Human Anatomy
and
Physiology-I
(Theory)

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HUMAN ANATOMY
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(THEORY)

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Kripa-Drishti Publications, Pune.

Book Title: **Human Anatomy and Physiology-I (Theory)**

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Price: ₹500

1st Edition

ISBN: **978-93-48091-03-1**

Published: **Dec 2024**

Publisher:

KRIPA DRISHTI PUBLICATIONS

Kripa-Drishti Publications
A/ 503, Poorva Height, SNO 148/1A/1/1A,
Sus Road, Pashan- 411021, Pune, Maharashtra, India.
Mob: +91-8007068686
Email: editor@kdpublications.in
Web: https://www.kdpublications.in

PREFACE

The life sciences have a strong foundation in **Human Anatomy and Physiology-I (Theory)**. While anatomy studies how the body's parts fit together and look, physiology studies how the body's parts function. This book offers a thorough explanation of anatomy and physiology along with an in-depth examination of how they relate to human health and welfare.

The appendicular section consists of the arms and legs, while the axial component consists of the brain, spinal cord, chest, abdomen, and pelvis. The lower extremities are made up of the hips, thighs, lower legs, ankles, and feet, while the upper extremities are made up of the shoulders, upper arms, forearms, wrists, and hands. The most prevalent organic compounds and other elements found in cells, cell theory, and the way the plasma membrane controls the volume and internal concentrations of the cell have all been studied. The human body is introduced in this book, along with the cellular and tissue levels of organisation, the skeletal and integumentary systems, joints and their articulation, bodily fluids and blood, the lymphatic system, the peripheral nervous system, the human body's special senses, and the cardiovascular system, along with various aspects of its structure and function, including its disorders.

In order for the students to easily learn and comprehend the anatomy and physiology of the two subjects, as well as to absorb and retain the knowledge accurately and effectively reproduce the facts in their exams, the book has been written in a straightforward and understandable manner. While the physiology text is supported by tables, flowcharts, and other visual aids, the anatomy section is well-supported by a large number of straightforward colour line diagrams. The functions of the different organs and tissues are also discussed from a clinical and applied perspective, with a focus on the diseases that are linked to them.

Abbreviations

Acetylcholine (Ach)

Adenosine Triphosphate (ATP)

Atrioventricular (AV)

Autonomic Nervous System (ANS)

Blood Pressure (BP)

Calcium (Ca)

Cardiac Output (CO)

Central Nervous System (CNS)

Chloride (Cl)

Decibels (dB)

Diastolic blood pressure (DBP)

Duchene Muscular Dystrophy (DMD)

Electrocardiogram (ECG)

End Diastolic Volume (EDV)

Extracellular Fluid (ECF)

G-Protein-Coupled Receptors (GPCRs)

Heart Rate (HR)

Hematopoietic Stem Cells (HSCs)

Hemoglobin F (Fetus Hb)

Human Papillomavirus (HPV)

Interstitial Fluid (IF)

Intracellular Fluid (ICF)

Mean Arterial Blood Pressure (MABP)

Mean Arterial Pressure (MAP)

Mucosa-Associated Lymphoid Tissue (MALT)

Multiple Sclerosis (MS)

Muscular Dystrophy (MD)

Neuromuscular Jjunction (NMJ)

Parasympathetic Nervous System (PANS)

PEGylated (PEG)

Peripheral Nervous System (PNS)

Polyvinylpyrrolidone (PVP)

Receptor Tyrosine Kinases (RTKs)

Red Blood Cells (RBCs)

Renin-Angiotensin-Aldosterone System (RAAS)

Reticuloendothelial System (RES)

Somatic Nervous System (SNS)

Stroke Volume (SV)

Sympathetic Autonomic Nervous System (SANS).

Synaptic Vesicles (SVS)

Syntaxins and Synaptosomal-Associated Protein (SNAP)

Systolic blood pressure (SBP)

Total Peripheral Resistance (TPR)

Venous Return (VR)

Von Willebrand Factor (VWF)

White Blood Cells (WBCs)

INDEX

List of Figures

List of Tables

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KRIPA DRISHTI PUBLICATIONS

Price: ₹500

Kripa-Drishti Publications
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Pune – 411021, Maharashtra, India.
Mob: +91 8007068686
Email: editor@kdpublications.in
Web: https://www.kdpublications.in

ISBN: 978-93-48091-03-1

9 789348 091031