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Q1: Structure of Eye:

- Eye is the organ of sight.
- The Eye is divided by three parts.
 - 1— The Eye Ball.
 - 2— The Extraocular Muscle.
 - 3— The Bony Orbit.

1 → The Eye Ball:

→ The Eye Ball is spherical organ, which around the structures produce vision.

→ It lies in Bony cavity, within the facial skeleton, called Bony ORBIT.

→ The Eye ball is divided into ⁽²⁾ three parts.

1): The fibrous layer.

2): Vascular layer.

3): Inner layer.

1 → Fibrous layer.

→ Outermost layer.

→ It consist of sclera and cornea.

⇒ Function

→ Provide shap to eye.

→ Support the inner structures.

i): The Sclera:

→ Approx "85%" of the fibrous layer.

→ Provide an attachment to the extraocular Muscles.

→ Visible as the white part of the body.

(3)

ii) The Cornea:

- Positioned in centre at the front of eye.
- It refracted the light entering the eye.

2 → Vascular Layer:

- lies below the fibrous layer.
- Consist of choroid, Ciliary body, and iris.

i) Choroid:

- Consist of blood vessels and connective tissues.
- Function: Provide nourishment to the outer layer of retina.

ii) Ciliary Body:

- Has two parts, ciliary muscle, and ciliary processes.
-

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- The ciliary muscles consist of smooth muscle fibres collection.
- And attached to the lense of eye by ciliary process.

iii) Iris:

- Circular structure.
 - Has aperture in center.
(Pupil)
 - The Pupil is altered by smooth muscle fibres within iris.
 - Situated between the lense and The Cornea.
-

⑤

→ Eye Ball has three layers.

1): Inner layer

2): Neutral layer.

3): Pigmented layer.

⇒ Vasculature

→ Arterial blood supply to eyeball through Ophthalmic Artery.

→ Venous drainage of the eyeball is carried out by the superior and inferior Ophthalmic Veins.

2) ^⑥ The Extraocular Muscles:

→ Located within Orbit.

→ Separate from eyeball.

Functions:

→ Control movement of eyeball and superior eyelid.

→ There are 7 Extraocular Muscles.

- 1- Levator palpebrae superioris
 - 2- Superior rectus.
 - 3- Medial rectus.
 - 4- lateral rectus.
 - 5- Inferior Oblique.
 - 6- Inferior rectus.
 - 7- Superior Oblique.
-

3: The Bony Orbit. (7)

- Symmetrical cavities in the head.
- Enclose the eyeball and its associated structures.

⇒ Foramina of the Skull.

- | | |
|------------------------------|--------------------------------|
| 1): Foramen Caecum | 2): Optical 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. |
-

Q2: Medial facial Compartment of
The THIGH

⇒ Muscles:

→ Gracilis

→ Adductor longus,

→ Adductor Bivis.

→ Adductor Magnus.

⇒ Blood Vessels:

→ Profunda femoris Artery and

→ Obturator Artery and Vein.

⇒ Nerve:

→ Obturator Nerve.

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1 → Gracilis:

⇒ Origin: Inferior pubic ramus and ischial ramus.

⇒ Insertion: Upper part of medial surface of the shaft of tibia

2 → Adductor Longus:

⇒ Origin: Body of pubic bone just below and medial to the pubic tubercle.

⇒ Insertion: Linea aspera of the femur lateral to the region of vastus medialis.

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3 → Adductor Brevis:

⇒ origin: Inferior ramus of the pubic bone.

⇒ Insertion:

→ Linea aspera of the femur.

4 → Adductor Magnus:

⇒ origin: Inferior pubic ramus and from ischial ramus and lateral part of ischial Tuberosity.

⇒ Insertion:

→ linea aspera and Medial super-condylar line.

→ Adductor tubercle of the femur.

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Q3:
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Effects of Injury of Laryngeal Nerves

- changes the pitch of voice.
 - Cause inability to make explosive sound.
 - If the patient is not going to doctor and leave the injury then after 3 months the injury ~~will~~ or damage is to be permanent.
 - Vocal cord Abducted and poses a respiration risk.
 - Damaged during thyroidectomy and cricothyrotomy.
-

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- Uncontrolled coughing.
- voice fatigue
- Vague Foreign body sensations.

⇒ Testing of Facial Nerve:

1) Testing the temporal branches:

- frown and wrinkle the forehead

2) The Zygomatic Branches

- Close the eyes slightly.

3) Buccal Branches

- Buff up cheeks (Buccinator)

- Smile and show teeth.

(Orbicularis Oris)

- Tap with fingure over each ~~other~~ cheek to detect ease of air expulsion on the affected side

Q4:

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→ Structure of Skull:

→ In Neonate, the incompletely fused suture joints give rise to membranous gaps between the bones, called Fontanelles.

Fontanelles:

- 1- Frontal Fontanelles.
 - ↳ located in junction of the coronal & sagittal sutures.
 - 2- Occipital fontanelles:
 - ↳ Located at the junction of the sagittal & Lambdoid Sutures.
-

⇒ Bones of Skull:

1) Occipital Bone:

↳ Articulate with temporal and parietal bone.

↳ forms the posterior portion of the cranium and cranial base, and also form posterior cranial fossa.

→ Base of the occiput is Basilar part.

→ Two temporal bones are coverage on it from each side.

→ Squamous Part, is the occipital bone that's behind the foramen magnum

2- The temporal Bone: (15)

→ Contributes to lower lateral walls of skull.

→ contain middle and inner portion of the ear

→ crossed by cranial nerves.

→ lower portion articulate with mandible, forms temporomandibular joint of jaw

→ Has 5 parts:

1) Squamous

2) Tympanic

3) Petromastoid

4) Zygomatic process.

5) Styloid Process.

3) Sphenoid Bone

(16)

- Make up the cranium.
- Protect the brain.
- It has Butterfly shape
- Consist of:
 - ↳ paired greater wings
 - ↳ Lesser wings.
- and
 - ↳ Two pterygoid Process.

4) Ethmoid Bone:

- Small unpaired Bone.
 - Located in Midline.
 - Also protect the brain
 - Made up of three Parts.
 - 1) Cribiform plate
 - 2) Perpendicular Plate
 - 3) Ethmoidal Labyrinth.
-

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⇒ Trigeminal Nerve:

↳ Major Branches of Trigeminal Nerve.

1) Ophthalmic Nerve,

2) Maxillary Nerve,

3) Mandibular Nerve.

↳ Coverage on the Trigeminal ganglion,

↳ located within Meckel's Cave

↳ Containing cell bodies of incoming sensory nerve fibres.

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Q5:

The Spinal Cord:

- has a cylindrical shape, elongated.
- Occupying the superior two-thirds of the vertebral canal.
- Extend from upper part of atlas to the junction between the first and second lumbar vertebrae.
- Enclosed in the dura, arachnoid and pia mater, separated from each other by subdural and subarachnoid spaces respectively.
- continuous cranially with the medulla oblongata, and narrows caudally to the conus medullaris.

(19)
→ It varies in Transverse width, gradually tapering craniocaudally, except at the levels of enlargements.

Gross Features of Spinal

→ 42-45 cm length, 2.5 cm wide, Cord,

→ It's slightly flattened dorsoventrally and located in the spinal canal of vertebral column.

→ Protect Provided by,

↳ The vertebrae of their ligaments.

↳ The meninges and a cushion of CSF.

→ The innermost layer of pia mater adheres to the surface of the spinal cord.

→ The Outermost layer of dura mater forms a tube that extends from the level of the foramen magnum to S2. (20)

→ It's continuous with the dura mater around the Brain.

≥ External features of S.C:

- 1- Fissures and Sulci.
- 2- Attachments of Spinal Nerve
- 3- Enlargements.
- 4- Cauda equina.
- 5- Supports.

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⇒ Pharynx:

→ Common Pathway for air and food.

→ Musculo-fascial half-cylinder that links the oral and Nasal cavities in the head to the larynx and esophagus in the Neck.

→ Attachment:

Above → to the base of skull

Below → with the top of esophagus.

→ Pharynx is at the level of C6.

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→ Subdivided in three regions

1 - Nasopharynx.

2 - Oropharynx.

3 - Laryngopharynx.

⇒ Constrictor Muscles:

→ 3 constrictor muscles on each side, major contributes to the structure of the pharyngeal wall - superior, middle, and inferior.

→ Pharyngeal raphe:

↳ Posteriorly are muscles from each side are joined together.

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→ Anteriorly, these muscles attach to bones and ligaments related to the lateral margins of the nasal and oral cavities and the larynx.

→ Constrict or narrow the pharyngeal cavity.

→ Inverted by the pharyngeal Branch of the Vagus Nerve.
