**Course Title: Histology ll *Instructor: Ms. Salma Ishaq***

**Max Marks: 50**

**NOTE:**

**Final term**

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***BS Dental 4th***

**Each question carries 10 marks.**

***Q1: Distinguish the fibrous capsule and articular disc?***

***Fibrous capsule***

Above to the interior edge of the preglenoid plane

Posteriorly to the squamo tympanic fissure, between these to edges of the articular fossa.

Below to the periphery of the neck of mandible.

Articular disc

Fibro cartilaginous disc dividing joint cavity upper and lower component.

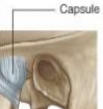
Shape :oval

Its make articular surface.

Being a synovial joint the TMJ is encircled by a sinewy container which appends essentially around the outskirts on the outside part of the articular edges. The stringy container connects to the articular tubercle above and in front just as to the squamotympanic crevice behind, at that point along the circuit of the mandibular fossa. Poorly it connects to the neck of the mandible.

The lower some portion of the joint is encircled by close capsular filaments that append the condyle to the intraarticular plate. Conversely, the upper piece of the joint is encircled by free filaments that connect the plate to the zygomatic bone. This game plan allows the intricacy of developments that happen in the upper and lower portions of the joint.

The stringy container is fortified by the temporomandibular (parallel) tendon and by two extra tendons; the sphenomandibular and Stylomandibular tendons..



***Articular disc***

Fibro cartilaginous disc dividing joint cavity upper and lower component.

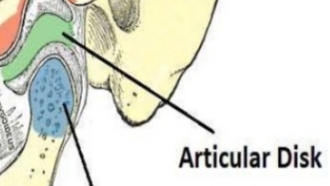
Shape :oval

Its make articular surface-

The **articular disc** is a fibrous extension of the capsule that runs between the two **articular** surfaces of the **temporomandibular joint**..

The **disc** articulates with the mandibular fossa of the temporal bone above and the condyle of the mandible below.

Its make articular surface



***Q2: Write a short note on the clinical consideration of salivary glands.***

***AGE CHANGES***: -

>Generalized loss of parenchymal tissue

>Increase in fibrous connective tissue

>Decrease in production of saliva

>Lost salivary cells often replaced by

adipose cells

>Gradual reduction in proportional acinar

volume in major salivary glands

***CLINICAL CONSIDERATION OF SALIVARY GLANDS: -***

Careful examination of a patient’s

medical history and profile can lend clues

to dysfunction of the salivary glands

because they are often associated with

other systemic disorders such as hormonal

imbalances, diabetes mellitus,

arteriosclerosis, and neurological disorders.

For example:-

Xerostomia (dry mouth),

Sialorrhea (increase salivary flow), both

could result from dysfunction of the

madullary salivary center, autonomic

innervations to the glands, damage to the

gland itself, or imbalances in fluid and

electrolyte In salivary gland parotid gland location

superficial portion lies subcutaneously .

deeper portion lies behind ramus of mandible

In this gland parotid gland capsule are

CT capsule surround it and send septa to divide gland into lobes and lobules

The parotid gland secretion are Pure serous in adults, mixed in infant and old age (only gland that changes with age)

The parotid gland ductStensen's duct near upper 7parotid gland secretion % which is upto 25-30%

***Radiation caries***

Radiation caries is a rampant form of dental

decay that may occur in individuals who

receive a course of radiotherapy that

include exposure of salivary glands.

Dental Carious lesions are produced due to the

exposure of salivary glands and reduced

flow of saliva, decreased pH, decreased

buffering capacity, and increased viscosity.

***Signs***:

Superficial lesions (abnormal change in

structure) attack the buccal, occlusal,

incisal, and lingual surfaces. It includes

cementum and dentin in cervical lesions.

Lesions progress around the teeth

circumferentially and resulting in loss of the crown..

***Q3: Describe the factors that play a role in shading?***

***Factors that play a role in shading.***

***ODONTOCLAST***

When root resorption is practically finished, these odontoclasts degenerate, and mononuclear cells rise up out of pulpal vessels and move to the predentin surface. Ess Less is thought about the resorption of delicate tissues as it sheds. Not long before shedding, resorption stops as the odontoclasts relocate away from the dentin surface. The tooth sheds with some pulpal tissues flawless.

***pressure***

The pressure applied by the emitting changeless teeth appear to assume a significant job in resorption of deciduous teeth. The local pressure is liable for commencement of resorption.

notwithstanding this nearby weight, overwhelming masticatory and strong powers assume a job in resorption.

***MECHANISM***

The mechanism engaged with achieving tooth resorption and peeling are not yet completely demonstrated, anyway unmistakably the odontoclast appends to the hard tissue surface incidentally, in this manner making a fixed space lined by the unsettled outskirt.

Q.4. Explain the classification of tooth movement?

***CLASSIFICATION OF TOOTH MOVEMENT***

* 1 Physiologic tooth movement
* 2 Eruption
* 3 Drifting

***Pathologic tooth movement***

Periodontal Pathology Oral pathologies (Cysts, Tumors etc)

Orthodontic tooth movement

Tooth Movement under external clinical forces

1. ***PHYSIOLOGIC TOOTH MOVEMENT: -***

Naturally occurring tooth movements that take place during and after tooth eruption.

***This includes***

* Tooth Eruption.
* Migration or drift of teeth. -
* Changes in tooth position during mastication.

These preeruptive movements of deciduous and permanent

tooth germs place the teeth in a position within the jaw for eruptive movement.

These preeruptive movements of teeth are a combination of two factors:

(1) total bodily movement of the tooth germ and

(2) growth in which one part of the tooth germ remains fixed while the rest continues to grow, leading to a change in the center of the tooth germ.

***(2) PATHOLOGIC TOOTH MOVEMENT: -***

Pathologic migration is defined as change in tooth position resulting from disruption of the forces that maintain teeth in normal position in relation to their arch. The disruption of equilibrium in tooth position may be caused by several etiologic factors.

1. **ORTHODONTIC TOOTH MOVEMENT**: -

***Phases of tooth movement***

There are three phases of tooth movement.

* 1 Initial stage
* 2 Slack stage
* 3 Post slack stage

1. ***Initial stage***:

Fast tooth development is seen over a short separation which at that point stops.

Speaks to uprooting of tooth in PDL film space and presumably twisting of alveolar bone.

Both light and overwhelming powers dislodge the tooth in a similar way.

Between 0.4 to 0.9mm for the most part happens in a weeks time.

Both light and overwhelming powers dislodge the tooth in a similar way during this stage.

***2 Lag stage***

Almost no tooth development happens. - Formation of hyalinized tissue.

Degree upto 2-3 weeks.

***3 Post Lag stage***:

Tooth development advances quickly as the hyalinized zone is expelled and bone experiences resorption. Osteoclasts are found over a bigger surface zone.

Orthodontic tooth movement is a process in which the application of a force induces bone resorption on the pressure side and bone apposition on the tension side. Thus, conventional tooth movement results from biological cascades of resorption and apposition caused by the mechanical forces. The term physiological tooth

movement primarily refers to the slight

tipping of the tooth in its socket and

secondarily to the changes in tooth

position that occur during and after tooth eruption.

***Q 5 Enlist the function and component of TMJ ?***

***Function of TMJ***

Speech and mastication

Ligaments;

Movements at this joint are produced by the muscles of mastication, and the hyoid muscles.

The two divisions of the

temporomandibular joint have different functions.

*Components of TMJ*

Ligaments

* Fibrous capsule
* Articular disc
* Lateral ligament of jaw
* Sphenomandibular ligament
* Stylomandibular ligament

The main components are the joint capsule, articular disc, mandibular condyles, articular surface of the temporal bone, temporomandibular ligament, stylomandibular ligament, sphenomandibular ligament, and lateral pterygoid muscle.