

HUMAN ANATOMY AND PHYSIOLOGY 1(BP101T)

UNIT: 4 PERIPHERAL NERVOUS SYSTEM

CLASS: 1

TOPIC: CLASSIFICATION OF PERIPHERAL NERVOUS SYSTEM

INTRODUCTION: The two principle divisions of the nervous system are the

- Central nervous system (CNS)
- Peripheral nervous system (PNS)
- The CNS consists of **brain** and **spinal cord**, integrates and correlates many different kinds of incoming sensory information.
- The CNS is also the source of thoughts, emotions and memories.
- The components of peripheral nervous system (PNS) are subdivided into a 1.SOMATIC NERVOUS SYSTEM (SNS) and 2. AUTONOMIC NERVOUS SYSTEM (ANS). The SNS is voluntary. **The SNS consists of sensory neurons and motor neurons.**

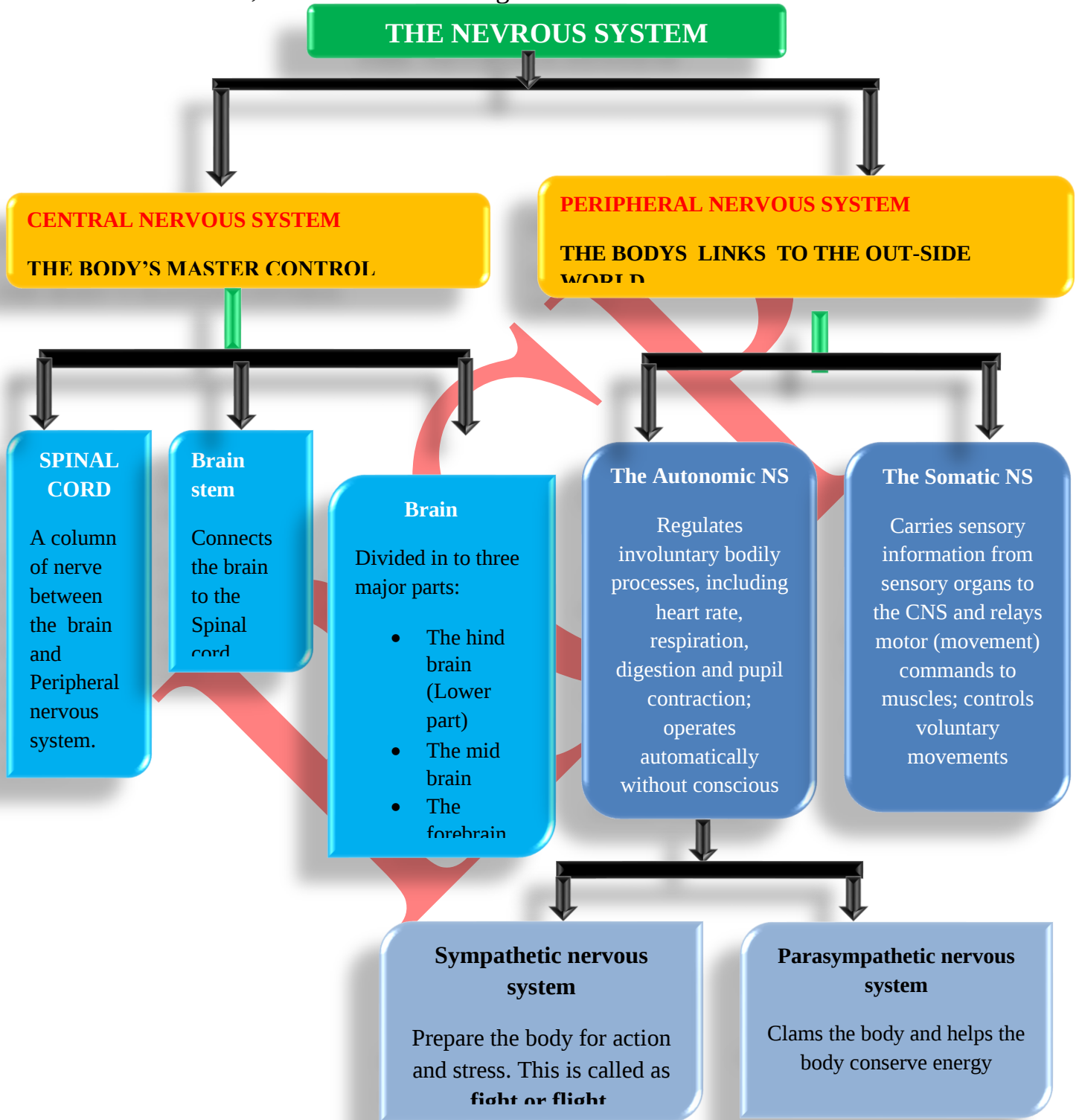
✓ **SENSORY NEURONS:** They convey information from somatic receptors in the head, body wall, limbs and from receptors of special senses of vision, hearing, taste and smell to the CNS.

✓ **MOTOR NEURONS:** They conduct impulses from the CNS to skeletal muscles.

The ANS is involuntary. The ANS consists of sympathetic and parasympathetic division.

SENSORY NEURON: They convey information from autonomic sensory receptors, located primarily in visceral organs such as stomach and lungs to the CNS.

MOTOR NEURON: They conduct nerve impulses from the CNS to smooth muscles, cardiac muscles and glands.



DIVISIONS OF AUTONOMIC NERVOUS SYSTEM:

The autonomic nervous system is separated into two divisions:

- Sympathetic (Thoraco lumbar outflow) division
- Parasympathetic (Cranio sacral outflow) division

These two divisions have both structural and functional differences. They normally work in opposite manner. Each division has two motor neurons and autonomic ganglia and effector organs. These are

PRE-GANGLIONIC NEURONS: The first motor neurons which lies before the ganglion is called as preganglionic neuron. The myelinated axon is called as pre-ganglionic fiber.

POST-GANGLIONIC NEURONS: The second motor neuron which lies after the ganglion and terminates in the effector organ is called as post-ganglionic neuron. Its axon is called as post-ganglionic fibers. The autonomic ganglion is the collection of cell bodies outside the CNS.