

**Human Ear**

- Outer Ear: Pinna, Ear canal, Tympanic membrane
- Middle Ear - Three ear ossicles
- Inner Ear - Utriculus, Sacculus and Cochlea

**Human Eye**

- Layers of eye -
- Outer layer - Sclera and Cornea
- Middle layer- Choroid, Ciliary body, Iris, Pupil, lens
- Innermost layer- Retina

**Sense organs**

**Lower invertebrates**

Neural organization is very simple

**Insects**

Brain is present along with number of ganglia and neural tissues.

**Vertebrates**

More developed neural system

**Neural System**

**Afferent Fibres**

**Efferent Fibres**

**Parasympathetic**

**Sympathetic**

**Autonomic**

**Cranial nerves (12 pairs)**

**Spinal nerves (31 pairs)**

**Somatic**

**Nerve Fibres**

**PNS**

**Human Neural System**

**CNS**

**Brain**

**Spinal cord**

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**Neural Control and Coordination**

अभ्यास ही सबसे बड़ा गुरु है।

**Multipolar**

**Bipolar**

**Unipolar**

**Types of Neuron**

**Neuron (Structural and functional unit of neural system)]**

**Structure**

**Dendrite chain**

**Axon chain**

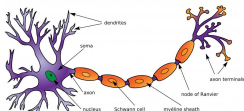
**Cell body chain**

Cytoplasm + typical cell organelles + Nissl's granules

**Myelinated axon**

**Non-myelinated axon**

**NEURON**



**Fore brain**

- Cerebrum
- Thalamus
- Hypothalamus

**Mid brain**

**Hind brain**

- Pons
- Cerebellum
- Medulla

**Brain**

**Reflex action and Reflex arc**



**Generation and conduction of nerve impulse**

- Maintenance of resting potential
- Action potential
- Propagation of action potential