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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY

Director of the Institute of Dentistry

_____ / Pervov Yu.Yu./

“ 8th” of June 2026

COLLECTION OF ASSESSMENT TOOLS
B1.C.39 Orthopedic dentistry
of the basic educational program
of Higher Education

Specialty	**31.05.03 Dentistry for foreign students (English-language program)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing health care in patients with dental pathology)
Mode of study	**Full-time**
Period of mastering the BEP	**5 years** (nominal length of study)
Institute	of Dentistry

Vladivostok, 2026

1. INTRODUCTION

1.1. Collection of Assessment Tools is a document that regulates the format, content, and types of assessment tools for continuous assessment, interim examination and final (state final) examination, and graded criteria for each type of assessment tools.

1.2. Assessment tools allows to evaluate the development of universal, general professional, and professional competencies (UCs, GPCs and PCs respectively) outlined in Federal State Educational Standard of Higher Education and defined in the basic educational program of higher education for the specialty 31.05.03 Dentistry for foreign students (English-language program), profile 02 "Healthcare" (in the field of providing health care in patients with dental pathology).

(BEP HE for the 31.05.03 Dentistry for foreign students (English-language program) specialty, section 3 Learning Outcomes Requirements of the Basic Educational Program of Higher Education)

2. DOCUMENT BODY

2.1. Types of Assessment, Formats of Assessment Tools

No.	Types of assessment	Assessment Tools Format
1	**Continuous assessment**	**Tests**
		Interview Questions
		Mini-Case Studies
		Checklists
2	**Interim assessment**	**Interview Questions**
		Checklists

3. The contents of assessment tools for continuous and interim examination are prepared by the teacher of the course

1. Interview questions

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness

I		**ANSWER THE QUESTIONS** 1. Orthopedic Dentistry. Definition of the academic discipline, its purpose, and objectives. Main areas of development of this field. Contribution of the department's staff to the development of orthopedic dentistry. 2. Diagnostics in orthopedic dentistry. Methods of patient examination. Components of diagnosis (etiological, functional, anatomical). 3. Methodology for examining a patient in an orthopedic dentistry clinic. Case history. 4. Features of collecting anamnesis, sequence of patient examination. 5. Instrumental and special research methods in orthopedic dentistry. 6. Radiological research methods, techniques, information content for establishing a final diagnosis. 7. Electromyography, methodology, information content for establishing a diagnosis. 8. Gnathodynamometry. Reserve and residual capacity of the periodontium, practical significance. 9. Chewing force, chewing pressure, chewing efficiency. Methods for their determination. 10.Static and dynamic methods for determining chewing efficiency. 11. Oral cavity preparation for dental prosthetics (surgical, therapeutic, orthodontic). Their scope and significance. 12. Classification of partial dentition defects according to A.I. Betelman and Kennedy. Their significance in orthopedic dentistry. 13. Bite. Physiological and pathological bite. Age-related characteristics of bite. 14. Mobility and compliance of the oral mucosa. Classifications and significance in removable prosthetics. 15. The structure of the oral mucosa. Its changes during dental prosthetics. 16. Marginal periodontium. Anatomy of the periodontal junction. Structure, function, and significance. 17. Types of jaw atrophy. Factors that contribute to the development of jaw atrophy and their clinical significance. 18. Anatomy of the lower and upper jaws, their functional features. 19.Components of the dental apparatus and their functional interaction. 20. Normal masticatory muscle groups and their functions. Phenomena of coordinated antagonism and synergism in the work of the masticatory muscles. 21. Facial muscles and their functions. 22. Relative physiological rest of the masticatory muscles, its importance in the clinic of orthopedic dentistry. 23. Neuromuscular system. Reflexes of the dental system. Concepts of periodontomuscular, gingivomuscular, and myostatic reflexes. Their significance. 24. Mechanism of mandibular movements. Comparative characteristics of the anatomical and physiological mechanisms of the masticatory apparatus in different animal groups. The relationship between the form and function of the temporomandibular joint. 25. Articulation. Movements of the lower jaw in the sagittal and transverse planes. Basic parameters of these movements. 26. Movements of the lower jaw in vertical, sagittal and transverse directions. Phases of chewing movements according to Gysi. 27. The mechanism of mandibular movements in the sagittal direction. The incisor and articular tracts and their relationship. The Christensen phenomenon. Significance in the design of complete removable dentures. 28. Movements of the lower jaw in the transverse direction (Benet angle, relationship of dental arches). 29. Sagittal and transverse occlusal curves, their importance in the design of artificial dentition for the manufacture of complete removable dentures. Working and balancing sides (characteristics of occlusal contacts).

		30. Methods of recording (registration) of movements of the lower jaw (internal oral, external). 31. Biomechanics of mandibular movements and their importance for the design of dentures. Definition of the concepts of "articulation" and "occlusion" and their importance for the design of dentures. 32. Structure of dental arches. Concept of dental, alveolar and basal arches. Occlusal curves (Spee and Wilson). 33. Factors that ensure the stability of teeth. 34. Anatomy of the occlusal surface of teeth and dental arches. Occlusal contacts of teeth. 35. Occlusion factors (articular path; Benet movement; occlusal plane - Spee, Wilson; occlusion morphology; incisal path; distance between articular heads). 36. Structure and functions of the periodontium. Transformation of chewing pressure. 37. Structure and functions of the periodontium. Tooth mobility, diagnostic significance. 38. Types of occlusion. Tooth contacts in centric occlusion. Relationship of anterior and lateral teeth in centric occlusion. 39. Contacts of teeth during forward protrusion of the lower jaw and its lateral movements. Premature contacts – supracontacts. 40. Basic provisions of the articular theory of articulation of the lower jaw and its practical significance. 41. The main provisions of the spherical theory of articulation and its practical significance. 42. Theory of articulatory balance, basic provisions. 43. Pain. Anesthesia. Anesthesia methods in orthopedic dentistry. Medical and pharmacological pain relief agents. 44. Possible errors and complications of anesthesia (fainting, collapse, anaphylactic shock), clinical signs, scope of emergency care. 45. Asepsis and antisepsis in the clinic of orthopedic dentistry. 46. Disinfection and sterilization of instruments and impressions. Prevention of the spread of infectious diseases in a dental clinic. 47. Impressions and their classification. Materials used to obtain them. 48. Impression materials. Requirements for them. Characteristics of thermoplastic impression materials, indications for their use. 49. Impression materials. Requirements for them. Characteristics of elastic impression materials, indications for their use. 50. Impression materials. Requirements. Characteristics of silicone impression materials, indications for their use. 51. Complications in obtaining anatomical plaster impressions and their prevention. 52. Classification of impression materials. Requirements for impression materials. 53. Classification of tooth crown defects according to Black and Kurilenko. 54. Indications and contraindications for replacing defects of hard dental tissues with inlays. 55. Inlay designs. Clinical and laboratory stages of manufacturing. 56. Fixation of fixed dentures using inlays. 57. Pin teeth. Indications and contraindications for the production of pin structures. 58. Selection of the design of pin teeth depending on the clinical situation. 59. Clinical and laboratory stages of manufacturing pin teeth (Katz, Ilyina-Markosyan, Richmond, Akhmedov, Logan pin tooth). 60. Indications for filling defects in hard tissues of anterior teeth with inlays. Principles of cavity formation and inlay design. 61. Indications for filling defects in hard tissues of posterior teeth with inlays. Formation of cavities, inlay designs, and their fixation 62. Clinical and laboratory stages of inlay production.

		63. Requirements for artificial crowns. Indications for crowning a tooth. Crown classification. Materials used to make artificial crowns. 64. Consequences of preparation of hard dental tissues. The need to use temporary structures. 65. Requirements for stamped metal crowns. Types of stamping, materials, and tools. 66. Rules for preparing different functionally oriented groups of teeth for a stamped crown. Instrumentation. 67. Clinical and laboratory stages of manufacturing stamped crowns. Types of stampings. 68. The relationship of the crown margin to the marginal periodontal tissues. Complications with elongated and shortened crown margins, morphological changes in trauma to the marginal periodontium. 69. Plastic crowns. Indications and contraindications for their use. 70. Clinical and laboratory stages of their production. Materials used for this. 71. Combined stamped crowns. Clinical indications for their use. Rules for tooth preparation. Manufacturing methods, materials. 72. Cast crowns. Indications. Clinical stages of fabrication. Materials for their veneering. 73. Laboratory stages of manufacturing cast crowns. Mechanism for fixing the facing material. 74. Dental bridges. Indications and contraindications for the treatment of dental defects with dental bridges. 75. Biomechanics of bridge prostheses. Requirements for supporting teeth. 76. Principles of designing bridge prostheses. 77. Indications for the use of different supporting elements in bridge prostheses. Designs of supporting elements. 78. Designs of bridge prostheses, indications for their use. 79. Comparative characteristics of soldered, non-soldered and cast bridge prostheses. 80. Clinical and laboratory stages of manufacturing stamped-soldered bridge prostheses. 81. Solders and fluxes. Silver solder, composition, method of application. The role of fluxes in the soldering process. 82. Metals and alloys used in orthopedic dentistry. Noble alloys. 83. Metals and alloys used in orthopedic dentistry. Steel and its grades. Physicochemical properties. The role of alloying elements. 84. Clinical and laboratory stages of manufacturing non-soldered bridge prostheses. 85. Modeling the intermediate portion of a bridge prosthesis. The relationship between its shape and the topography of the dental defect. 86. Facing materials for bridge prostheses. Methods for improving the fixation of the facing material. 87. Clinical and laboratory stages of manufacturing cast bridge prostheses. 88. Methods for producing wax reproductions of solid cast frameworks for bridge prostheses. Methods for compensating for metal shrinkage. Metal alloys used for fixed prostheses. Requirements for them. 89. Factors that ensure the fixation of fixed dentures. Rules and sequence of fixation. 90. Types of fixing cements (phosphate, ionomer, carboxylate), indications for their use.

Assessment criteria

“Very good” - more than 91% correct answers

“Good” - 81-90% correct answers

“Satisfactory” - 71-80% correct answers

“Unsatisfactory” - less than 71% correct answers

2. Tests for continuous and interim assessment

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
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C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)**
		1. Types of clasp lines include 1) vertical, diagonal, transverse 2) lateral, anterior, sagittal 3) diagonal, distal, medial **4) transverse, diagonal, sagittal** 5) sagittal, vertical, lateral 2. Alloys used to produce cast clasps include 1) silver-based 2) silver-palladium 3) 900-carat gold 4) 750 assay value gold with platinum 5) titanium 3. The retaining clasp consists of 1) shoulder, process 2) process, occlusal pad 3) occlusal pad, branch 4) branches, body, occlusal pad **5) shoulder, body, process** 4. To determine central occlusion, the clinic uses plaster models 1) installed in the occluder 2) installed in the articulator **3) with wax bases and occlusal rims (bite blocks)** 4) with wax bases and artificial teeth 5) with wax bases installed in the occluder 5. A wax base with occlusal rims must 1) be made from modeling wax and fit tightly to the prosthetic bed 2) fit tightly to the prosthetic bed with occlusal ridge below natural teeth 3) have the occlusal ridge below natural teeth corresponding to the boundaries of the denture base

4) have the occlusal ridge lower and narrower than the natural teeth.
5) fit tightly to the prosthetic bed in compliance with the boundaries of the prosthetic base

6. The guideline for the placement of artificial teeth is
1) medial surface of the canine
2) distal surface of the canine
3) setting the central incisors
4) in the middle of the vestibular surface of the canine
5) setting the central and lateral incisors

7. In the position of central occlusion, the muscles that lift the lower jaw are
1) uniformly tense
2) at relative physiological rest
3) completely relaxed
4) toned
5) unevenly tense

8. To prevent deformation of the wax base with occlusal rims, _____ is used
1) self-hardening plastic
2) gypsum block
3) metal wire
4) increasing the thickness of the wax
5) metal mesh

9. A wax construction for determining the central occlusion is
1) impression
2) modeling
3) baseplate
4) clasp
5) baseplate with occlusion rims

10. Artificial plastic teeth are connected to the baseplate
1) mechanically
2) chemically
3) using glue
4) using insulating varnish
5) using sticky wax

11. When placing teeth in the articulator, _____ occlusions are assessed
1) lateral left, lateral right
2) side right and left, front
3) front, central
4) central
5) central, front, side

12. Temporary splints in the treatment of periodontal diseases should
1) not interfere with pharmacotherapy
2) conduct electricity well
3) if necessary, replace a defect in the dental row
4) 1) and 3) are correct
5) 1), 2), 3) are correct

13. Optimal position of the clasp line on the lower jaw is

1) diagonal
2) sagittal
3) transverse
4) vestibulo-oral
5) point

14. When replacing the wax base of a removable denture with plastic, ___ is/are used
1) model
2) clasps
3) artificial teeth
4) artificial teeth, clasps
5) model, artificial teeth, clasps

15. The combined method of plastering is used in cases where
1) the front teeth are placed on alveolar ridge, and the side teeth are placed on an artificial gum
2) the teeth are placed on artificial gums, and the clasps are located in the front part of the denture
3) a complete removable denture is made
4) the fixing elements are support-retaining clasps
5) the lateral teeth are placed on alveolar ridge, and the front teeth are placed on an artificial gum

16. The final fitting of a removable plate denture is performed
1) by a dental technician on a model
2) by a doctor in the oral cavity
3) by a doctor on a model
4) by a dental technician on a model, then by a doctor in the oral cavity
5) by the doctor first on the model and then in the oral cavity

17. Incomplete seating of a plate prosthesis (in case of a dental arch defect) is caused by
1) overestimation of the height of the lower part of the face
2) defects of the baseplate due to incomplete packaging of plastic
3) adhesion of the base plastic to the necks of the teeth
4) lowering of the height of the lower part of the face
5) mistakes in the installation of artificial teeth

18. One of the factors that causes pain when using dentures is
1) thickness of the denture base
2) shortening of the basis boundaries
3) the degree of wear of the occlusal surface of artificial teeth
4) unverified occlusal contacts
5) reduction in the height of the lower part of the face

19. When repairing a removable denture on the lower jaw due to loss of teeth, impressions must be made from
1) lower jaw without prosthesis
2) lower jaw with prosthesis
3) upper jaw and lower jaw without prosthesis
4) lower jaw with prosthesis and upper jaw
5) there is no need to take impressions

20. According to Kennedy's classification, a unilateral distally unlimited (terminal) defect of the dentition belongs to the ____ class
1) first
2) second
3) third
4) fourth
5) fifth

21. The clasp denture transmits chewing pressure to
1) natural teeth
2) chewing muscles
3) oral mucosa and natural teeth
4) temporomandibular joint
5) oral mucosa, muscles, natural teeth

22. One of the advantages of plastic artificial teeth in removable dentures is
1) greater hardness
2) mechanical connection with the base
3) possibility of placing teeth on the alveolar ridge
4) possibilities of placing teeth with a progenic bite
5) greater color fastness

ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)

1. 1st and 3rd classes of defects according to Kennedy include
1) bilateral end defect
2) included defect in the lateral section
3) bilateral defect in the lateral section, combined with a defect in the anterior section
4) included defect of the anterior section
5) unilateral terminal defect
6) a stand-alone tooth

2. 2nd and 7th classes of dental row defects according to Gavrilov's classification include
1) bilateral end defect
2) a stand-alone tooth
3) bilateral defect in the lateral section, combined with a defect in the anterior section
4) included defect of the anterior section
5) unilateral terminal defect
6) included defect in the lateral section

3. Orthognathic bite is characterized by
1) tight fissure-tubercle contact
2) the upper incisors overlap the lower ones by no more than half the height of the crown
3) the cutting edges of the upper incisors do not overlap the lower ones, but are in butt contact with them
4) displacement of the lower jaw backwards
5) disocclusion in the frontal part of the dentition
6) the upper front incisors overlap the upper ones by more than 1/3

4. Camper's line is a line that crosses
1) the middle of the tragus of the ear

2) the outer edge of the wing of the nose
3) base of the nose
4) the lower point of the sella turcica
5) angle of the lower jaw
6) nasofrontal junction

5. Methods of determining centric jaw relation include
1) Kantorovich method
2) occlusal
3) interalveolar
4) Wordsworth-White method
5) X-ray
6) Herbst method

6. Functional system of purposeful behavioral act (according to P.K. Anokhin) includes
1) Afferent synthesis
2) Neurogenic synthesis
3) Adaptation
4) Decision-making stage
5) Partial adaptation
6) Excitation

7. Dental therapeutic bioengineering systems (according to M.Z. Mirgazizov) includes
1) Restoration object
2) Transformative design
3) Simulation object
4) X-ray object
5) Clinical object
6) Articular structure

8. Biological width includes
1) Cement
2) Alveolar bone
3) Neurovascular bundle
4) Attached epithelium
5) Alveolar part of the gum
6) Sharpey's fibers

9. Types of fixation of crowns to abutment
1) No fixation
2) Hinged
3) Cement
4) Beam
5) Screw
6) Cement screw

10. Signs of balanced occlusion include
1) Lack of contact on the balancing side
2) Lack of contact on the working side
3) Contact on the working side of the same tubercles
4) Contact on the working side of dissimilar tubercles
5) Contact on the balancing side of the same tubercles

6) Contact on the balancing side of opposite tubercles

11. X-ray symptoms accompanied by decreased quantity of bone tissue include
1) Lysis
2) Osteoporosis
3) Parostoses
4) Osteosclerosis
5) Resorption
6) Fibrosis

12. X-ray symptoms accompanied by bone formation include
1) Lysis
2) Osteoporosis
3) Parostoses
4) Osteosclerosis
5) Resorption
6) Fibrosis

13. Classification according to Lund includes
1) crista galli
2) peripheral fibrous zone
3) soft palate
4) vestibule of the oral cavity
5) adipose zone
6) retromolar region

14. Classification according to Souplet includes
1) crista galli
2) peripheral fibrous zone
3) soft palate
4) vestibule of the oral cavity
5) adipose zone
6) retromolar region

ANSWER LEVEL 3 TEST QUESTIONS (MATCHING QUESTIONS)

1. Match the classes of supracontact (Jankelson) with their characteristics

Supracontact class:
1) 1
2) 1a
3) 2a
4) 3
5) 3a
6) 2

Characteristic:
A) vestibular slope of the lingual cusps of the lower molars and premolars
B) vestibular slopes of the buccal cusps of molars and premolars
C) oral slopes of the buccal cusps of the lower molars and oral surfaces of the upper anterior teeth
D) oral slopes of the buccal cusps of the lower molars and premolars
E) vestibular slopes of the palatine tubercles of the upper molars and premolars
F) oral slopes of the palatine cusps of the upper molars and premolars

2. Match the periodontal fibers with their location

Periodontal fibers:
1) transeptal fibers
2) free gingival fibers
3) circular fibers
4) alveolar ridge fibers
5) oblique fibers
6) dentoalveolar fibers

Location:
A) cover the neck of the tooth
B) come from the neck and are woven into the connective tissue of the gums
C) go horizontally and connect adjacent teeth
D) cover the middle part of the tooth root
E) go from the top of the alveolar ridge to the cementum of the tooth neck
F) start from the root cementum along its entire length and go to the wall of the dental alveolus

3. Match the cellular elements of the periodontium with their function
Cellular elements of the periodontium:
1) fibroblasts
2) labrocytes
3) plasma cells
4) cementoblasts
5) Malassé islands
6) osteoblasts

Function:
A) construction of secondary cellular cement
B) synthesis of the main substance
C) synthesis of heparin and histamine
D) source of epithelialization of chronic apical processes
E) production of antibodies
F) young bone tissue cells (15-20 μm in diameter) that synthesize the intercellular substance – the matrix

4. Match the periodontal function with its characteristic
Functions of the periodontium:
1) support and retaining (shock-absorbing)
2) barrier
3) trophic
4) reflex
5) plastic
6) distribution and control

Characteristic:
A) collagen and elastic fibers and liquid contents of vessels and lymph nodes, tissue fluid - hydraulic gun
B) regulation of chewing pressure due to muscular reflex, mechanoreceptors
C) fibro-osteo-cementoblasts
D) a wide network of blood, lymphatic and nerve endings
E) the ability of the gum to keratinize, the formation of the gingival groove
F) uniform redistribution of the load on the tooth and alveolar tissue during chewing

		5. Match the clasp with location of the distribution line Clasp: 1) Acker clasp 2) Roach clasp 3) combined (Acker + Roach) 4) single-arm, rear action 5) single-ring 6) Ney's clasp Distribution line location: A) different direction on different surfaces of the tooth B) typical arrangement C) closer to the gum area D) atypical location E) inclined, single standing molars F) above the dividing line

Assessment criteria

"Very good" - more than 91% correct answers of questions of every level
"Good" - 81-90% correct answers of questions of every level
"Satisfactory" - 71-80% correct answers of questions of every level
"Unsatisfactory" - less than 71% correct answers of questions of every level

Standardized case studies and checklists for the **B1.C.39 Orthopedic dentistry** course

Case Study No.1

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
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C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient I., 76, visited the orthopedic dentistry clinic. She complained of unsatisfactory aesthetics, difficulty chewing, and poor fit of her removable dentures. Medical history: missing teeth were removed due to caries and its complications. The first dentures were installed approximately 28 years ago, the last 9 months ago – with cast crowns with plastic veneers and removable

<table>
<tr><td></td><td></td><td>partial dentures. The last extraction was 4 months ago due to caries under the crowns, after which the removable dentures failed to fit properly.
Physical examination findings, including visual inspection, include pronounced nasolabial folds and slightly drooping corners of the mouth. The height of the lower face in central occlusion is reduced by 4 mm.
Objectively upon examination:

Dental formula:<table><tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>Cd</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr><tr><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr><tr><td>48</td><td>47</td><td>46</td><td>45</td><td>44</td><td>43</td><td>42</td><td>41</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td></tr><tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr></table></td></tr>
<tr><td>Q</td><td>1</td><td>Question: Make a diagnosis</td></tr>
<tr><td>Q</td><td>2</td><td>Question: Make a treatment plan</td></tr>
<tr><td>Q</td><td>3</td><td>Question: Specify the phases of adaptation to complete removable dentures</td></tr>
<tr><td>Q</td><td>4</td><td>Question: List the functional tests according to Herbst to assess the stability of a plate prosthesis in the complete absence of teeth on the lower jaw</td></tr>
<tr><td>Q</td><td>5</td><td>Question: Name the structural dental materials used for the manufacture of removable plate dentures in cases of complete edentia</td></tr>
</table>

Case Study No.1 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
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C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies

<table>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS

Patient I., 76, visited the orthopedic dentistry clinic. She complained of unsatisfactory aesthetics, difficulty chewing, and poor fit of her removable dentures.
Medical history: missing teeth were removed due to caries and its complications. The first dentures were installed approximately 28 years ago, the last 9 months ago – with cast crowns with plastic veneers and removable partial dentures. The last extraction was 4 months ago due to caries under the crowns, after which the removable dentures failed to fit properly.
Physical examination findings, including visual inspection, include pronounced nasolabial folds and slightly drooping corners of the mouth. The height of the lower face in central occlusion is reduced by 4 mm.
Objectively upon examination:

Dental formula:<table>
<tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>Cd</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr>
<tr><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr>
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<tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr>
</table></td></tr>
<tr><td>Q</td><td>1</td><td>Question: Make a diagnosis</td></tr>
<tr><td>A</td><td></td><td>Correct answer:
1. Partial secondary absence of teeth of the upper jaw, class IV according to Gavrilov.
2. Complete secondary absence of teeth of the lower jaw, type II according to Keller.
3. Chronic fibrous periodontitis of tooth 1.3. 4. Functional overload of tooth 1.3, grade II mobility.</td></tr>
<tr><td>R2</td><td>Very good</td><td>All descriptors of the correct answer have been listed</td></tr>
<tr><td rowspan="2">R1</td><td>Good</td><td>3 descriptors of the correct answer have been listed</td></tr>
<tr><td>Satisfactory</td><td>1-2 descriptors of the correct answer have been listed</td></tr>
<tr><td>R0</td><td>Fail</td><td>No descriptors of the correct answer have been listed</td></tr>
<tr><td>Q</td><td>2</td><td>Question: Make a treatment plan</td></tr>
<tr><td>A</td><td></td><td>Correct answer:
1. Therapeutic protocol: consultation with a periodontist regarding the condition of the mucous membrane of the prosthetic bed and the prescription of treatment</td></tr>
</table>

		2. Surgical protocol: tooth extraction 1.3 3. In order to improve the stability of the upper jaw prosthesis, plastic surgery of the alveolar ridge in position 1.3 after tooth extraction is recommended. 4. After removal of 1.3, it is recommended to refrain from prosthetics for at least 3-4 weeks 5. Orthopedic protocol: production of individual impression trays for the upper and lower jaw 6. Manufacturing of two complete plate dentures for the upper and lower jaw
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Specify the phases of adaptation to complete removable dentures
A		Correct answer: 1. The first phase – the placement phase – is observed on the day of delivery of the prosthesis. 2. The second phase – the partial braking phase – occurs in the period from the first to the fifth day after the installation of the prosthesis 3. The third phase – the phase of complete inhibition – occurs in the period from 5 to 33 days after the delivery of the prosthesis.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: List the functional tests according to Herbst to assess the stability of a plate prosthesis in the complete absence of teeth on the lower jaw
A		Correct answer: 1. Mouth opening test. 2. Saliva swallowing test. 3. Test of tongue movement along the red border of the lips. 4. Test of touching the cheeks with the tongue. 5. Test of tongue movement towards the nose. 6. Pushing the lips forward like a tube (the sound “oo”).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Name the structural dental materials used for the manufacture of removable plate dentures in cases of complete edentia
A		Correct answer: 1. Acrylic 2. Vinyl acrylic 3. Based on modified polystyrene 4. Copolymers or mixtures of the listed plastics 5. Both colored and colorless material is used for the base
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.2

<table>
<tr><th></th><th>Code</th><th>Competence description / name of labor function / name of work activity / text</th></tr>
<tr><td>S</td><td>31.05.03</td><td>Dentistry for foreign students (English-language program)</td></tr>
<tr><td>C</td><td>GPC-5</td><td>Able to examine a patient and make a diagnosis</td></tr>
<tr><td>C</td><td>GPC-6</td><td>Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>C</td><td>PC-1</td><td>ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods</td></tr>
<tr><td>C</td><td>PC-2</td><td>ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment</td></tr>
<tr><td>C</td><td>PC-3</td><td>ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients</td></tr>
<tr><td>F</td><td>A/01.7</td><td>Patient examination. Making a diagnosis</td></tr>
<tr><td>F</td><td>A/02.7</td><td>Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS

Patient F., 53 years old, came to the clinic. Complaints: unsatisfactory aesthetics and impaired chewing of food.
Medical history: Prosthetic dentistry was performed 10 years ago. According to the patient, the missing teeth were removed due to caries and its complications.
Objective examination data, external examination: decrease in the height of the lower part of the face by 3 mm, nasolabial folds are pronounced, the corners of the mouth are lowered, facial asymmetry is observed.
<table>
<tr><td>F</td><td>F</td><td>Cd</td><td>A</td><td>A</td><td>Cd</td><td>F/C</td><td>C</td><td>C</td><td>F/C</td><td>Cd</td><td>A</td><td>Cd</td><td>A</td><td>A</td><td>Cd</td></tr>
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<tr><td>F</td><td>Cd</td><td>A</td><td>Rx</td><td>F/C</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Cd</td><td>Cd</td><td>A</td><td>Cd</td><td>A</td></tr>
</table>
Clinical examination of the oral cavity:

On the upper jaw: missing teeth 1.5, 1.4, 2.4, 2.6, 2.7. Metal-ceramic prosthesis with supports on teeth 1.6, 1.3, unsatisfactory marginal fit of the crowns, partial de-cementation. Deep caries of teeth 1.1, 2.1, 1.2, 2.2. Fracture of metal-ceramic bridge prosthesis 2.3, 2.5, 2.8.</td></tr>
</table>

		On the lower jaw: missing teeth 3.8, 3.6, 4.6. Metal-ceramic bridge prosthesis supported by teeth 3.7, 3.5, 3.4, unsatisfactory fixation of the prosthesis, partial de-cementation of artificial crowns on all supporting teeth, recession and hyperemia of the marginal gingiva. Increased abrasion of teeth 3.3, 3.2, 3.1, 4.1, 4.2, 4.3. Secondary deep caries of tooth 4.4. The crown of tooth 4.5 is completely destroyed. Fracture of the metal-ceramic prosthesis supported by teeth 4.5, 4.7, the crown of tooth 4.5 and the facet of tooth 4.6 are missing. Complete de-cementation of the artificial crown on tooth 4.7. Mismatch of the cosmetic center.  Orthopantomogram shows bone atrophy covering 1/3 of the root length of the teeth in the upper and lower jaws. Teeth 1.3, 1.6, 2.2, 2.3, 2.5, 2.8, 3.4, 3.5, 3.7, 4.5, 4.7 are depulped. Filling material is unevenly visible in the canals of teeth 1.6, 2.2, 2.3, 3.4. Caries of teeth 1.7, 1.2, 1.1, 2.1, 2.2, 4.4. Bone resorption around the root of tooth 4.5.
Q	1	Question: Make a diagnosis
Q	2	Question: Create a comprehensive treatment plan without taking implantation into account
Q	3	Question: List the clinical stages of manufacturing metal-ceramic dental prostheses
Q	4	Question: Name the method for determining the height of the lower part of the face in central occlusion; what is the essence of the method?
Q	5	Question: Specify the minimum thickness of a cast framework for metal-ceramic crowns; what device is used to take measurements?

Case Study No.2 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis

<table>
<tr><td>F</td><td>A/02.7</td><td>Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS

Patient F., 53 years old, came to the clinic. Complaints: unsatisfactory aesthetics and impaired chewing of food.
Medical history: Prosthetic dentistry was performed 10 years ago. According to the patient, the missing teeth were removed due to caries and its complications.
Objective examination data, external examination: decrease in the height of the lower part of the face by 3 mm, nasolabial folds are pronounced, the corners of the mouth are lowered, facial asymmetry is observed.
<table>
<tr><td>F</td><td>F</td><td>Cd</td><td>A</td><td>A</td><td>Cd</td><td>F/C</td><td>C</td><td>C</td><td>F/C</td><td>Cd</td><td>A</td><td>Cd</td><td>A</td><td>A</td><td>Cd</td></tr>
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</table>
Clinical examination of the oral cavity:

On the upper jaw: missing teeth 1.5, 1.4, 2.4, 2.6, 2.7. Metal-ceramic prosthesis with supports on teeth 1.6, 1.3, unsatisfactory marginal fit of the crowns, partial de-cementation. Deep caries of teeth 1.1, 2.1, 1.2, 2.2. Fracture of metal-ceramic bridge prosthesis 2.3, 2.5, 2.8.
On the lower jaw: missing teeth 3.8, 3.6, 4.6. Metal-ceramic bridge prosthesis supported by teeth 3.7, 3.5, 3.4, unsatisfactory fixation of the prosthesis, partial de-cementation of artificial crowns on all supporting teeth, recession and hyperemia of the marginal gingiva. Increased abrasion of teeth 3.3, 3.2, 3.1, 4.1, 4.2, 4.3. Secondary deep caries of tooth 4.4. The crown of tooth 4.5 is completely destroyed. Fracture of the metal-ceramic prosthesis supported by teeth 4.5, 4.7, the crown of tooth 4.5 and the facet of tooth 4.6 are missing. Complete de-cementation of the artificial crown on tooth 4.7. Mismatch of the cosmetic center.</td></tr>
</table>

		 Orthopantomogram shows bone atrophy covering 1/3 of the root length of the teeth in the upper and lower jaws. Teeth 1.3, 1.6, 2.2, 2.3, 2.5, 2.8, 3.4, 3.5, 3.7, 4.5, 4.7 are depulped. Filling material is unevenly visible in the canals of teeth 1.6, 2.2, 2.3, 3.4. Caries of teeth 1.7, 1.2, 1.1, 2.1, 2.2, 4.4. Bone resorption around the root of tooth 4.5.
Q	1	Question: Make a diagnosis
A		Correct answer: 1. Partial secondary adentia on the upper and lower jaw K08.1 2. On the upper jaw, Kennedy class 2, on the lower jaw, Kennedy class 3 3. Chronic gingivitis K05.10 4. Teeth 3.3, 3.2, 3.1, 4.1, 4.2, 4.3 – Abrasion K03.0 5. Teeth 1.8, 1.7, 1.2, 1.1, 2.1, 2.2, 4.4, 4.8 – Dentin caries K02.1 6. Teeth 1.6, 2.2, 2.3, 3.4, 4.5 – Chronic apical periodontitis K04.5
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Create a comprehensive treatment plan without taking implantation into account
A		Correct answer: 1. Removal of all orthopedic structures due to failure 2. Therapeutic sanitation - professional oral hygiene, treatment of dental caries 1.8, 1.7, 1.2, 1.1, 2.1, 2.2, 4.4, 4.8, endodontic retreatment of teeth 1.6, 2.2, 2.3, 3.4 3. Surgical sanitation – tooth extraction 4.5 4. Orthopedic rehabilitation – manufacturing of metal-ceramic crowns with support on teeth 1.6, 1.3, 1.2, 1.1, 2.1, 2.2, 2.3, 2.4, 3.7, 3.5, 3.4, 3.3, 3.2, 3.1, 4.1, 4.2, 4.3, 4.4, 4.7, manufacturing of a clasp denture for the upper jaw with support-retaining clasps on crowns 1.6, 1.3, 2.4, 2.5; manufacturing of a clasp denture for the lower jaw with support-retaining clasps on crowns 3.7, 3.4, 4.4, 4.7.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: List the clinical stages of manufacturing metal-ceramic dental prostheses
A		Correct answer: 1. Preparation, taking impressions, bite registration, making temporary crowns.

		2. Fitting metal frames (cast, milled). 3. Determination of color. 4. Try-in of veneered crowns, correction of approximal contacts and occlusal relationships. 5. Fixing the structure
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Name the method for determining the height of the lower part of the face in central occlusion; what is the essence of the method?
A		Correct answer: 1. The method for determining the height of the lower part of the face is called Anatomical and Physiological. 2. The method involves creating bite ridges on a wax or rigid base. Next, fixed points are marked on the patient, from which the relative physiological resting height of the mandible is determined, which is 2-4 mm. A distance—the resting height—is measured from these points. With central occlusion, the vertical dimension of the lower face is reduced by 2-4 mm relative to the normal resting height of the mandible. The ridges are softened, and the patient, under the doctor's supervision, closes the mouth to the measured height.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 incomplete descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Specify the minimum thickness of a cast framework for metal-ceramic crowns; what device is used to take measurements?
A		Correct answer: 1. The minimum thickness of the cast frame is 0.4 mm 2. Measurements are taken using a micrometer
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 incomplete descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.3

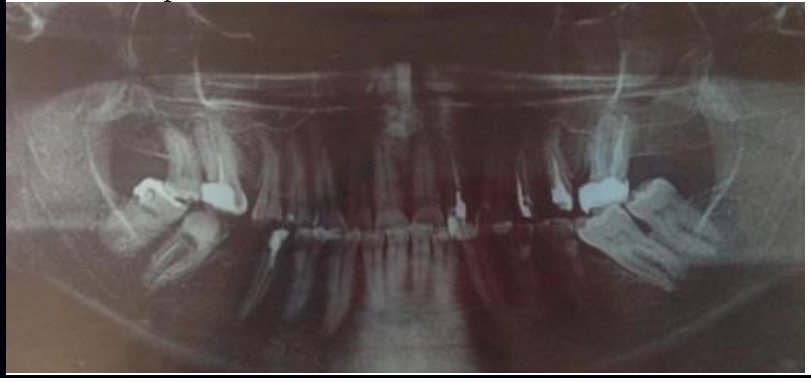
	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients

F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient B., 65, came to the clinic. Complaints: difficulty chewing food, periodic pain in the area of tooth 2.2, unsatisfactory aesthetics. Medical history: teeth were extracted throughout life due to caries and its complications. The first denture was performed 20 years ago, and the last dental visit was about 3 years ago. Objective examination data, external examination: decrease in the height of the lower part of the face by 2 mm. Dental formula:

F	F	Cd	Cd	A	A	F/C	C	C	C/F	Cd	A	Cd	A	A	Cd
18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
48	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
F	Cd	A	Rx	F/C							Cd	Cd	A	Cd	A



Oral examination: orthognathic bite. There is a diastema between teeth 1.1 and 2.1. In the oral cavity, there are combined plastic crowns 2.4 - 2.5, which are in unsatisfactory condition (aesthetics and marginal fit of the crowns in the area of the supporting teeth are impaired). Wedge-shaped defects of teeth 1.3, 1.4. Deep carious cavities of teeth 1.4, 2.7, 3.8, 4.4, 4.8. Gum recession in the area of teeth 3.3, 3.1, 4.1, 4.2. Hyperemia in the bifurcation area of the roots of tooth 4.7, mobility of parts of the crown of tooth 4.7. Pathological generalized abrasion of teeth on the upper jaw to dentin and lower jaw in the frontal section (1/3 of the height)
When analyzing the OPG, foci of bone tissue rarefaction were found in the area of the apices of roots 1.7, 2.2, 2.4, 2.5, 4.5 with unclear contours.



Q	1	Question: Make a diagnosis
Q	2	Question: Specify the manipulations that are advisable to perform on the patient during the preparatory stage without taking into account implantation
Q	3	Question: Create a plan for orthopedic treatment using crowns and bridges
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
Q	5	Question: Indications for the production of a pin-and-core inlay

Case Study No.3 Checklist

<table>
<tr><th></th><th>Code</th><th>Competence description / name of labor function / name of work activity / text</th></tr>
<tr><td>S</td><td>31.05.03</td><td>Dentistry for foreign students (English-language program)</td></tr>
<tr><td>C</td><td>GPC-5</td><td>Able to examine a patient and make a diagnosis</td></tr>
<tr><td>C</td><td>GPC-6</td><td>Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>C</td><td>PC-1</td><td>ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods</td></tr>
<tr><td>C</td><td>PC-2</td><td>ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment</td></tr>
<tr><td>C</td><td>PC-3</td><td>ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients</td></tr>
<tr><td>F</td><td>A/01.7</td><td>Patient examination. Making a diagnosis</td></tr>
<tr><td>F</td><td>A/02.7</td><td>Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS

Patient B., 65, came to the clinic. Complaints: difficulty chewing food, periodic pain in the area of tooth 2.2, unsatisfactory aesthetics.
Medical history: teeth were extracted throughout life due to caries and its complications. The first denture was performed 20 years ago, and the last dental visit was about 3 years ago.
Objective examination data, external examination: decrease in the height of the lower part of the face by 2 mm.

Dental formula:
<table>
<tr><td>F</td><td>F</td><td>Cd</td><td>Cd</td><td>A</td><td>A</td><td>F/C</td><td>C</td><td>C</td><td>C/F</td><td>Cd</td><td>A</td><td>Cd</td><td>A</td><td>A</td><td>Cd</td></tr>
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</table>
</td></tr>
</table>

		 Oral examination: orthognathic bite. There is a diastema between teeth 1.1 and 2.1. In the oral cavity, there are combined plastic crowns 2.4 - 2.5, which are in unsatisfactory condition (aesthetics and marginal fit of the crowns in the area of the supporting teeth are impaired). Wedge-shaped defects of teeth 1.3, 1.4. Deep carious cavities of teeth 1.4, 2.7, 3.8, 4.4, 4.8. Gum recession in the area of teeth 3.3, 3.1, 4.1, 4.2. Hyperemia in the bifurcation area of the roots of tooth 4.7, mobility of parts of the crown of tooth 4.7. Pathological generalized abrasion of teeth on the upper jaw to dentin and lower jaw in the frontal section (1/3 of the height) When analyzing the OPG, foci of bone tissue rarefaction were found in the area of the apices of roots 1.7, 2.2, 2.4, 2.5, 4.5 with unclear contours. 
Q	1	Question: Make a diagnosis
A		Correct answer: 1. Partial secondary absence of teeth on the upper and lower jaw (class III, subclass 1 according to Kennedy). 2 Increased abrasion of teeth of decompensated form of the 1st degree. 3. Diastema between teeth 1.1 and 2.1. 4. Dentin caries of teeth 1.4, 2.7, 3.8, 4.4, 4.8. Cemental caries of tooth 4.7. 5. Chronic apical periodontitis of teeth 1.7, 2.2, 2.4, 2.5, 4.5.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the manipulations that are advisable to perform on the patient during the preparatory stage without taking into account implantation
A		Correct answer: 1 Professional oral hygiene. Training in individual oral hygiene and its control. 2. Extraction of tooth 4.7 due to root caries and root separation along the bifurcation. Removal of combined plastic crowns 2.4-2.5. 3. Revision of canals and treatment of chronic periodontitis of teeth 1.7, 2.4, 2.5, 4.5.

		4 Therapeutic treatment of teeth 1.4, 1.5, 4.4, 4.8 due to deep carious process. 5 In cases of planning implantation (carrying out surgical intervention to install implants in the area of missing teeth 1.6, 2.6, 4.6 after orthodontic treatment).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Create a plan for orthopedic treatment using crowns and bridges
A		Correct answer: 1. Manufacturing of crowns 1.3; 1.2; 1.1; 2.1; 2.2; 2.3; 2. Manufacturing of dental bridges 1.7 – F -1.5, 1.4; 2.4, 2.5 –F - 2.7; 4.4, 4.5 – F – F - 4.8
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 incomplete descriptors of the correct answer have been listed
	Satisfactory	1 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
A		Correct answer: 1. Follow-up examinations after 1, 4, 6 months 2. Follow-up examinations are then carried out once every 6 months to assess multiple fissure-tubercle contacts and marginal fit of fixed dentures. 3. Control examinations to assess the hygienic condition of the oral cavity.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Indications for the production of a pin-and-core inlay
A		Correct answer: 1. Teeth with significant destruction of the crown part - more than 50%, incisors, canines, premolars and molars. 2. Teeth whose root canals have an oval, leaf-shaped, triangular or other non-round shape in the cross-sectional plane. 3. Teeth with significant destruction of the crown portion, where there is a deviation of the central axis of the crown portion from the root portion of no more than 30°. 4. Front teeth requiring reinforcement and restoration of the crown part, with deep incisal overlap (deep bite). 5 Anomalies in the development and position of the front teeth in adults that cannot be cured by orthodontic measures.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

<table>
<tr><th></th><th>Code</th><th>Competence description / name of labor function / name of work activity / text</th></tr>
<tr><td>S</td><td>31.05.03</td><td>Dentistry for foreign students (English-language program)</td></tr>
<tr><td>C</td><td>GPC-5</td><td>Able to examine a patient and make a diagnosis</td></tr>
<tr><td>C</td><td>GPC-6</td><td>Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>C</td><td>PC-1</td><td>ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods</td></tr>
<tr><td>C</td><td>PC-2</td><td>ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment</td></tr>
<tr><td>C</td><td>PC-3</td><td>ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients</td></tr>
<tr><td>F</td><td>A/01.7</td><td>Patient examination. Making a diagnosis</td></tr>
<tr><td>F</td><td>A/02.7</td><td>Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS

Patient L., 44 years old. Complaints: unsatisfactory aesthetics, difficulty chewing food.
Medical history: I had dentures 8 years ago, the missing teeth were removed due to caries and its complications.
Objective examination data, external examination: decrease in the height of the lower part of the face by 4 mm.
Clinical examination of the oral cavity:

Dental formula:
<table>
<tr><td>A</td><td>Cd</td><td>Cd</td><td>A</td><td>Cd</td><td>A</td><td>F</td><td>C/F</td><td>F</td><td>F</td><td>A</td><td>Cd</td><td>Cd</td><td>A</td><td>Cd</td><td>A</td></tr>
<tr><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr>
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<tr><td>Cd</td><td>A</td><td>A</td><td>A</td><td>Cd</td><td>Cd</td><td>F</td><td></td><td>F</td><td>Cd</td><td>Cd</td><td>Cd</td><td>A</td><td>A</td><td>A</td><td>A</td></tr>
</table>

Bite: orthognathic, complicated by deep incisor overlap.
Condition of the oral mucosa, gingiva, alveolar processes, and palate: pale pink, moderately moist, with the exception of the marginal gingiva in the area of the supporting crowns. Deep palate, poorly defined alveolar process on the left mandible.
Objectively: the oral cavity contains stamped and soldered bridge prostheses with a titanium nitride coating, which are in unsatisfactory condition. Gingival recession is observed in the area of all present crowns, and wear facets are visible on the chewing surface. Crowding of the anterior teeth on the lower jaw is present. Macrodontia of the 11 and 21 teeth is present. The 17 tooth has a vertical dentoalveolar deformity. Hyperemia and swelling of the marginal gingiva are observed in the area of all crowns. The depth of the periodontal pockets is 3-4 mm.</td></tr>
</table>

		 Orthopantomogram analysis: bone tissue atrophy on the lower jaw in the frontal group of teeth by ½ of the root length, in the lateral sections by 1/3, with the exception of tooth 4.8, where atrophy is more than 2/3; on the upper jaw, in the frontal section by 1/3 of the root length, on the remaining teeth by 1/2 of the root length. Teeth: 1.2, 1.6, 2.1, 2.2, 2.4, 2.5, 3.2, 3.3, 3.4, 4.2, 4.3, 4.4, 4.8 - depulped, canals at 1.6, 2.1, 2.5, 3.2, 3.3, 3.4, 4.8 are not filled to the apex, foci of rarefaction with clear rounded boundaries are noted in the periapical tissues.
Q	1	Question: Make a diagnosis
Q	2	Question: Specify the manipulations that are advisable to perform on the patient during the preparatory stage (excluding implantation)
Q	3	Question: Make an orthopedic treatment plan (excluding implantation)
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
Q	5	Question: Requirements for the root for the production of a cast post-and-core inlay

Case Study No.4 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient L., 44 years old. Complaints: unsatisfactory aesthetics, difficulty chewing food.

		Medical history: I had dentures 8 years ago, the missing teeth were removed due to caries and its complications. Objective examination data, external examination: decrease in the height of the lower part of the face by 4 mm. Clinical examination of the oral cavity: Dental formula: A Cd Cd A Cd A F C/F F F A Cd Cd A Cd A **18 17 16 15 14 13 12 11 21 22 23 24 25 26 27 28** **48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38** Cd A A A Cd Cd F F Cd Cd Cd A A A A Bite: orthognathic, complicated by deep incisor overlap. Condition of the oral mucosa, gingiva, alveolar processes, and palate: pale pink, moderately moist, with the exception of the marginal gingiva in the area of the supporting crowns. Deep palate, poorly defined alveolar process on the left mandible. Objectively: the oral cavity contains stamped and soldered bridge prostheses with a titanium nitride coating, which are in unsatisfactory condition. Gingival recession is observed in the area of all present crowns, and wear facets are visible on the chewing surface. Crowding of the anterior teeth on the lower jaw is present. Macrodontia of the 11 and 21 teeth is present. The 17 tooth has a vertical dentoalveolar deformity. Hyperemia and swelling of the marginal gingiva are observed in the area of all crowns. The depth of the periodontal pockets is 3-4 mm.  Orthopantomogram analysis: bone tissue atrophy on the lower jaw in the frontal group of teeth by ½ of the root length, in the lateral sections by 1/3, with the exception of tooth 4.8, where atrophy is more than 2/3; on the upper jaw, in the frontal section by 1/3 of the root length, on the remaining teeth by 1/2 of the root length. Teeth: 1.2, 1.6, 2.1, 2.2, 2.4, 2.5, 3.2, 3.3, 3.4, 4.2, 4.3, 4.4, 4.8 - depulped, canals at 1.6, 2.1, 2.5, 3.2, 3.3, 3.4, 4.8 are not filled to the apex, foci of rarefaction with clear rounded boundaries are noted in the periapical tissues.
Q	1	Question: Make a diagnosis
A		Correct answer: 1. Defect of the dental arch of the upper jaw, class IV according to Kennedy, subclass I; defect of the dental arch of the lower jaw, class II according to Kennedy. 2. Chronic generalized periodontitis of moderate severity. 3. Decreased occlusal height, deep incisor overlap, crowding of the lower jaw dentition 4. Chronic granulomatous periodontitis of teeth 1.6, 2.1, 2.5, 3.2, 3.3, 3.4, 4.8. 5. Secondary caries of the tooth 1.1.

R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the manipulations that are advisable to perform on the patient during the preparatory stage (excluding implantation)
A		Correct answer: 1. Additional examination methods. 2. Removal of orthopedic structures. 3. Professional oral hygiene with curettage of periodontal pockets. 4. Tooth extraction 4.8. 5. Endodontic treatment of teeth.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Make an orthopedic treatment plan (excluding implantation)
A		Correct answer: 1. Restoration of the integrity of the crown of the teeth with pin-shaped inlays, if necessary. 2. Production of plaster models with wax modeling. For occlusion analysis and aesthetic considerations. 3. Preparation of teeth of the upper and lower jaws. Fabrication of temporary restorations. taking into account the parameters of wax modeling 4. Manufacturing of permanent restorations (crowns and bridges) taking into account functional and aesthetic parameters, with an increase in occlusal height. 5. Occlusal correction, fixation of structures in the oral cavity.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
A		Correct answer: 1. Professional oral hygiene. 2. Medicinal treatment of periodontal pockets. 3. Physiotherapy treatment. 4. Treatment of dental caries, Endodontic treatment of teeth.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Requirements for the root for the production of a cast post-and-core inlay
A		Correct answer: 1. Lack of root mobility. 2. Absence of inflammatory phenomena in periodontal tissues. 3. The apical part of the canal must be sealed. 4. The root must be longer than the height of the future crown.

		5. The root walls must be of sufficient thickness and the root canal must have a smooth structure for at least 2/3 of the root length.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.5

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient Ch., 56 years old. Complaints of unsatisfactory aesthetics and difficulty chewing food. Medical history: According to the patient, dental prosthetics were performed 15 years ago. Her last dental visit was three years ago, when all crowns were removed. External examination: a decrease in the height of the lower part of the face by 4 mm, pronounced nasolabial folds, an aged expression, full mouth opening, without deviation from the midline. Oral examination: Dental formula:

A	F	F	A	A	A	F	F	F	R,Pt	F	A	F	A	A	A
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
A	A	A	F	F	F	F	F	F	A	F	A	F	A	F	A

		 The mucous membrane is pale pink, moderately moisturized, without visible pathological changes. Tooth 1.2 is restored with light-curing composite material; 1.1 is tangentially prepared for a crown, the filling has fallen out; 2.1 is tangentially prepared for a crown, restored with cement and an anchor pin; 2.2 is Radix; 3.1, 4.1, 4.3 are fillings in the cervical area, they do not meet clinical requirements - overhanging edges, color change. Teeth 1.6, 1.7, 2.3, 2.5 are tangentially prepared, previously treated with the resorcinol-formalin method. Vertical deformation of the alveolar parts of the upper and lower jaw in the area of 1.6, 1.7 and 4.4. The following teeth: 1.1, 1.2, 1.6, 1.7, 2.1, 2.3, 2.5 – the crowns are discolored, the fillings do not meet clinical requirements. 1.6 – secondary caries. The palate is domed with a pronounced torus. Horizontal wear facets are noted. Tartar is in the area of 3.1, 4.1, 4.2, 4.3. Orthopantomogram 
Q	1	Question: Make a preliminary diagnosis
Q	2	Question: Create a surgical treatment plan without taking into account implantation
Q	3	Question: Create a plan for orthopedic treatment using crowns, bridges and clasp-retained partial dentures
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
Q	5	Question: Stages of setting (hardening) of plastic

Case Study No.5 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies

<table>
<tr><td>C</td><td>PC-1</td><td>ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods</td></tr>
<tr><td>C</td><td>PC-2</td><td>ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment</td></tr>
<tr><td>C</td><td>PC-3</td><td>ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients</td></tr>
<tr><td>F</td><td>A/01.7</td><td>Patient examination. Making a diagnosis</td></tr>
<tr><td>F</td><td>A/02.7</td><td>Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS

Patient Ch., 56 years old. Complaints of unsatisfactory aesthetics and difficulty chewing food.
Medical history: According to the patient, dental prosthetics were performed 15 years ago. Her last dental visit was three years ago, when all crowns were removed.
External examination: a decrease in the height of the lower part of the face by 4 mm, pronounced nasolabial folds, an aged expression, full mouth opening, without deviation from the midline.
Oral examination:
Dental formula:
<table>
<tr><td>A</td><td>F</td><td>F</td><td>A</td><td>A</td><td>A</td><td>F</td><td>F</td><td>F</td><td>R,Pt</td><td>F</td><td>A</td><td>F</td><td>A</td><td>A</td><td>A</td></tr>
<tr><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr>
<tr><td>A</td><td>A</td><td>A</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>F</td><td>A</td><td>F</td><td>A</td><td>F</td><td>A</td><td>F</td><td>A</td></tr>
</table>

The mucous membrane is pale pink, moderately moisturized, without visible pathological changes. Tooth 1.2 is restored with light-curing composite material; 1.1 is tangentially prepared for a crown, the filling has fallen out; 2.1 is tangentially prepared for a crown, restored with cement and an anchor pin; 2.2 is Radix; 3.1, 4.1, 4.3 are fillings in the cervical area, they do not meet clinical requirements - overhanging edges, color change. Teeth 1.6, 1.7, 2.3, 2.5 are tangentially prepared, previously treated with the resorcinol-formalin method. Vertical deformation of the alveolar parts of the upper and lower jaw in the area of 1.6, 1.7 and 4.4.
The following teeth: 1.1, 1.2, 1.6, 1.7, 2.1, 2.3, 2.5 – the crowns are discolored, the fillings do not meet clinical requirements. 1.6 – secondary</td></tr>
</table>

		caries. The palate is domed with a pronounced torus. Horizontal wear facets are noted. Tartar is in the area of 3.1, 4.1, 4.2, 4.3. Orthopantomogram 
Q	1	Question: Make a preliminary diagnosis
A		Correct answer: 1. Partial secondary absence of teeth on the upper jaw – class II subclass II, on the lower jaw – class II subclass III according to Kennedy. 2. Decompensated generalized increased abrasion of moderate severity of mixed form. 3. 2.2 – Radix, chronic granulating periodontitis. 4. Chronic generalized periodontitis of mild severity in remission. Decrease in the vertical dimension of the alveolar surface by 4 mm. Vertical deformation of the alveolar portions of the upper and lower jaw in the region of 16-17 and 44.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Create a surgical treatment plan without taking into account implantation
A		Correct answer: 1. Remove the tooth 2.2. Stages: 2. Infiltration anesthesia 3. Separate the annular ligament from the tooth neck after the patient's pain has subsided due to anesthesia. The gum can be separated using a thin scalpel or a spatula. 4. Application of forceps, advancement of forceps, fixation of forceps. 5. Luxation with rotation. Traction. 6. After tooth extraction, the doctor applies a gauze pad to the socket and compresses its edges. This achieves repositioning of the displaced edges of the socket, reducing the area of the postoperative wound, which promotes better healing and prevents the development of post-extraction complications.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Create a plan for orthopedic treatment using crowns, bridges and clasp-retained partial dentures
A		Correct answer: 1. Restore the crown parts of teeth 1.7, 1.6, 1.2, 1.1, 2.1, 2.3, 2.5, 3.1, 3.3, 3.5, 3.7, 4.1, 4.2, 4.3, 4.4, 4.5 with pin-and-core inlays.

		2. Restore the VNOL and myotatic reflex using temporary crowns 1.7-1.6, 3.7 and bridge prostheses 1.2-1.1-2.1-2.3-2.5, 3.5-3.3-3.1-4.1-4.2-4.3-4.4-4.5. 3. Make metal-ceramic crowns 1.7-1.6, 3.7 and bridge prostheses 1.2-1.1-2.1-2.3-2.5, 3.5-3.3-3.1-4.1-4.2-4.3-4.4-4.5 (crowns 1.7, 1.6, 1.2, 1.1, 2.4, 2.5, 3.5, 3.7, 4.4 and 4.5 should be prepared for supporting and retaining clasps of partial dentures). 4. Make clasp dentures for the upper and lower jaws with supporting and retaining clasps.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
A		Correct answer: Follow-up examinations once every 6 months to assess: 1. multiple fissure-tubercle contact, 2. marginal fit of fixed dentures, 3. relocation of clasp dentures, 4. hygienic condition of the oral cavity.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Stages of setting (hardening) of plastic
A		Correct answer: 1. first stage – saturation; 2. the second stage is sand; 3. third stage – stretching threads; 4. fourth stage – pasty; 5. fifth stage – rubber-like.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.6

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients

F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient V., 73 years old. Complaints: difficulty chewing food, unsatisfactory fixation of a removable denture on the lower jaw, as well as pain under the denture while eating. Medical history: teeth were extracted due to decay. The last tooth extraction on the upper and lower jaws was performed 3 months ago due to and their mobility. Removable plate dentures were made for both jaws at the local dental clinic. Adaptation to the lower denture never occurred, despite numerous adjustments. Physical examination findings: Deepening of the nasolabial and submental folds, drooping of the corners of the mouth. Decreased height of the lower face. ORAL EXAMINATION:

A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
48	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

The bite is not determined. The height of the lower part of the face is reduced. Condition of the oral mucosa, gums, alveolar processes, and palate: the mucosa is moderately moist and pale pink. On the upper jaw, there is a moderate degree of alveolar process atrophy, moderately pronounced maxillary tubercles, a medium-depth palate, and a pronounced torus. On the lower jaw, there is pronounced atrophy of the alveolar parts in the lateral regions with relative preservation in the anterior region.
The patient refused to use implants.



		
Q	1	Question: Make a preliminary diagnosis and justify it
Q	2	Question: Create an orthopedic treatment plan
Q	3	Question: Specify the phases of adaptation to complete removable dentures
Q	4	Question: List the functional tests to assess the stability of a plate prosthesis in the complete absence of teeth
Q	5	Question: What will the rehabilitation and preventive stage for this patient consist of?

Case Study No.6 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient V., 73 years old. Complaints: difficulty chewing food, unsatisfactory fixation of a removable denture on the lower jaw, as well as pain under the denture while eating. Medical history: teeth were extracted due to decay. The last tooth extraction on the upper and lower jaws was performed 3 months ago due to and their mobility. Removable plate dentures were made for both jaws at the local dental clinic. Adaptation to the lower denture never occurred, despite numerous adjustments. Physical examination findings: Deepening of the nasolabial and submental folds, drooping of the corners of the mouth. Decreased height of the lower face.

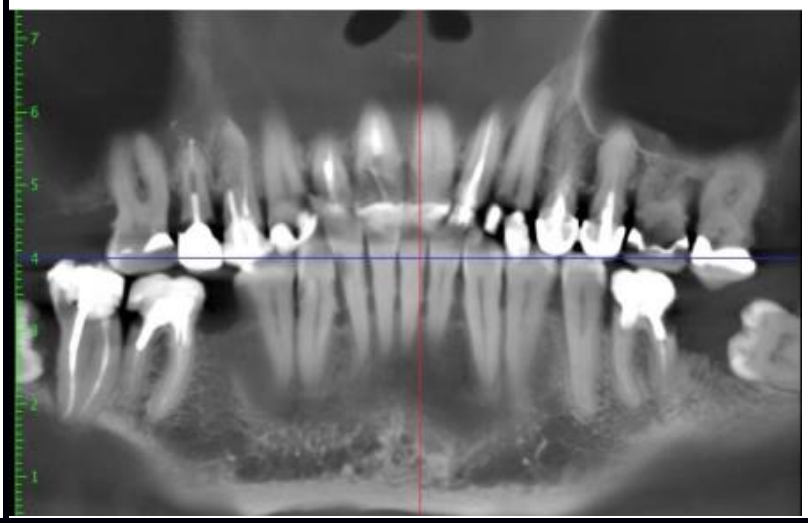
		ORAL EXAMINATION: <table><tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr><tr><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr><tr><td>48</td><td>47</td><td>46</td><td>45</td><td>44</td><td>43</td><td>42</td><td>41</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td></tr><tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr></table> The bite is not determined. The height of the lower part of the face is reduced. Condition of the oral mucosa, gums, alveolar processes, and palate: the mucosa is moderately moist and pale pink. On the upper jaw, there is a moderate degree of alveolar process atrophy, moderately pronounced maxillary tubercles, a medium-depth palate, and a pronounced torus. On the lower jaw, there is pronounced atrophy of the alveolar parts in the lateral regions with relative preservation in the anterior region. The patient refused to use implants.  
Q	1	Question: Make a preliminary diagnosis and justify it
A		Correct answer: 1. K08.1. Tooth loss due to accident, extraction, or localized periodontal disease. Complete secondary edentia of the upper and lower jaws. Based on: 2. Patient complaints. 3. Data from examination of the oral cavity. 4. Conducting functional research methods. 5. X-ray research methods.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Create an orthopedic treatment plan
A		Correct answer: 1. Taking preliminary anatomical impressions with alginate impression materials to produce individual trays for the upper and lower jaws.

		2. Fitting individual spoons and conducting functional tests according to Herbst. 3. Taking final functional impressions. 4. Fitting the bite ridges, determining and fixing the centric relation. Determining the bite height and the physiological resting height. 5. Checking the design of the prosthesis: -inspection of jaw models. - checking the placement in the articulator. - examination in the oral cavity. 6. Application of the prosthesis, correction and adaptation.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Specify the phases of adaptation to complete removable dentures
A		Correct answer: 1. The irritation phase occurs on the day the denture is delivered. This phase is characterized by the patient's fixation on the denture as if it were a foreign body. The irritation manifests itself as increased salivation, a sharply altered diction and phonation, the appearance of a lisp, loss or reduction of chewing power, tense lips and cheeks, and the appearance of a gag reflex. 2. The partial inhibition phase occurs between the first and fifth days after receiving the denture. Characteristic features of this phase include: salivation returns to normal, diction and phonation are restored, soft tissue tension subsides, the gag reflex (if present) disappears, and chewing power begins to recover (the rate of recovery depends on the design of the denture). 3. The phase of complete inhibition occurs between 5 and 33 days after receiving the prosthesis. Characteristic features of this period include: the prosthesis no longer feels like a foreign body, but rather, cannot be without it; complete adaptation of the muscles and ligaments to the restored (or modified) occlusion is observed; functional capacity is maximally restored. Inhibition is reversible, meaning that under certain conditions, the inhibited stimulus becomes active again.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: List the functional tests to assess the stability of a plate prosthesis in the complete absence of teeth
A		Correct answer: The stability of the prosthesis is dynamically tested by the patient himself under the supervision of a doctor: 1. If the prosthesis rises slowly and evenly, the length of the vestibular edges should be reduced in accordance with the areas of adhesion of the masticatory muscles. 2. If the prosthesis rises only in its posterior part, it is necessary to reduce the length of the lingual edge of the prosthesis under the mylohyoid line. 3. If the prosthesis shifts forward, it is necessary to shorten the area behind the molar and the adjacent lingual area. 4. Backward displacement of the prosthesis: - shorten the labial edge of the prosthesis.

		- the front teeth are not positioned in accordance with the neutral muscle zone. - the modeling of the base from the vestibular side is excessively voluminous.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: What will the rehabilitation and preventive stage for this patient consist of?
A		Correct answer: 1. Preliminary neuromuscular correction. 2. Preliminary neuromuscular correction using various devices - mouth guards. 3. The purpose of this method is to interrupt acquired reflexes, rebuild the developed stereotype of muscle movements, and ensure a return to the previous reflexes that determine the true central relationship of the jaws.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

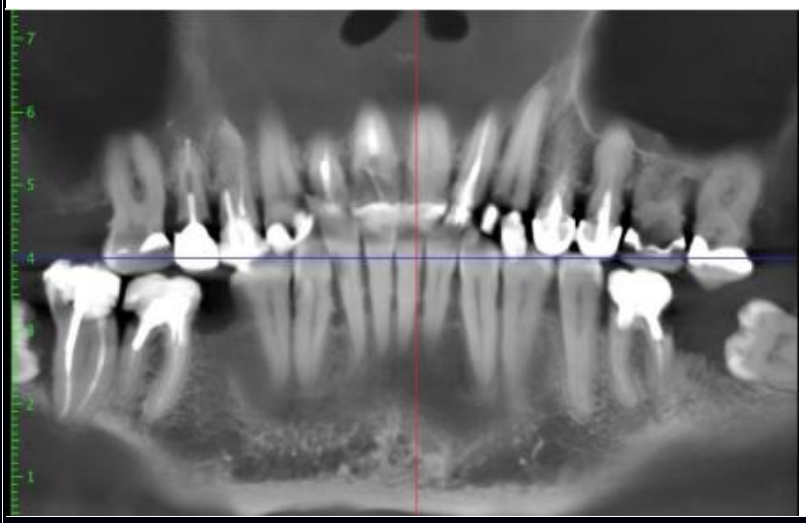
Case Study No.7

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient L., 55, came to the clinic. Complaints: unsatisfactory aesthetics of the front teeth, a fractured crown of the upper left front tooth. Medical history: teeth were extracted due to caries and its complications. The first denture was installed 12 years ago, and the last dental visit was approximately two years ago.

		Physical examination findings, external examination: facial configuration is unchanged. Skin is clear. Mucous membranes are without visible pathological changes. Oral examination: orthognathic occlusion. Combined metal-ceramic crowns 1.1-2.1 and 2.4-2.5 are present in unsatisfactory condition (impaired aesthetics and marginal fit of the crowns). Crowding of the anterior lower jaw teeth. Horizontal position of teeth 3.8 and 4.8. Pathological abrasion of the lower jaw teeth in the anterior region, compensated. Hyperemia and swelling of the gums in the area of all teeth.   
Q	1	Question: Make a diagnosis
Q	2	Question: Specify the manipulations that are advisable to perform on the patient at the preparatory stage (except for implantation)
Q	3	Question: Create an orthopedic treatment plan taking into account the production of metal-ceramic crowns and a clasp denture
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
Q	5	Question: Formulate the indications for the production of veneers

Case Study No.7 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient L., 55, came to the clinic. Complaints: unsatisfactory aesthetics of the front teeth, a fractured crown of the upper left front tooth. Medical history: teeth were extracted due to caries and its complications. The first denture was installed 12 years ago, and the last dental visit was approximately two years ago. Physical examination findings, external examination: facial configuration is unchanged. Skin is clear. Mucous membranes are without visible pathological changes. Oral examination: orthognathic occlusion. Combined metal-ceramic crowns 1.1-2.1 and 2.4-2.5 are present in unsatisfactory condition (impaired aesthetics and marginal fit of the crowns). Crowding of the anterior lower jaw teeth. Horizontal position of teeth 3.8 and 4.8. Pathological abrasion of the lower jaw teeth in the anterior region, compensated. Hyperemia and swelling of the gums in the area of all teeth. 

		 
Q	1	Question: Make a diagnosis
A		Correct answer: 1. Defects in the dental arch of the upper and lower jaw. Kennedy classification of the defect: Upper jaw, grade 2 Lower jaw, grade 3, subclass 1 2. Loss of chewing efficiency according to Kurlyandsky: 22% 3. Teeth 3.8 and 4.8 are horizontally dystopic. 4. Pulpitis of 1.5, 1.4, 1.2, 1.1, 2.1, 2.3, 2.4, 2.5, 3.6, 4.6, 4.7 teeth. 5. Metal-ceramic crowns 1.1-2.1, 2.4, 2.5.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the manipulations that are advisable to perform on the patient at the preparatory stage (except for implantation)
A		Correct answer: 1. Professional oral hygiene and its control. 2. Removal of teeth 3.6 and 4.6 due to root caries and teeth 3.8, 4.8 (positional anomaly). 3. Removal of combined metal-ceramic crowns 1.1-2.1, 2.4-2.5. 4. Consultation and treatment with a periodontist. 5. Revision of canals and treatment of chronic periodontitis of teeth 1.1, 1.2, 1.4, 1.5, 2.2, 2.3, 2.4, 2.5
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Create an orthopedic treatment plan taking into account the production of metal-ceramic crowns and a clasp denture

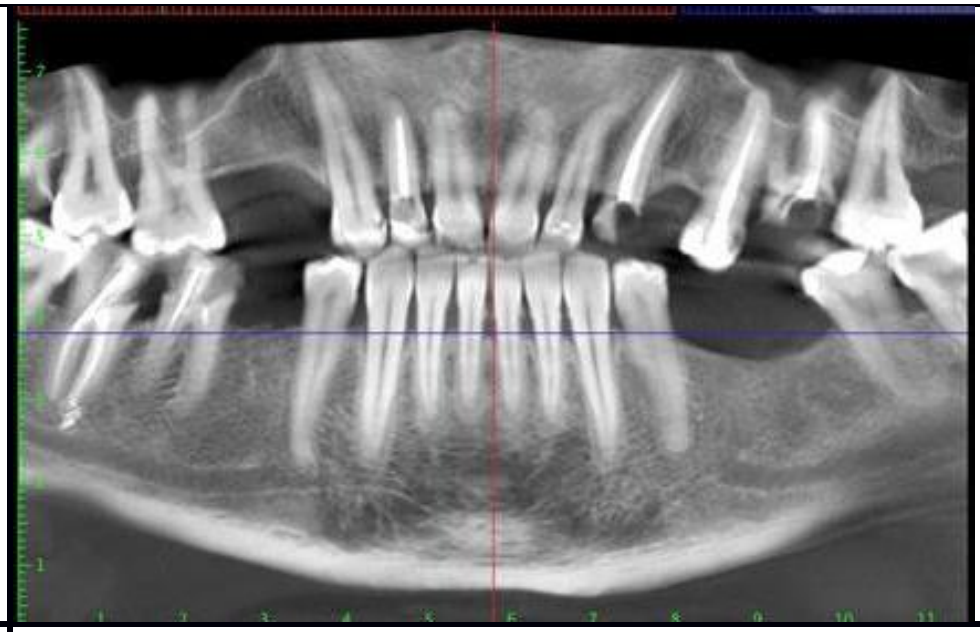
A		Correct answer: 1. Manufacturing of metal-ceramic crowns for teeth of the upper jaw: 1.6, 1.5, 1.4, 1.3, 1.2, 1.1, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7. 2. Manufacturing of metal-ceramic crowns for lower jaw teeth: 4.7. 3. Manufacturing of a partial denture for the lower jaw.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
A		Correct answer: 1. Recommendations for oral hygiene and removable denture care. 2. Follow-up examinations within a month as needed to correct the clasp prosthesis and occlusion. 3. Follow-up examinations once every 6 months to assess and control multiple fissure-tubercle contacts and marginal adhesion of fixed dentures, relining of removable dentures, and the hygienic condition of the oral cavity,
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Formulate the indications for the production of veneers
A		Correct answer: 1. Imperfect amelogenesis and dentinogenesis. 2. Aesthetic dissatisfaction with the shape, position and color of teeth. 3. Fluorosis. 4. Chips in enamel. 5. Wedge-shaped defects.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.8

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis

<table>
<tr><td>F</td><td>A/02.7</td><td>Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies</td></tr>
<tr><td>F</td><td>A/03.7</td><td>Developing, implementing and monitoring the individual rehabilitation programs effectiveness</td></tr>
<tr><td>I</td><td></td><td>Patient A., 45 years old, came to the clinic.
Complaints: difficulty chewing food, unsatisfactory aesthetics.
Medical history: teeth have been extracted throughout life due to caries and its complications. No previous dental restorations have been performed; the last dental visit was approximately two years ago.
Data of objective examination, external examination: Reduction in the height of the lower part of the face by 2 mm.
Dental formula
<table>
<tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr>
<tr><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr>
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<tr><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td><td>A</td></tr>
</table>


Oral examination
Orthognathic bite. Teeth 1.8; 1.5; 1.4; 2.4; 2.8; 3.6; 3.5; 4.5 are missing. Teeth 1.7; 1.6; 1.2; 2.1; 2.7 have caries, and the marginal fit of previously placed fillings is impaired. Wedge-shaped defects of teeth 1.3; 3.4; 4.4.</td></tr>
</table>

		
Q	1	Question: Make a diagnosis
Q	2	Question: Specify the manipulations that are advisable to carry out on the patient during the preparatory stage (excluding implantation)
Q	3	Question: Make an orthopedic treatment plan (excluding implantation)
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
Q	5	Question: Indications for the production of a pin-and-core inlay

Case Study No.8 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient A., 45 years old, came to the clinic. Complaints: difficulty chewing food, unsatisfactory aesthetics.

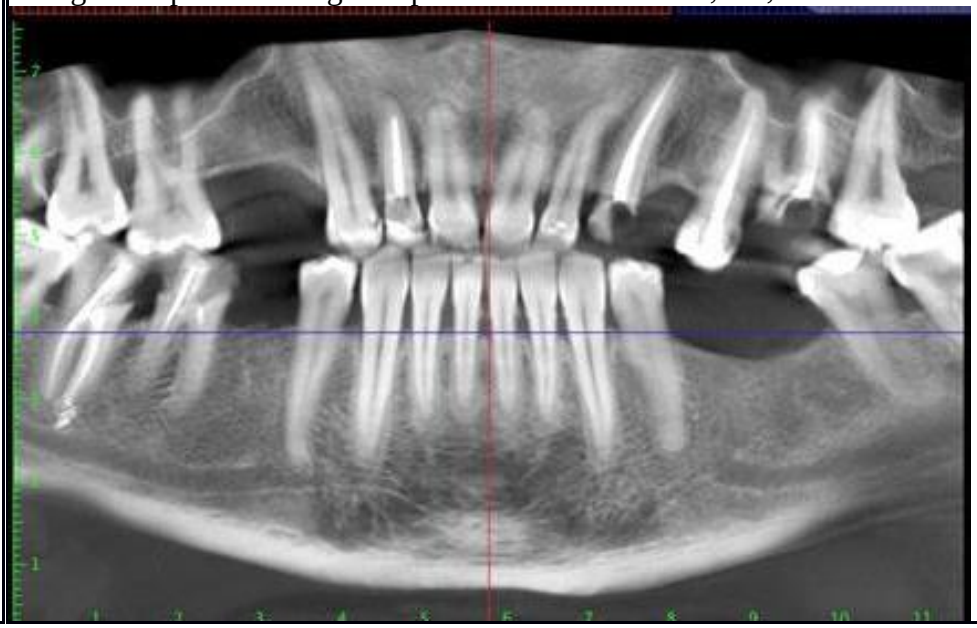
Medical history: teeth have been extracted throughout life due to caries and its complications. No previous dental restorations have been performed; the last dental visit was approximately two years ago.
Data of objective examination, external examination: Reduction in the height of the lower part of the face by 2 mm.
Dental formula

A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
48	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A





Oral examination
Orthognathic bite. Teeth 1.8; 1.5; 1.4; 2.4; 2.8; 3.6; 3.5; 4.5 are missing. Teeth 1.7; 1.6; 1.2; 2.1; 2.7 have caries, and the marginal fit of previously placed fillings is impaired. Wedge-shaped defects of teeth 1.3; 3.4; 4.4.



Q	1	Question: Make a diagnosis
A		Correct answer: 1. Partial secondary absence of teeth (partial secondary adentia) on the upper and lower jaws. 2. 3rd grade according to Kennedy. 3. Pathological abrasion of teeth, grade 1, horizontal, limited. 4. Complete destruction of the crown parts of teeth 2.3, 2.6, partial destruction of the crown parts of teeth 1.2, 4.6, 4.7. 5. Non-carious lesions of teeth. Wedge-shaped defects 1.3, 3.4, 4.4. 6. Impaired chewing function. Impaired appearance.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	2-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the manipulations that are advisable to carry out on the patient during the preparatory stage (excluding implantation)
A		Correct answer: 1. Professional hygiene. 2. Therapeutic preparation of teeth with complete sanitation, in particular endodontic treatment with revision of canals 1.2, 2.3, 2.5, 2.6, 4.6, 4.7. Teeth 1.2 and 2.5 must be pinned. 3. If conservative treatment is not possible, remove 2.6, 4.6.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Make an orthopedic treatment plan (excluding implantation)
A		Correct answer: 1. Manufacturing of pin root inlays 2.3, 2.6, 4.6, 4.7. 2. Single crowns 1.7, 1.2, 2.6, 2.7. 3. Bridge prostheses 1.6-1.3, 2.3-2.5, 3.4-3.7, 4.4-4.6-4.7. 4. Restoration of the frontal group of teeth of the lower jaw is possible directly or with the help of veneers. 5. Manufacturing of a protective mouth guard (preferably for the lower jaw) for night positioning.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: What will the rehabilitation and preventive stage for this patient consist of?
A		Correct answer: 1. Restoration of stumps of completely destroyed crown parts of the corresponding teeth. 2. Restoration of the occlusal height of the teeth of the upper and lower jaws by 2 mm using temporary orthopedic structures. 3. Restoration of the frontal group of teeth of the upper jaw from the palatal surface and along the cutting edge, as well as the frontal group of lower teeth from the vestibular surface and along the cutting edge to the height of separation (2 mm) until they are brought into correct occlusal relationships.

		4. Restoring the integrity of dental arches using fixed orthopedic structures. 5. Manufacturing of a protective mouth guard.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Indications for the production of a pin-and-core inlay
A		Correct answer: 1. Destruction of a significant part of the crown of a natural tooth due to caries or another pathological process. 2. Traumatic fracture of a large part of the tooth. 3. Anomalies in the position of the front teeth in adults when it is impossible to correct them orthodontically. 4. Pathological abrasion of hard dental tissues. 5. Teeth tilt of more than 15 degrees with secondary deformations of the dental arches. 6. Short crowns of natural teeth (microdontia).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed

4. Assessment criteria for learning outcomes

"Very good" grade is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships.

"Good" is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes.

"Satisfactory" is given to a student who possesses the bulk of knowledge on the subject; has difficulties answering questions with no outside help, uses imprecise wording; makes mistakes in substantial number of their answers.

"Unsatisfactory" is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions.

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Appendix 1

Practical Skills Assessment Checklist

Practical Skill Name: Removal of an artificial crown

C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies

	Action	Performed	Not Performed
1.	Use of personal protective equipment, selection of tools for performing the task (medical gown, cap, change of shoes, medical gloves, dental mirror, forceps, probe, tray, metal spatula, burs for sawing crowns)	1 point	-1 point
2.	Conducting a survey (complaints, medical history, informed voluntary consent of the patient)	1 point	-1 point
3.	Examination of teeth, artificial crowns, dental arches, and bite. Determination of tooth mobility by probing or palpation, assessment of periodontal condition (probing of the gingival groove and pocket), detection of gingival recession, and reduction in the height of the interdental septa. Palpation of the gingival mucosa and the mucosal fold	1 point	-1 point
4.	Evaluation of orthopantomogram, panoramic and targeted dental radiographs: presence of periapical changes, changes in the cortical plate, narrowing or widening of the periodontal space, defects in the marginal fit of artificial crowns	1 point	-1 point
5.	Formulating a diagnosis, reasons for removing the artificial crown, filling out the medical record	1 point	-1 point
6.	Sawing the vestibular wall of the artificial crown using a wheel-shaped or cylindrical bur with a rounded tip made of carbide, or a special small-diameter vulcanite disc. The incision is made through to the cement layer and extends across the entire vestibular surface, extending to the incisal or chewing surface	1 point	-1 point
7.	Spread the edges of the crown in the incision area on the vestibular surface using a spatula or a large excavator. If there is no stable support at the lingual edge of the artificial crown, make a small horizontal notch on the lingual surface of the crown approximately 2 mm from the edge (being careful not to perforate the crown), where the tip of the instrument will rest	1 point	-1 point
8.	Assemble the crown removal tool (connect the device to the hook-shaped tip), set the vibration intensity to low (there are three levels in total)	1 point	-1 point
9.	Place the tip of the crown removal instrument on the lingual edge of the crown or on the horizontal notch and secure it in place. Press the tip against the crown, holding it in place with your finger. Hold the instrument with your other hand, avoiding contact with the opposing teeth. Then release the instrument lever, which will cause a slight, brief jolt (first attempt)	1 point	-1 point
10.	Increase the device's lever intensity to medium and repeat the crown removal procedure again (2nd attempt). Increase the device's lever intensity to maximum and repeat again (3rd attempt). Set the vibration intensity to low. Place the tip of the instrument on the buccal edge of the crown and secure it in place. Press the tip against the crown and hold it in place with your finger. Hold the device with your other hand, avoiding contact between the instrument and the	1 point	-1 point

	opposing teeth. Then release the instrument's lever. Remove the crown from behind the mouth with forceps		
	Total		

Assessment criteria:
"Pass" - at least 75% of required actions performed
"Fail" - 74% of required actions or less performed

Practical Skills Assessment Checklist

Practical Skill Name: Examination of a patient with partial tooth loss, defects in hard tooth tissue

C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies

	Action	Performed	Not Performed
1.	Use of personal protective equipment, selection of tools for performing the task (medical gown, cap, change of shoes, medical gloves, dental mirror, forceps, probe, tray)	1 point	-1 point
2.	Conducting patient interview (complaints, medical history, informed voluntary consent of the patient to obtain data on concomitant and past diseases, prosthetics, oral sanitation)	1 point	-1 point
3.	Examination (palpation of the soft tissues of the face and bone base, determination of the height of the lower part of the face in a state of physiological rest and occlusal height, determination of the type of bite)	1 point	-1 point
4.	Palpation of the temporomandibular joint (determination of symmetry, smoothness of movements, deviation of the lower jaw)	1 point	-1 point
5.	Determination of the degree of tooth mobility by probing or palpation, determination of the periodontal condition (probing of the periodontal groove, pocket), detection of gum recession, reduction in the height of the interdental septa.	1 point	-1 point
6.	Determination of areas of mobile and immobile mucous membrane, determination of compliance and pain sensitivity of the oral mucosa by palpation	1 point	-1 point
7.	Determination of bite, defects of dental arches, defects of teeth - the degree of destruction of hard tissues of chewing teeth using the index of destruction of the occlusal surface of the tooth (IDOTS according to V.Yu. Milikevich), the degree and uniformity (unevenness) of atrophy of the alveolar processes, exostoses, palatine torus	1 point	-1 point
8.	Evaluation of orthopantomogram, panoramic and targeted radiographs: presence of periapical changes, changes in the cortical plate, narrowing or widening of the periodontal space	1 point	-1 point
9.	Filling out a medical card	1 point	-1 point
10.	Formulating a diagnosis	1 point	-1 point
	Total		

Assessment criteria:
"Pass" - at least 75% of required actions performed
"Fail" - 74% of required actions or less performed

Practical Skills Assessment Checklist

Practical Skill Name: Making a temporary crown and fixing it

C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies

	Action	Performed	Not Performed
1.	Use of personal protective equipment, selection of tools for performing the task (medical gown, cap, change of shoes, medical gloves, dental mirror, forceps, probe, tray, dental burs for preparing teeth, plastic for temporary crowns included, articulating paper, polishing head, dental cement for temporary fixation of crowns).	1 point	-1 point
2.	Conducting a survey (complaints, medical history, informed voluntary consent of the patient).	1 point	-1 point
3.	Examination of teeth, artificial crowns, dental arches, and bite. Determination of tooth mobility by probing or palpation, assessment of periodontal condition (probing of the gingival groove and pocket), detection of gingival recession, and reduction in the height of the interdental septa. Palpation of the gingival mucosa and the mucosal fold.	1 point	-1 point
4.	Evaluation of orthopantomogram, panoramic and targeted dental radiographs: presence of periapical changes, changes in the cortical plate, narrowing or widening of the periodontal space, defects in the marginal fit of artificial crowns.	1 point	-1 point
5.	Formulating a diagnosis, treatment plan, filling out a medical record.	1 point	-1 point
6.	Taking an impression of the tooth before preparation and adjacent teeth using softened silicone material (1 layer). After the silicone material has hardened, the impression is removed from the teeth (the impression must be prepared in advance).	1 point	-1 point
7.	The tooth is prepared for a cast crown (the tooth must be prepared in advance), and an insulating material is applied.	1 point	-1 point
8.	The plastic for the temporary crowns is selected, and the color of the plastic for the temporary crown is determined by the color chart. A plastic mass of the chosen color is prepared and, in the paste-like state, poured into a silicone impression of the tooth, obtained before preparation for the cast crown.	1 point	-1 point
9.	A silicone impression with a plastic mass is placed on the teeth and pressed into place. After the plastic has hardened, the impression is removed from the dentition. The temporary plastic crown is removed from the tooth. The temporary crown is fitted, ground, and polished.	1 point	-1 point
10.	A temporary plastic crown is fixed with dental cement for temporary fixation.	1 point	-1 point
	Total		

Assessment criteria:

"Pass" - at least 75% of required actions performed

"Fail" - 74% of required actions or less performed