



**ФАКУЛТЕТ ПО ДЕНТАЛНА МЕДИЦИНА**  
**Катедра по детска дентална медицина**  
4002 Пловдив, бул. Христо Ботев № 3



**FACULTY OF DENTAL MEDICINE**  
**Department of Paediatric Dentistry**  
3, Hristo Botev Blvd., 4002 Plovdiv, Bulgaria

## SYLLABUS

### STATE EXAM IN PEDIATRIC DENTISTRY

1. Ontogenetic development of maxillofacial region, stages of ontogenetic development, developmental disorders of the maxillofacial region.
2. Ontogenetic development of tooth germ, stages of development of tooth germ, origin and characteristics of tooth germ elements. Morphological and biological features.
3. Histogenesis of the tooth enamel, stages of amelogenesis, factors associated with enamel histogenesis.
4. Morphology and physiology of the tooth enamel, morphologic units, features of enamel associated with childhood.
5. Histogenesis, morphology and physiology of the tooth dentin, features of dentin associated with childhood.
6. Histogenesis, morphology and physiology of the dental pulp, features of pulp associated with childhood.
7. Histogenesis, morphology and physiology of the tooth cementum and periodontal ligament, features associated with childhood.
8. Histogenesis and physiology of the oral mucosa and periodontium, features associated with childhood.
9. Dynamics of primary and permanent dentition development, stages, eruption times and resorption, factors associated with normal and abnormal tooth eruption.
10. Dental anatomy, morphology and physiology of primary and permanent dentition, identifiable features that distinguish primary from permanent teeth, tooth codes.
11. Abnormalities in shape, size, number and position of teeth, their importance in clinical practice.
12. Etiology, pathogenesis and classification of the abnormalities in dental structure (dysplasia), importance in clinical practice.
13. Physiology of the oral cavity, origin, components, functions and salivary role in physiology of the oral cavity.
14. Oral ecosystem – origin and dynamics in childhood, components and defense mechanisms of oral ecosystem
15. Oral microflora, species of microorganisms and types of relationships between them, mechanism of action, age-associated variability.

16. Characteristics of immune system in children, non-specific immune system and specific immune system, defense mechanisms in the oral cavity, development of immune system in children.
17. Oral immunity, immunopathological reactions involved in the pathogenesis of the oral diseases, defense mechanisms of the oral mucosa, saliva and gingival fluid.
18. Dental prevention – aim, principles, types, strategies and forms of dental prevention, prevention resources.
19. Etiology of tooth decay – role of primary and secondary factors.
20. Pathogenesis of dental caries – theories, contemporary concept, exchange processes in the tooth enamel.
21. Histopathology of tooth decay in the enamel and dentin - differential criteria for stages, stages, carious lesion zones, carious process specifications in childhood.
22. Oral hygiene – mechanical and chemical control of dental plaque, factors determining the effectiveness, methods and means for individual and professional oral hygiene, specifics of the mechanical control of dental plaque in childhood.
23. Nutritional prevention of oral diseases – pre-resorptive and post-resorptive effect of nutrition.
24. Use of fluorides for the prevention of dental caries – metabolism of fluoride, effect of fluoride on anticaries activity, toxicity of fluoride.
25. Endogenous fluoride prevention – aims, indications for use, mechanisms of action, factors determining the effectiveness, methods and means
26. Exogenous fluoride prevention – aims, indications for use, mechanisms of action, factors determining the effectiveness, methods and means
27. Mineralizing agents in prevention of dental caries - aims, indications, mechanisms of action, factors determining the effectiveness, methods and means.
28. Sealants in the prevention of dental caries - aim, indications, mechanism of action, factors determining the effectiveness, techniques.
29. Epidemiology of dental caries - contemporary trends, indexes, determining factors, objectives of WHO.
30. Risk assessment and prognosis of oral diseases, risk assessment systems, individual oral risk profile.
31. Prevention programs - types, goals, organization and control.
32. Promotion of oral health - guidelines, principles, strategies, process of health promotion, methods of health promotion, health education.
33. Oral examination of the child in the dental practice. Risk assessment of oral diseases, preventive programs, treatment plan.
34. Psychological problems in pediatric dental practice – factors affecting child's behaviour, evaluation of behaviour and anxiety of the child, pharmacological and nonpharmacological management of the child's behaviour.
35. Caries in primary and permanent teeth in children - anatomical and morphological characteristics, classification, methods of examination, clinical characteristics, features of tooth decay associated with childhood.
36. Non-operative treatment of caries in primary and permanent teeth in children - diagnostic criteria for assessing caries lesion activity. Indications, methods, and means for non-operative treatment.

37. Operative treatment of caries in primary and permanent teeth in children. Treatment plan, principles in cavity design and preparation.
38. Operative treatment of caries in primary in children. Cavity form characteristics for dental amalgam and resin materials. Preformed metal crowns.
39. Early childhood caries – risk factors, specifics of the clinical characteristics, complications. Treatment and prevention of early childhood caries.
40. Operative caries treatment of permanent teeth in children. Pit and fissure caries. Cavity form characteristics for dental amalgam and resin materials. Minimal intervention techniques of preparation. Preventive restorations.
41. Operative caries treatment of permanent teeth in children – approximal caries, frontal teeth caries. Principles in cavity design and preparation.
42. Operative caries treatment of primary and permanent teeth in children – medication. Cavity sealers, liners, and cement bases (advantages and disadvantages). Restorative materials (advantages and disadvantages).
43. Alternative techniques and methods for caries removal in children.
44. Secondary caries at primary and permanent teeth in children. Risk factors, diagnostics, prevention, and treatment.
45. Pulpitis in primary teeth - classification, etiology, pathogenesis, examination methods, clinical characteristics, features associated with childhood, treatment.
46. Pulpitis in permanent teeth - classification, etiology, pathogenesis, examination methods, clinical characteristics, features associated with childhood.
47. Treatment of pulpitis in permanent teeth in children – indications, techniques, results.
48. Apical periodontitis in primary and permanent teeth in children - characteristics of periodontal tissue in children, classification.
49. Apical periodontitis of primary and permanent in children - etiology, clinical characteristics, specifics.
50. Treatment of periodontitis in primary teeth – indications, methods, and means.
51. Treatment of periodontitis of permanent teeth with incomplete root development – aim, methods, and means.
52. New clinical protocol in endodontic treatment of permanent teeth with necrotic pulp and incomplete root development in children.
53. Traumatic injuries of primary and permanent teeth - prevalence, classification, etiology, methods of examination.
54. Traumatic injuries of primary teeth - clinical characteristics and treatment of different trauma types.
55. Traumatic injuries of permanent teeth in children – Contusio dentis, Luxatio dentis /Lateral, Intrusio, Extrusio dentis/, Expulsio dentis - clinical characteristics and treatment.
56. Fracture of hard dental tissues in permanent teeth - clinical characteristics and treatment – restoration techniques.
57. Complications in primary and permanent teeth after trauma.
58. Extraction of primary teeth – indications, anesthesia /premedication, types of anesthesia/, technique, post-extraction complications.
59. Abnormalities in dental structure (dysplasia) - clinical characteristics and treatment.
60. Molar Incisor hypomineralization (MIH).

61. Periodontal diseases in children – classification, examination methods, indexes, periodontal risk assessment.
62. Gingivitis catarrhalis in children – classification, etiology, pathogenesis, clinical characteristics, treatment methods.
63. Gingivitis hypertrophicans in children – classification, etiology, pathogenesis, clinical characteristics, treatment methods.
64. Ulceronecrotic gingivitis in children - classification, etiology, pathogenesis, clinical characteristics, treatment methods.
65. Periodontal diseases in children – aggressive periodontitis – classification, etiology, clinical characteristics and treatment.
66. Periodontal diseases in children associated with systematic diseases – pathogenesis, clinical characteristics and treatment.
67. Periodontal diseases associated with anomalies in the development or acquired deformations and conditions – clinical characteristics and treatment.
68. Gingivostomatitis caused by mechanical, chemical, thermal and other factors – clinical characteristics and treatment. Local changes in the oral mucosa of infants and children – clinical characteristics and treatment.
69. Gingivostomatitis of viral origin. Acute herpetic gingivostomatitis.
70. Recurrent oral herpes - etiology, classification, clinical characteristics, and treatment.
71. Oral candidosis – classification, etiology, clinical characteristics, and treatment.
72. Recurrent aphthous stomatitis in children and adolescence.
73. Gingivostomatitis associated with most common infectious diseases in childhood - clinical characteristics and treatment.
74. Gingivostomatitis associated with dermatosis, hypovitaminosis, blood disorders in children - clinical characteristics and treatment.
75. Gingivostomatitis associated with gastrointestinal diseases and endocrine disorders in children - clinical characteristics and treatment.
76. Diseases of the lips in children – classification, clinical characteristics and treatment.
77. Diseases of the tongue in children – classification, clinical characteristics and treatment.
78. General guidelines for treatment of the periodontal diseases in children – aim of treatment, early diagnosis, types of periodontal treatment.
79. Oral health in children with AIDS/HIV infection – prevalence, clinical characteristics and treatment.
80. Oral health in children with systemic diseases - diabetes mellitus, respiratory disorders.
81. Dental erosion and abrasion in children.
82. Child abuse and trauma in the orofacial area in children.
83. Football - risk factor for oral health in children and adolescents.
84. Oral health in overweight and obese children.

Approved,  
09.09.2021

HEAD OF DEPARTMENT: /s/

/Prof. A. Belcheva, DDS, PhD, MSc/

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## RECOMMENDED READING FOR INDIVIDUAL PREPARATION FOR STATE EXAM IN PEDIATRIC DENTISTRY

1. *American Academy of Pediatric dentistry*. Guideline on fluoride therapy. [www.aapd.org/media/Policies\\_Guidelines/G\\_Fluoride\\_Therapy.pdf](http://www.aapd.org/media/Policies_Guidelines/G_Fluoride_Therapy.pdf)
2. *American Dental Association*. ADA statement on enamel (dental) fluorosis. [www.ada.org/prof/resources/positions/statements/fluoride\\_community\\_enamel.asp](http://www.ada.org/prof/resources/positions/statements/fluoride_community_enamel.asp)
3. *Avery JD*. Essential of Oral Histology and Embryology: A clinical Approach, Mosby, 3 Edition, 2005
4. *Avery JK, Steele PF, Avery N*. Oral development and histology. Thieme, 2002
5. *Axelsson P*. Preventive materials, methods and programs, Quintessence, 2004.
6. *Axelsson P*. Risk prediction and preventive dentistry, Quintessence, 2004.
7. *Casamassimo F, McTiger N, Sounders*. Pediatric Dentistry. Infancy through adolescence. 5-edition. Quintessence Publishing Co, Inc, 2012.
8. *Chiego D*. Essential of Oral Histology and Embryology: A clinical Approach, Mosby, 3 Edition, 2014.
9. *Dean JA, Avery DR, McDonald RE*. Dentistry for the Child and Adolescent. Elsevier Health Sciences, 2011. Edition, Mosby, 2013.
10. *FDI/WHO/ADR*. Global consultation on oral health through Fluoride. <http://www.fdiworldental.org>.
11. *Garant PR*. Oral Cells and Tissues, Quintessence Publishing Co, Inc, 2003.
12. *Koch G, Poulsen S*. Pediatric dentistry. John Willey and Sons, 2009.
13. *Koch G, Poulsen S*. Pediatric dentistry. John Willey and Sons, 2009.
14. Lecture course in Pediatric Dentistry – Part I and II, and in Dental Prevention, Department of Pediatric dentistry- Plovdiv
15. *McDonald, Avery D, Jeffrey A*. Dentistry for the Child and Adolescent, 9e, 2010.
16. *Millett, Declan, Wellbury, et al*. Clinical Problem Solving in Dentistry Orthodontics and Paediatric Dentistry. Churchill Livingstone & Elsevier, 2010.
17. *Nanci A*. Ten Cate's Oral Histology. Development, structure, and Function. 9th Edition. Elsevier, 2016.
18. *Srivastava VK*. Modern Pediatric Dentistry. Jaypee Brothers Medical Publishers, 2011.
19. Tests in Pediatric Dentistry - Part I, Medical University Plovdiv, 2020
20. *Wellbury R, Duggal M, Hosey MT*. Pediatric Dentistry. Fourth edition. Oxford University Press, 2012.

21. *Wellbury R, Duggal*. Pediatric Dentistry. 5-edition. Oxford University Press, 2005.
22. *Wellbury R, Duggal*. Pediatric Dentistry. Oxford University Press, 2012.
23. *World Health Organization*. The world health reports 2003. Geneva: WHO; 2003  
[http://www.who.int/oral\\_health](http://www.who.int/oral_health).

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