Lecture Topics:

1. Properties and composition of enamel
   Histological structure of enamel
2. Properties & composition of dentine
   Histological structure of dentine
3. Dental pulp, anatomy, structures & functions
4. Cementum, structure and function
5. Histological structure & function of periodontal ligament
6. Histological Structure of the jaw bones and alveolar process
7. Classification of the Oral Mucosa, definitions and general consideration
8. Gingival sulcus and dentogingival junction
9. Salivary gland, classification
   Salivary gland, structures and functions
10. Temporomandibular joint, anatomy and histology
11. Maxillary Sinus
Lectures Topics in Details (content)

1. **ENAMEL:**

   Enamel Structure I: Origin-Physical and Chemical characteristics -Structure
   Enamel Structure II: Enamel Surface Structures: Prismless enamel –Perikymata
   Age changes of enamel-Clinical Implications: Fluoridation -Acid Etching

   • **Recommended textbook:** James Avery (Oral development and histology) 3rd edition, 2002, Chapter 5 page 92-105 & chapter 9 page 153-171

2. **DENTIN:**

   Dentin Structure: Origin-Physical and Chemical characteristics -Basic anatomy
   Types of Dentin- Predentin-Histology of Primary Dentin-Incremental growth lines
   Dentin Structure II: DE junction-DC junction -Innervation of dentin- Dentin Sensitivity and Theories of Pain sensation.
   Age changes Dentin: Transparent /sclerotic dentin- Dead tract

   • **Recommended textbook:** James Avery (Oral development and histology) 3rd edition, 2002 chapter 5 page 87-92 & chapter 10 page 172-189
3. **DENTAL PULP:**

Origin-Functions and Anatomy-Histology -Vascularity and Lymphatic supply –
Nerve supply Regressive changes of the pulp: fibrous changes -pulpal stones –diffuse
calcifications

- **Recommended textbook:** James Avery (Oral development and histology) 3rd edition, 2002 chapter 11 page 190-211

4. **CEMENTUM :**

Structure-Origin-Physical and Chemical characteristics –Composition
Functions -Types of cementum -Cementoid-Clinical considerations-Histology –
Incremental lines of Salter-Cemento-enamel junction-Cemento-dentinal junction
Age changes of the cementum


5. **PERIODONTAL LIGAMENT:**

Origin-Development -Functions -Histological structure -Blood supply –Lymphatic
system- Nerve supply -Age changes of the periodontal ligament

6. **ALVEOLAR PROCESS:**

Development -Structure -Physiologic Changes -Internal Reconstruction of Bone -Clinical Consideration

- **Recommended textbook:** James Avery (Oral development and histology) 3rd edition, 2002, chapter 13, page 226-231

7. **ORAL MUCOUS MEMBRANE:**

1. Definitions and General Considerations
   Lamina propria- Submucosa- Epithelium
2. Keratinized Oral Mucosa
   Masticatory mucosa: Hard palate -Gingiva
   Vermillion border of lip
3. Non-keratinized Oral Mucosa & Specialized Mucosa
   Lining mucosa & Anterior two third and Posterior one third of the tongue

- **Recommended textbook:** James Avery (Oral development and histology) 3rd edition, 2002, chapter 14, page 243-262

8. **GINGIVAL SULCUS AND DENTOGINGIVAL JUNCTION:**

Gingival sulcus-Development of junctional (attachment) epithelium-Shift of dentogingival junction -Migration of attachment epithelium-Clinical considerations

9. **SALIVARY GLANDS:**

1. Structure and Function of Salivary Gland Cells
   Serous, mucous and myoepithelial cells-ducts- CT elements
2. Classification and Structure of Human Salivary Glands
   Major salivary glands-Minor salivary glands-Development and growth-Control of secretion-Saliva: Composition and functions-Clinical considerations


10. **TEMPOROMANDIBULAR JOINT (TMJ):**

Classification of Joints-Gross Anatomy of the TMJ-Development –Histology of Bony Structure, articular fibrous covering and articular disk- Muscle of Mastication-Movements at the Joint-Ligaments associated with the Joint-Clinical Considerations

- **Recommended textbook:** James Avery (Oral development and histology) 3rd edition, 2002, chapter 20, page 353-363

11. **MAXILLARY SINUS:**

Paranasal sinuses
   Anatomical and histological Structure
   Function of the maxillary sinus
   Clinical considerations

Textbooks and References:

The Recommended Textbooks:

- **James K. Avery**
  Oral Development and Histology

- **Ten Cate AR**
  Oral Histology, Development, Structure and Function

The Recommended Atlas:

- **Berkovitz BKB, Hollan GR and Moxham BJ**

The Reference Textbooks:

- **Bhaskar SN**
  Orban's Oral Histology and Embryology

- **B.G.Jansen Van Rensburg**

- **Avery JK**
  Essentials of Oral Histology and Embryology. A clinical approach

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