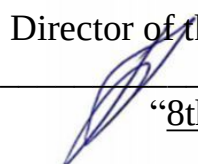


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Информация о владельце:
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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY

Director of the Institute of Dentistry
 / Pervov Yu.Yu./
“8th” of June 2026

COLLECTION OF ASSESSMENT TOOLS

B1.V.EC.04.02 Functional diagnostics of temporomandibular joint disorders 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	Interview Questions
		Tests
		Mini-Case Studies
		Checklists
2	Interim assessment	Tests

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

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	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
I		ANSWER THE QUESTIONS
		1. Definition of gnathology. Goals and objectives. 2. The main elements of the dental system and their function. The concept of "dental harmony". 3. Devices that reproduce movements of the lower jaw. 4. Anatomical structure of the TMJ. 5. Biomechanics of the lower jaw. 6. Classification of TMJ diseases. 7. Electromyography. Axiography. Arcusdigma. Masticationography. 8. Registration of vertical movements of the lower jaw. Occlusiography. T-scan. 9. Etiology, pathogenesis, clinical picture of dysfunctional TMJ syndromes. Differential diagnostics.

		10. Etiology, pathogenesis, clinical picture of arthrosis and arthritis of the TMJ. Differential diagnostics. 11. Selective grinding methods. 12. Types of mouth guards. Types of orthopedic devices used to treat patients with temporomandibular joint disorders. 13. Occlusal concepts. Occlusiography techniques. 14. Characteristics of selective grinding methods. 15. Occlusal correction using inlays, veneers, crowns 16. Occlusal splints. Features of prosthetic fabrication taking into account the restoration and maintenance of functional occlusion. 17. Preparation of teeth taking into account the preservation of central occlusion. 18. Principles of placing artificial teeth in case of occlusion disorders 19. Methods of pain relief for the masticatory muscles. Techniques for repositioning the articular disc and joint. 20. Methods of complex treatment of TMJ arthritis. 21. Immobilization of the TMJ. 22. Orthopedic treatment for arthritis and osteoarthritis. 23. Massage and myogymnastics. 24. Errors in diagnosing the disease. 25. Errors and complications in occlusal correction. 26. Errors and complications in orthodontic treatment. 27. Errors and complications during anesthesia of the masticatory muscles and joint reduction. 28. Errors and complications in the treatment of TMJ arthritis.
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Assessment criteria

"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.

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	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
I		ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)
		1. Selective grinding of teeth in TMJ pathology is carried out with the aim of

		a) reduction of occlusal height b) normalization of functional occlusion c) achieving smooth movements of the lower jaw +d) options b) and c) are correct 2. Auscultation of the TMJ in arthrosis and chronic arthritis reveals a) uniform, soft, sliding sounds of rubbing surfaces +b) crepitus c) absence of joint noise d) options a) and c) are correct 3. Occlusal splints are used for the following purposes a) normalize the function of the masticatory muscles b) protect joint tissues from existing occlusal disorders c) normalize the position of the articular heads +d) options a), b) and c) are correct 4. To diagnose TMJ disease the following methods are used a) measuring the height of the lower part of the face b) X-ray examination c) analysis of functional occlusion +d) options b) and c) are correct 5. Selective grinding of teeth in case of TMJ pathology is carried out for the purpose of a) reducing the load on the periodontium b) achieving smooth movements of the lower jaw c) normalization of functional occlusion +d) options b) and c) are correct 6. Factors contributing to the occurrence and development of arthrosis a) underdevelopment of the articular head on one side b) violation of functional occlusion c) congenital shortening of the branch of the lower jaw +d) options a), b) and c) are correct
I		ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)
		1. Primary bone injuries and diseases of the temporomandibular joint include 1) habitual dislocation +2) osteoarthritis +3) deforming juvenile arthrosis 4) pain syndrome of temporomandibular joint dysfunction 2. In case of secondary deforming osteoarthritis of the temporomandibular joint on both sides, a five-year-old child is shown +1) osteotomy of the branches of the lower jaw with subsequent bone traction according to Limberg 2) osteotomy of the branches of the lower jaw with one-stage bone grafting 3) mechanotherapy 4) sling bandage 5) physiotherapy

		3. Functional diseases of the temporomandibular joint are typical for children with the following body types 1) normosthenic 2) hypersthenic +3) asthenic 4. Birth trauma is the most common cause 1) acute arthritis of the temporomandibular joint +2) secondary deforming osteoarthritis 3) chronic arthritis 4) dislocation of the temporomandibular joint 5) aplasia of the condylar process 5. Joint space on radiograph in chronic arthritis of the temporomandibular joint 1) expanded uniformly 2) unevenly expanded 3) tapered evenly +4) narrowed unevenly 5) not changed 6. A wide joint space, up to a complete absence of articulation of the joint surfaces, hypo- or aplasia of the condylar process are radiological signs 1) acute arthritis of the temporomandibular joint +2) congenital joint pathology 3) habitual dislocation 4) secondary deforming osteoarthritis 5) bone ankylosis 7. The cause of facial asymmetry in secondary deforming osteoarthritis of the temporomandibular joint on one side is 1) facial nerve paresis 2) intermuscular hematoma +3) underdevelopment of half of the lower jaw 4) overdeveloped half of the lower jaw 5) hemihypertrophy of the masticatory muscle 8. For secondary deforming osteoarthritis of the temporomandibular joint on one side, a five-year-old child is shown +1) osteotomy of the mandibular branch with subsequent bone traction according to Limberg 2) osteotomy of the mandibular branch with simultaneous bone grafting 3) sling bandage 4) mechanotherapy 5) physiotherapy 9. Primary bone injuries and diseases of the temporomandibular joint include 1) pain dysfunction syndrome +2) habitual dislocation 3) congenital joint pathology 4) acute arthritis +5) deforming juvenile arthrosis
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		10. The corner of the mouth is lowered on the side opposite the painful joint, with +1) acute arthritis of the temporomandibular joint 2) secondary deforming osteoarthritis 3) chronic arthritis 4) habitual dislocation of the joint
I		ANSWER LEVEL 3 TEST QUESTIONS (MATCHING QUESTIONS)
		1. Match the Jenkins supracontact class and its characteristic Jenkins supracontacts: 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 type of periodontal fibers and its 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 and its 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 B) synthesis of heparin and histamine D) source of epithelialization of chronic apical processes D) production of antibodies E) young bone tissue cells (15-20 µm in diameter) that synthesize the intercellular substance – the matrix 4. Match the periodontal function and 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 B) fibro-osteo-cementoblasts C) a wide network of blood, lymphatic and nerve endings D) the ability of the gum to keratinize, the formation of the gingival groove E) uniform redistribution of the load on the tooth and alveolar tissue during chewing
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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 **B1.V.EC.04.02 Functional diagnostics of temporomandibular joint disorders** course

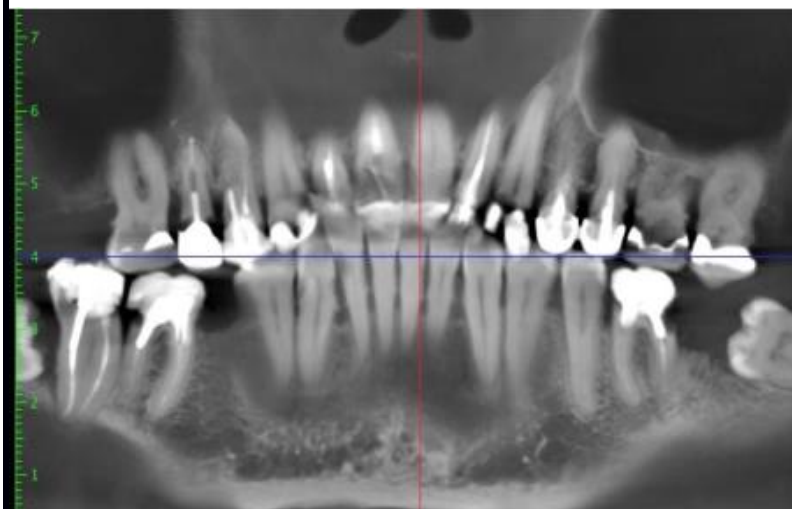
Case Study No. 1

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.03	Dentistry for foreign students (English-language program)
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
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.

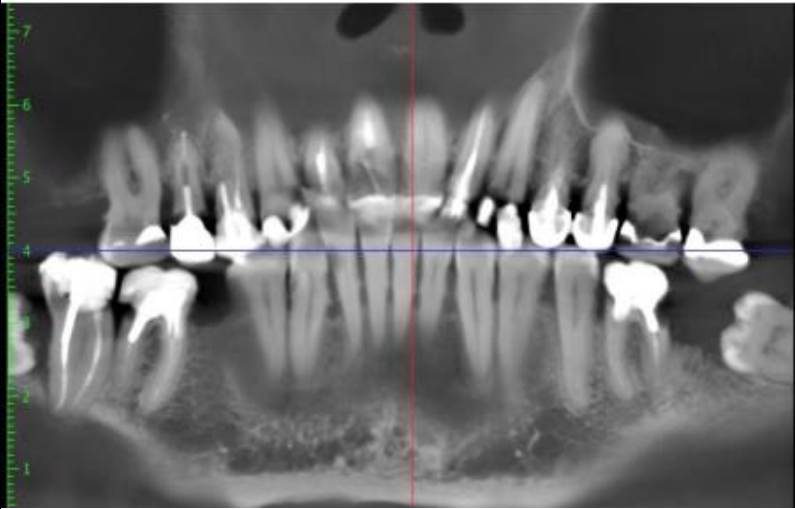


Q	1	Question: Make a diagnosis
Q	2	Question: Specify the manipulations that are advisable to perform on the patient at the preparatory stage (except for implantation)
Q	3	Question:

		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.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	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
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/Satisfactory	4-5 descriptors of the correct answer have been listed
		1-3 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 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/Satisfactory	4-5 descriptors of the correct answer have been listed
		3-4 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/Satisfactory	2-3 descriptors of the correct answer have been listed 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. 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/Satisfactory	2 descriptors of the correct answer have been listed 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/Satisfactory	4-5 descriptors of the correct answer have been listed 1-3 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

4. Assessment criteria for learning outcomes

"Pass" is given to a student who has shown a sufficiently strong knowledge of the basic concepts of the subject; is able to complete specific practical tasks outlined in the program with no outside help, use recommended reference material, and correctly evaluate the results.

"Fail" is given to a student who has significant gaps in knowledge of the basic concepts of the subject, is not able reach the correct solution to a specific practical task outlined in the curriculum even with outside help.

Practical Skills Assessment Checklist

Practical Skill Name: Patient examination

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, tweezers, probe, tray)		1 point	-1 point
2.	Conducting a survey (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, dental arch defects, dental defects - the degree of destruction of hard tissues of chewing teeth using the index of destruction of the occlusal surface of the tooth (IODZ 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 and making recommendations		1 point	-1 point
	Total		10 points	

Assessment criteria:

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

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