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INU PESHAWAR

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QUESTION No: 1

Write about the structure of Eye.
Also name the foramina found in skull.

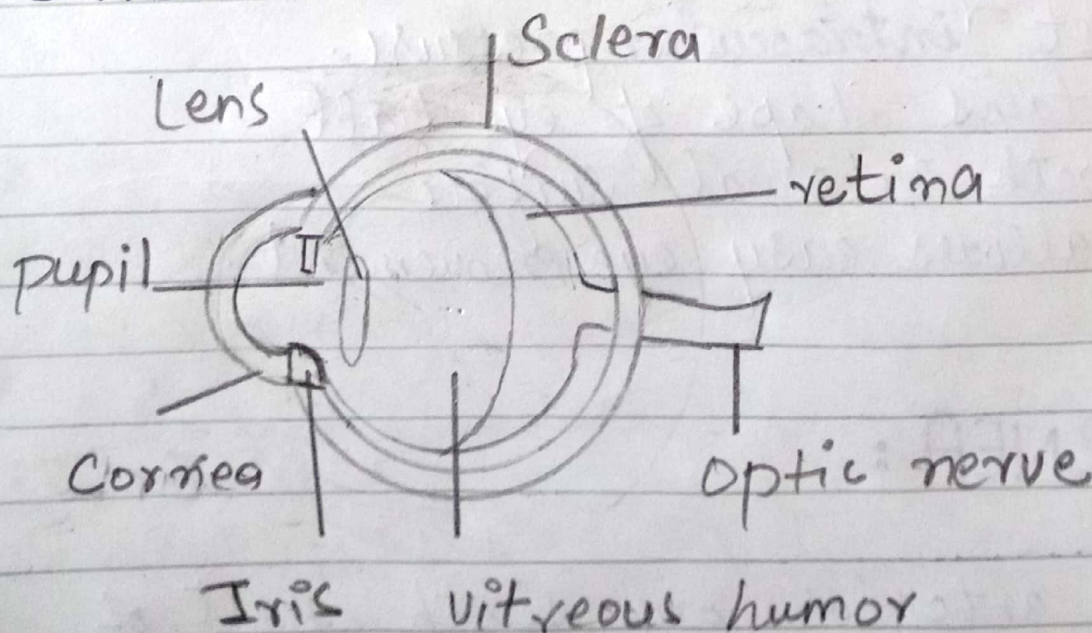
ANSWER:

EYE:

INTRODUCTION:

- Specialized sense organ that help us to understand the environment.
- Spherical in shaped
- 2.5 cm in diameter
- situated in the orbital cavity

STRUCTURE OF EYE:



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The structure of eye consists of

1: OUTER LAYER: (FIBROUS COAT)

This layer gives shape of eye ball and contains

1: SCLERA

2: CORNEA

1: SCLERA:

- Sclera is the white of the eye
- It forms the outermost layer of the eye ball.

FUNCTION OF SCLERA:

- ⇒ Provides protection to delicate structure within eye.
- ⇒ resist intraocular pressure.
- ⇒ maintains shape of eye ball
- ⇒ smooth external surface
- ⇒ It allows easy eye movement.

2: CORNEA:

- The anterior one sixth part of

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the sclera is known as cornea.

- Cornea is also known as window of eye.
- The light rays pass through cornea, the cornea to reach the retina.

MIDDLE LAYER STRUCTURE:

1: CHOROID:

- It is a thin pigmented membrane.
- Dark brown in color.

LOCATION:

- Between sclera and retina

2: CILIARY BODY:

- It is continuation of choroid
- It consists of smooth muscle fibres.
i.e. ciliary muscles adjusting the thickness of lens.

3: IRIS:

- Pigmented membrane
- It surrounds the pupil
- The space between the iris and cornea is the anterior chamber.
- They are filled with a clear fluid, the aqueous humor.

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* INNER LAYER STRUCTURE :

1. RETINA :

It is the internal membrane.

It contains the light-receptive cells called rods and cones.

It converts light into electrical signals.

* PUPIL :

It is black hole in iris where light enters.

Pupil size is controlled by iris muscles.

* OPTIC NERVE :

It creates blind spot

Transmits electrical signals from retina to the brain.

FORAMINA OF BASE OF SKULL :

1. Cribriform plate
2. Optic canal
3. Superior orbital fissure
4. Foramen rotundum
5. Foramen ovale

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6. Foramen spinosum
7. Jugular foramen
8. Hypoglossal canal
9. Foramen magnum.

QUESTION NO: 2

Write the names of the medial fascial compartment of thigh with their origin and insertion?

ANSWER:

NAMES OF THE MEDIAL FASCIAL COMPARTMENT OF THIGH:

1: GRACILIS:

most superficial and medial
It passes at both the hip and
knee joints.

ORIGIN:

Its origin is from inferior
rami of the pubis and the body of
the pubis.

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INSERTION:

⇒ Upper part of shaft of tibia on medial surface.

2: ADDUCTOR LONGUS:

- ⇒ Large
- ⇒ Fan shaped muscle
- ⇒ It is located in the medial aspect of the thigh.

ORIGIN:

⇒ Body of pubis, inferior to pubic crest and lateral to pubic symphysis.

INSERTION:

⇒ Middle third of linea aspera of femur (medial lip)

3: ADDUCTOR BREVIS:

- ⇒ Flat and triangular muscle.
- ⇒ It is found in the inner of thigh.

ORIGIN:

Anterior body of pubis
inferior pubic ramus

INSERTION:

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Linea aspera of femur (medial lip)

4: ADDUCTOR MAGNUS:

⇒ large and triangular muscle of lower limb

⇒ Strongest muscle of the medial compartment of the thigh.

ORIGIN:

⇒ inferior pubic ramus and ischial ramus

⇒ ischial tuberosity.

INSERTION:

⇒ Gluteal tuberosity linea aspera and supracondylar line

⇒ Adductor tubercle of femur.

5. OBTURATOR EXTERNUS:

⇒ Flat and triangular

⇒ It is paired muscle of the gluteal region.

⇒ Found on the anterior aspect of obturator foramen.

ORIGIN:

Anterior surface of obturator foramen membrane and bony boundaries of obturator foramen.

INSERTION:

Trochanteric fossa of femur.

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QUESTION NO: 4

Write about the sutures of skull.
also write a note on trigeminal nerve
and write its branches.

ANSWER:

SUTURES OF SKULL:

SUTURE:

A suture is a type of fibrous joint which only occurs in the skull or cranium.

They are bound together by Sharpey's fibres.

1: CORONAL SUTURE:

Junction between frontal and parietal bones.

2: LAMBDOID SUTURE:

Junction between parietal and occipital bones

3: OCCIPITOMASTOID SUTURE:

Junction between sphenoid and temporal

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bones.

4: PARIETOMASTOID SUTURE:

Junction between parietal and temporal bones.

5: SPHENOFRONTAL SUTURE:

Junction between sphenoid and ^{frontal} parietal bones.

6: SPHENOPARIETAL:

Junction between sphenoid and parietal bones.

7: ZYGOMATICOMAXILLARY SUTURE:

links the zygoma and maxilla.

2: TRIGEMINAL NERVE:

INTRODUCTION:

⇒ The trigeminal nerve is the largest and most complex of the 12 cranial nerves.

FUNCTION:

⇒ It supplies sensations to the face mucous membrane and other structures of the head.

⇒ It is the motor nerve for the

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muscles of mastication and contain fibres.

BRANCHES OF TRIGEMINAL NERVE:

It has three branches;

1: OPHTHALMIC NERVE:

⇒ It is the smallest division.

⇒ It is sensory only

SUPPLY:

⇒ Eyeball, conjunctiva, lacrimal gland, mucosa of nose and paranasal sinus, skin of forehead eyelid and nose.

3 BRANCHES:

Lacrimal, nasociliary, frontal

2: MAXILLARY NERVE:

⇒ It is the second division of trigeminal nerve.

It is pure sensory

SUPPLIES derivatives of maxillary process and frontonasal process.

After leaving foramen rotundum it moves anteriorly in the uppermost part of pterygopalatine fossa.

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GIVE RISES TO 3 BRANCHES:

Sphnopalatine ganglion.

posterior superior alveolar nerve

Zygomatic branches.

3: MANDIBULAR NERVE:

Mandibular nerve gives rise to four terminal branches in the infra-temporal fossa.

- Buccal nerve
- inferior alveolar nerve
- auriculotemporal nerve
- lingual nerve.

These all branches innervate the skin mucous membrane and striated muscle derivatives of the mandibular prominence of the 1st pharyngeal arch.

QUESTION NO: 5

Write a note on spinal cord with reference to its anatomical position and structure also write a short note on pharynx with enumeration to its constrictors.

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SPINAL CORD:

INTRODUCTION:

- ⇒ Long, thin and tubular structure
- ⇒ It is the most important structure between the body and the brain.
- ⇒ The spinal cord extends from the foramen magnum where it continues with the medulla to the level of the first or second lumbar vertebrae.

LENGTH:

40 to 50 cm long

DIAMETER:

1 cm to 1.5 cm in diameter.

DIVISION | STRUCTURE:

It is divided into four regions.

- Cervical (C) (8)
- Thoracic (T) (T₁-T₁₂)
- Lumbar (L) (5)
- Sacral (S) (S₁-S₅)

STRUCTURE OF SPINAL CORD:

≡ A cylinder of gray and white matter

⇒ In the upper 2/3 of vertebral

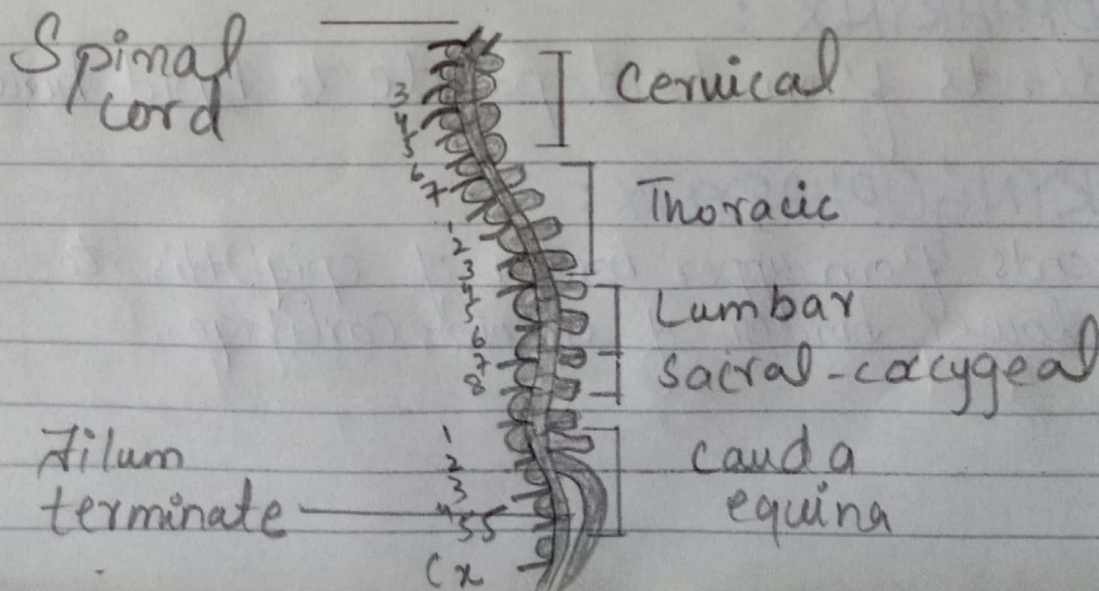
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canal.

- ⇒ Extends from foramen magnum to L1 - (or L2)
- ⇒ Covered with meninges and CSF.
- ⇒ A typical adult spinal cord ranges between 42 and 45 cm.

ANATOMICAL POSITION:

- ⇒ The spinal cord arises cranially as a continuation of the medulla oblongata.
- ⇒ It then travels inferiorly within the vertebral canal, surrounded by the spinal meninges containing cerebrospinal fluid.
- ⇒ At the level of L2 vertebral level the spinal cord tapers off forming the conus medullaris.



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PHARYNX:

INTRODUCTION:

Pharynx is a fibromuscular tube which is lined mucous membrane.

It extends from base of skull to lower border of cricoid cartilage (C-6).

It is passage for respiratory and digestive tracts.

At lower border cricoid it continues with esophagus.

LENGTH:

12-14 cm long

*DIVISION OF PHARYNX:

1: NASOPHARYNX:

Extends from base of skull to soft palate.

2: OROPHARYNX:

Extends from hard palate to hyoid bone.

3: LARYNGOPHARYNX:

Extends from upper border of epiglottis to the lower border of cricoid cartilage.

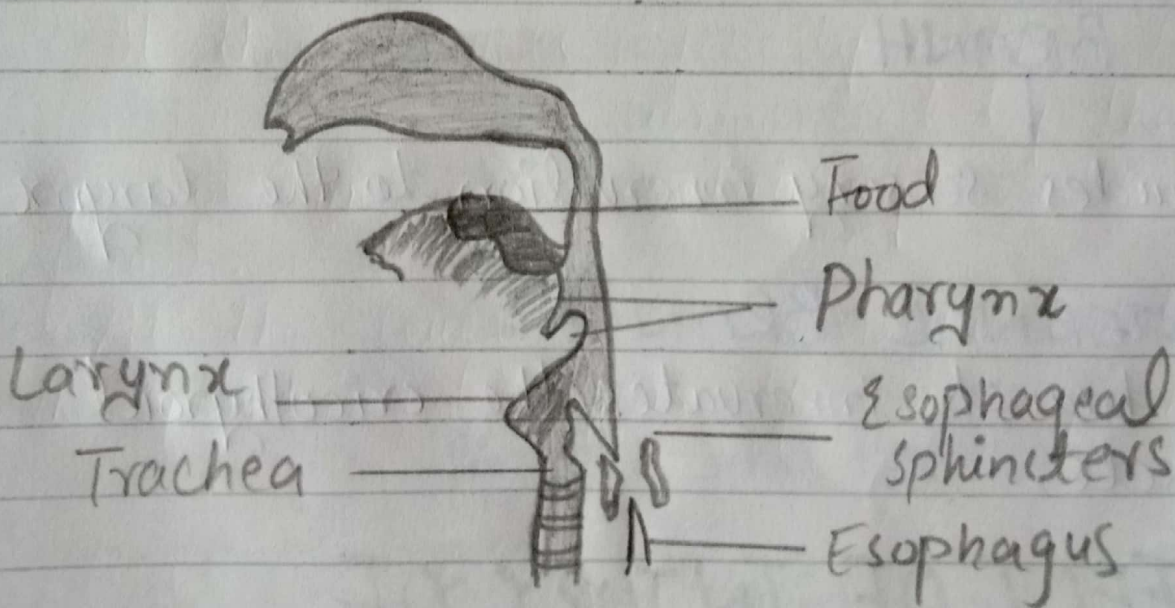
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PHARYNX CONSTRICTORS: ENUMERATIONS:

- Inferior Constrictor muscle
- Middle Constrictor
- Superior Constrictor

The inner longitudinal layer includes,

- Stylopharyngeus muscle
- Salpingopharyngeus muscle
- Palatopharyngeus muscle



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QUESTION NO: 3

What is the effect of injury of external laryngeal nerve and also write about how to test the integrity of facial nerve.

ANSWER:

→ The Superior laryngeal nerve has both an internal and external branch.

INTERNAL BRANCH

→ Provides sensory innervation to the larynx.

EXTERNAL BRANCH:

→ This branch innervates the cricothyroid muscle.

EFFECT OF INJURY OF EXTERNAL LARYNGEAL NERVE:

→ Injury to the superior laryngeal nerve can occur as a complication of a thyroidectomy.

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- ⇒ It will result in paralysis of the cricothyroid muscle and anesthesia of the region above the level of the vocal folds.
- ⇒ It tends to be, however the external laryngeal branch that is affected. It affect only the cricothyroid muscle.
- ⇒ Hoarseness of voice will occur if external laryngeal nerve is damage and there will be difficulties in breathing.
- ⇒ Some patients may not have any significant consequences of this, while others may have difficulty in changing the pitch of their voices or reduced stamina in their voice.
- ⇒ It is disastrous consequence for those who use their voice in their careers, for example Singers and speakers.

TEST OF INTEGRITY OF FACIAL NERVE :

- ⇒ The facial nerve supplies motor branches to the muscles of facial expression.
- ⇒ This nerve is therefore tested by asking the patient to crease up their

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forehead (raise their eyebrows), close their eyes and keep them closed against resistance, put out their cheeks and reveal their teeth.

END OF PAPER!