MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL
Affiliated to Pondicherry Central University,
Recognized by Dental Council of India
Chalakkara, P.O. Pallor, Mahe-673 310
U.T. of Puducherry. Ph : 0490 2337765

2.5.4: The Institution provides opportunities to students for midcourse improvement of performance through specific interventions Opportunities provided to students for midcourse improvement of performance through:

1.Timely administration of CIE

2.On time assessment and feedback

3.Makeup assignments/tests

4.Remedial teaching/support

INDEX SHEET

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CERTIFICATE OF THE HEAD OF THE INSTITUTION

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Dr.ANIL MELATH, MDS.,
PRINCIPAL

TO WHOMSOEVER IT MAY CONCERN

This is to certify that our Institution provides opportunities to students for midcourse improvement of performance through specific interventions Opportunities provided to students for midcourse improvement details are given:

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Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O.Palloor, Mahe -673310
UT of Puducherry

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CHALAKKARA
MAHE
PIN: 673310

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RE-TEST AND ANSWER SHEETS

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MARL KIST OF MID-COURSE IMPROVEMENT EXAMINATION

Batch 2020-21

DEPART MENT OF ANATOMY

SL.NO	STUDENTS PRESENT	MARK (70)
1.	Adithya Sagar	19
2.	Adla Nadeer	23
3.	Aparna P R	33
4.	Aradhana Sivakumar	16
5.	Aswin K . Rajeev	05
6.	Dua Fathima	14
7.	Fathima Nasmi	09
8.	Hridhya Ramesh	25
9.	Ibthisam	20
10.	Ireen Babu	24
11.	Jenna Parveen	18
12.	M .Madhuvandhi	22
13.	Mohanarangan	26
14.	Nandhana R S	18
15.	Navya keerthi	21
16.	Nima Nihala	31
17.	paveethra	16
18.	P .G Lakshmi	21
19.	P .Liza	28
20.	Rahul Krishnan	28
21.	N.Selvakani Amudhan	22
22.	Shana .T	29
23.	Shameema Araf	36

Dr. Anil Kumar, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O.Pallor, Mahe -673310
U.T. of Puducherry

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	R .Shamini	**25**
25.	Shana	**33**
26.	Sneha	**34**
27.	Srivaidhya	**06**
28.	Sruthi .K S	**09**
29.	S. Venkatesan	**24**

Faculty in charge: 28/10/21

Signature of HOD

Copy to:

Principal

Convenor Academic Committee

IQAC

Examination wing

CHALAKKARA MAHE PIN 673310

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O Pallour, Mahe -673310
UT of Puducherry

From,

Students of I[st] BDS 2020-21 Batch

MINDS, MAHE

To,

the HOD | Dept. Incharge

Department of Anatomy

MINDS, MAHE

Sub: Request for attending Mid-course improvement Examination.

Respected Madam,

As we have scored less marks in the external Examinations, we humbly request you to provide us a chance to improve our Marks by writing a improvement Examination.

Thanking you

Chalakkara

09/10/21

Yours Sincerely.

28. Sruthi K.S
29. Venkitesh
1. Adityasagar
2. Adla Nadeep
3. Aparna P.R
4. Aradhana Sivakumar
5. [illegible]
6. Dua fathima
7. Fathima
8. Hridya Ramesh
10. Ireenbabu
11. Jenna Parveen
12. M. Madhuvanthi
13. Mohanaranga
14. Nandhana
15. Navya keerthi
16. Nima Nihal
17. Paveethra
18. P.Y Lakshmi
19. P. Liza
20. Rahul krishnan
21. Selvakani
22. Shana T
23. Shamema Afrah
24. R. Shamni
25. Shana
26. Sneha sekhar

DR ANJU M

Dr. Anil... MDS Principal, ... Institute of Dental Sciences & Hospital, Chalakkara, P.O.-673 310, Puducherry

for Principal 09/10/21

MAHATMA INSTITUTE OF DENTAL SCIENCES & HOSPITAL, CHALAKKARA

FIRST YEAR.

Mid-Course Improvement 2a

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
U. T. of PUDUCHERRY - PIN 673 310

INTERNAL ASSESSMENT BOOK
SUBJECT : ANATOMY

Tick Questions Attempted:

Q_1 ☐ Q_2 ☑ Q_3 ☑ Q_4 ☐ Q_5 ☑ Q_6 ☐ Q_7 ☑ Q_8 ☑

Q_1	08	10	Q_5	4½	5
Q_2	4½	10	Q_6	0	5
Q_3	4½	5	Q_7	2½	5
Q_4		5	Q_8	1½	5

No. of Additional sheets used. ☐

TOTAL 17½ 45

Total in Words

Evaluated by:

Name of the candidate : NANDHANA R. S.

Reg. No : 60

Signature

Date: 18-10-21

Dr. J. Vishnu Sripreeg 18/10/21
Signature of Invigilator

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O.Pallioor, Mahe -673310
UT of Puducherry

SECTION - A

2. T.M.J:

Temporo-mandibular Joint is Condylar Variet of
Joint. it is a Joint b/w Temporal Bone & Man
it Consist of a Articular Surface, ~~disc~~ ligaments,
disc

Articular Surface

The Articular Surface Consist of Articula
tubercle, Posterior non Articulating Surface, Anterior
articulating area, Head of Mandible.

Ligaments

- Fibrous Capsule.

- its is attached above to the Articular tub
& below with the Mandible.

- lateral Temporomandibular ligament

- it is attached
  - above to the Articular tubercle
  - below to the Mandible.
  - laterally to the temporal bone.

- Sphenomandibular ligament.

it is a ligament which is related to lingula. Spine of sphenoid bone & to the Mandible. it is an accessory ligament. laterally related to auri temporal nerve, maxillary artery & medially re to chorda tympani.

- Stylomandibular ligament.

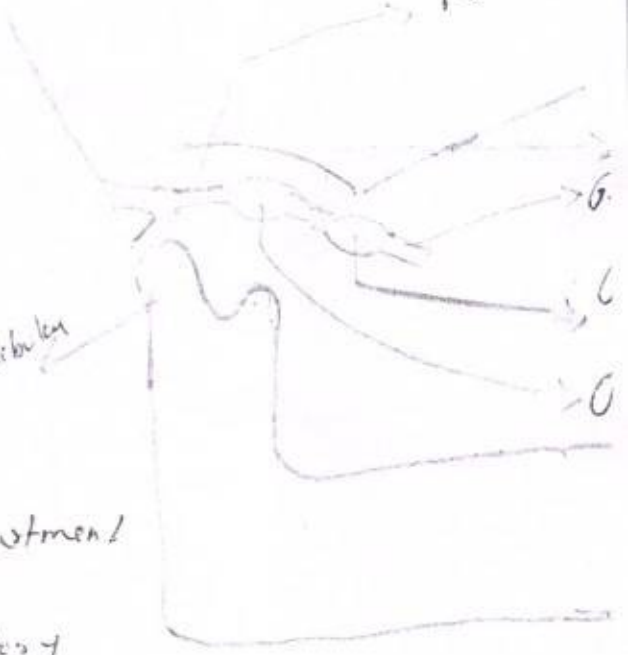
It is attached from styloid Process to mandible. it separates the Parotid gla from other salivary glands. it is an ligament.

- Pterygomandibular ligament.

ligament from the Pterygoid fovea to the Mandible.

Articular disc

The Articular disc is a Plate that divides it into 2 compartments. Upper Compartment Permits gliding movement & lower Compartment Permit gliding as well as rotatory movement. The Upper compartment is meniscotemporal lower one is meniscomandibular. The Articular disc consist of a Bilaminar region. Posterior thick Band, Intermediate region, Anterior



The Muscles of mastication help in move of T-M-J

1. Masseter:

Quadrilateral Muscle.

- Superficial layer

origin : Anterior 2/3rd of zygomatic arch.

Insertion : Ramus of mandible.

- Middle layer.

origin : ~~Posterior 1/3rd of zygoma~~ Middle of zygomatic arch

Insertion : Ramus of mandible.

- Deep layer : Posterior 1/3rd of zygomatic arch.

& insert to Rest Portion of mandible.

→ masseter help in Protrusion of mandible

2. Temporalis.

- origin : Temporal fossa & Temporal fascia.

- Insertion : to the mandible.

- help in Protrusion of mandible.

3. Lateral Pterygoid:

upper head & lower head.

from the the ~~Pterygoid forvea~~ Zygomatic ar

to the Pterygoid forvea.

- it help in depression of mandible for opening of m

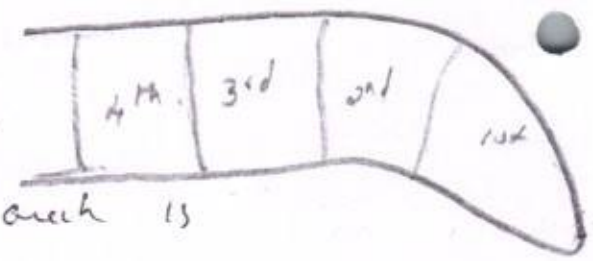
4½

4. Medial Pterygoid.

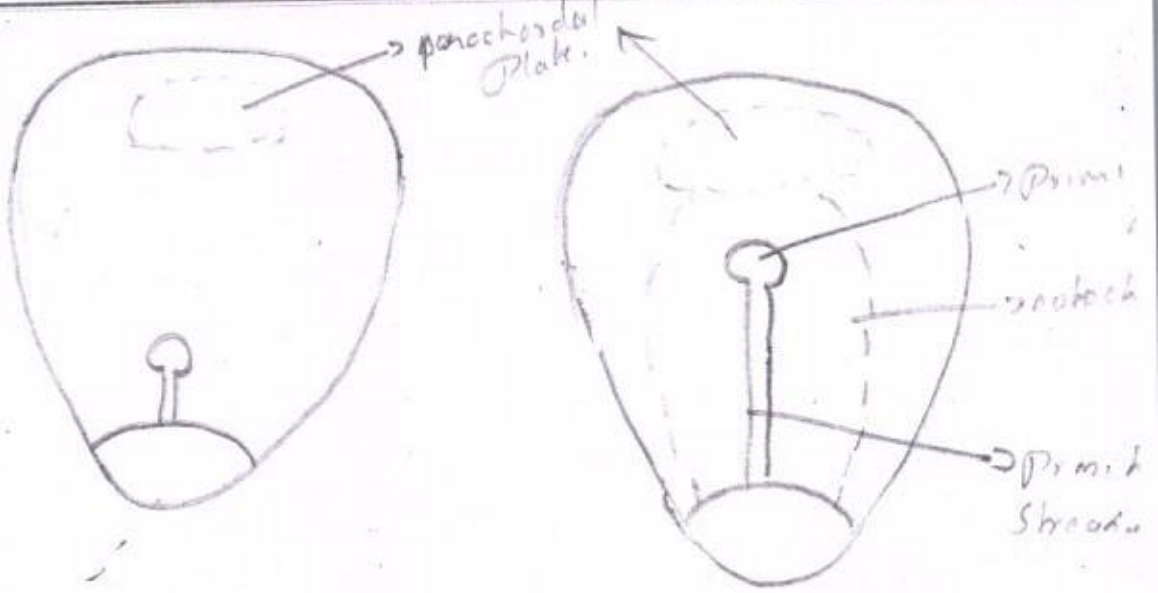
SECTION B.

3. Tongue:

Toungue is developed from 1st, 2nd 3rd & 4th arc. The ~~Post~~ tongue is developed from the swe that found in the Branchial arch. ~~Their~~ The swelling in first arch is called Hypobranchial emminence, from which th ~~Ant~~ erior 2/3rd of the tongue is developed. & it is supplied by chodra tymphano n



The Posterior 1/3rd is developed from swelli Seen on 3rd & 4th arch. It is called a tuberculum impar & ~~2nd~~ lingual swelling on both side & will grow & overlap. The Posterior 1/3rd is supplied by lingual n

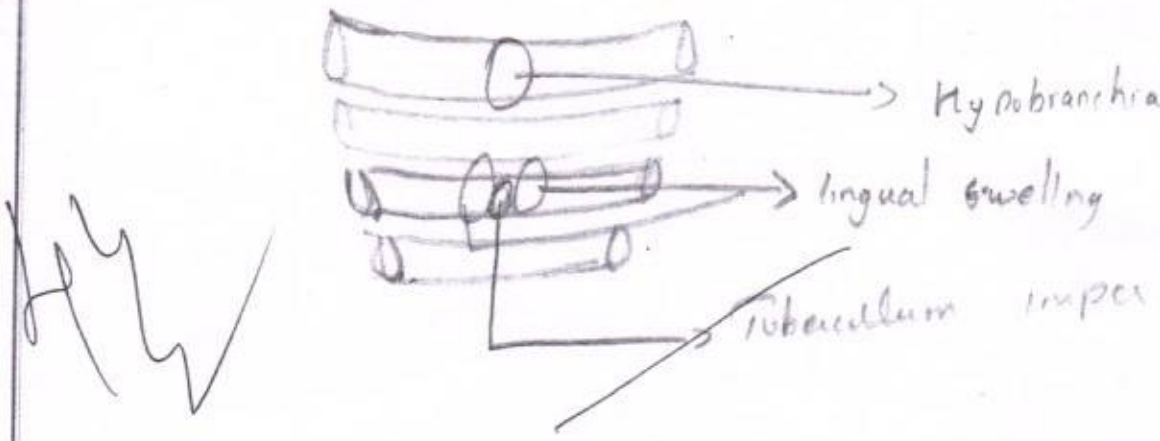


it is formed below the Prochordal Pla

Importance: it is important for the forme of notochord & 3rd germ layer. it give a cranial & caudal end & also helps the symmetry of the human body.

Fate.

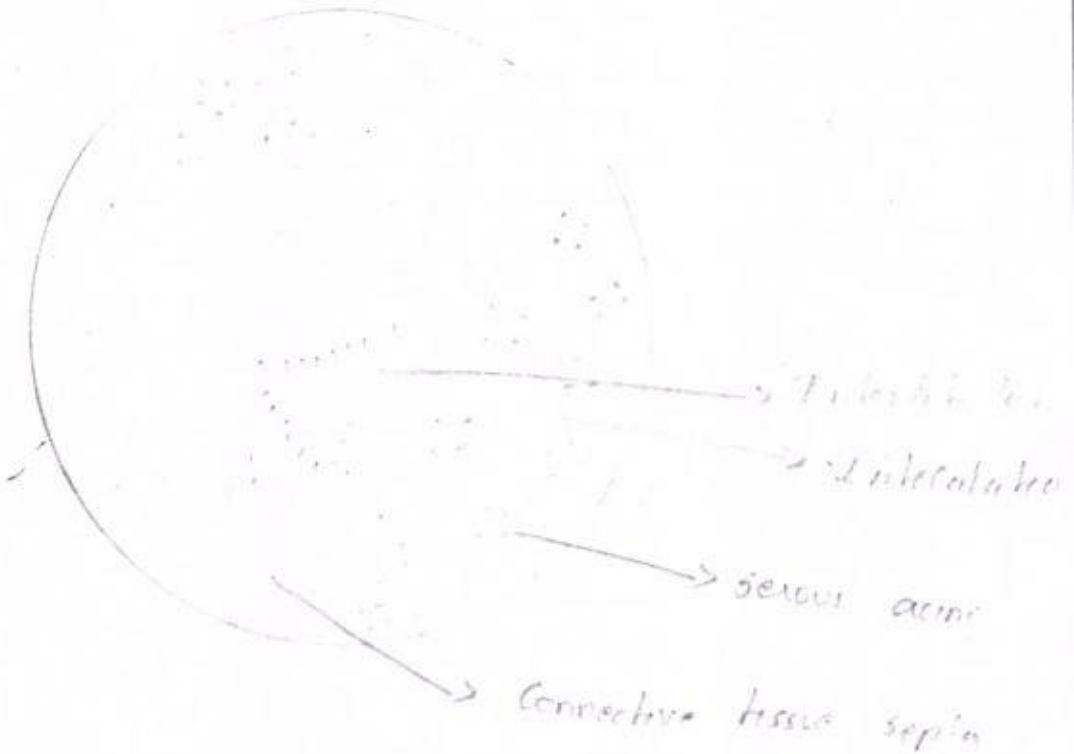
it get disappear at the 29th day of gestation.



5- Primitive streak.

It is a transient structure that disappear few days i.e, 22th day of IUL. it is fo below the notochord. The epithelial cells Prese Caudal end will undergo differentiation, Prol & migration & forms a extension calle streak. the middle portion is narrow & lateral walls are raised which gives a tub appearance. The cells at the end of Primi streak undergo Primitive knot & the G- In it is called Primitive Pit.

7.



- Serous salaivary gland. eg: Parotid gland & Von-E gla
- The ~~gla~~ Connective tissue septa is Present saperate gland to different Parts.
- Serous acini are Present with Pyramidal she nucleus.
- Inter lobular & intercalated ducts are Present

8 Carotid Triangle

Boundary

Anteriorly - sternocleidomastoid.

Base - hyoid Bone.

& Superiorly - ~~Superior~~ Anterior belly of omohyoid.

Inferiorly - Posterior belly of omohyoid

Roof - Deep cervical fascia, Platysma, skin, supe

cal fascia

Content : Internal Carotid, Common Carotid, Exte

Carotid sinus

Mid- course improvment 2020- 21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
U. T. of PUDUCHERRY - PIN 673 310

INTERNAL ASSESSMENT BOOK
SUBJECT : ANATOMY

Tick Questions Attempted:

Q_1 ☐ Q_2 ☐ Q_3 ☐ Q_4 ☐ Q_5 ☐ Q_6 ☐ Q_7 ☐ Q_8 ☐

Q_1	8½ 10	Q_5	5
Q_2	8½ 10	Q_6	5
Q_3	3½ 5	Q_7	5
Q_4	5	Q_8	5

No. of Additional sheets used. ☐

TOTAL 8½ 45

Total in Words

Evaluated by:

Name of the candidate : FATHIMA NASMI M

Reg. No : 20BDS 31

Signature

Date: 18/10/21

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, Mahe
UT of Puducherry

Dr. Vishnu 15/10/21
Signature of Invigilator

3. TONGUE.

Tongue is an muscular organ
middle fibrous septum divides the tongue into
and left. halves. each half consist of four ext
and four intrinsic muscles.

* Intrinsic muscles:
  1. Superior longitudinal
  2. Inferior longitudinal
  3. Transverse
  4. Vertical.

* Extrinsic muscles are:
  1. Hypoglossus
  2. styloglossus.
  3. genioglossus.
  4. palatoglossus.

ARTERIAL SUPPY OF TONGUE:

It is derived from tortuous lingual nerve a
branch of external carotid artery. not the ton
is supplied by ~~lingu~~ tonsillar nerve, facea
nerve and Ascending pharyngeal branch of
external carotid artery.

Nerve supply:

Accesory nerve:

All Intrinsic and extrinsic muscle is suppli by hypoglossal nerve ~~supplied by~~ except pa glossal nerve.

palatoglossal nerve is supplied by cranial of cervical mandibular of pharyngeal plexus.

Motor nerve:

Lingual nerve is a nerve for sensation and Chorda tympani nerve is an nerve for tas of the ~~post~~ anterior two third except vallate pal papellae.

glossopharyngeal nerve is for both tas sensation ∧ which posterior one-third. include the circumvallate p

posterior most part of the tongue is su by vagus nerve.

Venous drainage:

Venie comitrants or vein of the tongue. Two comitrants for hypoglossal nerve and on Venae comitrants for lingual nerve.

Deep lingual nerve is the largest nerve.

DEVELOPMENT OF TONGUE

Anterior two-third:

Two lingual swelling from the first br arch. It is supplied by lingual nerve o first arch and chorda tympanic nerve of arch.

posterior one-third:

It is from the cranial part of hypoglos eminence which is supplied by glossopharynge nerve of third arch.

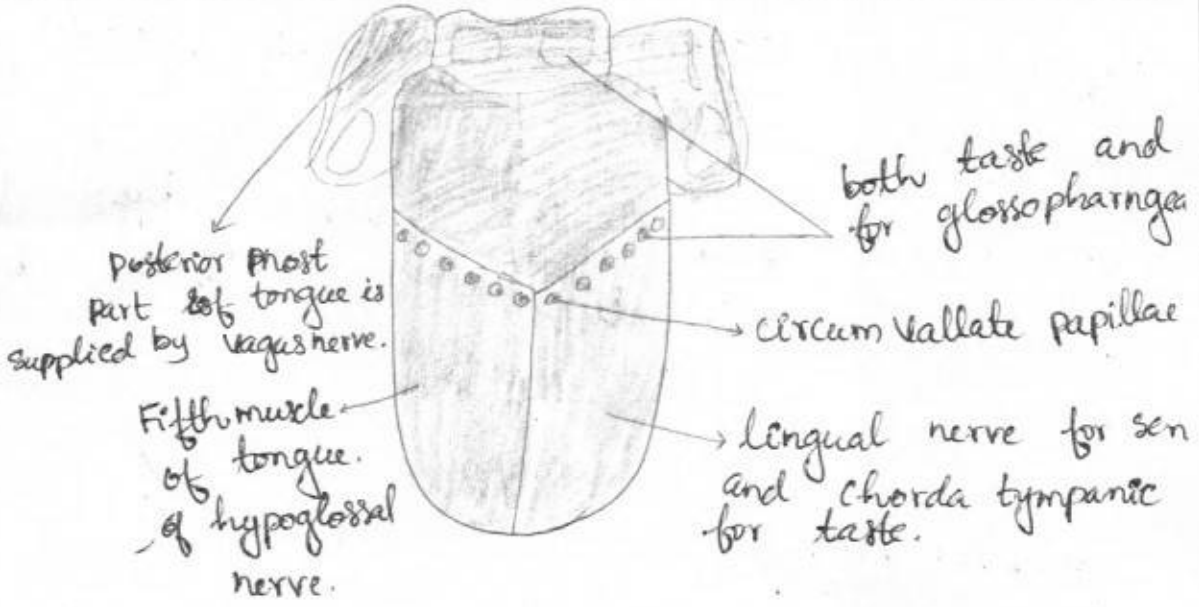
posterior most part is supplied by Vag nerve of fourth arch.

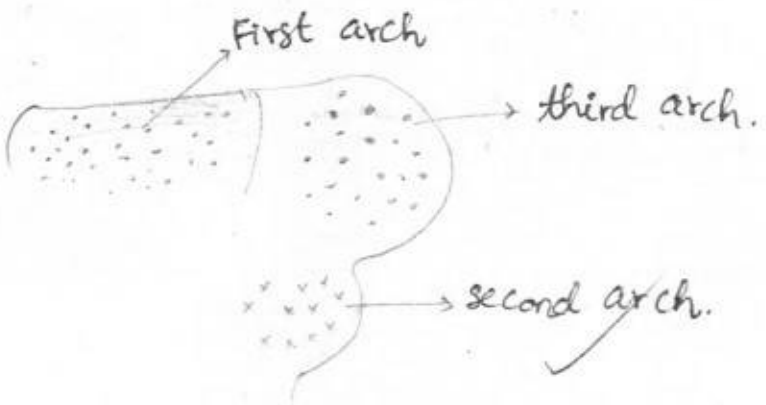
Muscle of Tongue:

Muscular part of the tongue develop from the occi myotomes of glossepharyngeal nerve.

Connective tissue:

Connective tissue is located in the local mesenchyme.





2. TEMPOROMANDIBULAR JOINT

Temporomandibular Joint is an synovial Joint (Chondylar Variety

Articular surface:

upper part of articular surface of temporal are:

1. Articular tubercle.
2. Anterior part of mandibular fossa.
3. posterior non articating part of tympani bone.

Inferior articulating surface is head of the mandible.

Articular surface is covered by fibracart The joint divide upper and lower by intra disc.

6. LIGAMENTS:

Ligament are lateral ligament, fibrous caf sphenomandibular ligament and stylomandi ligament.

Fibrous ligament:

Fibrous ligament is attached to the articular tubercle above, ~~sphenomandibular~~ squamotympa fessure behind and below the neck of mandible.

Spinal membrane & lining the fibrous ca and the neck of the mandible.

Lat Lateral legament:

The lateral legament give reinforce and strengther lateral part which is attached above the ar tubercle and below the neck of the mandi

sphenomandibular legament:

It is an accessory legament. deep away from fibrous capsule. of the Lateral pterygoid muscle and lengula of the mandibular foraman.

* Lateral part of the legament:
  1. Auriculo temporal nerve.
  2.

* Medeal part of the legament:
  1. chorda tympanic nerve.
  2. maxellary nerve.

Stylomandibular legament:

Stylomandibular legament is an another accesso legament of the joint. attached to the ma vein and artery and maxellary nerve.

C. Movements of the tongue:

Depression (open the mouth)

Suppression contraction ~~Suppression~~ (close the mouth)

protrution (protrude the chin)

Retraction (Retract the chin)

Lateral or side to side movement of the tong (

~~Lateral~~ muscle ~~of~~ Tongue:

MUSCLES OF TONGUE:

Laterally:

1. skin and fascia.
2. parotid gland.
3.

Medially:

1. Temporal bone ~~supplied~~ by branch of external Carotid artery
2. spine of sphenoid. upper side of attached by sphenomandibular ligament.
3. chorda tympanic nerve and maxillary
4.

Ar
pe
su
inf

Anteriorly:

1. Lateral pterygoid muscle.
2. masseteric nerve and artery.

posteriorly:

1. parotid gland.
2. Lingual nerve.

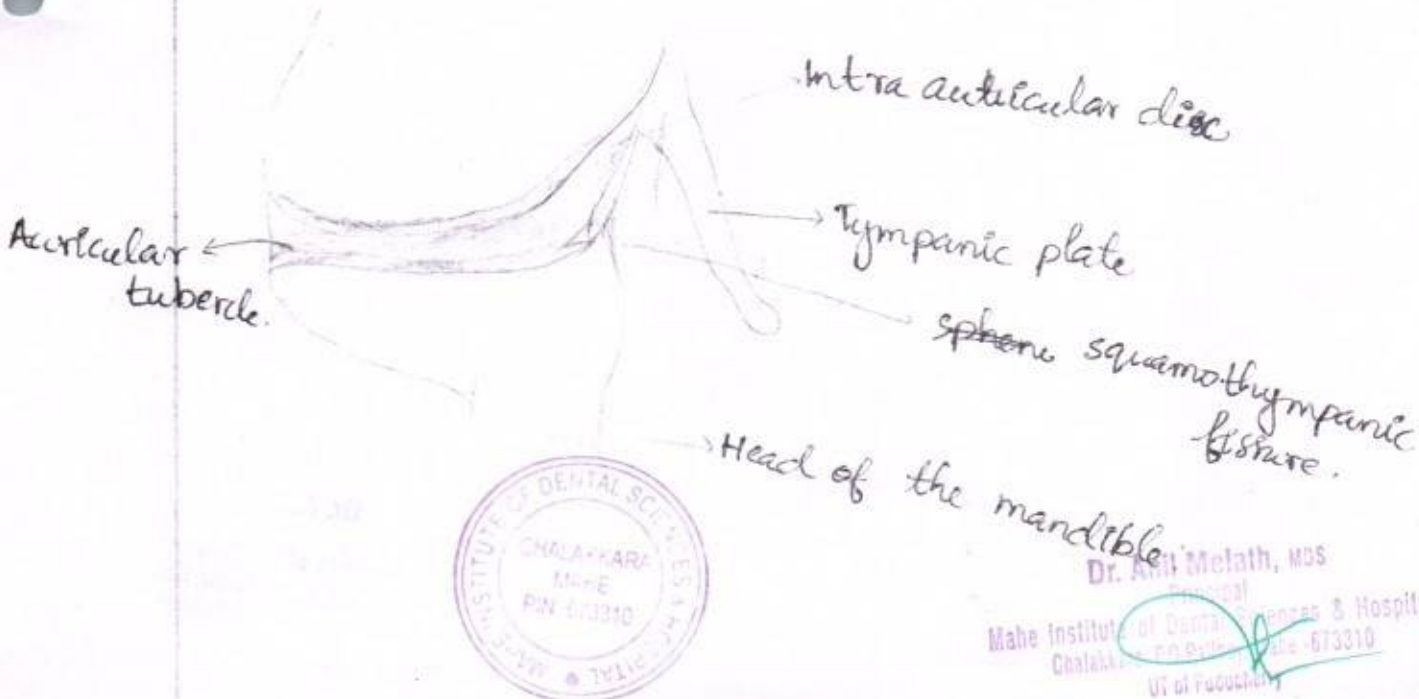
superiorly:

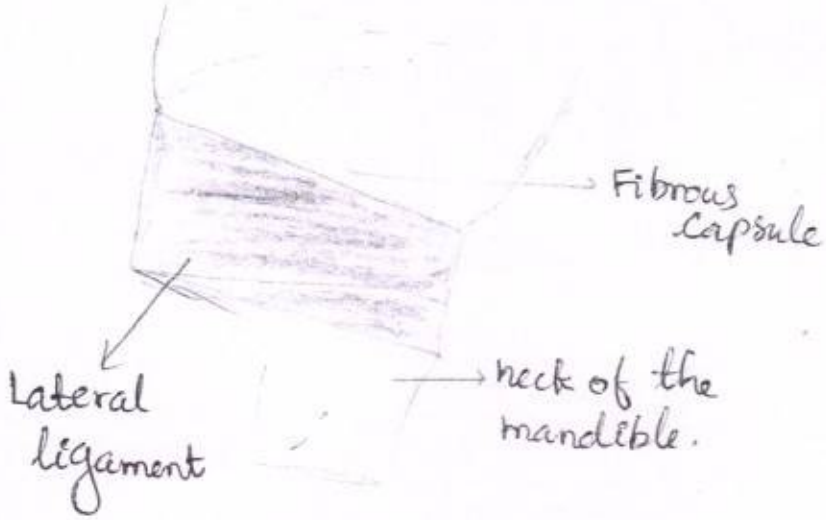
middle cranial fossa.

middle meningeal artery.

Inferiorly:

maxillary vein and artery.





d) Clinical Anatomy:

- TMJ is an synovial Joint of bone.
- TMJ help for the movement of tongue
- Also help for the closing and opening of mouth.
- Fibrous tissue deep to the mucous membran it pass longitudinally back from the tip the tongue.
- ~~hep help to protrude the dorsum of the tong Con Concave and tonicity in shape.~~
- ~~Transverse muscle help to curve turd th tongue which is with increas the dep the~~

1) Larynx:

Larynx is an muscular part which help for the pa
of both food and air.
It consist of cricoid cartilage, arytenoid cartilag
thyroid cartilage.
Larynx consist of a nine cartelage.
three are paired and another three unpaired carte

a) Inlet of Larynx.

Inlet of the larynx is supplied by pretracheal pa
Larynx pass through the trachea. through th
oesophagus.

Mid-course improvment

2020 - 21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: ANATOMY

Tick Questions Attempted :

Q_1 ☑ Q_2 ☑ Q_3 ☑ Q_4 ☑ Q_5 ☐ Q_6 ☑ Q_7 ☑ Q_8 ☑

Q_1	2	10	Q_5	NA	5
Q_2	6½	10	Q_6	1½	5
Q_3	5	5	Q_7	3	5
Q_4	4	5	Q_8	3	5
			TOTAL	25	45

No. of Additional Sheets used.

Total in Words

Evaluated by:

Name of the candidate : Hridhya Ramesh. P

Reg. No : 42

Signature

Date : 18/10/2021

Dr. J. Vishnu Sanjay 18/10/21.

Signature of Invigilator

Dr. [illegible], MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pothur, Mahe-673310
UT of Puducherry

2. TMJ

It is a type of synovial joint

Bicondylar

Structurally: Condylar variety

* movement of hinge joint

TMJ is the articulation btw the mandibular fossa of the temporal bone.

The cavity is seperated into upper and lower by intraarticular disc

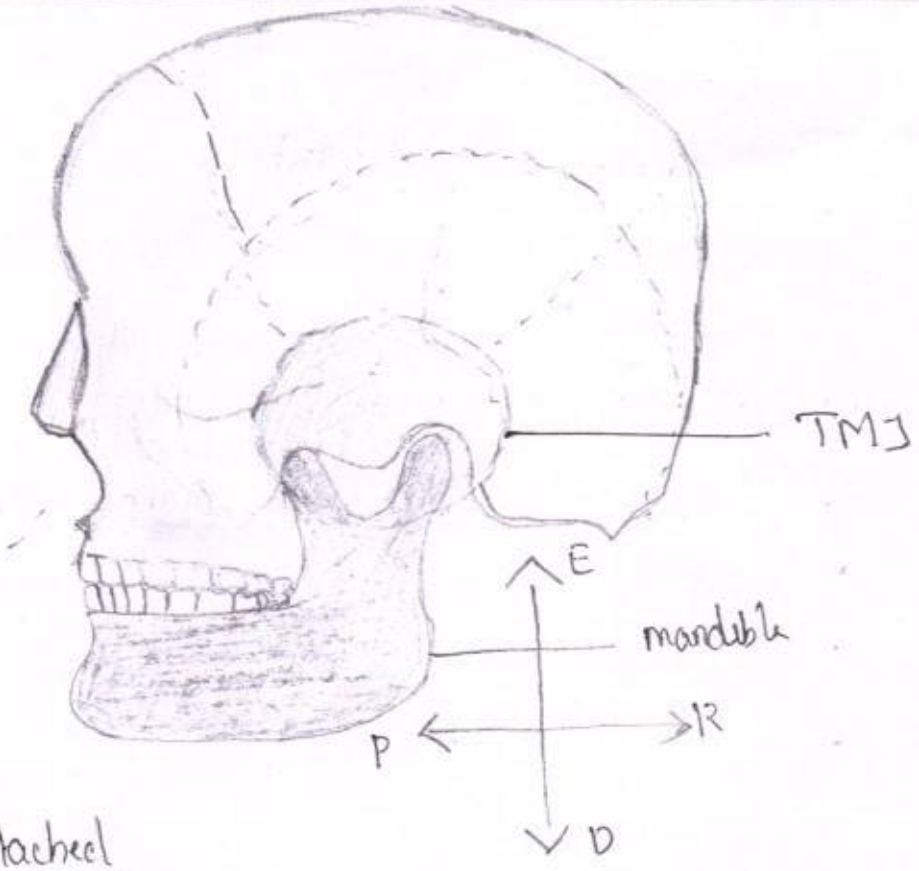
It has two surfaces :-

Superior surface

- Anteriorly to the head of the ~~temporal~~ mandible fossa (Glenoid fossa) of the temporal bone
- The anterior limit is till the vertebral rigidity
- The posterior limit is till the squamotympanic fissure

Inferior surface

- Articulates to the articular tubercle
- The tympanic cavity - upper
- To the condylar process of mandibular - lower



Ligaments attached

1) Capsular ligament | fibrous capsule
2) Articular disc
3) Temporomandibular ligament
4) Accessory ligaments
   a) Stylomandibular ligament
   b) Sphenomandibular ligament

1) fibrous capsule

Thick capsule covered by deep cervical facia

This ligament helps in the attachment

2) Articular disc

- when it articulates with ~~mesotympa~~ tympanic cavity ab to form mesotympanic.

∴ articulates below to form mesomandibular which articulates with mandibule.

- this disc helps in the articulation of upper and lower p

9) Tempuromandibular ligament

~~Sup~~: temporal fossa

~~Inf~~: mandibular

This ligament attaches the temporal and mandibule hence forms the tempuromandibular ligament.

4) Accessory ligament

a) Stylomandibular ligament

- attached to the styloid process
- ligament that connects styloid and mandibular

b) Sphenomandibular ligament

- attached to the sphenoid bone
- ligament that connects sphenoid bone to mandibular.

Relations

Superiorly: Temporalis.

Inferiorly: medial lateral pterygoid & mandibular nerve

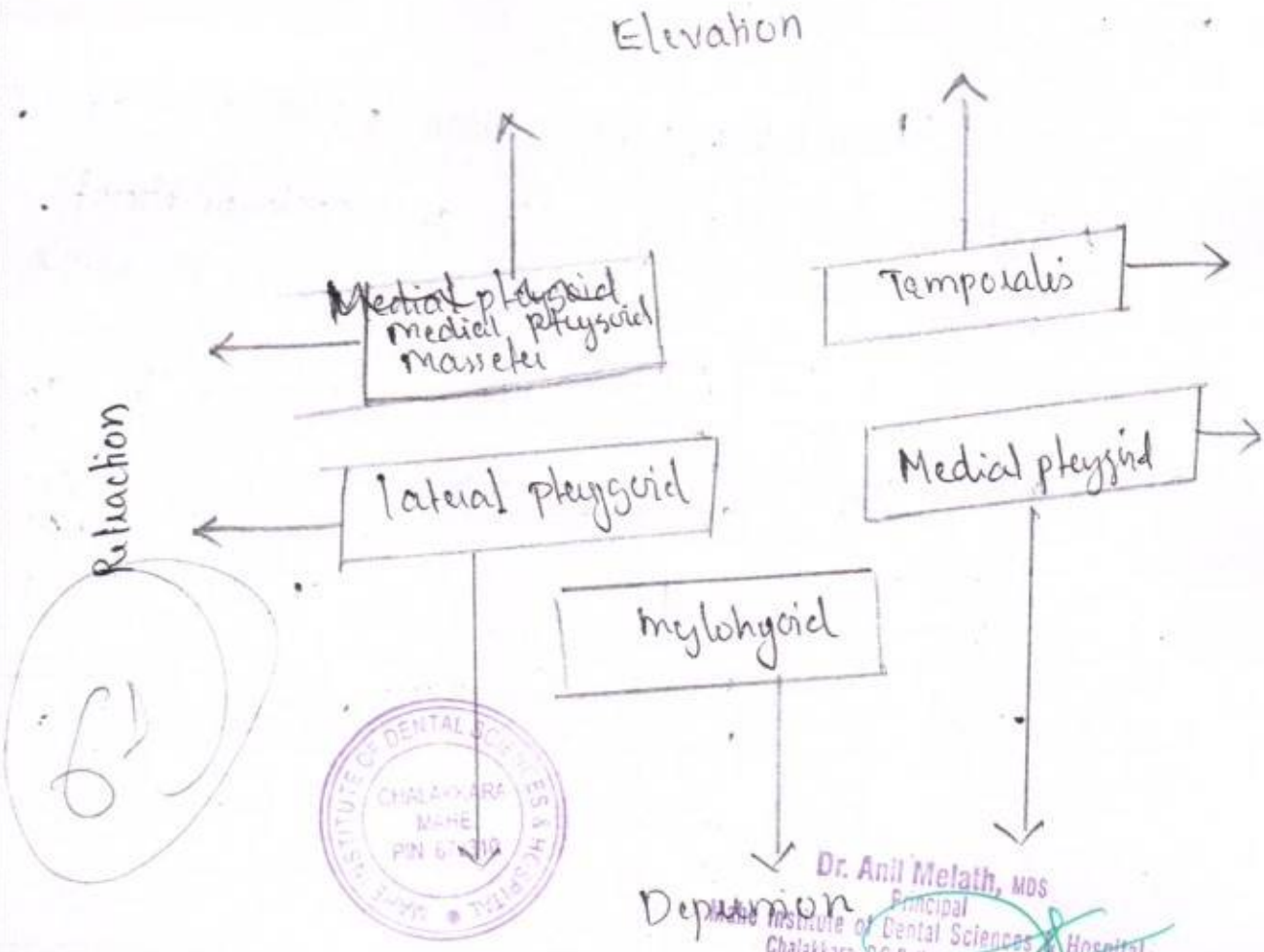
Nerve Supply: Mandibular nerve and pharyngeal plexus of pterygoid nerve

Movements of TMJ

Elevation, Protrusion, Retraction and depression and side to side movement as seen.

Movement	Muscles
Elevation	Masseter, medial Pterygoid and Temporalis
Depression	lateral pterygoid, medial Pterygoid
Protrusion	~~Temporalis~~. medial Pterygoid Suprahyoid
Retraction	Temporalis, infrahyoid. Lateral pterygoid.
Side to side movement	medial pterygoid and. lateral Pterygoid.

Movements	Muscles
Opening	medial pteygoid, lateral Pteysoi Temporalis
closing	Temporalis, maneter, medial pteys lateral pteygoid.
Side to side movmnt	medial pteygoid and lateral pteys



Applied aspect

* When the mouth is blown when open the movement of TMj is felt and it slightly changes.

* When the mouth is blown closed the movement of TMj is felt a felling of pain is felt at the TMj

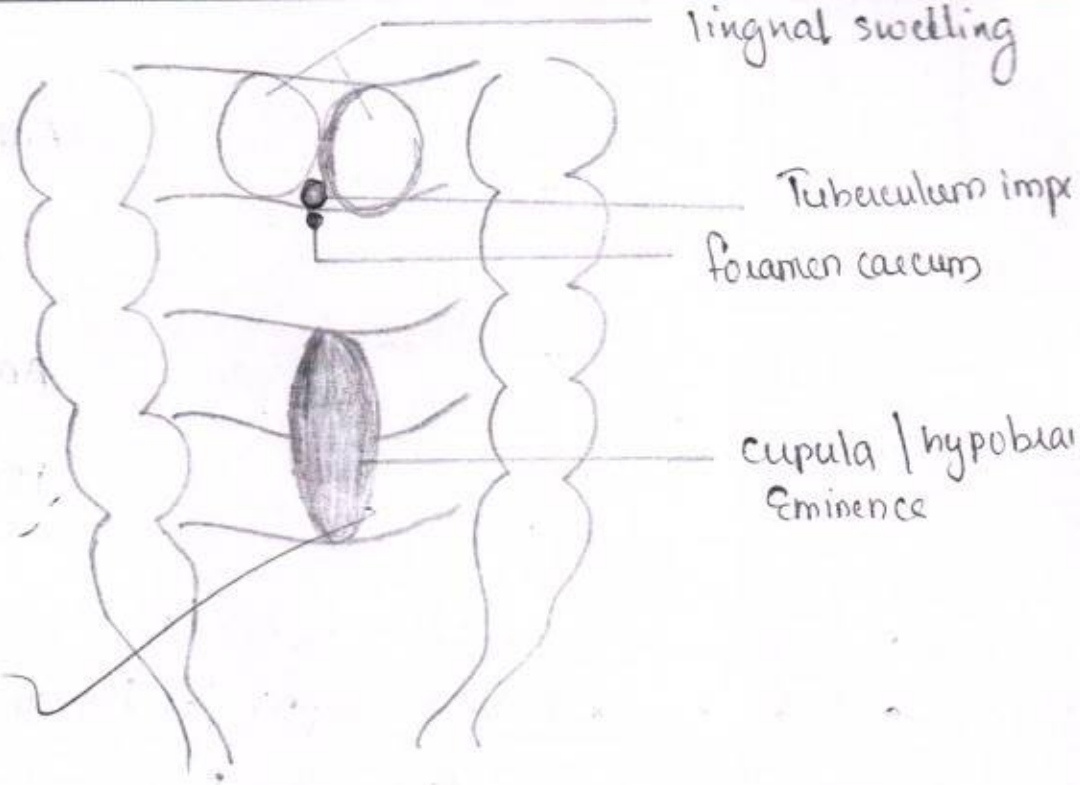
* The ligament of TMj is affected it leads to the paralysis / movement of TMj is affected.

* if the TMj is affected the patient will be unable to open and close the mouth.

3. Nerve supply of Tongue

Tongue is a muscular organ which consists of 3 part Anterior 2/3, posterior 1/3 and posterior most.

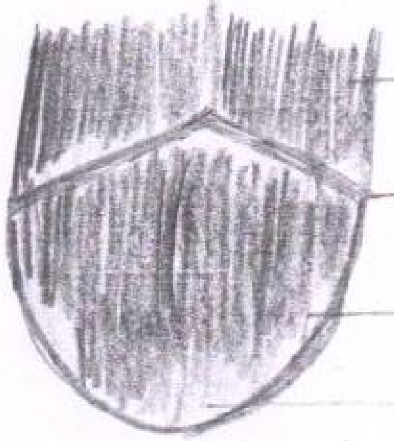
	Anterior 2/3	Posterior 1/3	Posterior most
Nerve supply	lingual nerve chorda tympani	glossopharyngeal	vagus
~~Pharyn~~geal arch	I st	III rd	IV th
Supplying	lingual swelling Tuberculum impar	cupula	cupula.



5

Phayngeal Arches

* Anterior 2/3rd part is supplied by the lingual nerve and th chorda tympani which is supplied by the lingual swelling and tuberculum impas in the Ist phayngeal arch
* posterior 1/3rd part is supplied by glossophayngeal nerv which is supplied by the cupula (which has upper head a lower head) present in the 2nd, 3rd and 4th phayngeal
* posterior most part is supplied by the vagus nerve. whi is present in the 4th phayngeal arch supplied by cupula.



* The Anterior 2/3rd is supplied by lingual nerve which is for general sensation and chorda tympani for taste sensation
* The posterior 1/3rd is supplied by Hypoglossal which acts as both general and taste sensation.
* The posterior most part is supplied by vagus which also acts as both general and taste sensation

All the muscles of tongue are supplied by Hypoglossal nerve except palatoglossal which is supplied by cervical root of accessory nerve which is supplied by pharyngeal plexus.

4. Microscopic structure of thyroid gland.

Thyroid gland is situated above the pharynx and below the trac it extends from the lower part of the C5 vertebra to T_4

it is about 25g weight.

Measurment

Height: 5cm

width : 3cm

Thickness: 2cm

Shape:

H shape or butterfly shaped.

The thyroid gland consists of lobules present named as Thyroid lobs These lobes joints to form capsule. The cavity of the capsule is filled with colloids. The thyroid gland Produce follicles which are situated at the basement membrane. Btw the follicle cells and colloid is the Presence of parafollicular cells. Produce hormones The function of parafollicular cells is entirely different from follicular cells.

They produce hormone calcitonin. which is an important hormone for growth.

The follicular cells helps in the rate of metabolism

When the parafollicular cells is in active state, it becomes columnar with the colloidal cells. The Parafollicular cells is inactive the colloid decrease and becomes flattened.

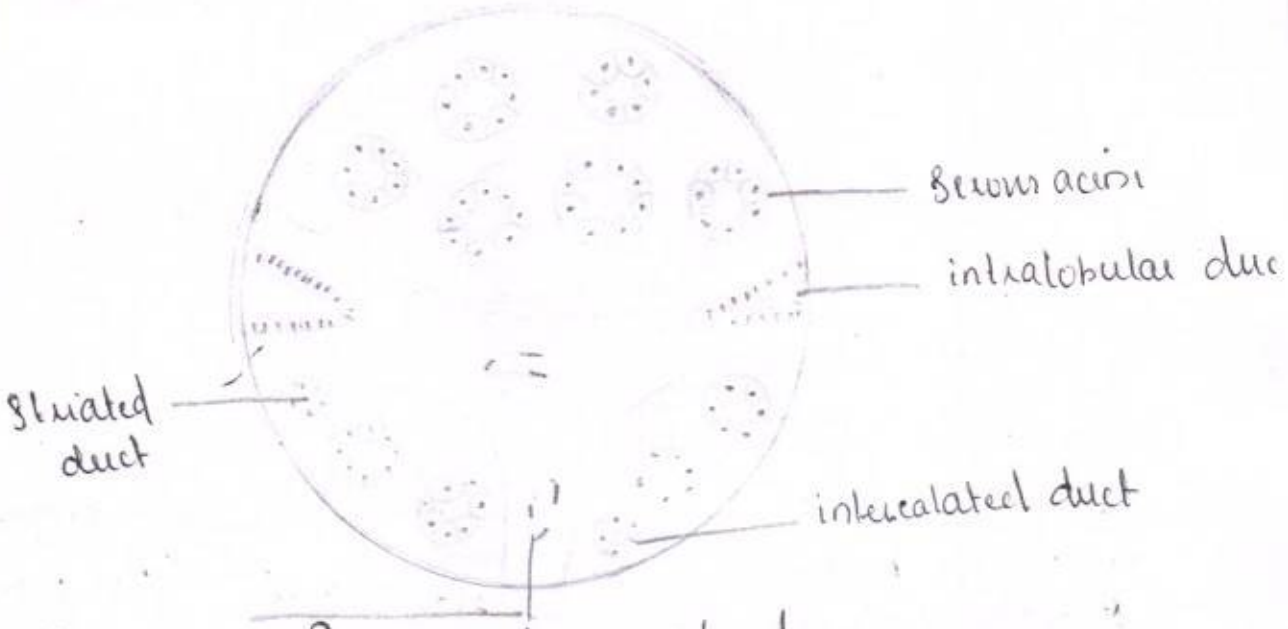
in normal state, the Parafollicular cells are cuboidal

7. Histology of serous salivary gland.

Serous Salivary gland.

The serous salivary gland are watery like secretions which are

- Seen in parotid, submandibular gland
- Mostly it is seen in parotid gland.
- The serous salivary glands are basophilic in the cytoplasm and acidophilic in the zymogen granules.
- presence of ducts.



Serous salivary gland.

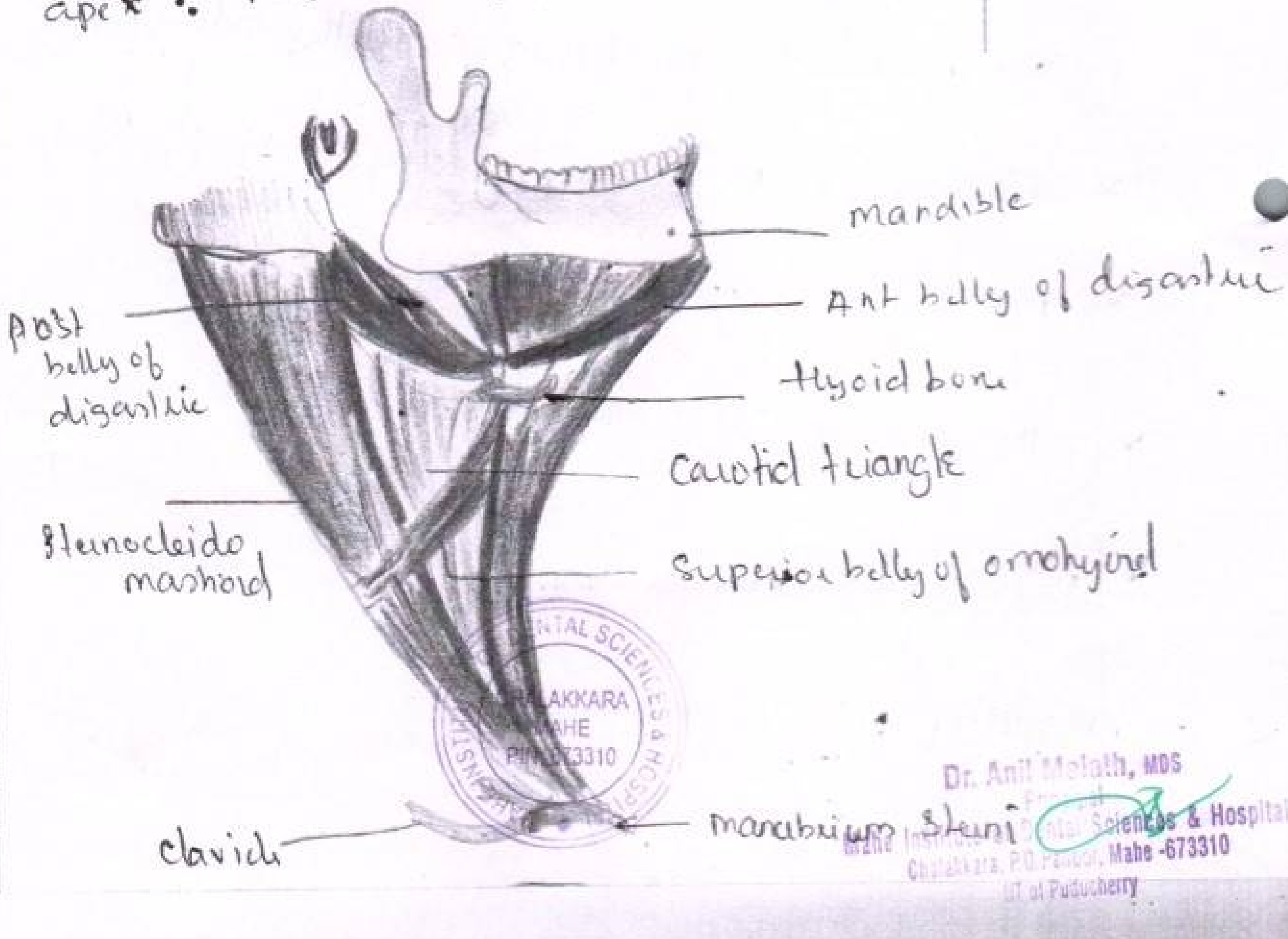
* Serous acini are darkly stained
* The nucleus is round and centrally placed
* Serous cells are round / pyramidal shaped
* Presence of intercalated and striated duct
* Presence of intralobular duct.
* Presence of serous acini
* Presence of connective tissue

8. carotid triangle.

Boundaries of Carotid triangle

Superiorly
Posteriorly Anterior
~~Anteriorly~~: ~~Posterior~~ border of Sternocleidomastoid
~~Posteriorly~~: Superior belly of omohyoid
inferiorly: Ant belly of digastric
apex: manubrium sterni

Ant: ant belly of digastric
Posteriorly: post be[illegible] of digastric



The carotid triangle is ~~divided~~ into contains

Common carotid artery which is divided into :-
internal carotid artery and external carotid artery

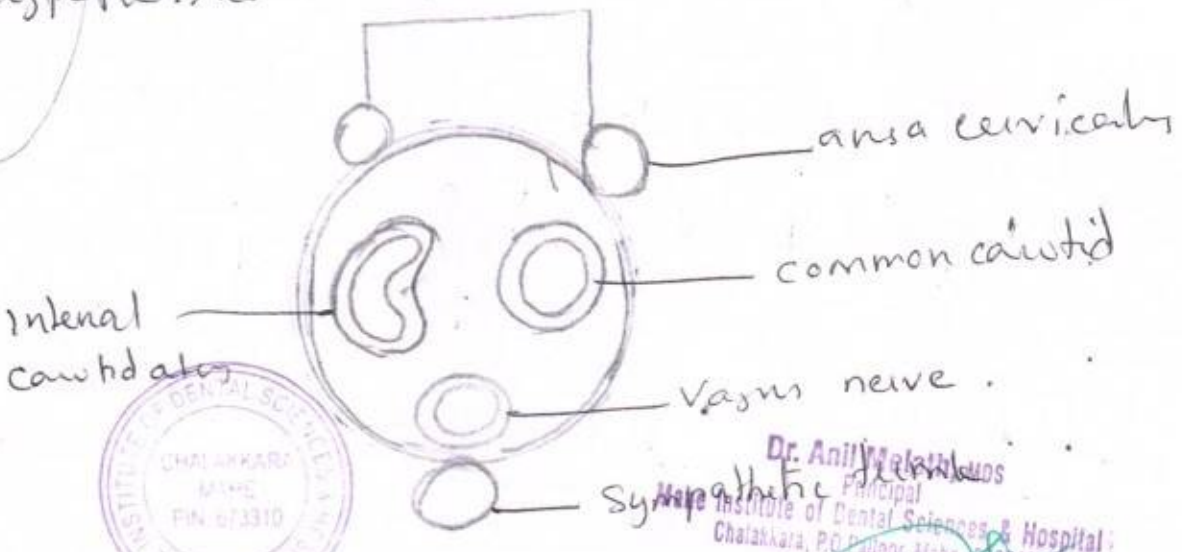
The terminal branches of external carotid artery are
Maxillary artery and superficial artery.

- occipital artery
- posterior auricular artery
- Vagus nerve
- Hypoglossal nerve.

The carotid sinus acts as baroreceptor

The carotid body acts as chemoreceptor.

The carotid sheath is enclosed the vagus nerve a
hypoglossal nerve.



1. Laynx

Laynx is situated below the trachea and above the Phaynx.

The sound is produced in the vocal cord by narrowing of the Rima Glottidis.

The Epiglottis the leaf like structure is the inlet of the l[illegible]

The laynx is divided into three paired and three unpaired Cartilages.

Three paired cartilages are:-

1) Thyroid cartilage
2) Cicoid cartilage
3) Epiglottis

1) Thyroid cartilage: is the layest cartilage
- Presence of laryngeal Eminence.
- Adams apple is seen
- presence of laryngeal notch.

2) Cricoid cartilage.

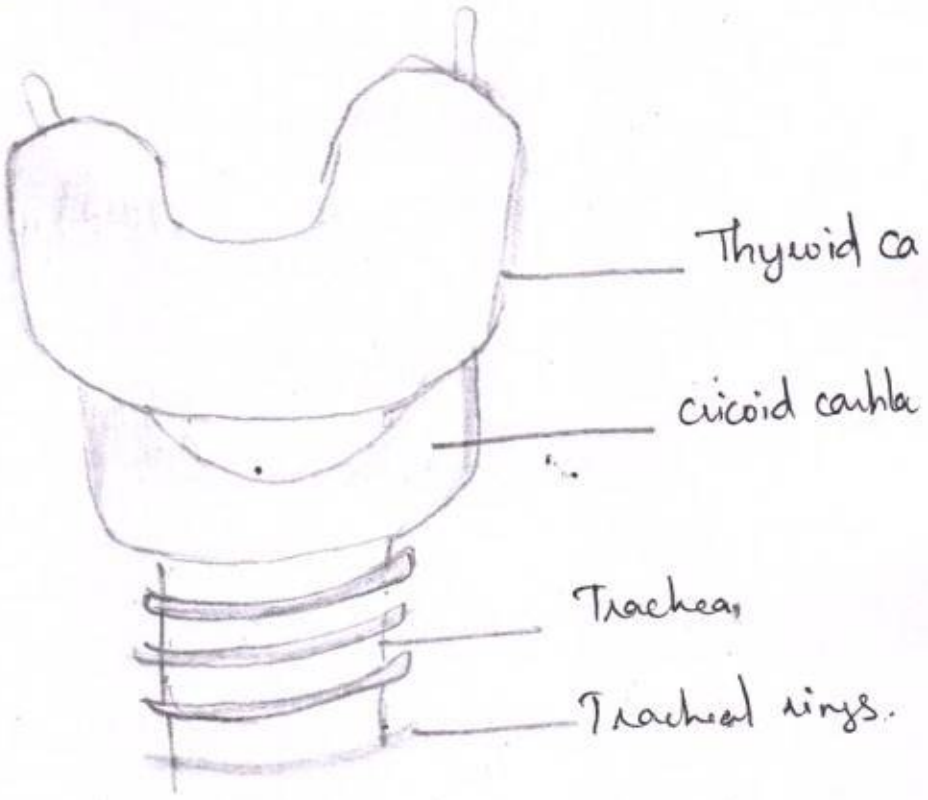
The vibration is produced in this cartilage.

~~The cricothyroid is the vocal and Tenses.~~

This is related next to the thyroid cartilage.

3) Epiglottis

leaflike structure present below the cricoid cartilage. which is the inlet of larynx.



Three unpaired cartilages are :-

1) Cricothyroid Cartilage
2) Cricoarytenoid Cartilage
3) arytenoid Cartilage

Cricothyroid Cartilage :

- which is situated at the Anterior Neck
- The Tensor of Vocal cord

Cricoarytenoid cartilage

- which is situated below the cricothyroid
- Abductor of Vocal cord.

arytenoid cartilage.

situated below the cricoarytenoid cartilage.

Applied aspect

The larynx is also known as Vocal cord.

- Any disturbances in the larynx will leads to the impairment Producing sound.

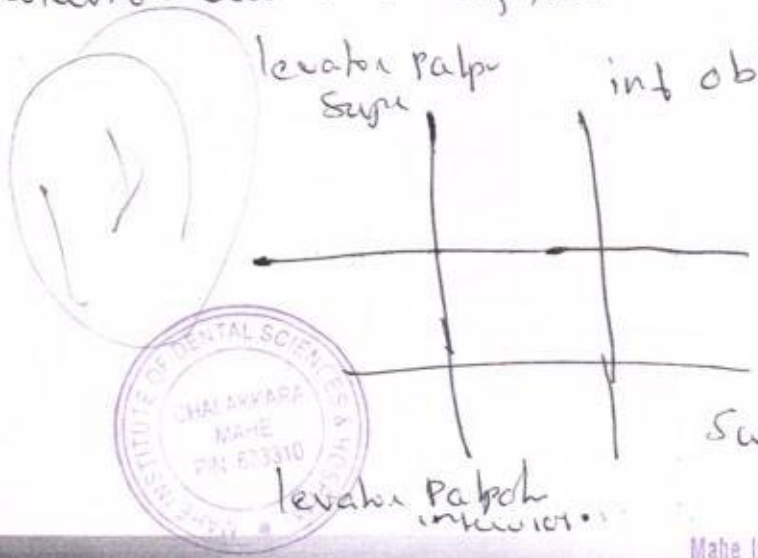
- in some cases, when the larynx is removed, the person is unable to speak or produce sound.
- any injury to Rima glottidis will also leads to voice impairment.

6. Extraocular muscle.

- it is the muscle supplying to the eye.

Several muscles are present in this levator palpebrae superioris, levator palpebrae inferioris superior oblique muscle, inferior oblique muscle.

Extraocular muscle helps in the movment of eyeball Certain movements like abduction, Retraction, protusion and done by this muscle.



Mid- Course improvement Hsidhya Ramesh 42

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH,OCTOBER-2021

Duration:30 Min. **Date:18.10.2021**

(Tick the correct answer with Pen)**SECTION :C (MCQ)**(1 x 25= 25)

22

(*SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)*

1. **Inferior Petrosal sinus passes through**
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. **Circle of willis is formed by**
   a) Anterior cerebral artery C) middle cerebral
   b) Anterior communicating d) all of above.
3. **In an adult spinal cord ends at level of**
   a) Lower border of L1 c) Lower border of L3
   b) Lower border of L2 d) Lower border of S2
4. **The skull at birth is devoid of .**
   a) Metopic suture
   b) Mastoid process
   c) Glabella
   d) All of above.
5. **Joint between tooth and it's socket is**
   a) Primary cartilaginous joint c) Pivot joint
   b) Gomphosis d) Ellipsoid joint
6. **Spinal accessory nerve supplies**
   a) Orbicularis oris c)Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. **Vertebral artery does not passes through the foramen transversarium of**
   a) C7
   b) C6
   c) C2
   d) C1
8. **Organ of corti is located within**
   a) Cochlear c)Semicircular duct
   b) Utricle d) saccule
9. **Crows feet is caused by the contraction of .**
   a) Orbicularis occuli c) orbicularis oris
   b) Frontalis d)procerus
10. **Artery Of suboccipital triangle is**
    a) External carotid c) vertebral
    b) Posterior auricular d) Maxillary
11. **Internal Acoustic meatus transmits**
    a) 7^{th} & 8^{th} c) 6^{th} & 7^{th}
    b) 8^{th} & 9^{th} d) 9^{th} & 10^{th}

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL CHALAKKARA MAHE PIN 673310

Dr. Anil Meloth MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara P.O. Mahe -673310
UT of Puducherry

12. Subaceous glands belongs to
   a) Apicrine   c) Apocrine
   b) Holocrine   d)Merocrine

13. A injury to middle meningeal artery leads to
   a) Extradural hemorrhage
   b) Subdural hemorrhage
   c) Subarachnoid hemorrhage
   d) All of above

14. The Nerve related to Pyriform fossa
   a) External laryngeal .   c) internal laryngeal
   b) Recurrent laryngeal nerve   d)vagus nerve.

15. Fascia forming the floor of Posterior triangle is
   a) Investing layer   c) Buccopharyngeal fascia
   b) Pretracheal   d) prevertebral .

16. Tensor of vocal cord is.
   a) Vocalis   c) posterior cricoarytnoid
   b) Cricothyroid   d) Thyroarytenoids

17. All the following nuclei are present in cerebellum except.
   c) Dentate   c) fastigeous
   d) Emboliformis   d) tractus solitarius

18. Lower lip develops from
   a) Maxillary process   c) mandibular process
   b) Frontonasal process   d) palatal process

19. Only cranial nerve seen in diagastric triangle is
   a) Hypoglossal   c) accessory
   b) Glossopharyngeal   d) vagus.

20. Soft palate veins drains into plexus
   a) Carotid   c) tonsillar
   b) Periapical   d) pharyngeal

21. Myoepithelial cell shape is
   a) Cuboidal   c) stellate
   b) Columnar   d)Pear

22. Stapedius is supplied by nerve
   a) 5th   c) 8th
   b) 7th   d) 9th

23. Masseter is crossed by vein
   a) Maxillary   c)transverse fascial
   b) Lingual   d)external jugular

24. Anterior ligament of malleus is developed from -
   a) 1st arch
   b) 2nd arch
   c) 3rd arch
   d) 4th arch

25. Promontry in the medial wall of Middle ear is produced by
   a) 1stturn of cochlea
   b) Vestibule
   c) Semicircular canal
   d) None

Mid-course improvment 2020-21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
U. T. of PUDUCHERRY - PIN 673 310

INTERNAL ASSESSMENT BOOK
SUBJECT : ANATOMY.

Tick Questions Attempted:

Q_1 ☑ Q_2 ☑ Q_3 ☑ Q_4 ☑ Q_5 ☑ Q_6 ☑ Q_7 ☑ Q_8 ☐

Q_1	8	10	Q_5	4½	5
Q_2	7	10	Q_6	3½	5
Q_3	4½	5	Q_7	2½	5
Q_4	½	5	Q_8	NA	5

No. of Additional sheets used.

TOTAL 30½ 45

Total in Words

Evaluated by:

Name of the candidate : NIMA NIHALA P.K.

Reg. No : 63.

Signature

Date: 18/10/21.

Dr. J. Vishnu Sai 18/10/21
Signature of Invigilator

Dr. Anil Malath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, Mahe-673310
UT of Puducherry

① (a) Laeynx.

1) Inlet of laeynx, 2) interior of laeynx, 3) muscles and membrane, 4) Applied An

Laeynx.

Introduction:-

Laeynx is an organ which produces the sound.

It's situated in the anterior midline of the neck.

It's extend from the root of the tongue to the trachea.

Size:-

Male: 44mm length.

Female: 36mm length.

Width: 8mm ↓

12mm in adult.

CARTILAGES of laeynx.

9 cartilages are there for the laeynx.

8 paired

Arytenoid cartilage.
cuniform cartilage.
corniculate cartilage.

3 unpaired.

Epiglottis
thyroid cartilage.
Cricoid cartilage.

Inlet of larynx.

Extend from: inlet of the larynx to the cricoid cartilage.

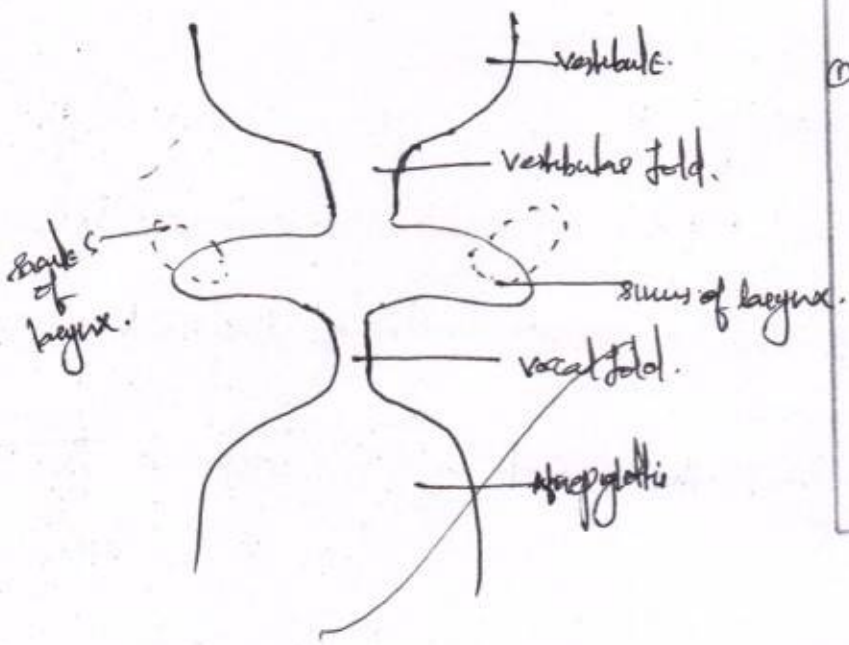
Inlet of larynx is obliquely arranged.

Boundaries

① Anteriorly: epiglottis

Posteriorly: mucous membrane of aryepiglottic fold

on each side: aryepiglottic fold

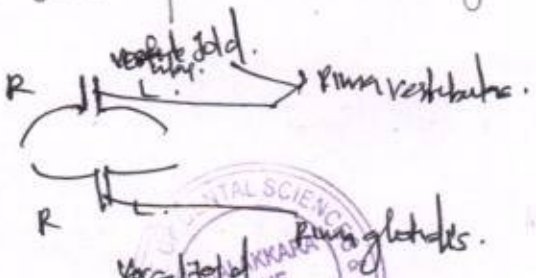


The cavity of the larynx is having two membranous fold.

① Vocal fold. VESTIBULAR FOLD.

Vestibular fold is space → RIMA vestibulae.

Vocal. vestibular fold is space → RIMA glottidis



These folding divides the cavity of the larynx in 3 parts

① Vestibule

② sinus of larynx.

③ epiglotis

Note

Sinus of morgagni - it's the narrow cleft which is present in the larynx.
Saccules of the larynx are also called as the oil cans of the larynx
Its helps in the lubrication of the vocal folds.

Muscles of larynx.

muscles controlling the inlet of LARYNX.	OBLIQUE ARETENOID. THYRO EPIGILOTIC.
Musches controlling the MOVEMENT OF THE VOCAL CORD.	CRICO THYROID. THYROARETENOID.

CRICO ARETENOID.

- LATERAL.
- POSTERIOR.

TRANSVERSE.

ARTENOID.

oblique Artenoid muscle: → it controls the inlet of larynx.

Thyro epiglottica muscle: → it controls the inlet of larynx.

Crico thyroid muscle.

Thyro Artenoid muscle

Crico Artenoid muscle.

lateral crico Artenoid muscle.

posterior crico Artenoid muscle.

Transverse Artenoid muscle.

} controlls the Movement of the VOCAL CORD.

Abduction

All intrinsic and extrinsic muscle of the larynx are supp by the recurrent laryngeal nerve except for the Cricoid muscle it's supplied by the external laryngeal nerve.

Arterial Supply.	Venous supply.	lymphatic drainage.
* Superior laryngeal Artery.	Superior laryngeal Vein	* upper deep cervical lymph node.
* Inferior laryngeal Artery.	Inferior laryngeal Vein.	* lower deep cervical lymph

Applied Anatomy of larynx.

clinical:

laryngitis → Infection of the larynx.

Smuggler's fossa: Smuggler's fossa or the pyriform fossa is used to smuggle out the precious stones.

Singer's nodules: Misuse of the vocal cords creates nodules in the vocal fold.

2. Tempro mandibular joint

Introduction:

Tempro mandibular joint is the joint found between the Temporal bone and mandibular bone.

Type: It's a synovial joint of condylar variety.

TMJ is an eg: for the joint which comes under category of Articulating ~~joint~~.

It's a complex articulating ~~joint~~.

complex Articulating joint: The joint cavity divides by a. Intra articular cavity or a meniscus.

eg: TMJ, knee joint.

Articulating surfaces.

TMJ is having ① upper articulating surface.

② lower Articulating surface.

upper Articulating surface consist of

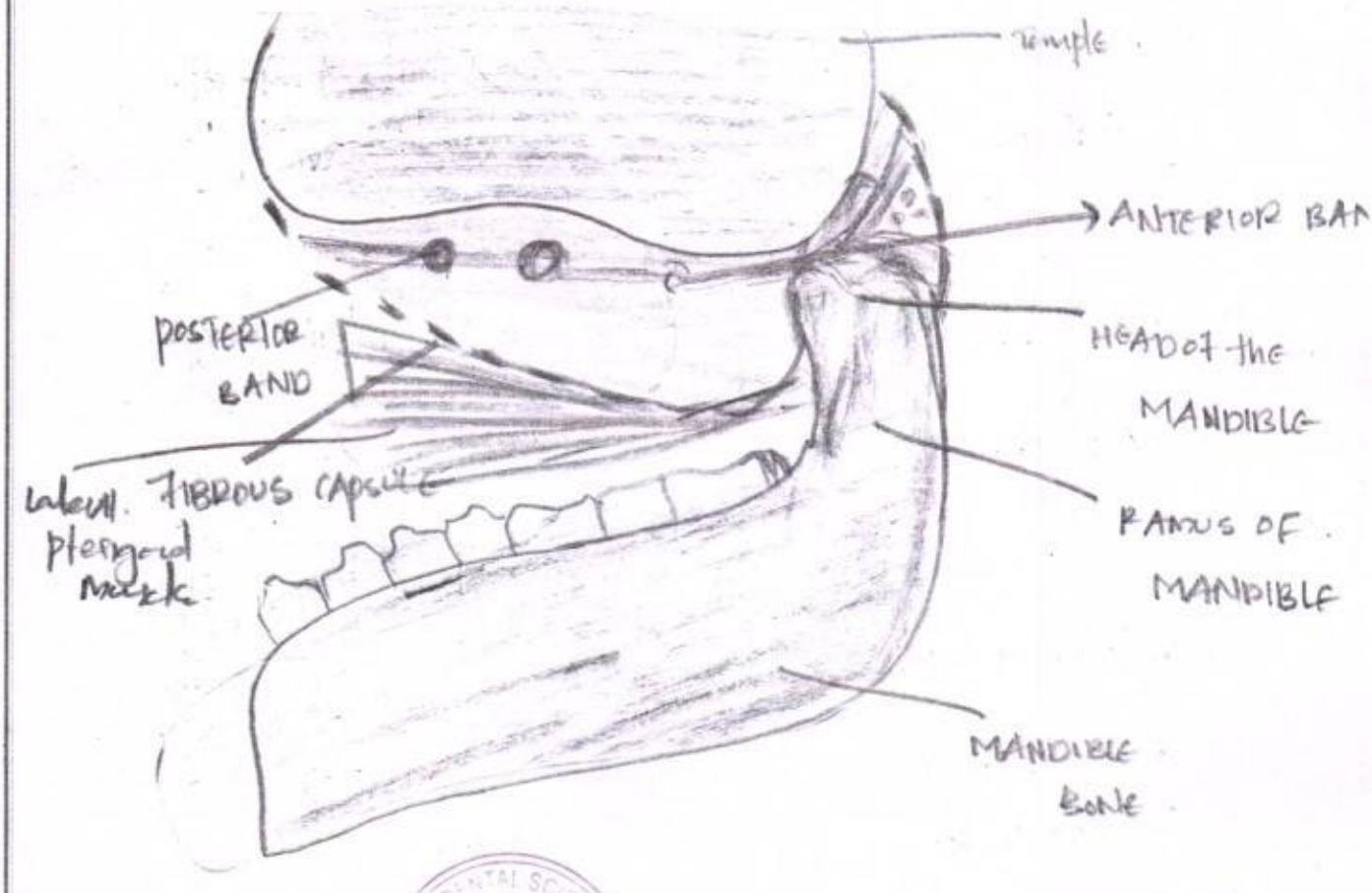
① Mandibular fossa.

② Articular eminence.

③ Tympanic plate.

lower Articulating surface consit of.

Head of Mandible.



ligaments of TMJ.

① Fibrous capsule.

② Lateral Ligament of TMJ.

③ Sphenomandibular Ligament.

④ Stylo mandibular Ligament.

⑤ Pterygo mandibular Ligament.

Arterial supply.	Nerve supply.
① Maxillary Artery.	① Auriculo temporal nerve.
② superficial temporal Artery.	② Masseteric nerve.
→ followed by. Venous supply.	

Movements and Muscles Acting on the TMJ.

Muscles of mastication:

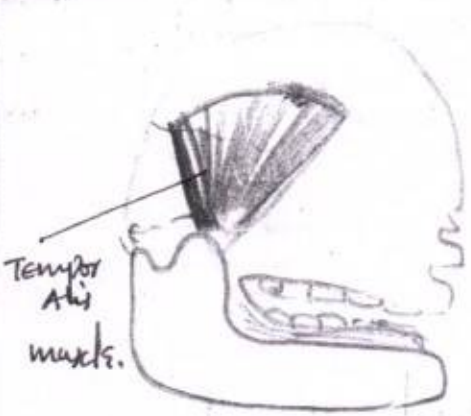
muscles of mastiction helps to move the mandible during the mastication and speech.

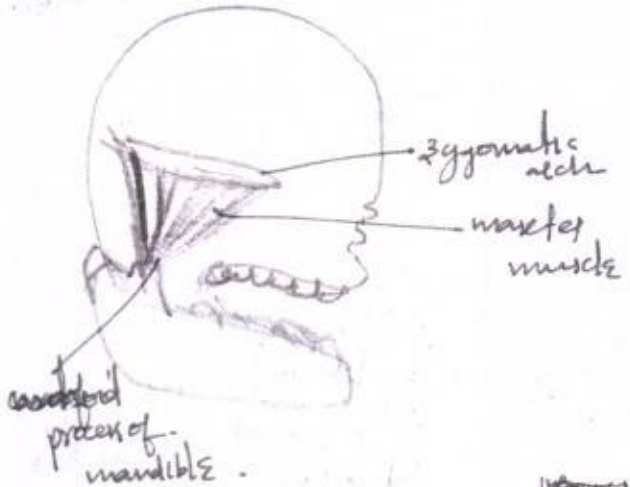
① Temporalis muscle.

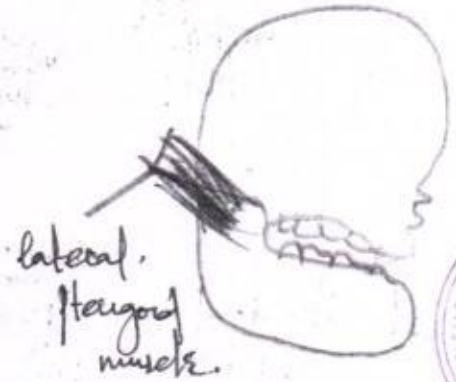
② Masteter muscle.

③ Medial pterygoid

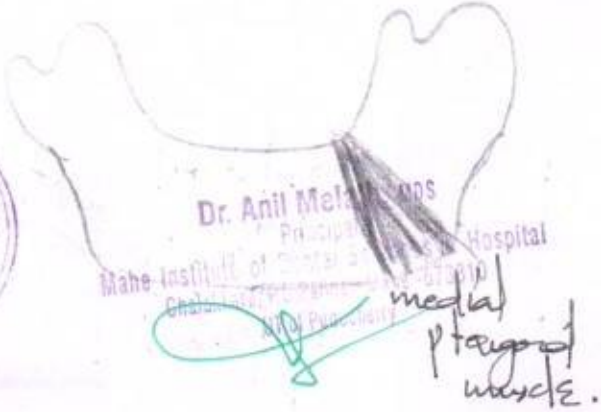
④ lateral pterygoid







Inner view.



	Muscles.	Origin	Insertion.	Nerve supply	Blood supply..	Action
①	① Temporalis Muscles.	Skull of the temporal fossa.	Ramus and coronoid process of mandible	Trigeminal nerve.	~~deep temporal~~ ~~artery~~.	elevates close ma[illegible]
②	Masseteric muscle.	Zygomatic arch.	Ramus of mandible	Trigeminal nerve.	masseteric artery.	elevate do m[illegible]
③	medial pterygoid	Palatine bone lateral pterygoid plate, maxillary tuberosity	Ramus of mandible	Trigeminal nerve.	pterygoid branch of maxillary artery.	[illegible]
④	lateral pterygoid	~~lateral pterygoid plate~~ ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ of sphenoid bone lateral pterygoid plate	neck of condyle	Trigeminal nerve.	Pterygoid branch of maxillary artery.	side t[illegible] Depre protr of the ma[illegible]

lateral pterygoid

It's the key muscle of the muscles of mastication.

Relations.

superficial relation:	deep relation.
Masseteric nerve.	~~Tendons of temporalis~~
maxillary artery.	sphenomandibular ligament.
Ramus of mandible.	medial pterygoid plate.
Tendons of temporalis	pterygo mandibular raphae.
	deep to medial pterygoid

structures emerging at upper surface.	structures emerging at lower surface.
① mandibular nerve.	① inferior Alveolar nerve.
~~②~~	② lingual nerve.
	③ middle meningeal artery.

clinical.

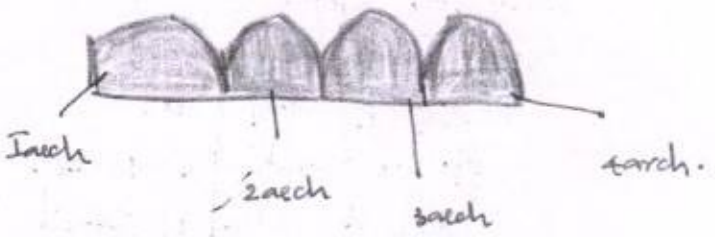
① dislocation of the mandible bone.

② failure of side to side movement of the mandible.

③ myofacial pain

(3) nerve supply of tongue.

Development of the tongue.



Introduction:

Tongue is a muscular organ which is made up of skeletal muscle.

Tongue is having Anterior 2/3rd and posterior 1/3rd. each half tongue is divided by a median fibrous septum

development:

Epithelium

① Anterior 2/3rd → Anterior 2/3rd is developed from the a lingual swelling of 1 arch which is supplied by the lingual nerve and chorda tympani nerve.

② posterior 1/3rd developed from the ventral part of the 3rd arch. which is supplied by glossopharyngeal nerve

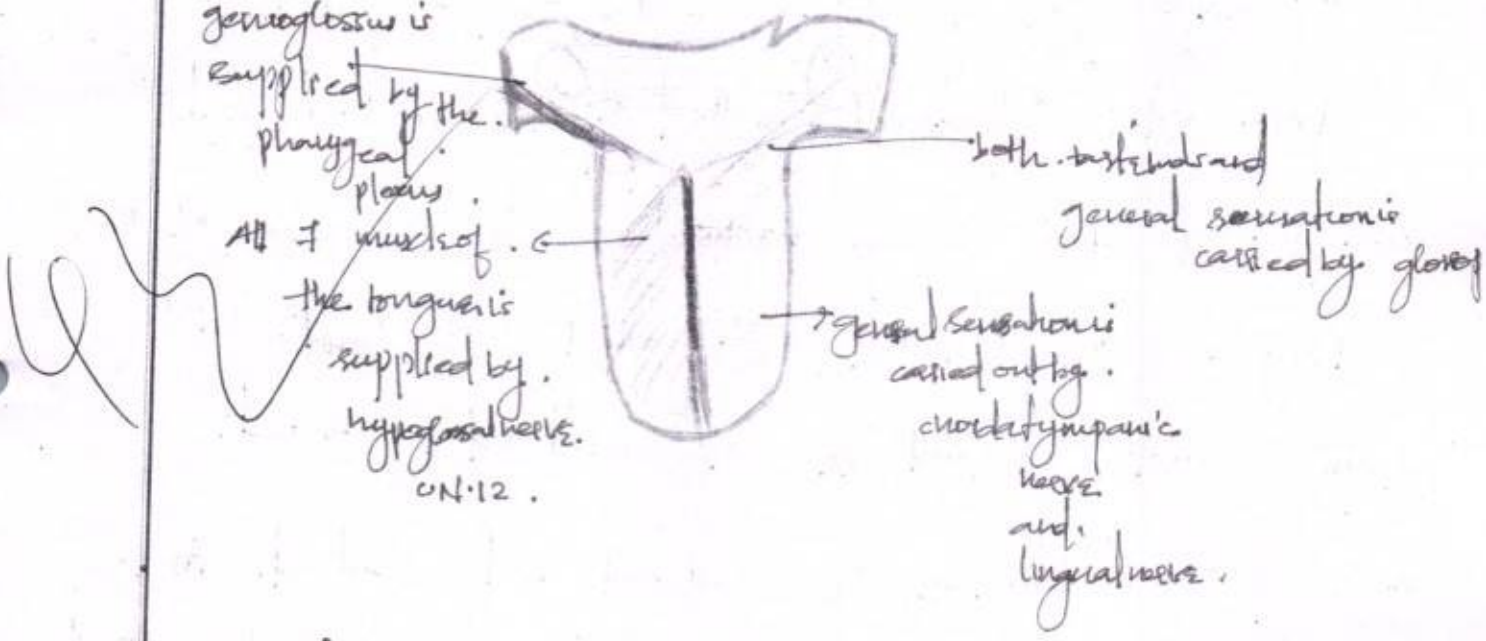
posterior most part: 4th dev (epiglottis) → developed from 4th arch which is supplied by the vagus nerve.

muscles:

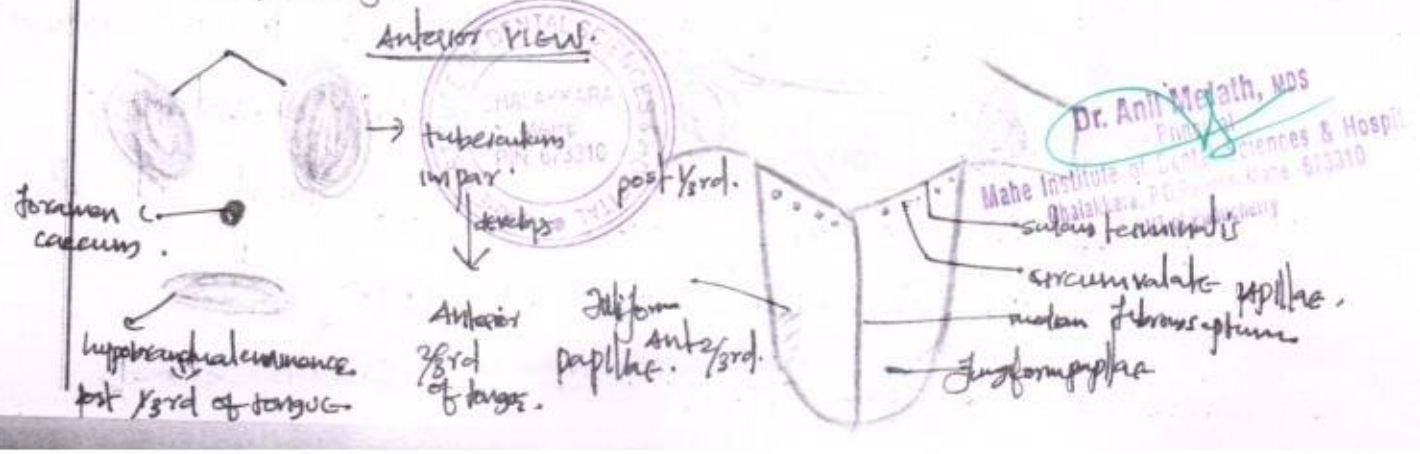
muscles of the tongue is developed from the occipital myotome

Nerve supply of tongue.

All intrinsic and extrinsic muscle of the tongue is supplied by hypoglossal nerve CN·12 except palatoglossus palatoglossus is sup by pharyngeal plexus.

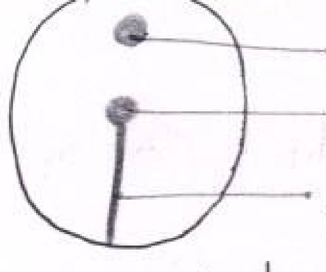


developed tongue.



(5) primitive streak.

Fig: embryonic disc.



→ There is an enlargement of ectodermal cells and endodermal cells in the circular disc of an embryo. this enlargment is called as the prochodal plate. With the formation of the prochordal plate the axis of embryo is get divided in to right half and left half and A tail end and head end is formed. With the formation of the tail end and head end. the of the ectodermal cells teach the tail end along the the axis and proliferates. leaving back an elevation and bulges into the Amnioni cavity. this elivation is called as the primitive streak. primitive streak ends in depression which is called as the primitive node. primitive node is the end part of the primitive streak.

(6). extra ocular muscles.

extra ocular muscles are the eyemuscles.

There are two types of extra ocular muscles are there.

(1) voluntary muscles.

(2) involuntary muscle.

voluntary muscles.

consist of :

- 4 recti muscles → superior recti, inferior recti, medial recti, lateral recti
- 2 oblique muscles.
- Levator palpebrae superioris

oblique muscles → superior oblique muscle. → inferior oblique muscle.

Levator palpebrae superioris → it elevates the upper eyelid

involuntary muscles.

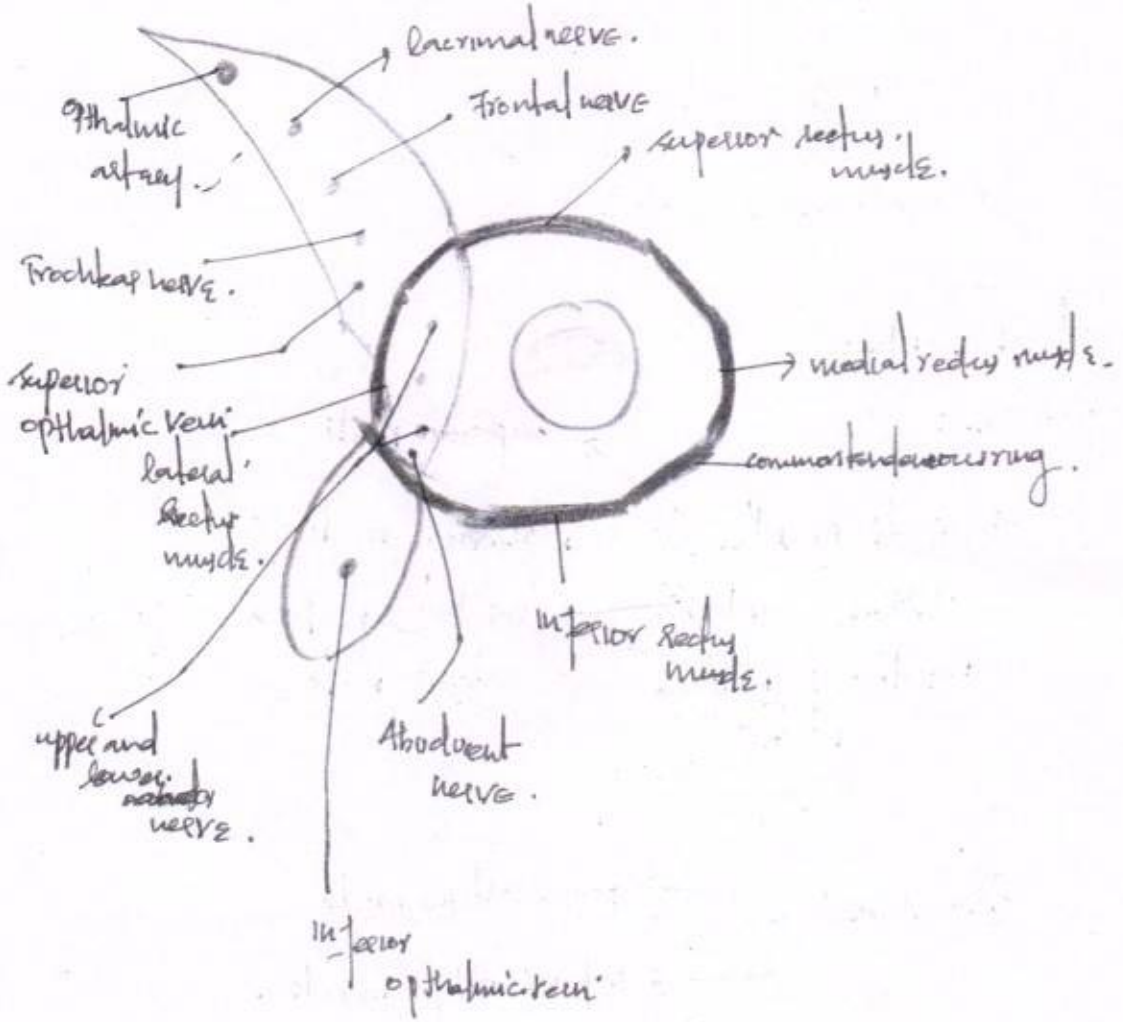
superior tarsal muscle → deep to the lips. Action: elevates the uppereyelid

inferior tarsal muscle → Action: It depresses the lower eyelid

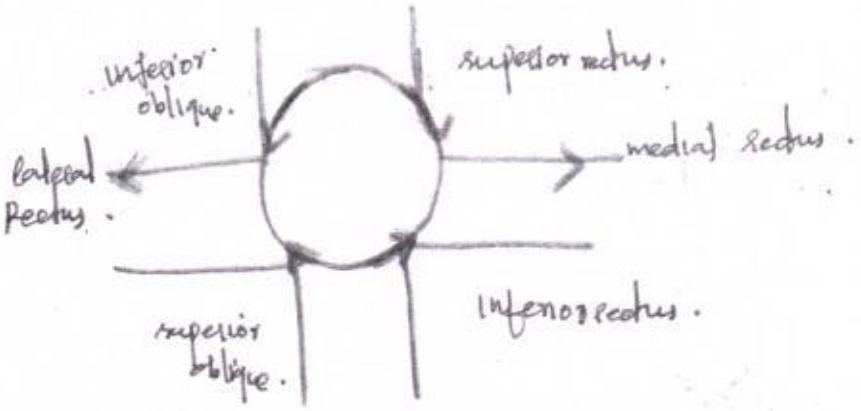
orbitalis muscle → in the inferior orbital fissure. Action is uncertain

Figure:-

Muscles:-



Arterial supply	nerve supply.	Veins
ophthalmic artery.	Trochlear nerve. lacrimal nerve. frontal nerve. upper and lower division nerve. Abducent nerve.	Superior ophthalmic vein Inferior ophthalmic vein



↑ elivation. → medial

↓ depression ← lateral.

↘ → intorsion.

↑ → extorsion

31

clinical:-

diplopia → double vision

strabismus → blinking of the eyes.

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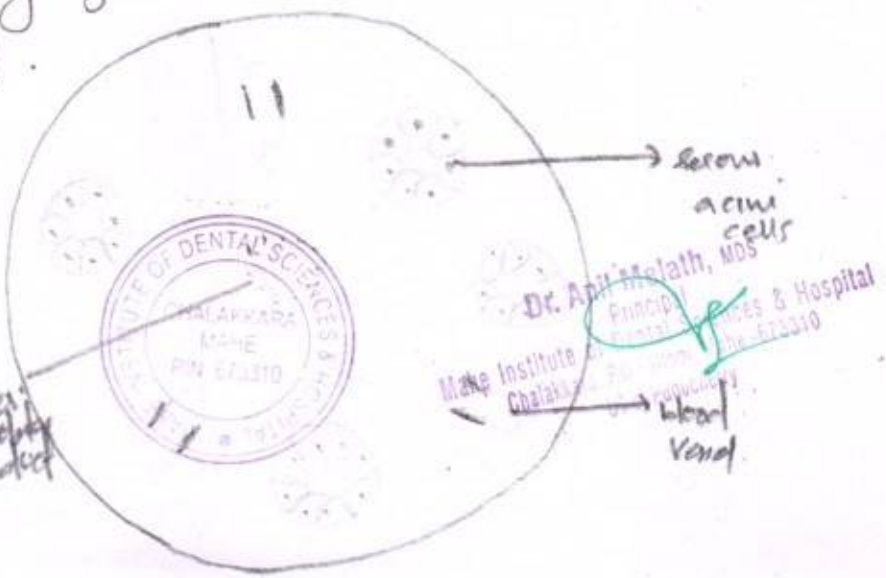
(5) Serous salivary gland.

(parotid gland).



→① Serous salivary is the parotid gland (major salivary gland).

→② Dadly stained serous acini cells are present in the serous salivary gland.

→③ Serous acini cells are with narrow lumen.

→④. nucleous are Rounded.

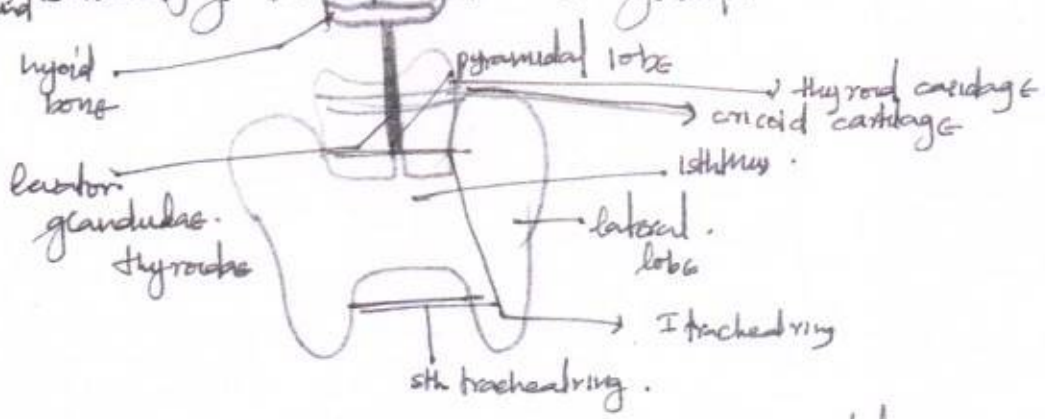
→⑤ nucleous are rounded and placed at the centers of cell.

→⑥ Well developed ductal systems.

→⑦. only the presence of serous acini cells. absence of mucous acini cells.

④ Thyroid gland.

Thyroid gland is a butterfly shaped endocrine gland.



which is having 2 lateral lobes and one pyramidal lobes and an isthmus.

1/2

Mid-course improvement NIMA NIHALA PK
Roll no: 63.

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH,OCTOBER-2021

Duration:30 Min. **Date:18.10.2021**

12

(Tick the correct answer with Pen)**SECTION :C (MCQ)(1 x 25= 25)**

(SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)

1. Inferior Petrosal sinus passes through
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. Circle of willis is formed by
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3. In an adult spinal cord ends at level of
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   b) Lower border of L2 d) Lower border of S2
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   b) Mastoid process
   c) Glabella
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6. Spinal accessory nerve supplies
   a) Orbicularis oris c)Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. Vertebral artery does not passes through the foramen transversarium of
   a) C7
   b) C6
   c) C2
   d) C1
8. Organ of corti is located within
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   b) Utricle d) saccule
9. Crows feet is caused by the contraction of .
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11. Internal Acoustic meatus transmits
    a) 7^{th} & 8^{th} c) 6^{th} & 7^{th}
    b) 8^{th} & 9^{th} d) 9^{th} & 10^{th}

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O., Mahe-673310

12. Subaceous glands belongs to
   a) Apicrine c) Apocrine
   b) Holocrine d)Merocrine
13. A injury to middle meningeal artery leads to
   a) Extradural hemorrhage
   b) Subdural hemorrhage
   c) Subarachnoid hemorrhage
   d) All of above

14. The Nerve related to Pyriform fossa
   a) External laryngeal . c) internal laryngeal
   b) Recurrent laryngeal nerve d)vagus nerve.
15. Fascia forming the floor of Posterior triangle is
   a) Investing layer c) Buccopharyngeal fascia
   b) Pretracheal d) prevertebral .
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17. All the following nuclei are present in cerebellum except.
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18. Lower lip develops from
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20. Soft palate veins drains into plexus
   a) Carotid c) tonsillar
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21. Myoepithelial cell shape is
   a) Cuboidal c) stellate
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22. Stapedius is supplied by nerve
   a) 5^{th} c) 8^{th}
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23. Masseter is crossed by vein
   a) Maxillary c)transverse fascial
   b) Lingual d)external jugular
24. Anterior ligament of malleus is developed from -
   a) 1^{st} arch
   b) 2^{nd} arch
   c) 3^{rd} arch
   d) 4^{th} arch
25. Promontry in the medial wall of Middle ear is produced by
   a) 1^{st}turn of cochlea
   b) Vestibule
   c) Semicircular canal
   d) None

Mid-course improvment 2020-2

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
U. T. of PUDUCHERRY - PIN 673 310

INTERNAL ASSESSMENT BOOK
SUBJECT : ANATOMY

Tick Questions Attempted:

Q_1 ☐ Q_2 ☐ Q_3 ☐ Q_4 ☐ Q_5 ☐ Q_6 ☐ Q_7 ☐ Q_8 ☐

Q_1	NA	10	Q_5	NA	5
Q_2	3	10	Q_6	2½	5
Q_3	3	5	Q_7	2	5
Q_4	3½	5	Q_8	1½	5

No. of Additional sheets used. ☐

TOTAL 13½ 45

Total in Words

Evaluated by:

Name of the candidate : Dhanalakshmi K V

Reg. No : 29

Signature

Date: 18-10-2021

Dr. J. Vishnu Jaitapure 18/10/21
Signature of Invigilator

3) tounge is a muscular organ which helps in speech, mastic etc. it consis of taste buds which helps for taste sensat tounge has mainly 3 parts anterior 2/3rd, posterior 1/3rd Posterior most part.

the anterior 2/3rd of tongue is developed from the 2 lingu swellings and genital tubercle.

The posterior 1/3rd is developed from the third pharyngea arch and the posterior most part from the 4th pharyn arch.

the tongue ~~go~~ consist of 2 type of muscles :-

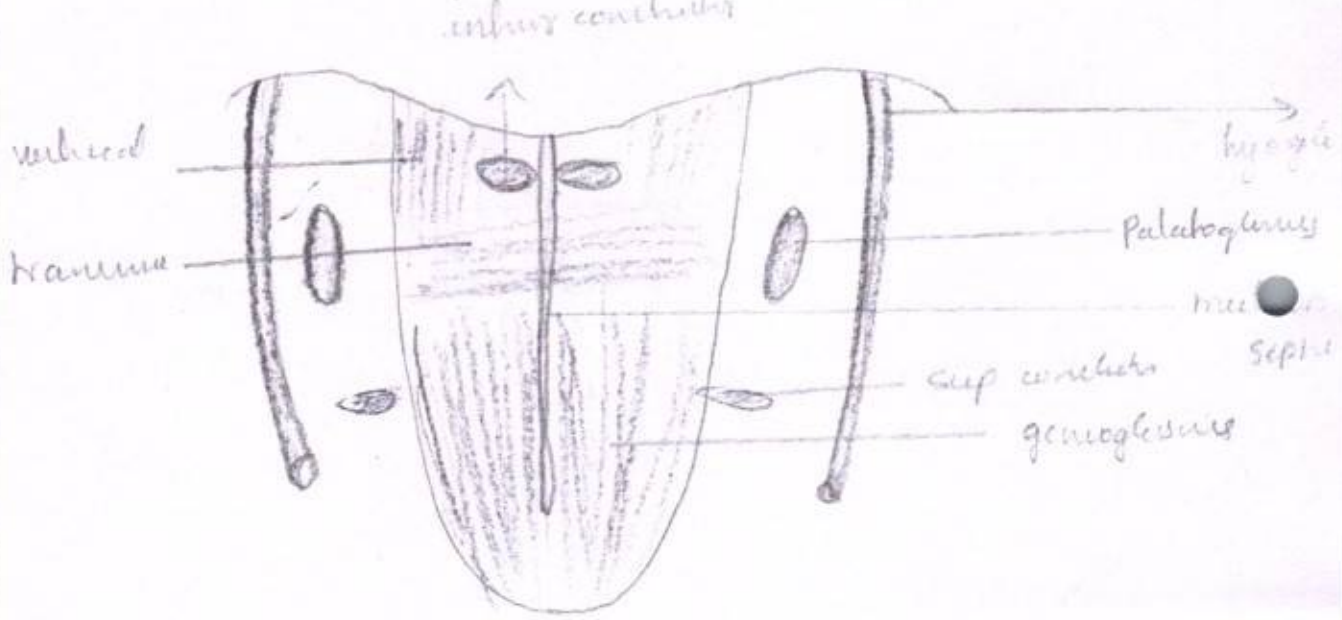
→ intrinsic muscles

→ extrinsic muscles

intrinsic muscles :- superior constrictor
inferior constrictor
transverse
vertical

extrinsic muscles :- palatoglossus
hyoglossus
styloglossus
genioglossus

The anterior $2/3^{rd}$ of the tongue is supplied by glossopl nerve. posterior $1/3^{rd}$ by palatoglossal nerve.



the inferior conchalis muscle is placed below the mucous membrane it helps to hold the tongue and the oral cavity and helps in the movement of the ~~extrinsic~~ superior conchalis muscle helps in the mo of tongue. the superior conchalis muscle ~~has~~ is and the inferior conchalis is concave.

Palatoglossus muscle is originating from the palatine and inserted lateral side of the tongue.

hyoglossus originating from the hyoid bone and styloglossus from the styloid process and ge from the genial tubercle.

diagram for

the anterior and tip of the tongue is mainly genioglossus muscle and it also bears taste buds.

~~clinically while giving anesthesia the tongue~~

the palatoglossus help in elevation of tongue

hyoglossus help in depression

styloglossus helps in Retraction

genioglossus help in protrusion

clinically while giving anesthesia the tongue is put outwards otherwise if it ~~stuck~~ the genioglossus will go inward and will be difficult to breath

6) Extraocular muscles are 7

4 recti , 2 oblique and 1 levator palpebrae superioris also

4 recti :- superior recti
inferior recti
lateral recti
medial recti

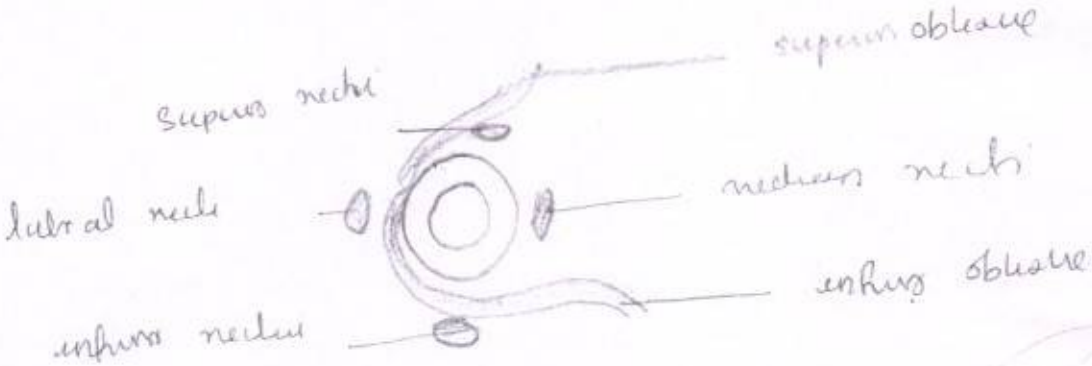
2 oblique :- superior oblique
inferior oblique

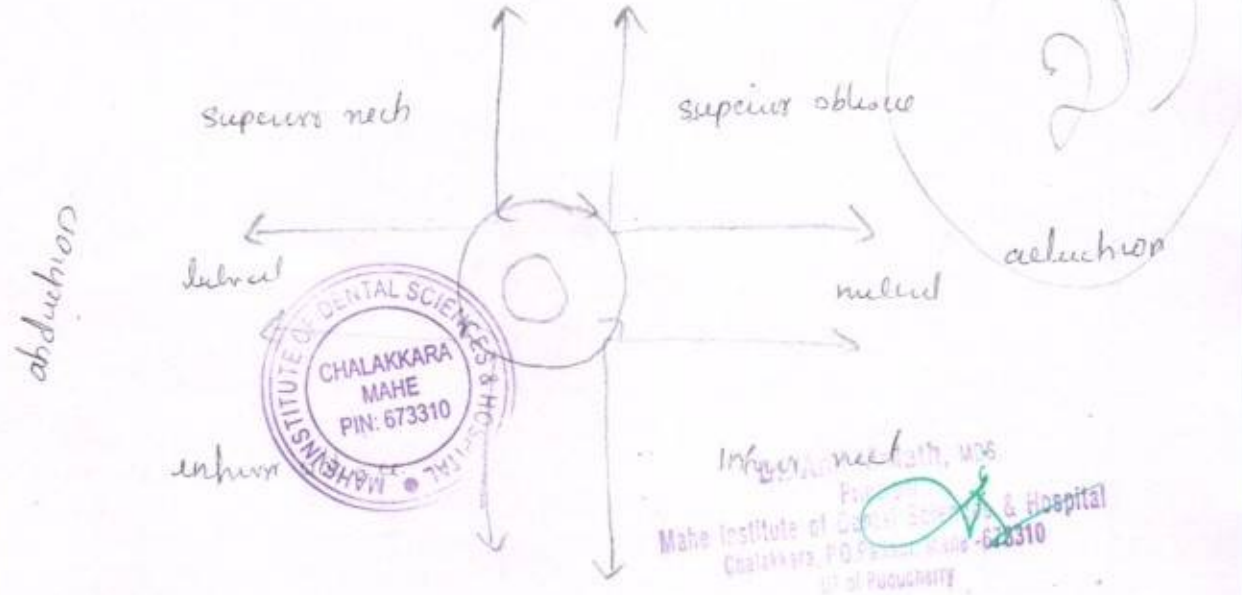
levator palpebrae superioris

the nerve is superior tarsal
inferior tarsal
orbicularis

the superior tarsal is seen between inferior rectus and inferior oblique and is inserted to tarsal plate of the floor of orbit

inferior tarsal is seen between inferior rectus and inferior oblique.





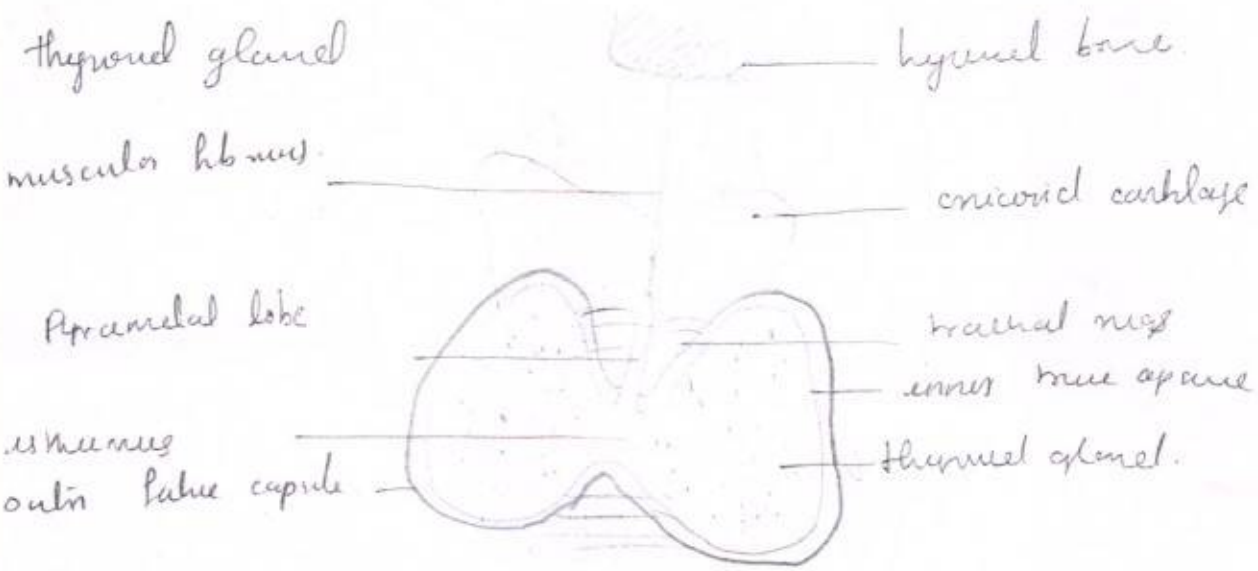
Superior rectus and superior oblique upward direction

inferior oblique and inferior recti downward direction

superior recti and inferior oblique lateral direction

superior oblique and inferior rectus medium dir

4) thyroid gland



the thyroid gland ~~has~~ ~~is~~ ~~lobe~~ is a endocrine g which secrets hormones and helps in maintaing basal metabolic rate and calcium metabolism. i consist of 2 lobes which is connected by isthe a extention from the isthmus called as pyramid a fibrous muscle extention is seen from the hy bone to the pyramidal lobe or isthmus.

the size of the gland is 5 x 2.5 x 2.5 cm

the thyroid gland has 2 capsules

inner true capsule and outer false capsule

the inner true capsule is formed by the condensation of connective tissue present in the gland. it is th and where as the outer false capsule is thin

the inner capsule inner true capsule is formed within thyroid gland where as the outer false capsule

laterally the gland has :

Sternocleidomastoid
Sternohyoid
Sternothyroid
superior belly of omohyoid

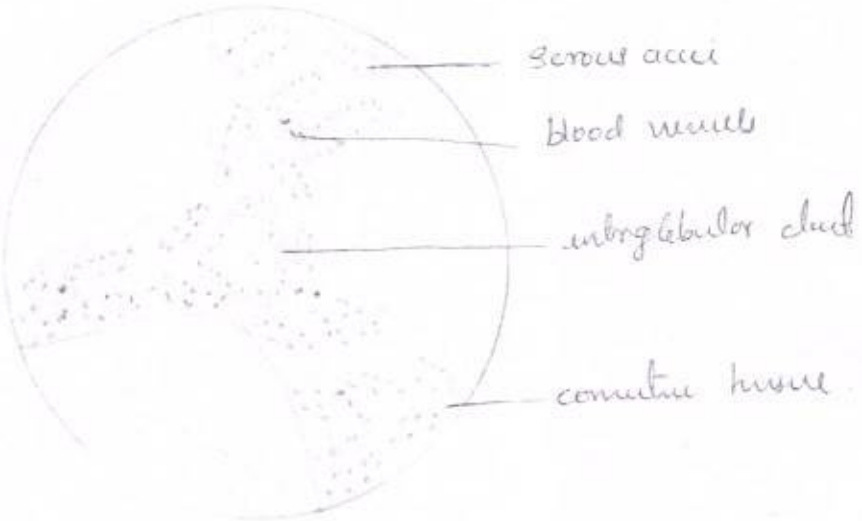
medially : Esophagus and trachea

the trachea is seen in between C5 - C7 and T1

clinical :- hyper thyroidism cause goiter

during hemithyroidectomy removing the thyroid gland of inner true capsule is important as it contains venous plexus and can ... to the

7) Serous salivary gland.



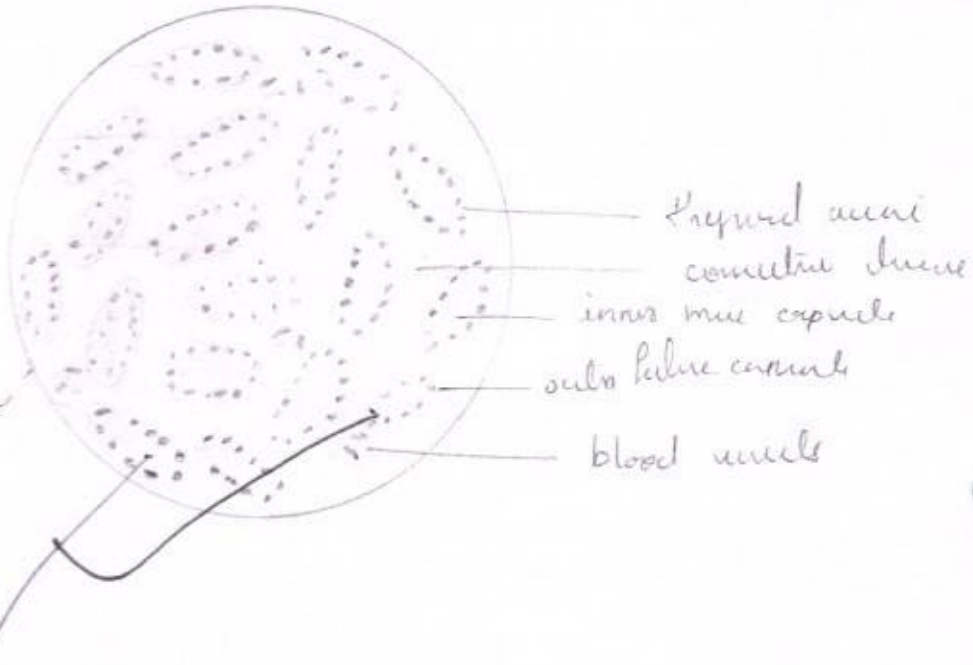
- the serous salivary gland consist of a large number serous acini
- Presence of intraglobular ducts
- presence of blood vessels.
- connective tissue and present.

the salivary glands are mainly of 3 types serous, mucous and mixed salivary glands.

Serous salivary gland contains serous acini

mucous salivary gland contain mucous acini

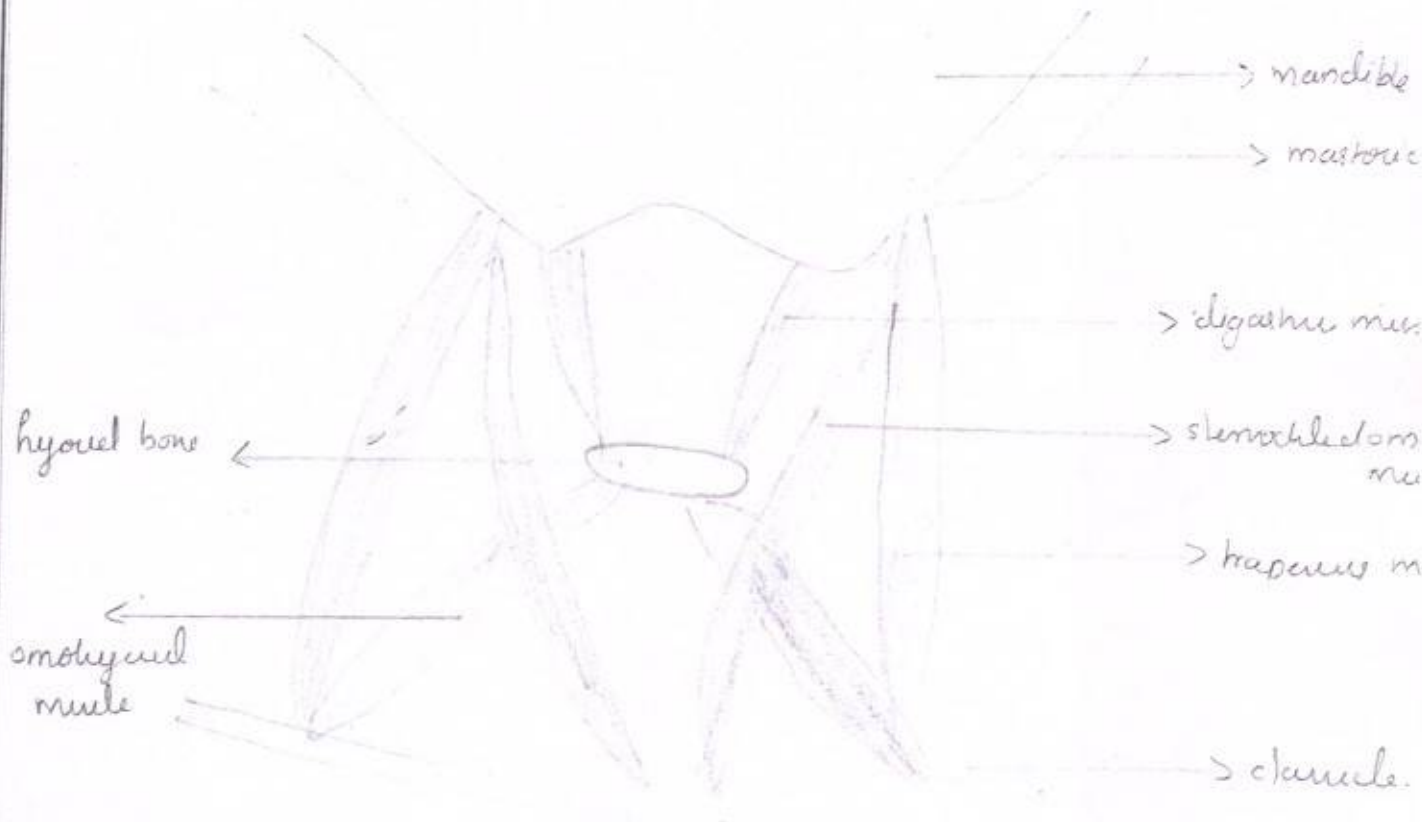
and mixed contain both serous and mucous acini



22

- Presence of inner fibrous capsule and outer fibrous capsule.
- large centrally placed nucleus present.
- Presence of large number of thyroid acini
- blood vessels present
- presence of connective tissue.

8)



the carotid triangle is a muscular triangle seen in the Posterior part of the neck.

it is formed from Posterior belly of digastric, anterior belly of omohyoid and sternocleidomastoid.

2) Tempono mandibular joint is the joint between temporal bone and mandible

c) muscles of mastication :-

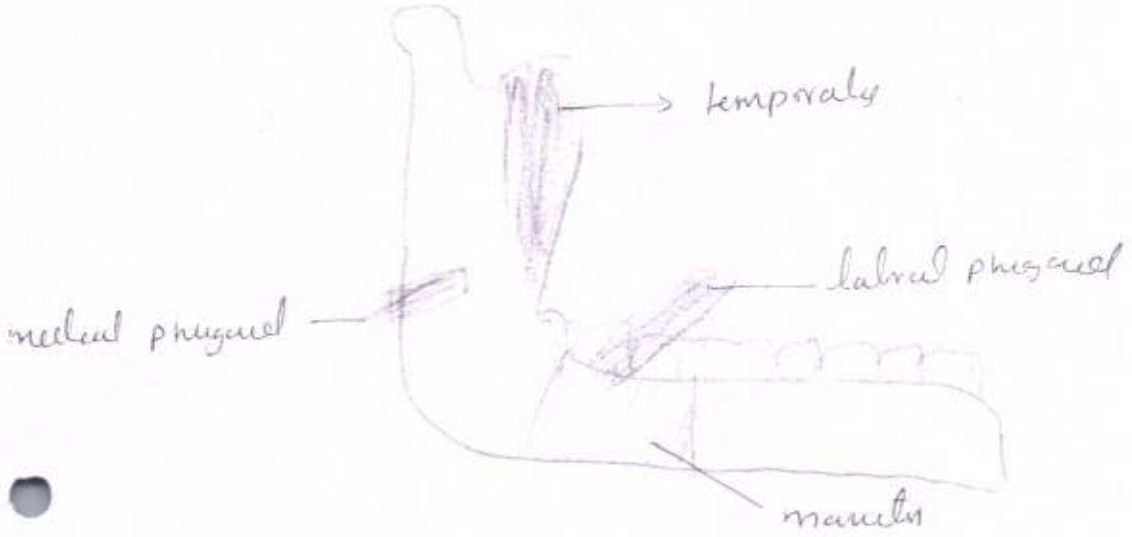
masseter
temporalis
lateral pterygoid
medial pterygoid

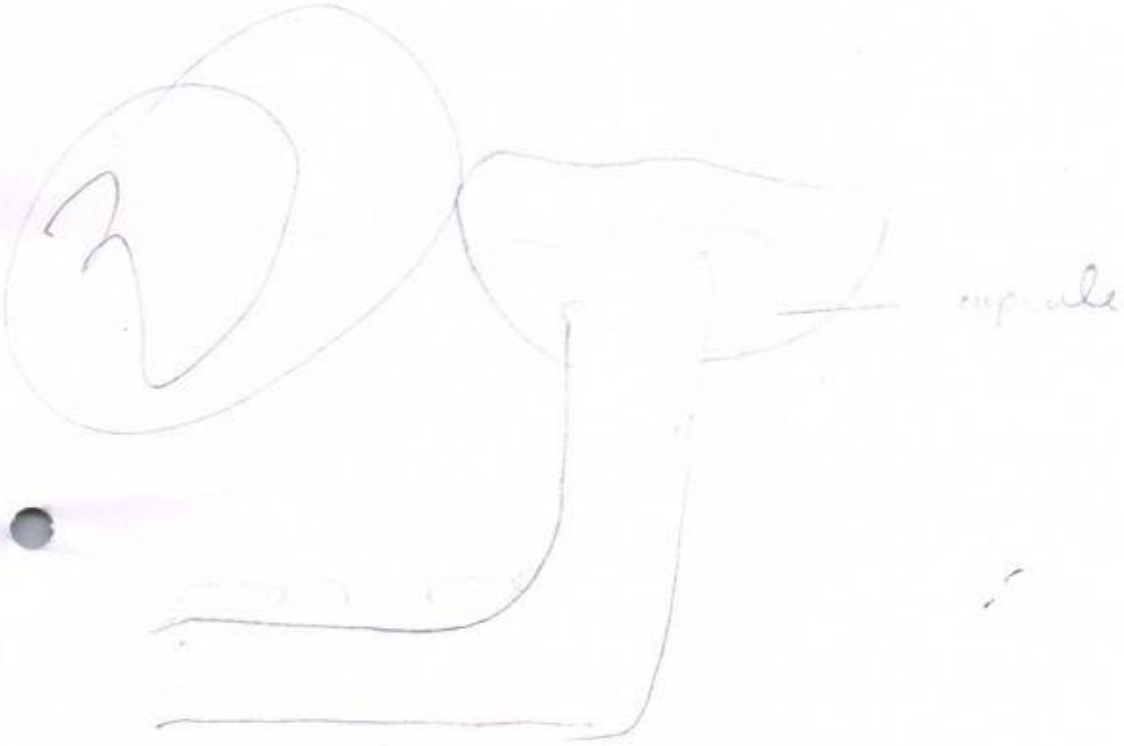
masseter :- origin :- zygomatic arch
insertion :- ramus of mandible
action :- elevation of mandible

temporalis :- origin :- temporal fossa, temporal fascia
insertion :- coronoid process of mandible
action :- elevation of mandible

lateral pterygoid :- origin :- ~~lat~~ greater wing of sphenoid
insertion :- mandible
action :- depression of mandible

medial pterygoid :- origin :- lateral pterygoid plate
insertion :- middle part of ramus
action :- elevation of mandible





Mid-Course improvement

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
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Mid-course improvment 2020 - 21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: ANATOMY

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Q_3	03	5	Q_7	3	5
Q_4	NA	5	Q_8	0	5

No. of Additional Sheets used.

TOTAL 16 45

Total in Words Sixteen

Evaluated by:

Name of the candidate : PAVEETHRA.E

Reg. No : 66

Signature E

Date : 18.10.21

Dr. J. Vishnu Sai 18/10/21
Signature of Invigilator

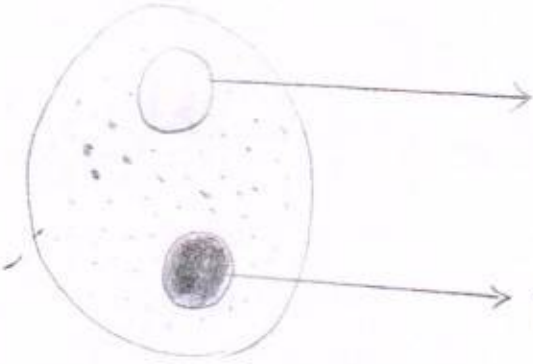
Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, PO Kaniyoor, Mahe -673310
UT of Puducherry

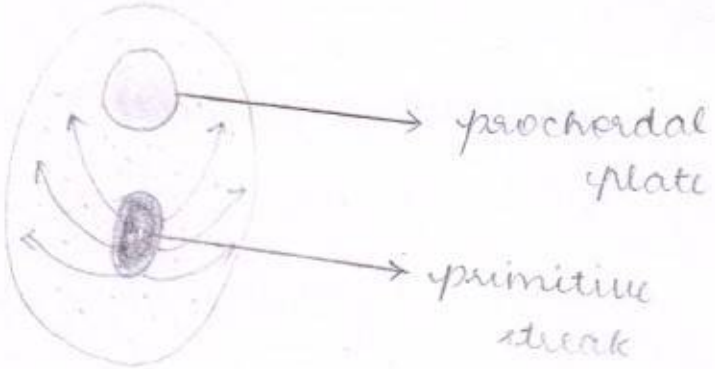
SECTION - B

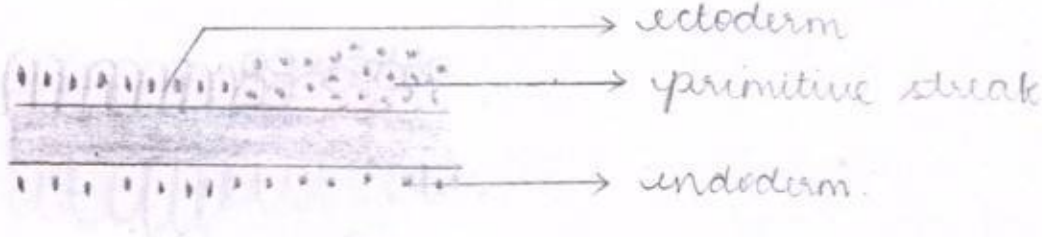
5. **PRIMITIVE STREAK:**

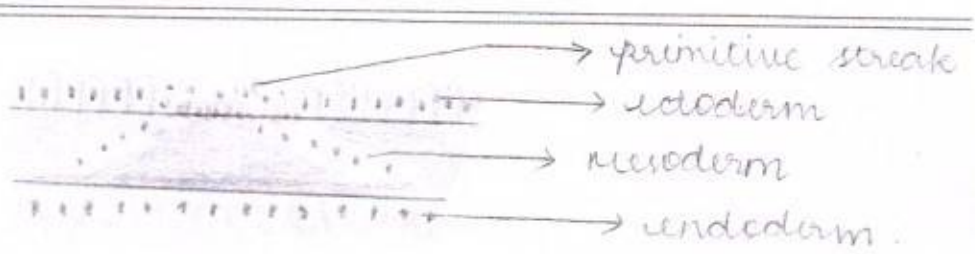
* It is a transient structure forms from the early stage of development of embryo.
* it has earliest stage of the embryonic development on 3rd germ layer.
* it has proliferative cells for migratio invasion for active invase of the cells in the early stage of embryonic development.
* prochordal plate that elevates and bulges. This is elevation called primitive streak
* primitive streak size change when elongation of the cells in the

aminotic cavity. due to the caudal end of the embryonic development.





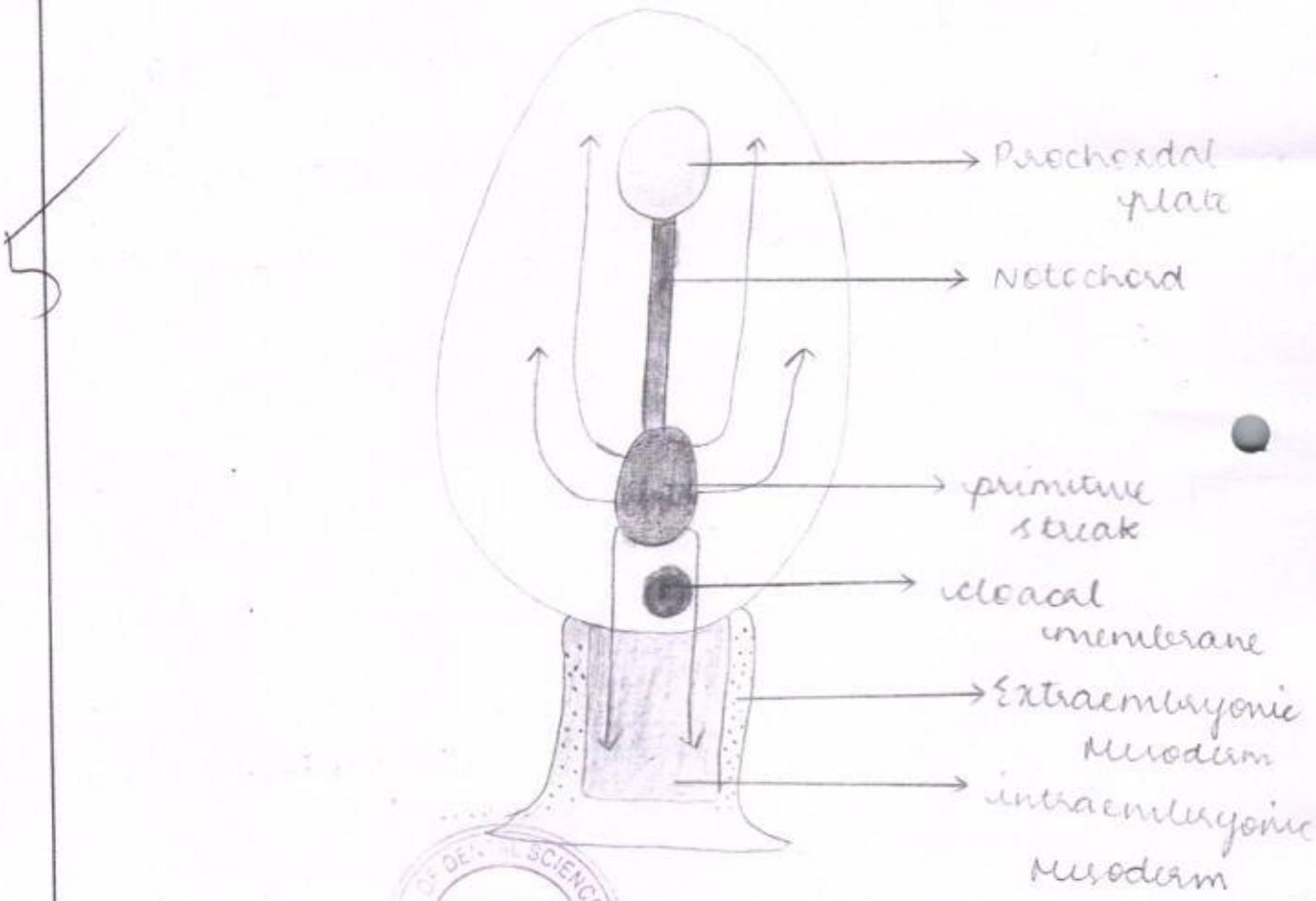




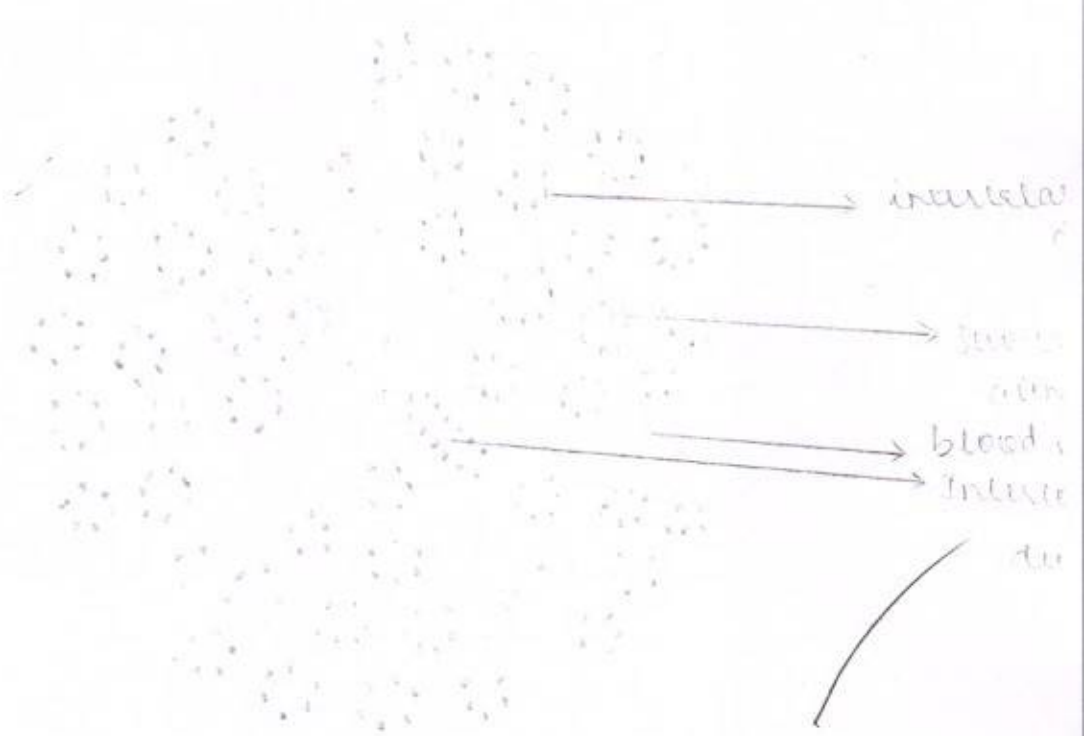
* when prochord plates projects to the caudal end of embryonic axis and primitive streak.
* The elongation of primitive streak and prochord plates, the shape of the amnion cavity changes circular into oval of the caudal end of embryonic axis.
* So, expansion of embryonic axis, the primitive streak show some bulges.
* Primitive streak is **organizer**, intraembry development and 3rd week of trilaminar development of germ layers.

Fate of primitive streak :

* The formation of primitive streak indicates the gastrulation, embryonic development.
* on 26th days, are completely disappear the primitive streak.



7. Serous salivary gland:



* Serous salivary gland is also know parotid gland.
* Salivary gland is the secretion of mucous and saliva.
* Salivary glands can into 2 types

* Major salivary gland
* Minor salivary gland

→ Major salivary gland

* Serous salivary gland — parotid gland
* Mucous salivary gland — submandibular gland
* Mixed salivary gland — sublingual gland.

* Serous salivary gland is also known as parotid gland
* A numerous collection of secretory cells is called serous acini
* Secretory cells are pyramidal in shape have numerous serous acini
* Serous acini is round in shape have proliferated Nucleus

3. Nerve supply of tongue co relate with its development:

* Tongue is mobile muscular organ that helps in the development of tongue.
* It helps in the process of mastication, grinding, deglutition, taste etc.
* Tongue has intrinsic muscle and extrinsic muscles.
* Intrinsic muscle are superior longitudinal muscle, inferior longitudinal muscle Transverse lingulae, verticus lingua.
* Extrinic muscle are styloglossus, Hypoglossus, palatoglossus, glenioglossus

Nerve supply:

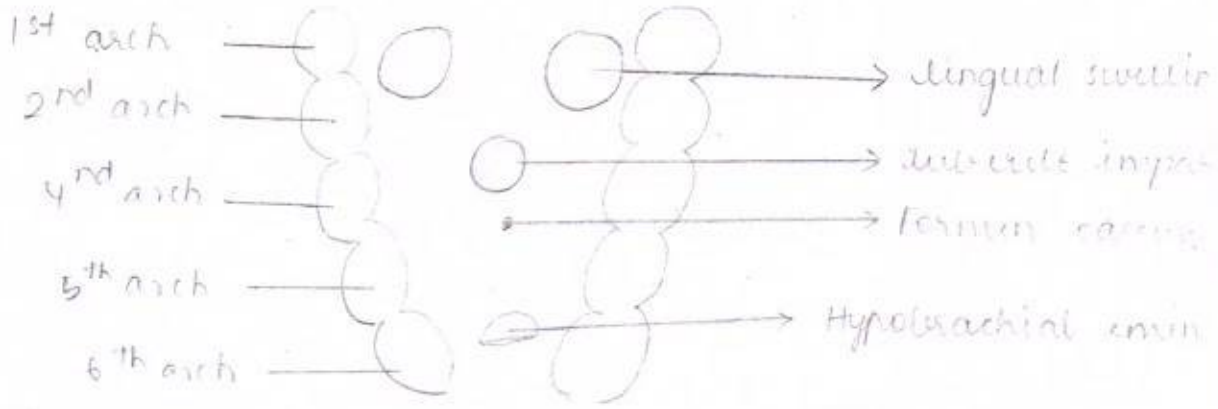
* all extrinsic muscle and intrinsic muscle are Hypoglossal nerve expt Palatoglossus is cranial part of accessory nerve.

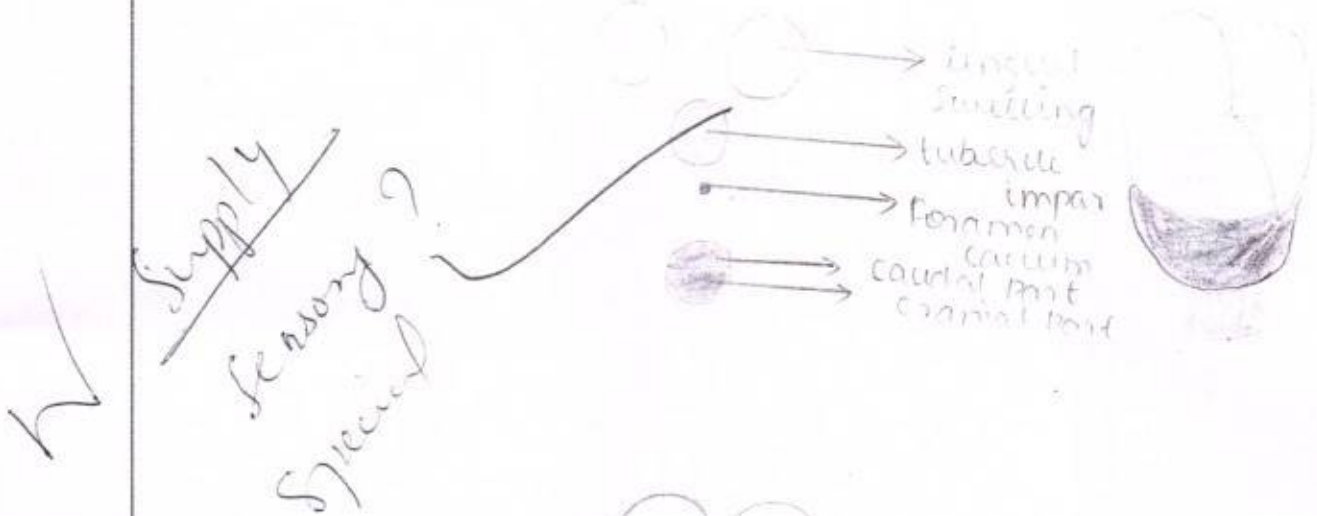
development of tongue:

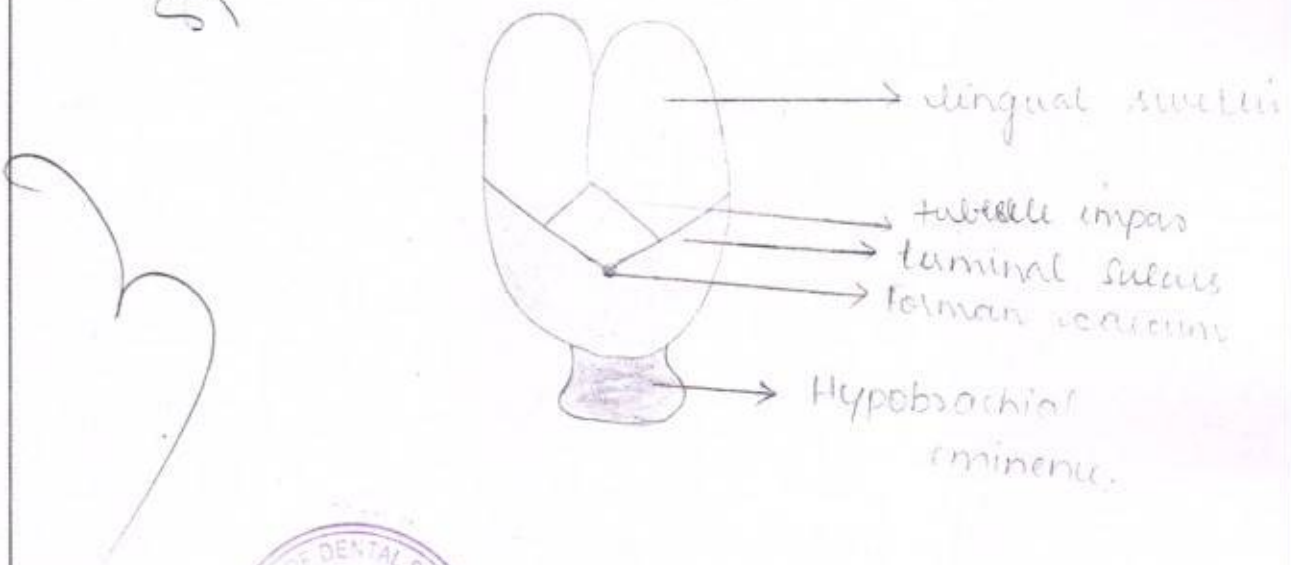
anterior 2/3 of tongue	Posterior 1/3 of tongue	Posterior most major
First Pharyngeal arch	Second Pharyngeal arch	IV Pharyngeal arch.

all intrinsic muscle and extrinic muscle are Hypoglossal nerve except Palatoglossal is cranial accessory nerve

Facial nerve	Hypoglossal nerve	vagus nerve.







6. **Extraocular muscle:**

* Extraocular muscle has voluntary muscle and involuntary muscle.
* It has four rectus
* Superior Rectus
* Inferior Rectus
* Medial Rectus
* Lateral Rectus.
* It has ~~two~~ ~~muscles~~, inferior oblique muscle, inferior oblique muscle.
* It has two oblique, inferior oblique, Superior oblique.

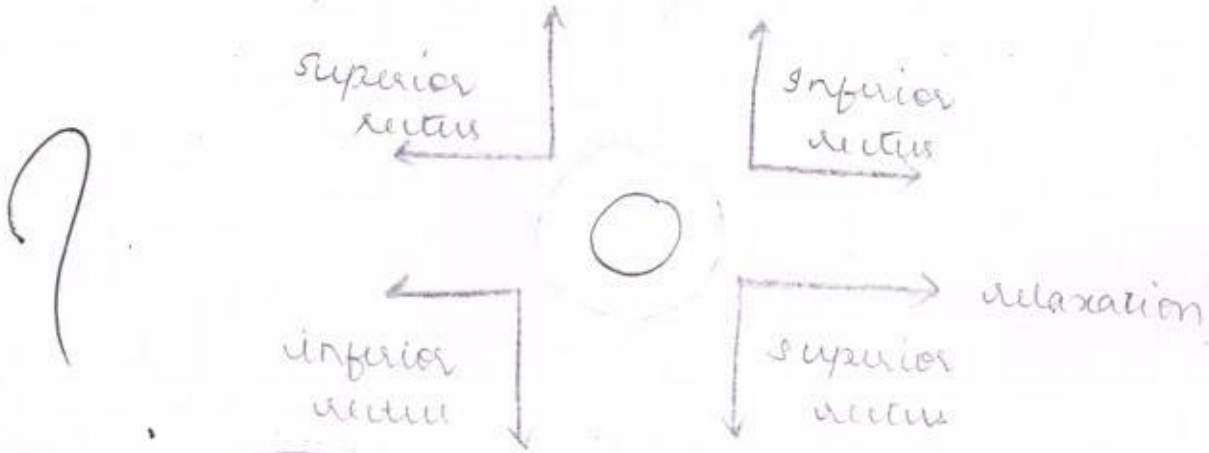
Muscle:

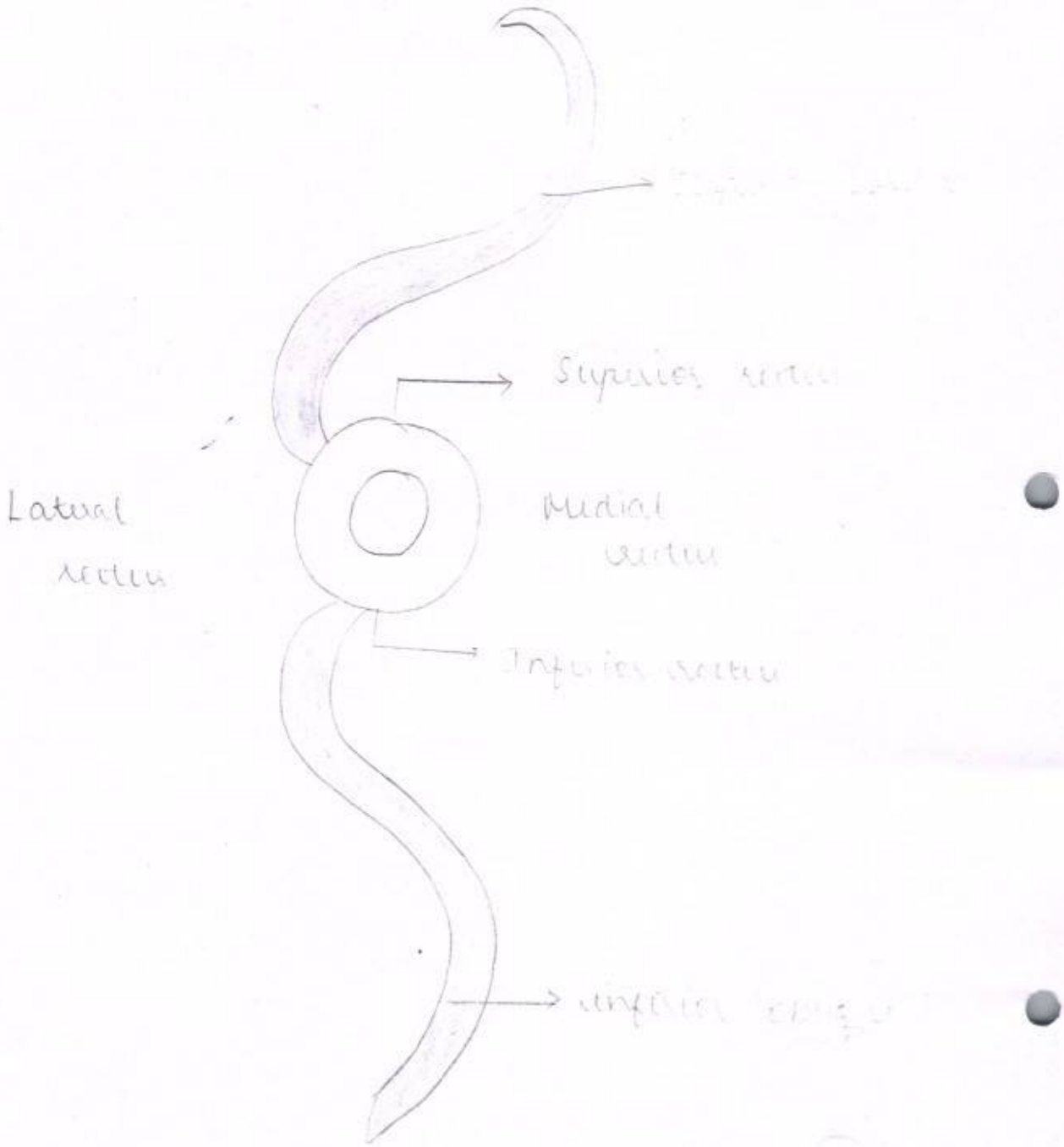
* elevator palpabrae superoris
* ~~Mubbery~~ Muller muscle
* Inferior muscles.
* Orbicularis occuli

* It has sphincter pupillae, dilator pupilla

Nerve supply:

* superior rectus inferior rectus elevator palpebra superioris	Oculomotor nerve 3rd cranial ner
* lateral rectus	Trochelar nerve 4th cranial n
* Medial rectus	Abducent nerve 6th cranial ne





Extraocular Muscles

2. TMJ :

* TMJ is extend from the intratemporal fo and inserted to the angle of mandible.

* type - ~~an~~ synovial joint, bicondylar.

* subtype

- structurally - condylar variety

- Functionally - Hindge joint.

articular surface :

* anterior ~~Inferior~~ articular surface

* Posterior ~~Superior~~ articular surface.

* anterior articular surface : is limit till th anterior surface of tubule opening.

* Posterior articular surface till limit Squamotympanic fissure

* Posterior articular surface till the superior temporal tissue.

* Ligament:

- capular ligament
- temporomandibular ligament.

* Muscles - Masseter ~~MUSC~~ muscle, angle of mandible, lateral pterygoid muscle, Medial pterygoid muscles

Mid- course improvment

PAVEETHRA.E

ROLL NO: 66

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH, OCTOBER-2021

Duration:30 Min.

Date:18.10.2021

09

(Tick the correct answer with Pen) SECTION: C (MCQ) (1 x 25= 25)

(SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)

1. Inferior Petrosal sinus passes through
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. Circle of willis is formed by
   a) Anterior cerebral artery C) middle cerebral
   b) Anterior communicating d) all of above.
3. In an adult spinal cord ends at level of
   a) Lower border of L1 c) Lower border of L3
   b) Lower border of L2 d) Lower border of S2
4. The skull at birth is devoid of.
   a) Metopic suture
   b) Mastoid process
   c) Glabella
   d) All of above.
5. Joint between tooth and it's socket is
   a) Primary cartilaginous joint c) Pivot joint
   b) Gomphosis d) Ellipsoid joint
6. Spinal accessory nerve supplies
   a) Orbicularis oris c) Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. Vertebral artery does not passes through the foramen transversarium of
   a) C7
   b) C6
   c) C2
   d) C1
8. Organ of corti is located within
   a) Cochlear c)Semicircular duct
   b) Utricle d) saccule
9. Crows feet is caused by the contraction of .
   a) Orbicularis occuli c) orbicularis oris
   b) Frontalis d)procerus
10. Artery Of suboccipital triangle is
    a) External carotid c) vertebral
    b) Posterior auricular d) Maxillary
11. Internal Acoustic meatus transmits
    a) 7th & 8th c) 6th & 7th
    b) 8th & 9th d) 9th & 10th

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital

12. Subaceous glands belongs to
    a) Apicrine c) Apocrine
    b) Holocrine d)Merocrine
13. A injury to middle meningeal artery leads to
    a) Extradural hemorrhage
    b) Subdural hemorrhage
    c) Subarachnoid hemorrhage
    d) All of above

14. The Nerve related to Pyriform fossa
    a) External laryngeal . c) internal laryngeal
    b) Recurrent laryngeal nerve d)vagus nerve.
15. Fascia forming the floor of Posterior triangle is
    a) Investing layer c) Buccopharyngeal fascia
    b) Pretracheal d) prevertebral .
16. Tensor of vocal cord is.
    a) Vocalis c) posterior cricoarytnoid
    b) Cricothyroid d) Thyroarytenoids
17. All the following nuclei are present in cerebellum except.
    c) Dentate c) fastigeous
    d) Emboliformis d) tractus solitarius
18. Lower lip develops from
    a) Maxillary process c) mandibular process
    b) Frontonasal process d) palatal process
19. Only cranial nerve seen in diagastric triangle is
    a) Hypoglossal c) accessory
    b) Glossopharyngeal d) vagus.
20. Soft palate veins drains into plexus
    a) Carotid c) tonsillar
    b) Periapical d) pharyngeal
21. Myoepithelial cell shape is
    a) Cuboidal c) stellate
    b) Columnar d)Pear
22. Stapedius is supplied by nerve
    a) 5^{th} c) 8^{th}
    b) 7^{th} d) 9^{th}
23. Masseter is crossed by vein
    a) Maxillary c)transverse fascial
    b) Lingual d)external jugular
24. Anterior ligament of malleus is developed from -
    a) 1^{st} arch
    b) 2^{nd} arch
    c) 3^{rd} arch
    d) 4^{th} arch
25. Promontry in the medial wall of Middle ear is produced by
    a) 1^{st}turn of cochlea
    b) Vestibule
    c) Semicircular canal
    d) None

Mid-course improvement 2020-21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: Anatomy

Tick Questions Attempted :

Q_1 ☐ Q_2 ☐ Q_3 ☐ Q_4 ☐ Q_5 ☐ Q_6 ☐ Q_7 ☐ Q_8 ☐

Q_1	2½ / 10	Q_5	4 / 5
Q_2	5½ / 10	Q_6	3½ / 5
Q_3	½ / 5	Q_7	0 / 5
Q_4	½ / 5	Q_8	3½ / 5

No. of Additional Sheets used. ☐

TOTAL 21 / 45

Total in Words

Evaluated by: P.G. Lakshmi

Name of the candidate : P. G. Lakshmi

Reg. No : 67

Signature P.G. Lakshmi

Date : 18/10/2021

DENTAL SCIENCES & HOSPITAL CHALAKKARA MAHE PIN 673310

Dr. J. Vishnu Sanjayi 18/10/21.

Signature of Invigilator

Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Mahe -673310
UT of Puducherry

Section - I

2) *temporal mandibular joint is a synovial joint of condylar joint
*it modified by condylar joint
*it functionally modified by hinge joint
* the temporal mandibular joint has two surfaces.
1. upper articulating surface
2. lower articulating surface

*upper articulating surface having
→ articular tubercule
→ posterior non articular surface of tympanic palate.
* lower articulating surface having.
→ joins and forms from the neck of the mandible.

* cavity of tempro mandibular joint are separated the upper articulating surface and lower articulating by intra articulate cavity.

Ligaments

* there are four types of Ligaments
→ fibrous capsule
→ lateral tempro mandibular ligament
→ Sphenomandibular ligament
→ stylomandibular ligament

Fibrous capsule

above
articulate tubercule
anterior
* chorda tympanic
posterior
Spheno-tympanic ligament

below
from forms the neck of the mandible

lateral temporal mandibular ligament

above
articular tubercle

below
forms the neck of the mandible.

* looses the below the articular disc
* tightes the above the articular disc.

Sphenomandibular ligament

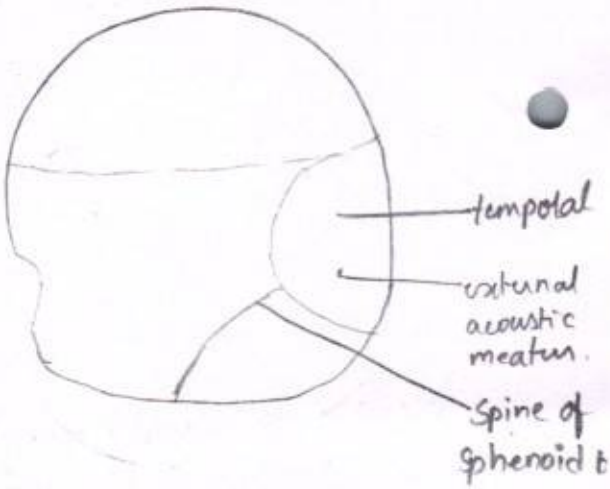
* Maxillary artery
* Maxillary vein.

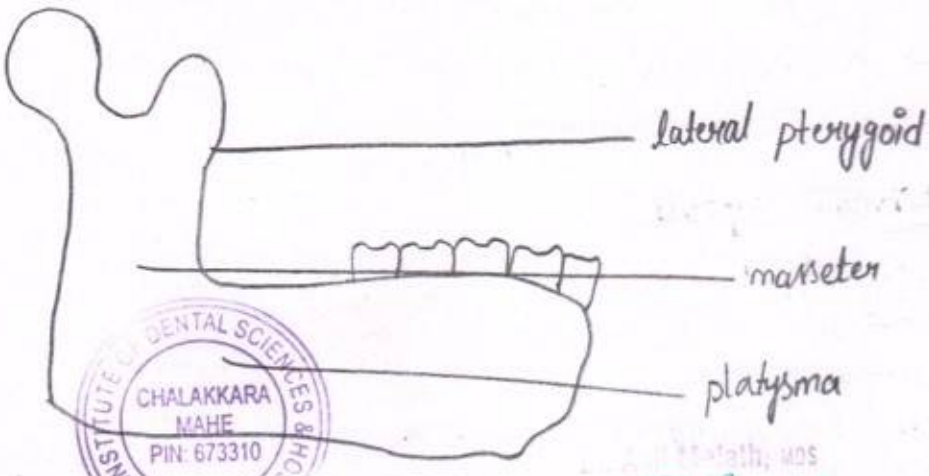
Laterally

* Middle meaningal artery
* middle cranial fossa

medially

* auriculo temporal nerve.
* external cartoid artery.





Stylomandibular Ligament

* styloid process
* auriculotemporal nerve

functions

* they help in weight transmission
* they act as shock absorber

relations

anterior

* fascia
* skin
* platysma

posterior

* chorda tympani
* tympanic palate
* sphenoid bone

superior

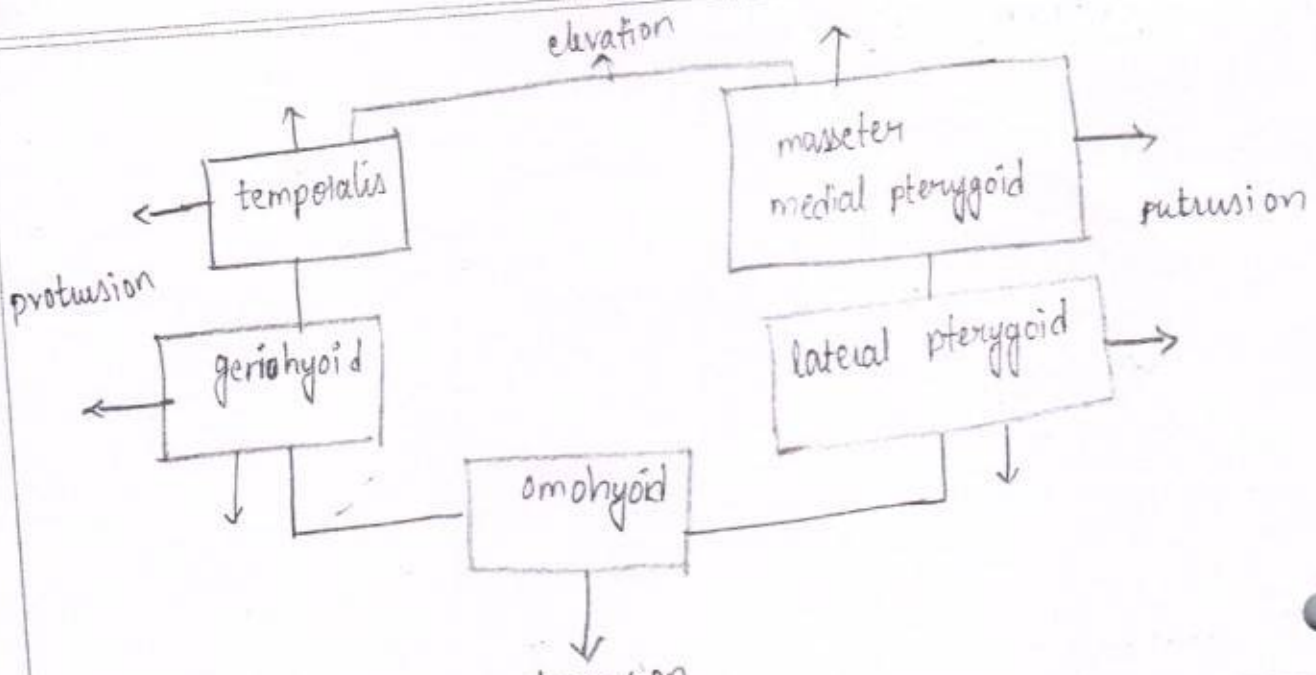
parotid gland

inferior

* Maxillary artery
* Maxillary vein

Movements

1. elevation movement
2. depression movement
3. protrusion movement
4. retrusion movement
5. side by side chewing movement



Movements	Muscles acting on it
elevation	* tempolalis masseter medial pteryggoid
protusion	* master medial pteryggoid Lateral pteryggoid
depression	* omohyoid geniohyoid
protrusion	* tempolalis geniohyoid

applied aspect

*dissolocation of tempro mandibular joint when an injury the mandibule and articular disc can be dissolu

*dearranged of tempro mandibular joint

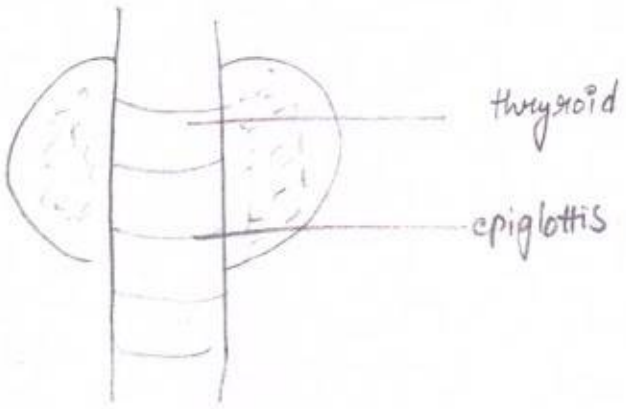
1) *larynx is a muscular tube like structure.
*larynx function for produce voice
*larynx is prominant in males than females.
*they have louder voice and high pitch.
*the laryngeal prominance is called adem's apple.
*they starts at C6, C4 vertebrae
*they are formed by the nine cartilages and eight muscles.
*cartilages are 3 paired and 3 unpaired cartilages

paired cartilage

1. thyroid cartilage
2. epiglottis
3. cricothyroid cartilage

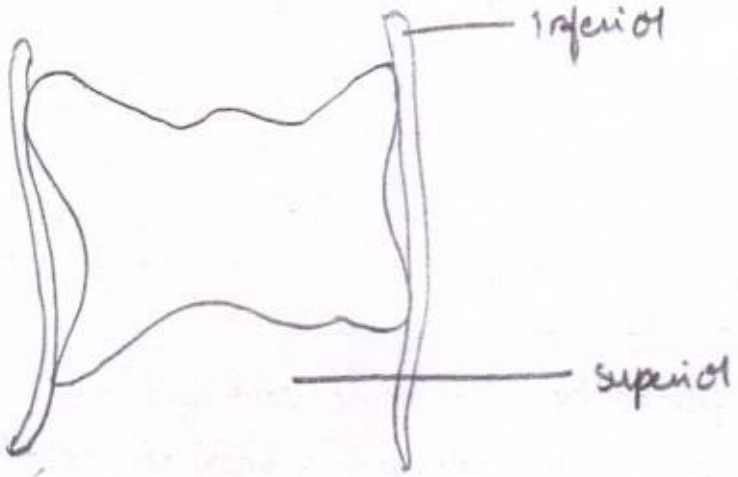
unpaired cartilage

1. arytenoid cartilage.
2. corniform cartilage
3. cuneiform cartilage



thyroid cartilage

* they are in pyramidal in shape
* they have left and right lamella.
* they are inferior border and inserted into cricothyroid.
* they are superior border inserted into palatopharyngeal, spinopharyngeal, stylopharyngeal.



thyroid cartilage.

epiglottis

*they are leaf like structure
* it is a elastofibrous cartilage.
*they function is to prevent food from the treachea and respiratory tract.

epiglottis

Inlet of larynx

*Communication between the larynx and treachea.
* they having 3 parts
1. palatopharyngeal
2. spingopharygeal
3. stylopharygeal.

* intesiol of larynx

rima of glottis

* there is a narrow space in laoge is called rima of glottis
* they have acting on
1. relaxation
2. adduction
3. abduction

* adduction is oviaretenoid
* abduction is potteriol bicothyroid.

*Vocal colds.

*there function is to produce sound
* they source is voice.

false vocal colds

*they source to produce voice
*but their function is not voice.

Muscle.

* superiol bicoarytenoid muscle
*inferiol bicoarytenoid Muscle
* transverse oricoarytenoid Muscle
* oblique thyroid and thyro arytenoid Muscle.
* thyro bicoarytenoid Muscle.

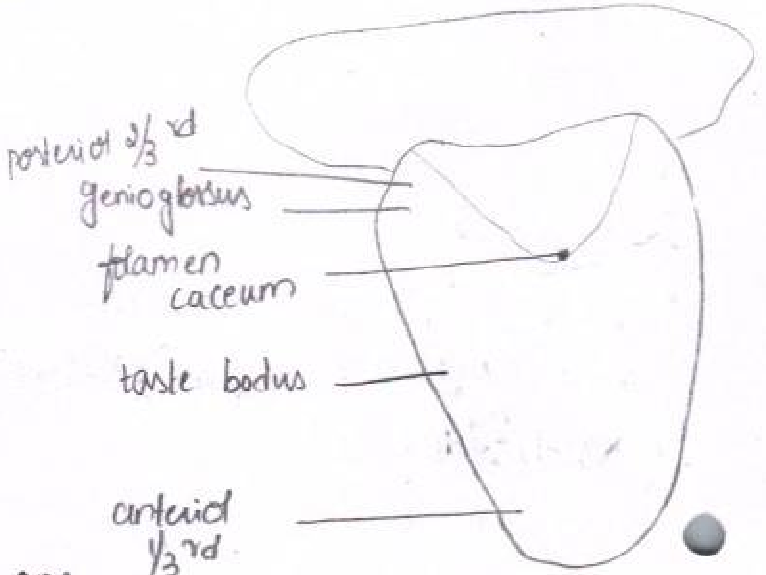
applied aspect

laryn laryngotocmy.

*removal of vocal cold due to any injury.
*Now-a-days they are imported robotic vocal colds they proch the ~~produce~~ sound when they heard anything.
* there are soo many disadvantages are there because charging v be decreased.

Section-B

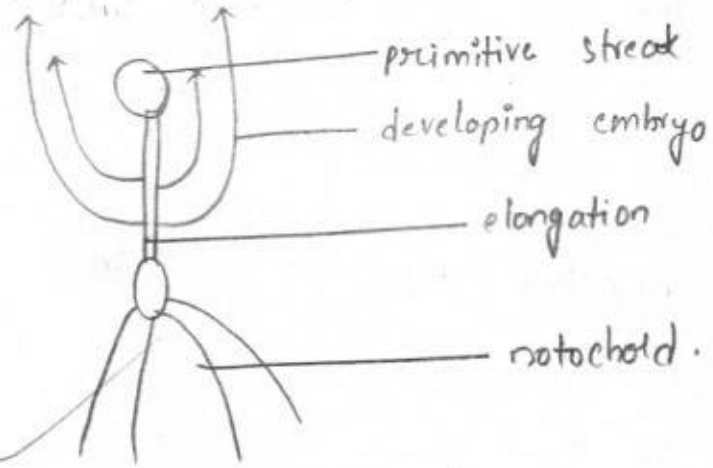
3) * tongue is muscular organ
* there are function is mastication and sphecch.
* they have 2 parts
1. oral part
2. pharyngeal part
* oral part forms anterior one-third of the tongue.
* pharyngeal part forms posterior one third of the tongue.



* they have
1. tip
2. body
3. root.

	Anterior 1/3rd tongue	posterior 1/3rd tongue	posterior part
arch	first arch	third arch	fourth [illegible]
Nerve supply	lingual artery of trigeminal nerve	lingual artery of trigeminal nerve	lingual a[illegible] of trige[illegible] nerve

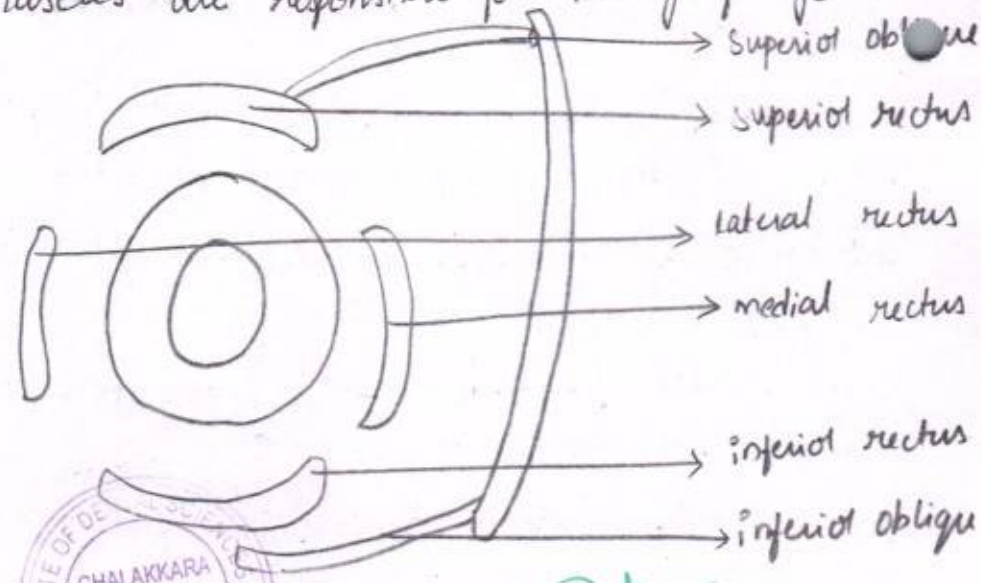
5)A) *Primitive streak is a transient structure of the early st
of developing embryo.
* Primitive streak is the indicater of early stage of embryo
*during embryo and gastration period they are profilated, dividi
cells and arranged into another cells.



Primitive streak.

* the profilated cells are elegonated and bulge the notochold and prochordronal called primitive streak.
* it is between the notochochold and prochordronal part caudal end (or) tail forms the primitive streak.
* Primitive streak is round or oval shaped
* but later the embryonic disc is elongated. so it become narro
* because of notochord and Prechordral again it became o
shaped
* due to the elongation of notochord and Prechordral the embry
disc also elongated.
* Primitive streak is a First ~~oligo~~ organizer for the embryo and notocho
* Fate :- ~~of~~ on gastrution period after 24 days the notochold is degenea
completely

6) *extraocular Muscles is present in orbit
*but it is extrinsic
*they are present within the eyeball.
*they are responsible for moving eyeball and raising the eyelid.
*extraocular Muscles are seven types.
*In that they are divided into two types:
1. recti
2. oblique.
*they are
1. levator palpebral superioris
2. superior oblique
3. inferior oblique.
4. superior rectus
5. lateral rectus.
6. medial rectus.
*levator palpebral superioris muscle is responsible for raising eyelid
*remaining muscles are responsible for moving of eyeball.



levatol palpebral superiolis Muscle

* they are oliginate from the sphine of sphenoid bone
* they are inserted into tarasal palate.

Rectus muscles

Recti	oligin	attachement	actions	innervo
Inferiol rectus	common tendonous ring	Inferiol aspect of sclear	abduction and contributes to elevation	occulomo nerve
superiol rectus	common tendonous ring	superiol aspect of sclear	abduction and contributes to depression	occulomo nerve
lateral rectus	common tendonous ring of lateral eye ball	antero lateral aspect of sclear	adduction	abduanc nerve
medial rectus	common tendonous ring medial eye ball	anteromedial aspect of sclear	adduction	occulom nerve

oblique muscles

* there is no common tendonous ring oligin for this muscles.

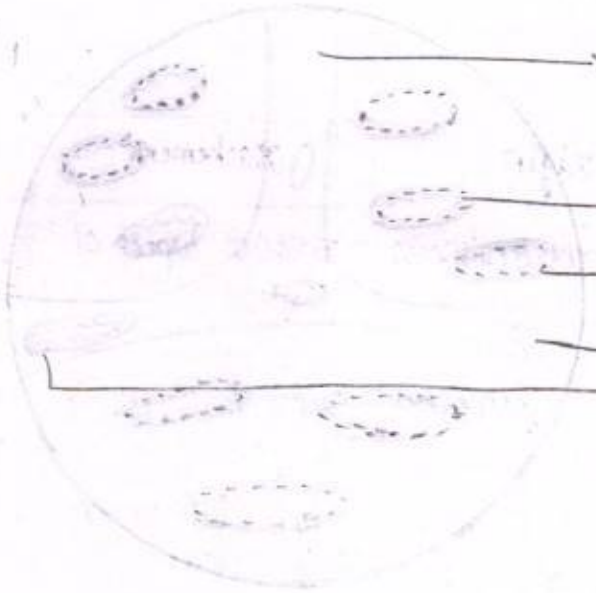
oblique	oligin	attachement	actions	innervatio
superiol oblique	spine of sphenoid bone	superiol aspect of sclear	*abduction and contributes to depression	trocheolar ne
Inferiol, superiol oblique	flood of the orbit	inferiol aspect of sclear	*abduction and contributes to elevation	occolomotol Ne

applied aspect

cranial paralysis

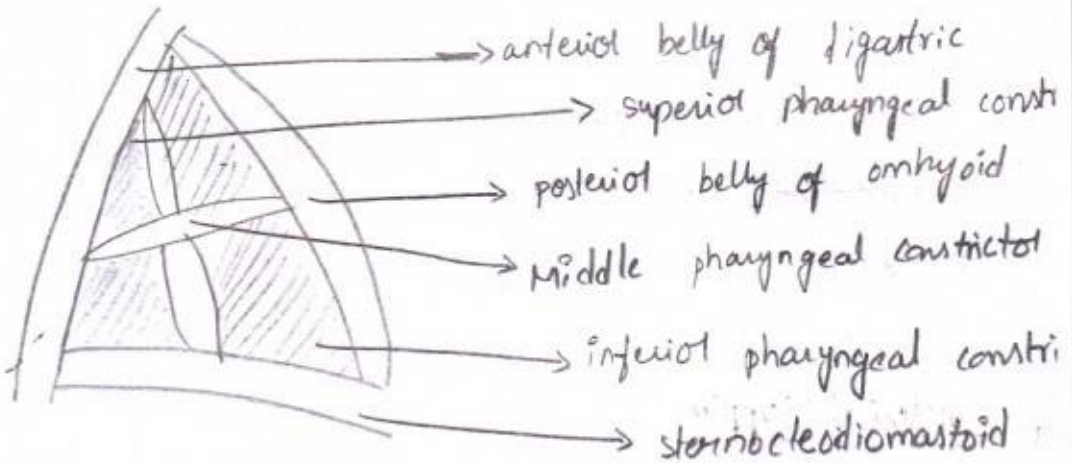
*if there is a paralysis in abducant nerve there is no movement to the lateral side of the eyeball.

7)



* it is produced by parotid glands.
* they are having serous acini
* they are divided by connective tissue of septa.
* they having blood vessels.

8) it is a division of anteiod tiangle



boundaiies.

anteiod superiod :- ~~posteiod~~ anteiod belly of digastric Muscle

anteioinfeiiod :- posteiod belly of omhyoid Muscle

Lateially :- sternocleoidomastoid

contents

*it is oulated to common caitoid aiteiy

1. caitoid sinus
2. caitoid body
3. caitoid sheath.

~~venous~~ ~~drainage~~ aiteiial ~~supply~~

*they ~~diains~~ supply into esteinal caitoid aiteiy and supplies

1. inteinal jugulai vein
2. phaiyngeal vein
3. Lingual vein
4. common caitoid vein.

Arterial Supply of Nerves

*they are supplied to external carotid artery.

1. Vagus Nerve
2. Spinal accessory Nerve
3. Sympathetic Nerve
4. Hypoglossal Nerve
5. Lingual Nerve.

arterial supply

1. Internal jugular artery
2. pharyngeal artery
3. lingual artery
4. common carotid artery.

venous

*internal jugular vein.

carotid sinus

*it is beginging of internal jugular vein.

*it supplies
1. ~~glosso~~ genioglossus
2. hypoglossus.

carotid body

*it is a red stained colored body.

*Supplies
→ genoglossus
→ sympathetic Nerve.

Mid-course improvment 2020-21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: ~~Anatomy~~

Tick Questions Attempted :

Q_1 ☑ Q_2 ☑ Q_3 ☑ Q_4 ☑ Q_5 ☑ Q_6 ☐ Q_7 ☑ Q_8 ☑

Q_1	6½ / 10	Q_5	5 / 5
Q_2	8½ / 10	Q_6	/ 5
Q_3	2½ / 5	Q_7	3 / 5
Q_4	½ / 5	Q_8	3½ / 5

No. of Additional Sheets used.

TOTAL 27½ / 45

Total in Words

Evaluated by:

Name of the candidate : F. Lizaa.

Reg. No : 68

Signature

Date : 18/10/21

Dr. J. Vishnu Sai Prasad 18/10/21

Signature of Invigilator

Mahe Institute of Dental Sciences & Hospital
Chalakkara, Mahe - 673310
UT of Puducherry

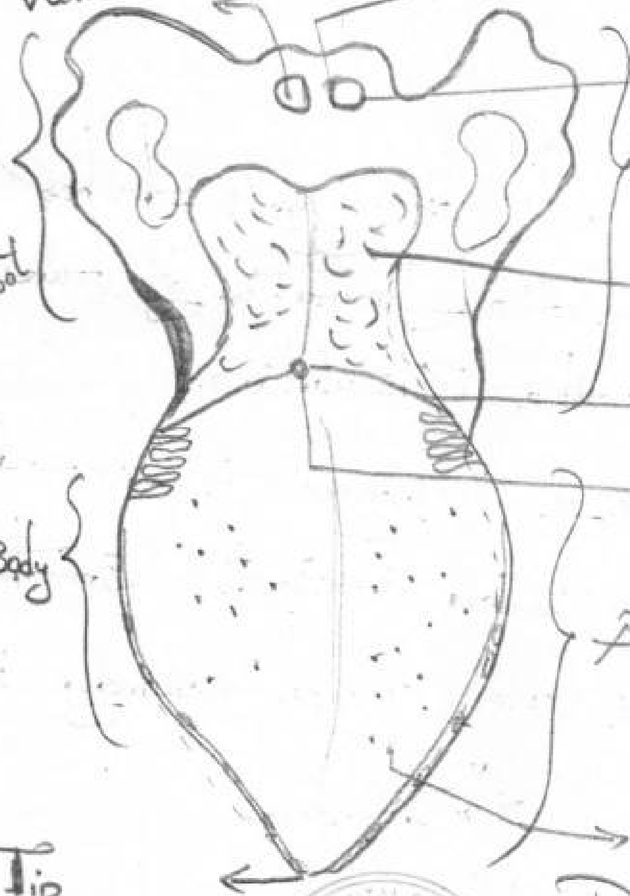
Section-B.

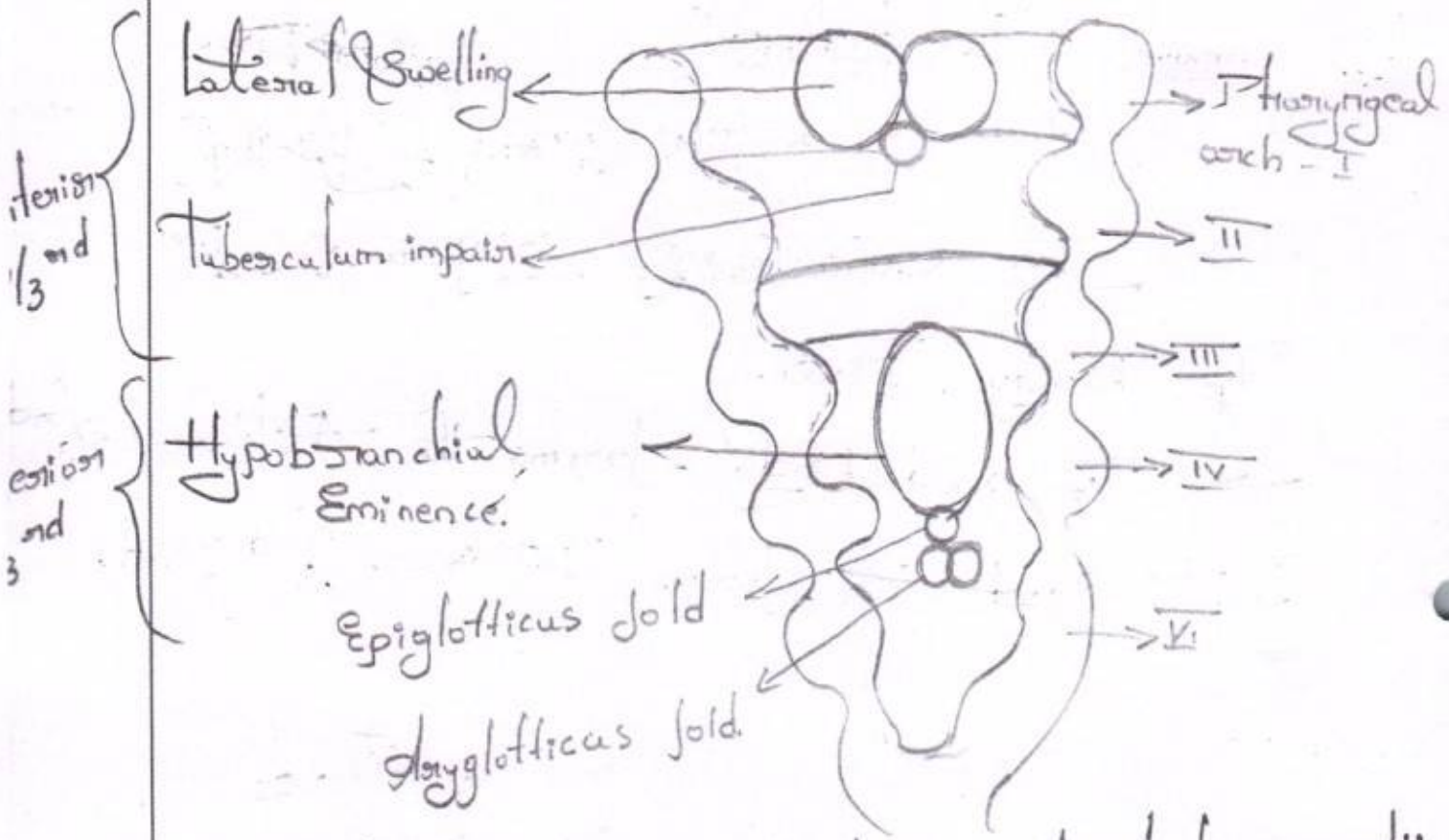
3.) Ans:- Tongue & it's development

→ It is a muscular Organ.

→ It consists of 3 Parts i.e Tip, Body, Root.

→ Tip and Body forms the Anterior 2/3 Part and root forms Posterior 1/3rd Part.



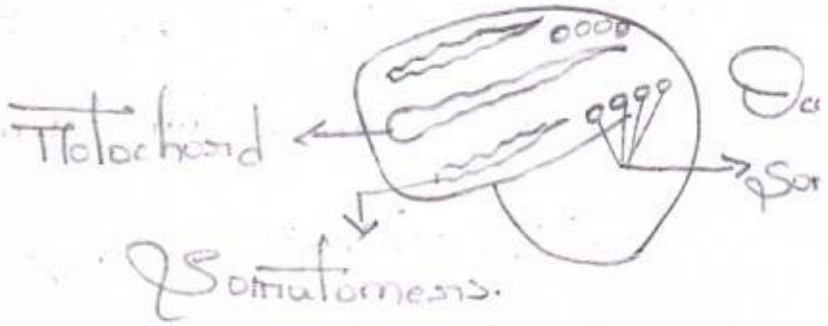


→ There are 6 Pharyngeal Arches - All these are useful for the formation of mucous membrane, But not the Musculature.

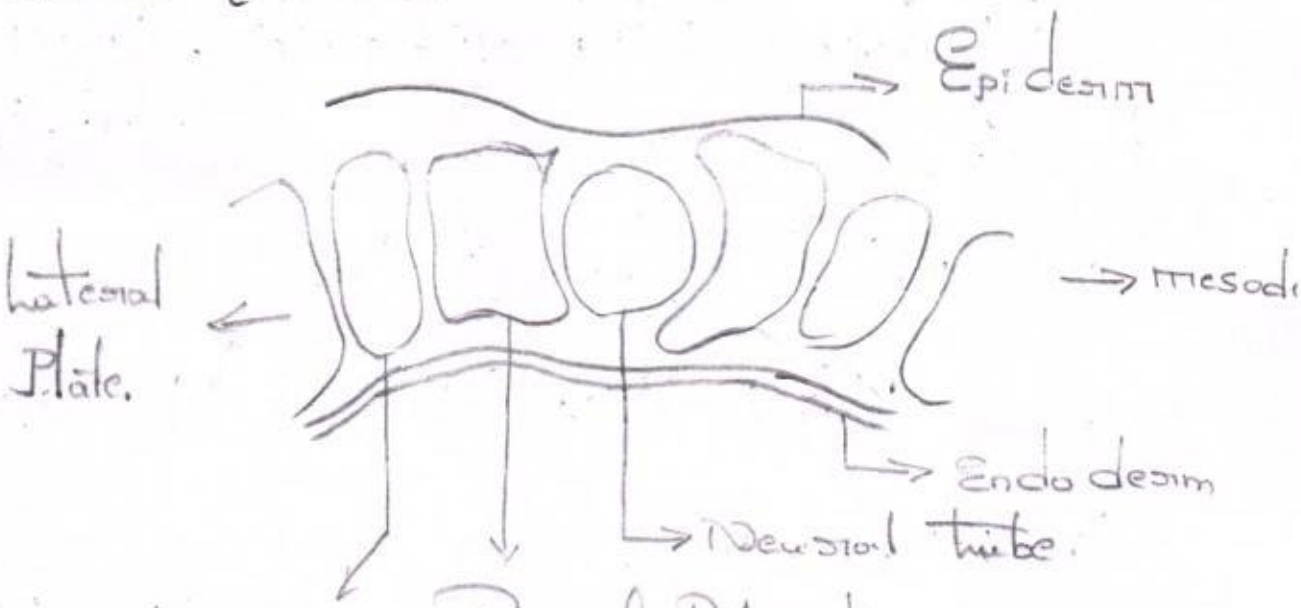
→ The musculature of tongue is formed by the Somites. called Occipital Somites.

→ These Somites are grown caudally Segmented Partially to form Somitomers.

→ they are Completly Segmented cranially to form Somites.



→ These Occipitals are formed from the Paraxial Mesoderm, which is Present in the lateral Sides of the ~~Not~~ Neural tube.



→ The Mucous Membrane is formed ~~form~~ form the Swelling on the Arches.

→ in 1st Arch there are Lateral Swel

→ Below that there is small structure called tuberculum impair. for future tygoid gla

→ The Anterior Part of tongue is formed by the fusion of 2 lateral swellings and in the Mid line.

→ There is a large swelling in the 3rd & 4th Arch called hybranchial Eminence.

→ Most of it is formed from 3rd Arch and Very small Part from 4th Arch.

→ 2 foldings Below it called Arye & Epiglottius fold.

→ All these structures forms the Posterior 1/3rd Part of tongue.

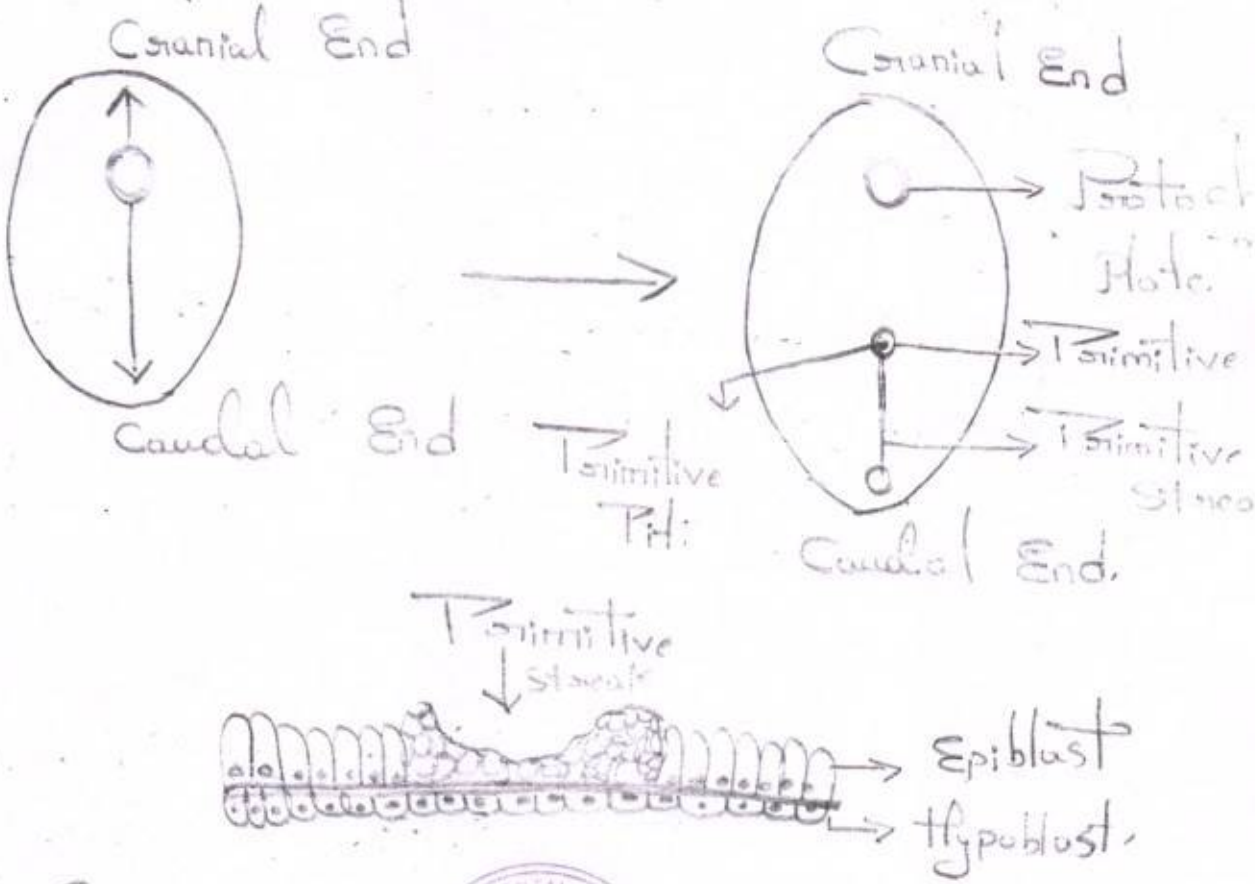
Nerve Supply Correlated with it's development.

→ 1st arch related derivaties are supply by Trigeminal Nerve.

→ And Remaining Structures derived from 3rd & 4th Arch are Supplied by Hypoglossal Nerve.

5) Primitive Streak.

Ans:- ⇒ It is formed during the 15th day gastrulation.



(In Case of Epiblast and hypoblast layers)

→ Some Cells of Prochordal plate. get Migrated & invaginated & Proliferated to Caudal End.

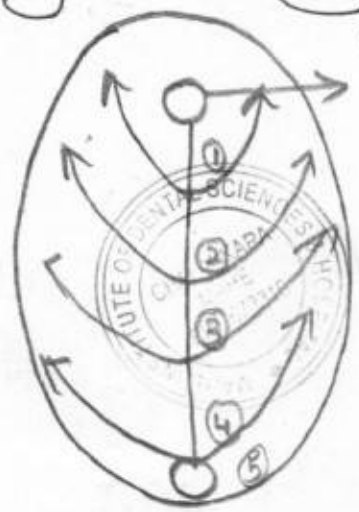
→ So, there is an Elevation of Bulge appears in the Caudal End.

→ that Elevation is called Primitive Streak

→ The Epiblast Cells gets proliferated by fibroblast growth factor - 8 - this inhibits the Secretion of Cadherin Protein and also for Specification of cells.

→ at the End of 2nd week this Primitive Streak gets disappeared.

→ By forming Some lateral Areas.



Prochordal plate.

1. tip of notochord
2. Sides of Notochord.
3. Still Caudal Area
4. Most Caudal Area

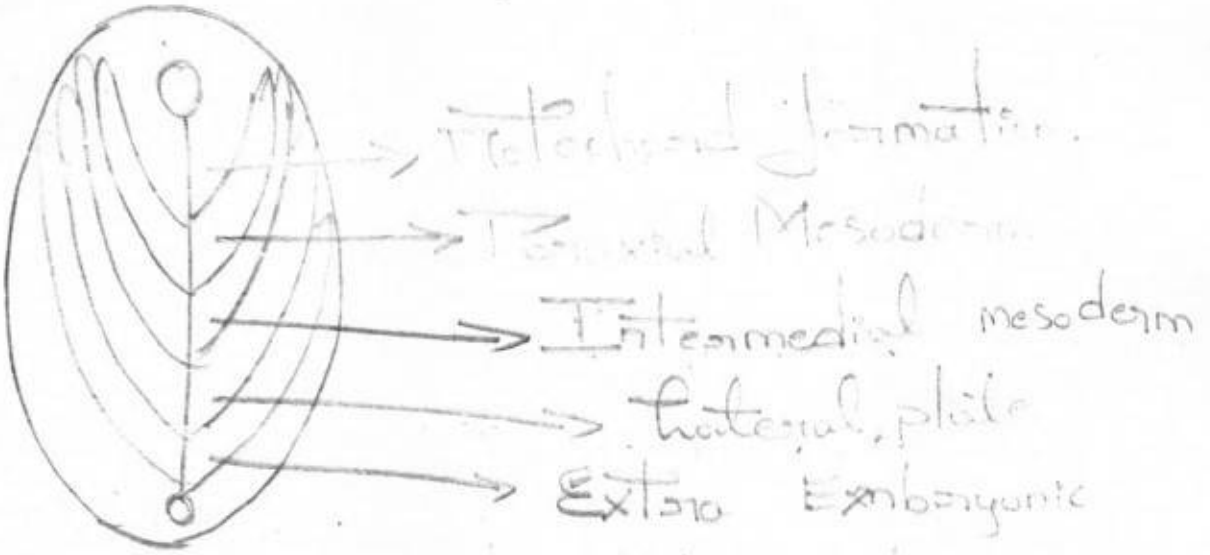
→ 1st Area gives the Notochord Formati

→ 2nd Area gives the Paraxial Mesoderm formation

→ 3rd Area gives the intermediate Mesoderm

→ 4th Area gives the lateral plate.

→ 5th Area give the Extra - Embryoni Mesoderm.



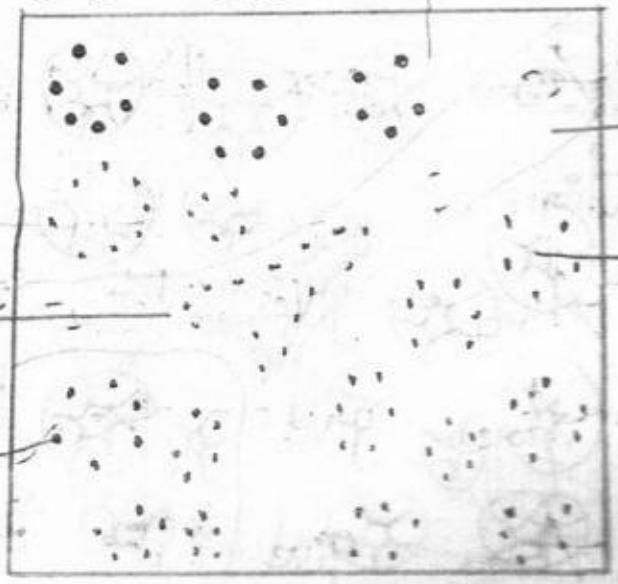
Applied Aspect

1.) i] Primitive Streak is ~~formed~~ not Existed after 2nd week also so there are many deformalives in formation of Lower Abdomen.

7.)

Ans:-

Parotid gland (or) Serous Salivary → Serous acini



→ Serous Salivary gland Mainly seen in Parotid gland.

→ They are Made up of Serous acini.

→ they have Round Nucleus.

→ And tall Columnar cells are observed.

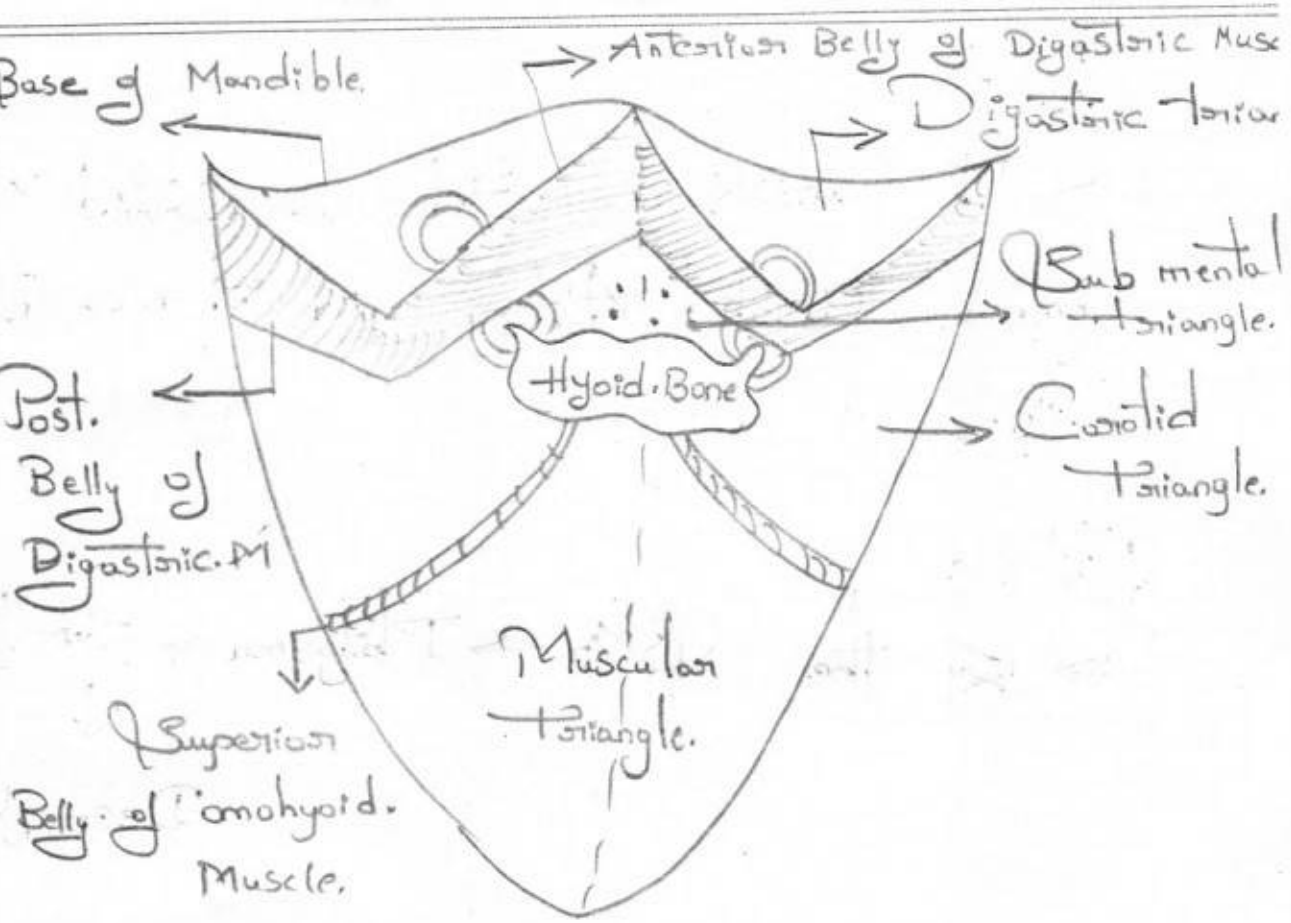
→ inter lobular duct with Connective tissue.

→ intercalated duct from inter lobular duct.

→ intra lobar duct is also seen.

→ they are Secreting Serous Saliva of Amount 25 - 30%.

8.) Ans:



Carotid Triangle

Boundaries are :- Anteriorly by Midline of Neck and Hyoid Bone.

Posterio Superiorly → By the Posterior Belly of Digastric Muscle

Posterio inferiorly → By the Superior Belly of Omohyoid Muscle.

laterally → By the Anterior Surface of SCM. Mus

Contents

→ It Consists of External Carotid Artery, Common Carotid Artery and internal Jugular Vein.

Floor :-

→ By the Skin → Platysma → Superficial fasci
↓
Deep fascia.

Roof :-

→ By Middle Constrictor & inferior Constrictor Muscles and thyroid Membrane.

→ And Muscles are Hypoglossus and Omohyoid Muscle.

Nerve Supply

→ Vagus Nerve

→ Hypoglossus Nerve.

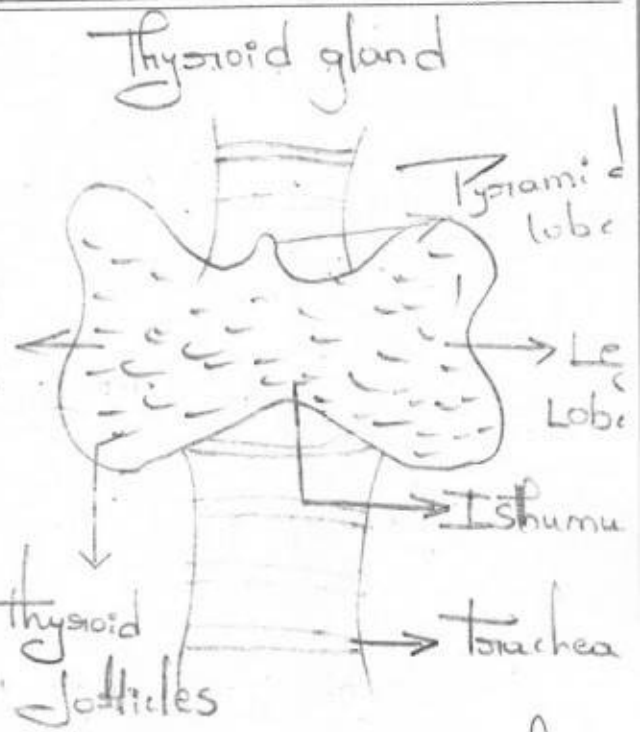
4) Ans:-

Thyroid gland

→ it is the Endocrine gland

→ it is important of Metabolic rate.

→ it is the only Endocrine gland for the raw Materials of Environment.



→ The thyroid gland is developed from thyroid deriticulum.

→ the thyroid gland is having 2 lobes cal Anterior lobe and posterior lobe.

→ these two lobes are connected by Isthmus.

→ There is Presence of 3rd lobe from th Superior Aspect of ~~Pyramidal~~ Isthmus

Called the Pyramidal lobe.

→ the thyroid gland is Made up of thyroid follicles.

→ Blood Supply is by Superior & inferior thyroid Artery and Venous Plexus.

→ Nerve Supply is by Sub Mandibular Ganglion.

→ External laryneal Nerve

→ Recurrent laryneal Nerve.

Section-A

1.) Larynx

Ans:
→ it is the Organ of Phonation.
→ It is the respiratory Passage Organ.
→ it is Present at the level of C_1 to C_4 in Adults and C_5 to C_7 Vertebrae in childr
→ the growth of larynx is small in female so that they have high pich Voice, & are the children.
→ the growth of larynx in Males is good s that they have Base Voice.

a.) Communication:-
→ the larynx Communicate with Pharynx thr laryngeal inlet and Below it Communicates w trachea.

b) Interior of the larynx
the Skeletal of larynx is Made up of cartilages there are 3 Paired Cartilageous and 3 un Paired cartilagens.

3 unpaired Cartilages are :-

1.) Epiglottis

2.) thyroid

3.) Cricoid.

3 paired Cartilages are :-

1.) Aryetinoid

2.) Cuniform

3.) Corniculate.

→ All these Cartilages are Made up of hyaline Cartilage.

* Except:-

Epiglottis, Corniculate and Cuniform - they are made up of fibro elastic cartilage.

c.) → Muscles of larynx

→ there are 2 types of Muscles Extrinsic and Intrinsic Muscles.

1.) Intrinsic Muscles.

	Muscles	Origin	Insertion	Action
1.)	Crico thyroid	from the lower Border of Cricoid Cartilage	to the lower Border of thyroid Cartilage.	1.) Tenses the Vocal ligaments 2.) Closes the glottis.
	*The Only intrinsic Muscle Present External Aspect.			
2.)	Posterior Crico Arytenoid	from the Posterior Border of Cricoid Cartilage	to the Arytenoid Cartilage.	→ Opens the glottis. → Sole Abduction of Vocal folds.
	* The Safety Muscle for larynx. We can't Breath if it is Absent.			
3.)	lateral Crico Arytenoid	from the lateral Surface of cricoid Cartilage.	to the Arytenoid Cartilage	→ closes the glottis when contracts.

Muscle	Origin	Insertion.	Action.
Transverse Arytenoid.	From the transverse Process of One Arytenoid Cartilage.	Muscular Process of Opposite Arytenoid Cartilage.	→ closes the glottis.
Oblique Arytenoid	from the the Oblique of One Arytenoid Cartilage.	Muscular process of Opposite Arytenoid Cartilage	→ closes the Vocal ligaments.
Thyro Arytenoid.	From the Thyroid Cartilage.	Musalar Process of Opposite Arytenoid Cartilage.	→ Closes the glottis.

Muscle	Origin	insertion	Action
Aryepiglotticus	The the Continuation fibres of Aryetoid Cartilage	to the Epiglotticus Cartilage.	→ closes the Vocal folds
Thyro Epiglotticus	form the Continuation fibres of Thyro Arytenoid Muscles	to the epiglotticus Cartilage.	→ Opens the glottis.
Vocalis	from the Muscular process of tongue	to the Vocal folds	→ Relaxes the Vocals folds.

* the Membranes are thyroid Membrane, Cricoid Membrane.

8.) T.M.J

a.) → They are Variety of Synovial Joint.

→ they Structurally Bicondylar Variety

→ they are Junctionally Hindge Joint.

→ They have 2 Articulating Surfaces

a.) upper Articulating Surfaces.

b.) inferior Articulating Surfaces.

upper Articulating Surfaces

→ The Mandibular Fossa

→ Ant. Articulating tubercle.

inferior Articulating Surface

→ the Head of the Mandible

b.) ligaments

→ there are 4 types of ligaments.

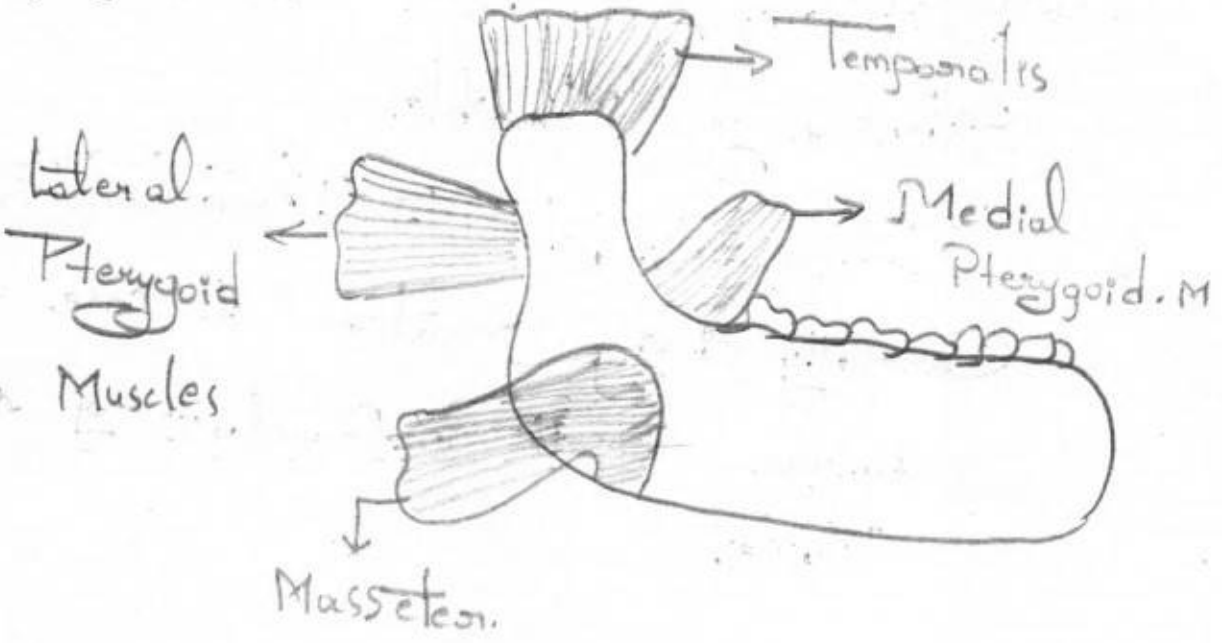
1.) Fibrous Capsule.

2.) Sphenomandibular ligament

3.) lateral temporo Mandibular ligament

4.) Stylo Mandibular ligament.

c.)



→ The Depression of Mandible by lateral Pterygoi with help of digastric, geniohyoid, Styloglossus. Muscle

→ Elevation by the Medial Pterygoid & ~~lateral~~ Massetric Muscles., temporalis.

→ Protrusion is by Medial Pterygoid, lateral Pterygoid

→ Retraction is by lateral Pterygoid, Masseteric Muscles.

→ these Muscles help in Mastication Purpose.

d) Applied Aspect

→ Disbociation of TMJ - due to Over Extension of Mandible.

→ Nerves related to TMJ should be Preserved Carefully during operations if case of any damage results in Paralysis of Associated Muscles.

Ansa cervicalis

* it is a narrow tube.

applied aspect

carotid sinus

* If a patient getting carotid sinus

↓

they are hypersensitive

↓

if they are suddenly turn head

↓

then it blood pressure decreased.

4) * thyroid gland is a helps in somatic and psychic growth of individuals

* they also help in calcium metabolism.

* they are developed 3rd week of intra uterine life of embryo. gland originates

* they have endodermal thickening called thyroglossal duct.

* by 7th week it bifid and separates and form thyroid glar

Mid- Course improvment

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH, OCTOBER-2021

Duration:30 Min. **Date:18.10.2021**

P. G. Lakshmi
Roll No :- 67

(Tick the correct answer with Pen) SECTION: C (MCQ) (1 x 25= 25)

13

(SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)

1. **Inferior Petrosal sinus passes through**
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. **Circle of willis is formed by**
   a) Anterior cerebral artery C) middle cerebral
   b) Anterior communicating d) all of above.
3. **In an adult spinal cord ends at level of**
   a) Lower border of L1 c) Lower border of L3
   b) Lower border of L2 d) Lower border of S2
4. **The skull at birth is devoid of.**
   a) Metopic suture
   b) Mastoid process
   c) Glabella
   d) All of above.
5. **Joint between tooth and it's socket is**
   a) Primary cartilaginous joint c) Pivot joint
   b) Gomphosis d) Ellipsoid joint
6. **Spinal accessory nerve supplies**
   a) Orbicularis oris c) Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. **Vertebral artery does not passes through the foramen transversarium of**
   a) C7
   b) C6
   c) C2
   d) C1
8. **Organ of corti is located within**
   a) Cochlear c)Semicircular duct
   b) Utricle d) saccule
9. **Crows feet is caused by the contraction of .**
   a) Orbicularis occuli c) orbicularis oris
   b) Frontalis d)procerus
10. **Artery Of suboccipital triangle is**
    a) External carotid c) vertebral
    b) Posterior auricular d) Maxillary
11. **Internal Acoustic meatus transmits**
    a) 7^{th} & 8^{th} c) 6^{th} & 7^{th}
    b) 8^{th} & 9^{th} d) 9^{th} & 10^{th}

Dr. Anil Kumar, MDS
Professor
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallur, Mahe -673310
UT of Puducherry

12. Subaceous glands belongs to
    a) Apicrine c) Apocrine
    b) Holocrine d)Merocrine
13. A injury to middle meningeal artery leads to
    a) Extradural hemorrhage
    b) Subdural hemorrhage
    c) Subarachnoid hemorrhage
    d) All of above
14. The Nerve related to Pyriform fossa
    a) External laryngeal . c) internal laryngeal
    b) Recurrent laryngeal nerve d)vagus nerve.
15. Fascia forming the floor of Posterior triangle is
    a) Investing layer c) Buccopharyngeal fascia
    b) Pretracheal d) prevertebral .
16. Tensor of vocal cord is.
    a) Vocalis . c) posterior cricoarytnoid
    b) Cricothyroid d) Thyroarytenoids
17. All the following nuclei are present in cerebellum except.
    c) Dentate c) fastigeous
    d) Emboliformis d) tractus solitarius
18. Lower lip develops from
    a) Maxillary process c) mandibular process
    b) Frontonasal process d) palatal process
19. Only cranial nerve seen in diagastric triangle is
    a) Hypoglossal c) accessory
    b) Glossopharyngeal d) vagus.
20. Soft palate veins drains into plexus
    a) Carotid c) tonsillar
    b) Periapical d) pharyngeal
21. Myoepithelial cell shape is
    a) Cuboidal c) stellate
    b) Columnar d)Pear
22. Stapedius is supplied by nerve
    a) 5th c) 8th
    b) 7th d) 9th
23. Masseter is crossed by vein
    a) Maxillary c)transverse fascial
    b) Lingual d)external jugular
24. Anterior ligament of malleus is developed from -
    a) 1st arch
    b) 2nd arch
    c) 3rd arch
    d) 4th arch
25. Promontry in the medial wall of Middle ear is produced by
    a) 1st turn of cochlea
    b) Vestibule
    c) Semicircular canal
    d) None

Mid- course improvement Roll No: 43

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FIRST YEAR

Mid-course improvement 2020

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
U. T. of PUDUCHERRY - PIN 673 310

INTERNAL ASSESSMENT BOOK
SUBJECT: ANATOMY

Tick Questions Attempted:

Q_1 ☑ Q_2 ☑ Q_3 ☑ Q_4 ☑ Q_5 ☑ Q_6 ☑ Q_7 ☑ Q_8 ☐

Q_1	4½	10	
Q_2	6	10	
Q_3	3	5	
Q_4	2	5	
Q_5	[illegible]	5	
Q_6	1	5	
Q_7	2½	5	
Q_8	NA	5	

No. of Additional sheets used.

☐

TOTAL 21 45

Total in Words

Evaluated by:

Name of the candidate: NAVYA KEERTHI. T. k

Reg. No: 61

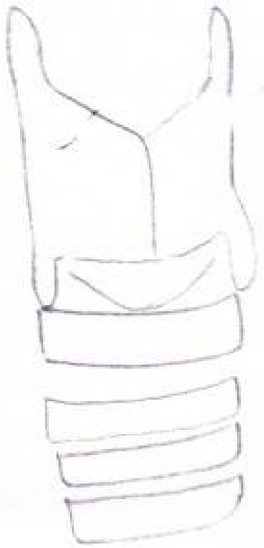
Signature

Date: 18.10.2021

Dr. J. Vishnu Priya 18/10

Signature of Invigilator

1) Larynx is a cartilageneous organ extending from the ... of pharynx to the trachea
Usually the diameter of trachea and length is more in male ... female.
Larynx is made up of cartilages, ligaments and membra...

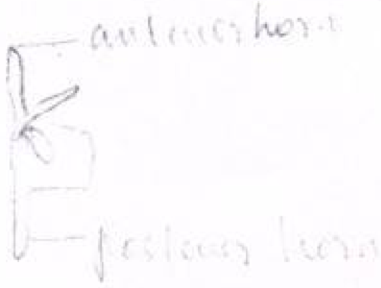


In the anterior aspect thyroid cartilage is the largest ...
In the posterior aspect arytenoid cartilage is the large...

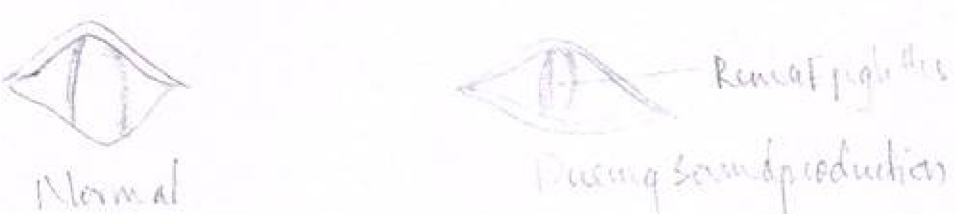
: Cartilages of larynx :- Thyroid cartilage
Epiglottis
Cricoid cartilage
Arytenoid cartilage
Cuneiform cartilage } Not easily vi...
Corniculate cartilage

Larynx is the organ that contain the voice b

(a) The Inlet of the larynx is called the glottis i is covered by a cartilagenous flap { leaf like st called epiglottis. This epiglottis remain close during this epiglottis is attached to ~~thyroid~~ arytenoid ca by a ligment aryepiglottic fold



b) Interior to the larynx it contains the voice box



attatched anteriorly to the posterior side of thyroid and posteriorly to the anterior side of arytenoid

The gap between is called Rima epiglotti this space decrease during the sound produced

This fibres and ligaments together

(c) Muscles attached to larynx are 9.

Thyrohyoid – Hyoid bone to thyroid cartilage

~~Cricothyroid~~ – ~~Cricoid~~

Sternothyroid – Sternum to thyroid cartilage

Cricohyoid – ~~Hyoid~~ Hyoid bone to cricoid cartilage.

Thyroarytenoid – lateral thyroid cartilage

~~Thyropharyngeal~~

~~Cricopharyngeal~~

Membranes are :- Thyroarytenoid membrane.

Cricothyroid membrane.

2). Tempero Mandibular Joint (TMJ)

(a)

Type : Synovial joint

Subtype :- Bicondylar variety

Functionaly modified Hinge joint

~~They are~~ to contains two ~~cutif~~ articular surface :

Superior ~~Anterior~~ articular Surface :- Anterior clou plane joint capsule menbroid fossa

Inferior ~~posterior~~ articular surface :- Head of mandib

The condylar part of mandible articulates ~~with~~ in mandibular fossae in base of the Skull.

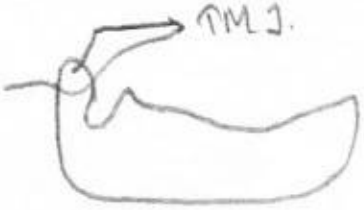
The articulating surfaces does not come into cont

It is separated by the articulating disc

Articulating disc divides it into two champers.

meniscotemporal ~~Tempuroethamodal~~ chamber and meniscoma ~~mandibuloett~~ chamber

They are called bicondylar variety as bothe the co joints on either side works entegratedly



(b) ligaments of TMJ

Articular disc

Joint capsule.

~~Ethmoid~~ ~~Pterygoethmoidal ligament~~

Sphenoethmoidal ligament.

Pterygomandibular ligament.

c).

Muscle	Origin	Insertion	Nerve supply	Movement
Temporalis muscle (Fan shaped)	Inferior part of temporal line above zygomatic arch	muscle fibres descend down to form form a ~~ligament~~ Tendon deep to the zygomatic arch.	Temporal branch of mandibular nerve.	closing of mandible Retraction of mandible Side to side movement
Masseter (quadrangular shaped).	Superficial layer: (largest) anterior 2/3 of zygomatic arch. Inferior: Inferior border of Zygomatic arch.	anterior border of ramus of mandible and lateral pterygoid fossa	masseteric nerve.	closing of mandible main muscle of mastication

Medial Pterygoid (quadrangular shaped).	Inferior (large) medial part of lateral pterygoid Superior (small) maxillary tuberosity.	Neck of mandible	Nerve to medial pterygoid	Retraction mandible - protection with Lateral
Lateral Pterygoid (Triangular Shaped)	lateral pterygoid plate greater wing of sphenoid	Ramus of mandible.	Pterygoid branch of mandibular nerve.	protraction mandible opening of protection with Medial Pterygoid

Accessory masticatory muscles:-

Supra hyoid muscles

Infra hyoid muscles.

Supra hyoid muscles :- ~~also~~ Glossopharyngeal.

Stylohyoid.

Sphenohyoid

Thyrohyoid

Infra hyoid muscle :-

omohyoid.

mylohyoid.

d) Applied Anatomy: Irreducible joint

Dislodgement of mandible.

degeneration of synovial fluid

Damage to the nerves.

SECTION - B

3) Tongue develops in the 4-8 weeks of development.
A swelling appears on the first pharyngeal arch which is call lingual swelling

Later this lingual swelling divided to two by an overlying s: called tuberculum impar

posterior to this swelling cells proliferates and descends down to for thyroglossal duct from which the thyroid gland de. This is demarcated by Foramen caecum

Anterior 2/3rd of the tongue is developed by the fusion of the tuberculum impar and two lateral ~~sw~~ lingual swe

∴ The anterior 2/3rd of the tongue is developed from the 1st arch or mandibular arch and is supplied by the nerv mandibular nerve

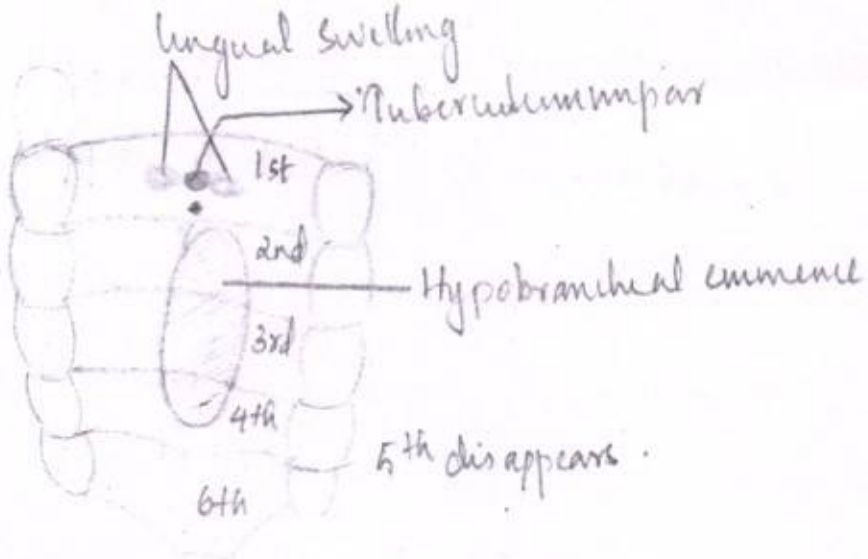
later on a swelling appears ~~on the~~ ~~sec~~ covering 2nd 3rd ar arches. This swelling is called chorda tympani or. copula
It is from this the posterior 1/3rd develops.
~~The~~ ~~cxtxd~~ epithelium of 2nd arch is overlayed by the growth of 3rd arch. ∴ the posterior 1/3rd develops from the 2nd arc

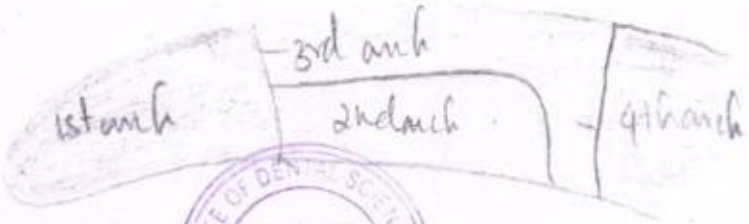
And is supplied by Chorda tympani and Hypoglossal nerve.

The posteriormost part of the tongue develops from the fourth and is supplied by vagus nerve

The joining point of anterior 2/3rd and posterior 1/3rd marked by 'V Shaped' Sulcus terminalis

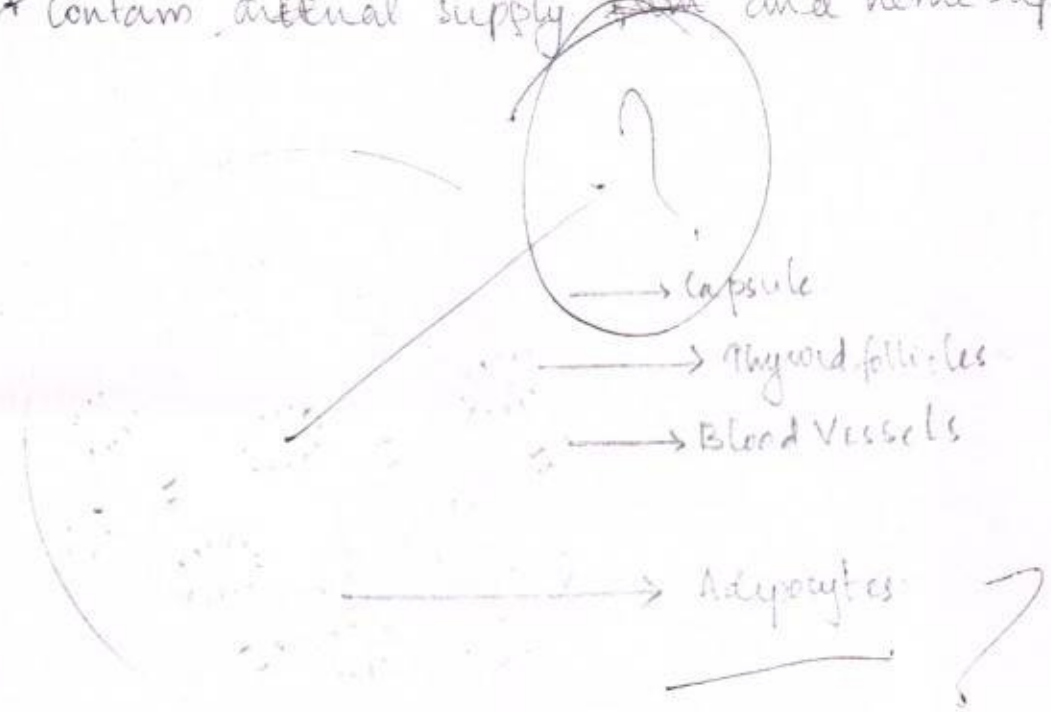
* The mucosa of the tongue develops from the Endoderm of f
* Musculature of tongue develops from the Occipital myoto
* papillas develops from the mesenchymal cells of - first an circumvallate papillae and later migrate to anterior por of Sulcus terminalis





ii) Thyroid gland -

* It is an endocrine gland that ~~secretes~~ pour its secretion directly into the blood stream. ∴ it does not contain ducts.
* The secretion are produced by follicular cells.
* The matrix contain adipose ~~tissue~~ cells.
* It is covered by capsule.
* lined by ~~cuboidal cell~~ base cells. basal cuboidal cells
* contain arterial supply ~~from~~ and nerve supply.



5) Primitive Streak

* Primitive streak is a transient structure that appears in the blastula during the early stage of embryonic development

* Formation of primitive streak is an early indication of embryonic development.

* In the ~~fifth~~ fifteenth day of gestation after the for[mation] of prochordal plate there occurs an active proliferat[ion] of prochordal plate there occurs an active proliferation, migration and invagination of pluripotent cells post to the caudal part of embryonic disk.

* The proliferating cells forms a bulging into the amniotic cavity. this bulging is called the primitive streak

* This proliferates along the vertical axis between the epibl[ast] and hypoblast with raised lateral walls.

* Primitive streak from which the development of notoch[ord] and 3rd germinal layer (intra embryonic layer) oc[curs]

* Due to elongation primitive streak acquires a linear st[ructure]

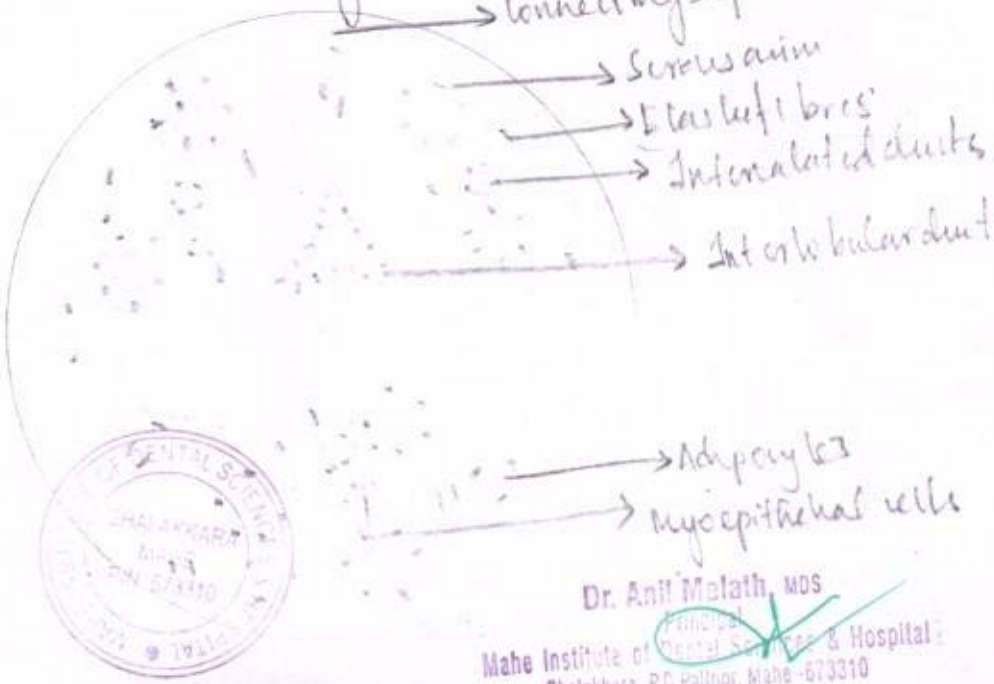
* Due to the elongation the embryonic disc changes from circular to oval.

Extraocular glands

7) Serous salivary gland (parotid gland)

* Serous salivary gland contains serous acini
* Serous acini are pyramidal in shape with basal nuc
* contain zymogen granules at the apex (basophilic).
* serous acini contain small lumen.
* Duct — Stensons duct.

* Contain intercalated and interglobular duct
* Interlobular duct in connecting septa
* They contain myoepithelial cells which helps in secretion
* Its duct opens ~~into~~ at the level of upper third molar
* located in the parotid region.
* Secretion is watery.

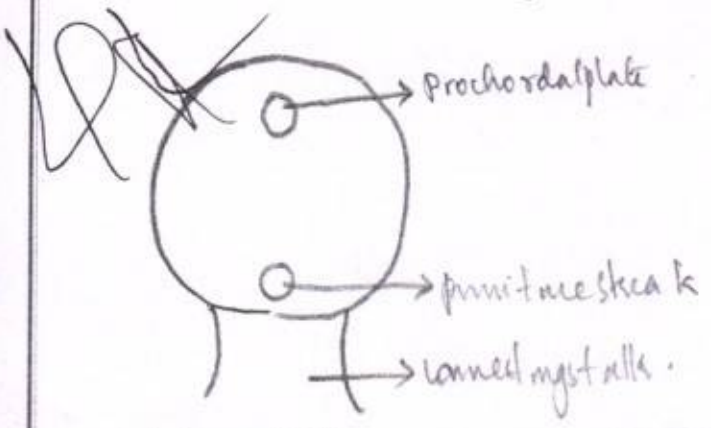


+ Due to the development and elongation of prochordal plate and primitive streak embryonic disc change shape from oval to pear sha

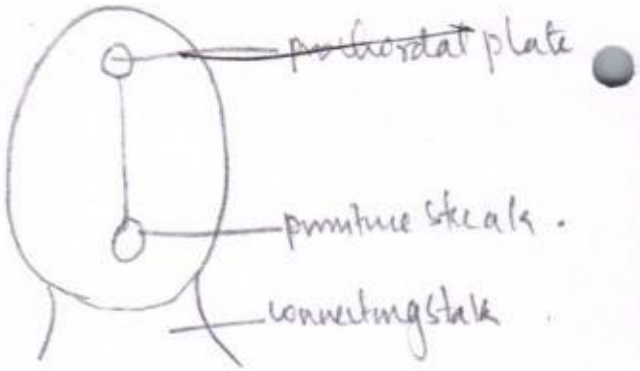
+ The elongation of the primitive streak determines the cranio-cau axis and determines the left and right side of the embryo.

Significance :- Determines the craniocaudal axis.
Establishes the Bilateral symmetry.
Formation of notochord.
Formation of intra embryonic layer.
Indication of gastrulation.

Fate : At the end of 3rd week primitive streak starts regression and degenerates at the 26th day.
∴ They are called transient structure.



(I) Round shape



(II) Oval shape

(III) Pear shape

6) Extraoccular muscles.

Muscles associated with the orbicularis Oculi
i.e. eyes.

Extra occular muscles are :-

Superior longitudinal
Inferior longitudinal
transverse longitudinal
} oculomotor. (movement of eyes)

lateral rectus
medial rectus }

Levator palpabral } opening and closing of eyelids

Mid-course improvement

P. Lizaa
Roll No :- 68

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Duration:30 Min. **Date:18.10.2021**

16

(Tick the correct answer with Pen) SECTION: C (MCQ) (1 x 25= 25)

(SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)

1. **Inferior Petrosal sinus passes through**
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. **Circle of willis is formed by**
   a) Anterior cerebral artery C) middle cerebral
   b) Anterior communicating d) all of above.
3. **In an adult spinal cord ends at level of**
   a) Lower border of L1 c) Lower border of L3
   b) Lower border of L2 d) Lower border of S2
4. **The skull at birth is devoid of.**
   a) Metopic suture
   b) Mastoid process
   c) Glabella
   d) All of above.
5. **Joint between tooth and it's socket is**
   a) Primary cartilaginous joint c) Pivot joint
   b) Gomphosis d) Ellipsoid joint
6. **Spinal accessory nerve supplies**
   a) Orbicularis oris c) Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. **Vertebral artery does not passes through the foramen transversarium of**
   a) C7
   b) C6
   c) C2
   d) C1
8. **Organ of corti is located within**
   a) Cochlear c)Semicircular duct
   b) Utricle d) saccule
9. **Crows feet is caused by the contraction of .**
   a) Orbicularis occuli c) orbicularis oris
   b) Frontalis d)procerus
10. **Artery Of suboccipital triangle is**
    a) External carotid c) vertebral
    b) Posterior auricular d) Maxillary
11. **Internal Acoustic meatus transmits**
    a) 7th & 8th c) 6th & 7th
    b) 8th & 9th d) 9th & 10th

Dr. Anil Mohanth, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, PO Pallur, Mahe -673310
UT of Puducherry

12. Subaceous glands belongs to
    a) Apicrine c) Apocrine
    b) Holocrine d)Merocrine
13. A injury to middle meningeal artery leads to
    a) Extradural hemorrhage
    b) Subdural hemorrhage
    c) Subarachnoid hemorrhage
    d) All of above

14. The Nerve related to Pyriform fossa
    a) External laryngeal . c) internal laryngeal
    b) Recurrent laryngeal nerve d)vagus nerve.
15. Fascia forming the floor of Posterior triangle is
    a) Investing layer c) Buccopharyngeal fascia
    b) Pretracheal d) prevertebral .
16. Tensor of vocal cord is.
    a) Vocalis c) posterior cricoarytnoid
    b) Cricothyroid d) Thyroarytenoids
17. All the following nuclei are present in cerebellum except.
    c) Dentate c) fastigeous
    d) Emboliformis d) tractus solitarius
18. Lower lip develops from
    a) Maxillary process c) mandibular process
    b) Frontonasal process d) palatal process
19. Only cranial nerve seen in diagastric triangle is
    a) Hypoglossal c) accessory
    b) Glossopharyngeal d) vagus.
20. Soft palate veins drains into plexus
    a) Carotid c) tonsillar
    b) Periapical d) pharyngeal
21. Myoepithelial cell shape is
    a) Cuboidal c) stellate
    b) Columnar d)Pear
22. Stapedius is supplied by nerve
    a) 5^{th} c) 8^{th}
    b) 7^{th} d) 9^{th}
23. Masseter is crossed by vein
    a) Maxillary c)transverse fascial
    b) Lingual d)external jugular
24. Anterior ligament of malleus is developed from -
    a) 1^{st} arch
    b) 2^{nd} arch
    c) 3^{rd} arch
    d) 4^{th} arch
25. Promontry in the medial wall of Middle ear is produced by
    a) 1^{st}turn of cochlea
    b) Vestibule
    c) Semicircular canal
    d) None

Mid-course improvment 2020-21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: HUMAN ANATOMY

Tick Questions Attempted :

Q_1 ☑ Q_2 ☑ Q_3 ☑ Q_4 ☑ Q_5 ☑ Q_6 ☐ Q_7 ☑ Q_8 ☑

Q_1	3½	10	Q_5	4½	5
Q_2	2½	10	Q_6	NA	5
Q_3	5	5	Q_7	3	5
Q_4	NA	5	Q_8	1½	5
			TOTAL	20	45

No. of Additional Sheets used.

NIL

Total in Words

Evaluated by:

Name of the candidate : Ibthisam

Reg. No : Roll No: 43

Signature

Date : 18.10.2021

Dr. J. Vishnu Sai Iyer 18/10/21

Signature of Invigilator

Dr. Anil Kotrath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallock, Mahe -673310
UT of Puducherry

B :- Short Notes

Ans : 3) Tongue is a muscular organ situated in the oral cavity. The nerve supply of tongue is :-

Motor supply :

- All the intrinsic and extrinsic muscles of tongue, except the palatoglossus is supplied by the hypoglo nerve.
- The palatoglossus is supplied by the cranial root accessory nerve through pharyngeal plexus.

Sensory supply :

- Anterior 2/3rd of the tongue - (except circumvallate papilla Lingual nerve is the nerve of general sensation a Chorda tympani is the nerve of taste.
- Posterior 1/3rd of the tongue - (including circumvallate pap The glossopharyngeal nerve is the nerve for both general sensation and nerve of taste.
- Posterior most part of tongue -
  It is supplied by the vagus nerve through the laryngeal branch.

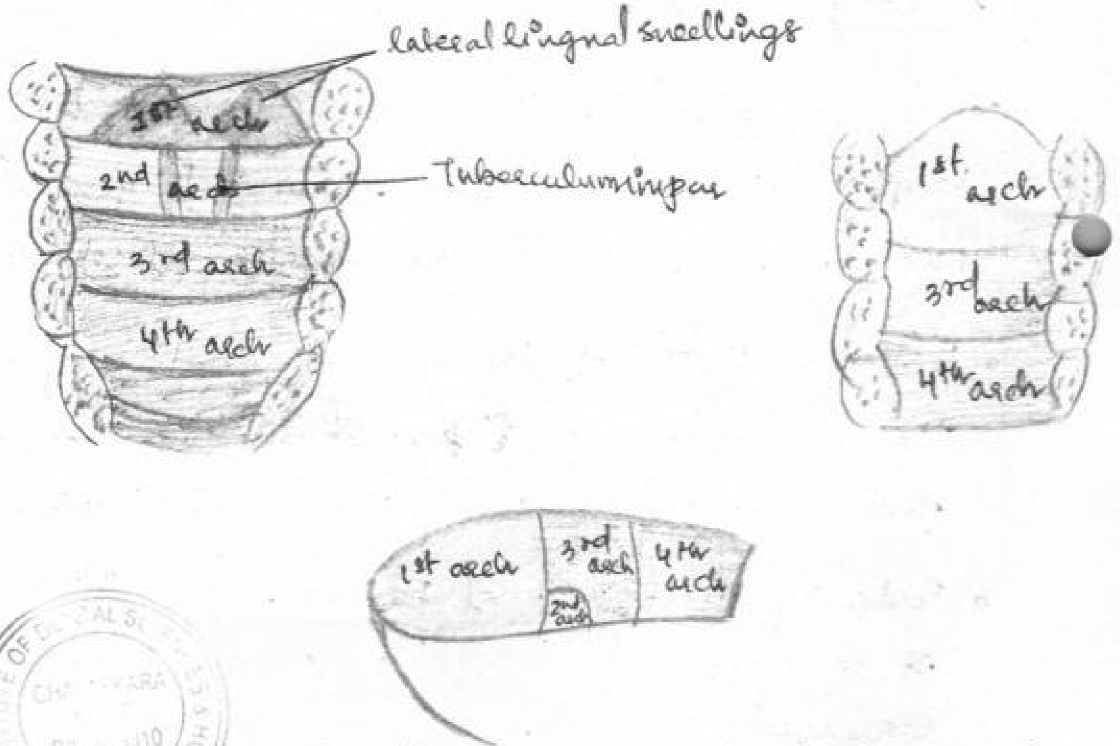
Now, on co-relating with the development of tong

- Anterior 2/3rd of the tongue is developed from the two lateral lingual swellings of the 1st pharyngeal arch which is the mandibular arch - and tuberculum impar. The nerve supply is by the lingual nerve (nerve of 1st a

- The posterior 1/3rd of the tongue is developed from anoth swelling called hypobranchial eminence which grows from 2nd arch to the 3rd arch. Therefore, the nerve supply is glossopharyngeal nerve.

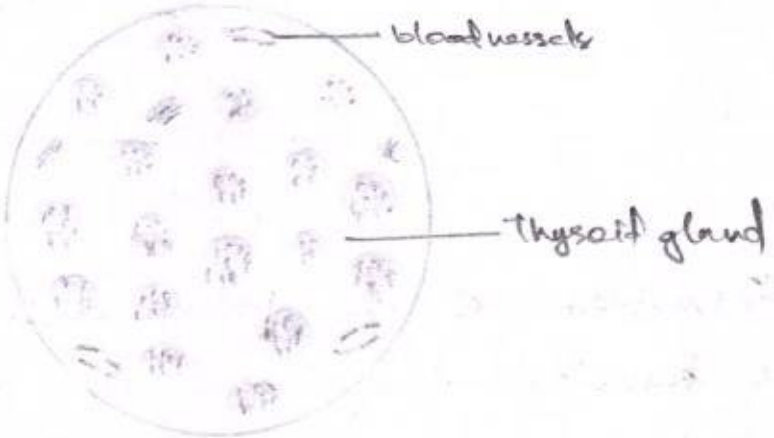
- The posterior most part is developed from the 4th pharyngeal arch.

- The muscles of the tongue are developed from the occipital myotomes.



- Development of various parts of tongue from pharyngeal arches -

Ans: 4) Microscopic structure of thyroid gland.



Ans: 5) Primitive streak

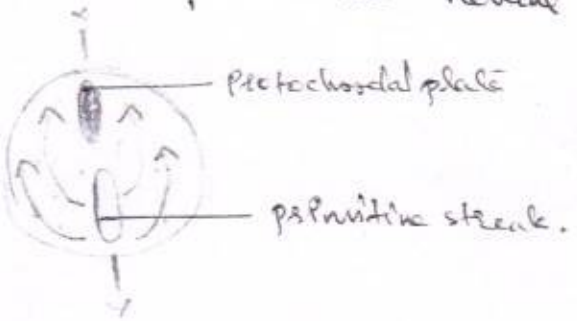
Primitive streak is the transient stage in the blastula during the embryonic development.

On the 10th week of gestation; the differentiation, migration and invagination of pluripotent cells take place which forms the primitive streak.

The primitive streak is the primary organizer as it induces the formation of notochord and intraembryonic mesoderm.

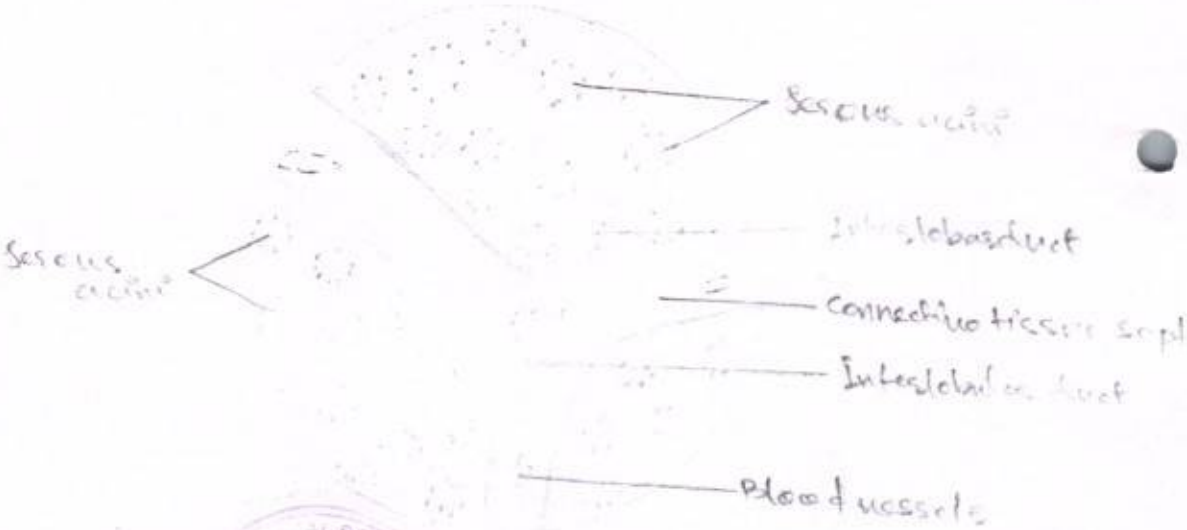
On the later stages of development, the primitive streak

starts to elongate and develop in the neural tube.



formation of the primitive streak is identified as a transient stage since its development is occured in two stages of embryonic development. Primitive streak is seen in the neural tube along with the prochordal plate.

Ans: 7) Serous salivary gland



In serous salivary glands the following structures are seen:-

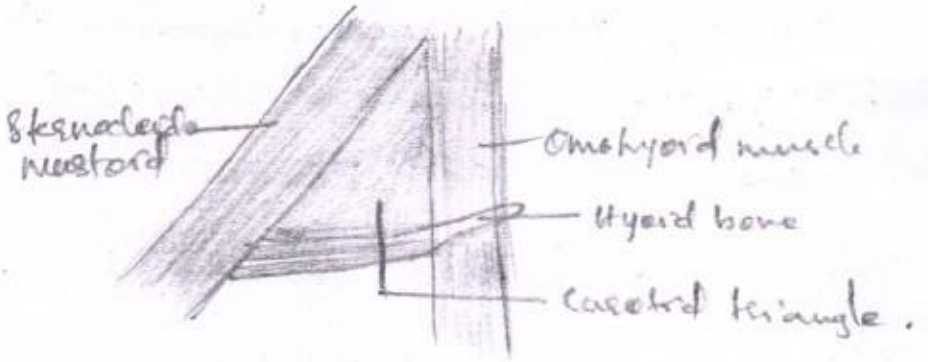
- Serous acini (Abundant)
- Connective tissue septa with intercalated duct

- Serous salivary gland produces / secretes saliva into the oral cavity. The structure serous acini are seen which are small and pyramidal in shape.
- The parotid gland is an example for serous salivary gland.
- The serous secretions are transported through the ductal systems which are interlobular and striated interlobar ducts.
- When compared to the mucous salivary glands (mucous acini), the serous acini are small and more in number. They are not as darkly stained as mucous acini.

Ans: 8) Carotid triangle

The carotid triangle is one of the triangles of the anterior triangles of neck. It is bounded by the following structures:

1) Anterior border of sternocleidomastoid
2) posterior belly of omohyoid muscle
3) Floor / base of triangle by the clavicle.
4) Roof by the base of mandible.



The carotid triangle is supplied by :

1) Internal carotid artery
2) Internal jugular vein
3) Vagus nerve (accessory root of vagal nerve)

These structures are embedded in a sheath known as the carotid sheath. It also include the common carotid artery.

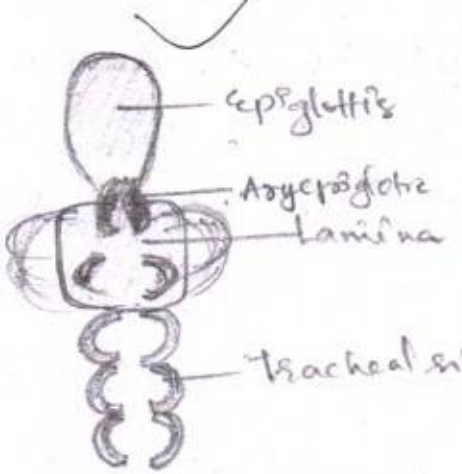
A – Long essay

Ans: 1) Larynx is the voice box in human beings. It produ sound and also allows the passage of air. Larynx is situated in between the root of the ton and trachea. It is a skeletal framework of cartil which are connected by ligaments, joints and the movements are controlled by various muscles.

Inlet of larynx;

Opening of inlet of larynx – epiglottoaryfenoid

Closing of inlet of larynx – Thyroaryfenoid



Larynx is made up of 9 cartilages of which three are unpaired and 3 are paired.

→ epiglottis, thyroid } unpaired
→ cricoid
→ cornicular
→ cuneiform etc. } paired.

Muscles of larynx.

- The muscles of larynx included posterior cricoarytenoid which is the only abductor of larynx.
- The vocalis is the relaxor of larynx.
- The other muscles which perform various functions such as elevation, depression, adduction etc are:-
  lateral cricoarytenoid, aryepiglottis, epiglottis, oblique arytenoid, transverse arytenoid, cricothyroid etc.
- The membrane of larynx consists of folds which are aryepiglottical fold, vestibular fold etc.

At puberty, the larynx in males will form an angle of thyroid cartilage (adams apple) and the voice produced will be hard and low pitched.
In females at these stage, the changes are not prominent but voice becomes high pitched and soft.

The passage of food into the windpipe is controlled by epiglottis. The condition in which a person is unable to swallow is known as dysphag

Ans: 2) T.M.J

The temperomandibular joint is a type of synovial joint of condylar variety.

The articular surfaces are :-

1) Mandibular arch
2) Articular part of temporal bone

Temperomandibular joint helps in various movements of the jaw in humans.

→ elevation of the mandible
→ Protraction of jaw
→ Masticatory movements. etc.

The muscles of mastication plays the role in movements of the T.M.J.

→ Temporalis
→ Masseter
→ Lateral pterygoid
→ Medial pterygoid.

The paralysis of T.M.J results in the impaired function of T.M.J such as elevation and other mov

Dr. Anil Mefath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe-673310
UT of Puducherry

Mid-course improvment

Navyakeerthi K
Roll No: 61

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH,OCTOBER-2021

Duration:30 Min. **Date:18.10.2021**

16

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Dr. Anil Melath, MDS
Principal
Maha Institute of Dental Sciences & Hospital
Chalakkara, P.O. Mahe-673310
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Mid-course improvement 2020-21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: ANATOMY

Tick Questions Attempted :

Q_1 ☐ Q_2 ☐ Q_3 ☐ Q_4 ☐ Q_5 ☐ Q_6 ☐ Q_7 ☐ Q_8 ☐

Q_1	1½	10	Q_5	4½	5
Q_2	5½	10	Q_6	1	5
Q_3	4½	5	Q_7	3	5
Q_4		5	Q_8	5½	5

No. of Additional Sheets used.

TOTAL 25½ 45

Total in Words

Evaluated by:

Name of the candidate : S. Mohanarangan Alias Vidyadhar.

Reg. No : 54.

Signature S. Mohanarangan

Date : 18/10/21.

Dr. J. Vishnu Priya 18/10/21
Signature of Invigilator

Dr. Anil Mehta, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O.Pallour, Mahe -673310
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Section- A

2) TMJ.

a) type & Articular surface.

Type - Synovial joint

variety - condylar variety

Articular surface

Superior articular surface.

Anterior surface of tubercle
Head of the mandibular fossa.

Inferior articular surface.

Lingular of the mandible

b) Ligaments

Fibrous capsule.

Temporomandibular capsule.

Sphenomandibular ligament

Stylomandibular ligament

1. Fibrous capsule

it is attached above the intraarticular tubercle and it is loose above the articular surface and tight below the neck

2. Temporomandibular capsule.

It surfaces and strengthins the capsule of the lateral part. it is attached below the neck of the mandible

3. sphenomandibular ~~capsule~~ ligament.

It is also called accessory ligament it is attached superiorly by spine of sphenoid and inferiorly by lingula of the mandible.

It is laterally attached to,

1. Maxillary artery
2. Auriculotemporal nerve.
3. Lateral pterygoid plate

It is medially attached to ;

1. chordatympani nerve
2. Pharynx

4. Stylomandibular ligament.

It is also a accessory ligament. It separates the parotid gland from Submandibular and sublingual gland. It is attached superiorly by styloid process. and laterally by mandibular process.

Disc

oval / saw shaped disc divides into upper meniscotemporal and meniscomandibular compartments.

c) Movements

Temporalis. (Fan shaped muscle)

* Elevation
* Retraction.

Masseter. (Quadrilateral shape).

* Elevation
* Protraction

* Lateral pterygoid.

* Depression
* protraction.

Medial pterygoid

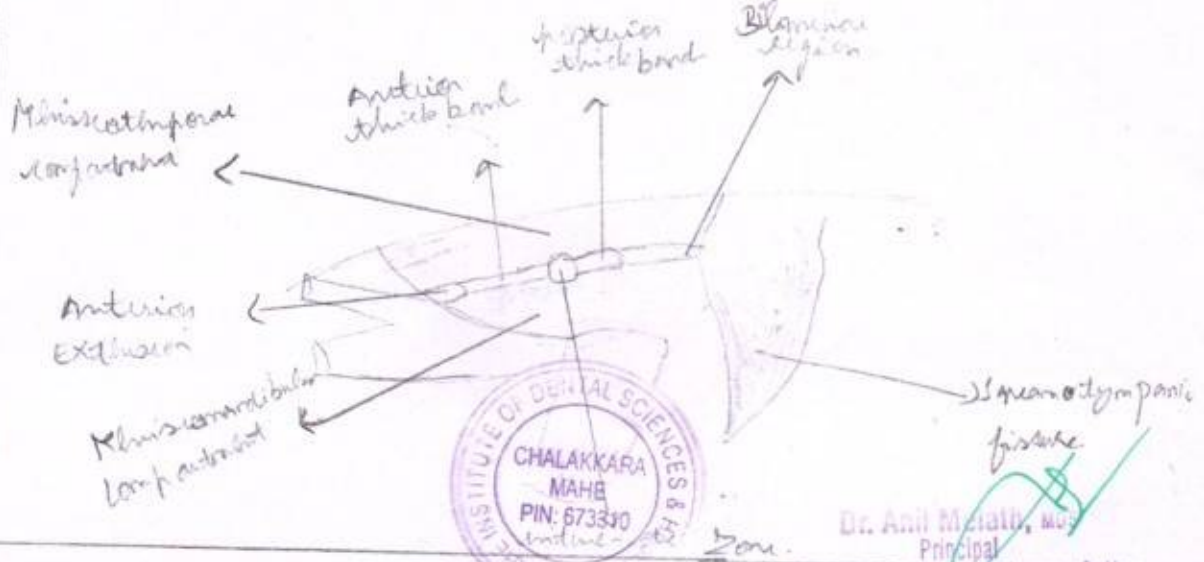
* Elevation,
* protraction

d) Applied Anatomy

Dislocation of capsule causes Abnormal movements. Also causes Malocclusion.

It causes pain during opening and closing of mouth.

Diagram.



Section- B

3 Nerve supply of tongue.

MOTOR SUPPLY.

All the intrinsic and extrinsic muscle of tongue are supplied by Hypoglossal nerve except palatoglossal muscle that is supplied by cranial root of accessory nerve through pharyngeal plexus

SENSORY SUPPLY.

Anterior 2/3 of the tongue: ~~is lingual~~

* nerve supply for taste is supplied by lingual nerve

* nerve supply of sensation is supplied by chorda tympanic nerve.

* Except circumvallate papilla.

Posterior 1/3 of tongue:

Both taste and sensory is supplied by Glossopharyngeal nerve which supplies

Circumvallate papillae

posterior most of tongue

This part of tongue is supplied by Vagus nerve

Development of tongue

Anterior 2/3 of tongue

It is formed by 2 lingual swellings and one tuberculum impar. tuberculum impar soon disappears. It is supplied by lingual and chordatympani nerve. It is mainly developed from 1st Arch.

Posterior 1/3 of tongue

It is formed by hypobranchial Eminence. by the 3rd arch. It is supplied by Glossopharyngeal nerve.

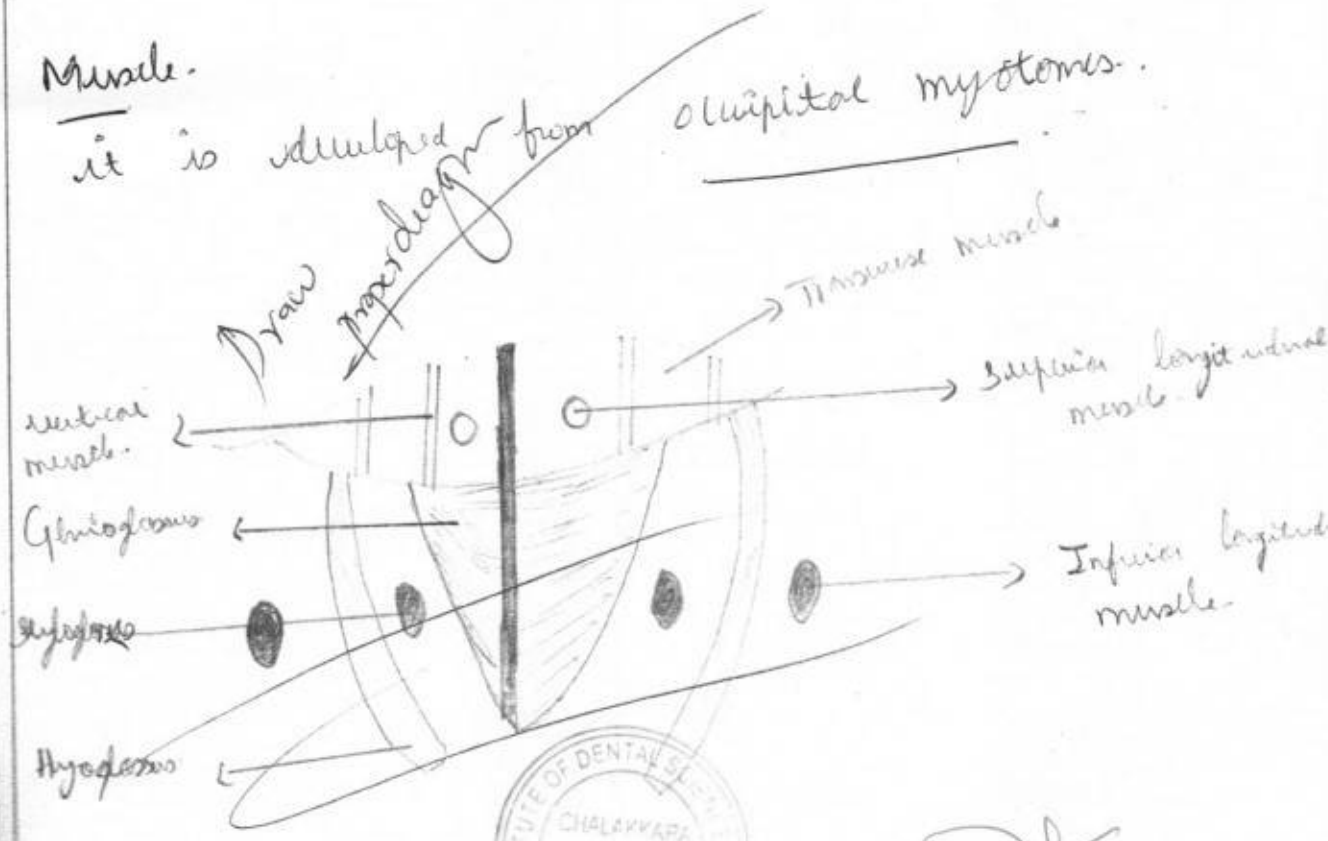
Posterior most.

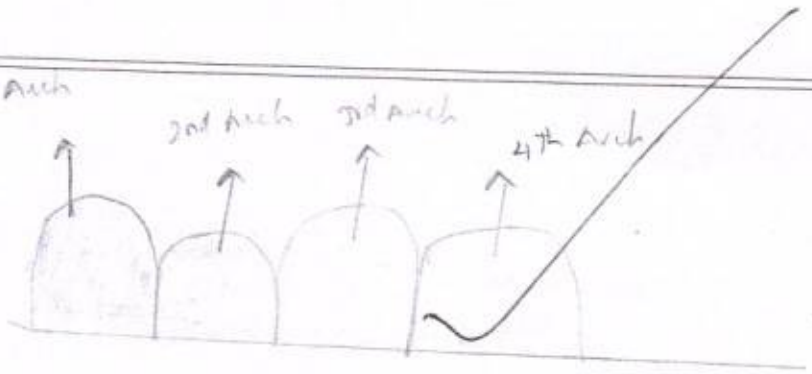
It is formed from 4th Arch. it is supplied by Vagus nerve.

Muscle.

it is developed from occipital myotomes.

Draw appropriate diagram

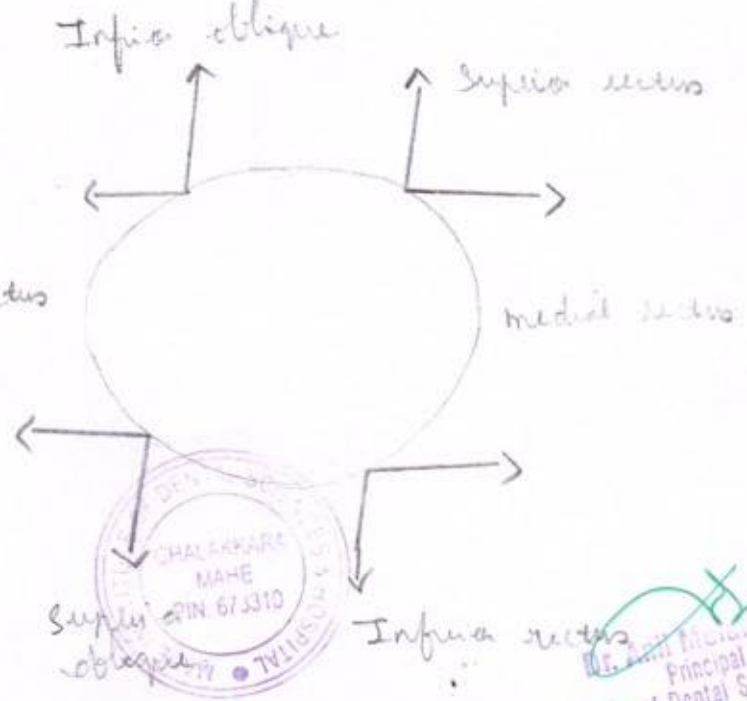




6) Extraocular muscles

These are seven extraocular muscles

1. Superior rectus
2. Inferior rectus
3. Medial rectus
4. lateral rectus
5. Inferior oblique
6. Superior oblique
7. levator palpebral superioris.

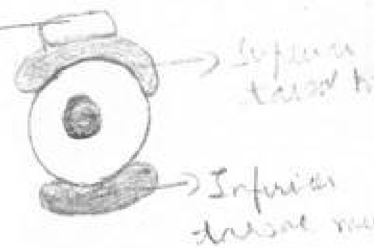


(1) Levator palpebrae superioris

It is a muscle which involves in the movement of uppereyelid.

It is attached above by superior tarsal muscle.

origin from sphenoid bone



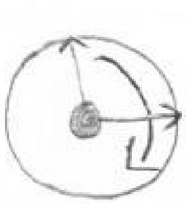
Nerve:- Occulomotor nerve.

(2) Superior rectus.

It origins from superior part of common tendinous ring / "Annulus of Zinn" and inserts into the anterosuperior part of sclera of the eye.

It is involved in,

1. Elevation.
2. adduction.
3. Intorsion (medial).



Nerve:- Oculomotor nerve

(3) Inferior rectus

It origin from inferior part of common tendinous ring and inserts into the anterior part of sclera of the eye.

It is involved in,

1. depression
2. adduction
3. Extrosion (lateral)

Nerve: Oculomotor nerve

(4) medial rectus

It origin from medial part of common tendinous ring and inserts into the medial part of sclera of the eye.

It is involved in

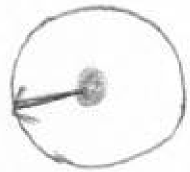
1. adduction

Nerve. Oculomotor nerve.

(5) lateral rectus

It origin from the lateral part of common tendinous ring and inserts into the antero lateral part of sclera of the eye

It is involved in,



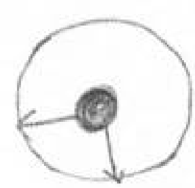
1. abduction

Nerve: Abducence nerve.

(6) Inferior ~~rectus~~ oblique

It origins from sphenoid bone, and takes an angular approach to the posterior side of the eye. It is then passes through the pulley called vestibule and it reaches the sclera of the eyeball.

It is involved in,



1. depression
2. abduction.

Nerve: Trochlear Nerve.

Superior oblique -

It is originated from medial orbital floor of the eye.

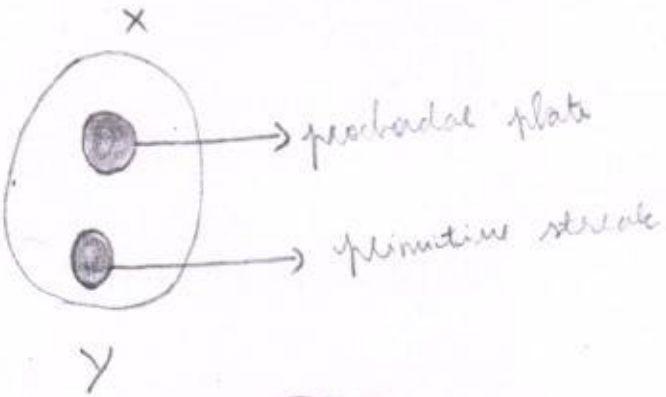
It is inserted in :

1. abduction
2. Elevation.

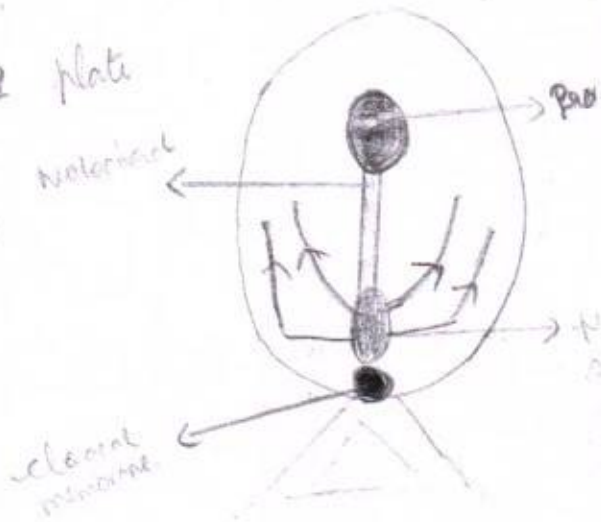
Nerve: Oculomotor nerve.

5. Primitive streak.

It is the cells of the epiblast at the caudal end of the disc.



(2)



(3)

It is a transient structure seen in the epiblast during embryo development.

It is the indication of the early development of the embryo

After the proliferation of prochord plate, there is a active proliferation, migration, invagination of epiblast cells.

It bulges and touches the Amniotic cavity.

Soon after the prochordal plate, the disc shape changes from round to oval / disc shaped.

Fate of Primitive streak

It is regressed at the End of 3rd week and it is completely degenerated and disappeared at the 26 days so it is called transient structure

Importance of primitive streak

It is involved in the indication of Gastrulation and Bilateral symmetry.

8. Carotid triangle

It is located in side of the neck.

Boundaries

Anterosuperiorly

posterior belly of digastric

Anteroinferiorly

~~Sup~~ Inferior belly of Omohyoid

posteriorly

Anterior border of ~~digastric~~ Sternocleidomastoid.

Roof.

It is formed by pretracheal layer of deep cervical fascia

Skin, platysma.

Floor.

middle Constrictor of pharynx

Inferior constrictor of pharynx.

✱ Artery

*Common carotid artery.

1. Carotid sinus
2. Carotid body.

(1) Carotid sinus

It is seen at termination of common carotid artery / in the beginning of internal carotid artery.

Carotid sinus is a "baroreceptor / pressure receptor". It controls the blood pressure in the body.

(2) Carotid body.

It is seen ~~at the~~ behind the the Bifurcation of common carotid artery. Carotid body is a "Chemoreceptor". which maintain pH of Arterial blood. balance of the blood.

* Internal carotid artery.
* External carotid artery
  - → thyroid
  - → facial
  - → lingual
  - → pharyngeal
  - → occipital ~~[illegible]~~ fascia.

* Veins.

Internal Jugular vein.

pharyngeal Jugular vein

lingual vein

Nerve supply.

Hypoglossal nerve

Vagus nerve

Accessory spinal nerve.

Ansa Cervicalis.

It is a thin looped structure [illegible] against the carotid sheath. It is supplied by infrahyoid muscle. It is formed by

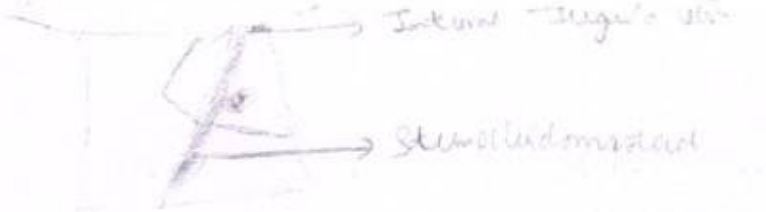
Superior root and inferior root

Contents of Carotid sheath.

*Includes :
- → Common Carotid artery
- → Internal Carotid artery
- → Internal Jugular Vein.
- → Vagus nerve.

(1) The thin - looped structure Ansa Cervicalis is situated against the carotid sheath.

(2) overlapping the sternocleidomastoid.



7) Histology of Serous Salivary gland.

Serous salivary gland

Serous salivary gland - parotid gland.

Microscopically, it is identified as presence of more number of Serous Acini.

Serous acini are synthetic secreting cells. And some identification are some ducts are seen. like intercalated duct, striated duct, interlobular duct.

lobules, lobes are also seen.

It is drained through the duct called Stenson's duct. It is secreted in

opposite
the vestibule of lower 2nd molar teeth

Section - A

1). Larynx.

a) Inlet of larynx

cavity of larynx is found between the inlet of larynx and the cricoid cartilage. It is seen as oblique slit.

Inlet of larynx divides the cavity into two
1. upper fold.
2. lower fold.

upper fold is called "Rima Vestibuli"
lower fold is called "Rima Glottis"

Structure present above the vestibules

upper fold is called Vestibular fold.
lower fold is called Vocal fold.

Structure between right and left side of V. fold is called "Rima Vestibuli"

Structure between the right and left side of vocal fold is called "Rima Glottidis"

Structure present above the Vestibular fold - Vestibule of Lar
Structure present below the vocal fold - Infraglottidis
Structure present between the Vestibular fold and vocal fold - Ventricle of larynx.

d) Clinical Anatomy

damage in posterior cricothyroid cartilage cause failure in Adduction.

damage in structure of pharynx leads to deep damage of trachea and cause infection.

Mid-course improvement

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH, OCTOBER-2021

Duration:30 Min. **Date:18.10.2021**

(Tick the correct answer with Pen) **SECTION: C (MCQ)** (1 x 25= 25)

(SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)

1. Inferior Petrosal sinus passes through
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. Circle of willis is formed by
   a) Anterior cerebral artery C) middle cerebral
   b) Anterior communicating d) all of above.
3. In an adult spinal cord ends at level of
   a) Lower border of L1 c) Lower border of L3
   b) Lower border of L2 d) Lower border of S2
4. The skull at birth is devoid of.
   a) Metopic suture
   b) Mastoid process
   c) Glabella
   d) All of above.
5. Joint between tooth and it's socket is
   a) Primary cartilaginous joint c) Pivot joint
   b) Gomphosis d) Ellipsoid joint
6. Spinal accessory nerve supplies
   a) Orbicularis oris c) Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. Vertebral artery does not passes through the foramen transversarium of
   a) C7
   b) C6
   c) C2
   d) C1
8. Organ of corti is located within
   a) Cochlear c)Semicircular duct
   b) Utricle d) saccule
9. Crows feet is caused by the contraction of .
   a) Orbicularis occuli c) orbicularis oris
   b) Frontalis d)procerus
10. Artery Of suboccipital triangle is
    a) External carotid c) vertebral
    b) Posterior auricular d) Maxillary
11. Internal Acoustic meatus transmits
    a) 7th & 8th c) 6th & 7th
    b) 8th & 9th d) 9th & 10th

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Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O Pallor, Mahe -673310
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12. Subaceous glands belongs to
    a) Apicrine
    b) Holocrine
    c) Apocrine
    d)Merocrine
13. A injury to middle meningeal artery leads to
    a) Extradural hemorrhage
    b) Subdural hemorrhage
    c) Subarachnoid hemorrhage
    d) All of above

14. The Nerve related to Pyriform fossa
    a) External laryngeal .
    b) Recurrent laryngeal nerve
    c) internal laryngeal
    d)vagus nerve.
15. Fascia forming the floor of Posterior triangle is
    a) Investing layer
    b) Pretracheal
    c) Buccopharyngeal fascia
    d) prevertebral .
16. Tensor of vocal cord is.
    a) Vocalis
    b) Cricothyroid
    c) posterior cricoarytnoid
    d) Thyroarytenoids
17. All the following nuclei are present in cerebellum except.
    c) Dentate
    d) Emboliformis
    c) fastigeous
    d) tractus solitarius
18. Lower lip develops from
    a) Maxillary process
    b) Frontonasal process
    c) mandibular process
    d) palatal process
19. Only cranial nerve seen in diagastric triangle is
    a) Hypoglossal
    b) Glossopharyngeal
    c) accessory
    d) vagus.
20. Soft palate veins drains into plexus
    a) Carotid
    b) Periapical
    c) tonsillar
    d) pharyngeal
21. Myoepithelial cell shape is
    a) Cuboidal
    b) Columnar
    c) stellate
    d)Pear
22. Stapedius is supplied by nerve
    a) 5^{th}
    b) 7^{th}
    c) 8^{th}
    d) 9^{th}
23. Masseter is crossed by vein
    a) Maxillary
    b) Lingual
    c)transverse fascial
    d)external jugular
24. Anterior ligament of malleus is developed from -
    a) 1^{st} arch
    b) 2^{nd} arch
    c) 3^{rd} arch
    d) 4^{th} arch
25. Promontry in the medial wall of Middle ear is produced by
    a) 1^{st}turn of cochlea
    b) Vestibule
    c) Semicircular canal
    d) None

Mid-course improvment 2020-21

MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL

CHALAKKARA, MAHE
U. T. of PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT : ANATOMY

Tick Questions Attempted:

Q_1 ☐ Q_2 ☐ Q_3 ☐ Q_4 ☐ Q_5 ☐ Q_6 ☐ Q_7 ☐ Q_8 ☐

Q_1	3½	10	Q_5	2½	5
Q_2	5½	10	Q_6	3	5
Q_3	NA	5	Q_7	1	5
Q_4	NA	5	Q_8	3	5

No. of Additional sheets used. ☐

TOTAL 18½ / 45 + 3½

Total in Words 22

Evaluated by:

Name of the candidate : M. Madhuvandhi

Reg. No : 51

Signature Madhuvandhi
Date: 18/10/21

Dr. J. Vishnu Raj 18/10/21

Signature of Invigilator

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, PO, Mahe-673310
UT of Puducherry

Section - A

2) TMJ.

Temporal Mandibular Joint

a) Type + Articular surface:

TMJ is the synovial joint and condyles.

Articular surfaces:

Anterior:

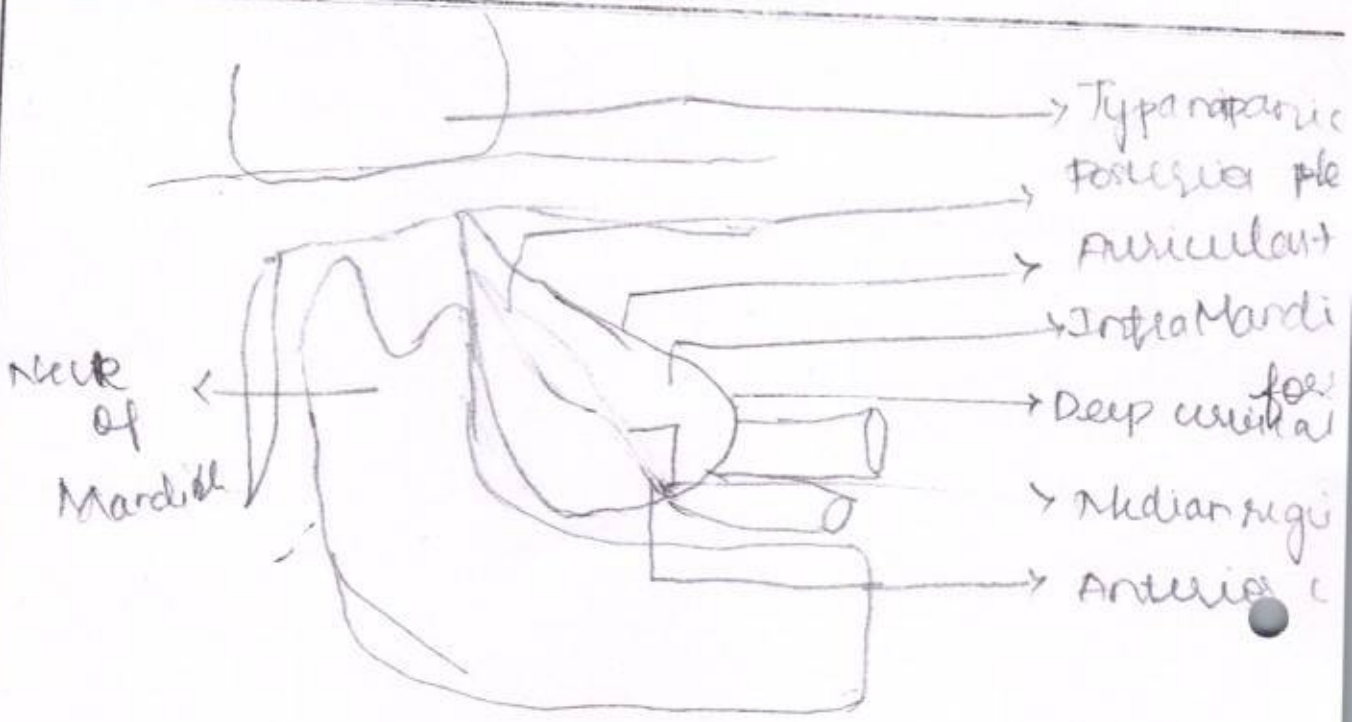
* auricular tubercle.
* Articulating part of circumference of sphenomandibular fossa.
* Non-articulating part of tympanic plate

Posterior:

Head of the mandible.

b) Ligaments:

1) Fibrous
2) Temporal Mandibular ligament.
3) Sphenomandibular ligament
4) Stylomandibular ligament.



1) Fibrous Ligament :

Above : Auricular tubercle.

Behind : circumstance of Mandibular fossa.

Front : Squamous part of tympanic plate

Below : Neck of the Mandible

Attachments :

Above they are loosely attached to intra articular disc.

Below they are tightly attached to the art articular disc.

Fibrous ligament are the synovial joint.

2) Tempro Mandibular gan ligament:

They are at the lateral side of ligament

They are directed downwards and backwar

Above: Zuricular tubercle.

Below: Mandibular fossa.

3) Stylomandibular ligament:

They are accessory.

Deep cervical fascia.

Above: Styloid process.

Below: Ramus of the Mandible.

4) Sphenomandibular ligament:

Sphenomandibular ligament is accessory

They are at the median plane.

Above: Sphenoid

Below: Ramus of Mandible.

C) Movements & muscles acting on it.

1. Depression - Opening

2. Elevation - Closure.

3. Protrusion - Opening movement of Right.

4. Retrusion - Closure. movement of left.

5. Side to side.

Articular disc:

The articular disc is divided into upp and lower articular disc.

The upper part is called as meniscotemp movement and used for gliding

The lower part is called as menisco-mandibular gliding and rotatory.

1. The anterior relation region
2. The anterior thick band
3. Median thick band region
4. Posterior relation region
5. Posterior thick band.

They are used for the friction.

And they are used for the movements

They are used as the shock absorbent

They blance the load in articulating and condylar process.

Applied anatomy:

Artitis.

Congential - Hypopysia, Hypopysia, apoplexy

Ankylosis

Neoplysia

Muscle - spam of Muscle.

spam of muscles:
sound while floding of joints
mostly happen in women.

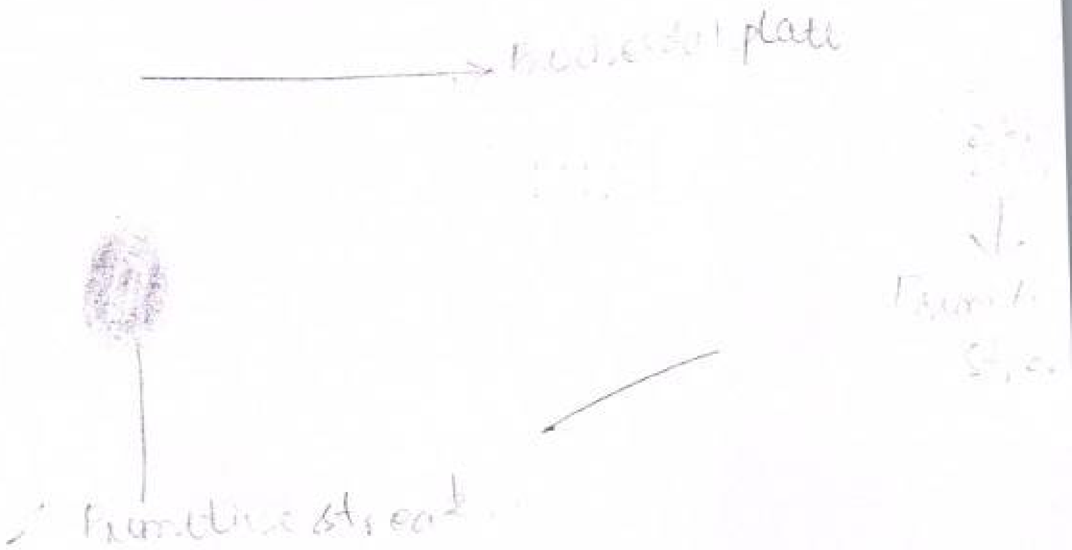
Section - B

5. Primitive streaks:

Primitive streaks is the formation of prochordal plate, epithelial cells are produced along the central axis near the disc, proliferate with cells, and it budges into the amniotic fluid.

Formation of primitive streaks and protochordal plate the shape is change circle to Oval.

Prochordal



b) Extraocculal Muscles :

Superior Extraocculal muscles :

superior extraocculal muscles are ~~fo~~ fr[illegible]
the ~~posterior~~ paphesal leavator. Inag into the
superior . They are for upper eyelids

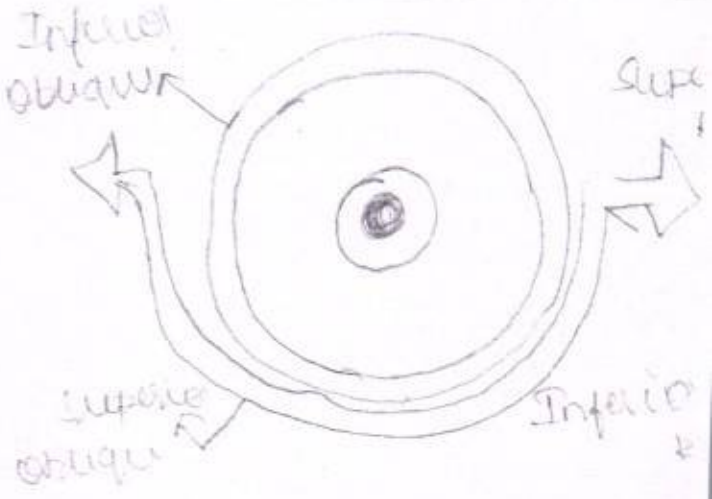
Inferior :

Interior from the inferior oblique and
inferior recti into the Inferior
They are for lowes eyelid.

Dr. Anil Melath, MDS
Principal
Maha Institute of Dental Sciences & Hospital
Chalakkara, P.O.Palloor, Mahe -673310
UT of Puducherry

Recti

1) Superior Recti
2) Lateral Recti
3) Medial Recti
4) Inferior Recti

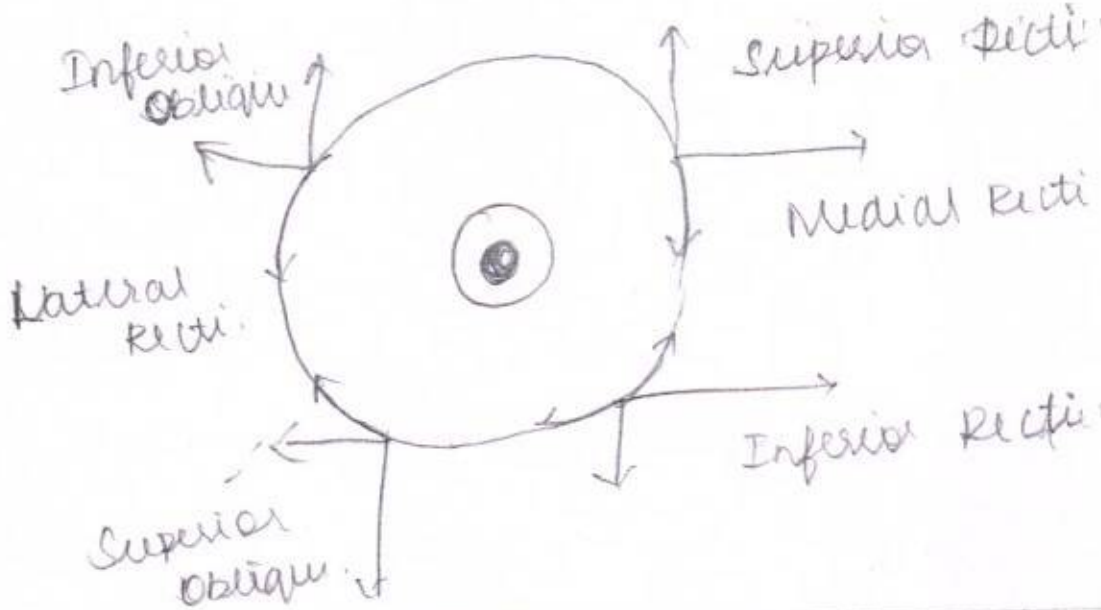


Oblique :

1) Superior Oblique.
2) Inferior oblique.

Lateral.
Levator palpebral.

Muscles	Origin	Insertion
Superior Recti	Tendinuous Ring of Zinn.	Depression Adduction Intrusion
Inferior Recti		



Muscles	Origin	Insertion	Action
Superior Recti	Tendinous Ring of Zinn	Sclera of the & corneosclera.	Depression Adductio Intorsio
Inferior Recti	Tendinous Ring of Zinn.	Sclera of Posterior corneosclera.	Extrosion Adductio Elevatio
Medial Recti	Tendinous Ring of Zinn	Sclera of Posterior corneo sclera.	Extrosion Adductio Intrusio
Lateral Recti	Tendinous Ring of Zinn	Sclera of posterior Cornea sclera.	Intrusio Adductio Extrosi

Muscles	Origin	Insertion	Actions
Superior Oblique.	Greater wing of Sphenoid and Optic Nerve.	lateral recti and Superial recti	Depression Adduction Extrotion
Inferior Oblique.	Muscle of lacrimal gland.	Superior oblique.	Intorsion. Adduction Elevation
Lateral. Pathebral levator.	Muscle action of Greater Wing of Sphenoid	Superior lamina into the Superior recti and Inferior lamina into the inferior recti.	

8. Cartoid Triangle :

Anterio superiorly : Anterior belly of digastric

Posterosuperior : omohyoid

Posteroinferior : Sternocleomastoid.

Roof :

The fascia.
The Superficial.
The Platysma.

The cervical branch of facial.

transverse cervical facial

Deep cervical fascia.

Floor :

The middle constrictor

The inferior midle constricter.

The thyrohyoid.

Ateries :

The common cartoid Atery

The Internal cartoid Atery

The External Carotid Artery.

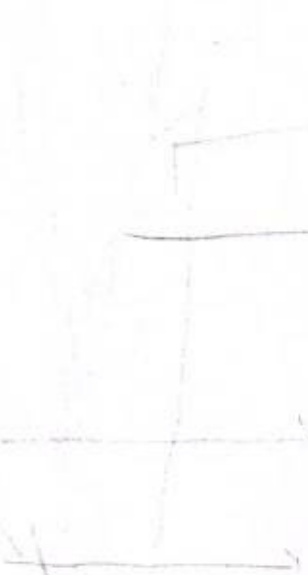
Vein:

* The Common Carotid Vein by Jugular Vein
* The Internal Carotid Vein by the Ex Jugular Vein
* The External Carotid Vein by external
* Jugular Vein
* The lingual Vein by the internal Jug Vein
* The pharyngeal Vein by the internal Vein

Nerve Supply:

* The Vagus Nerve.
* The Lingual Nerve.
* The pharyngeal Nerve.
* The Accessory spinal Nerve of the Carotid Artery

The Sensory Nerve



3) Tongue Co-relate with its development and Nerve supply

Development of the Tongue:

Anterior 2-3rd: The anterior 2-3rd of the tongue is formed by the and supplied by 1st branchial arch. Chorda tympani of lingual Nerve and 1st arch.

Posteriorly:

Posterior 1-3rd is by the hypobranchial and the cranial part of 3rd arch. by the hyp Nerve.

Superiorly Middle:

By the Vagus Nerve of the 4th arch

Nerve supply of Tongue:

The chorda Tympani for the sensation the tasting of the 1st branchial arch.

The hypoglossal for the burning sensation 3rd branchical arch of hypobranchial.

The vagus Nerve.

6) Microscopic Structure of thyroid gland.

7) Histology of serous salivary gland.

Salivary gland is of three type.

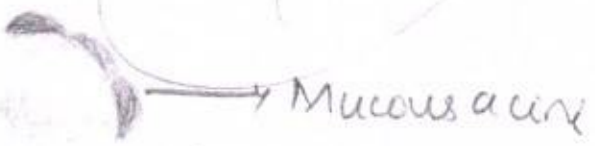
- Serous salivary
- Mixed Submandibular
- Mucous Sublingual gland.

serous salivary gland:

Serous salivary gland is of semi demilunes

semi acini called semi demilunes covered by th

mucous acini.

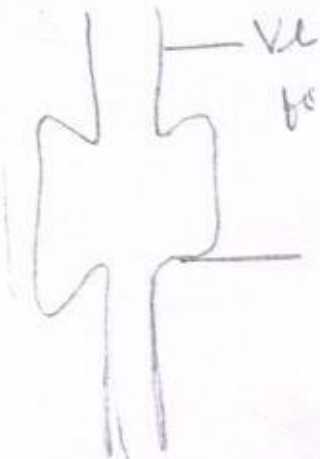


C) Microscopic structure of Thyroid gland.

Section - D.

D) Larynx:

a) Inlet of Larynx:



Larynx are divided into two Upper or lower. The Upper is called Vestibule fold and the lower is called Vocal fold.

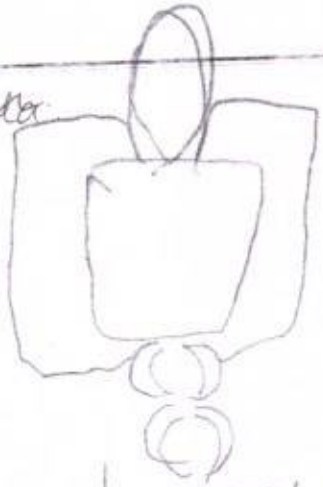
The Vestibule folds between the rem Vestibuli and the Vocal fold between them is known the rami Vocalis.

The part above the above the rimi Vestibule is epiglottis

The part between the remi Vestibule the Vocal fold Vestibule is called Sinus.

The remi Vestibule below the part infra

The mucous layer is called as capsule



C) Muscles of membrane.

Intristic muscles

circothyroid.	Lateral surface of circoid.	Lateral surface of Pterygoid
circothyroid. arytenoid	Lateral surface of cricoid	Lateral surface of Pterygoid
Anterior circothyroid.	Another circoid	Lateral side Pterygoid
Transverse arytenoid		Lateral surface of Pterygoid
Lateral cricothyroid.	Lateral surface of cricoid	
Oblique cricothyroid and arytenoid.	Lateral surface of cricoid	On the arytenoid below the larynx.
Vocal cords	On the Vocalis.	

To :

The Head of the Department (Microbiology)
MINDS,
MAHE,
CHALAKKARA.

From:

S. Srihari
II year Regular batch BDS,
MINDS,
MAHE

Sub: Requesting for improvement Exam Microbiology 2021

Sir,

As I am suffering from Covid-19, I am not able to attend Microbiology IIIrd internal assessment Exam (24/09/21). So, I kindly request you sir to conduct an Improvement exam for me as to compensate for my microbiology internal marks.

12/09/21
srihari.S
2nd yr B.D.S

Yours faithfully,
S.
srihari.S

Professor & HOD
Department of Microbiology
Mahe Institute of Dental Sciences & Hospital
Chalakkara, Mahe-673 333

INSTITUTE OF DENTAL SCIENCES & HOSPITAL
CHALAKKARA
MAHE
PIN 673310

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry

punya k <punyak69@gmail.com>

Mon, 24 Jan, 20:23

To,
The Head Of the Department (Microbiology)
MINDS, Mahe,Chalakkara

From,
Punya k
IInd year Regular batch BDS (MINDS)

Sub: Requesting for Improvement Exam Microbiology 2021

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Yours faithfully,

Punya K

12 /09/21
Punya K

West Hill

2ND year BDS

Professor & HOD
Department of Microbiology
Mahe Institute of Dental Sciences & Hospital
Chalakkara, Mahe-673 333

INSTITUTE OF DENTAL SCIENCES & HOSPITAL
CHALAKKARA
MAHE
PIN 673310

Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O.Pallor, Mahe -673310
UT of Puducherry

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UT OF PUDUCHERRY - PIN 673 333

INTERNAL ASSESSMENT BOOK
SUBJECT: MICRO BIOLOGY
MID COURSE IMPROVEMENT TEST

Tick Questions Attempted :

Q_1 ☑ Q_2 ☑ Q_3 ☑ Q_4 ☑ Q_5 ☑ Q_6 ☑ Q_7 ☑ Q_8 ☐

Q_1	7 / 10	Q_5	4 / 5
Q_2	6 / 10	Q_6	2 / 5
Q_3	4 / 5	Q_7	2½ / 5
Q_4	3 / 5	Q_8	/ 5

No. of Additional Sheets used. ☐

TOTAL 28½ / 45

Total in Words Twenty eight & half

Evaluated by: Rajeswari V

Name of the candidate : PUNYA. K

Reg. No : 19DS0263

Signature

Date : 14.10.21

Signature of Invigilator

Dr. A. [illegible] Malathi, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallur, Mahe -673310
UT of Puducherry

SECTION - A

1. Classification of Mycobacteria

(1) Cultivable

- Tubercle bacilli
  - (i) Mycobacterium tuberculosis (Human type)
  - (ii) M. bovis (Bovine type)
  - (iii) M. africanum (African type)
- Atypical mycobacteria
  - (i) Photo chromogens
  - (ii) Scoto chromogens
  - (iii) Non-photo chromogens
- Mycobacteria causing skin ulcers
  - (i) M. ulcerans
  - (ii) M. balnei
- Saprophytic mycobacteria.
  - (i) M. phlei

(2) Non cultivable

M. leprae

Cultural Characters of Pulmonary tuberculosis

- M. tuberculosis — Obligate aerobe
- Optimum temperature - 37°C.
- Optimum pH — 6.4 - 7.0
- Culture media — Lowenstein-Jensen medium (LJ medium)
  - It consists of beaten egg, mineral salts, malachite green & glycerol.
  - It is a solid media without agar
  - Egg acts as solidifying agent
  - Malachite green inhibits growth of organisms other than mycobacterium and provide color to medium
  - Glycerol - improves the growths of M. tuberculosis.
- It gives dry, rough, buff colored colonies.

Lab diagnosis of pulmonary tuberculosis:

1. Specimen
   - Sputum - collected in a clean

container. (morning specimens on 3 consecutive days) by laryngeal swab.

2. Direct Microscopy

- Smear is made and stained by Ziehl-Neelsen technique.
- M. tuberculosis is an acid-fast bacilli appear as bright red bacilli against a blue background.

3. Culture

- Lowenstein Jensen medium is used. which gives dry, rough, buff coloured colonies of M. tuberculosis

4. Serology

- ELISA
- RIA
- latex agglutination assay

} detection of antimycobacterial antibodies.

2. Hyper sensitivity

Exaggerated immune response to injury.

Classification

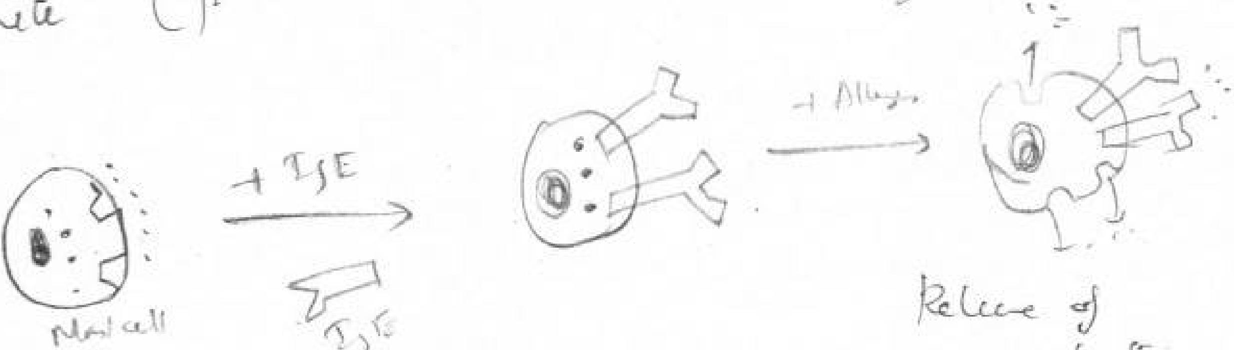
- Immediate
  - Type I (Anaphylactic)
  - Type II (Cytotoxic)
  - Type III (immune complex)
- Delayed
  (Type IV / Cell mediated)

Anaphylaxis (Type I reaction)

- Immediate response
- rapid onset and short duration
- IgE mediated
- Mechanism of reaction

- It occurs when a sensitized individual comes in with shocking dose of Ag.

Route (parenteral, inhalation / ingestion).



Release of mediator
⇓
Anaphylaxis

Chemical mediators

= Primary mediators
- → Histamine
- → Serotonin

= Secondary mediators
- Prostaglandin
- Platelet activating fact.
- bradykinin
- kinins etc

→ It occurs within a few seconds to few minutes following shocking dose of Ag.

→ lung → principal shock organ in humans result in bronchospasm, laryngeal oedema, shock, respiratory distress and death finally.

SECTION - B.

5. Actinomycosis

- Gram positive, non motile, non spore, non acid fast organism. (Actinomyces)
- True branching
- Sun-ray appearance in gram staining
- Sulphur granules are white / yellow in colour & found only in tissues
  - (pus granules)

Culture

- Anaerobic
  - 5-10% CO_2 (capnophilic)
  - 37°C (opt. temp)
- A. israeli form spidery colonies.

Pathogenesis

- Causes Actinomycosis
- Chronic granulomatous disease with multiple ... sinus discharges.

- Gingivitis & periodontitis

Laboratory Diagnosis

(1) Specimens :
Pus from lesions, discharge from sinuses, sputum & tissue biopsy.

(2) Microscopy
- Sun ray appearance.
- (Sulphur granules)

(3) Culture
(Thioglycollate broth & Brain heart infusion blood agar) used.
Blood agar
→ shows spider colonies.

Treatment

- Surgical removal of affected tissue.
and Antibiotic therapy.

7. Cell mediated immunity

→ It is an acquired active immune resp one.
— It is antibody mediated immunity
→ depends on synthesis of Ab by plasma / B cell.
— These cells produce specific circulating Ab to specific Ag and modify the activity
→ It may be, in the form of lysis of Ag molecule, then destruction (neutral ?).
— Phagocytosis.

6. Intestinal Amoebiasis

Caused by Entamoeba histolytica
. lives in large intestine of man.

→ I.P 1-4 weeks
- It causes ulcerative lesions & profuse
bloody diarrhoea (Amoebic dysentery)

- Laboratory diagnosis

a) Stool examination
- Charcot-Leyden crystals may appear
in saline preparation.
(diamond shaped crystals (clear, refractile)

b) Blood examination
- Leucocytosis.

c) Serology
- IHA, ELISA.

Dr. Anil [illegible] MDS
Mahe Institute of Dental Sciences & Hospital
Chalakkara, [illegible] Pallor, Mahe -673310
UT of Puducherry

4. Auto Immunity

- Conditions where body produces auto antibodies & immunological competent T lymphocyte against its own tissues which leads to ~~struct~~ structural & functional damage to tissues.

Mechanism

- Hidden / Sequestered Ag
- Ag Alterations
- Cross reacting foreign Ag
- Forbidden Clones
- T & B cell defects

Auto Immune Disease

(A) Haemocytolytic

class

Auto immune haemolytic anemia

leucopenia, thrombocytopenia

(2) Organ specific disease

- Graves disease, Myasthenia gravis,
Eg. Pernicious anemia

(3) Systemic disease

- Rheumatoid Arthritis, SLE.

3. Malaria

- Caused by Plasmodium falciparum
- Infection in 2 host (man is intermediate) and female anopheles mosquito (definitive host)
- Asexual developed in man & sexual developed in mosquito

- Sporozoite is the infective form.

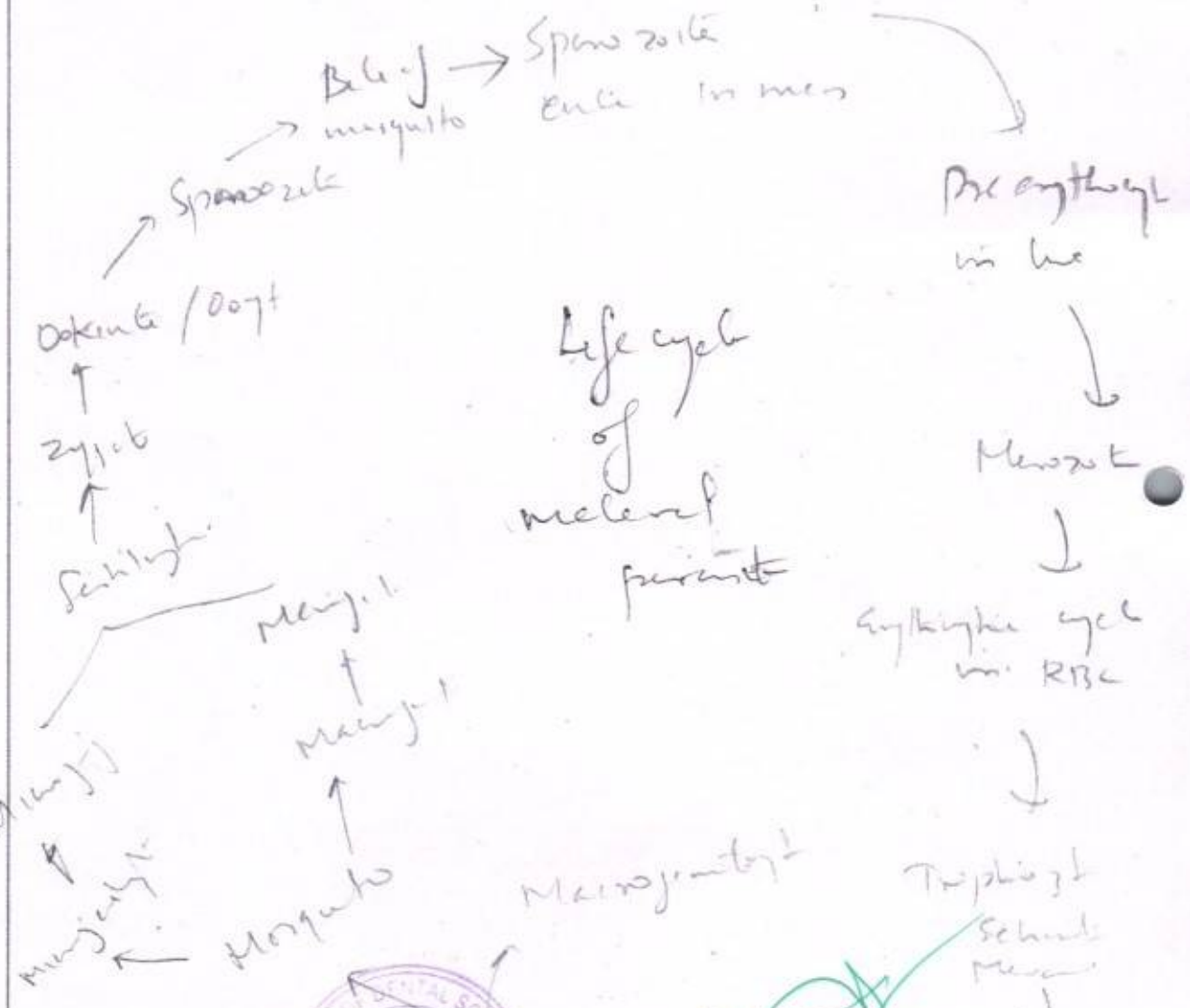
- Stages

Pre erythrocytic - Schizogony

- Erythrocytic Schizogony

- Cryptic gamogony

- Exo-erythrocytic Schizogony



Clinical feature

- Severe fever
- Anemia
- Splenomegaly

Complication

- Pernicious malaria
- blackwater fever

Laboratory Diagnosis

Serology test

- IHA, ELISA

Treatment

- Chloroquine (commonly used)
- Mefloquine

Mid- Course improvment M. Madhuvandhi 51.

MAHE INSTITUTE OF DENTAL SCIENCES &HOSPITAL
DEPARTMENT OF ANATOMY
IMPROVEMENT INTERNAL EXAMINATION FOR 1st BDS 2020-2021BATCH,OCTOBER-2021

Duration:30 Min. **Date:18.10.2021**

(Tick the correct answer with Pen)**SECTION :C (MCQ)(1 x 25= 25)**

(SECTION C SHOULD BE COMPLETED IN THE FIRST 30 MINUTES)

1. Inferior Petrosal sinus passes through
   a) Ovale c) jugular
   b) Spinosum d) carotid
2. Circle of willis is formed by
   a) Anterior cerebral artery C) middle cerebral
   b) Anterior communicating d) all of above.
3. In an adult spinal cord ends at level of
   a) Lower border of L1 c) Lower border of L3
   b) Lower border of L2 d) Lower border of S2
4. The skull at birth is devoid of .
   a) Metopic suture
   b) Mastoid process
   c) Glabella
   d) All of above.
5. Joint between tooth and it's socket is
   a) Primary cartilaginous joint c) Pivot joint
   b) Gomphosis d) Ellipsoid joint
6. Spinal accessory nerve supplies
   a) Orbicularis oris c)Scalenus posterior
   b) Levator scapulae d) Sternocleidomastoid and trapezius
7. Vertebral artery does not passes through the foramen transversarium of
   a) C7
   b) C6
   c) C2
   d) C1
8. Organ of corti is located within
   a) Cochlear c)Semicircular duct
   b) Utricle d) saccule
9. Crows feet is caused by the contraction of .
   a) Orbicularis occuli c) orbicularis oris
   b) Frontalis d)procerus
10. Artery Of suboccipital triangle is
    a) External carotid c) vertebral
    b) Posterior auricular d) Maxillary
11. Internal Acoustic meatus transmits
    a) 7th& 8th c) 6th& 7th
    b) 8th& 9th d) 9th& 10th

Dr. Anil Meleth, MDS
Professor
Mahe Institute of Dental Sciences & Hospital
Chalakkara, Po Pallor, Mahe -673310
UT of Puducherry

12. Subaceous glands belongs to
    a) Apicrine
    b) Holocrine
    c) Apocrine
    d)Merocrine
13. A injury to middle meningeal artery leads to
    a) Extradural hemorrhage
    b) Subdural hemorrhage
    c) Subarachnoid hemorrhage
    d) All of above
14. The Nerve related to Pyriform fossa
    a) External laryngeal .
    b) Recurrent laryngeal nerve
    c) internal laryngeal
    d)vagus nerve.
15. Fascia forming the floor of Posterior triangle is
    a) Investing layer
    b) Pretracheal
    c) Buccopharyngeal fascia
    d) prevertebral .
16. Tensor of vocal cord is.
    a) Vocalis
    b) Cricothyroid
    c) posterior cricoarytnoid
    d) Thyroarytenoids
17. All the following nuclei are present in cerebellum except.
    c) Dentate
    d) Emboliformis
    c) fastigeous
    d) tractus solitarius
18. Lower lip develops from
    a) Maxillary process
    b) Frontonasal process
    c) mandibular process
    d) palatal process
19. Only cranial nerve seen in diagastric triangle is
    a) Hypoglossal
    b) Glossopharyngeal
    c) accessory
    d) vagus.
20. Soft palate veins drains into plexus
    a) Carotid
    b) Periapical
    c) tonsillar
    d) pharyngeal
21. Myoepithelial cell shape is
    a) Cuboidal
    b) Columnar
    c) stellate
    d)Pear
22. Stapedius is supplied by nerve
    a) 5^{th}
    b) 7^{th}
    c) 8^{th}
    d) 9^{th}
23. Masseter is crossed by vein
    a) Maxillary
    b) Lingual
    c)transverse fascial
    d)external jugular
24. Anterior ligament of malleus is developed from -
    a) 1^{st} arch
    b) 2^{nd} arch
    c) 3^{rd} arch
    d) 4^{th} arch
25. Promontry in the medial wall of Middle ear is produced by
    a) 1^{st} turn of cochlea
    b) Vestibule
    c) Semicircular canal
    d) None

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INTERNAL ASSESSMENT BOOK
SUBJECT: MICROBIOLOGY

MIDCOURES IMPROVEMENT EXAMINATION

Tick Questions Attempted :

Q_1 ☐ Q_2 ☐ Q_3 ☐ Q_4 ☐ Q_5 ☐ Q_6 ☐ Q_7 ☐ Q_8 ☐

Q_1	7	10	Q_5	5	5
Q_2	6½	10	Q_6	2	5
Q_3		5	Q_7	3	5
Q_4	3½	5	Q_8	4½	5

No. of Additional Sheets used. ☐

TOTAL 31½ 45

Total in Words : Thirty one & half

Evaluated by:

Name of the candidate : Srihari . S

Reg. No : 92

Signature

Date : 14.10.2021

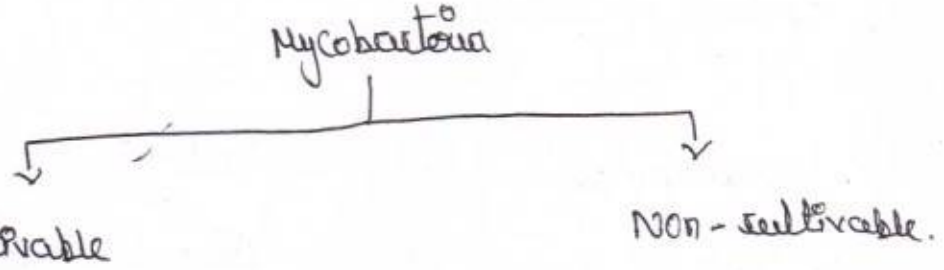
Signature of Invigilator

Dr. Anil Melath, MDS
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Palloor, Mahe -673310
UT of Puducherry

SECTION-A.

ANSWER THE FOLLOWING:

1. classification of Mycobacteria.



Cultivable :-

Tubercle bacilli

(i) Human type => M. tuberculosis.
(ii) Bovine type => M. bovis.
(iii) Vole type => M. microti
(iv) African type => M. africanum.

Atypical Mycobacteria

* Photochromogen
* Scotochromogens
* Non-Photochromogen
* Rapid grows

Non-cultivable:

* M. leprae

Culture characteristic of tuberculosis:

M. tuberculosis is an obligate aerobe

M. bovis is microaerophilic on primary isolation.

Bacilligrow Slowly (14-15 hours) colonies appear two weeks Sometime 6-8 weeks.

optimum temperature 37°C.

pH - 6.4 to 7.0.

Medium - lowenstein - Jenson

Laboratory Diagnosis

Specimen:

* Spectum is Common Collected clean wide-mouthed Container.

* Collected in morning

* Sputum is Scanty. Collected in laryngeal Swab.

+ In children gastric washing may be examined Swallow Sputum.

Direct microscopy:

* Smear is made in Specimen & stained by Ziehl-Neelsen.

* Examined oil Immersion lens.

* It appears bright red bacilli against blue background.

Culture:-

* Very Sensitive method for detection of tubercle bacilli

* Medium are used Lowenstein - Jensen medium.

* Inoculated 37°C in the dark light

Serology:-

* ELISA.

* RIA,

* BCG vaccine.

2. Hypersensitivity:

Definition:

Hypersensitivity refers to a condition in which immune response results in excessive reactions leading to tissue damage, disease (or) even death in the sensitised host.

Classification:

classified two main types

Immediate
↓
Type-I (Anaphylactic)
Type-II (cytotoxic)
Type-III (Immune complex)
~~Type-IV~~ 6th

delayed type.
Type IV (Delayed (or) cell mediated.

Anaphylaxis:

* Comes in contact with shocking dose of antigen.

* Route parenteral, inhalation (or) ingestion

* cytotropic antibody IgE (previously known as reagnic antibody.

* IgE bind to these receptors by Fc end.

* antigen antibody complex stimulate mast cells and basophils to release mediators cause anaphylaxis.

Chemical mediators:

Two types

Primary mediators:-

1. Histamin
2. Serotonin
3. ECF-A

Secondary mediator:

1. SRS-A
2. prostoglandens and thromboxane.
3. platelet activating factor.
4. . other mediator Anaphylaxis.

Features of Anaphylaxis:

* cytotropic IgE antibody is respo

Types of Anaphylaxis:

i) Anaphylaxis in vitro
ii) cutaneous anaphylaxis

SECTION-B

6. Intestinal amoebiases :

Stool examination :

* Stool (or) scrapings from ulcers can examined by naked eye.

* Normal saline smear motile trophozoites.

* Iodine stained study of cyst (or) dead trophozoites.

Blood examination :

* Leucocytosis seen.

Serology :

* ELISA.
* IHA.

7. Cell mediated immunity:-

* It depends on T-lymphocytes developed against certain antigen.

* CMI by sensitised T-lymphocytes is important in resistance to chronic bacterial infection.

* multiple and survive phagolysosome

* Viral Infection (Herpes simplex).

* Two types

↓ Natural active immunity

↓ Small pox infection

↓ Artifical active immunity

Vaccines:

Live vaccines

* BCG

Killed vaccine

* TAB ~~(OE)~~ for enteric fever.

4. Autoimmunity:

Autoimmunity is a condition when the body produces autoantibodies and immunologically competent T-lymphocytes against its own tissue.

Mechanisms of Autoimmunity:

1. Hidden (or) Sequestered Antigens.
2. Antigen Alteration.
3. Cross Reacting foreign Antigen.
4. Forbidden Clones
5. T and B Cells Depots.

Classification of Auto Immunity diseases:

1. Haemocytolytic diseases
2. localised (or) organ specific diseases
3. systemic (or) non-organ-specific Diseases.

5. Actinomycoses:

Morphology:

* Gram positive
* Non-motile, non-sporing,

non-acid fast organism.

Culture:

* Anaerobic (or) microaerophilic
* optimum pH & temperature of 37°C

under 5-10% CO_2.

* Brucella Blood agar (or) thioglycollate

broth.

* Spidery colonies are seen.

Pathogeneses:

* Diseases like actinomycosis
* Inflammatory disease of gum.

laboratory diagnoses:

Specimens

* Pus from lesion
* Tissue (or) biopsy

Microscopy:

* Sulphur granules are seen.
* Pus is shaken along with some saline in a test tube.
* Smear appearance.

Culture:

* grow on thioglycollate broth.

Treatment:

Penicillin therapy.

8. Atypical Mycobacteria:

Photo Chromogens:-

* Produce Pigment on exposure to light slow growing.

* on this group - M. kansasii.

M. marinum.

- Scotochromogens:

* Produce pigment (yellow, orange, or red
* cultured & incubated even in dark.
* In this group . M. Scrofulaceum.

Non - photochromogens:

* Not contain pigment
* Medically important species

M. Intracellulare.

Rapid growers:

* Capable of rapid growth,

colonies with in seven days LJ

medicem.

* In this group M.