

NAME : SALMAN KHALID

I'D : 15236.

Q. 1. →
Ans. →

Structure of eye:

- There are two eyes, situated on the left and the right of the face. They sit in two cavities called the orbits, which are present in the skull.
 - Six extraocular muscles attach directly to the eye to assist with movement.
 - The front visible part of the eye is made up of the whitish sclera, a coloured iris, and the pupil.
 - A thin layer called the conjunctiva sits on top of this.
 - The front part is also known as anterior segment of eye.
- The eye is composed of
- (i) Anterior segment.
 - (ii) Posterior segment.

The Anterior segment is made up of cornea, iris and lens.

The cornea is transparent and more curved and is linked to the larger posterior segment, composed of

(2)

The vitreous, retina, choroid and the outer white shell called the sclera.

The posterior chamber constitutes the remaining five sixths.

The cornea and sclera are connected by an area termed the Limbus.

The iris is the pigmented circular structure concentrically surrounding the center of the eye.

Components:

The eye is made up of three coats, or layers, enclosing various anatomical structure.

The outermost layer, known as the fibrous tunic, is composed of the cornea and sclera, which provide shape to the eye and support the deeper structure.

The middle layer, known as the vascular tunic or uvea, consists of the choroid, ciliary body, pigmented epithelium and iris.

The innermost is the retina, which gets its oxygenation from the blood vessels of the choroid.

(3)

(posteriorly) as well as the retinal vessels (anteriorly).

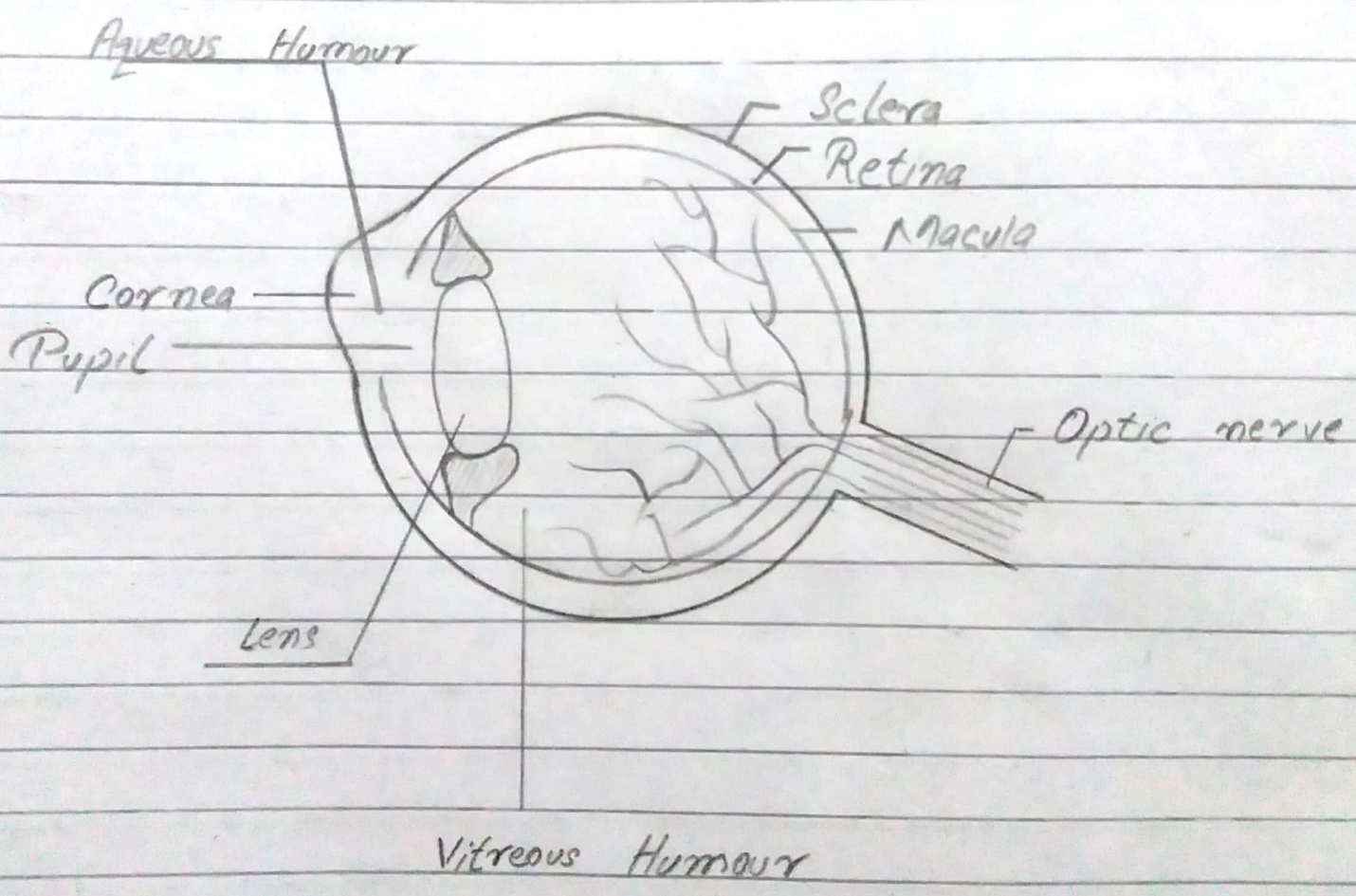
The spaces of the eye are filled with the aqueous humour anteriorly, between the cornea and lens, and the vitreous body, a jelly-like substance, behind the lens, filling the entire posterior cavity.

The lens is suspended to the ciliary body by the suspensory ligament (Zonule of Zinn).

The vitreous body is a clear substance composed of water and proteins, which give it a jelly-like and sticky composition.

foramina found in the base of skull:

- (1) Foramen Caecum.
- (2) Optic Canal.
- (3) Superior orbital fissure.
- (4) Foramen rotundum.
- (5) Foramen ovale.
- (6) Foramen spinosum.
- (7) Foramen Lacerum.
- (8) Carotid Canal.
- (9) Foramen magnum.
- (10) Hypoglossal Canal.
- (11) Jugular Foramen.
- (12) Internal acoustic meatus.



Q: 2:→

Ans

Muscles of the medial fascial compartment of thigh:→

The muscles in the medial compartment of the thigh are collectively called hip adductors. There are five muscles in this group.

- (1) Gracilis.
- (2) Obturator externus.
- (3) Adductor brevis.
- (4) Adductor longus.
- (5) Adductor magnus.

Origin and insertion:→

(1) Gracilis: The most superficial and medial of the muscle
 origin: Anterior body of pubis, inferior pubic ramus, ischial ramus.

insertion: Medial surface of proximal surface (via pes anserinus).

(2) Obturator externus: One of smaller muscle of medial thigh.
 origin: Anterior surface of obturator membrane, bony boundaries of obturator foramen.

insertion: Trochanteric fossa of femur.

(5)

(3) Adductor brevis → Short muscle

Origin: Anterior body of pubis, inferior pubic ramus.

insertion: Linea aspera of femur (medial lip).

(4) Adductor longus → large, flat muscle

Origin → Body of pubis, inferior to pubic crest and lateral to the pubic symphysis.

Insertion: Middle third of Linea aspera of femur (medial lip).

(5) Adductor magnus → Largest muscle in medial compartment.

origin → pubis, tuberosity of the ischium.

insertion Linea aspera and adductor tubercle of femur.

Q: 3:0
Ans: >

Injury to the external branch of the Superior Laryngeal nerve would result in paralysis of the cricothyroid muscle, leading to dysphonia (alteration in sound pitch). Some patients may have difficulty in changing the pitch of their voice or reduced stamina in their voice. This can have disastrous consequence for those who use their voice in their careers. For example: singers and public speakers.

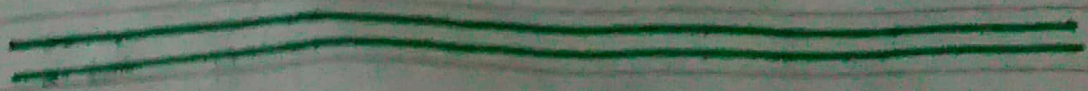
Test for the integrity of facial nerve:

Motor: →

- i) Raise both eyebrows
- ii) Show both upper and lower teeth
- iii) puff out both cheeks
- iv) close both eyes tightly so that you can not open them. Test muscular strength by trying to open them.
- v) Smile

Sensory: →

* Test for taste.



Q. 4.

Ans.

Sutures of the skull.

It is crack or joint that allows the bone to move during the birth process. In addition, they act as an expansion joint and this allows the bone to enlarge and evenly as the brain grows and skull expands.

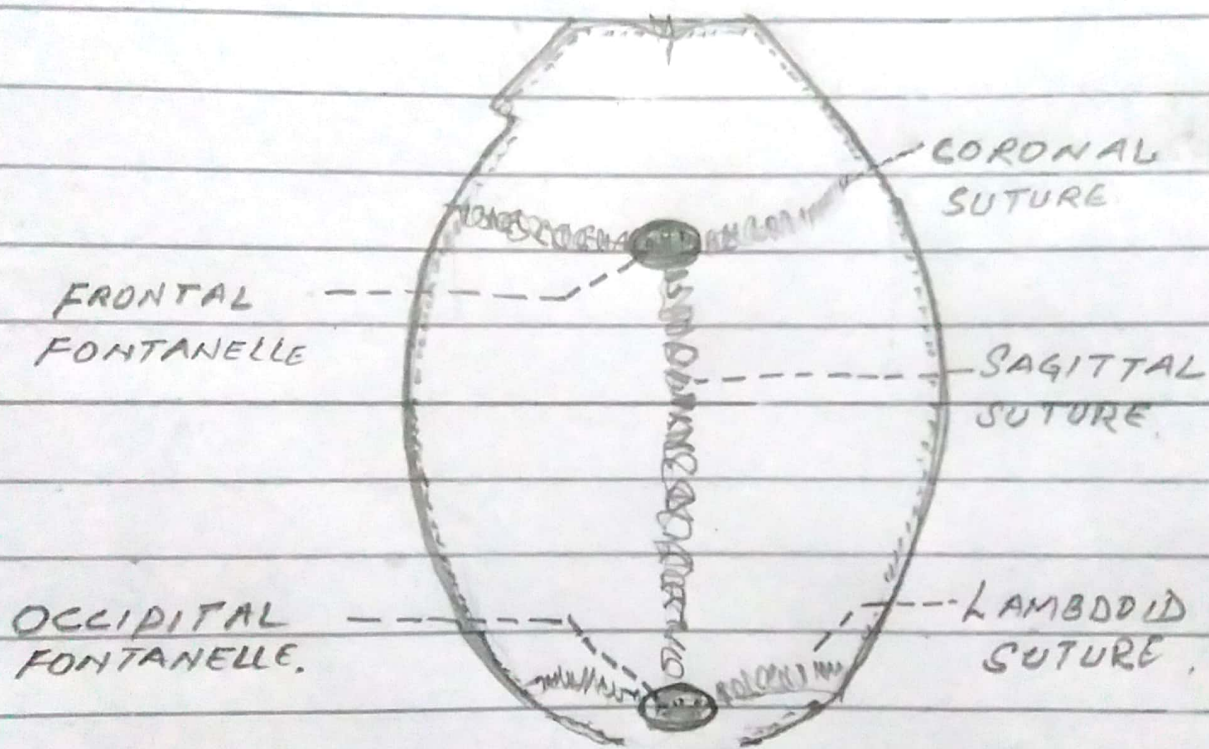
Some sutures extend to the forehead while some other extends to the back or side of the skull.

There are four major sutures in the skull of humans that include:

- (i) Metopic suture.
- (ii) Coronal suture.
- (iii) Sagittal suture.
- (iv) Lambdoid suture.

1) Metopic suture: This suture extends from the top of the head down to the middle of the forehead towards the nose. Also, the two bones join at the metopic suture.

(ii) Coronal suture: This suture extends from one ear to another ear. Moreover, each frontal bone joins with a parietal bone plate.



SUTURES OF THE SKULL.

at the coronal suture.

(iii) Sagittal suture: This suture extends from the back of the skull, down in the middle to the top of the skull.

(iv) Lambdoid suture: This suture extends across the back of the skull. Most noteworthy, each parietal bone plate assembles the occipital bone at the lambdoid suture.

Trigeminal nerve → The trigeminal nerve is the largest cranial nerve and is the great sensory nerve of the head and face, and the motor nerve of the muscle of mastication.

It emerges from the side of the pons, near its upper border, by a small motor and a large sensory root, the former being situated in front of and medial to the latter.

Function Receives sensation from the face and innervates the muscles of mastication.

Located in the superior orbital fissure (ophthalmic nerve - V₁), foramen rotundum

(maxillary nerve - V₂), and foramen ovale (mandibular nerve - V₃).

There are three branches of trigeminal nerve:

(i) Ophthalmic Nerve → it give rise to 3 terminal branches.

frontal, lacrimal and nasociliary which innervate the skin and mucous membrane of derivatives of the frontonasal prominence derivatives.

- forehead and scalp.
- Frontal and ethmoidal sinus
- upper eyelid and its conjunctive
- Cornea.

(ii) Maxillary nerve The maxillary nerve (V_2) is one of the three branches or divisions of the trigeminal nerve the fifth (CNV) cranial nerve. It comprises the principal of sensation from the maxilla, nasal cavity, sinuses, the plat palate and subsequently that of the mid-face, and is intermediate, both in position and size between the ophthalmic nerve and the mandibular nerve.

(iii) Mandibular nerve it is the largest of the three divisions of the trigeminal nerve, the fifth cranial nerve.

The large sensory root emerges from the lateral part of the trigeminal ganglion and exist the cranial cavity through the foramen ovale.

Q. 5.3

Ans. 1 Spinal cord

A part

The spinal cord is a long, thin tubular structure made up of nervous tissue, which extends from the medulla oblongata in the brainstem to the lumbar region of the vertebral column.

→ In human, the spinal cord begins at the occipital bone, passing through the foramen magnum and entering the spinal canal at the beginning of the cervical vertebrae.

The spinal cord extends down to between the first and second lumbar vertebrae, where it ends.

The enclosing bony vertebral column protects the relatively shorter spinal cord.

The cervical enlargement, stretching from the C₅ to T₁ vertebrae.

→ Terminating at L₂, the spinal cord occupies two thirds of the vertebral canal. The spinal nerves then arise and bundle together, forming a structure known as Cauda equina.

→ The spinal cord is marked by two depression on its surface.

* the anterior median fissure

* the posterior median sulcus

pharynx → The pharynx is a muscular column that runs between the oral cavity and the esophagus.

The muscles that make up the pharyngeal walls run both circularly on the outside and longitudinally on the inside.

The three pharyngeal constrictor muscles make up the outer layer of the wall. While the inner layer is comprised of paired muscles. The

- (i) superior pharyngeal constrictor
- (ii) middle pharyngeal
- (iii) inferior

(i) superior pharyngeal constrictor

Origin:

- the pterygoid hamulus.
- the pterygomandibular raphe.
- posterior end of mylohyoid line of mandible.

insertion

pharyngeal tubercle
pharyngeal raphe.

function constrict the upper portion of the pharynx.

Middle pharyngeal Constrictor:

Proximally they are attached to the stylohyoid Ligament and greater and lesser cornu of the hyoid bone.

Distally → median pharyngeal raphe

Function constricts the middle portion of the pharynx.

Inferior pharyngeal constrictor:

→ Arises from the oblique line of the thyroid cartilage of the larynx and the lateral aspect of the cricoid cartilage of the larynx.

Function constricting the lower portion of the pharynx.