMEN DUE TO GREATER MUSCLE MASS BODY COMPOSITION MORE MUSCLE MASS INCREASES BMR HORMONES THYROID HORMONES PLAY A SIGNIFICANT ROLE IN REGULATING METABOLISM GENETICS YOUR GENES CAN ALSO INFLUENCE YOUR BMR TOTAL DAILY ENERGY EXPENDITURE TDEE THIS INCLUDES BMR PLUS THE ENERGY USED FOR PHYSICAL ACTIVITY AND THE THERMIC EFFECT OF FOOD THE ENERGY NEEDED TO DIGEST AND PROCESS FOOD METABOLIC DISORDERS WHEN THINGS GO WRONG WHILE METABOLISM IS ESSENTIAL FOR LIFE IMBALANCES CAN LEAD TO HEALTH PROBLEMS OBESITY OCCURS WHEN ENERGY INTAKE CONSISTENTLY EXCEEDS ENERGY EXPENDITURE LEADING TO EXCESS FAT STORAGE DIABETES CHARACTERIZED BY PROBLEMS WITH BLOOD SUGAR REGULATION EITHER DUE TO INSUFFICIENT INSULIN PRODUCTION OR THE BODY'S INABILITY TO USE INSULIN EFFECTIVELY METABOLIC SYNDROME A CLUSTER OF RISK FACTORS THAT INCREASE THE LIKELIHOOD OF DEVELOPING CARDIOVASCULAR DISEASE STROKE AND TYPE 2 DIABETES THESE FACTORS INCLUDE HIGH BLOOD PRESSURE HIGH BLOOD SUGAR EXCESS ABDOMINAL FAT AND ABNORMAL CHOLESTEROL LEVELS HARNESSING THE POWER OF DIGESTION AND METABOLISM UNDERSTANDING THE COMPLEXITIES OF DIGESTION AND METABOLISM CAN EMPOWER YOU TO MAKE INFORMED CHOICES ABOUT YOUR HEALTH AND WELLBEING HERE ARE SOME KEY TAKEAWAYS FUEL YOUR BODY RIGHT CHOOSE A BALANCED DIET RICH IN FRUITS VEGETABLES WHOLE GRAINS AND LEAN PROTEIN STAY ACTIVE REGULAR EXERCISE BOOSTS METABOLISM HELPS CONTROL WEIGHT AND STRENGTHENS YOUR BODY MANAGE STRESS CHRONIC STRESS CAN DISRUPT HORMONES THAT REGULATE METABOLISM GET ENOUGH SLEEP ADEQUATE SLEEP IS CRUCIAL FOR MAINTAINING HEALTHY METABOLIC PROCESSES CONSULT A HEALTHCARE PROFESSIONAL IF YOU HAVE CONCERNS ABOUT YOUR DIGESTIVE HEALTH OR METABOLISM SEEK GUIDANCE FROM A QUALIFIED HEALTHCARE PROFESSIONAL THE POWER OF DIGESTION AND METABOLISM A LIFELONG JOURNEY FROM THE FIRST BITE TO THE VERY LAST CELL DIGESTION AND METABOLISM WORK TIRELESSLY TO KEEP YOU ALIVE AND THRIVING BY EMBRACING THESE POWERFUL PROCESSES AND TAKING CARE OF YOUR BODY YOU UNLOCK THE KEY TO A HEALTHIER HAPPIER LIFE 4

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A CONCISE ILLUSTRATED AND ACCESSIBLE GUIDE TO THE DIGESTIVE SYSTEM EACH OF THE TWELVE VOLUMES IN PEATE S BODY SYSTEMS SERIES IS ROOTED IN THE BELIEF THAT A DEEP AND THOROUGH UNDERSTANDING OF THE HUMAN BODY IS ESSENTIAL FOR PROVIDING THE HIGHEST STANDARD OF CARE OFFERING CLEAR ACCESSIBLE AND UP TO DATE INFORMATION ON DIFFERENT BODY SYSTEMS THIS SERIES BRIDGES THE GAP BETWEEN COMPLEX SCIENTIFIC CONCEPTS AND PRACTICAL EVERYDAY APPLICATIONS IN HEALTH AND CARE SETTINGS THIS SERIES MAKES FOR AN INVALUABLE RESOURCE FOR THOSE COMMITTED TO UNDERSTANDING THE INTRICACIES OF HUMAN BIOLOGY PHYSIOLOGY AND THE VARIOUS SYSTEMS THAT SUSTAIN LIFE THE DIGESTIVE SYSTEM IS THE PERFECT COMPANION FOR STUDENTS AND NEWLY REGISTERED PRACTITIONERS ACROSS NURSING AND ALLIED HEALTH FIELDS WITH AN INTEREST IN GASTROINTESTINAL CARE PROVIDING A COMPREHENSIVE YET EASY TO DIGEST GUIDE FOR BOTH ACADEMIC AND CLINICAL APPLICATION EQUIPS HEALTHCARE STUDENTS AND PRACTITIONERS WITH THE NECESSARY INFORMATION TO PROVIDE SAFE AND COMPETENT CARE FEATURES COLOURFUL ILLUSTRATIONS TO AID COMPREHENSION CLARIFY COMPLICATED CONCEPTS AND RENDER CONTENT MORE ENGAGING AND ACCESSIBLE EMPOWERS READERS TO ADAPT TO A RAPIDLY EVOLVING HEALTHCARE LANDSCAPE PREPARING THEM FOR THE FUTURE OF HEALTHCARE DELIVERY CONTAINS INFORMATION NECESSARY FOR EFFECTIVE PATIENT CARE OF THOSE WITH PEPTIC ULCERS INFLAMMATORY BOWEL DISEASE AND OTHER GASTROINTESTINAL DISEASES AND CONDITIONS

UPPER DIGESTIVE TRACT 2ND EDITION PART 1 IN THE 3 BOOK DIGESTIVE SYSTEM VOLUME PROVIDES A CONCISE AND HIGHLY VISUAL APPROACH TO THE BASIC SCIENCES AND CLINICAL PATHOLOGY OF THE MOUTH PHARYNX ESOPHAGUS AND STOMACH THIS BOOK IN THE NETTER COLLECTION OF MEDICAL ILLUSTRATIONS THE CIBA GREEN BOOKS HAS BEEN EXPANDED AND REVISED TO CAPTURE CURRENT PERSPECTIVES IN GASTROENTEROLOGY FROM NORMAL ANATOMY AND PHYSIOLOGY THROUGH PATHOPHYSIOLOGY DIAGNOSTICS AND TREATMENT RADIOLOGIC AND PATHOLOGIC IMAGES SUPPLEMENT THE CLASSIC NETTER ILLUSTRATIONS AS WELL AS NEW ILLUSTRATIONS HIGHLIGHTS INCLUDE NEUROPHYSIOLOGY AND ELECTRICAL PHYSIOLOGY OF NORMAL GASTRIC FUNCTION AND DISEASE BARRETT S ESOPHAGUS EOSINOPHILIC ESOPHAGUS AND IMAGING AND PHYSIOLOGIC COMPLEXITIES OF SWALLOWING GAIN A RICH COMPREHENSIVE OVERVIEW OF THE UPPER DIGESTIVE TRACT BY SEEING CLASSIC NETTER ILLUSTRATIONS SIDE BY SIDE WITH CUTTING EDGE RADIOLOGIC AND ENDOSCOPIC IMAGES EXPLORE KEY TOPICS IN GASTROENTEROLOGY INCLUDING TUMORS OF SALIVARY GLANDS MICROBIOTA DIAGNOSTIC AIDS AND POSTGASTRECTOMY COMPLICATIONS SEE MODERN ISSUES IN DIGESTIVE HEALTH AND DISEASE BARIATRIC SURGERY IBS AND GERD CAPTURED IN THE VISUALLY RICH NETTER ARTISTIC TRADITION VIA CONTRIBUTIONS FROM ARTISTS WORKING IN THE NETTER STYLE GET COMPLETE INTEGRATED VISUAL GUIDANCE ON THE MOUTH PHARYNX ESOPHAGUS AND STOMACH IN A SINGLE SOURCE FROM BASIC SCIENCES AND NORMAL ANATOMY AND FUNCTION THROUGH PATHOLOGIC CONDITIONS BENEFIT FROM THE KNOWLEDGE OF A TEAM OF RENOWNED CLINICIANS AND SCIENTISTS

OFFERING A CONCISE HIGHLY VISUAL APPROACH TO THE BASIC SCIENCE AND CLINICAL PATHOLOGY OF THE DIGESTIVE SYSTEM THIS UPDATED VOLUME IN THE NETTER COLLECTION OF MEDICAL ILLUSTRATIONS THE CIBA GREEN BOOKS CONTAINS UNPARALLELED DIDACTIC ILLUSTRATIONS REFLECTING THE LATEST MEDICAL KNOWLEDGE REVISED BY DRS JAMES C REYNOLDS PETER J WARD DAVID A KATZKA HENRY P PARKMAN AND MICHELE A YOUNG UPPER DIGESTIVE TRACT PART 1 OF THE DIGESTIVE SYSTEM VOLUME 9 INTEGRATES CORE CONCEPTS OF ANATOMY PHYSIOLOGY AND OTHER BASIC SCIENCES WITH COMMON CLINICAL CORRELATES ACROSS HEALTH MEDICAL AND SURGICAL DISCIPLINES CLASSIC NETTER ART UPDATED AND NEW ILLUSTRATIONS AND MODERN IMAGING CONTINUE TO BRING MEDICAL CONCEPTS TO LIFE AND MAKE THIS TIMELESS WORK AN ESSENTIAL RESOURCE FOR STUDENTS CLINICIANS AND EDUCATORS PROVIDES A HIGHLY VISUAL GUIDE TO THE MOUTH PHARYNX ESOPHAGUS AND

STOMACH IN A SINGLE SOURCE FROM BASIC SCIENCES AND NORMAL ANATOMY AND FUNCTION THROUGH PATHOLOGIC CONDITIONS OFFERS EXPERT COVERAGE OF KEY TOPICS SUCH AS GASTROINTESTINAL MANIFESTATIONS OF COVID MECHANISMS OF DISEASE FUNCTIONAL DISORDERS DIAGNOSTIC TESTS IN GASTRIC DISORDERS ENDOFLIP OF THE ESOPHAGUS AND ENDOSCOPIC PYLOROMYOTOMY FOR GASTROPARESIS PROVIDES A CONCISE OVERVIEW OF COMPLEX INFORMATION BY INTEGRATING ANATOMICAL AND PHYSIOLOGICAL CONCEPTS WITH PRACTICAL CLINICAL SCENARIOS COMPILES DR FRANK H NETTER S MASTER MEDICAL ARTISTRY AN AESTHETIC TRIBUTE AND SOURCE OF INSPIRATION FOR MEDICAL PROFESSIONALS FOR OVER HALF A CENTURY ALONG WITH NEW ART IN THE NETTER TRADITION FOR EACH OF THE MAJOR BODY SYSTEMS MAKING THIS VOLUME A POWERFUL AND MEMORABLE TOOL FOR BUILDING FOUNDATIONAL KNOWLEDGE AND EDUCATING PATIENTS OR STAFF

EXAMINES THE ROLE AND FUNCTION OF THE HUMAN DIGESTIVE SYSTEM

DISCUSSES THE PARTS THAT MAKE UP THE HUMAN DIGESTIVE SYSTEM WHAT CAN GO WRONG HOW TO TREAT THOSE ILLNESSES AND DISEASES AND HOW TO STAY HEALTHY PROVIDED BY PUBLISHER

BIOCHEMICAL PHYSIOLOGICAL AND MORPHOLOGICAL ASPECTS OF MAMMALIAN DIGESTIVE SYSTEMS

THE SATISFACTION DERIVED FROM SAVORING A STEAK OR INDULGING IN AN ICE CREAM SUNDAE IS ONLY ONE ASPECT OF A LARGER PROCESS THAT OCCURS IN THE HUMAN DIGESTIVE SYSTEM FROM THE MOMENT FOOD ENTERS OUR MOUTHS UNTIL LONG AFTER WE HAVE FINISHED A MEAL THE BODY ENGAGES IN AN EXTENSIVE ROUTINE DESIGNED TO RETAIN NUTRIENTS AND DISCARD WASTE THIS COMPREHENSIVE BOOK EXAMINES ALL THE VITAL COMPONENTS INVOLVED IN CONSUMING AND DIGESTING FOOD AS WELL AS THE DISEASES AND DISORDERS THAT CAN PLAGUE THIS FREQUENTLY OVERLOOKED AREA OF THE HUMAN BODY

THIS IS AN INTEGRATED TEXTBOOK ON THE DIGESTIVE SYSTEM COVERING THE ANATOMY PHYSIOLOGY AND BIOCHEMISTRY OF THE SYSTEM ALL PRESENTED IN A CLINICALLY RELEVANT CONTEXT APPROPRIATE FOR THE FIRST TWO YEARS OF THE MEDICAL STUDENT COURSE ONE OF THE SEVEN VOLUMES IN THE SYSTEMS OF THE BODY SERIES CONCISE TEXT COVERS THE CORE ANATOMY PHYSIOLOGY AND BIOCHEMISTRY IN AN INTEGRATED MANNER AS REQUIRED BY SYSTEM AND PROBLEM BASED MEDICAL COURSES THE BASIC SCIENCE IS PRESENTED IN THE CLINICAL CONTEXT IN A WAY APPROPRIATE FOR THE EARLY PART OF THE MEDICAL COURSE

AN INTRODUCTION TO THE DIGESTIVE SYSTEM THIS BOOK INTRODUCES READERS GRADES 3 5 TO THE DIGESTIVE SYSTEM INCLUDING THE DIGESTIVE PROCESS THE ORGANS INVOLVED IN DIGESTION AND COMMON PROBLEMS AND DISEASES ASSOCIATED WITH THE DIGESTIVE SYSTEM

WHEN TALKING ABOUT THE DIGESTIVE SYSTEM A FEW TOPICS MUST BE COVERED VOMIT THE INTESTINES AND POOP ALL READERS CAN ENJOY THESE AND MANY MORE TOPICS ABOUT THE GROSSEST OF THE BODY SYSTEMS IN THIS FRIENDLY FUN FACT FORMAT FROM THE MOUTH AND ESOPHAGUS TO THE SMALL AND LARGE INTESTINE READERS TAKE A JOURNEY THROUGH THE HUMAN BODY VIA THE DIGESTIVE TRACT AND ENJOY LEARNING ABOUT PROCESSES THE DIGESTIVE SYSTEM DOES WITHOUT US EVEN KNOWING THE BRIGHT IMAGES AND LABELED DIAGRAMS ENCOURAGE BODY LITERACY AND SUPPORT SCIENCE CLASSROOM LEARNING

AN OVERVIEW OF THE DIGESTIVE SYSTEM AND HOW IT WORKS

NOW IN ITS NINTH EDITION THIS COMPREHENSIVE ALL IN ONE TEXTBOOK COVERS THE BASIC LPN LVN CURRICULUM AND ALL CONTENT AREAS OF THE NCLEX PN COVERAGE INCLUDES ANATOMY AND PHYSIOLOGY NURSING PROCESS GROWTH AND DEVELOPMENT NURSING SKILLS AND PHARMACOLOGY AS WELL AS MEDICAL SURGICAL MATERNAL NEONATAL PEDIATRIC AND PSYCHIATRIC MENTAL HEALTH NURSING THE BOOK IS WRITTEN IN A STUDENT FRIENDLY

STYLE AND HAS AN ATTRACTIVE FULL COLOR DESIGN WITH NUMEROUS ILLUSTRATIONS TABLES AND BOXES BOUND IN MULTIMEDIA CD ROMS INCLUDE AUDIO PRONUNCIATIONS CLINICAL SIMULATIONS VIDEOS ANIMATIONS AND A SIMULATED NCLEX PN EXAM THIS EDITION S COMPREHENSIVE ANCILLARY PACKAGE INCLUDES CURRICULUM MATERIALS POWERPOINT SLIDES LESSON PLANS AND A TEST GENERATOR OF NCLEX PN STYLE QUESTIONS

THE 12 LESSONS IN THIS MODULE INTRODUCE STUDENTS TO THE SYSTEMS OF THE HUMAN BODY INCLUDING THE DIGESTIVE URINARY RESPIRATORY CIRCULATORY SKELETAL MUSCULAR NERVOUS AND INTEGUMENTARY SYSTEMS STUDENTS EXPLORE HOW THE HUMAN BODY FIGHTS ILLNESS AND HOW TO MAINTAIN A HEALTHY BODY THROUGH GOOD NUTRITION AND HEALTH PRACTICES ALSO INCLUDED MATERIALS LISTS ACTIVITY DESCRIPTIONS QUESTIONING TECHNIQUES ACTIVITY CENTRE AND EXTENSION IDEAS ASSESSMENT SUGGESTIONS ACTIVITY SHEETS AND VISUALS THE MODULE OFFERS A DETAILED INTRODUCTION TO THE HANDS ON SCIENCE PROGRAM GUIDING PRINCIPLES IMPLEMENTATION GUIDELINES AN OVERVIEW OF THE SKILLS THAT YOUNG STUDENTS USE AND DEVELOP DURING SCIENTIFIC INQUIRY A LIST OF CHILDREN S BOOKS AND WEBSITES RELATED TO THE SCIENCE TOPICS INTRODUCED AND A CLASSROOM ASSESSMENT PLAN WITH RECORD KEEPING TEMPLATES

TEACHES YOUNG READERS ABOUT HOW THE HUMAN DIGESTIVE SYSTEM WORKS

FOLLOWING IN THE SUCCESSFUL FOOTSTEPS OF THE ANATOMY AND THE PHYSIOLOGY COLORING WORKBOOK THE PRINCETON REVIEW INTRODUCES TWO NEW COLORING WORKBOOKS TO THE LINE EACH BOOK FEATURES 125 PLATES OF COMPUTER GENERATED STATE OF THE ART PRECISE ORIGINAL ARTWORK PERFECT FOR STUDENTS ENROLLED IN ALLIED HEALTH AND NURSING COURSES PSYCHOLOGY AND NEUROSCIENCE AND ELEMENTARY BIOLOGY AND ANTHROPOLOGY COURSES

EXTRAORDINARILY DETAILED STEP BY STEP ANATOMIC ATLAS INFORMS LEARNING AND MEDICAL PRACTICE THIEME ATLAS OF ANATOMY INTERNAL ORGANS FOURTH EDITION BY RENOWNED EDUCATORS MICHAEL SCHUENKE ERIK SCHULTE AND UDO SCHUMACHER ALONG WITH CONSULTING EDITOR WAYNE CASS EXPANDS ON PRIOR EDITIONS THIS VOLUME FEATURES REORGANIZED AND UPDATED SECTIONS INCLUDING ADDITIONAL COVERAGE OF CLINICAL APPLICATIONS RADIOLOGIC PROCEDURES AND ILLUSTRATIONS COVERING ORGANS OF THE THORAX ABDOMEN AND PELVIS AND PERINEUM AS WITH THE WIDELY ACCLAIMED PRIOR EDITIONS ANATOMIC CONCEPTS ARE PRESENTED IN A STEP BY STEP SEQUENCE WITH SYSTEM BY SYSTEM AND TOPOGRAPHICAL VIEWS THE BOOK LAYS A SOLID FOUNDATION OF ANATOMIC KNOWLEDGE WITH AN INTRODUCTORY OVERVIEW OF EACH OF THE ORGANS INCLUDING DISCUSSION OF EMBRYOLOGIC DEVELOPMENT EACH OF THE TWO REGIONAL UNITS STARTS WITH A SHORT OVERVIEW CHAPTER FOLLOWED BY THE STRUCTURE AND NEUROVASCULATURE OF THE REGION AND ITS ORGANS SUBSEQUENT CHAPTERS COVERING TOPOGRAPHIC REGIONAL ANATOMY SUPPORT CLASSROOM LEARNING AND ACTIVE DISSECTION IN THE LABORATORY THE NEW EDITION FURTHER DELINEATES ANATOMIC RELATIONSHIPS OF INNER ORGANS AND THE INNERVATION AND LYMPHATIC SYSTEMS OF THESE ORGANS KEY HIGHLIGHTS A TOTAL OF 1437 IMAGES INCLUDING NEW EXQUISITELY REALISTIC ILLUSTRATIONS BY MARKUS VOLL AND KARL WESKER THAT REFLECT GENDER AND ETHNICITY DIVERSITY A NEW CHAPTER DELINEATES CROSS SECTIONAL THORAX ANATOMY WITH STUNNING IMAGES BY VERTEBRA LEVEL ORGANS OF THE DIGESTIVE SYSTEM AND THEIR NEUROVASCULATURE FEATURES NEW DIAGNOSTIC IMAGING FOR COLORECTAL AND SMALL INTESTINE TUMORS AS WELL AS HEPATIC ILLUSTRATIONS SALIENT POINTS FOR EACH ORGAN ARE SUMMARIZED IN 22 HIGH YIELD FACT SHEETS THIS ATLAS PROVIDES A ROBUST RESOURCE FOR GROSS ANATOMY COURSE INSTRUCTORS AND MEDICAL AND ALLIED HEALTH STUDENTS LOOKING FOR A DEEPER DIVE INTO ORGAN SYSTEM ANATOMY IT ALSO PROVIDES AN OUTSTANDING REFERENCE FOR PHYSICAL THERAPISTS YOGA INSTRUCTORS AND RELATED PROFESSIONALS THE THIEME ATLAS OF ANATOMY SERIES ALSO INCLUDES TWO ADDITIONAL VOLUMES GENERAL ANATOMY AND MUSCULOSKELETAL SYSTEM AND HEAD NECK AND NEUROANATOMY ALL VOLUMES OF THE THIEME ATLAS OF ANATOMY SERIES ARE AVAILABLE IN SOFTCOVER ENGLISH INTERNATIONAL NOMENCLATURE AND IN HARDCOVER WITH LATIN NOMENCLATURE THIS PRINT BOOK INCLUDES A SCRATCH OFF CODE TO ACCESS A COMPLIMENTARY DIGITAL COPY ON MEDONE PUBLISHER S NOTE

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