

APPROVED

by Head of the Department of  
Prosthetic Dentistry and  
Orthodontics, associate professor



Ya.I. Timchuk

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## QUESTIONS FOR THE STATE EXAMINATION

### **Academic discipline «Non-removable prosthetics»**

1. Medical ethics. components of medical ethics. Ethical issues in dentistry and methods for addressing them.
2. Preparing of oral cavity for prosthetic treatment.
3. Reactions of teeth on their preparation. Base of need for medication preparing of patients before tooth preparation.
4. Methods of anesthesia and selection of medications for tooth preparation. Injection anesthesia, methods and indications depending on the number and topography of teeth for preparation.
5. Possible complications during tooth preparation and their prevention.
6. Diseases leading to changes of anatomical shape, structure and color of hard tissues of tooth.
7. Methods of patients examination with crown defects of tooth.
8. Carious and non-carious defects of hard tissue of tooth. Etiology, clinical features.
9. Classification of crown defects by Black and Kurlyandsky. Index of occlusal surface damage (IOSD).
10. Types of dentures that restore the anatomical shape of teeth.
11. Dental photo protocol and its importance in prosthetics dentistry.
12. Main medical reporting documentation during dental treatment.
13. Impression trays. Types of impression trays and rules for their selection. Definition of "impression". Types and classification of impressions.
14. Technique of alginate impressions from lower and upper jaws. Evaluation of impression and possible errors made during its taking.
15. Classification of impression materials. Methods for obtaining one- and two-stage impressions, materials. Evaluation of impression and possible errors made during its taking.
16. Gingival retraction. Indications, methods and techniques for gingival retraction.
17. Inlays. Purpose of inlays. International classification of inlays. Indications for treatment with inlays.
18. Comparative evaluation of inlays and direct restorations (fillings). Modern structural materials for inlay fabrication.

19. Anatomical features of the structure of hard tissues and pulp of dental crowns (safety zones). General principles of forming cavities for inlays. Methods for redistributing chewing pressure on dental tissues and inlays.
20. Direct and indirect methods for fabricating of inlays, clinical and laboratory stages. Features of taking impressions for fabricating inlays.
21. Errors and complications during treatment with inlays. Criteria for the quality of the fabricated inlay.
22. Veneers. Indications for veneer. Primary and auxiliary materials used in the fabrication of veneers.
23. Modern technologies for veneers fabricating. Clinical and laboratory stages of veneer manufacturing.
24. Methodology for fabricating of prosthetics constructions using CEREC (CAD/CAM).
25. Stages and instrumentation of dental preparation for veneers. Criteria for assessing the quality of tooth preparation for veneers.
26. Modern materials for veneer cementation and their characteristics. Errors and complications treatment with veneers.
27. Metal stamped crowns: advantages and disadvantages. Indications and contraindications for manufacture of metal stamped crowns.
28. Plastic crowns: advantages and disadvantages. Requirements for plastic crowns. Indications and contraindications for manufacture of plastic crowns.
29. Methods of tooth preparation for plastic crowns. Evaluation of tooth preparation quality. Clinical and laboratory stages of plastic crown manufacturing. Characteristics of materials for manufacture of plastic crowns.
30. Indications for manufacture of self-hardening plastic crowns and manufacturing methods. Errors and complications.
31. Combined crowns. Advantages and disadvantages. Indications and contraindications for manufacture of combined crowns.
32. Types of combined crowns. Comparative characteristics of combined crowns designs. Clinical and laboratory stages. Errors and possible complications during treatment with combined crowns.
33. Cast metal crowns. Design characteristics. Advantages and disadvantages. Indications and contraindications for manufacture.
34. Metal-acrylic crowns. Design characteristics. Advantages and disadvantages. Indications and contraindications for manufacture.
35. Metal-ceramic crowns. Design characteristics. Advantages and disadvantages. Indications and contraindications for manufacture.
36. Principles of tooth preparation for cast metal, metal-acrylic and metal-ceramic crowns.
37. Clinical and laboratory stages of fabricating of cast metal crowns.
38. Clinical and laboratory stages of fabricating of metal-acrylic crowns.
39. Clinical and laboratory stages of fabricating of metal-ceramic crowns.
40. Temporary crowns. Methods of fabricating of temporary crowns.
41. Fitting the frames of metal-acrylic and metal-ceramic crowns. Possible complications and how to eliminate them. Fitting and evaluation of quality of

finished crowns in the clinic. Cementation of crowns with a cast framework (temporary and permanent).

42. Errors in the manufacture of cast metal, metal-acrylic and metal-ceramic crowns.

43. All-ceramic crowns. Their characteristics, indications and contraindications for fabrication.

44. Comparative characteristics of all-ceramic crowns, technologies and basic materials used for their fabrication.

45. Indications and contraindications for application of various types of all-ceramic crowns.

46. Principles of tooth preparation for all-ceramic crowns.

47. Impression techniques for fabricating all-ceramic crowns. Impression requirements.

48. Digital impression technique. Preparing the oral cavity and models for scanning, the sequence of steps in the fabrication of an all-ceramic crown using CEREC technology in the "Database" modeling mode.

49. Fabrication methods (sintering, milling, pressing), clinical and laboratory stages of fabricating various types of all-ceramic crowns.

50. Fitting and cementing of all-ceramic crowns. Errors in the fabrication of all-ceramic crowns and how to eliminate them.

51. Posts and posts structures. The need for use. Requirements for posts. Classification of restorative posts structures.

52. Posts teeth, their types, indications and contraindications for use. Comparative characteristics.

53. Post-and-core structures, their types, indications and contraindications for use. Comparative characteristics.

54. Features of preparing the supra- and subgingival portions of the tooth for different types of posts structures. Root canal preparing procedures.

55. Complications during the fabrication of posts teeth and post-and-core structures and their prevention.

56. Indications and contraindications for the use of elastic posts.

57. Etiology and pathogenesis of partial tooth loss. Morphological and functional changes in the dentoalveolar system with partial tooth loss.

58. Clinical symptoms of partial tooth loss. Kennedy's classification of dental defects, rules for determining the classes of dental defects. Gavrilov's classification of dental defects.

59. Secondary deformities of the dental arches in tooth loss. Pathogenesis and clinical presentation. Changes in the temporomandibular joint.

60. General and additional methods of examining patients with partial tooth loss.

61. Types of dentures used to treat partial tooth loss. Indications for depulpation of teeth during the fabrication of dental bridges.

62. Indications and contraindications for fixed prosthetics treatment depending on the topography and nature of the defect.

63. Odontoparodontogram, its definition. Rules for filling odontogram and plotting the graph.

64. Clinical and biological foundations of dental bridge prosthetics. Endurance and reserve of periodontium.

65. Factors determining the choice of dental bridge design. Selection of abutment teeth and assessment of their condition.

66. General characteristics of stamped-soldered bridges. Indications and contraindications. Advantages and disadvantages of stamped-soldered dental bridges.

67. Clinical and laboratory stages of manufacturing stamped-soldered dental bridges.

68. General characteristics of cast metal dental bridges. Indications and contraindications. Advantages and disadvantages of cast metal dental bridges.

69. Clinical and laboratory stages of manufacturing cast metal dental bridges.

70. General characteristics of metal-acrylic dental bridges. Indications and contraindications. Advantages and disadvantages of metal-acrylic dental bridges.

71. Clinical and laboratory stages of manufacturing metal-acrylic bridges.

72. General characteristics of metal-ceramic dental bridges. Indications and contraindications. Advantages and disadvantages.

73. Clinical and laboratory stages of manufacturing metal-ceramic bridges.

74. Preparation of hard tissues of abutment teeth in the fabrication of cast bridges.

75. Preparation of hard tissues of abutment teeth in the fabrication of combined (metal-ceramic and metal-acrylic) bridges.

76. Temporary bridges. Justification for their use. Methods for fabricating temporary bridges.

77. Justification for the choice of impression material in the fabrication of dental bridges. Impression techniques. Criteria for assessing the quality of impressions in the fabrication of various types of dental bridges.

78. Intermediate part of dental bridge (Pontic). Types of pontics depending on clinical conditions and bridge fabrication technology.

79. Concept of centric occlusion and centric relation. Signs of centric occlusion with intact dentition and orthognathic occlusion.

80. Variants of determining and recording of central occlusion. Methods for determining and recording central occlusion. Materials for record central occlusion in cases of partial tooth loss.

81. Errors in central occlusion determining and their eliminating.

82. Stages of controlling of dental bridge design. Criteria for assessing the quality of bridge fabrication.

83. Possible errors in the fabrication of dental bridges and methods for their eliminating.

84. Fixation of bridges (temporary and permanent). Fixation rules. Possible errors during fixation stage of bridges and methods for their eliminating.

85. Recommendations for the patient and tactic of dentist when damaged cast metal, metal-acrylic or metal-ceramic dental bridges.

86. Types of adhesive dentures. indications and contraindications for their fabrication.

87. Justification and selection of adhesive prosthesis designs. Fixation of adhesive prostheses. Manufacturing technologies for adhesive prostheses.

88. General characteristics of metal-free dental bridges. Features of tooth preparation for metal-free prosthetics structures.

89. Clinical and laboratory stages of crown fabrication using CAD/CAM technologies. Materials for the fabrication of ceramic prostheses using CAD/CAM systems.

90. Adhesive fixation of metal-free Prosthetics structures. Advantages and disadvantages of composite and glass ionomer cements.

91. Advantages and disadvantages of bridge prosthetics. Errors and complications in prosthetics treatment of patients with partially missing teeth with bridges.

92. Theoretical foundations of dental implantation. The concept of osseointegration of implants. Types of osteogenesis during implantation.

93. Types of dental implants, classification. Examination of patients for their treatment with dental implants.

94. Indications and contraindications for prosthetics using dental implants. Requirements for materials used for the manufacture of dental implants.

95. Types and characteristics of structural elements of various types of dental implants.

96. Indications and contraindications for the fabrication of dentures on dental implants supported by various types of abutments. Design features of dentures supported by various types of abutments.

97. Closed-tray impression technique for the fabrication of dentures supported by dental implants. Indications and selection of impression material.

98. Open-tray impression technique for fabricating dental implant-supported dentures. Indications and selection of impression material.

99. Comparative characteristics of cemented and screw-retained fixed dentures supported by dental implants.

100. Quality assessment of fabrication of fixed dentures supported by dental implants. Potential errors and complications, and methods for their elimination.

### **Academic discipline «Removable prosthetics»**

1. Etiology, pathogenesis and clinic of partial tooth loss. Methods for examining of patients with partial tooth loss.

2. Changes in the dentition, jaws and TMJ after partial tooth loss and their clinical manifestations.

3. Kennedy and Gavrilov's classification of dentition defects. The diagnosis of partial tooth loss and its base.

4. General principles of examination, treatment and stages of comprehensive treatment planning for patients with partial tooth loss.

5. Prosthetics treatment of partial tooth loss of the upper and lower jaws using removable plate dentures.

6. Prosthetics treatment of partial tooth loss of the upper and lower jaws using clasp dentures.

7. General principles of prosthetics and surgical treatment of partial tooth loss of upper and lower jaws using dental implantation.

8. Medical follow-up of patients with partial tooth loss.

9. Types of dentures used in treatment of patients with partial tooth loss. Indications and contraindications for removable plate dentures.

10. Characteristics of partial removable plate dentures. Structural elements of partial removable plate dentures. Structural materials for the manufacture of partial removable plate dentures.

11. Preparing of patient and oral cavity for prosthetics with partial removable plate dentures. Definition of concepts and methods of fixation and stabilization of partial removable plate dentures.

12. Clasp line and its importance for fixation of partial removable plate dentures. Types of clasp lines and their location on the upper and lower jaw.

13. Types of clasps. Characteristics of supporting and retaining clasp and its components.

14. Retention of removable dentures using dental implants.

15. Impression materials and their properties. Impression materials in fabrication of removable dentures.

16. Compliance and mobility of oral mucosa. Selection of impression materials depending on the condition of mucosa. Impression trays, requirements for them and their varieties. Selection of an impression tray.

17. Methods for taking impressions with alginate materials for fabrication of working and auxiliary models in partial removable plate dentures. Evaluation of quality of impressions.

18. Fabrication of working and auxiliary models in the fabrication of partial removable plate dentures. Borders of base of partial removable plate dentures in upper and lower jaws and factors determining them.

19. Fabrication of wax base with bite rims. Materials and requirements for wax bases with bite rims.

20. Types of articulation and occlusion. Bite and its varieties. Signs characterizing centric occlusion in orthognathic bite. The concept of centric relation of jaws.

21. Determining the centric relation of the jaws (three variants) depending on the number and location of antagonizing teeth. Methods for determining the height of the lower face. Methodology for determining the centric relation in the absence of antagonizing teeth.

22. Clinical guidelines for the selection and placement of artificial teeth in partial tooth loss dentures. Types of artificial teeth used in prosthetics of partial removable plate dentures. Rules for placing artificial teeth.

23. Requirements for the retaining elements of partial removable denture. Requirements for wax reproductions of the partial removable denture.

24. Sequence of checking the partial removable denture design on a model. Criteria for clinical evaluation of the partial removable denture design. Errors made during the determination of the center of gravity and strategies for correcting them.

25. Final modeling of the bases of partial removable plate dentures. The cuvette and its components. Methods for plastering a wax reproduction of the denture into the cuvette.

26. The injection pressing method and its features. Preparing and polymerization mode of base resins.

27. Processing, grinding and polishing of removable dentures and used instruments. Quality evaluation of finished partial removable plate dentures.

28. The sequence of fitting of removable dentures. Recommendations and rules for patient about use and hygienic care of partial removable plate dentures.

29. Clinical and laboratory errors during manufacturing of partial removable plate dentures, their elimination.

30. Possible changes in oral mucosa during use of partial removable plate dentures and their reasons.

31. Correction of partial removable plate dentures, its technique and instruments.

32. Relining of partial removable plate denture (clinical, laboratory).

33. Clasp dentures, characteristics. Indications and contraindications for clasp dentures. Positive properties of clasp dentures compared to partial removable plate denture.

34. Methods of manufacturing of clasp dentures. Structural elements of clasp dentures. Impressions materials for clasp dentures treatment.

35. Anatomical shape of the crown of the tooth. Elements of the supporting and retaining clasp and their functional purpose.

36. Purpose of the parallelometer and its components. Parallellometry methods: arbitrary, selection method, graphic.

37. Ney clasp system: selection of clasps depending on the topography of the boundary line. Elements of clasp denture that reduce chewing pressure on periodontium of supporting teeth.

38. Clinical and laboratory stages of manufacturing of frames of clasp denture on refractory models. Equipment and materials required for manufacturing.

39. Duplicating materials, characteristics. Preparing the working model for duplication. Manufacturing a refractory model. Modeling the denture frame. Molding the flask.

40. Quality assessment and design verification of frames of clasp denture. Errors and complications during manufacture on a refractory model.

41. The importance of the design verification stage of clasp denture in the clinic. The sequence of verification in clinic (on model and in oral cavity).

42. Rules and sequence for fitting of finished clasp denture. Possible reasons of poor fixation and ways to eliminate them.

43. Rules for use of clasp dentures. Recommendations for patient.

44. Indications and contraindications for telescopic, beam (bar) systems and attachments for fixation of removable dentures.

45. Complete tooth loss. Causes and prevalence. Diagnosis of "Complete tooth loss" in accordance with the clinical protocol of the Ministry of Health of the Republic of Belarus.

46. Anatomical and topographic features of structure of edentulous upper and lower jaws. Features of clinical examination of patients with complete tooth loss.

47. Functional and morphological changes in dentoalveolar system with complete tooth loss. The mechanism of development of "senile progenia."

48. General principles of examination, treatment and stages of complex treatment for patients with complete tooth loss.

49. Classifications of upper and lower edentulous jaws (by Schroeder, Keller, Kurlyandsky and Oksman).

50. Evaluation of mucous membrane in edentulous jaws. Classification of mucous membrane by Supply.

51. Prosthetics treatment of complete tooth loss with complete removable dentures. Medical follow-up of patients with complete tooth loss.

52. Fixation and stabilization of complete removable dentures: mechanical, physical, biomechanical and biophysical methods of fixation of complete removable dentures.

53. Factors of stabilization of complete removable dentures on the upper and lower jaws. Dependence of denture fixation on area of denture bed, the influence of the masticatory and facial muscles, the severity of submucosal layer and shape of alveolar process.

54. Basic principles of patient's treatment with complete tooth loss using dental implants.

55. Impressions: anatomical and functional. Impression materials: classification and properties. Areas of application in the manufacture of complete removable dentures.

56. Custom trays. Requirements. Materials and manufacturing methods. Boundaries of custom trays on upper and lower jaws.

57. Fitting of a custom tray using the Herbst method to the upper and lower jaws.

58. Choice of impression material and the method for obtaining a functional impression depending on condition of oral alveolar mucosa. Methods for compression, decompression impressions and impressions with differentiated pressure.

59. Quality evaluation of functional impression. Edging the edges of functional impression, purpose and methodology. Casting models and orientation lines applied to model (valvular zone, alveolar, middle).

60. Borders of complete removable plate dentures on the upper and lower jaws. Advantages and indications for fabrication of rigid bases with occlusal rims.

61. Centric relation and centric occlusion. Determining of height of lower third face (height of occlusion) and it's brief characteristics.

62. Anatomical and physiological method for determining the height of occlusion. Sequence for determining the centric relation of the jaws.

63. Methods for determining of centric relation of the jaws. Sequence for transferring anatomical landmarks to wax bases.

64. Gysi-Hanau's laws of articulation. General principles for creating a balanced occlusion.

65. Types of artificial teeth, comparative characteristics. Rules for selecting artificial anterior and posterior teeth for complete removable dentures.

66. Occlusal schemes, advantages and indications.

67. Methods of tooth placement. Placement of artificial teeth according to anatomical landmarks. Requirements for placement of artificial teeth in complete tooth loss dentures.

68. Teeth placement on glass (Vasiliev method). Fixing of models in articulator and installing the horizontal plane (glass).

69. Tooth placement in prognathic and prognathic relationships in complete tooth loss dentures.

70. Controlling of wax composition of complete removable plate dentures.

71. Clinical signs and the doctor's tactics when raising or lowering the height of lower face during the centric relation determination stage.

72. Clinical signs and the doctor's tactics in case of errors associated with displacement of mandible in the sagittal and horizontal planes during centric relation determination.

73. Errors caused by separation of wax bases from denture bed during centric relation determination.

74. Quality evaluation of complete removable plate dentures.

75. Sequence and methodology for fitting of complete removable plate dentures. Possible difficulties in fitting of complete removable plate dentures and ways to solve them.

76. Patient adaptation to removable dentures. Phases of adaptation to complete removable plate dentures. Recommendations and rules for patients with complete removable plate dentures.

77. Relining of complete removable plate dentures. Techniques, indications and contraindications.

78. Features of prosthetics treatment in complete tooth loss on one of jaws.

79. Indications and period of secondary prosthetics treatment in cases of complete tooth loss. Fractures of complete removable plate dentures. Dental tactics and methods for their elimination.

80. Method for fabricating of framed complete removable dentures and complete removable dentures with metal base.

81. Method for fabricating of complete removable plate dentures with two-layer base.

82. Duplication of complete removable dentures during secondary prosthetics treatment in patients with complete tooth loss. Indications, advantages and procedure.

83. WHO and VNOS classification of periodontal diseases.

84. Local and systemic etiologic factors in periodontal diseases. Pathogenesis of periodontal diseases.

85. Clinical manifestations of periodontal diseases.

86. Clinical, radiographic and laboratory examination methods for patients with periodontal diseases.

87. Differential diagnosis of periodontal diseases.

88. Periodontal endurance and reserve forces. Their importance in prosthetics treatment of periodontal diseases. The relationship between changes in periodontal reserve forces and alveolar bone resorption.

89. Odontoparodontogram, principle of its construction and structure. Analysis of functional state of periodontium based on odontoparodontogram.

90. Reasons of periodontal overload of individual teeth or a group of teeth. Occlusal trauma and its role in pathogenesis of periodontal diseases. Clinical and radiographic signs of occlusal trauma.

91. Selective grinding of teeth as the first stage of periodontal disease treatment.

92. Methods of selective grinding. Complications during selective grinding of teeth.

93. Immediate prosthetics. Clinical and biological principles of using immediate dentures at stages of prosthetics treatment of periodontal diseases. Indications for immediate prosthetics.

94. Methods for fabricating immediate dentures according to Sosnin and Oksman.

95. Indications for temporary splinting. Requirements for temporary splints. Types of temporary splints and their characteristics. Errors and complications during temporary splinting.

96. Indications and contraindications for orthodontic treatment of patients with periodontal diseases. Features of orthodontic treatment of patients with periodontal diseases.

97. Permanent splinting of teeth. Biomechanical principles of splinting. Indications for tooth extraction in periodontal diseases.

98. Indications for fixed and removable splints and splints-dentures. Comparative characteristics of removable and fixed splints.

99. Requirements for permanent splints. Importance of parallelometry in fabrication of removable splints.

100. Stabilization. Definition and types of stabilization.

### **Academic discipline «Maxillofacial orthopedics and orthopedic dentistry»**

1. Treatment of malocclusions in formed bite.

2. Methods of treatment of malocclusions (surgical, physical and physico-pharmacological) in formed bite.

3. Complex approach in treatment of malocclusion in formed bite as a way to optimize orthodontic treatment for adults.

4. Retention period. Types of retention. Recurrence in orthodontic treatment of malocclusions in formed bite.

5. Indications for prosthetic treatment of malocclusions in formed bite.

6. Prosthetic treatment for individual tooth position malocclusion in adults.

7. Prosthetic treatment for vertical malocclusions (deep bite, open bite).

8. Prosthetic treatment for sagittal malocclusions (prognathia, progenia).
9. Prosthetic treatment for transverse malocclusions (crossbite).
10. Etiology, clinical features and diagnosis of false joint of the mandible.
11. Indications and prosthetic treatment of false joint in mandible. Devices by Gavrilov, Kurlyandsky, Oksman and Weinstein.
12. Etiology, clinical features and diagnosis of malunion of mandible fracture. Classification of malunion of the mandible by Kurlyandsky.
13. Indications and prosthetics treatment of malunion of mandible fracture.
14. Classification of mandibular defects by Kurlyandsky. Methods of fixation of mandibular bone fragments: interstitial implants, dental splints, extraoral appliances for compression osteosynthesis.
15. Prosthetic treatment of patients with microstomia. Types of prostheses.
16. Secondary deformities of dental row and occlusion. Etiology and pathogenesis.
17. Clinic of dentoalveolar deformities. Forms of dentoalveolar elongation by V.A. Ponomareva.
18. Diagnosis of dental row and bite deformities.
19. Methods for eliminating occlusal deformities in dental row deformities.
20. Classification of acquired palatal defects by Kurlyandsky. Design features and methods of fixation of dentures in acquired palatal defects.
21. Etiology, pathogenesis, clinic and differential diagnosis of congenital defects of the hard and soft palate. Classification.
22. The role of prosthetics in the complex treatment of hard and soft palate defects. Treatment methods for congenital defects of hard palate.
23. Functional disorders after jaw resection. Immediate, early and late prosthetics after jaw resection, their features.
24. Technique for fabricating an immediate denture after mandibular resection (mental part, half of the mandible, entire mandible).
25. Technique for immediate prosthetics after maxillary resection (by Oksman, Kiselev-Pinsky).
26. Late prosthetic treatment of patients after maxillary and mandibular resection.
27. Defects of the nose, auricle and orbit. Nasal prosthesis. Defects and deformities of the lips and chin. Prosthetic treatment. Forming devices.
28. Craniomaxillofacial prosthetics with implant support.
29. Examination of patients and diagnosis of partial and complete tooth loss during prosthetics treatment using dental implants.
30. Bone types by S. Mish. Indications and contraindications for prosthetics treatment with dental implants.
31. Requirements for prosthetics devices after dental implantation.
32. Types of dental implants used as support for fixed prosthetics, their characteristics. Classification, types and structural elements of dental implants.
33. Clinical and laboratory stages of manufacturing of fixed structures supported by dental implants.

34. Errors and complications in prosthetics treatment with fixed structures on dental implants.

35. Indications and contraindications for removable dentures supported by dental implants.

36. Types of dental implants used as support for removable dentures and their characteristics (classification, types and structural elements of dental implants).

37. Clinical and laboratory stages of manufacturing of removable dentures supported by dental implants.

38. Dynamic observation after prosthetics treatment with removable dentures supported by dental implants. Complications during prosthetics with removable dentures using dental implants.

39. Primary and secondary lesions of the oral mucosa. Additional diagnostic methods used in the diagnosis of diseases of the oral mucosa.

40. Etiology, clinical features, diagnosis and features of prosthetic treatment of thrush, papillomatosis and angular cheilitis.

41. Etiology, clinical features, diagnosis and features of prosthetic treatment of leukoplakia and leukokeratosis of the palate.

42. Etiology, clinical features, diagnosis and features of prosthetic treatment of gingival fibromatosis and lichen planus.

43. Etiology, pathogenesis, clinical features and diagnosis of oral galvanosis.

44. Differential diagnosis of intolerance to metal dentures. Methodology for determining the potential of Prosthetics structures. Tactics of dentist in case of oral galvanosis. Prevention methods.

45. Allergic reactions: types, stages of development, mechanism of development. Epidemiology of allergic reactions on components of dental materials.

46. Etiology, pathogenesis, clinical features of allergic conditions in oral cavity.

47. Diagnosis (clinical and laboratory) of allergic reactions on denture materials.

48. Treatment of allergic reactions on denture materials. Prevention of oral diseases caused by allergic reactions.

49. Etiology of increased tooth wear. Examination methods of patients with increased tooth wear. Classification of increased tooth wear.

50. Changes in the dentoalveolar system in increased tooth wear. Clinics of increased tooth wear.

51. Aims of prosthetic treatment of patients with increased tooth wear. Types of prosthetic constructions for restoring lost dental tissue. Medical controlling of patients with increased tooth wear.

52. Etiology of increased tooth wear with temporomandibular joint (TMJ) dysfunction.

53. Diagnosis of temporomandibular joint condition in patients with increased tooth wear.

54. Prosthetic constructions for restoration of teeth in patients with increased tooth wear complicated by temporomandibular joint dysfunction.

55. Complex treatment of patients with increased tooth wear complicated by temporomandibular joint dysfunction. Preventive measures after treatment.

56. Etiology of temporomandibular joint diseases. Methods of examining patients with temporomandibular joint diseases. Classification of temporomandibular joint diseases.

57. Complex treatment of patients with temporomandibular joint diseases. Preventive measures after integrated treatment.

58. Etiology, clinical features and examining of patients with diseases of hard dental tissues. Indications for treatment of dental crown defects with inlays and veneers.

59. Basic principles of forming of cavities for inlays depending on the topography of the defect and the distribution of chewing forces. Methods and sequence of inlay fabrication. Errors and complications.

60. Methods of fabricating of veneers. Stages and instrumentation for preparation for veneers. Fitting and fixing veneers, luting materials. Possible errors and complications during producing of veneers.

61. Indications and contraindications for fabrication of metal crowns. Clinical and laboratory stages of stamped metal crown fabricating.

62. Plastic crowns: indications and contraindication. Clinical and laboratory stages a plastic crown fabricating.

63. Cast, metal-acrylic, metal-ceramic and metal-free crowns. Their characteristics. Indications and contraindications for the fabrication.

64. Principles of preparation for cast, metal-acrylic, metal-ceramic and metal-free crowns. Clinical and laboratory stages of fabricating.

65. Indications for treatment with post-and-core depending on the condition of the supragingival tissues of the tooth, the thickness of the walls and the type of occlusion. Preparation features, methods and materials for fabricating of post-and-cores.

66. Elastic post structures, indications and contraindications, materials for producing and root canal preparation features.

67. Etiology and pathogenesis of partial tooth loss. Classification of dental arch defects (by Kennedy, Gavrilov, ICD-10). Clinical presentation of partial tooth loss. Treatment planning for patients with dental arch defects.

68. Secondary deformities of the dentition in partial tooth loss: pathogenesis and clinical presentation. Changes in the temporomandibular joint in partial tooth loss.

69. Treatment algorithm of patients with partial tooth loss and decreased lower facial third and secondary deformities of the dentition.

70. Indications and contraindications for fabrication of cast metal, metal-acrylic, metal-ceramic and metal-free bridges. Clinical and laboratory stages of their manufacturing.

71. Rules for fixing of various dental bridges. Quality criteria of manufacturing various dental bridges.

72. Indications and contraindications for partial removable plate dentures in case of partial tooth loss. Characteristics of partial removable plate dentures and their structural components.

73. Methods of fixation and stabilization of removable plate dentures. The clasp line and its importance for fixing. Plate denture boundaries and the conditions on which they depend.

74. Determining of the centric relation of the jaws in the fabrication of partial removable plate dentures. Methods for determining the height of the lower third of face. Clinical landmarks for the selection and placement of teeth. Controlling the design of partial removable plate dentures. Possible errors.

75. Fitting and application of removable dentures. The mechanism of patients adaptation to denture. Patient instructions for use and hygienic care of partial removable plate dentures. Rules for denture corrections.

76. Medical and biological principles of treatment with clasp dentures and their characteristics. Structural elements of clasp dentures. Clinical indications and contraindications for manufacture of clasp dentures.

77. Parallellometer. Parallellometry techniques. Ney's clasp system, selection of clasps depending on topography of the boundary line.

78. Clinical and laboratory stages of manufacturing of cast clasp dentures on refractory models. Equipment and materials required for their manufacture.

79. Manufacturing of cast clasp dentures using a locking system. Types of attachments and clinical conditions for their application.

80. Etiology, pathogenesis and clinical picture of complete tooth loss. Changes in the dentoalveolar system with complete tooth loss. Classifications of edentulous jaws by Schroeder, Keller and Kurlyandsky. Types of mucosa by Suply. The concept of mucosal mobility and compliance.

81. Methods of fixation and stabilization of dentures on edentulous jaws (mechanical, physical, biomechanical, biophysical). Factors of stabilization of dentures on the upper and lower jaws in the complete tooth loss.

82. Features of manufacture of complete removable dentures for patients with oral mucosa diseases. Materials and methods for the manufacture of complete removable dentures.

83. Custom trays: general characteristics, materials for manufacture. Methodology for obtaining functional impressions, rationale for the choice of impression materials depending on the condition of the alveolar mucosa.

84. Clinical and laboratory stages of the manufacture of complete removable plate dentures.

85. Anthropometric landmarks for determining of centric relation of the jaws. Methods for determining the height of the lower section and their characteristics. Sequence for determining of centric relation of the jaws.

86. Methods of artificial teeth setting in the manufacture of complete removable plate dentures. Peculiarities of tooth placement with prognathic and retrognathic alveolar processes.

87. Errors in determining the centric jaw relationship. Clinical signs and the doctor's tactics when raising or lowering the height of the lower face during the

"checking the wax construction of the denture" stage. Clinical signs and the doctor's tactics associated with fixation of mandible in the anterior and lateral occlusions at the previous stage.

88. Etiology and pathogenesis of periodontal diseases. Pathological changes in periodontal tissues in chronic simple complex periodontitis. Clinical, radiographic and laboratory examination methods for patients with periodontal diseases. Classification of periodontal diseases according to the WHO.

89. What are periodontal endurance and reserve forces? Their importance in prosthetic treatment of periodontal tissue diseases. Odontoparodontogram and principle of its filling. Periodontal function analysis based on odontoparodontogram.

90. Reasons of periodontal overload in teeth or groups of teeth. Clinical presentation and methods for identifying of teeth with periodontal overload. Tooth grinding as the first stage of periodontal disease treatment. Methods of selective tooth grinding and possible complications.

91. Indications for temporary and permanent splinting. Requirements for temporary and permanent splints. Types of temporary and permanent splints and their characteristics. Errors and complications with temporary and permanent splinting.

92. Indications and contraindications for orthodontic treatment for periodontal disease. Specifics of orthodontic treatment for patients with periodontal disease.

93. Examination and diagnosis of patients with partial and complete tooth loss with prosthetics using dental implants. Bone tissue types by S. Mish. Types of dental implants and their characteristics (Classification, implant types).

94. Indications and contraindications for prosthetics using dental implants. Requirements for prostheses used after dental implantation.

95. Indications and contraindications for fixed dentures supported by cemented fixation on dental implants. Clinical and laboratory stages of fabrication of fixed dentures supported by cemented fixation on dental implants. Errors and complications.

96. Indications and contraindications for the fabrication of fixed dentures supported by screw-retained fixation on dental implants. Design features.

97. Clinical and laboratory stages of fabrication of fixed dentures supported by screw-retained fixation on dental implants. Errors and complications.

98. Indications and contraindications, design features, clinical and laboratory stages of manufacturing dentures on dental implants supported by multi-units. Advantages and disadvantages, errors and complications.

99. Organizational foundations of dental prosthetics care in the Republic of Belarus. Structure of a dental clinic and prosthetics department.

100. Issues of medical ethics and deontology, asepsis and antisepsis in prosthetics dentistry clinic. Service life and quality guarantees for dentures.

### **Academic discipline «Orthodontics»**

1. Orthodontics as a branch of dentistry. Purpose, tasks. The main directions of development of orthodontics. Organization of work and material and technical equipment of the orthodontic office, orthodontic instruments.

2. Evaluation of esthetics of the face: approximate planes of the head and jaws.

Vertical and horizontal linear parameters and face proportions.

3. Evaluation of esthetics of the face: Garson morphological index, facial index of Izar, interpretation. Assessment of face shape.

4. Evaluation of esthetics of the face: face profile. Profile corners, esthetic plane of Ricketts, profile types, according to F. Ya. Khoroshilkina.

5. Methods of measurement of dental casts: determination of adequate space for the teeth in the dental arch (methods by Nance, Merrifield, Little).

6. Methods of measurement of dental casts: prediction of space needed for permanent teeth in the period of mixed dentition (Johnston-Tanaka's methods, Moyers).

7. Methods of measurement of dental casts: parameters of dentitions (Pont's methods, Korkhaus).

8. Methods of measurement of dental casts: correlation of teeth sizes of upper and lower dentitions (Gerlach's methods, Bolton).

9. Methods of measurement of dental casts: parameters of jaw-bases (N. G. Snagina's).

10. Types of tooth movement. Biomorphological changes in dental system during orthodontic treatment: periodontal tissues reorganization in cases of bodily tooth movement and tipping.

11. Principles of designing orthodontic appliances. Methods for fixation of orthodontic appliances. Anatomical retention and adhesion. Types of supports used in orthodontic appliances.

12. Wire elements of removable orthodontic appliances: clasps, vestibular arch, springs. Components, purpose.

13. Orthodontic screws: classification, purpose, principles of work. Screws for movement of separate teeth and groups of teeth.

14. Orthodontic screws: screws for normalization of shape of dentitions and for intermaxillary action. Rules of installation of screws in orthodontic appliances.

15. Clinical and laboratory stages of fabrication of single-jaw removable orthodontic appliance by method of hot polymerization.

16. Clinical and laboratory stages of fabrication of single-jaw removable orthodontic appliance by method of cold polymerization.

17. Clinical and laboratory stages of manufacturing a single-jaw removable orthodontic appliance using the pneumatic vacuum forming method.

18. Clinical and laboratory stages of fabrication of double-jaw removable orthodontic appliance by method of hot polymerization.

19. Clinical and laboratory stages of fabrication of double-jaw removable orthodontic appliance by method of cold polymerization.

20. Characteristics of I and II periods of bite formation.

21. Characteristics of the III period of bite formation.

22. Characteristic of the IV period of bite formation.

23. Characteristic of the V period of bite formation.

24. Classification of dentoalveolar anomalies by Angle. Advantages and disadvantages.

25. Main steps of making an orthodontic diagnosis according to algorithm of

F.Ya. Khoroshilkina.

26. Clinical examination method in orthodontics.

27. Functional test by Ilyina-Markosyan, clinical test by Eshler-Bitner.

28. Dental intraoral X-ray. X-ray of palatal suture. Technique of the tests, dose of radiation exposure. Significance for orthodontics.

29. Panoramic X-ray. Technique of the tests, dose of radiation exposure. Significance for orthodontics.

30. Wrist X-ray. Technique of the tests, dose of radiation exposure. Significance for orthodontics.

31. Cephalometry. Technique and rules of carrying out, dose of radiation. Significance for orthodontics.

32. Cone beam computed tomography of the facial skeleton (CBCT). Possibilities of using the research method in orthodontics.

33. Electromyography and myotonometry of chewing and mimic muscles. Purpose and tasks. Technique, interpretation of results.

34. Treatment methods of dentoalveolar anomalies: characteristics, indications depending on the period of bite formation. Main principles of Treatment in different periods of bite formation.

35. Myotherapy. Purpose, tasks, age indications for orthodontics. Main principles. Decrease in strength of chewing and mimic muscles. Dosage of exposure depending on extent of depression of muscles' endurance.

36. Instrumental method for the treatment of dentoalveolar anomalies: characteristics, indications for use. Conditions necessary for tooth movement. Types of tooth movement.

37. Classification of orthodontic appliances by the mechanism (principle) of action and purpose. Examples.

38. Mechanical orthodontic appliances: characteristics, design features, examples. Possibilities of use.

39. Functionally guiding orthodontic appliances: characteristics, design features, examples. Possibilities of use.

40. Functional orthodontic appliances: characteristics, design features, examples. Possibilities of use.

41. Standard functional orthodontic appliances (elastopositioners). Varieties.

42. Individually manufactured functional orthodontic appliances. Varieties.

43. Classification of orthodontic devices by the way of action, anchorage, location, design, fixation. Varieties.

44. Complex method of treatment of dentoalveolar anomalies. Absolute and relative orthodontic indications for teeth extraction.

45. Hotz method: indications and contraindications for use. Methodology.

46. Surgical method of treatment of dentoalveolar anomalies: characteristics, differences from complex method. The role of the orthodontist in surgical treatment of bite anomalies.

47. Prosthetic method of treatment of dentoalveolar anomalies. Indications for prosthetic method for treatment of children of different ages.

48. Children's removable dentures: features, replacement terms depending on

the period of bite formation. of crowns (bands) used in orthodontics: indications, fabrication. Preparation of temporary and permanent teeth for orthodontic crowns (bands) fixation.

49. Anomalies in the size of the teeth: types, etiology, clinic, diagnosis. Treatment at various periods of bite formation.

50. Anomalies of terms of teeth eruption: etiology, clinical features, diagnostics. Treatment in various periods of bite formation.

51. Anomalies of number of teeth: etiology, clinical features, diagnostics. Treatment in various periods of bite formation.

52. Anomalies of position of teeth in the sagittal plane: etiology, clinical features, diagnostics. Treatment in various periods of bite formation (appliances).

53. Anomalies of position of teeth in the vertical plane: etiology, clinical features, diagnostics. Treatment in various periods of bite formation (appliances).

54. Anomalies of position of teeth in the horizontal plane: etiology, clinical features, diagnostics. Treatment in various periods of bite formation (appliances).

55. Diastema: etiology, clinical features, diagnostics. Indications and terms for upper lip frenulotomy. Treatment of a diastema depending on its type (appliances).

56. Anomalies of dentition in sagittal plane. Elongation of dentition: etiology, clinical features, diagnostics. Treatment in various periods of bite formation.

57. Anomalies of dentition in sagittal plane. Shortening of dentition: etiology, clinical features and diagnostics. Treatment in various periods of bite formation.

58. Anomalies of dentition in the vertical plane. Dentoalveolar elongation and dentoalveolar shortening: etiology, clinical features, diagnostics. Treatment in various periods of bite formation.

59. Anomalies of dentition in horizontal plane. Narrow and broad dentition: etiology, clinical features, diagnostics. Treatment in various periods of bite formation.

60. Distal occlusion: etiology, clinical features, diagnostics. Morphological disturbances at the level of teeth, dentition and jaws.

61. Distal occlusion: prophylaxis and treatment in the period of a temporary occlusion.

62. Distal occlusion: treatment in the period of mixed occlusion. Retention of achieved results. Mistakes and complications.

63. Distal occlusion: treatment in the period of permanent occlusion. Retention of achieved results. Mistakes and complications.

64. Mesial occlusion: etiology, clinical features, diagnostics. Morphological disturbances at the level of jaws, dentition and separate teeth.

65. Mesial occlusion: prophylaxis and treatment in the period of a temporary occlusion.

66. Mesial occlusion: treatment in the period of mixed occlusion. Retention of achieved results. Mistakes and complications.

67. Mesial occlusion: treatment in the period of permanent occlusion. Retention of achieved results. Mistakes and complications.

68. Deep bite: etiology, clinical features, diagnostics. Morphological disturbances at the level of jaws, dentition and separate teeth.

69. Deep bite: prophylaxis and Treatment in the periods of the temporary and mixed occlusion. Mistakes and complications, retention of achieved results.

70. Deep bite: treatment in the period of permanent occlusion. Mistakes and complications, retention of achieved results.

71. Open bite: etiology, clinical features, diagnostics. Morphological disturbances at the level of jaws, dentition and separate teeth. Forms of an open bite.

72. Open bite: prophylaxis and treatment in the period of temporary dentition.

73. Open bite: treatment in the period of mixed occlusion. Mistakes and complications, retention of achieved results.

74. Open bite: treatment in the period of permanent occlusion. Mistakes and complications, retention of achieved results.

75. Crossbite: etiology, clinical features, diagnostics. Morphological disturbances at the level of jaws, dentition and separate teeth. Crossbite forms. Differential diagnostics of crossbite forms.

76. Crossbite without mandibular displacement: prophylaxis and treatment in the period of temporary occlusion.

77. Crossbite without mandibular displacement: treatment in the period of mixed occlusion. Mistakes and complications, retention of achieved results.

78. Crossbite without mandibular displacement: treatment in the period of permanent occlusion. Rapid palatal expansion method: indications, appliances. Mistakes and complications, retention of achieved results.

79. Crossbite with mandibular displacement: prophylaxis and treatment in the period of temporary occlusion.

80. Crossbite with mandibular displacement: treatment in the period of mixed occlusion.

81. Crossbite with mandibular displacement: treatment in the period of permanent occlusion. Mistakes and complications, retention of achieved results.

82. Congenital clefts of maxillofacial area: classification, etiology, clinical features, diagnostics.

83. Rehabilitation steps for children with inborn isolated cleft lip and alveolus, role of the orthodontist.

84. Orthodontic treatment steps for children with inborn isolated soft and hard cleft palate, role of the orthodontist.

85. Orthodontic treatment steps for children with inborn unilateral lip, cleft alveolus and cleft palate, role of the orthodontist.

86. Orthodontic treatment steps for children with inborn bilateral lip, cleft alveolus and palate cleft, role of the orthodontist.

87. Space control in dentition after early temporary teeth loss: indications, orthodontic appliances.

88. Space management in dentition: indications, choice of orthodontic appliances.

89. Braces: indications and contraindications, kinds of braces. Positioning of brackets, ways of fixation. Differences from removable orthodontic devices.

90. Six keys of an ideal occlusion according to L. Andrews.

91. Main stages of treatment with dental braces according to the mechanics of

Bennett J. and McLaughlin R. First stage of treatment. Types of anchorage.

92. Second stage of treatment with dental braces according to the mechanics of Bennett J. and McLaughlin R. Characteristics of wires used for alignment of teeth.

93. Third stage of treatment with dental braces according to the mechanics of Bennett J. and McLaughlin R. Anchorage control in patients with enlarged and reduced lower part of the face.

94. Fourth stage of treatment with dental braces according to the mechanics of Bennett J. and McLaughlin R. Mechanisms of sliding wire and smooth movement of teeth.

95. Fifth stage of treatment with dental braces according to the mechanics of Bennett J. and McLaughlin R. Final actions.

96. Retention of achieved results after treatment with dental braces. Ways of retention. Removable and fixed retainers. Relapse reasons, methods of prevention.

97. A system of transparent aligners for the treatment of dental and jaw anomalies.

98. Microimplants in orthodontics. Types, features of installation and use.