**Assessment tools for certification**
**in the discipline "Innovative technologies in prosthetic dentistry"**
**for students in year of admission 2021**
**according to the educational program 31.05.03 Dentistry,**
**orientation (profile) Dentistry (specialty), full-time education**
**for the 2025-2026 academic year**

1.1. Assessment tools for conducting the current assessment in the discipline

The current certification includes the following types of tasks: testing, situational task solving, assessment of the development of practical skills, interview on control issues.

1.1.1. Examples of test tasks

Verifiable indicators of competence achievement:УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.1., УК-2.2.2., УК-2.2.3., УК-2.2.4. , УК-2.2.5. , УК-2.3.1., УК-2.3.2. ,УК-2.3.3., УК-11.3.1. , УК-11.3.2.; ОПК -2.2.1.,ОПК-6.3.3.,ОПК-8.3.1.,ОПК -12.1.3.,ОПК-12.2.1, ОПК-12.2.2, ОПК-12.2.3.

1. CEREC System is designed for milling:
1) metal restorations made of noble alloys
2) metal-ceramic and metal-plastic restorations
3) all-ceramic (metal-free) restorations
4) partial removable dentures made of polymers
5) removable dentures made of polymers

2.Minimum production time for cerec restoration:
1) per visit
2) in one week
3) for two visits
4) in one month
5) for four visits

3. List the methods of studying the masticatory muscles:
1) myotonometry
2) mastication
3) myography
4) zonography

4. The method of mastication allows you to judge:
1) about the tone of certain muscles of the masticatory system in various conditions
2) about the efforts expended when chewing food substances of different hardness
3) about the combined reflex activity of various muscle groups that perform movements of the lower jaw
4) the degree of grinding of food during chewing

5. To identify the condition of the soft tissues of the temporomandibular joint, use:
1) arthrography
2) magnetic resonance imaging
3) arthroscopy
4) ultrasound diagnostics

6. Main indications for the use of occlusal splints:
1) pain syndrome of musculoskeletal dysfunction

2) protection of teeth from auto-destruction
3) for splinting movable teeth

7. An occlusal mouth guard differs from an occlusal splint in that…
1) exactly repeats the relief of the occlusal surface
2) Used only on the upper jaw
3) partially or completely covers the occlusal surface of all teeth

8. An occlusal splint differs from a bite plate in that…
1) can be applied for a longer time
2) exactly repeats the relief of the occlusal surface
3) Used only on the upper jaw

9. The width of the neck ledge of the tooth stump, prepared for ceramic veneer is:
1) not less than 0.3 mm
2) 0.3-0.5 mm
3) not less than 0.5 mm
4) less than 1 mm

10. Cementation of veneers and ceramic crowns is caused by:
1) violation of fixation technology
2) saliva ingestion during fixation
3) deep subgingival arrangement of the edges of the restoration
4) violation of the occlusal relationship of ceramic restorations and teeth

1.1.2. Example of a situational task
Verifiable indicators of competence achievement: УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.1. , УК-2.2.2 ., УК-2.2.3 ., УК-2.2.4. , УК-2.2.5. , УК-2.3.1 ., УК-2.3.2. , УК-2.3.3.,УК-11.3.1., УК-11.3.2., ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-6.3.1. , ОПК-6.3.2., ОПК-6.3.3. , ОПК-5.2.1., ОПК-5.2.2. , ОПК-5.2.3., ОПК-5.2.4. , ОПК-8.3.1.. ОПК-13.1.2., ОПК-9.2.1., ОПК-12.1.3., ОПК-12.2.1. , ОПК-12.2.2., ОПК-12.2.3.

To Patient K. Orthopedic treatment of dental hard tissue pathology has been performed for 35 years. Figures 1,2 show the stage of prosthetic storage on the model.

Рис.1.

Рис.2.

Task:

1. Name the orthopedic structures that are shown in the photos, list their types. What are the indications for the use of these structures?

2. What materials and technologies are used in the manufacture of these structures.

3. List the clinical and laboratory stages of manufacturing these structures.

1.1.3. Examples of practical skills assessment tasks

Verifiable competencies: Verifiable indicators of competence achievement: ПК-1.1.3., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3., ПК-4.2.1., ПК-4.2.2., ПК-4.2.3., ПК-4.3.1., ПК-4.3.2., ПК-4.3.3.

1. Preparation of a tooth for an all-ceramic crown
2. Obtaining an anatomical impression with silicone mass
3. Preparation of a tooth for a veneer
4. Silicone key manufacturing
5. Modeling the wax tab

1.1.4. Examples of control questions for an interview
Verifiable competencies: УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.3., УК-2.3.1., УК-2.3.2. УК-2.3.3., УК-11.3.1., УК-11.3.2.,ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.2., ОПК-5.2.4., ОПК-6.3.3., ОПК-8.3.1., ОПК-9.2.1., ОПК-13.1.2., ПК-1.1.4., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3.

1. The mechanism of action of the occlusal splint.

2. Classification of TMJ diseases.

3. Types of deprogramming devices.

4. The importance of deprogramming of the masticatory muscles in determining central occlusion.

1.2. Assessment tools for conducting intermediate certification in the discipline

The intermediate certification is conducted in the form of a test.

The intermediate certification includes the following types of tasks: testing, assessment of the development of practical skills, and an interview.

1.2.1. Examples of test tasks

Verifiable competencies: Verifiable indicators of competence achievement: УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1. , УК-1.3.2. , УК-2.2.1., УК-2.2.2., УК-2.2.3., УК-2.2.4. , УК-2.2.5. , УК-2.3.1., УК-2.3.2. ,УК-2.3.3., УК-11.3.1. , УК-11.3.2.; ОПК -2.2.1.,ОПК-6.3.3.,ОПК-8.3.1.,ОПК -12.1.3.,ОПК-12.2.1, ОПК-12.2.2, ОПК-12.2.3.

1.The time required for etching the enamel during adhesive fixation:
a) 60 seconds;
b)) 15-20 seconds;
c)) 90 seconds;
d)) 30 seconds.
2. Acid is used to etch the tooth:
a) phosphoric acid;

b)) hydrofluoric;
c) salt;
d) formic.

3. Treatment with occlusive splints is aimed at:
a) pain
relief b) removal of TMJ dysfunction
c) reduction of soreness in the masticatory muscles
d) orthodontic tooth movement

4. For muscular disorders, the use of:
a) the disconnecting bus
b) relaxation tire
c) stabilizing tire
d) the repositioning bus

5. For joint symptoms, a splint is used:
a) uncoupling
b) relaxing
c) stabilizing
d) repositional

6. For the first time, the protective mouth guard was made of:
a) rubber
b) plastics

7. Diastema is eliminated by making veneers on:
a) the first incisors
b) first and second incisors
c) incisors and canines
d) depends on the size of the diastema

8. Chipped ceramic veneers are caused by preparation errors:
a) insufficient preparation depth
b) the location of the borders of the veneers in the area
of occlusal contact c3) the presence of sharp outer or (and) inner corners of the stump
d) smooth transitions of the cavity walls

9. Symmetroscopy is…
a) a graphical method for studying the shape of the dentition
b) a method for studying pulse fluctuations in blood supply to vessels of various organs and tissues
c) a method for studying blood circulation in periodontal tissues

10. A sharp decrease in the strength of hot polymerized plastics is observed when the monomer content is:
a) more than 0.7%
b) more than 3%
c more than 2%

1.2.2. List of questions for practical skills assessment

| № п/п | Перечень практических навыков | Проверяемые индикаторы достижения компетенций |
|---|---|---|
| 1. | Wax modeling of the anterior group of teeth. | ПК-1.1.4., ПК-1.2.1., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. , ПК- 4.2.1., ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 2. | Preparation of a tooth for a veneer. | ПК-1.1.3. ПК-1.1.4. ПК-1.2.1. ПК-1.2.2. ПК-2.1.1. ПК-2.1.2. ПК-2.1.3. ПК-2.2.1. ПК-2.2.2. ПК-2.2.3. ПК-2.3.1. ПК-2.3.2. ПК-2.3.3. ПК-4.2.1. ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 3. | Preparation of a tooth for a metal-free crown. | ПК-1.1.3. ПК-1.1.4. ПК-1.2.1. ПК-1.2.2. ПК-2.1.1. ПК-2.1.2. ПК-2.1.3. ПК-2.2.1. ПК-2.2.2. ПК-2.2.3. ПК-2.3.1. ПК-2.3.2. ПК-2.3.3. ПК-4.2.1. ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 4. | Obtaining an updated impression for the manufacture of veneers. | ПК-1.1.3., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. |
| 5. | Analysis of the clinical situation based on archived diagnostic models and optimal treatment choice. | ПК-1.1.4., ПК-1.2.1., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. , ПК- 4.2.1., ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 6. | Assessment of the functional state of DJS according to odontoparodontogram and CT | ПК-1.1.4., ПК-1.2.1., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. , ПК- 4.2.1., ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 7. | Determination of the central ratio of the jaws. | ПК-1.1.3. ПК-1.1.4. ПК-1.2.1. ПК-1.2.2. ПК-2.1.1. ПК-2.1.2. ПК-2.1.3. ПК-2.2.1. ПК-2.2.2. ПК-2.2.3. ПК-2.3.1. ПК-2.3.2. ПК-2.3.3. ПК-4.2.1. ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 8. | Simulation of an occlusal splint. | ПК-1.1.4., ПК-1.2.1., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. , ПК- 4.2.1., ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |

1.2.3. List of interview questions

| № | Questions for the interim assessment | Verifiable indicators of competence achievement |
|---|---|---|
| 1. | Methods of studying the condition of the masticatory muscles and the temporomandibular joint. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., ОПК-1.2.1., ОПК-1.2.2, ОПК-1.2.3, ОПК-5.2.1., ОПК-5.2.2., ОПК-5.2.3., ОПК-5.2.4., ОПК-6.3.1., ОПК-8.3.1., ОПК-13.1.2., ОПК-9.2.1., ОПК-12.1.3., ОПК-12.2.1., ОПК-12.2.2., ОПК-12.2.3., ОПК-13.1.2. ПК-1.1.3. ПК-1.1.4. ПК-1.2.1. ПК-1.2.2. ПК-2.1.1. ПК-2.1.2. ПК-2.1.3. ПК-2.2.1. ПК-2.2.2. ПК-2.2.3. ПК-2.3.1. ПК-2.3.2. ПК-2.3.3. |
| 2. | Analysis of aesthetic parameters in orthopedic dentistry.<br>Assessment of the shape and size of the head, teeth, and face. | УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-2.2.3., УК-2.2.4., УК-2.2.5., УК-2.3.1., УК-2.3.2., УК-2.3.3., ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.1., ОПК-5.2.2., ОПК-5.2.3., ОПК-5.2.4., ОПК-6.3.1., ОПК-8.3.1., ОПК-9.2.1., ОПК-13.1.2., ОПК-13.1.2, ПК-1.1.3., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.2., ПК-2.2.3., ПК-2.3.2. |
| 3. | Analysis of diagnostic models in the articulator. Assessment of static and dynamic occlusion. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.3., УК-2.3.1., УК-2.3.2. УК-2.3.3., УК-11.3.1., УК-11.3.2.,ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.2., ОПК-5.2.4., ОПК-6.3.3., ОПК-8.3.1., ОПК-9.2.1., ОПК-13.1.2., ПК-1.1.4., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. |
| 4. | The concept of a CAD/CAM system. Clinical and laboratory application possibilities. Working methods. | УК-1.2.2., УК-1.2.3., УК-1.3.2., УК-2.2.3., УК-2.2.4., УК-2.3.2., УК-2.3.3., УК-11.3.1., УК -11.3.2., ОПК-1.2.1., ОПК-1.2.2., ОПК-5.2.2., ОПК-5.2.4.,ОПК-6.3.1., ОПК-6.3.2., ОПК-6.3.3., ОПК-8.3.1., ОПК-9.2.1., ОПК-12.1.3., ОПК-12.2.1., ОПК-12.2.2., ОПК-12.2.3., ОПК-13.1.2., ПК-1.1.3., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3., ПК-4.2.1., ПК-4.2.2., ПК-4.2.3., ПК-4.3.1., ПК-4.3.2., ПК-4.3.3. |
| 5. | Orthopedic treatment of dental crown defects with inlays and veneers. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.1., УК-2.2.2., УК-2.2.3., УК-2.2.4., УК-2.2.5., УК-2.3.1., УК-2.3.2., УК-2.3.3., УК-11.3.1., УК-11.3.2., ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.1., ОПК-5.2.2., ОПК-5.2.3., ОПК-5.2.4., ОПК-6.3.1., ОПК-6.3.2., ОПК- |

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|---|---|---|
| | | 6.3.3., ОПК-8.3.1., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. ОПК-9.2.1., ОПК-13.1.2., ПК-1.1.3. |
| 6. | Metal-free technologies for manufacturing crowns and bridges: pressed ceramics, glass ceramics, and the manufacture of structures by milling. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.1., УК-2.2.2., УК-2.2.3., УК-2.2.4., УК-2.2.5., УК-2.3.1., УК-2.3.2., УК-2.3.3., УК-11.3.1., УК-11.3.2., ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.1., ОПК-5.2.2., ОПК-5.2.3., ОПК-5.2.4., ОПК-6.3.1., ОПК-6.3.2., ОПК-6.3.3., ОПК-8.3.1., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. ОПК-9.2.1., ОПК-13.1.2., ПК-1.1.3. |
| 7. | Technology of manufacturing prostheses from thermoplastics. Indications. Clinical and laboratory stages of manufacturing. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.1., УК-2.2.2., УК-2.2.3., УК-2.2.4., УК-2.2.5., УК-2.3.1., УК-2.3.2., УК-2.3.3., УК-11.3.1., УК-11.3.2., ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.1., ОПК-5.2.2., ОПК-5.2.3., ОПК-5.2.4., ОПК-6.3.1., ОПК-6.3.2., ОПК-6.3.3., ОПК-8.3.1., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. ОПК-9.2.1., ОПК-13.1.2., ПК-1.1.3. |
| 8. | Cable-stayed and adhesive-fixed bridge prostheses: indications, materials, types, manufacturing technology. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.1., УК-2.2.2., УК-2.2.3., УК-2.2.4., УК-2.2.5., УК-2.3.1., УК-2.3.2., УК-2.3.3., УК-11.3.1., УК-11.3.2., ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.1., ОПК-5.2.2., ОПК-5.2.3., ОПК-5.2.4., ОПК-6.3.1., ОПК-6.3.2., ОПК-6.3.3., ОПК-8.3.1., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. |
| 9. | Occlusal splints. Classification of occlusal devices. Methods of manufacturing an occlusal splint. Materials. | УК-1.2.2., УК-1.2.3., УК-1.3.2., УК-2.2.3., УК-2.2.4., УК-2.3.2., УК-2.3.3., УК-11.3.1., ОПК-6.3.1., ОПК-6.3.2., ОПК-6.3.3., ОПК-9.2.1., ПК-1.1.3., ПК-1.1.4., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1. ПК-2.3.2. ПК-2.3.3. ПК-4.2.1. ПК-4.2.2. ПК-4.2.3. ПК-4.3.1. ПК-4.3.2. ПК-4.3.3. |
| 10. | Registration of the interocclusion ratio. Types of deprogramming devices. | УК-1.2.1., УК-1.2.2., УК-1.2.3., УК-1.3.1., УК-1.3.2., УК-2.2.3., УК-2.3.1., УК-2.3.2. УК-2.3.3., УК-11.3.1., УК-11.3.2.,ОПК-1.2.1., ОПК-1.2.2., ОПК-1.2.3., ОПК-5.2.2., ОПК-5.2.4., ОПК-6.3.3., ОПК-8.3.1., ОПК-9.2.1., ОПК-13.1.2., ПК-1.1.4., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. |
| 11. | Modern cements for fixing metal-free orthopedic structures. Composition and properties. Advantages and disadvantages. Application. The algorithm of operation. | УК-1.2.2., УК-1.2.3., УК-1.3.2., ОПК-6.3.1., ОПК-6.3.2., ОПК-6.3.3., ОПК-9.2.1., ОПК-12.1.3., ОПК-12.2.1., ОПК-12.2.2., ОПК-12.2.3., ОПК-13.1.2., ПК-1.1.3., ПК-1.1.4., ПК-1.2.1., ПК-1.2.2., ПК-2.1.1., ПК-2.1.2., ПК-2.1.3., ПК-2.2.1., ПК-2.2.2., ПК-2.2.3., ПК-2.3.1., ПК-2.3.2., ПК-2.3.3. |

1.2.4. Ticket example

Federal State Budgetary Educational Institution of Higher Education "Volgograd State Medical University"

Ministry of Health of the Russian Federation

Department: Orthopedic Dentistry

Credit in the discipline Innovative technologies in orthopedic dentistry

educational program 31.05.03 Dentistry, specialty

full-time 5th year 9th semester 20__ 20__ academic year

Ticket No. 2

Questions:

1. Classification of occlusal devices.
2. Types of thermoplastic materials.
3. Preparation of the tooth for veneers.

M.P. Head of the Department _____ V.I.Shemonaev

Considered at the meeting of the Department for Prosthetic dentistry "17" May 2025, protocol No 11.

Head of the Department  V.I. Shemonaev