

Revised Ordinance Governing  
**BACHELOR OF DENTAL SURGERY (BDS)**  
Degree Course 2011



**RAJIV GANDHI UNIVERSITY OF  
HEALTH SCIENCES KARNATAKA**

4th 'T' Block, Jayanagar, Bangalore 560041

Revised Ordinance Governing

**Bachelor of Dental Surgery (BDS)**

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4th 'T' Block, Jayanagar, Bangalore - 560041.  
Website: [www.rguhs.ac.in](http://www.rguhs.ac.in)

## I BDS

# Human Oral and Dental Anatomy, Embryology, Physiology and Histology

Theory - 105 Hrs.

### I. DENTAL ANATOMY:

1. Introduction, Dental Anthropology & Comparative Dental Anatomy	Sl.No. 1 To 4 - 3 HRS.
2. Function of teeth.	
3. Nomenclature.	
4. Tooth numbering systems (Different system) (Dental formula).	
5. Chronology of deciduous and permanent teeth. (First evidence of calcification, crown completion, eruption and root completion).	2 Hrs
6. Deciduous teeth - a. Nomenclature. b. Importance of deciduous teeth. c. Form & function, comparative dental, Anatomy, fundamental curvature.	4 Hrs.
7. Gross morphology of deciduous teeth.	5 Hrs.
8. General differences between deciduous and permanent teeth.	
9. Morphology of permanent teeth. - Chronology, measurements, description of individual surface and variations of each tooth.	3 Hrs.
10. Morphological differences between incisors, premolars and molars of same arch.	10 Hrs.
11. Morphological differences between maxillary and mandibular. incisors, canines, premolars and molars of the opposite arch.	5 Hrs.
12. Internal Anatomy of Pulp.	1 Hr.
13. Occlusion: a. Development of occlusion. b. Dental arch form. c. Compensating curves of dental arches. d. Angulations of individual teeth in relation to various planes. e. Functional form of the teeth at their incisal and occlusal thirds. f. Facial relations of each tooth in one arch to its antagonist or antagonists in the opposing arch in centric occlusion. g. Occlusal contact and interscusp relations of all the teeth of one arch with those in the opposing arch in centric occlusion. h. Occlusal contact and intercusp relations of all the teeth during the various functional mandibular movements.	8 Hrs.

<p>i. Neurobehavioural aspect of occlusion.          Temporo Mandibular Joint (T.M.J.):          - Gross Anatomy and articulation.          - Muscles (Muscles of mastication).          - Mandibular position and movements.          - Histology.          - Clinical considerations with special emphasis on Myofascial Pain Dysfunction Syndrome (MPDS) - (Desirable to Know)</p>	
<b>ORAL PHYSIOLOGY:</b>	
1. Theories of calcification.	01 hr.
2. Mastication and deglutition.	01 hr.
<b>Oral Embryology, Anatomy and Histology:</b>	
1. Development and growth of face and jaws.	1 hr.
2. Development of tooth.	6 hrs.
3. Cranial nerves with more emphasis on V.VII and IX.	1 hr.
4. Blood supply, nerve supply and lymphatic drainage of teeth and surrounding structures.	1 hr.
5. Cell - structure and function.	1 hr.
6. Maxillary sinus - Structure, Variations, Histology function and clinical considerations.	3 hrs.
7. Salivary Glands - Classification, structure, function, Histology, Clinical Considerations and age changes.	4 hrs.
8. Oral Mucous membrane: - Definitions, General consideration. - Functions and classifications. - Structure and microscopic appearance of gingiva, palate, lips, alveolar mucosa, tongue, floor of mouth. - Gingival sulcus and dento gingival junction. - Clinical considerations and age changes.	8 hrs.
<b>ENAMEL:</b> - Physical characteristics, chemical properties structure. - Development - Life cycle of ameloblasts Amelogenesis and Mineralisation. - Clinical considerations. - Age changes.	8 hrs.
<b>DENTIN:</b> - Physical characteristics, chemical properties, structure. - Types of dentin. - Dentin innervation and hypersensitivity. - Development - Dentinogenesis and mineralisation. - Clinical considerations. - Age Changes.	6 hrs.

<p><b>PULP :</b> Anatomy, structural features, functions, pulp organs.</p> <ul style="list-style-type: none"> <li>- Developments.</li> <li>- Clinical consideration</li> <li>- Age changes.</li> </ul>	5 hrs.
<p><b>CEMENIUM:</b></p> <ul style="list-style-type: none"> <li>- Physical characteristics, chemical properties, structure.</li> <li>- Cementogenesis.</li> <li>- Clinical consideration</li> <li>- Age changes.</li> </ul>	5 hrs.
<p><b>PERIODONTAL LIGAMENT:</b></p> <ul style="list-style-type: none"> <li>- Cells and fibers</li> <li>- Functions</li> <li>- Development</li> <li>- Clinical Considerations.</li> <li>- Age Changes</li> </ul>	5 hrs.
<p><b>ALVEOLAR BONE:</b></p> <ul style="list-style-type: none"> <li>- Physical characteristics, chemical properties structure.</li> <li>- Structure</li> <li>- Development.</li> <li>- Internal reconstruction.</li> <li>- Clinical consideration.</li> </ul>	5 hrs.
<p>HISTOCHEMISTRY OF ORAL TISSUES. (Tissue processing)</p>	4 Hrs.
<p>THEORIES OF ERUPTION AND SHEDDING. (Physiological tooth movement)</p>	4 Hrs.

**PRACTICAL : 250 Hours**

**Preparation of Ground sections, haematoxylin & Eosin sections & decalcified section - (Desirable to know).**

<p><b>DENTAL ANATOMY:</b></p> <p>Carving on wax blocks:-</p> <ol style="list-style-type: none"><li>a. Cube, rectangle, cone and cylinder</li><li>b. Individual tooth - Only permanent teeth of both arches. - Central, Incisors, Lateral, Canines, Premolars and 1st molar.</li></ol>	
<p><b>HISTOLOGY:</b></p> <p>List of Histology slides: Development of tooth:</p> <ol style="list-style-type: none"><li>1. Bud stage of tooth development.</li><li>2. Cap stage of tooth development.</li><li>3. Early bell stage of tooth development.</li><li>4. Late Bell stage of tooth development.</li><li>5. Root formation.</li></ol>	
<p><b>ENAMEL :</b></p> <ol style="list-style-type: none"><li>1. Enamel rod.</li><li>2. Hunter-Schreger Bands</li><li>3. Tufts, Lamellae, Spindles.</li><li>4. Incremental lines of Retzius.</li><li>5. Neonatal line.</li><li>6. Gnarled Enamel.</li></ol>	
<p><b>DENTIN :</b></p> <ol style="list-style-type: none"><li>1. Dentino - Enamel junction.</li><li>2. Dentinal Tubules.</li><li>3. Incremental lines of Von Ebner.</li><li>4. Contour lines of Owen.</li><li>5. Neonatal line.</li><li>6. Tomes granular layer.</li><li>7. Interglobular Dentin.</li><li>8. Secondary Dentin.</li><li>9. Intratubular Dentin.</li><li>10. Intertubular Dentin.</li><li>11. Dead Tracts</li><li>12. Tertiary Dentin</li><li>13. Sclerotic Dentin</li></ol>	
<p><b>CEMENTUM:</b></p> <ol style="list-style-type: none"><li>1. Cellular cementum.</li><li>2. Acellular cementum.</li></ol>	

<p>3. Cemento enamel junction  - Type 1 - 60% type - Overlapping.  - Type 2 - 30% type - Butt  - Type 3 - 10% type - GAP type  4. Sharpey's fibers.  5. Hypercementosis.  6. Cementum</p>	
<p><b>PULP:</b>  1. Zones of Pulp.  2. Pulp stones.</p>	
<p><b>PERIODONTAL PRINCIPAL LIGAMENT:</b>  1. Principal fibers of Periodontal ligament  - Apical, Horizontal, Oblique, Alveolar crest, Interradicular, Transeptal</p>	
<p><b>ALVEOLAR BONE:</b>  1. Haversian system.  2. Trabeculated bone.  3. Mature and immature bone.</p>	
<p><b>SALIVARY GLANDS:</b>  1. Mucous gland.  2. Serous gland.  3. Mixed gland.</p>	
<p><b>MAXILLARY SINUS:</b>  Sinus lining (Pseudostratified ciliated columnar)  (Desirable to know)</p>	
<p><b>ORAL MUCOUS MEMBRANE:</b>  1. Parakeratinised epithelium.  2. Orthokeratinised epithelium.  3. Palate - Anterolateral zone.  4. Palate - Posterolateral zone.  5. Alveolar mucosa.  6. Vermilion border of lip.  7. Tongue - Circumvallate Papillae.  - Fungiform Papillae  - Filiform Papillae  8. Dentogingival junction.  9. Skin</p>	
<p><b>Temporo Mandibular Joint (T.M.J.):</b>  1. Histological section (Desirable to know).</p>	

**LECTURE DEMONSTRATION :**

1. Identification of Individual teeth.
  - Deciduous.
  - Permanent.
2. Mixed dentition using study models.
3. Cross - Section & T.S. of mandible and maxilla with teeth present using study models.  
Demonstration of preparation of ground section, Decalcification, Paraffin section & H & E Staining.

**Scheme of Examination**

**A. Theory : 70 Marks**  
**Distribution of Topics and Type of Questions**

<b>Contents</b>	<b>Type of Questions and Marks</b>	<b>Marks</b>
A. Dental anatomy - one question - 10 marks B. Dental histology - one question - 10 marks	Long Essays 2 x 10 marks	20
A. Oral histology - five questions - 25 marks B. Dental anatomy - two questions - 10 marks C. Oral physiology - one question - 05 marks	Short Essays 08 x 5 marks	40
A. Oral histology - two questions - 04 marks B. Dental anatomy - one question - 02 marks C. Oral physiology - one question - 02 marks D. Oral embryology - one question - 02 marks	Short Answers 05 x 2marks	10
	<b>Total</b>	<b>70</b>

**B. Viva Voce : 20 Marks**

**C. Internal Assessment - Theory : 10 marks, Practicals : 10 marks**

**D. Practicals : 90 Marks**

1. Carving 30 marks 1 hour 15 min
2. Spotters 60 marks (20 spotter x 3 marks) 1 hour 15 min

- 13 histology and ground section slides
- 4 tooth identification
- 3 casts for identifications of teeth, numbering system and age assessment.



**Text Books Recommended :**

Name of the Book & Title	Author	Edn	Yr. of Publ.	Publ.'s Name Place of Publ.	Price
Orban's Oral Histology and Embryology	Orban's	10th	1990	American Publication Ontario, Canada	Rs. 350/-
Oral Histology - Development, Structure and Functions	A. R. Tencate	5th	1998	Mosby A Harcourt Health Science Company USA	\$ 25.00
Dental Anatomy, Physiology and Occlusion	Wheeler's	7th	1993	Prism Book Pvt. Ltd. Bangalore	Rs. 300/-

**REFERENCE BOOK:**

- Dental anatomy by Scoot & Simon.
- Oral Physiology by Lavelle.
- Oral Physiology by Jenkins.
- Dental Anatomy by Krauss.
- Dental Anatomy - It's relevance to dentistry 5th edition by Woelfel
- Illustrated Dental Embryology, Histology and Anatomy- 2nd editon By Bath- Balogh

## II BDS

# ORAL PATHOLOGY AND MICROBIOLOGY

**Theory : 25 Hours**  
**Practical : 50 Hours**

### **MUST KNOW**

1. Developmental Disturbances of oral and para oral structures :(15 hrs)
  - a. Developmental disturbances of Jaws
    - Agnathia, Micrognathia, Macrogathia, Facial Hemihypertrophy, Facial Hemiatropy
  - b. Developmental Disturbances of lips and palate
    - Congenital Lip pits and Commissural pits and fistulas
    - Double lip, Cleft lip, cleft Palate, Chelitis Glandularis, Chelitis Granulomatosa, Hereditary Intestinal Polyposis, Hereditary Melanotid Macule
  - c. Developmental disturbances of Oral Mucosa
    - Fordyce's Granules
    - Focal epithelial Hyperplasia
  - d. Developmental disturbances of gingiva
    - Fibromatosis Gingiva, Retrocuspid Papilla
  - e. Developmental Disturbances of Tongue
    - Macroglossia, Microglossia, Ankyloglossia, Cleft Tongue, Fissured Tongue, Median Rhomboid Glossitis, Benign Migratory Glossitis, Hairy Tongue.
    - Aglossia, macroglossia, Microglossia, Ankyloglossia, Cleft Tongue, Fissured Tongue, Median Rhomboid Glossitis, Benign Migratory Glossitis, Hairy Tongue, lingual Varices, lingual Thyroid Nodule
  - f. Development disturbances of oral lymphoid tissue:
    - Reactive lymphoid aggregates
    - Lymphoid hamartoma
    - Lympho-epithelial cyst
  - g. Developmental disturbances of salivary glands:
    - Aplasia, Xerostomia, Hyperplasia of the palatal glands, Atresia, Aberrancy, Stafine's cyst Anterior Lingual Depression
  - h. Developmental disturbances in size of teeth:
    - Microdontia, Macrodonia
  - i. Developmental disturbances in the shape of the teeth:
    - Fusion, Germination, Concrecence, Dilacerations, Talon's Cusp, Dens in Dente, Dens Evaginatus, Taurodontism, Supernumerary Roots, Enamel Pearl
  - j. Developmental Disturbances in number of teeth
    - Anodontia, Supernumerary teeth, Predeciduous and Post Permanent dentition
  - k. Developmental Disturbances in Structure of Teeth:
    - Amelogenesis Imperfecta, Enamel Hypoplasia, Dentinogenesis Imperfecta, Dentinal dysplasia, Regional Odontodysplasia, Shell Teeth.
  - l. Developmental Disturbances in eruption of teeth:
    - Premature Eruptions, Eruption Sequestrum, Delayed Eruption, Multiple Unerupted teeth, Submerged Teeth. Embedded and Impacted Teeth



- m. Developmental / Fissural cysts of the Oral cavity  
 - Median palatal cyst, Globulomaxillary cyst, Median Mandibular cyst, Naso-alveolar cyst, Palatal cyst of neonates, Thyroglossal duct cyst, Epidermoid, and Dermoid cyst, Nasopalatine duct cyst.

**2. Dental Caries (5 hrs)**

- Theories and Etiology
- Clinical features
- Classification
- Histopathology
- Immunology
- Caries activity Tests
- Factors Influencing Caries

**3. Diseases of the pulp and Periapical tissues(5 hrs) (5 hrs)**

- a. Diseases of the Dental Pulp  
 - Focal Reversible Pulpitis, Acute Pulpitis, Chronic Pulpitis, Chronic Hyperplastic Pulpitis.
- b. Diseases of the Periapical Tissues  
 - Acute Apical Periodontitis, Periapical Granuloma, Periapical Abscess, Periapical Cyst
- c. Osteomyelitis  
 - Acute Suppurative Osteomyelitis, Chronic Suppurative Osteomyelitis, chronic Focal And Diffuse Sclerosing Osteomyelitis, Chronic Osteomyelitis With Proliferative Periostitis

**Practicals : 50 hours**

Identification of Hard and Soft Tissue Specimens

**Text Books Recommended :**

Name of the Book & Title	Author	Edn.	Yr. of Publ	Publisher's Name and Place of Publication	Price
Oral Pathology	R. Rajendran & -ndaram				
Shafer's Text Book of	BShivapathasu	6th	2009	Elsevier	Rs. 876/-
Oral Pathology Clinical Pathologic Correlation	Regezi & Scuibia	5th	2007	W. B. Saunders Company USA	\$ 25
Textbook of Oral and Maxillofacial Pathology	Neville, Damm. Allen, Bouquot	3rd	2009	Elsevier	
Oral Diseases in The Tropics	Prabu, Wilson, Duftry, Johnson	1st	1992	Oxford University Press	Rs. 400/-

**Other suggested reading**

1. Pathology of Tumors-Lucas
2. Oral Immunology - Lehner
3. Oral Pathology - Soames and Southam
4. Contemporary Oral and Maxillofacial Pathology - SAPP Eversole, Wysocki,
5. Colour Atlas of Oral Pathology - John Everson And Crispian Scully





## III BDS

# ORAL PATHOLOGY AND MICROBIOLOGY

Theory: 120 Hours

## ORAL PATHOLOGY

### MUST KNOW

#### 1. Benign and Malignant Tumours of the Oral Cavity

(30 hrs)

a. Benign tumours of epithelial tissue origin

- Papilloma, Keratoacanthoma, Nevus

b. Premalignant lesions and conditions:

- Definition, classification
- Epithelial dysplasia
- Leukoplakia, Carcinoma in-situ, Erythroplakia, Palatal changes associated with reverse smoking, Oral submucous fibrosis

c. Malignant tumours of epithelial tissue origin

- Basal Cell Carcinoma, Epidermoid Carcinoma (Including TNM staging), Verrucous carcinoma, Malignant Melanoma.

d. Benign tumours of connective tissue origin :

- Fibroma, Giant cell Fibroma, Peripheral and Central Ossifying Fibroma, Lipoma, Haemangioma (different types). Lymphangioma, Chondroma, Osteoma, Osteoid Osteoma, Benign Osteoblastoma, Tori and Multiple Exostoses.

e. Tumour like lesions of connective tissue origin :

- Peripheral & Central giant cell granuloma, Pyogenic granuloma, Peripheral ossifying fibroma

f. Malignant Tumours of Connective tissue origin :

- Fibrosarcoma, Chondrosarcoma, Kaposi's Sarcoma Ewing's sarcoma, Osteosarcoma Hodgkin's and Non Hodgkin's Lymphoma, Burkitt's Lymphoma, Multiple Myeloma, Solitary Plasma cell Myeloma.

g. Benign Tumours of Muscle tissue origin :

- Leiomyoma, Rhabdomyoma, Congenital Epulis of newborn, Granular Cell tumor.

h. Benign and malignant tumours of Nerve Tissue Origin

- Neurofibroma & Neurofibromatosis-1, Schwannoma, Traumatic Neuroma, Melanotic Neuroectodermal tumour of infancy, Malignant schwannoma.

i. Metastatic Tumours of Jaws and Soft Tissues of Oral Cavity

## 2. Tumours of the salivary glands

(8 hrs)

### Classification

- a. Benign tumours
  - Pleomorphic adenoma
  - Warthin's tumor
  - Basal cell adenoma
  - Canalicular adenoma
  
- b. Malignant tumors of the salivary glands
  - Malignant pleomorphic adenoma
  - Adenoid Cystic carcinoma
  - Acinic Cell carcinoma
  - Mucoepidermoid carcinoma
  - Central Mucoepidermoid carcinoma
  - Clear cell carcinoma
  
- c. Non Neoplastic enlargement of Salivary glands
  - Sjogrens syndrome
  - Mickulicz's disease
  - Necrotising Sialometaplasia

## 3. Cysts of Odontogenic Origin & Pseudocysts

(8 hrs)

- Introduction and Classification of Cysts of Oral Region
- Odontogenic Cysts
- Odontogenic Keratocyst, Dentigerous Cyst, Dental Lamina Cyst of newborn, Gingival Cyst of adults, Lateral Periodontal Cyst, Calcifying Odontogenic Cyst, Radicular Cyst.
- Pseudocysts
- Aneurysmal bone cyst, Traumatic bone cyst, Mucous extravasation phenomenon

## 4. Tumours of Odontogenic Origin

(9 hrs)

- Classification

### BENIGN:

- a. Odontogenic epithelium without Odontogenic ectomesenchyme- Ameloblastoma, Calcifying Epithelial Odontogenic Tumour, Adenomatoid Odontogenic Tumour, Squamous Odontogenic Tumor
  
- b. Odontogenic epithelium with Odontogenic ectomesenchyme with or without hard tissue formation-- Ameloblastic Fibroma, Ameloblastic Fibro-odontoma, Odontoma, Dentinogenic Ghost cell Tumor
  
- c. Odontogenic ectomesenchyme with or without included Odontogenic epithelium- Peripheral and Central Odontogenic Fibroma, Odontogenic Myxoma, Benign Cementoblastoma.

**MALIGNANT**

- a. Odontogenic carcinomas : Metastasizing ameloblastoma, Ameloblastic carcinoma

**5. Regressive alterations of teeth (2 hrs)**

- a. Attrition, abrasion, erosion, abfraction
- b. Dentinal sclerosis, dead tracts, secondary dentin, pulp calcifications
- c. Resorption of teeth (internal & external)
- d. Hypercementosis and Cementicles

**6. Infections of the Oral cavity(10 hrs)**

- a. Bacterial Infections: Scarlet fever, Diphtheria, Tuberculosis, Syphilis, actinomycosis, Tetanus, Noma.
- b. Viral Infections : Herpes Simplex, Measles, Mumps, Chicken Pox, Herpes Zoster, Cytomegalic Inclusion disease, H.I.V and Oral Manifestations of AIDS
- c. Fungal Infections : Candidiasis, Histoplasmosis, Phycomycosis and Rhinosporidosis.

**7. Allergic and Immunological Diseases of the Oral cavity (2 hrs)**

- Immunological Diseases: Recurrent Aphthous Stomatitis, Bechet's Syndrome, Reiter's Syndrome, Sarcoidosis, Wegener's Granulomatosis
- Allergic Diseases: Angioedema, Stomatitis Medicamentosa, Stomatitis Venenata

**8. Spread of Oral Infection (2 hrs)**

- a. Cellulitis, Ludwig's Angina, Intra Cranial Complication of Dental Infection, Maxillary sinusitis, Focal Infection and foci of Infection (Definition, Mechanism and significance)

**9. Physical and Chemical Injuries of the Oral Cavity (5 hrs)**

- a. Physical Injuries of Teeth
  - Bruxism, Ankylosis
  
- b. Physical Injuries of Bone
  - Traumatic Bone Cyst
  
- c. Physical Injuries of Soft tissues
  - Traumatic Ulcer, Denture Injuries of the Mucosa, Mucous Retention Phenomena
  
- d. Chemical Injuries of Oral Cavity
  - Aspirin Burn
  - Lead, Mercury and Bismuth Poisoning
  - Acrodynia
  - Silver poisoning
  - Dilantin sodium -induced gingival enlargement
  - Tetracycline
  
- e. Effects of Radiation on bone and Oral Mucosa



**10. Biopsy, Cytology and Healing of Oral Wounds(5 hrs)**

- Factors affecting the healing of wounds
- Healing of Extraction Wound and Dry Socket
- Healing of Fracture
- Biopsy:
- Biopsy Techniques, Processing Of Tissues With A Brief Account Of Routine Stains Used, Healing Of The Biopsy Wound
- Basic Aspects of Cytology:
- Indications, Staining of Cytosmears, Interpretation of Cytosmears
- Re-Implantation and Transplantation of Teeth

**11. Disease of Bone**

**(8 hrs)**

- Genetic:
- Osteogenesis Imperfecta, Cleidocranial Dysplasia, Craniofacial Dysostosis, Mandibulofacial Dysostosis, Pierre Robin Anomalad, Marfan's Syndrome, Down's Syndrome, Osteopetrosis, Achondroplasia, Cherubism
  
- Fibro-Osseous Lesions
- Fibrous Dysplasia
- Cemento-osseous dysplasias
  
- Unknown Etiology:
- Paget's Disease, Histiocytosis-X-Disease
  
- Disorders of the Temporomandibular Joint:
- Developmental disturbances of the TMJ
- Ankylosis of the TMJ
- Subluxation and luxation
- Myofascial pain dysfunction syndrome

**12. Blood Dyscrasias**

**(4 hrs)**

- Clinico-pathological aspects and oral manifestations of Anemias, Polycythemia, Leukopenia, Neutropenia, Agranulocytosis, Chediak-Higashi Syndrome, Leukocytosis, Infectious mononucleosis, Leukaemias, Purpura, Haemophilia

**13. Diseases of Periodontology**

**(5 hrs)**

- Stains, Calculus, Dental Plaque
- Gingivitis, Acute Necrotizing Ulcerative Gingivitis (ANUG), Gingival hyperplasia, Periodontitis, Juvenile periodontitis

**14. Diseases of Skin**

**(10 hrs)**

- Hereditary:
- Hereditary Ectodermal Dysplasia, Chondroectodermal Dysplasia, Dyskeratosis Congenita, White Sponge Nevus, Hereditary Benign Intra Epithelial Dyskeratosis, Ehler-Danlos Syndrome
  
- Immune-mediated:

- Lichen Planus, Pemphigus, Benign Mucous Membrane Pemphigoid, Cicatricial Pemphigoid, Psoriasis, Erythema Multiformae, Epidermolysis Bullosa, Scleroderma, Lupus Erythematosus

**15. Defence Mechanisms of the Oral Cavity (1 hrs)**

**16. Introduction to Forensic Odontology (2hrs)**

- Introduction, definition, aims & scope.
- Sex and ethnic (racial) differences in tooth morphology and histological age estimation
- Determination of sex & blood groups from buccal mucosa/ saliva
- Dental DNA methods
- Bite marks, rugae patterns and lip prints
- Dental importance of poisons and corrosives
- Overview of forensic medicine and toxicology

**17. Oral Aspects Of Metabolic Disease: (5 Hrs)**

- Oral Aspects of Disturbances in Mineral Metabolism: Calcium, Phosphorus, Magnesium, Zinc, Fluorine, Iron
- Oral Aspects of Avitaminoses and Hypervitaminoses: Vitamin A, Vitamin D, Vitamin C, Vitamin B complex
- Oral Aspects of Disturbances in Hormone Metabolism: Hypopituitarism, Hyperpituitarism, Hyperthyroidism, Hypothyroidism, Hypoparathyroidism, Hyperparathyroidism, Addison's disease, Cushing's Syndrome, Diabetes Mellitas

**18. Diseases of Nerves: (2hrs)**

- Trigeminal neuralgia, Sphenopalatine neuralgia, Frey's Síndrome, Burning Mouth Síndrome

**Oral Microbiology (3 Hrs)**

1. Normal Oral Microbial Flora

2. Microbiology of Dental Caries

- Streptococcus mutans, Lactobacillus acidophilus, Actinomyces israelii, Veillonella

3. Microbiology of Periodontal Diseases:

- Borrelia vincentii, Fusobacteria, Actinomycetes actinomycetum-comitans

4. Microbiology of Oral Infections:

- Bacteria: Mycobacterium tuberculosis, Treponema pallidum
- Viruses: Herpes group of viruses, Human immunodeficiency virus
- Fungi: Candida albicans

**Practicals : 80 hours**

- Identification of Hard and Soft Tissue Specimens
- Demonstration of Cytosmear and bacteriology smear
- Identification of Microscopic slides of Various Oral Lesions

**Identification of the histopathologic slides of the following lesions :**

1. Pit & fissure caries
2. Smooth surface caries
3. Dental caries - liquefaction foci
4. Pulp polyp
5. Periapical granuloma
6. Dentigerous cyst
7. Radicular cyst
8. Cholesterol clefts / cholesterol crystals
9. Rushton bodies
10. Calcifying odontogenic cyst
11. Mucocele
12. Leukoplakia
13. Carcinoma-in-situ
14. Oral submucous fibrosis (h/e)
15. Fordyce's spots
16. Papilloma
17. Fibroma
18. Lipoma
19. Capillary hemangioma
20. Cavernous hemangioma
21. Lymphangioma
22. Schwannoma
23. Well differentiated squamous cell carcinoma
24. Moderately differentiated squamous cell carcinoma
25. Verrucous carcinoma
26. Malignant melanoma
27. Osteosarcoma
28. Pyogenic granuloma
29. Fibrous dysplasia
30. Ossifying fibroma
31. Paget's disease
32. Osteomyelitis (acute)
33. Osteomyelitis (chronic)
34. Peripheral giant cell granuloma
35. Central giant cell granuloma
36. Ameloblastoma (follicular)
37. Ameloblastoma (plexiform)
38. Ameloblastoma (granular cell variant)
39. Adenomatoid odontogenic tumour
40. Cementoblastoma
41. Ameloblastic fibroma
42. Compound odontome
43. Pleomorphic adenoma, preferably with metaplastic areas
44. Warthin's tumour
45. Mucoepidermoid carcinoma (high grade)

46. Mucoepidermoid carcinoma (low grade)
47. Adenoid cystic carcinoma (pas)
48. Necrotizing sialometaplasia
49. Lichen planus with civatte bodies
50. Pemphigus
51. Tuberculosis
52. Actinomycosis
53. Candidiasis

**ADDITIONAL TOPICS:**

1. Ultrastructural features, Immunofluorescence techniques for muco-cutaneous lesions and viral infections
2. Basics of immunology
3. Different type of Microscopy used in the diagnosis of oral lesions
4. Syndromes

**Scheme of Examination**

**A. Theory : 70 Marks**

Distribution of Topics and Type of Questions

Contents	Type of Questions and Marks	Marks
Both questions from Oral Pathology only	Long Essays 02 x 10 marks	20
a. 6 questions on Oral pathology b. 2 questions on Oral microbiology	Short Essays 08 x 5 marks	40
a. 4 questions on Oral pathology b. 1 question on Oral microbiology	Short Answers 05 x 2marks	10
<b>Total</b>		<b>70</b>

**B. Viva Voce : 20 Marks**

**C. Internal Assessment - Theory : 10 Marks, Practicals : 10marks**

**D. PRACTICALS : 90 Marks**

**Spotters (total 15 spotters)**

1. Specimen : Identification & Points in Support 6x5=30 marks
2. Slides : Slides, diagrams, Labelling & Salient features, 12 slides 12x5=60 marks

**Text Books Recommended :**

Name of the Book & Title	Author	Edn.	Publisher's Name and Place of Publication	Price
Oral pathology -Clinical Pathologic Correlation	Regezi & Scuibia	5th	W. B. Saunders Company USA, 2007	\$ 25
Shafer's Text Book of Oral Pathology	R. Rajendran B. Sivapathasundharam	6th	Elsevier, 2009	Rs. 876/-
Text Book of Oral and Maxillofacial Pathology	Neville, Damm, Allen, Bouquot	3rd	Elsevier, 2009	-
Essentials of Oral Microbiology	Lakshman P Samaranayake	3rd	Churchill Livingstone, 2006	\$ 86.95

**Other suggested reading**

1. Sapp, Eversole, Wysocki : Contemporary Oral And Maxillofacial Pathology, 3rd edition
2. R B Lucas: Pathology of tumors of oral tissues, 5th edition
3. Peter.A.Reichart, Hans P.Philipsen: Odontogenic tumors and allied lesions
4. Mervyn Shear, Paul M.Speigh: Cysts of oral and maxillofacial regions, 4th edition
5. S R Prabhu: Oral diseases of the tropics
6. Roitt, Lehner: Oral Immunology
7. Russel J Nisengard, Michael G Newman: Oral Microbiology & Immunology, 2nd edition
8. John Eveson, Crispian Scully: Colour atlas of oral pathology

