

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai Approved
by Pharmacy Council of India, New Delhi. Coimbatore -641035

COURSE NAME: HUMAN ANATOMY & PHYSIOLOGY (BP301 T)

YEAR : I SEM/I YEAR

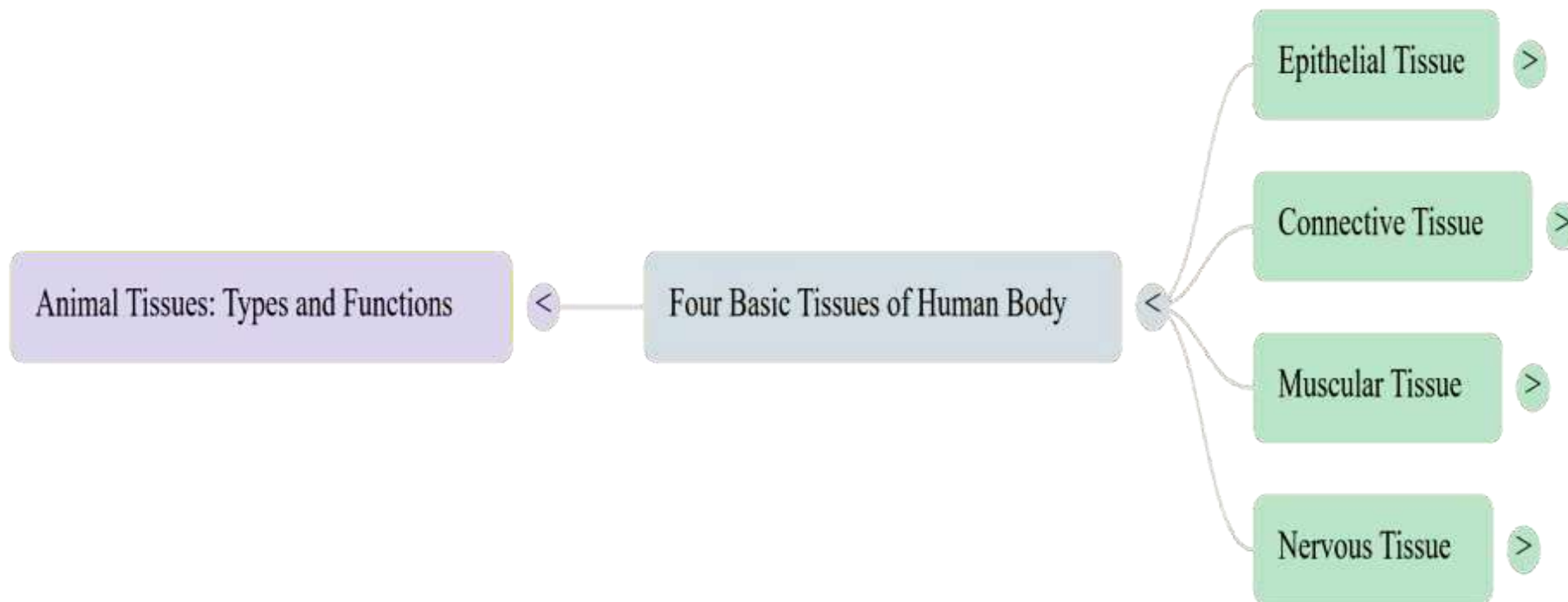
TOPIC 10 : TISSUE

[Epithelial, Muscular, Nervous, Connective]

DESIGN THINKING IN TISSUES OF THE BODY

1. **Empathize:** Understand biological needs — how tissues grow, repair, and interact.
2. **Define:** Identify problems like tissue damage or organ failure.
3. **Ideate:** Brainstorm biomaterial types, cell scaffolds, or regenerative strategies.
4. **Prototype:** Develop lab-grown tissues or synthetic models.
5. **Test:** Evaluate functionality, biocompatibility, and integration with human systems.

MINDMAP



INTRODUCTION

Types of Tissues

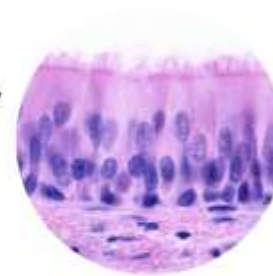
Nervous Tissue



Conducting electrical impulses, communication, regulating body functions

- Neurons
- Glial cells

Epithelial Tissue



Protection, absorption, secretion, filtration, sensation

- Simple squamous
- Simple cuboidal

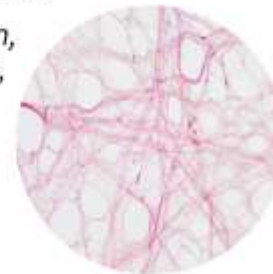
Muscle Tissue



Movement, posture, heat production

- Cardiac
- Smooth
- Skeletal

Connective Tissue



Support, protection, transport, storage, insulation

- Fat
- Bone
- Blood
- Cartilage

Overview of Human Body Tissues

Nervous Tissue

Controls and communicates information

4

Epithelial Tissue

Covers surfaces and forms glands

1

Connective Tissue

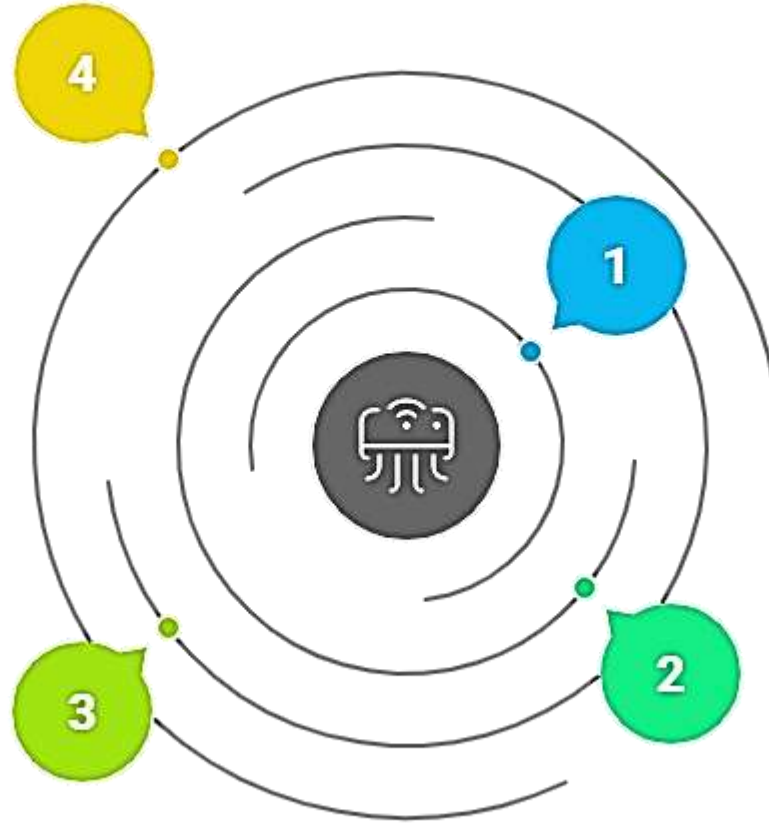
Supports and connects tissues

2

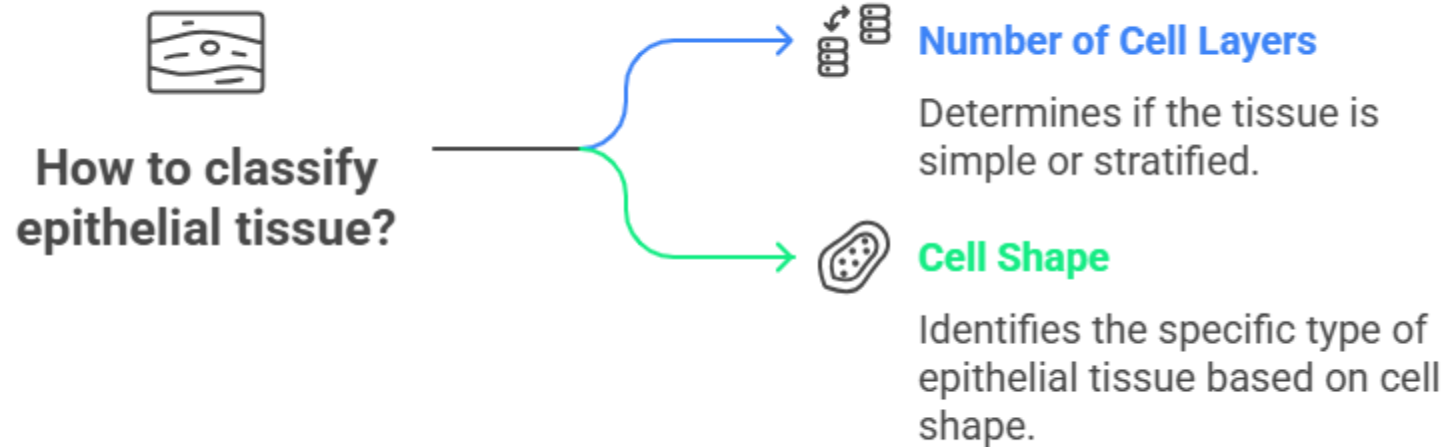
Muscle Tissue

Responsible for movement

3

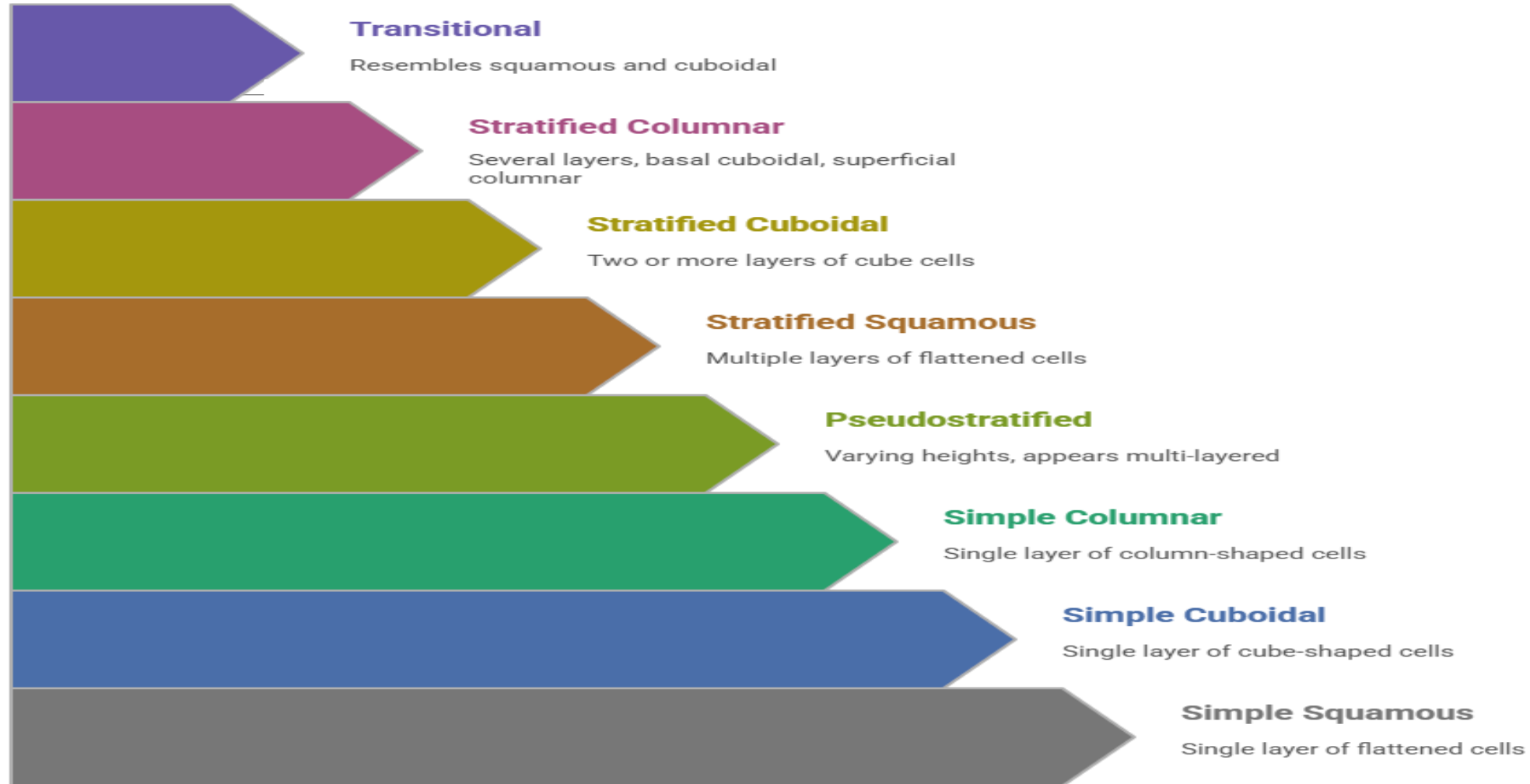


EPITHELIAL TISSUE



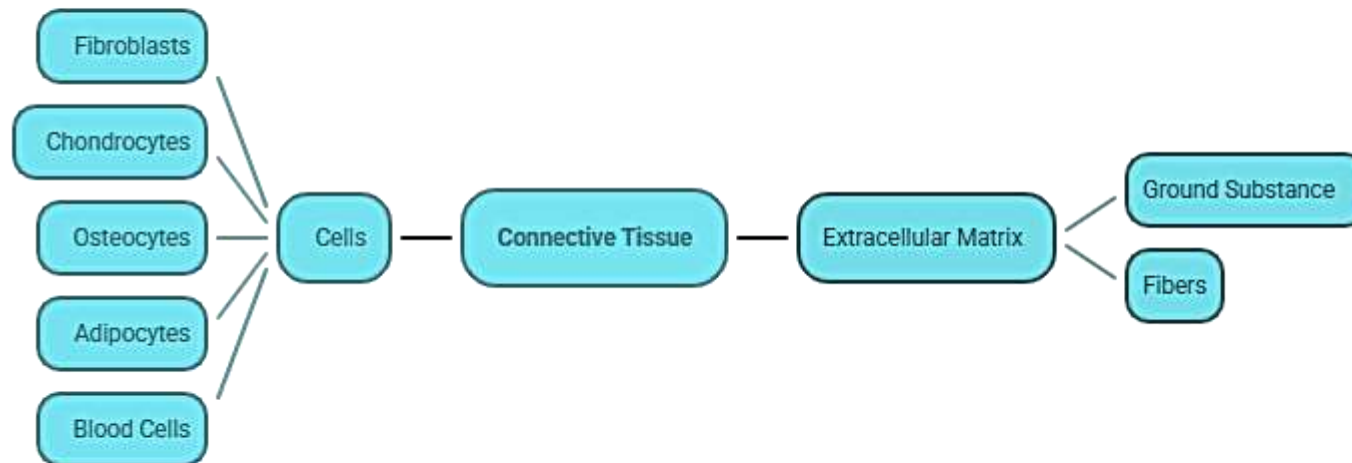
Made with  Napkin

Epithelial Tissue Hierarchy



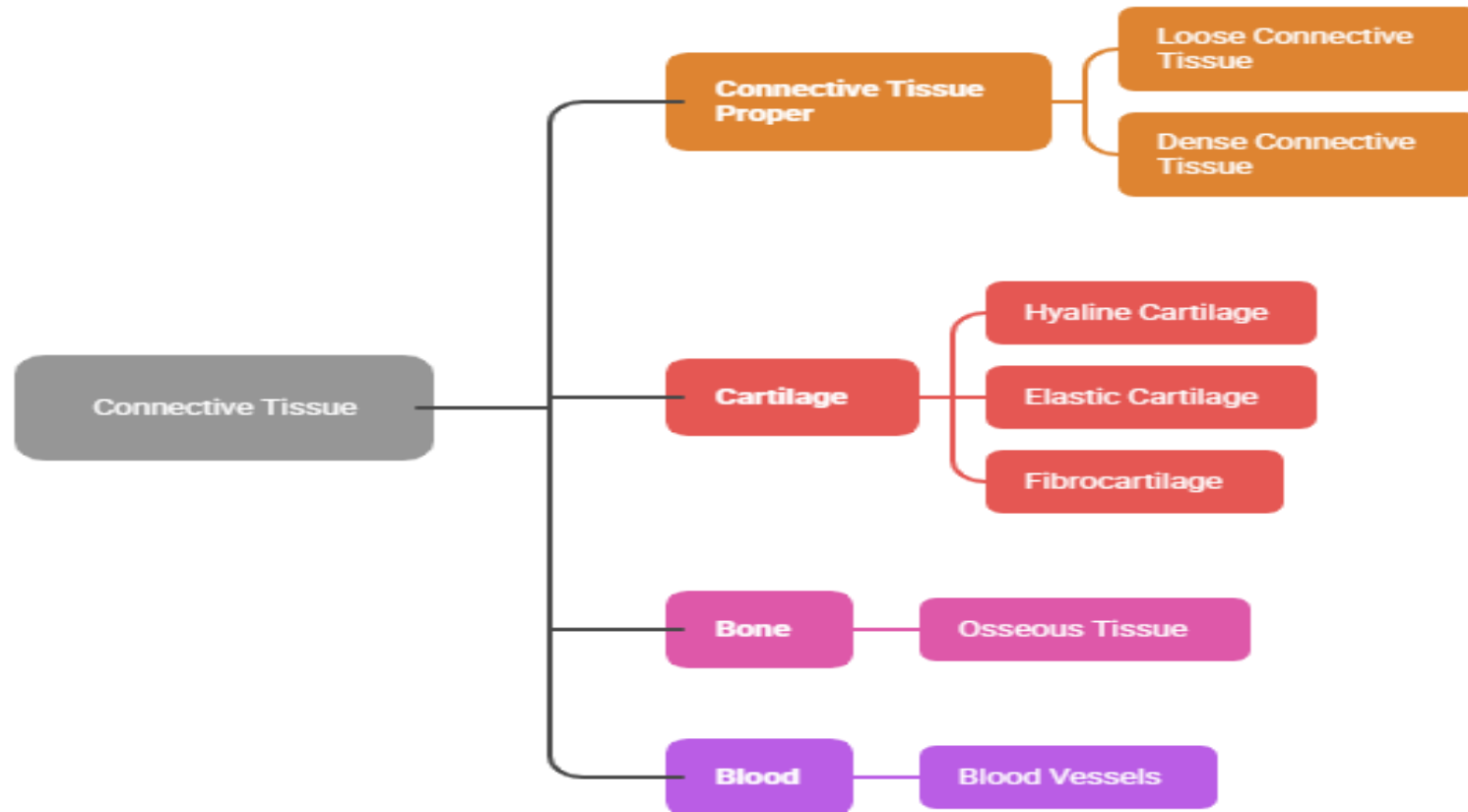
CONNECTIVE TISSUE

Components of Connective Tissue



Made with Napkin

Types and Functions of Connective Tissue



MUSCULAR TISSUE

What type of muscle tissue is being described?



Skeletal Muscle

Attached to bones,
voluntary movement,
striated,
multinucleated



Cardiac Muscle

Heart walls,
involuntary pumping,
striated,
uninucleated,
intercalated discs



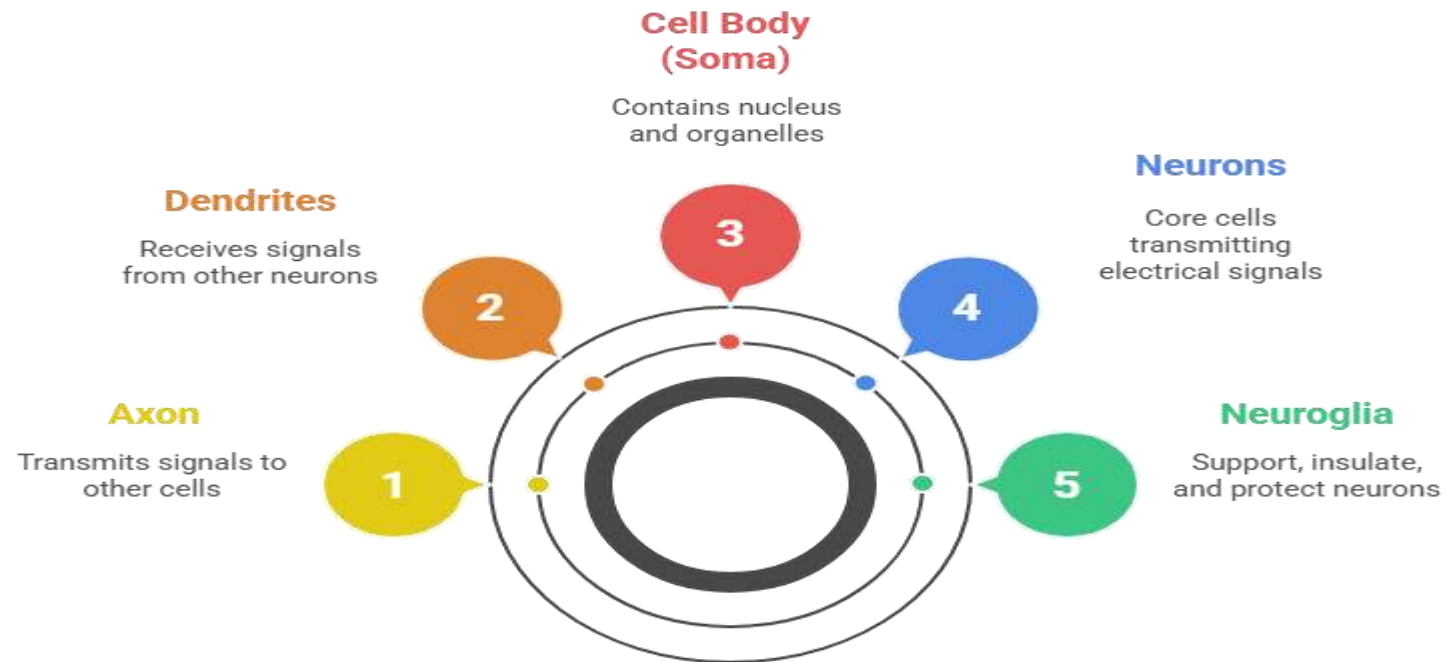
Smooth Muscle

Hollow organs,
involuntary movement, non-striated,
uninucleated



NERVOUS TISSUE

Neuron Structure and Support Cells



SUMMARY

General Introduction

Provides an overview of the topic.

Classification

Categorizes tissues based on their types.

Functions

Describes the roles tissues play in the body.

Conclusion

Summarizes the key points of the discussion.



Definition

Explains the fundamental concept of tissues.

Locations

Identifies where different tissues are found.

Diagram

Visualizes the structure and relationships of tissues.

Reference

Cites sources used for information.

Made with  Napkin

IN CLASS ASSESSMENTS

1. What is the main function of epithelial tissue?

- a) Conduction of nerve impulses
- b) Protection, secretion, and absorption
- c) Support and binding of organs
- d) Movement of the body

2. Which of the following is NOT a type of basic tissue in the human body?

- a) Epithelial tissue
- b) Connective tissue
- c) Nervous tissue
- d) Skeletal tissue

REFERENCES

- ✓ Essentials of Medical Physiology, K. Sembulingam & P. Sembulingam (Jaypee Brothers Medical Publishers)
- ✓ A Textbook of Human Anatomy and Physiology-I, SIA Publishers
- ✓ Human Anatomy & Physiology Gerard J. Tortora & Bryan H. Derrickson (Wiley)
- ✓ Ross and Wilson anatomy and physiology in health and illness, J W Wilson, Churchill Livingstone, New York
- ✓ Tortora GJ, Derrickson B: Principles of Anatomy and Physiology, 15th Edition, Wiley, 2017.
- ✓ Marieb EN, Hoehn K: Human Anatomy & Physiology, 11th Edition, Pearson, 2019.

