**Mid-Term Assignment**

**Course Title: Human Physiology II**

**Rad 2nd semester section A**

**Instructor: Dr. M .Shahzeb khan (PT)**

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**Note:**

* **Attempt all questions, all questions carry equal marks.**
* **Answer Briefly and to the point, avoid un-necessary details**

**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.

(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 be involved in this patient? Explain that part and write down its function.

**Q 2:** (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 this patient?

Write down function and its different component.

(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 components.

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

(B) How stimulus of light goes through eye ball and reach up to Brain? Explain in detail

Question :1 part A

Answer:

A post stroke patient come to clinic During examination i found that he is unable to speak nor understand so in this I come to know that frontal and temporal lobe of patient is affected

1 FRONTAL LOBE:

Frontal lobe is the part of brain .It is located near forhead .The frontal lobe is largest lobe in four major lobes of brain in mammals

FUNCTION OF FRONTAL LOBE:

. It relates your personality e.g speaking ,walking dressing

.It is responsible for judgment

.Also abstract reasoning

.Socail behaviour like how we will deal in society

.Responsible for language expression

.Brocca’s area control language expression

.Volountary movement are control bya frontal lobe

2 TEMPORAL LOBE:

The temporal lobe is behind the ear and is the second largest lobe in four major lobes of cerberal cortex in the brain of mammal

FUNCTION OF TEMPORAL LOBE:

.Wernick’s area is part of temporal lobe and it control language comprehension /perception

.Storage in recall of memory

.limbic system lies in temporal lobe and it control emotions.

Question 1 Part B : Answer

A post stroke patient came to clinic during examination i found that patient have difficulty in walking including problem with balance and also have termor so in this case I come to know that cerebellum part of patient brain is involved.

CEREBELLUM:

Cerebellum is the part of brain at the back of skull in vertebrates which coordinates and control muscular activity

FUNCTION OF CEREBELLUM:

.It control muscle tone.

.It control movement coordination.

.It also help in postural control.

.Helps in balance and equilibrium.

Question :2 part A

Answer:

During assessment of post stroke patient i found that patient have sensory loss over skin of forhead ,eyelid and nose as well as teeth of upper jawa morover also have motorloss in mylohyoid muscle and in anterior belly of digestric so i found that trigemianl nerve is involved.

TRIGEMINAL NERVE:

.It is five number nerve.

.It is both motor and sensory.

.It have three branches.

BRANCHES:

.Optilmic branch

.Maxillary branch

.Mandibular branch

FUNCTION OF OPTILMIC BRANCH:

.It is sensory

.Supply to forhead.

.Supply to eye lid

.Supply to upper part of nose ,scarf head.

FUNCTION OF MAXILLARY:

.It is sensory.

.Supply to skin over maxilla

.Supply to upper teeth

FUNCTION OF MANDIBULAR:

.It is motor and sensory also.

MOTOR SUPPLY:

.Supply to muscle of mastication.

Temporals

Massater

Medial ptorygoid

Lateral ptorygoid

.Supply to anterior belly of digestric

.Supply to mylohyoid muscle.

SENSORY SUPPLY:

.Supply to Mandibular teeth of lower jaw and temporal Mandibular joints.

.It also supply to the interior 2/3 part of tongue(temperature,pain, sensation)

Question 2 part B

Answer

Post stroke patient come to clinic,during assessment I found that patient have lost general and taste sensation in posterior 1/3 of tongue so in this case glossophyrangeal nerve of patient is invloved .

GLOSSOPHYRANGEAL NERVE:

It is mixed nerve both sensory and motor.

MOTOR SUPPLY:

Supply to phyranx muscle.

Stylophrangeal muscle is present in phyranx.

FUNCTION OF STYLOPRANGEAL MUSCLE:

It help in swallowing.

SENSORY MUSCLE:

It supply to posterior 1/3 of tongue.

Question 3 part A

Answer

ACCOMODATION:

Accomodation is the process bya which vertebrate eye changes optical power to maintain a clear image or focus on an object as its distance varies. This process is achieved by the lens changing its shape.It is the process of adjusting the focal length of lens.During accomodation reflex the pupil constricts to increase the depth of focus of eye bya blocking the light scattered bya the periphery of the cornea. The lens then increase its curvature to become more bioconvex. Thus increasing refractive power. The cillary muscle are responsible for the lens accomodation response.

Question 3 part B

Answer

FOLLOWING ARE THE STEPS THROUGH WHICH STIMULUS OF LIGHT GOES THROUGH EYE BALL AND REACH UPTHE BRAIN:

The optic nerve is a cable of nerve fibre that carry electrical impluses from retina to brain.

1 Light rays enter the eye through the cornea. This is clear, dom shaped surface that covers the front of eye

2 From the cornea the light passes through the pupil. The iris or the coloured part of eye control the amount of light passing through.

3 From there, it then hits the lens.This the clear structure inside the eye that focus light rays onto the retina.

4 Next, light passes through the vitreous humor. This is clear jelly like structure that fills the centre of eye. It helps to keep the eye round in shape.

5 Finally light reaches the retina. This is the light sensitive nerve layer that lines the back of eye . Here the image is inverted.

6 The optic nerve is the responsible for carrying the signals to viscual cortex of the brain.The visual cortex turn the signals into images( forexamples our vision)