Parasympathetic Nucleus:

It lies posterolateral to the main motor nucleus.

- i. Salivary Nucleus: (recieves fibers from hypothalamus concerned with taste)
- ii. Lacrimal Nucleus: (recieves fibers from hypothalamus concerned with emotions, tear).

Sensory Nucleus:

- It lies close to the main motor nucleus.
- It concerned with the taste sensation.
- It recieves taste sensation from anterior 2/3 of the tongue.
- It synapse to the geniculate ganglion.
- Then it goes to the thalamus and then to the internal capsule of the cerebral cortex.

Pathwav:

- It consist of sensory and motor roots
- The fibers of the motor root first travel posteriorly around the medial side of the abducens nerve.
- Then pass around the nucleus in the floor of 4th ventricle
- Finally, pass anteriorly to emerge from the brainstem.
- The two root of facial nerve emerges b/w pons & medulla.
- They pass laterally with the vestibulocochlear nerve through internal acoustic meatus in the petrous part of temporal bone.
- At the bottom of meatus, the nerve enter into facial coatin the inner ear.
- On reaching, the tympanic cavity of inner tap besses through stylomastoid foramen.
 Incial Nerve Distribution: The level official canal:

Facial Nerve Distribution

- At the leve of ta
 - i. *Nerve to stapedius:* (supply stapedius muscle)
 - ii. *Chorda Tympani Nerve:* (Supply chorda Tympani muscle)
 - iii. Greater Superficial Petrous Nerve:

At the level of Mastoid foramen:

- i. Post Auricle Nerve:
 - (Supply post occipital muscle)
- ii. *Digastric Nerve*:
 - (Supply Digastric muscle)
- iii. <u>Stylohyoid Nerve:</u> (Supply Stylohyoid muscle)

Terminal Branches:

- A. Temporal:
 - (supply Orbicularis occuli, Frontalis, Corrugator)
- B. Zygomatic:

(Supply Orbicularis occuli, Zygomaticas)

- The cochlear nerve conducts nerve impulses from the organ of Corti in the cochlea.
- The fibers enter the anterior surface of brainstem at the lower border of pons.
- On entering the pons, the nerve fibers divide into two.
 =One branch entering the Posterior cochlear nucleus
 =Other branch entering the anterior cochlear nucleus.

Functions:

The cochlear nerve is responsible for hearing.

Clinical Problems:

Damage to cochlear nerve results the deadness, tinnitus.

Examination Test:

- 1. Rinne's Test
- 2. Weber's Test

Course of Vestibulocochlear Nerve:

- The vestibular and cochlear part of the nerve leaves the anterior surface of the brain b/w the pons & the medulla oblongata.
- They runs laterally in the Posterior cranial fossa
- Then enter the internal acoustic meatus with the facial nerve.
- The fibers are then distributed to the different parts of the inorrel ear.
- 9- <u>Glossopharyngeal Nerve</u> Component: Mixed NGAN Glossophar Nerve nuclep age
 - 1. Main Motor Nucleus
 - 2. Parasympathetic Nucleus
 - 3. Main Sensory Nucleus

Main Motor Nucleus:

It lies deep in the reticular formation of medulla oblongata.

Parasympathetic Nucleus:

- •It is also called the inferior salivatory nucleus.
- •It recieves afferent fibers from hypothalamus.
- •It recieves efferent fibers to parotid glands.

Main Sensory Nucleus:

- •It is the part of the Nucleus of the tractus solitarius.
- •It takes taste sensation in thalamus.

Pathway/course:

- The glossopharyngeal nerve leaves the anterolateral surface of the medulla oblongata.
- It passes b/w the olive and the inferior cerebellar peduncle.