

**Federal State Budgetary Educational Institution North Ossetian State Medical  
Academy of the Ministry of Health of the Russian Federation**

**Department of Dentistry No. 1**

**APPROVED**

By the Central Coordinating  
Educational and Methodological Council  
"May 23, 2023 No. 5

**FOND OF ESTIMATED FUNDS**

in the discipline **Modern diagnostic methods in orthopedic dentistry**  
basic professional educational program of higher education –  
specialty programs in the specialty 31.05.03 Dentistry, approved by the Ministry of  
Health of the Russian Federation. 24.05.2023 г.

For students specialty 31.05.03 Dentistry

Reviewed and approved at the meeting of the  
Department on May 19, 2023, Protocol No. 9  
Head of the Department MD,



signature

Associate Professor  
M. G. Dzgoeva

**Vladikavkaz 2023г.**

## **STRUCTURE OF EVALUATION MATERIALS**

1. Title page
2. Structure of evaluation materials
3. Reviews of evaluation materials
4. Passport of evaluation materials
5. Set of evaluation materials:
  - questions for the module
  - questions for the test
  - exam questions
  - a bank of situational tasks/practical tasks/business games
  - standards of test tasks (with title page and table of contents)
  - examination tickets/test tickets

FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER  
EDUCATION "NORTH OSSETIAN STATE MEDICAL ACADEMY" OF THE  
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

REVIEW  
of evaluation materials

in the discipline Modern diagnostic methods in orthopedic dentistry  
For 5 st year students in the specialty 31.05.03 Dentistry

The evaluation materials were compiled at the Department of Dentistry No. 1 on the basis of the work program of the discipline approved on 05/24/2023 and meet the requirements of the Federal State Educational Standard for the specialty 31.05.03 Dentistry, approved by the Ministry of Education and Science of the Russian Federation on 08/19/2020, No. 984.

Evaluation materials include a bank of test tasks, exam tickets (test tickets).

The bank of test tasks includes the following elements: test tasks, variants of test tasks, answer templates. All tasks correspond to the work program of the discipline Modern diagnostic methods in orthopedic dentistry and cover all its sections. The complexity of the tasks varies. The number of tasks for each section of the discipline is sufficient to carry out knowledge control and eliminates the repeated repetition of the same question in different versions. The bank contains answers to all test tasks and tasks.

The number of examination tickets is 35, which is enough for the exam and excludes the repeated use of the same ticket during the exam in one academic group on the same day. Examination tickets are made on the forms of a single sample in a standard form, on paper of the same color and quality. The exam ticket includes 4 questions. The wording of the questions coincides with the wording of the list of questions submitted for the exam. The content of the questions of one ticket relates to various sections of the program, which allows you to more fully cover the material of the discipline.

The complexity of the questions in the examination tickets is evenly distributed.

There are no comments to the reviewed evaluation materials.

In general, evaluation materials on the discipline discipline Modern diagnostic methods in orthopedic dentistry contribute to a qualitative assessment of the level of students' proficiency in general cultural and professional competencies.

Peer-reviewed evaluation materials can be recommended for use for intermediate certification at the Faculty of Dentistry for 5 st year students.

Reviewer:

Chairman of the Central Committee of Dental  
Disciplines with the subcommittee on the  
examination of evaluation tools, MD,  
Associate Professor



G.V. Toboev

ПОДПИСЬ

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Reviewer:

The chief doctor of the dental  
polyclinic of SOGU, PhD



D.Z. Choniashvili

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ПОДПИСЬ

**Passport of the assessment fund for the discipline  
Modern diagnostic methods in orthopedic dentistry**

<b>n /</b>	<b>a Name of the supervised section (topic)of the discipline / module</b>	<b>Code of the formed competence (stage)</b>	<b>Name of the evaluation tool</b>
1	2	3	4
<b>Type of control</b>	<b>Intermediate</b>		
<b>1</b>	Innovative methods of examination, diagnostics, in orthopedic dentistry, morphological research methods	PC2	Standards of test tasks; tickets for the test
<b>2</b>	Innovative methods of examination, diagnostics, in orthopedic dentistry logii.	PC5	Standards of test tasks; test tickets
<b>3</b>	Physiological aspects of blood flow microcirculation and methods of their investigation	PC6	Standards of test tasks; test tickets
<b>4</b>	Innovative methods of removable prosthetics	PC 19	Standards of test tasks; test tickets

## Table of contents

#	Name of the supervised section (topic) of the discipline / module	Number of tests (total)	Code of the competencies being formed	page from __ to __
1	2	3	4	5
<b>Type of control</b>	<b>Intermediate</b>			
1.	Innovative methods of examination, diagnosis, in orthopedic dentistry, morphological research methods	10	PK2	p. 7-8
2.	Innovative methods of examination, diagnosis, in orthopedic dentistry logii.	10	PK5	p. 8-9
3.	Physiological aspects of blood flow microcirculation and methods of their investigation	10	PK6	p. 10-12
4.	Innovative methods of removable prosthetics	10	PK 19	p. 12-14

## Section 1.

1. The main method of examination of the patient in the clinic of orthopedic dentistry is:
  - A. Clinical;
  - B. Radiological;
  - C. Biometric;
  - D. Rheographic;
  - E. Measurement of diagnostic models of the jaws.
2. The best information about the condition of the periapical tissues of all teeth of the upper and lower jaw is provided by the following method of X-ray examination:
  - A. Dental radiography;
  - B. Panoramic radiography;
  - With. Orthopantomography;
  - D. Telerentgenography;
  - E. Roentgenkinematografiya.
3. The method of X-ray diagnostics, which provides comprehensive information about the condition of periodontal tissues, is:
  - A. Dental radiography;
  - B. Panoramic radiography;
  - With. Orthopantomography;
  - D. Telerentgenography;
  - E. Roentgenkinematografiya.
4. V.A. Ponomareva highlights:
  - A. Three forms of dental deformities;
  - B. Two forms of dentoalveolar deformities;
  - C. Four forms of dental deformities;
  - D. One form of dental deformity.
  - E. Five forms of dental deformities.
5. Periodontal fissure in teeth devoid of antagonists:
  - A. Expanded.
  - B. Narrowed down;
  - C. Not changed.
6. To diagnose diseases of the temporomandibular joint, the following methods are used:
  - A. Measuring the height of the lower face;
  - B. Analysis of functional occlusion;
  - C. X-ray examination;
  - D. Electromyographic study.
7. Rheography of the temporomandibular joint area is used to determine:
  - A. Contractility of the muscles of the maxillofacial region;
  - B. Hemodynamics;
  - C. Movement of the mandibular heads;
  - D. Dimensions of the elements of the temporomandibular joint.
8. Name the types of occlusal curves:
  - A. Sagittal;
  - B. Transversal;
  - C. Sagittal and transversal.

9. X-ray picture of chronic arthritis of the temporomandibular joint:

- A. Expansion of the joint gap;
- B. Narrowing of the articular fissure;
- C. The contours of the articular head are indistinct.
- D. Deformity of the bone elements of the joint.

10. X-ray picture of osteoarthritis of the temporomandibular joint:

- A. Narrowing of the articular fissure;
- B. Absence of an articular gap;
- C. Expansion of the joint gap;
- D. Changes in the shape of bone elements.

## Section 2

1. To detect supraocclusal contacts in the posterior contact position, the lower jaw is displaced:

- A. Distally;
- B. In the right lateral occlusion;
- With. In the left lateral occlusion;
- D. In the anterior lateral occlusion;
- E. By opening the mouth within 1-2 cm.

2. With painful palpation of the masticatory muscles and the absence of radiological changes in the temporomandibular joint, the following diagnosis is possible:

- A. Musculoskeletal dysfunction;
- B. Arthritis;
- C. Osteoarthritis.
- D. Osteoma of the articular process of the lower jaw;
- E. Mandibular fracture.

3. The shape of dentition in permanent bite:

- A. Semicircle.
- B. Trapezoid;
- C. Triangle.
- D. The upper one is a half - ellipse, and the lower one is a parabola.

4. The absence of a decrease in the height of the lower third of the face with a compensated form of pathological tooth erasure is due to:

- A. Displacement of the lower jaw;
- B. Growth of the alveolar process of the jaws;
- C. Changes in the relationship of elements of the temporomandibular joint;
- D. Extension of teeth;
- E. A dissection error.

5. At the dentist's appointment, the patient had a sharp headache, dizziness, noise and ringing in the ears, increased blood pressure, nosebleeds, nausea, vomiting, "grid in front of the eyes". Specify the correct diagnosis:

- A. Hypertensive crisis;
- B. Loss of consciousness;
- C. Anaphylactic shock;
- D. Clinical death;
- E. Collapse.



6. Patient G., 48 years old, complains of missing teeth in the upper jaw, a complication of chewing food. 18, 15, 13, 11, 22, 25, 27, 28 teeth are missing. Please indicate the Kennedy maxillary dentition defect:

- A. II class 5 division;
- B. III class, division 5;
- C. Class I, subclass 4.
- D. liClass II, subclass 4.
- E. liClass II, division 6.

7. Patient N., 57 years old, complains of missing teeth. The bite is not fixed. 18, 17, 16, 15, 14, 24, 25, 26, 27, 28. 31, 32, 33, 41, 42, 43 teeth are missing. Determine the group of defects in the dentition, taking into account the teeth of antagonists according a.Иto A. I. Betelman:

- A. The first group;
- B. The third group;
- C. The second group;
- D. The fourth group.

8. Patient D., 40 years old, was fitted with bridge-shaped dentures. Determine the period of adaptation to them, if when determining the chewing efficiency according to Rubinov, the following chewing time of 0.8 g of Nut before swallowing is obtained:

- A. On the 12th day-14 seconds.
- B. On the 3rd day-25 seconds.
- With. On the day of receiving prosthetics - 30 seconds.
- D. On the 6th day - 20 seconds.
- E. On the 9th day-18 seconds.

9. A 48-year-old man complains of pain when biting in the area of the 25th tooth, which appeared after covering it with a crown. Objectively: 25 under the crown, percussion is painful, premature contact with antagonists. What is the cause of the patient's complaints?

- A. Premature occlusal contact;
- B. The long edge of the crown;
- With. Complication of caries;
- D. Cementing the crown;
- E. Trigeminal neuritis.

10. Patient K., 54 years old, complains of a burning sensation in the mucous membrane of the prosthetic bed, dry mouth. Objectively: there are complete removable dentures in the oral cavity. The patient was diagnosed with allergic stomatitis. What clinical picture does a blood test confirm this diagnosis?

- A. Leukopenia, lymphocytosis, monocytosis;
- B. Leukocytosis, erythropenia, increased ESR;
- C. Leukopenia, monocytosis, increased ESR;
- D. Leukocytosis, lymphocytosis, monocytosis;
- E. Erythropenia, monocytosis, increased ESR.

### Section 3.

1. A 44-year-old woman applied for dental prosthetics. Objectively: 17-14, 12, 25, 26 are missing. What is the Kennedy class of dental defects кеннеди in this patient?

- A. Class III, division 2.
- B. III class, 1 subclass;
- C. Class III, Division 3;
- D. Class II, subclass 2.
- E. II class, 4 division.

2. A 45-year-old patient went to the clinic for prosthetics. Objectively: none 47, 46, 45, 35, 36, 37 teeth. There is a vertical movement of 17, 16, 26, and 27 teeth, the alveolar process is enlarged, and the necks of the teeth are not exposed. When the dentition is closed, the distance between the occlusal surfaces of the teeth and the alveolar process is about 3 mm. Determine the most rational method of treating secondary deformity in this patient:

- A. Depulping and soshlifovyvaniya;
- B. Surgical;
- C. The method of grinding teeth;
- D. Hardware-surgical method;
- E. The method of deocclusion.

3. At an appointment with an orthopedic doctor, during the preparation of a tooth, the patient began to have an attack of epilepsy. The attack was stopped. What mistake did the doctor make?

- A. Did not find out the life history;
- B. Did not apply premedication.
- C. Violated the rules of preparation;
- D. Did not find out the medical history of the disease;
- E. Did not perform anesthesia.

4. A 47-year-old patient went to the clinic for prosthetics. Objectively: 44, 45 teeth are missing, 46, 47 teeth are mobile of the first degree. What examination method should be used to select a rational bridge prosthesis design:

- A. Odontoparodontogram;
- B. Agapov's method;
- C. Gnathodynamometry;
- D. The Oxman method.
- E. Masticationography.

5. A 58-year-old patient applied for prosthetics. Objectively: there are 23 teeth present, stable, intact. The alveolar ridge is atrophied, and the palate is flat. It is planned to manufacture a removable prosthesis. What are the doctor's tactics for the 23rd tooth?

- A. Delete.
- B. Leave it.
- C. Depulpate;
- D. Cover it with a crown.
- E. Make a telescopic crown.

6. A 42-year-old patient complained of burning tongue, taste disorders, and dry mouth. He suffers from chronic cholecystitis. Objectively: the oral cavity is sanitized. 36, 46 amalgam fillings. Golden bridge-like prosthesis with supporting elements 23, 26. Single crowns with mzp 45, 44, when touching the ironer to which pain is determined. What kind of research should be done first to establish a diagnosis?

- A. Skin tests;
- B. Determination of saliva pH;
- C. Determination of traumatic occlusion;
- D. Measurement of oral microcurrents;
- E. Determination of taste sensitivity.

7. A 35-year-old patient with periodontal tissue disease sought orthopedic help. Objectively: the teeth on the upper and lower jaws of the first degree of mobility, have well-defined bumps. The doctor recommends grinding your teeth. What is the most objective method for determining the topography of the surface treatment?

- A. Gnathodynamometry;
- B. Radiograph;
- C. Chewing test;
- D. Occlusogram.
- E. Mastication chart.

8. A 23-year-old patient consulted an orthopedic dentist about an aesthetic defect. Objectively: the teeth of the lower and upper jaws have a slope towards the oral cavity, close together tightly. What kind of bite is this?

- A. Glubokiy;
- B. Orthognathic;  
With. Direct;
- D. Opisthognathic;
- E. Prognostic.

9. A 25-year-old woman complains of difficulty eating due to the lack of teeth in the lower jaw on the left. Objectively: a slight increase in the alveolar process in the area of 24, 25, the teeth are in infra-occlusion by 1/3 of the height of the crowns. The distance between the occlusal surface 24, 25 and the alveolar crest of the missing mandible 34, 35 is reduced. What is the most likely diagnosis?

- A. Kennedy grade 3 mandibular dentition defect complicated by the Popov-Hodon phenomenon;
- B. Partial secondary adentia complicated by traumatic syndrome;
- C. Partial secondary adentia, reduced bite;
- D. Generalized pathological erasure of the upper jaw teeth;
- E. Kennedy grade 3 lower jaw dentition defect.

10. A 25-year-old patient complains of a tooth crown defect, aesthetic and phonetic deficiencies. Objectively: the bite is orthognathic. All teeth are intact, except 21, which has a three-plane destruction of the crown. Probing the cavity is painless. Percussion is painless. The tooth is stable. What is the most appropriate orthopedic treatment plan:

- A. Tooth extraction;
- B. Treatment with the manufacture of an aesthetic crown;
- C. Treatment with the manufacture of a metal crown;
- D. Therapeutic treatment;
- E. Treatment with tab manufacturing.

#### **Section 4.**

1. Patient b.64 years old was sitting near the dentist's office waiting for her turn. Suddenly, she fell, her breathing became hoarse, her arms and legs twitched convulsively, her face and neck became cyanotic, her pupils dilated, and there was no reaction to light.

Blood pressure and pulse are not detected. Heart tones are not tapped. Involuntary urination was noted. What condition is characterized by these symptoms?

- A. Collapse;
- B. Epilepsy;
- C. Clinical death;
- D. Shock;
- E. Coma.

2. During dental prosthetics, a 52-year-old female patient who suffers from hypertension (she was in the orthopedic chair for more than an hour, was tired, nervous when she went to the doctor, and did not take antihypertensive drugs) complained of a headache. The doctor decided that he would finish fitting the prostheses in 15 minutes. He asked the patient to be patient and continued the manipulation. After some time, the patient developed dizziness, nausea, aching pain behind the sternum, and her vision worsened. The intensity of the headache increased, and vomiting appeared. Pulse 64 beats per minute, rhythmic, tense, blood pressure 220/150 mm Hg. Heart sounds are loud, systolic murmur above the apex of the heart, accent of the 2nd tone above the aorta. Respiration is vesicular. Determine the diagnosis in this case:

- A. Angina pectoris;
- B. Myocardial infarction;
- C. Hypertensive crisis;
- D. Grade 2a hypertension;
- E. Heart disease.

3. Patient L. 54 years old complains of crunching in the TMJ, difficult movement of the lower jaw in the morning, joint pain after eating solid food. Objectively: the lower third of the face is shortened, mouth opening is restricted, and the lower jaw moves to the left. The upper jaw has a solid cast bridge-like prosthesis supported by 17-13, 23-27 teeth. 12, 11, 21, 22 teeth are missing. On the lower jaw, the enamel of the lateral teeth is pathologically eroded. Palpation of the joints is painless, crunching in the joint. Radiologically: flattening of the articular head and tubercle, exophytes on the articular surface. What additional examination will be most informative for differential diagnosis?

- A. Using the method of determining chewing pressure;
- B. Electromyography;
- C. Rheography;
- D. Myotonometry;
- E. Determination of chewing efficiency.

4. Patient B. 25 years old, the vestibular surface of the upper incisors is affected by fluorosis. Which of the listed constructions is the most rational in this case:

- A. Metal-ceramic crown;
- B. Metal-plastic crown;
- C. Porcelain crown;
- D. Plastic crown;
- E. Porcelain veneers.

5. A 24-year-old patient came to the clinic complaining of missing teeth in the frontal area due to trauma. I lost my teeth 4 months ago. Objectively: 11, 21, and 22 teeth are missing, the remaining teeth are immobile, percussion is painless, periapical tissues are free of pathologies, and the bite is orthognathic. What kind of prosthesis design would you suggest in this case?

- A. Metal-ceramic bridge prosthesis;

- B. Plastic bridge prosthesis;
  - C. Removable bridge prosthesis;
  - D. Make a partial removable prosthesis without кламмеров/clamps;
  - E. Make a combined bridge prosthesis on metal crowns.
6. Who suggested distinguishing the types of dentition defects depending on the nature of the closing of antagonistic teeth:
- A. Oxman;
  - V. Gavrilov;
  - Kurlandsky village;
  - D. Grozovsky;
  - E. Betelman.
7. Patient E. 37 years old complains of missing teeth in the lower jaw. Objectively: missing 32, 45. Please indicate the Kennedy class of dentition defect:
- A. 4th grade;
  - B. 3 class 4 subclass;
  - C. 3 class 3 subclass;
  - D. 3 class 2 subclass;
  - E. 3 class 1 subclass.
8. A 25-year-old patient lost his side teeth due to periodontal tissue diseases. The dentition of the upper jaw is limited to the first premolars. And the lower ones are fangs. What measures should be taken first of all to prevent the development of periodontitis in this patient?
- A. Perform permanent dental splinting;
  - B. Perform selective tooth polishing;
  - With. Perform rational prosthetics;
  - D. Perform temporary splinting.
  - E. Perform oral plastic surgery.
9. Patient K., 18 years old, sought advice from an orthopedic dentist about an aesthetic defect after an injury to the lower jaw. Objectively: the chin protrudes forward, the lower jaw teeth overlap the upper ones in the anterior area. Specify the type of bite:
- A. Prognostic;
  - B. Direct;
  - C. Open;
  - D. Deep;
  - E. Progenic.
10. A 55-year-old man complains of pain when eating. On examination, an ulcer on the lateral surface of the tongue measures 0.3 by 0.8 cm. There is a poor-quality bridge prosthesis with support on 25, 27 teeth. What action of the doctor will contribute to the prevention of further progression of the ulcerative process?
- A. Rinsing with 0.002% chlorhexidine solution;
  - B. Application of prednisolone ointment;
  - With. Taking vitamins C and P;
  - D. Application of antiseptic solutions;
  - E. Urgent removal of the bridge prosthesis.

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Ministry of Health of the Russian Federation**

**Department of Dentistry No. 1  
Faculty of Dentistry                      Course 5  
Discipline Modern diagnostic methods in orthopedic dentistry**

**Test ticket # 1**

1. List the areas of application of MRCT in dentistry
2. Method of determining the central ratio of the jaws.

**Head of the Department, MD,  
Dzgoeva**

Associate Professor M. G.