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

**Max Marks: 50**

**NOTE:**

**Final term**

**Each question carries 10 marks.**

Q1: Distinguish the fibrous capsule and articular disc?

Ans: **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.

**Attachment:**

Above to the margins of mandibular fossa

Below to the neck of mandible

The inner aspect of capsule is attached to the disc:

Above disc ; capsule loose

Below disc; tight.

**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

Runs between the two articular surfaces of the temporomandibular joint.

Articulation:

Above the disc articulates with the mandibular fossa of the temporal bone

Below to the condyle of the mandible .

Also attached medially and laterally to the condyle by collateral ligaments.

Anterior disc attaches to the joint capsule and the superior head of the lateral pterygoid.

posterior portion attaches to the mandibular fossa

The disc divides the joint into two sections, each with its own synovial membrane.



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

Ans: **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

**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.

**Etiology (causes):**

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?

Ans:

* Hereditary
* Age
* Food and beverages intake; consuming colored food and beverages often
* Improper cleaning of your teeth
* Trauma to a certain tooth
* Excessive fluoride taken during tooth formation
* Taken tetracycline during tooth formation
* Tobacco user

Type of fillings used

Q4: Explain the classification of tooth movement?

Ans: **Classification of tooth movement:**

Following are the classification of tooth movement;

1. Physiological tooth movement

2. Pathological tooth movement

3. Orthodontic tooth movement

**1. Physiological tooth movement:**

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

This includes;

* Tooth eruption
* Migration or drift of the teeth
* Change in tooth position during mastication

**2. Pathological tooth movement:**

* Periodontal pathology
* Oral pathologies ( cysts, tumors etc)

**3. Orthodontics tooth movement :**

Its is a pathological process from which the tissue are recovered.

**Histology of tooth movement:**

Orthodontics movement bring about areas of pressure and tension around the tooth. The histologic changeschange seen during tooth movement vary according to the amount and duration of force applied.

**Changes occurs on tension side;**

PDL stretched

Distance between alveolar process and tooth is widened.

IncreasdAns vascularity

Mobilization of fibroblasts and osteoblasts.

Osteod is laid Down by osteoblast in PDL immediately adjacent to lamina dura.

Lightly calcified bone mature to form woven bone.

Over stretched PDL.

Tearing of blood vessels and ischemia.

Extreme forces applied net increase in osteoclastic activity and tooth loosened in socket.

**Phases of tooth movement:**

Burstone categorized the stages as :

Initial phase

Lag phase

Post lag phase

**A.Initial phase**

Rapid tooth movement is observed over a short distance which when stops.

Represents displacement of tooth in PDL membrane space and probably bending of alveolar bone .

Both light and heavy forces displace the tooth to same extent.

Between 0.4 to 0.9mm usually occurs in a week time.

**B.Lag phase**

Little or no tooth movement occurs.

Formation of hyanalized tissue.

Extent upto 2-3 weeks.

**C.Post lag phase**

Tooth movement progress rapidly as the hyalinized zone is removed and bone undergoes resorption.

Osteoclasts are found over a larger surface area.

Q5: Enlist the function and component of TMJ?

Ans: **Function of Temporomandibular Joint (TMJ):**

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. The upper part of the joint allows protrusion and retraction of the mandible - the anterior and posterior movements of the jaw.

The temporomandibular joint (TMJ) is a diarthrosis, better defined as a ginglymoarthrodial joint. TMJ is composed of

a synovial cavity, articular cartilage and a capsule that covers the same joint. We find the synovial fluid and several

ligaments. The joint is the union of the temporal bone cavity with the mandibular condyle.

Speech and mastication.

Ligaments.

**Component Of Temporomandibular joint (TMJ):**

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.



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Good luck.