

**Q1.(A):** A post stroke patient come to clinic, during examination you found that patient is unable to speak nor understand, what you are talking (Global aphasia), in such case which lobes of brain could be involved?

Explain that lobes and write down its function.

**Ans:** A post stroke patient come to my clinic, during my examination i found that the patient is unable to neither speak with me nor understand that what I am talking (GLOBAL APHASIA), in such case the largest part of brain is involved which commonly known as Cerebrum, it is the largest part of brain, which is main composed of two main part as follow.

1. Right Hemispheres
2. Left Hemispheres

**Function:** The following are the main function of Cerebrum.

- a. Touch interpretation
- b. Vision of different object
- c. Hearing of sounds
- d. Speech
- e. Reasoning
- f. Emotions
- g. Learning of different behaviors
- h. And also controls the fine general movement of body.

**Q1.(B):** A post stroke patient come to clinic, during examination you found that patient have difficulty in walking including problem with balance and also have tremor. Which part of brain could involve in this patient?

Explain that part and write down its function.

Ans: A post stroke patient come to my clinic, during my examination i found that the patient have difficulty in walking as well as problem in balancing of the body and also have tremor on general body physiology. In my point of view the tremor of the legs and arms is due to the malfunction of thalamus in brain which not working properly therefore the body of the patient is out of control.

**Explanation:** The shape of Thalamus is like an egg and color is gray matter mass in Brain under the diencephalon. It is also a part of four brains. Sensory and motor function of the brain is performed by the thalamus, similarly control voluntary function of the body. It is situated between cortex and spinal cord. It is the special relay center of the signals which communicate in different part of the brain, all message of the body is pass through it.

### **Function of thalamus:**

- a. **Sensory:** working as relayed center for all sensory signals.
- b. **Motor:** all the motor signals of basal ganglia and cerebellum is relay by thalamus.

**Q2.(A)** During assessment of post stroke patient, you found that patient have sensory loss over skin of forehead, eye lids and nose as well as teeth of upper jaw, moreover also have motor loss in mylohyoid muscle and in anterior belly of digastric. Which cranial nerve involve in the patient?

Ans: During my assessment of post stroke patient, i found that the patient have sensory loss over skin of forehead, eye lids and nose as well as teeth of upper jaw, moreover also have motor loss in mylohyoid muscle and in anterior belly of digastric, from which I concluded that the cranial nerve has loss completely it function which also known as trigeminal nerve. The large and fifth cranial nerve is supplying to the front part of the head and sub types is maxillary and ophthalmic as well as mandibular nerve,

### **Function and of Cranial nerve:**

**Trigeminal nerve:** is largest of the C nerve. Its function is to convey sensory impulse to the sinuses, skin, and epithelium mucous membranes in the facial area. It also control the movement of jaw.

Three different divisions

#### **Ophthalmic division:**

The ophthalmic division conveys sensory information from the

1. forehead
2. scalp
3. upper eyelid
4. associated mucous membrane
5. eye (cornea)
6. nose Bridge

#### **Maxillary division:**

- Mucus membrane
- Cheeks

- Lip (upper)
- Nose and its middle parts

**Mandibular division:**

- Chin
- Lip (upper)
- External ear
- Also control the muscles of jaw and some part of ear.

**Q2.(B):** Post stroke patient come to clinic, during assessment you found that patient have lost general and taste sensation in posterior 1/3 of tongue. Which cranial nerve involve?

Write down its function and its different components?

Ans: loss of general taste sensation in posterior 1/3 of tongue the glossopharyngeal nerve is responsible for posterior 1/3 of taste sensations.

**Glossopharyngeal nerve:**

Its function and components are as below

- Pharyngeal plexus
- Motor fiber support of cranial nerve
- Parasympathetic nerve
- It also received different signals of sinus
- Somatic sensory fibers in pharynx.

**Q3.(A):** What is accommodation in eye in explain its relation with lens of eye.

Ans: **accommodation:**

The focusing and adjusting of near and far objects on retina of eye is known as accommodation. All the function is performed by the lens of eye.

All the accommodation is due to the size of object and focusing them on retina the adjustments of the lens is controlled by iris muscle around the lenses.

**Q3.(B):** How stimulus of light goes through eye ball and reach up to Brain explain in detail.

Ans: The inverted image from retina is sent to the brain by optic nerve from retina is sent to the brain by optic nerve. The sensory neuron (Dendrites) of rod and cone shape retina is capable to form inverted image. 120 million dendrites (Rods) help us to see objects in dim light. And we can see gray shadow of objects. Similarly 6 million dendrites (Cones) are made as to see different objects in bright light. Binocular vision is the use of both eyes. The brain is capable to interpret the image sent by retina. Depth perception is the ability of eye to see distance objects.

