

APPROVED

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## **QUESTIONS FOR THE STATE EXAMINATION IN PROSTHETIC DENTISTRY**

1. History of prosthetic dentistry (prosthodontics).
2. Prosthetic Dentistry (prosthodontics). Modern content, subject and objectives of the specialty.
3. The role of scientists from the USSR and Belarus in the development of prosthodontics science and providing of the dental service to the population.
4. Anatomy and development of human dentoalveolar system.
5. Functional anatomy of masticatory apparatus. The muscles of masticatory apparatus – their characteristics and function. The movements of the mandible (the angles of sagittal and transversal paths).
6. Temporomandibular joint. The features of anatomy and function.
7. Anatomy of the face and its features, associated with the age. Anthropometric patterns.
8. The dental, alveolar and basal arches, the changes in their proportions according to the atrophy of the alveolar process. Occlusal plane. Occlusal curves.
9. Anatomy of maxillary and mandibular teeth.
10. Periodontium, anatomy, functions. The stamina of periodontium to the occlusal loads, the changes according to the atrophy of the alveolus. Reserve forces of periodontium.
11. The examination methods of the periodontium stamina to the loads (gnathodynamometry). Parodontogramm, its meaning in the prosthetic dentistry clinics.
12. The examination methods of the functional capacity of masticatory apparatus (functional chewing tests).
13. The structure of oral mucosa (classification by Supplee, mobility and pliability). The use of the mucosal condition in removable prosthodontics.
14. The occlusion (bite). Types of bite and their characteristics (physiology, anomaly, pathology).
15. Articulation and occlusion. Kinds of occlusion. Centric occlusion and its characteristics.
16. The changes in dentoalveolar system, associated with tooth loss. The concept of “relative physiologic rest position” and “vertical dimension of occlusion”. Interrelation between the pathology of dentoalveolar system and digestive tract.
17. Functional pathology of dentoalveolar system (according to Kourlandsky). Main types of functional pathology and the mechanism of their development.
18. The diagnosis and methods of patient examination in prosthodontics.
19. Ethic and deontologic aspects in the prosthetic dentistry clinics.

20. Main nosological forms of dentoalveolar pathology, which are subjects of prosthetic and complex treatment.
21. Apparatus, which reproduce the movements of the mandible.
22. Methods of anesthesia in the prosthetic dentistry clinics. Main complications and their prevention.
23. Organization of the daily work of prosthodontics office and dental laboratory.
24. Preparation of the oral cavity for prosthetic treatment (therapeutic, prosthodontic, orthodontic, surgical).
25. Methods of oral examination and indications for prosthodontics treatment (absolute, relative).
26. Case history, the rules of filling it in, its importance as medical, scientific and juridical document.
27. Methods of X-ray examination of teeth, jaws and temporomandibular joints.
28. Metals and metal alloys, used for making dentures. Main requirements, purposes of use.
29. Materials for denture bases. Main requirements, purposes of use.
30. Modelling materials. Main requirements, wax compositions.
31. Materials for polishing dentures. Methods of their use.
32. Classification of denture constructions. Specific features of transmitting the occlusal load in various types of dentures.
33. Pathology of hard tooth tissues. Classifications by Black and Kourlandsky.
34. Inlays, characteristics, indications for use. Index of destruction of occlusal surface (IDOST). Principles and rules of cavity preparation for inlays.
35. Methods of inlays making, the required materials.
36. Base alloys, used for manufacturing dentures: physicochemical, biomedical and technologic properties.
37. Noble alloys, used for manufacturing dentures: physicochemical, biomedical and technologic properties.
38. Impression materials. Classification, requirements for them. Impressions, classifications, the methods of taking impressions in partial edentia with different impression materials.
39. Instruments and materials, used for treatment of patients with fixed and removable dentures.
40. Total absence of a tooth crown. Clinical features, functional disorders, methods of prosthetic treatment. Indications for retention and use of tooth roots in prosthetic treatment.
41. Methods of prosthetic treatment with post constructions: the simple post tooth, tooth by Richmond, by Akhmedov, by Il'ina-Markosyan, root inlay/cast post-and-core, stock non-metallic posts from carbon and glass fibers.
42. Indications and contraindications for prosthetic treatment of tooth crown defects with artificial crowns.
43. The rules of preparation of teeth for crowns. Safety zones according to Abolmassov and Cluev. Specific features of preparing teeth for different kinds of artificial crowns. Reactions of tooth tissues to the preparation.
44. Requirements for the artificial crown.
45.  $\frac{1}{2}$  crowns, characteristics, indications, methods of manufacturing.

46. Clinical and laboratory stages of manufacturing metal stamped crowns (kinds of stamping).
47. Clinical and laboratory stages of manufacturing cast metal crown.
48. Clinical and laboratory stages of manufacturing metal crowns with acrylic facette (Belkin, Borodyuk, Velichko).
49. Clinical and laboratory stages of manufacturing acrylic crown.
50. Clinical and laboratory stages of manufacturing metal-acrylic and porcelain-fused-to-metal crowns.
51. Possible errors and complications during manufacturing artificial crowns.
52. Partial tooth loss (edentia). Etiology, clinical features, associated functional disorders. Classification of defects of dental arch.
53. Changes in dentoalveolar system, associated with partial defects of dental arch. Etiology, clinical features, methods of treatment.
54. Biological and clinical grounds of dental bridge designing.
55. Types of dental bridges in accordance with methods of manufacturing, kinds of fixation, construction materials.
56. Indications and contraindications for manufacturing bridges. Addition of abutments to the dental bridge as a method of increasing the use of reserve forces of periodontium.
57. Clinical and laboratory stages of manufacturing soldered bridge constructions, based on stamped crowns (metal and combined constructions).
58. Solder and its properties (for stainless steel, gold), requirements for them. Soldering of dental bridge made from stainless steel, gold alloy, silver-palladium alloy.
59. Metal-acrylic and porcelain-fused-to-metal bridges, indications and contraindications. Clinical and laboratory stages of bridge manufacturing.
60. Clinical and laboratory stages of manufacturing cast metal dental bridges.
61. Convergence of teeth. Causes of convergence. Specific features of bridge manufacture in case of convergence of teeth.
62. Possible errors and complications in bridge prosthetics.
63. Instruments and materials used for grinding and polishing fixed dentures.
64. Dentures by Rumpel, characteristics, indications for use.
65. Types and constructions of removable dentures. Characteristics, main components.
66. Indications for partial removable dentures. Grounds for the borders of removable partial dentures, number and location of abutment teeth.
67. Types of fixation of removable dentures (clasps, telescopic crowns, attachments, bars).
68. Procedure of centric occlusion registration in partial tooth loss.
69. Selection and rules of adjustment of artificial teeth in partial removable prosthodontics.
70. Clasps, purpose of their use, types of clasps. Clasp lines. Procedure of manufacturing wrought wire clasp.
71. Errors in centric occlusion registration in partial tooth loss. Prevention and correction during the stage of trial fitting denture.
72. Artificial teeth for removable dentures, kinds of teeth, characteristics of materials used.

73. Clinical and laboratory stages of manufacturing partial removable acrylic-based dentures.
74. Methods of flasking.
75. Self-cure acrylic resins, characteristics, purpose of use. Temperature mode of curing acrylic resin.
76. Grinding, finishing and polishing acrylic dentures.
77. Possible errors and complications in acrylic removable dentures manufacture.
78. Specific features of manufacturing removable dentures in case of bone tori in mandible (exostosis) and maxillary torus in hard palate.
79. The procedure of removable denture fitting and sitting, criteria of correctness of denture sitting.
80. Clasp removable dentures with metal framework: characteristics, main components, indications for their use.
81. Main rules of fixation of removable framework clasp dentures and the possibilities of distribution of functional loads between the abutment teeth and soft tissues of prosthetic bed.
82. Surveying, surveyors. Methods and rules of performing surveying.
83. Method of manufacturing removable clasp denture with the framework, which consists of separate elements.
84. Methods of manufacturing removable clasp dentures with cast framework.
85. Method of manufacturing the framework of removable clasp denture with replacement of wax composition for the resin (by Velichko L.S.).
86. Specific features of construction of removable clasp framework dentures. Clasp system by Ney. Characteristics, indications for use.
87. Rules of using removable dentures. Theory of adaptation to the denture.
88. Complete (total) edentia. Possible causes, incidence.
89. Functional and morphologic changes in the oral cavity in complete edentia.
90. Examination of totally edentulous patient.
91. Classifications of edentulous maxilla by Shroeder, Kourlandsky, Oxman. Classifications of edentulous mandible by Keller, Kourlandsky.
92. Oral mucosa (morphologic structure, mobility and pliability, neutral zone, zones of pliability of palatal mucosa by Lyund).
93. Methods of fixation of dentures in complete edentia.
94. Factors of stabilization of dentures in complete edentia.
95. Method of taking anatomical impressions for manufacturing individual trays and materials, used for these purposes. Methods of manufacture of individual trays, materials used for this.
96. Adjustment of maxillary and mandibular individual tray with functional tests by Herbst.
97. Method of taking functional impressions, substantiation of impression material selection in accordance with the condition of oral mucosa of alveolar ridge.
98. Manufacturing wax bases with occlusal rims, materials for their manufacture, criteria of assessment.
99. Methods of determining of VDO (vertical dimension of occlusion) and their characteristics.

100. The algorithm of registration of centric relation with anatomic-physiologic method. Anthropometric landmarks and clinical methods of determining position, shape and size of artificial teeth in complete edentia.
101. Adjustment of artificial dentition on a glass plate (method by Vassil'ev).
102. Specific features of adjustment of artificial dentition in prognic and prognatic interrelation of edentulous alveolar ridges.
103. Trial fit of waxed denture and algorithm of performing trial fit in complete edentia, possible errors.
104. Clinical signs and the tactics of the dentist in case of increased and decreased vertical dimension of occlusion in the trial fit of waxed denture.
105. Clinical signs and the tactics of the dentist in case of detecting frontal or lateral occlusion in the trial fit of waxed denture.
106. Final modeling and the replacement of wax composition for acrylic in manufacturing complete removable dentures.
107. Algorithm and methods of sitting and fitting complete removable dentures, rules of using complete dentures.
108. The process of patient adaptation to complete denture and oral hygiene in case of complete dentures. Recommendations for use.
109. Correction of removable denture, method of its performing.
110. Clinical and laboratory stages of manufacturing dentures in complete edentia.
111. Specific features of clinical and laboratory stages in case of complete edentia in one of the jaws.
112. Etiology and pathogenesis of periodontal diseases. Clinical symptoms of periodontal diseases.
113. Classification of periodontal diseases by WHO and Union Dental Scientific Society.
114. Clinical and X-ray symptoms of periodontal pathology, interrelation between them. The change of periodontal reserve forces connected with the atrophy of alveolar ridge.
115. Analysis of functional condition of periodontium on the basis of odontoparodontogramm.
116. Clinical, X-ray and laboratory examination of patients with periodontal diseases.
117. Possible causes of periodontium overload of separate teeth or group of teeth. Clinical symptoms and methods of detecting the teeth with periodontium overload.
118. Main causes of occlusal trauma. Prevention and treatment methods.
119. Occlusal adjustment/selective tooth grinding as the initial stage of periodontal disease treatment. Methods. Possible complications.
120. Immediate dentures. Clinical and biological grounds of using immediate dentures in prosthetic treatment of periodontal diseases.
121. Indications for manufacturing immediate dentures.
122. Methods of manufacturing immediate dentures by Sosnin and Oxman.
123. Temporary splinting, indications, requirements for the temporary splints. Types of temporary splint constructions, their characteristics.
124. Errors and complications of temporary splinting.
125. Indications and contraindications for orthodontic treatment in periodontal diseases. Specific features of orthodontic treatment of patients with periodontal

pathology.

126. Possible causes and clinical signs of functional overload of periodontal tissues. Indications for extraction of teeth in periodontal pathology.
127. Permanent splinting in periodontal diseases. Aims, objectives. Indications. Requirements for permanent splints.
128. Types of stabilization. Indications for removable and fixed splints.
129. Comparative characteristics of removable and fixed splints.
130. Indications for the use of fixed splints in combination with fixed dentures. The importance of surveying in manufacturing removable splints.
131. Specific features of construction and technology of manufacture of permanent splints and splinting dentures in preserved dentition.
132. Types of permanent splints and splinting dentures, used in included defects, distal defects of dental arch, single remaining teeth or groups of teeth and their characteristics.
133. Etiology, pathogenesis and classification of deformations of dental arch in partial edentia.
134. Clinical picture of deformity of dental arch, caused by displacement of teeth in vertical, transversal and sagittal planes.
135. Changes in temporomandibular joint in deformities of dental arch.
136. Kosten's syndrome, etiology, clinical picture, diagnostics, methods of prosthetic treatment.
137. Aims and subjects of prosthodontist in correction of dental arch deformity.
138. Methods of correction of dental arch deformities.
139. Prosthodontic treatment in chronic diseases of oral mucosa.
140. Etiology, pathogenesis, clinical picture, diagnostics of oral galvanosis.
141. Differential diagnostics of intolerance to metal dentures. Methods of measuring potentials of prosthetic constructions.
142. The tactics of prosthodontist in oral galvanosis. Methods of prevention.
143. Pathogenesis of allergic reactions to the components of dental restorative materials.
144. Etiology, pathogenesis, clinical picture of oral allergic pathology.
145. Diagnostics (clinical, laboratory) of allergic reactions to dental restorative materials.
146. Methods of treating allergic reactions to dental restorative materials. Prevention of oral pathology caused by allergic reactions.
147. Classification of TMJ pathology, differential diagnostics.
148. Etiology, pathogenesis, clinical picture, diagnostics and methods of prosthetic treatment of temporo-mandibular dysfunction.
149. Etiology, pathogenesis, clinical picture, diagnostics and methods of prosthetic treatment of habitual luxation and sub-luxation of TMJ.
150. Etiology, pathogenesis, clinical picture, diagnostics and methods of prosthetic treatment of TMJ arthrosis.
151. Specific features of treatment of dentoalveolar deformities in formed bite (adults).
152. Methods of treatment of dentoalveolar deformities (surgical, physical, physical-pharmacological) in formed bite.
153. Complex approach to the treatment of dentoalveolar deformities in formed bite as a way of optimization of orthodontic treatment of adults.

154. Indications for prosthetic method of treatment of dentoalveolar deformities in formed bite (adults).
155. Prosthetic treatment in case of malposition of separate teeth in adults.
156. Prosthetic treatment in case of vertical anomalies of occlusion (deep overbite, open bite).
157. Prosthetic treatment in case of sagittal anomalies of occlusion (prognathic, prognathic bite).
158. Prosthetic treatment in case of transversal anomalies of occlusion (crossbite).
159. Prosthetic methods of treatment of maxillary fractures.
160. Fractures of the maxilla. Etiology, clinical picture, diagnostics. Methods of prosthetic treatment.
161. Fractures of the mandible. Etiology, clinical picture, diagnostics. Methods of prosthetic treatment.
162. Congenital defects of hard and soft palate. Clinical picture, methods of prosthetic treatment.
163. Acquired defects of hard and soft palate. Etiology, clinical picture, methods of prosthetic treatment.
164. Improperly healed jaw fractures. Etiology, clinical picture, diagnostics. Methods of prosthetic treatment.
165. False joints. Etiology, clinics, diagnostics. Methods of prosthetic treatment. Types of dentures and specific features of their manufacturing.
166. Specific features of prosthetic treatment in case of microstomia.
167. Immediate, early and postponed prosthetic treatment in case of jaw resection, specific features.
168. Method of manufacturing immediate denture in case of mandible resection (mental part, one half of the mandible, total mandibular resection).
169. Methods of immediate prosthetic treatment in case of resection of maxilla (by Oxman, Kiselev-Pinsky).
170. Construction elements of post-resection maxillary dentures, used for fixation (cast clasps, multi-unit clasps, telescopic crowns, attachments).
171. Theoretical grounds of dental implantation. Types of osteogenesis in implantation.
172. Examination of patients in case of treatment of edentia with dental implants.
173. Indications and contraindications for prosthetic treatment using dental implants.
174. Requirements for the materials used for dental implants production.
175. Characteristics of dental implants (classification, types of implants).
176. Specific features of manufacturing the dentures on dental implants.
177. Clinical and laboratory stages of manufacturing fixed constructions of dentures on dental implants.
178. Clinical and laboratory stages of manufacturing screw-retained dentures on dental implants.
179. Clinical and laboratory stages of manufacturing removable denture constructions on dental implants.
180. Dental implantation errors and complications.