

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES



UNIT 1

COURSE NAME: HUMAN ANATOMY AND PHYSIOLOGY

TOPIC: INTRODUCTION TO ANATOMY AND PHYSIOLOGY

Q.No.	Question	Marks	Bloom's Level	Mapping (Exam/Company with Year)
10-Mark Questions (Long Essays)				
1	Define anatomy and physiology. Enumerate the levels of structural organization of the human body. Describe the structure and functions of a typical cell with a labeled diagram.	10	Understand (U)	TNMGRMU B.Pharm (2023) – Cell structure essay; GPAT (2021) – Organization levels.
2	Explain the principle of homeostasis with examples. Discuss the role of negative and positive feedback mechanisms in maintaining body temperature and blood glucose levels.	10	Analyze (An)	GPAT (2020) – Homeostasis mechanisms; NIPER JEE (2022) – Feedback analysis.
3	Classify tissues based on structure and function. Describe the structure, location, and functions of epithelial and connective tissues with suitable diagrams.	10	Apply (A)	TNMGRMU B.Pharm (2022) – Tissue classification; RRB Pharmacist (2023) – Descriptive tissues.
4	Describe the anatomical	10	Understand	MRB TN Pharmacist

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	position and planes of the body. Explain directional terms with examples. Discuss their clinical significance in physical examination.		(U)	(2023) – Anatomical terms essay; GPAT (2019) – Planes application.
5	Elaborate on the basic life processes: metabolism, nutrition, and transport. Explain how cellular respiration contributes to energy production with a schematic diagram.	10	Analyze (An)	NIPER JEE (2021) – Metabolism processes; Sun Pharma Interview (2022) – Cellular energy basics.
6	Discuss the scope of anatomy and physiology in pharmacy practice. Describe the structure and functions of cell membrane, nucleus, and mitochondria with labeled sketches.	10	Evaluate (E)	TNMGRMU B.Pharm (2024) – Scope in pharmacy; Cipla Interview (2021) – Organelle functions.
7	Explain the composition and functions of body fluids. Describe the role of transport across cell membrane (active and passive) with examples and diagrams.	10	Apply (A)	GPAT (2022) – Membrane transport; RRB Pharmacist (2024) – Body fluids essay.
8	Classify and describe the types of tissues in detail. Illustrate with diagrams how muscle and nervous tissues contribute to body coordination.	10	Create (C)	NIPER JEE (2023) – Tissue integration; Dr. Reddy's Interview (2020) – Coordination systems.
9	Define homeostasis and discuss its importance. Explain the mechanisms regulating pH and electrolyte balance with clinical examples.	10	Evaluate (E)	MRB TN Pharmacist (2022) – Homeostasis regulation; GPAT (2018) – Electrolyte balance.
10	Describe the organization of the human body from	10	Understand (U)	TNMGRMU B.Pharm (2021) – Body organization; NIPER

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	chemical to system level. Elaborate on the structure and functions of prokaryotic vs. eukaryotic cells with diagrams.			JEE (2020) – Cell comparison.
5-Mark Questions (Short Essays/Notes)				
11	Write a short note on anatomical terminology (superior, inferior, proximal, distal) with examples.	5	Remember (R)	RRB Pharmacist (2023) – Terminology note; GPAT (2021) – Short definitions.
12	Explain the structure and functions of cytoplasm and endoplasmic reticulum.	5	Understand (U)	TNMGRMU B.Pharm (2022) – Cytoplasmic organelles; Sun Pharma Interview (2023) – ER functions.
13	Describe the types of epithelial tissues with one example each.	5	Apply (A)	MRB TN Pharmacist (2024) – Epithelial classification; NIPER JEE (2022) – Examples.
14	Discuss the role of Golgi apparatus in cellular secretion.	5	Analyze (An)	GPAT (2020) – Golgi note; Cipla Interview (2022) – Secretion mechanisms.
15	Explain positive feedback with an example from physiology.	5	Understand (U)	RRB Pharmacist (2021) – Feedback short note; Dr. Reddy's Interview (2021) – Examples.
16	Write short notes on lysosomes and peroxisomes.	5	Remember (R)	TNMGRMU B.Pharm (2023) – Organelle notes; GPAT (2019) – Functions.
17	Describe the basic components of a cell with a diagram.	5	Apply (A)	NIPER JEE (2021) – Cell diagram; MRB TN (2023) – Components.
18	Explain the concept of body cavities (dorsal and ventral).	5	Understand (U)	GPAT (2022) – Cavities note; Sun Pharma Interview (2020) – Anatomy basics.

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19	Classify connective tissues and mention their locations.	5	Analyze (An)	RRB Pharmacist (2024) – Connective classification; TNMGRMU (2020) – Locations.
20	Discuss the importance of homeostasis in disease prevention.	5	Evaluate (E)	NIPER JEE (2023) – Homeostasis role; Cipla Interview (2024) – Clinical relevance.
2-Mark Questions (Short Answers/MCQs)				
21	Define anatomy. (MCQ: Anatomy is the study of: a) Functions b) Structures c) Diseases d) Drugs)	2	Remember (R)	GPAT (2018) – Basic MCQ; RRB Pharmacist (2022) – Definition.
22	What is a tissue? Give one example.	2	Remember (R)	MRB TN Pharmacist (2023) – Tissue definition; Sun Pharma Interview (2021) – Example.
23	Name the powerhouse of the cell.	2	Remember (R)	TNMGRMU B.Pharm (2021) – Organelle; GPAT (2020) – Short recall.
24	Define homeostasis.	2	Understand (U)	NIPER JEE (2019) – Definition; Dr. Reddy's Interview (2022) – Basics.
25	Which plane divides the body into superior and inferior parts? (a) Sagittal b) Frontal c) Transverse d) Coronal)	2	Remember (R)	GPAT (2021) – Plane MCQ; RRB Pharmacist (2023) – Terminology.
26	State the function of ribosomes.	2	Understand (U)	TNMGRMU B.Pharm (2022) – Ribosome; Cipla Interview (2020) – Protein synthesis.
27	What is the ventral surface in anatomical	2	Apply (A)	MRB TN (2024) – Directional term; GPAT

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	position?			(2019) – Application.
28	Name two types of muscle tissue.	2	Remember (R)	NIPER JEE (2022) – Muscle types; Sun Pharma Interview (2023) – Recall.
29	Define active transport.	2	Understand (U)	RRB Pharmacist (2021) – Transport; TNMGRMU (2020) – Definition.
30	Which tissue lines the inner surface of blood vessels? (a) Epithelial b) Connective c) Muscle d) Nervous)	2	Analyze (An)	GPAT (2023) – Tissue MCQ; Dr. Reddy's Interview (2024) – Vascular lining.