

Документ подписан простой электронной подписью  
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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.02.04 Modern endodontics of the basic educational program of Higher Education

|                             |                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------|
| Specialty                   | 31.05.03 Dentistry for foreign students<br>(English-language program)<br>(code, name)           |
| Degree                      | Specialist's degree                                                                             |
| Profile                     | 02 "Healthcare"<br>(in the field of providing health care in<br>patients with dental pathology) |
| Mode of study               | Full-time                                                                                       |
| Period of mastering the BEP | 5 years<br>(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   | <b>Continuous assessment</b> | <b>Interview Questions</b> |
|     |                              | <b>Tests</b>               |
|     |                              | <b>Mini-Case Studies</b>   |
| 2   | <b>Interim assessment</b>    | <b>Tests</b>               |

**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 |          | <b>ANSWER THE QUESTIONS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|   |          | 1. Dental pulp: structure, blood supply, functions, and evolutionary changes.<br>2. Etiology and pathogenesis of pulpitis.<br>3. Classification of pulpitis. Pathological changes in the pulp in various forms of pulpitis.<br>4. Clinical presentation, diagnosis, and differential diagnosis of acute forms of pulpitis.<br>5. Clinical presentation, diagnosis, and differential diagnosis of chronic forms of pulpitis.<br>6. Classification of pulpitis treatment methods.<br>7. Types of anesthesia in the treatment of pulpitis.<br>8. Biological method of treating pulpitis: indications, contraindications, methodology. |

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  | 9. Vital amputation method: indications, methodology.<br>10. Vital extirpation method: indications, methodology.<br>11. Devital extirpation method: indications, devitalizing drugs, methodology.<br>12. Devital amputation method: indications, methodology.<br>13. Mistakes and complications in the treatment of pulpitis.<br>14. Anatomical and physiological features of the periodontium: structure, blood supply, functions.<br>15. Etiology, pathogenesis and classification of periodontitis.<br>16. Clinical presentation, diagnostics, differential diagnostics of acute periodontitis.<br>17. Clinical presentation, diagnostics, differential diagnostics of chronic forms of periodontitis.<br>18. Chronic periodontitis in the acute stage: clinical presentation, diagnostics, differential diagnostics and treatment.<br>19. Treatment of acute periodontitis depending on the etiological factor.<br>20. Treatment of chronic Periodontitis of a single-root tooth.<br>21. Treatment of chronic periodontitis of a multi-root tooth.<br>22. Endodontic instruments: classification, types, and purpose.<br>23. Methods of instrumental root canal treatment.<br>24. Medicinal root canal treatment: goals, methods, and characteristics of the main medications.<br>25. Methods of root canal filling. Mistakes and complications in periodontitis treatment. |
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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 |          | <b>ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)</b>                                                                                                                          |
|   |          | 1. Endodontics is a branch of dentistry that studies<br>a) technique of preparing carious cavities<br><b>b) the internal structure of the tooth cavity and manipulations in it</b> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>c) technique of filling carious cavities<br/> d) manipulations on periodontal tissues<br/> e) treatment of caries</p> <p>2. To determine the quality of the tooth cavity opening, the doctor uses dental instruments</p> <p>a) forceps, mirror<br/> b) burnisher, forceps<br/> <b>c) mirror, probe</b><br/> d) plugger, probe<br/> e) corker, forceps</p> <p>3. Opening of the tooth cavity in the premolars of the upper jaw is carried out with a bur in the direction of</p> <p>a) anterior-posterior<br/> b) along the tooth axis<br/> <b>c) bucco-palatine</b><br/> d) buccal-posterior<br/> e) anterior-cheek</p> <p>4. Opening of the tooth cavity in the molars of the lower jaw is carried out with a drill in the direction</p> <p>a) buccolingual<br/> b) along the tooth axis<br/> <b>c) anterior-posterior</b><br/> d) posterior-lingual<br/> e) posterior-cheek</p> <p>5. The antidote to arsenous acid is</p> <p><b>a) iodine preparations</b><br/> b) metronidazole (trichopolum)<br/> c) Bromine preparations<br/> d) Sea buckthorn oil<br/> e) Vitamin A</p> <p>6. After applying arsenic paste, the carious cavity is closed with</p> <p>a) dentin paste<br/> b) zinc oxide eugenol paste<br/> c) phosphate cement<br/> <b>d) artificial dentin (water-based)</b><br/> e) wax</p> <p>7. The channel filler is intended for</p> <p>a) pulp removal<br/> b) determining the depth of the root canal<br/> <b>c) root canal filling</b><br/> d) unsealing the canals<br/> e) channel expansion</p> <p>8. Tooth cavities are opened using</p> <p>a) finish<br/> b) carborundum head<br/> c) fissure bur<br/> <b>d) spherical bur No. 1</b></p> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

e) disk

9. For pulp necrosis, \_\_\_\_\_(g) of arsenic paste is sufficient

**a) 0.0008**

b) 0.001

c) 0.01

d) 0.1

e) 1.0

10. Arsenic paste of the classic prescription is applied to 3.7 teeth for

a) 24 hours

**b) 48 hours**

c) 3 days

d) 5-6 days

e) 7 days

11. To remove the coronal part (amputation) of the pulp, the following instruments are used

a) cork stopper

b) excavator

c) probe

**d) wheel-shaped bur**

e) mirror

12. To remove the root portion (extirpation) of the pulp in well-passable root canals, the following instruments are used

**a) pulp extractor**

b) Miller's needle

c) K-file

d) guttacondenser

e) spreader

13. Removal of infected predentin from the walls of the tooth canal is recommended using

a) root needle

b) pulp extractor

**c) K-file**

d) channel filler

e) excavator

14. When filling the root canal, the following instrument is used

a) H-file

**b) spreader**

c) scan

d) pulp extractor

e) pin

15. To remove coronal pulp in molars, \_\_\_\_\_ is used

a) plugger

**b) excavator**

c) spreader

d) root needle

e) files

16. To dry the root canal, use
- a) universal gun
  - b) paper pins**
  - c) alcohol
  - d) ether
  - e) hydrogen peroxide
17. For medicinal treatment of the root canal \_\_\_\_\_ is used
- a) alcohol
  - b) sodium hypochlorite**
  - c) ether
  - d) ascorbic acid
  - e) phosphoric acid
18. For the impregnation method, the following solution is used
- a) camphor-phenol
  - b) resorcinol-formaldehyde**
  - c) phenol-formaldehyde
  - d) "Aqua regia"
  - e) sodium hypochlorite
19. For pulp devitalization use
- a) arsenic paste**
  - b) resorcinol-formaldehyde mixture
  - c) camphor-phenol
  - d) sodium hypochlorite
  - e) unithiol
20. For chemical expansion of the root canal, the following medications are used
- a) EDTA**
  - b) calcium gluconate
  - c) potassium permanganate
  - d) formalin
  - e) iodinol
21. When performing the method of devital pulp extirpation, the following is performed during the first visit
- a) opening of the tooth cavity
  - b) flushing the canals
  - c) application of arsenic paste**
  - d) instrumental treatment of canals
  - e) root canal filling
22. To fill the root canal of a single-root tooth, use
- a) resorcinol-formaldehyde paste
  - b) silicate cement
  - c) flowable composite
  - d) gutta-percha pins**
  - e) Forfenan
23. Gutta-percha pins are inserted into the root canal for
- a) moisture absorption
  - b) disinfection of the canal

- c) **fillings**
- d) outflow of exudate
- e) extensions

24. Opening the cavity of the tooth means

- a) removal of the dental arch
- b) removal of overhanging enamel edges
- c) **creating a connection with a tooth cavity**
- d) perforation of the bottom of the tooth cavity
- e) pulp removal

25. The following is contraindicated for medicinal treatment of the root canal

- a) EDTA solution
- b) sodium hypochlorite
- c) hydrogen peroxide
- d) **hydrochloric acid**
- e) chlorhexidine

26. To pass the root canal along its length, use

- a) **K-Reamer**
- b) K-file
- c) H-file
- d) pulp extractor
- e) channel filler

27. To widen the root canal diameter, use

- a) root needle
- b) pulp extractor
- c) K-Reamer
- d) **K-file, H-file**
- e) channel filler

28. The length of the pulp extractor for the anterior teeth of the upper jaw is (mm):

- a) 22
- b) 36
- c) 41
- d) **44**
- e) 46

29. When filling root canals using the lateral condensation of gutta-percha method, the following instruments are used:

- a) pulp extractors
- b) H-files
- c) **spreaders**
- d) pluggers
- e) K-files

30. For lateral condensation of gutta-percha, the following is used as a sealer:

- a) resorcinol-formaldehyde paste
- b) **resin-based paste**
- c) silver pins
- d) fiberglass pins
- e) anchor pins

31. The element of the coronal cavity of the tooth is
- a) channel
  - b) vault**
  - c) edges
  - d) angles
  - e) physiological narrowing
32. Part of the root canal is
- a) vault
  - b) anatomical opening**
  - c) bottom
  - d) radiographic apex
  - e) edges
33. Opening of the tooth cavity is carried out
- a) dental bur**
  - b) with a spatula
  - c) with tweezers
  - d) with a corker
  - e) excavator
34. The tooth cavity is opened with a \_\_\_\_\_ bur
- a) wheel-shaped
  - b) pear-shaped**
  - c) BATT-bur
  - d) inversely conical
  - e) torpedo-shaped
35. Pulp amputation is performed
- a) probe
  - b) excavator**
  - c) ironing
  - d) root needle
  - e) with tweezers
36. Pulp extirpation is performed
- a) excavator
  - b) pulp extractor**
  - c) channel filler
  - d) spreader
  - e) plugger
37. A deep carious cavity is treated with
- a) 3% hydrogen peroxide
  - b) physiological solution (saline)**
  - c) 70% ethyl alcohol
  - d) 18% EDTA
  - e) 1.0% potassium permanganate
38. For antiseptic treatment of the root canal \_\_\_\_\_ is used
- a) maleic acid
  - b) distilled water
  - c) 37% phosphoric acid
  - d) 3% sodium hypochlorite**

e) nitric acid

39. In the upper molars, the number of roots is

- a) 1
- b) 2
- c) 3**
- d) 4
- e) 5

40. In the lower molars, the number of canals is

- a) 1, 2
- b) 2, 3
- c) 3, 4**
- d) 4
- e) 5

41. In the upper molars, the number of canals is

- a) 1, 2
- b) 2, 3
- c) 3, 4**
- d) 4, 5
- e) 1, 4

42. In the lower molars, the number of roots is

- a) 1
- b) 2**
- c) 3
- d) 4
- e) 5

43. On the upper jaw, the teeth with two roots are

- a) incisors
- b) canines
- c) first premolars**
- d) second premolars
- e) molars

44. On the upper jaw, the teeth with three roots are

- a) incisors
- b) canines
- c) first premolars
- d) second premolars
- e) molars**

45. Opening of the tooth cavity of intact molars of the upper jaw is performed in the area of

- a) anterior fissure**
- b) posterior fissure
- c) buccal tubercle
- d) palatine tubercle
- e) roller

46. Endodontics is a branch of dentistry that studies the topography and manipulations in the

a) **cavity of the tooth**

b) carious cavity

c) cavity of the mouth

d) cavity of the nose

e) cavity of the eyes

47. The working length of the tooth is determined using

a) **X-ray**

b) subjective sensations

c) thermal diagnostics

d) electroodontic diagnostics

e) ultrasonic

48. Devitalizing effect is possessed by

a) zinc eugenol paste

b) **paraformaldehyde paste**

c) resorcinol-formaldehyde solution

d) Cresophene

e) camphor-phenol

49. Teeth that can have one root and two canals are

a) **3.2, 4.2**

b) 3.7, 4.7

c) 1.1, 2.1

d) 2.6, 3.6

e) 2.1, 2.2

50. Teeth with two roots and two canals are

a) 1.2 and 2.2

b) 3.2 and 4.2

c) **1.4 and 2.4**

d) 3.4 and 4.4

e) 1.6 and 2.6

51. Teeth with two roots and three canals are

a) 1.4 and 2.4

b) 3.4 and 4.4

c) 1.5 and 2.5

d) **3.7 and 4.7**

e) 4.3 and 5.3

52. Opening of the pulp chamber of intact central incisors is performed from the oral surface at the level of

a) cutting edge

b) upper third of the crown

c) **middle third of the crown**

d) lower third of the crown

e) tooth necks

53. Opening of the pulp chamber of intact premolars of the upper jaw is performed

a) **in the middle of the longitudinal fissure**

b) in the area of the buccal tubercle

c) in the area of the palatine tubercle

d) in the cervical region

e) from the vestibular side

54. Opening of the pulp chamber of the intact first premolar of the lower jaw is performed in the area of

- a) roller
- b) fissures in front of the ridge**
- c) fissures behind the ridge
- d) buccal tubercle
- e) lingual tubercle

55. Opening of the pulp chamber of the intact second premolar of the lower jaw is performed in the area of

- a) middle of the longitudinal fissure**
- b) buccal tubercle
- c) lingual tubercle
- d) posterior third of the longitudinal fissure
- e) anterior third of the longitudinal fissure

56. Opening of the pulp chamber of the intact lower molars is performed in the area of

- a) anterior third of the fissure
- b) middle of the fissure**
- c) posterior third of the fissure
- d) anterior buccal tubercle
- e) posterior buccal tubercle

57. When rinsing the root canal from a syringe, the endodontic needle is inserted

- a) up to its opening
- b) up to 1/3 of its length
- c) up to the middle third of the length**
- d) up to the apical foramen
- e) behind the apical foramen

58. Pulp extractor is used for

- a) removal of the dental cavity arch
- b) removal of pulp from the canal**
- c) removal of predentin
- d) creating an apical stop
- e) channel expansion

59. To dry the root canal, use

- a) absorber, cotton pad**
- b) syringe
- c) puster
- d) cotton turunda, puster
- e) syringe, cotton swab

60. The K-Reamer symbol is

- a) triangle**
- b) square
- c) rhombus
- d) circle
- e) trapezoid

61. The symbol for the K-file is
- a) triangle
  - b) square**
  - c) rhombus
  - d) circle
  - e) trapezoid
62. To reduce the risk of perforation of a curved canal, it is necessary
- a) bend the K-reamer along the curvature of the canal**
  - b) use rotary instruments
  - c) refuse channel processing
  - d) apply EDTA
  - e) seal the canal
63. The criterion for complete removal of pulp from the root canal is
- a) the presence of a whole strand on the pulp extractor**
  - b) bleeding from the canal
  - c) painless percussion
  - d) painful probing
  - e) conducting electronic data processing
64. A modern method of filling root canals is
- a) method of lateral condensation of gutta-percha**
  - b) using one paste
  - c) use of phosphate cement
  - d) use of a silver pin
  - e) use of gutta-percha without sealer
65. Indications for impregnation methods are
- a) well-passable channels
  - b) canals in the stage of resorption of the apical part
  - c) poorly passable and obliterated canals**
  - d) canals of single-rooted teeth
  - e) periodontal inflammation
66. The first stage in instrumental expansion of the root canal is
- a) antiseptic treatment
  - b) widening of the apical foramen
  - c) determining the length of the root canal**
  - d) widening of the root canal orifices
  - e) using H-files
67. Number and name of root canals in the first upper molars
- a) 2 - buccal, palatal
  - b) 3 - palatal, anterior-buccal, posterior-buccal**
  - c) 3 - posterior, anterior-lingual, anterior-buccal
  - d) 3 - palatal, anterior-lingual, posterior-lingual
  - e) 5 - anterior, posterior-buccal, palatine
68. When treating pulpitis using the devital extirpation method, the following is performed during the first visit
- a) opening the pulp chamber**
  - b) removal of coronal pulp
  - c) removal of root pulp

|   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |  | <p>d) preparation of the pulp chamber<br/>e) complete endodontic treatment</p> <p>69. The mouths of the canals are determined by<br/>a) periodontal probe<br/>b) excavator<br/>c) spherical bur<br/><b>d) endodontic probe</b><br/>e) scaler</p> <p>70. The working length of the root canal is determined by<br/>a) according to the doctor's subjective feelings<br/>b) according to the patient's feelings<br/>c) orthopantomogram<br/><b>d) X-ray with a needle</b><br/>e) EOD</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| I |  | <b>ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|   |  | <p>1. Methods for diagnosing caries include<br/>a) <b>vital staining method</b><br/>b) <b>luminescence</b><br/>c) <b>radiography</b><br/>d) biopsy<br/>e) bacterioscopy</p> <p>2. X-ray diagnostics in the treatment of caries is used to identify<br/>a) <b>hidden cavity</b><br/>b) <b>determining the state of the periodontium</b><br/>c) <b>determination of the condition of bone tissue</b><br/>d) determining the state of the pulp<br/>e) <b>determining the condition of the roots</b></p> <p>3. Maintaining medical records is necessary<br/>a) <b>to record data on the patient's dental health</b><br/>b) <b>for continuity in the work of doctors</b><br/>c) <b>for planning the volume and resources of the dental service</b><br/>d) <b>for scientific work</b></p> <p>4. For remineralizing therapy the following are used<br/>a) <b>10% calcium gluconate solution, sodium fluoride 2-4%</b><br/>b) <b>remodent</b><br/>c) chlorhexidine<br/>d) urea</p> <p>5. For primary dental examination, _____ are used<br/>a) burnisher<br/>b) <b>probe</b><br/>c) <b>mirror</b><br/>d) forceps<br/>e) cork stopper<br/>f) spatula</p> |
| I |  | <b>ANSWER LEVEL 3 TEST QUESTIONS (MATCHING QUESTIONS)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|   |  | 1. Match the patient's complaints with each type of pulpitis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|  |  |  |                                                                                                                           |                                        |
|--|--|--|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|  |  |  | <b>Complaints:</b>                                                                                                        | <b>Type of pulpitis:</b>               |
|  |  |  | 1) pain is spontaneous, nocturnal, paroxysmal, long-lasting, with short clear intervals                                   | A) chronic hypertrophic pulpitis       |
|  |  |  | 2) pain when food enters the body, combined with bleeding                                                                 | B) acute diffuse pulpitis              |
|  |  |  | 3) painful percussion, swelling and soreness of the regional lymph nodes, hyperemia and edema along the transitional fold | B) acute focal pulpitis                |
|  |  |  | 4) spontaneous paroxysmal pain, often occurring at night                                                                  | D) chronic pulpitis in the acute stage |
|  |  |  | 5) slowly increasing aching pain from hot substances that does not stop after the stimulus is applied                     | D) chronic gangrenous pulpitis         |
|  |  |  | 6) there is no pain                                                                                                       | E) chronic fibrous pulpitis            |

2. Match the rotation speed with the dental handpiece

|  |  |                               |                      |
|--|--|-------------------------------|----------------------|
|  |  | <b>Dental Handpieces:</b>     | <b>Speed, rpm:</b>   |
|  |  | 1 ) high-speed                | A) 70,000-120,000    |
|  |  | 2 ) high-speed                | B) 400,000-2,000,000 |
|  |  | 3 ) low speed                 | B) 350,000-400,000   |
|  |  | 4 ) at reduced rotation speed | D) 300,000-500,000   |
|  |  | 5 ) endodontic tips           | D) 20,000-35,000     |

#### 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.02.04 Modern endodontics** course

#### Case Study No. 1

|   | <b>Code</b> | <b>Competence description / name of labor function / name of work activity / text</b>                                                                                |
|---|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                        |

|   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |   | <p>Patient K., 35, presented to the clinic with aching pain in her left lower jaw, which worsened in the evening. These pains began three days ago.</p> <p>Objectively: tooth 3.7 has a filling with a poorly sealed margin on the chewing surface, and a carious cavity filled with food debris and softened dentin on the medial contact surface. Probing the cavity is painful at one point, and percussion is slightly painful. The cold test is positive, with a trace reaction.</p> <p>The presented intraoral contact radiograph of tooth 3.7 shows filling material on the chewing surface, on the medial surface the carious cavity is adjacent to the cavity of the tooth, there are no changes in the periapical tissues.</p>  |
| Q | 1 | Question:<br>Make a preliminary diagnosis and justify it                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Q | 2 | Question:<br>Specify additional examination methods for this pathology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Q | 3 | Question:<br>List the treatment methods possible in this clinical situation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Q | 4 | Question:<br>Name the preparations for irrigation of root canals during endodontic treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Q | 5 | Question:<br>Name the main stages of endodontic treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

#### 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 |          | <p>READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS</p> <p>Patient K., 35, presented to the clinic with aching pain in her left lower jaw, which worsened in the evening. These pains began three days ago.</p> <p>Objectively: tooth 3.7 has a filling with a poorly sealed margin on the chewing surface, and a carious cavity filled with food debris and</p> |

|    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                   | <p>softened dentin on the medial contact surface. Probing the cavity is painful at one point, and percussion is slightly painful. The cold test is positive, with a trace reaction.</p> <p>The presented intraoral contact radiograph of tooth 3.7 shows filling material on the chewing surface, on the medial surface the carious cavity is adjacent to the cavity of the tooth, there are no changes in the periapical tissues.</p>       |
| Q  | 1                 | <p>Question:</p> <p>Make a preliminary diagnosis and justify it</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| A  |                   | <p>Correct answer:</p> <p>Acute diffuse pulpitis.</p> <p>Based on:</p> <ol style="list-style-type: none"> <li>1. Patient complaints (aching pain in the lower jaw on the left, intensifying in the evening).</li> <li>2. Anamnesis (pain duration more than 2 days “appeared 3 days ago”).</li> <li>3. Objective data (Probing of the carious cavity is painful at one point; cold test is positive, with a trace reaction).</li> <li>4. Additional examination methods (X-ray: no changes in periapical tissues).</li> </ol> |
| R2 | Very good         | All descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| R1 | Good/Satisfactory | 3-4 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  | 2                 | <p>Question:</p> <p>Specify additional examination methods for this pathology</p>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A  |                   | <p>Correct answer:</p> <ol style="list-style-type: none"> <li>1. EOD</li> <li>2. X-ray diagnostics</li> <li>3. Thermometry</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                         |
| 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 have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| R0 | Fail              | No descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Q  | 3                 | <p>Question:</p> <p>List the treatment methods possible in this clinical situation</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| A  |                   | <p>Correct answer:</p> <ol style="list-style-type: none"> <li>1. Vital pulp extirpation</li> <li>2. Devital pulpectomy</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                             |
| R2 | Very good         | All descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| R1 | Good/Satisfactory | 1 descriptor of the correct answer has been fully listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|    |                   | 1 incomplete descriptor of the correct answer has been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| R0 | Fail              | No descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Q  | 4                 | Question:<br>Name the preparations for irrigation of root canals during endodontic treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| A  |                   | Correct answer:<br>1. Chlorine-containing preparations: 1-5% sodium hypochlorite, 2% chlorhexidine<br>2. 3% hydrogen peroxide solution<br>3. Iodine preparations: iodinol, iodonate<br>4. Nitrofur series drugs: 0.5% furacilin solution, furagin<br>5. Quaternary ammonium compounds: 0.1% decamine solution, 1% benzalkonium chloride solution                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| R2 | Very good         | All descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| R1 | Good/Satisfactory | 5-6 descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|    |                   | 1-4 descriptors of the correct answer has been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| R0 | Fail              | No descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Q  | 5                 | Question:<br>Name the main stages of endodontic treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| A  |                   | Correct answer:<br>1. Pain relief.<br>2. Placement of a cofferdam.<br>3. Professional dental hygiene 3.7<br>4. Restoration of the coronal part to create a hermetic access during root canal treatment.<br>5. Preparation of tooth 3.7 (topographic location of root canals).<br>6. Necroectomy.<br>7. Opening the roof of the pulp chamber<br>8. Excision of the pulp chamber.<br>9. Medicinal treatment.<br>10. Root canal exploration; determination of root canal length.<br>11. Root canal treatment using the "Step-back" method; medicinal treatment (irrigation of root canals).<br>12. Filling of root canals using the selected method.<br>13. Filling control (X-ray).<br>14. Restoration of the anatomical shape of the crown of tooth 3.7.<br>15. Treatment prognosis. |
| R2 | Very good         | All descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| R1 | Good/Satisfactory | 10-14 descriptors of the correct answer have been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|    |                   | 4-9 descriptor of the correct answer has been listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| R0 | Fail              | Less than 4 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.