

SYLLABUS OF PART – I

SUBJECT: PEDIATRIC DENTISTRY

Applied Anatomy

Development of oral cavity

Development of maxillary and mandible jaws

Development of palate

Development of tooth

Development of primary and permanent teeth

Development of muscle of mastication

Development of muscles of facial expression

Development of spaces associated with head, neck and face region

Development of course of arteries and nerves and lymphatic drainage supplying to head neck and face regions

Development of temporo-mandibular joint, movement and its application to development of harmonious balanced occlusion

Development of tongue

Development of salivary glands

Theories of teeth eruption

Developmental anomalies in teeth and supporting structure

Physiology and Biochemistry

Fluid and electrolyte balance in children

Blood & its constituent

Function of blood, blood grouping

Blood diseases in children

Vital parameters in children

Endocrine system

Mastication and Deglutition

Pain pathways and its management

Saliva- composition, function and its role in maintaining equilibrium of oral cavity

Pathology

Inflammation

Necrosis and gangrene

Allergy and hypersensitivity reaction
Benign and malignant neoplasm in children
Pathology of oral soft tissue and hard tissue
Pathology of dental caries and periodontal diseases
Attrition, abrasion and erosion of teeth
Oral manifestation of systemic diseases
Developmental and inflammatory cysts
Shock
Infectious diseases in children
Repair and regeneration of pulpo-dentinal complex
Immunity- type and immunoglobulins
Mechanism of repair of initial caries (white spot lesion)

Microbiology

Normal oral flora of oral cavity of children
Role of micro-organism in dental caries and periodontal diseases
Methods of Sterilization, disinfections and asepsis
Hospital waste management
Microflora related to others oral infections

Pharmacology

Drugs used for general anesthesia, sedation and conscious sedation in children
Local anesthesia in pediatric patients
Analgesics, antipyretics and antibiotics in children
Vitamin A, B complex, C, D and E,
Trace element in prevention of dental caries
Fluoride therapy (local and systemic for preventing dental caries)
Dentifrices

Research Methodology and Bio Statistics:

Statistics
Biostatistics as applied to dentistry and research
Sampling and sampling technique
Application of various probability tests
Data analysis and interpretation
Reliability, Sensitivity and specificity diagnosis test and measurement
Epidemiology of oral diseases

Different types of epidemiological studies

Research strategies

Designing of experimental study

Errors measurement in experiment

Growth & Development

Growth and development – prenatal development of cranium, face, jaws, teeth and supporting structures

Cephalometric evaluation of growth

Dimensional changes in dental arches

Development of occlusion (primary and permanent dentition)

Dental Plaque

Development of plaque

Oral microflora of plaque

Definition, composition, initiation, pathogenesis, biochemistry,

Different Plaque hypothesis

Acquired pellicle- its role in oral ecosystem

Genetics

Cell Biology, DNA, RNA, protein synthesis, cell division

Chromosomal abnormalities

Principals of oral facial genetics

Genetics of dental caries and periodontal diseases

Genetics risks and bioethenic

Modes of inheritance, hereditary traits in families