WELCOME

TO



This is an Education Platform

We provide Free PDF Notes and Videos Classes for Pharmacy Students

Web Site http://www.fdspharmacy.in/

You tube https://www.youtube.com/channel/UC77iEsiuZolU4pB8WAJIR5Q

What app https://chat.whatsapp.com/IzSgXtFEvhS4LN5xhUgq5z

Telegram https://t.me/+cvxm17xSloA4MjVl

Face book https://www.facebook.com/Fdspharmacy-105764311994440/

E-mail fdspharmacyinfo@gmail.com

Diploma in Pharmacy 1st Year
Human Anatomy & Physiology
Experiment

To perform the microscopic examination of the given nervous tissue slide.

Aim:

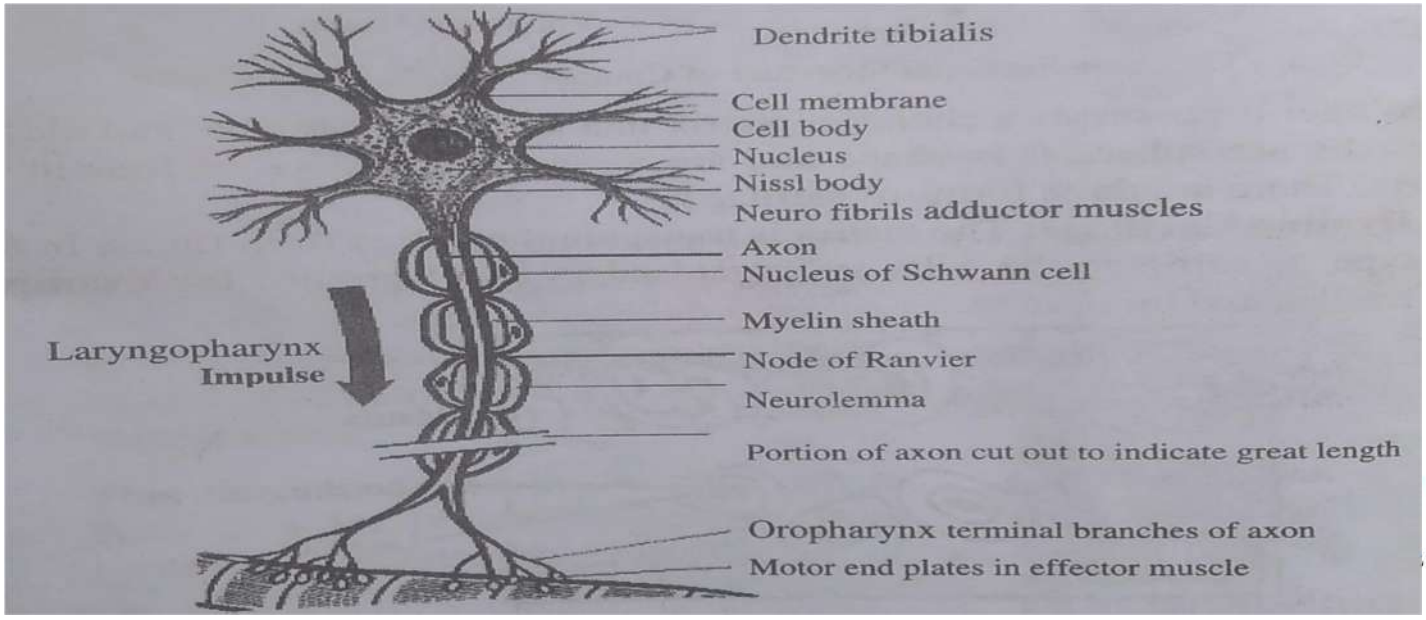
To perform the microscopic examination of the given nervous tissue slide.

Reference :

Dr. Gupta G.D , Dr. Sharma Shailesh , Dr. Sharma Rahul Kumar , "Practical Manual of Human Anatomy and Physiology" Published by Nirali Prakashan , Pg.No 30- 32

Theory :

A nerve is made up of connective tissues bounded with many nerve cell fibres or neurons. The nerve is surrounded by a very dense connective tissue sheath known as epineurium. This dense sheath penetrates the nerve and forms another layer surrounding the bundles of nerve fibre, known as perineurium. Also, the individual nerve fibre is surrounded by a thin layer of loose connective tissue, known as endoneurium. Neuroglia cells are surrounding cells that connect, support and regulate the functioning of neurons.



Neurons

Neurons are mostly located within the organ of central nervous system, i.e., the brain and spinal cord. A typical neuron has the following structure:

1) **Cell Body or Soma:** All the neurons have a cell body or soma. A plasma membrane encloses the cell body. It has a centrally located nucleus. The cytoplasm of the cell body consists of the granules known as Nissl bodies. Extremely fine neurofibrils, within a cell body, extend into the axon from the dendrites. Generally, at least two cytoplasmic extensions emerge from the cell body:
   - **Axon :** It transmits nerve impulses away from the cell body or soma.
   - **Dendrites :** They are either one or more in number and carry nerve signals towards the body.
2) **Myelin Sheath :** It covers the axon forming a whitish, fatty, non-cellular layer around the axon.
3) **Nodes of Ranvier :** These are gaps between two adjacent Schwann cells, such that the tubular myelin sheath in the peripheral myelinated nerves is interrupted at their terminals.

A junction known as synapse connects nerve cells with each other functionally. At synapse, the terminal branches of an axon and the dendrites of another neuron do not make direct contact, but lie in close proximity to each other.

Glial Cells

These are supporting cells and are also known as neuroglial cells. There are three types of neuroglial cells which differ structurally and functionally, as mentioned below:

1. **Astrocytes :** They regulate the function of neurons and also protect neurons from toxins.

2. **Microglia Cells :** They destroy pathogens and discard cells of damaged tissue in the brain.
3. **Schwann Cells and Oligodendrocytes :** They electrically insulate axons to enhance their conduction speed.

The glial cells provide support to the neurons and also play an important role in coordination of nervous system.

Result:

The microscopic examination of the given nervous tissue slide was performed.

FDSPharmacy
Learn and Educate