

Syllabus for Ph.D. Entrance Examination
In
Paedodontics & Preventive Dentistry

1. Applied Anatomy & genetics
2. Applied Physiology
3. Applied Pathology
4. Nutrition and Dietetics
5. Growth & Development: Prenatal and postnatal development of cranium, face, jaws, teeth and supporting structures. Chronology of dental development and development of occlusion. Dimensional changes in dental arches. Cephalometric evaluation of growth.
6. Child Psychology: Development & Classification of behavior, personality, intelligence in children, theories of child psychology, stages of psychological child development, fear anxiety, apprehension & its management.
7. Behavior Management: Non- pharmacological & Pharmacological methods.
8. Child Abuse & Dental Neglect.
9. Conscious Sedation, Deep Sedation & General Anesthesia in Pediatric Dentistry:
(Including Other Drugs, Synergic & Antagonistic Actions of Various Drugs Used in Children.
10. Preventive Paedodontics: Concepts, chair side preventive measures for dental diseases, high-risk caries including rampant & extensive caries - Recognition, Features & Preventive Management, Pit and Fissures Sealants, Oral Hygiene measures, Correlation of brushing with dental caries and periodontal diseases. Diet & Nutrition as related to dental caries. Diet Counseling.
11. Dental Plaque: Definition, Initiation, Pathogenesis, Biochemistry, and Morphology & Metabolism.
12. Microbiology & Immunology as related to Oral Diseases in Children. Basic concepts, immune system in human body, Auto Immune diseases, Histopathology, Pathogenesis, Immunology of dental caries, Periodontal diseases. Tumors, Oral Mucosal lesions etc.
 - Gingival & Periodontal diseases in Children:
 - Normal Gingiva & Periodontium in children.
 - Gingival & Periodontal diseases - Etiology, Pathogenesis, Prevention & Management.
14. Pediatric Operative Dentistry
 - Principle Of Operative Dentistry along with modifications of materials/past, current & latest including tooth colored materials.
 - Modifications required for cavity preparation in primary and young permanent teeth.
 - Various Isolation Techniques
 - Restorations of decayed primary, young permanent and permanent teeth in children using various restorative material like Glass Ionomer, Composites, Silver, Amalgam & latest material (gallium)
 - Stainless steel, Polycarbonate & Resin Crowns / Veneers & fibre post systems.
15. Pediatric Endodontics:
 - Primary Dentition: - Diagnosis of pulpal diseases and their management - Pulp capping, Pulpotomy, Pulpectomy (Materials & Methods), Controversies & recent concepts.
 - Young permanent teeth and permanent teeth, Pulp capping, Pulpotomy, Apexogenesis, Apexification, Concepts, Techniques and Materials used for different procedures.
 - Recent advances in Pediatric diagnosis and Endodontics.
16. Prosthetic consideration in-Paediatric Dentistry.

17. Traumatic Injuries in Children:

- Classifications & Importance.
- Sequelae & reaction of teeth to trauma.
- Management of Traumatized teeth with latest concepts.
- Management of jaw fracture in children.

18. Interceptive Orthodontics:

- Concepts of occlusion and esthetics: Structure and function of all anatomic components of occlusion, mechanics of articulations, recording of masticatory function, diagnosis of Occlusal dysfunction, relationship of TMJ anatomy and pathology and related neuromuscular physiology.
- A comprehensive review of the local and systemic factors in the causation of malocclusion.
- Recognition and management of normal and abnormal developmental occlusions in primary, mixed and permanent dentitions in children (Occlusal Guidance).
- Biology of tooth movement: A comprehensive review of the principles of teeth movement Review of contemporary literature. Histopathology of bone and Periodontal ligament, Molecular and ultra cellular consideration in tooth movement.
- Myofunctional appliances: Basic principles, contemporary appliances: Design & Fabrication
- Removable appliances: Basic principles, contemporary' appliances: Design & Fabrication
- Case selection & diagnosis in interceptive Orthodontics (Cephalometric, Image processing, Tracing, Radiation hygiene, Video imaging 8s advance Cephalometric techniques).
- Space Management: Etiology, Diagnosis of space problems, analysis, Biomechanics, Planned extraction in interception orthodontics.

19. Oral Habits in Children:

- Definition, Etiology & Classification
- Clinical features of digit sucking, tongue thrusting, mouth breathing 8s various other secondary habits.
- Management of oral habits in children

20. Dental ware of Children with special needs:

- Definition Etiology, Classification, Behavioral, Clinical features 8s Management of children with:
- Physically handicapping conditions
- Mentally compromising conditions
- Medically compromising conditions
- Genetic disorders

21. Oral manifestations of Systemic Conditions in Children 8s their Management

22. Management of Minor Oral Surgical Procedures in Children

23. Dental Radiology as related to Pediatric Dentistry

24. Cariology

- Historical background
- Definition, Etiology & Pathogenesis
- Caries pattern in primary, young permanent and permanent teeth in children.
- Rampant caries, early childhood caries and extensive caries. Definition, etiology, Pathogenesis, Clinical features, Complications 8s Management.
- Role of diet and nutrition in Dental Caries
- Dietary modifications 8s Diet counseling.

- Subjective & objective methods of Caries detection with emphasis on Caries Activity tests, Caries prediction, Caries susceptibility & their clinical Applications
- 25. Pediatric Oral Medicine & Clinical Pathology: Recognition & Management of developmental dental anomalies, teething disorders, stomatological conditions, mucosal lesions, viral infections etc.
- 26. Congenital Abnormalities in Children: Definition, Classification, Clinical features of Management.
- 27. Dental Emergencies in Children and their Management.
- 28. Dental Materials used in Pediatric Dentistry.
- 29. Preventive Dentistry:
 - Definition
 - Principles & Scope
 - Types of prevention
 - Different preventive measures used in Pediatric Dentistry including fissure sealants and caries vaccine.
- 30. Dental Health Education & School Dental Health Programmes
- 31. Dental health concepts, Effects of civilization and environment, Dental Health delivery system, Public Health measures related to children along with principles of Pediatric Preventive Dentistry
- 32. Fluorides:
 - Historical background
 - Systemic & Topical fluorides
 - Mechanism of action
 - Toxicity & Management.
 - Defluoridation techniques.
- 33. Medicological aspects in Paediatric Dentistry with emphasis on informed concept.
- 34. Counseling in Paediatric Dentistry
- 35. Case History Recording, Outline of principles of examination, diagnosis & treatment planning.
- 36. Epidemiology: Concepts, Methods of recording & evaluation of various oral diseases. Various national & global trends of epidemiology of oral diseases.
- 37. Comprehensive Infant Oral Health Care.
- 38. Principles of Bio-Statistics & Research Methodology & Understanding of Computers and Photography
- 39. Comprehensive cleft care management with emphasis on counseling, feeding, nasoalveolar bone remodeling, speech rehabilitation.
- 40. Setting up of Pedodontics & Preventive Dentistry Clinic.
- 41. Emerging concept in Paediatric Dentistry of scope of laser/minimum invasive procedures :