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

APPROVED BY

Director of the Institute of Dentistry

_____ / Pervov Yu.Yu./

“ 8th” of June 2026

COLLECTION OF ASSESSMENT TOOLS
B1.C.40 Therapeutic dentistry
of the basic educational program of Higher Education

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

Vladivostok, 2026

1. INTRODUCTION

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

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

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

2. DOCUMENT BODY

2.1. Types of Assessment, Formats of Assessment Tools

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

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

1. Interview questions

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**ANSWER THE QUESTIONS** 1. Methods of examination of a dental patient with a therapeutic profile: basic (questioning, examination), additional (radiological, electrometric; index assessment of the condition of the oral cavity organs; laboratory).

		2. Medical record of a dental patient, rules for filling it out. 3. Dental caries. Etiology. Factors influencing the development of dental caries (general and local). Pathogenesis of dental caries. 4. Classification of dental caries (anatomical, topographic, clinical, ICD-10). 5. Theories of the origin of dental caries. 6. Enamel caries. Clinical presentation, diagnosis, differential diagnosis, and treatment. Rationale for choosing a filling material. Clinical guidelines for the management of enamel caries. 7. Dentinal caries. Clinical presentation, diagnosis, differential diagnosis, and treatment. Rationale for choosing a filling material. Clinical guidelines for the management of patients with dentinal caries. 8. Cementum caries. Clinical presentation, diagnosis, differential diagnosis, and treatment. Rationale for choosing a filling material. Clinical guidelines for the management of cementum caries. 9. Black Class 1 carious cavities. Specific aspects of dental preparation for various filling materials (cements, composite resins, amalgam). Clinical rationale for choosing a filling material. Filling technique. 10. Black Class 2 carious cavities. Specifics of dental preparation for various filling materials (cements, composite resins, amalgam). 11. Creating a contact point when filling Black Class 2 carious cavities. Clinical rationale for choosing a filling material. Filling technique. 12. Black Class 3 carious cavities. Specifics of dental preparation for various filling materials (cements, composite resins). 13. Creating a contact point when filling Black Class 3 carious cavities. Clinical rationale for choosing a filling material. Filling technique. 14. Black Class 5 carious cavities. Specific aspects of dental preparation for various filling materials (cements, composite resins, amalgam). Clinical rationale for choosing a filling material. Filling technique. 15. Black class 4 carious cavities. Preparation features. 16. Black class 4 carious cavities. 17. Possible errors and complications that arise during the stages of diagnosis and treatment of dental caries. 18. Methods for eliminating and preventing possible errors and complications that arise during the diagnosis and treatment of dental caries. 19. Classification of non-carious dental lesions. Current understanding of the causes and mechanisms of development of non-carious dental lesions that occur before tooth eruption. 20. Clinical presentation, diagnostics, differential diagnostics, treatment, prevention of non-carious lesions of teeth that occurred before teeth eruption. 21. Classification of non-carious dental lesions. Current understanding of the causes and mechanisms of development of non-carious dental lesions that develop after tooth eruption. 22. Clinical presentation, diagnostics, differential diagnostics, treatment, and prevention of non-carious lesions of teeth that occur after teething. 23. Anatomical and histological structure of the pulp. 24. Pulpitis: etiology, pathogenesis, semiotics.

		25. Classification of pulpitis. 26. Acute pulpitis. Clinical presentation, diagnosis, and differential diagnosis. 27. Chronic pulpitis. Clinical presentation, diagnosis, and differential diagnosis. 28. Chronic pulpitis in the acute stage. Clinical picture, diagnosis, differential ¬diagnosis. 29. Rare forms of pulpitis. Clinical presentation and diagnosis. 30. Pulp disease treatment methods: biological method (BMLP). Indications, contraindications, and procedure. 31. Treatment methods for pulp diseases: vital pulp amputation. Indications, contraindications, and procedure 32. Treatment methods for pulp diseases: vital pulp extirpation. Indications, contraindications, and procedure 33. Endodontic Treatment Algorithm. Instrumental Root Canal Treatment 34. Principles, means, and technologies for medicinal root canal treatment. Materials for root canal obturation 35. Pulp disease treatment methods: devital pulp extirpation. Indications, contraindications, and procedure 36. Pulp disease treatment methods: devital pulpectomy. Indications, contraindications, and procedure 37. Physiotherapeutic methods for diagnosis and treatment of pulpitis (laser therapy, diathermocoagulation, EOD) 38. Possible errors and complications in pulpitis treatment 39. Methods for eliminating and preventing possible errors in pulpitis treatment 40. Anatomical and histological structure of the periodontium. 41. Periodontitis: etiology, pathogenesis, semiotics 42. Classification of periodontitis. 43. Acute periodontitis. Clinical presentation, diagnosis, and differential diagnosis. 44. Chronic periodontitis. Clinical presentation, diagnosis, and differential diagnosis. 45. Treatment of acute apical periodontitis 46. Treatment of chronic apical periodontitis 47. Treatment of chronic apical periodontitis in the acute stage 48. Treatment of chronic apical periodontitis of teeth with poorly passable root canals. 49. Possible errors and complications in the treatment of periodontitis, methods for their elimination and prevention 50. Physiotherapeutic methods for the treatment of periodontitis (intracanal electrophoresis, depophoresis, laser therapy, diadynamometry , diathermocoagulation, ultrasound therapy). 51. Periodontology: concepts and terminology. Anatomical and physiological features of the periodontal tissue structure. Blood supply and innervation of the periodontium. Functions. 52. Types of periodontal biotype. 53. Classification of periodontal diseases. 54. Modern aspects of the etiology and pathogenesis of periodontal diseases. Interaction between dental plaque and the macroorganism . Dental plaque (biofilm), periodontopathogenic bacteria. Factors influencing the number of microbes and their virulence.

		55. The main types of pathological processes in the development of periodontal diseases. 56. Basic methods for examining a periodontal patient in a therapeutic dentistry clinic. Criteria for assessing the condition of periodontal tissues. Medical documentation (case history outline). 57. Additional methods of examination of a periodontal patient in a therapeutic dentistry clinic: index assessment of the condition of periodontal tissues (Fedorov- Volodkina, Schiller-Pisarev, PMA, CPITN, GI, CPI indices) 58. Periodontal tests, targeted and general radiography. Visual criteria for assessing periodontal condition when examining radiographs. 59. The importance of oral hygiene and hygiene products and items recommended for periodontal diseases in children and adolescents. 60. List the methods of anesthetizing periodontal tissues before removing dental plaque. 61. Sequence of actions when performing professional hygiene. 62. List the antiseptic agents recommended for irrigation of the oral cavity and gingival pockets. 63. Additional methods of examination of a periodontal patient in a therapeutic dentistry clinic: laboratory (microbiological, polymerase chain reaction, general blood test), functional methods of periodontal examination (rheography, photoplethysmography, polarography). 64. Microbiological studies in periodontal diseases 65. Catarrhal gingivitis: course, prevalence, severity, causes. Clinical presentation, diagnosis, differential diagnosis. 66. Hypertrophic gingivitis (edematous, fibrous forms): course; prevalence; severity, causes. Clinical features, diagnosis, differential diagnosis. 67. Ulcerative gingivitis: course, prevalence, severity, causes. Clinical presentation, diagnosis, differential diagnosis. 68. Other forms of gingivitis (climacteric, desquamative, atrophic). Clinical presentation and diagnosis. 69. Patient management protocol: "Gingivitis". 70. Periodontitis: definition, characteristics of the main symptom complex; course; prevalence; causes. Clinical features, diagnosis, differential diagnosis. 71. Mild periodontitis: clinical presentation, diagnostics, differential diagnostics. 72. Moderate periodontitis: clinical presentation, diagnostics, differential diagnostics. 73. Severe periodontitis: clinical presentation, diagnostics, differential diagnostics. 74. Patient management protocol: "chronic generalized periodontitis". 75. Periodontosis: course, prevalence, severity. Etiology, pathogenesis, clinical presentation, diagnosis, and differential diagnosis. 76. Idiopathic diseases with progressive periodontal tissue loss. Etiology, pathogenesis, clinical features, diagnosis, and differential diagnosis. 77. Periodontomas are tumors and tumor-like processes in the periodontium. Etiology, pathogenesis, clinical features, diagnosis, differential diagnosis, and treatment. 78. Comprehensive treatment of periodontal diseases: concepts of periodontal treatment; possibilities of regeneration and healing of periodontal tissues; criteria for successful treatment.

		79. Drawing up a comprehensive treatment plan and its sequence: preparation for treatment; provision of emergency care; therapeutic treatment; surgical, corrective treatment; supportive therapy and observation (goals and methods for achieving them). 80. Conservative treatment of periodontal diseases. Professional oral hygiene: purpose, sequence of stages, tools, and methodology. 81. Conservative treatment of periodontal disease. Closed curettage Periodontal pockets: purpose, stages, instruments, techniques. Single-stage curettage. 82. General treatment of periodontal diseases: indications. Systemic antimicrobial therapy: rationale, principles (schedules) for prescribing antibiotics. Advantages and disadvantages of systemic antimicrobial therapy. 83. Local antibacterial therapy in the complex treatment of periodontal diseases. Advantages and disadvantages. Medications used in periodontology: routes of administration and characteristics. 84. Physiotherapeutic methods used in the treatment of periodontal diseases: massage, aeroionotherapy, aerosol therapy, mud therapy, light therapy. 85. Physiotherapeutic methods used in the treatment of periodontal diseases: electrotherapy, ultrasound therapy. 86. Periodontal abscess: etiology, pathogenesis, clinical features, diagnostics, differential diagnostics, treatment. 87. Periodontal disease prevention: oral hygiene. Selecting oral hygiene items and products, and how to use them. 88. Medical examination of patients with periodontal diseases.

Assessment criteria

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

2. Tests for continuous and interim assessment

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
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C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)**
		1. A pathological process of the hard tissues of teeth that develops after their eruption, in which demineralization and proteolysis occur, followed by the formation of a defect under the influence of external and internal factors is 1) hypoplasia

2) erosion
3) abrasion
4) caries
5) fluorosis

2. Caries resistance is resistance to the effect of
1) acids
2) alkalis
3) cariogenic factors
4) abrasive factor
5) temperature factors

3. To determine the prevalence and severity of caries, you need to know
1) CPITN
2) PMA
3) IDJ
4) DMF
5) OHI-S

4. Causes of caries include
1) cariogenic flora, carbohydrates, low enamel resistance
2) acid resistance of enamel, proteins, low resistance of enamel
3) easily digestible carbohydrates, high enamel resistance, fats
4) high enamel resistance, carbohydrates, cariogenic flora
5) carbohydrates, organic acids, high enamel resistance

5. The pellicle of the tooth is formed by
1) collagen
2) keratin
3) accumulation of microorganisms and carbohydrates
4) saliva glycoproteins
5) polyunsaturated fatty acids

6. Immune zones of the tooth include
1) fissures and depressions on the teeth
2) cervical third of the visible crown of the tooth
3) chewing surfaces of teeth
4) cusps, equator and vestibular surfaces of teeth
5) palatal and lingual surfaces of the teeth

7. The leading role in the development of caries belongs to
1) Streptococcus salivaris
2) Streptococcus mutans
3) lactobacilli
4) Streptococcus sangius
5) Streptococcus aureus

8. Caries resistance is resistance to the action of
1) acids
2) alkalis
3) cariogenic factors
4) abrasive factor
5) temperature factors

9. Local factors influencing the occurrence of caries include
1) climatic conditions
2) changes in the quantity and quality of oral fluid
3) diet and drinking water
4) protein food residues in the oral cavity
5) hereditary and somatic diseases

10. Changes in the chemical composition of enamel during caries at the spot stage are accompanied by
1) decrease in the microhardness of the outer enamel layer more than the subsurface one
2) decrease in the microhardness of the outer enamel layer less than that of the subsurface
3) equal decrease in microhardness of the outer and subsurface layers
4) increasing the microhardness of the outer layer more than the subsurface
5) equal increase in microhardness of the outer and subsurface layers

11. Ca / P ratio in dentin is
1) 1.55
2) 1.60
3) 1.67
4) 1.75
5) 2.0

12. The destruction of hydroxyapatite crystals occurs at a ratio of CA/ P of
1) 1.67
2) 1.57
3) 4.53
4) 1.33
5) 1.25

13. Methods for diagnosing caries at the spot stage are based on
1) enamel stability
2) decreasing the permeability of enamel
3) increasing the permeability of enamel
4) changes in the organic component of enamel properties
5) changes in the inorganic component of enamel

14. Differential diagnosis of superficial caries is carried out with
1) hyperplasia
2) erosion of hard tissues
3) deep caries
4) acute pulpitis
5) chronic fibrous pulpitis

15. In case of caries media, _____ is detected under a light microscope
1) transparent zone
2) dark zone
3) zone of transparent and intact dentin
4) subsurface demineralization
5) body of the lesion

16. Preparation of a deep carious cavity includes
1) formation of vertical walls

2) formation of a flat bottom
3) formation of an uneven day depending on the depth of the lesion and the topography of the tooth cavity
4) preservation of demineralized, softened dentin at the bottom of the cavity
5) finishing the enamel edges

17. Size of the enamel pigmentation lesion requiring dynamic monitoring and remineralization is
1) 0.5-1.0 mm
2) 1.0-1.5 mm
3) 1.5-2.0 mm
4) 2.0-2.5 mm
5) 2.5-3.0 mm

18. Black's classification of carious cavities includes
1) 3 classes
2) 4 classes
3) 5 classes
4) 6 classes
5) 7 classes

19. _____ has the greatest effect on enamel maturation
1) Fluorine
2) Molybdenum
3) Strontium
4) Calcium
5) Magnesium

20. Additional methods of examination of a dental patient during a therapeutic appointment include
1) questioning
2) probing
3) radiography
4) palpation
5) percussion

21. The caries detector is used to detect
1) outer layer of carious dentin
2) secondary dentin
3) inner layer of carious dentin
4) tertiary dentin
5) irregular dentin

22. Etching (conditioning) of dentin is carried out in order to
1) enhance the bactericidal properties of composites
2) strengthen the marginal fit
3) remove the smear layer
4) form a hybrid layer
5) remineralize enamel

23. Differential diagnosis of medium caries is carried out with
1) caries in the spot stage
2) hypoplasia

3) deep caries
4) acute diffuse pulpitis
5) acute periodontitis

24. Elements of carious cavity include
1) contact surface
2) dentin
3) wall
4) cervical region
5) enamel

25. The criterion for final preparation of a carious cavity is
1) the presence of softened dentin at the bottom and walls of the carious cavity
2) the presence of pigmented dentin on the bottom and walls of the carious cavity
3) the presence of light and dense dentin on the bottom and walls of the carious cavity, stained by a caries detector
4) the presence of light dense dentin on the bottom and walls of the carious cavity without staining by a caries detector
5) the presence of pigmented dentin on the walls and softened dentin at the bottom of the carious cavity

26. Differential diagnosis of asymptomatic median caries is carried out with
1) caries in the spot stage
2) chronic granulomatous periodontitis
3) destructive form of fluorosis
4) chronic fibrous periodontitis
5) local hypoplasia

27. Hypermineralization of the dentinal tubules in moderate caries is detected in the
1) zone of decay and demineralization
2) body of the damage
3) zone of transparent and intact dentin
4) dark zone
5) zone of replacement dentin and changes in the pulp

28. Pathological effect on the pulp leads to the formation of
1) tertiary dentin
2) enamel
3) cellular cement
4) primary and secondary dentin
5) irregular dentin

29. Secondary caries is
1) resumption of the process with incomplete removal of the carious lesion
2) new carious lesions developing near a filling in a previously treated tooth
3) a medium-sized carious cavity filled with food debris and carious dentin
4) a large, deep carious cavity with a large amount of softened dentin
5) caries process in permanent teeth

30. Recurrence of caries is

1) resumption of the process with incomplete removal of the carious lesion
2) new carious lesions developing near a filling in a previously treated tooth
3) a medium-sized carious cavity filled with food debris and carious dentin
4) a large, deep carious cavity with a large amount of softened dentin
5) caries process in permanent teeth

31. Differential diagnosis of caries in the spot stage is carried out with
1) acute diffuse pulpitis
2) enamel erosion
3) acute focal pulpitis
4) fluorosis and hypoplasia
5) deep caries

32. Differential diagnosis of deep caries is carried out with
1) caries in the spot stage
2) chronic granulomatous periodontitis
3) destructive form of fluorosis
4) chronic fibrous pulpitis
5) hypoplasia

33. Bacteria-filled, dilated dentinal tubules in moderate caries are detected in the
1) zone of decay and demineralization
2) body of the damage
3) zone of transparent and intact dentin
4) dark zone
5) body of the damage

34. Element of the carious cavity facing the pulp is
1) bottom
2) dentin
3) wall
4) edge
5) cement

35. The main mineralizing protective factor of oral fluid is
1) saliva supersaturated with calcium and phosphorus ions
2) pellicle
3) bicarbonate buffer in saliva
4) increasing the viscosity of oral fluid
5) decrease in the viscosity of oral fluid

36. General factors influencing the occurrence of caries include
1) dental plaque
2) diet and drinking water
3) carbohydrate food residues in the oral cavity
4) full structure and chemical composition of hard dental tissues
5) protein food residues in the oral cavity

37. Polarization microscopy reveals a lesion in the spot stage of caries in the form of
1) oval
2) circle
3) trapezoid

4) triangle
5) rectangle

38. Caries in the spot stage is characterized by
1) enamel necrosis
2) disruption of enamel formation
3) surface demineralization
4) subsurface demineralization
5) hypermineralization

39. The basis of the modern theory of caries is
1) physical-chemical theory
2) biological theory
3) chemical-parasitic theory
4) trophoneurotic theory
5) biochemical theory

40. Cariogenic factors require ____ to be realized
1) the element of surprise in interaction
2) long interaction duration factor
3) the factor of suddenness of interaction
4) short interaction duration factor
5) interaction sequence factor

41. Dental plaque begins to accumulate _____ after brushing teeth
1) 1 hour
2) 2 hours
3) 3 hours
4) 4 hours
5) 5 hours

42. The mucoid layer covering the dental plaque protects it from
1) removal with a toothbrush
2) rinsing with water
3) mineralization
4) removal of food bolus
5) mechanical removal

43. Initial damage to enamel occurs at pH of
1) 3.5-4.5
2) 4.5-5.5
3) 5.5-6.5
4) 6.5-7.5
5) 7.5-8.0

44. The carious process develops under conditions of
1) equilibrium of re- and demineralization
2) predominance of demineralization
3) absence remineralization
4) demineralization
5) remineralization

45. Chemistry of the demineralization process for enamel, dentin, and root cementum is

1) identical
2) different

46. The loss of calcium in the carious spot reaches
1) 10-20%
2) 20-30%
3) 30-40%
4) 40-50%
5) 50-60%

47. Remineralizing therapy is a
1) filling technique
2) restoration technique
3) method of artificial saturation of enamel with mineralizing components
4) method of artificial saturation of enamel with organic components
5) method for eliminating the smear layer

48. A decrease in the pH of oral fluid as the main cause of caries as presented by the theory of
1) Entina D.E.
2) Miller W.D.
3) Lukomsky I.G.
4) Sharpenaka A.E.
5) Shatz A., Martina D.

49. Long-term interaction of cariogenic flora, easily digestible carbohydrates with low resistance of hard dental tissues leads to the development of
1) non-carious lesions
2) caries
3) periodontal diseases
4) diseases of the oral mucosa
5) dysbacteriosis

50. Maintaining enamel homeostasis occurs due to
1) blood vessels
2) nerves
3) heteroionic exchange with oral fluid
4) lymphatic vessels
5) water fluoridation

51. The diagnosis of caries in the spot stage is made on the basis of
1) probing the surface of the spot
2) EOD
3) X-ray diagnostics
4) drying and coloring the stain
5) rheodentography

52. Superficial caries is characterized by the presence of
1) white spot
2) cavities within the enamel
3) medium-sized cavities
4) deep carious cavity
5) pigmented spot

53. Caries media is characterized by the presence of
1) pigmented spot
2) carious cavity within the enamel
3) medium-sized carious cavity in enamel and dentin
4) deep carious cavity
5) white spot

54. The diagnosis of "deep caries" corresponds to the diagnosis of _____ according to ICD-10
1) enamel caries
2) dentin caries
3) cementum caries
4) pulp hyperemia
5) recurrent caries

55. Preparation of a class II carious cavity without extending it to the chewing surface is carried out in the case of the location of the carious cavity
1) below the equator of the tooth with good access
2) above the equator in the absence of access
3) below the equator in the absence of access
4) above the equator with good access
5) above and below the equator with good access

56. The tunnel method of preparing class II carious cavity allows
1) creating a contact point
2) maintaining the existing natural contact point
3) preserving the chewing surface
4) preserving pulp biology
5) preserving the contact surface of the adjacent tooth

57. Treatment of deep caries includes the stages of
1) preparation of the carious cavity
2) pharmaceutical treatment
3) application of a medicinal pad
4) placing a permanent filling
5) dentin conditioning

58. The main components of remineralizing therapy are
1) sodium, magnesium
2) iodine, bromine
3) calcium, fluorine
4) iron, strontium
5) silver, gold

59. The author of remineralizing therapy for caries in the spot stage using the deep fluoridation method is
1) Borovsky E.V.
2) Leus P.A.
3) Albrecht N.
4) Knappvost A.
5) Lukomsky I.G.

60. The effectiveness of remineralizing therapy depends on

1) patient's sex
2) oral hygiene
3) patient work regimen
4) time of therapy procedures (morning, afternoon, evening)
5) temperature regimen

61. The transition of the bottom of the carious cavity to the side wall should have the angle of
1) 40°
2) 60°
3) 90°
4) 110°
5) 120°

62. The form of preparation of class I carious cavity is determined by
1) material for permanent filling
2) features of natural depressions in which caries develops
3) medicinal treatment
4) the shape of the bur for preparation
5) the patient's emotional state

63. The enamel bevel at 45° is created for
1) increasing adhesion and masking line
2) pain relief
3) reducing the toxicity of the material
4) removing the smear layer
5) increasing the hydrophobicity of enamel

64. The correct statement is
1) "fluorides increase the enzymatic activity of bacteria"
2) "fluorides block the enzymatic activity of bacteria"
3) "fluorides do not affect the enzymatic activity of bacteria"

65. In the presence of fluorides, adhesion of microorganisms to the pellicle
1) intensifies
2) weakens
3) does not change

66. With local use of fluorides, the rate of salivation
1) increases
2) decreases
3) does not change

67. Conditions for the formation of fluorapatite include
1) acidic environment
2) alkaline environment
3) high concentrations of fluorides
4) Ca / P < 1.67
5) CA/ P >= 1.67

68. The frequency of use of 0.1% NaF solution for rinsing is
1) once a day
2) once a week
3) once every 2 weeks

69. When using fluoride films, the release of the active component occurs over a period of
1) 30-60 min
2) 1-3 hours
3) 6-8 hours
4) 15-20 hours

70. Endogenous fluoride prophylaxis is indicated when the concentration of fluorides in drinking water (in mg/liter) is
1) 0.5
2) 1, 0
3) 1.5
4) 2.0

71. Mouthwashes with an active fluoride concentration of 0.05% are used
1) once a day
2) once a week
3) once every 2 weeks
4) once a month

72. Mouthwashes with an active fluoride concentration of 0.1% are used
1) once a day
2) once a week
3) once every 2 weeks
4) once a month

73. Mouthwashes with an active fluoride concentration of 0.2% are used
1) once a day
2) once a week
3) once every 2 weeks
4) once a month

74. Rinsing the mouth with fluoride solutions to prevent caries is recommended for children aged
1) 2 years
2) 4 years
3) 6 years
4) 8 years
5) 10 years

75. _____ is used for deep fluoridation of enamel
1) Duraphat
2) Gluftored
3) Fluor Protector
4) Belogel

76. When using Gluftored for caries prevention,
1) first the liquid is applied, then the suspension
2) first the suspension is applied, then the liquid
3) the liquid and suspension are pre-mixed on glass in equal proportions
4) the order of application does not matter

77. _____ is used for deep fluoridation of enamel

1) Belak-F
2) Tooth Mousse
3) enamel sealing liquid
4) Duraphat

78. The closed fissure form is characterized by
1) the possibility of visual assessment
2) instrumental revision of the bottom
3) application of sealant without voids
4) retention of food residues

79. Preventive closure of tooth fissures during the eruption stage is called
1) invasive sealing
2) deep fluoridation
3) mineral sealing
4) presealing

80. Optimal sealant for primary molars is
1) silicate cement
2) silicophosphate cement
3) glass ionomer cement
4) composite

81. _____ is used for pre-sealing
1) Silicate cement
2) Silicophosphate cement
3) Glass ionomer cement
4) Liquid-flowing composite

82._____ is used for mineral sealing
1) R.O.C.S. Medical Minerals
2) enamel sealing liquid
3) Fluor Protector
4) Remodent

83. Optimal age for sealing the first permanent molars is
1) 9-10 years
2) 8-9 years
3) 6-7 years
4) age does not matter

84. Optimal age for sealing second permanent molars is
1) 6-7 years
2) 8-9 years
3) 9-10 years
4) 12-13 years

85. Optimal age for sealing first premolars is
1) 6-7 years
2) 8-9 years
3) 9-10 years
4) age does not matter

86. Optimal age for sealing second premolars is

1) 13-14 years old
2) 10-11 years
3) 5-6 years
4) 7-8 years

87. What active components can be added to sealants?
1) fluorides
2) phosphates
3) calcium
4) magnesium

88. Dyes are added to the sealant for
1) the patient's wishes
2) assessment of the state of the sealant in dynamics
3) combating cariogenic microflora

89. For sealing temporary teeth, the preferred materials are
1) light-curing
2) chemical curing
3) glass-ionomer cement

90. The final step in the polymer sealing technique is
1) occlusion control
2) overexposure
3) fluoridation

91. Fissure sealing of premolars is recommended to be performed at the age of
1) 6-8 years
2) 9-12 years
3) 12-14 years
4) 16-18 years
5) at any time after tooth eruption

92. Fissure sealing of second permanent molars is recommended to be performed at the age of
1) 5-6 years
2) 6-8 years
3) 9-12 years
4) 12-14 years
5) at any time after tooth eruption

93. Fissure sealing of permanent teeth (molars and premolars) is recommended to be performed _____ after eruption
1) immediately
2) in 2-3 years
3) in 4-6 years
4) in 10-12 years
5) at any point

94. Sealants are materials for
1) filling of carious cavities
2) filling of root canals
3) fissure sealing
4) insulating gaskets

		5) medicinal pads 95. An absolute contraindication to the fissure sealing method is 1) poor oral hygiene 2) narrow and deep fissures 3) incomplete eruption of the tooth crown **4) caries media** 5) increased fluoride content in drinking water 96. If it is impossible to reliably isolate the tooth from saliva when performing the fissure sealing method, the material of choice is 1) chemically cured sealant 2) light-curing sealant 3) composite filling material **4) glass ionomer cement** 5) compomer 97. Carbohydrates with the greatest cariogenic activity are the ones introduced during 1) morning feeding 2) daytime feeding 3) evening feeding **4) night feeding** 98. To what limits should individual sugar consumption be limited per year (according to the WHO, 1989)? 1) up to 20 kg **2) up to 10 kg** 3) up to 15 kg 4) up to 5 kg 99. The carbohydrate with the greatest cariogenic effect is 1) maltose 2) galactose **3) sucrose** 4) glycogen 5) starch 100. The end product of sugar metabolism is 1) dextran **2) organic acid** 3) levans 4) glycans 5) glucose
		ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)
		1. Methods for diagnosing caries include 1) vital staining method 2) luminescence 3) radiography 4) biopsy 5) bacterioscopy 2. X-ray diagnostics in the treatment of caries is used to identify

1) hidden cavity
2) determining the state of the periodontium
3) determination of the condition of bone tissue
4) determining the state of the pulp
5) determining the condition of the roots

3. Maintaining medical records is necessary
1) to record data on the patient's dental health
2) for continuity in the work of doctors
3) for planning the volume and resources of the dental service
4) for scientific work

4. Substances used for remineralizing treatment include
1) gluconate solution , sodium fluoride 2-4%
2) remodent,
3) chlorhexidine
4) urea

5. Tools used for primary inspection in the dentist's practice include
1) burnisher
2) probe
3) mirror
4) forceps
5) plugger
6) spatula

6. Minimal floor area of a dental office per one dental chair (in m2) should be
1) 14
2) 10
3) 20
4) 16
5) 25
6) 7

7. Signs of decreased caries resistance of hard dental tissues include
1) decrease in the Ca / P ratio
2) damaged organic matrix
3) a large amount of fluorapatite
4) increase in the Ca / P coefficient

8. Clinical signs of a cariogenic situation include
1) dental plaque
2) the presence of white foci of demineralization
3) the presence of white spots of fluorosis
4) bad breath

9. Requirements for repair solutions include
1) supersaturation with Ca and P ions
2) Ca / P coefficient 1.33
3) pH = 7.2-7.4
4) pH = 6.2-6.4

10. The cariogenicity of dental plaque is determined by
1) the time of its formation

2) its localization
3) predominance of anaerobes
4) predominance of aerobes

11. The production of organic acid biofilms by microorganisms leads to
1) a local increase in pH
2) a local decrease in pH
3) increase the permeability of enamel
4) a decrease in enamel permeability

ANSWER LEVEL 3 TEST QUESTIONS (MATCHING QUESTIONS)

1. Match the types of dental plaque with the group the belong to

Dental plaque group:
1. non-mineralized
2. mineralized

Types of dental plaque:
a) pellicle
b) supragingival calculus
c) soft dental plaque
d) cuticle
e) food debris
f) subgingival calculus
g) dental plaque

2. Match the pathology its course

Disease:
1. local hypoplasia
2. enamel demineralization
3. fluorosis

Cause:
a) dental plaque microorganisms
b) mechanical trauma to the tooth rudiment
c) excess carbohydrates in the diet
d) chronic fluoride intoxication
e) inflammatory process in the area of the dental bud

3. Match the pathology with the period it occurs in

Disease:
1. caries
2. fluorosis

Time of occurrence:
a) before teething
b) after teething
c) during teething

4. Match the type of bite with the number of teeth

Bite:
1. lactic
2. mixed
3. constant

Number of teeth:

		a) 10; b) 20; c) 24; d) 28-32; e) variable; 5. Match the pathology with the period it occurs in Non-carious pathology: 1. before teething 2. after teething Time of occurrence: a) hyperplasia b) necrosis c) hypoplasia d) wedge-shaped defect d) fluorosis e) erosion

Assessment criteria

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

Standardized case studies and checklists for the **B1.C.40 Therapeutic dentistry** course

Case Study No.1

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient F., 29, presented for a preventive examination and has no complaints. His medical history indicates that he was visiting a dentist for the first time in four years. Objectively, tooth 36 has a medium-depth carious cavity on the occlusal surface of the distal buccal cusp, filled with pigmented and softened dentin. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived. The oral mucosa is pale pink, and no lesions are detected.

		
Q	1	Question: Make a diagnosis
Q	2	Question: Specify the necessary additional examination methods
Q	3	Question: Conduct differential diagnostics
Q	4	Question: Make a treatment plan
Q	5	Question: Characterize the class of this carious cavity in accordance with Black's classification

Case Study No.1 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient F., 29, presented for a preventive examination and has no complaints. His medical history indicates that he was visiting a dentist for the first time in four years. Objectively, tooth 36 has a medium-depth carious cavity on the occlusal surface of the distal buccal cusp, filled with pigmented and softened dentin. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived. The oral mucosa is pale pink, and no lesions are detected.

		
Q	1	Question: Make a diagnosis
A		Correct answer: 1. Caries media. Based on: 2. Complaints (none) 3. Anamnesis (came for the first time in 4 years for a professional examination) 4. Objective data: a medium-depth carious cavity filled with pigmented and softened dentin on the occlusal surface of the distal buccal cusp. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the necessary additional examination methods
A		Correct answer: 1. X-ray 2. EOD 3. Transillumination
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Conduct differential diagnostics
A		Correct answer: 1. Superficial caries 2. Deep caries 3. Chronic periodontitis
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Make a treatment plan
A		Correct answer: 1. Antiseptic treatment of the oral cavity (chlorhexidine, hexoral) 2. Anesthesia (application anesthesia of the mucous membrane of the left branch of the lower jaw Sol. Lidocaine 5-15% aerosol. Mandibular anesthesia. Ubistersine 4 %

		3. The cavity and medical treatment (2% chlorhexidine) 4. Filling 5. Grinding and polishing (micro and macro contouring) of fillings
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Characterize the class of this carious cavity in accordance with Black's classification
A		Correct answer: 1. VI. Cavities on the cutting edge of the anterior teeth and on the cusp tips of the posterior teeth. 2. The pathology is rare. 3. In case of local form, filling is carried out without changing the bite height.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.2

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient K., 35 years old, have presented to the clinic with aching pain in her left lower jaw, which worsened in the evening. These pains had begun three days prior. 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. 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.

		
Q	1	Question: Make a preliminary diagnosis and justify it
Q	2	Question: Specify additional examination methods for this pathology
Q	3	Question: List the treatment methods possible in this clinical situation
Q	4	Question: Name the preparations for irrigation of root canals during endodontic treatment
Q	5	Question: Name the main stages of endodontic treatment

Case Study No.2 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient K., 35 years old, have presented to the clinic with aching pain in her left lower jaw, which worsened in the evening. These pains had begun three days prior. 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. 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.

		
Q	1	Question: Make a preliminary diagnosis and justify it
A		Correct answer: 1. Acute diffuse pulpitis. Based on: 2. Patient complaints (aching pain in the lower jaw on the left, intensifying in the evening). 3. Anamnesis (pain duration more than 2 days “appeared 3 days ago”). 4. Objective data (Probing of the carious cavity is painful at one point; cold test is positive, with a trace reaction). 5. Additional examination methods (X-ray: no changes in periapical tissues).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify additional examination methods for this pathology
A		Correct answer: Clinical picture: 1. EOD 2. X-ray diagnostics 3. Thermometry
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: List the treatment methods possible in this clinical situation
A		Correct answer: 1. Vital pulp extirpation 2. Devital pulp extirpation
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	1 descriptors of the correct answer have been listed
	Satisfactory	1 incomplete descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Name the preparations for irrigation of root canals during endodontic treatment
A		Correct answer: 1. Chlorine-containing preparations: 1-5% sodium hypochlorite, 2% chlorhexidine 2. 3% hydrogen peroxide solution

		3. Iodine preparations: iodinol, iodonate Nitrofuran medications: 0.5% furacilin solution, furagin 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	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Name the main stages of endodontic treatment
A		Correct answer: 1. Pain relief. 2. Placement of a cofferdam. 3. Professional dental hygiene 3.7 4. Restoration of the coronal part to create a hermetic access during root canal treatment. 5. Preparation of tooth 3.7 (topographic location of root canals). 6. Necroectomy. 7. Opening the roof of the pulp chamber 8. Excision of the pulp chamber. 9. Medicinal treatment. 10. Root canal exploration; determination of root canal length. 11. Root canal treatment using the “Step-back” method; medicinal treatment (irrigation of root canals). 12. Filling of root canals using the selected method. 13. Filling control (X-ray). 14. Restoration of the anatomical shape of the crown of tooth 3.7. 15.Treatment prognosis.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	10-14 descriptors of the correct answer have been listed
	Satisfactory	4-9 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.3

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

		Patient P., 23, presented with food getting stuck between her lower right teeth and occasional short-term pain when consuming cold and sweet drinks and food. This sensation first appeared about two months prior. Objectively: tooth 2.6 has a medium-depth carious cavity on the occlusal and mesial contact surfaces, filled with softened and pigmented dentin. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived. 
Q	1	Question: Make a preliminary diagnosis and justify it
Q	2	Question: Specify the necessary additional examination methods
Q	3	Question: Conduct differential diagnostics
Q	4	Question: Make a treatment plan
Q	5	Question: List the possible errors when filling a carious cavity in tooth 2.6

Case Study No.3 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient P., 23, presented with food getting stuck between her lower right teeth and occasional short-term pain when consuming cold and sweet drinks and food. This sensation first appeared about two months prior. Objectively: tooth 2.6 has a medium-depth carious cavity on the occlusal and mesial contact surfaces, filled with softened and pigmented dentin. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived.

		
Q	1	Question: Make a preliminary diagnosis and justify it
A		Correct answer: 1. Dentin caries (Moderate caries) p.26 Based on: 2. Patient complaints (food getting between the teeth of the lower jaw on the right, periodically occurring short-term pain when consuming cold and sweet water and food) 3. Anamnesis (The sensation first appeared about 2 months ago.) 4. Basic examination methods (on the occlusal and medial contact surfaces there is a carious cavity of medium depth, filled with softened and pigmented dentin. Probing is painful along the walls of the carious cavity. Percussion of the tooth is painless.) 5. Additional research methods (short-term reaction to cold.)
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the necessary additional examination methods
A		Correct answer: 1. EOD 2. X-ray diagnostics 3. Thermal diagnostics
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Conduct differential diagnostics
A		Correct answer: 1. Enamel caries 2. Dentin caries (or deep caries) 3. Chronic periodontitis
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Make a treatment plan
A		Correct answer: 1. Surface cleaning 2. Pain relief

		3. Cavity preparation and medicinal treatment 4. Filling 5. Grinding and polishing the filling
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: List the possible errors when filling a carious cavity in tooth 2.6
A		1. Overdrying of dentin 2. Insufficient drying of enamel 3. Excess filling material 4. Insufficient enamel filling 5. Violation of filling technique
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.4

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient Z., 37, complained of pain in the area of tooth 44 when drinking cold water. According to the patient, he is practically healthy and visits a dentist once a year. Objectively: tooth 4.4 – on the vestibular surface in the cervical area, a focus of enamel demineralization and a medium-depth carious cavity filled with pigmented and softened dentin are detected. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived.

		
Q	1	Question: Make a preliminary diagnosis and justify it
Q	2	Question: Specify the necessary additional examination methods
Q	3	Question: Conduct differential diagnostics
Q	4	Question: Make a treatment plan
Q	5	Question: Characterize the class of this carious cavity in accordance with Black's classification

Case Study No.4 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient Z., 37, complained of pain in the area of tooth 44 when drinking cold water. According to the patient, he is practically healthy and visits a dentist once a year. Objectively: tooth 4.4 – on the vestibular surface in the cervical area, a focus of enamel demineralization and a medium-depth carious cavity filled with pigmented and softened dentin are detected. Probing along the walls of the cavity is painful. Percussion of the tooth is painless. The reaction to cold is short-lived.

		
Q	1	Question: Make a preliminary diagnosis and justify it
A		Correct answer: 1. Dentin caries (Moderate caries) p.44 Based on: 2. Patient complaints (about pain when drinking cold water in the area of tooth 44.) 3. Medical history (practically healthy, visits the dentist once a year.) 4. Basic research methods (– on the vestibular surface in the cervical region, a focus of enamel demineralization and a carious cavity of medium depth filled with pigmented and softened dentin are determined. Probing is painful along the walls of the carious cavity. Percussion of the tooth is painless) 5. Additional research methods (The reaction to cold is short-term.)
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Specify the necessary additional examination methods
A		Correct answer: 1. EOD 2. X-ray diagnostics 3. Thermal diagnostics
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Conduct differential diagnostics
A		Correct answer: 1. Enamel caries 2. Dentin caries (Deep caries) 3. Chronic periodontitis 4. Wedge-shaped defect
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Make a treatment plan
A		Correct answer:

		1. Surface cleaning 2. Pain relief 3. Cavity preparation and medicinal treatment 4. Filling 5. Grinding and polishing the filling
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Characterize the class of this carious cavity in accordance with Black's classification
A		1. V class 2. Location in the cervical region 3. On the vestibular surface
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer hase been listed
R0	Fail	No descriptors of the correct answer have been listed

Case Study No.5

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient M., 26 years old, presents with unpleasant, painful sensations when biting on tooth 2.5. Palpation of the gums in the area of the root of this tooth is painful. From the anamnesis: the tooth was previously treated endodontically due to complications of caries 5 years ago. Objectively: tooth 2.5 has a filling with a poor marginal seal (chipping) on the chewing and contact surfaces; the filling has become light brown in color. Vertical percussion is painful. Thermal diagnostics: cold test is negative. Tooth mobility is grade 1. EOD 100 μA. The mucous membrane in the projection of the root apex of tooth 2.5 is edematous, hyperemic, and painful on palpation. An intraoral radiograph of tooth 2.5 shows a single root. The root canal is obturated to the radiographic apex. The filling material shadow is homogeneous throughout the entire root canal. A well-defined, rounded lesion measuring 8 x 10 mm is identified at the root apex.

		
Q	1	Question: Make a preliminary diagnosis and justify it
Q	2	Question: Indications for conservative (therapeutic) treatment
Q	3	Question: Name the main stages of endodontic treatment
Q	4	Question: Name the filling materials for temporary filling of root canals
Q	5	Question: Specify the indications for and methods of surgical treatment in this situation

Case Study No.5 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.03	Dentistry for foreign students (English-language program)
C	GPC-5	Able to examine a patient and make a diagnosis
C	GPC-6	Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient M., 26 years old, presents with unpleasant, painful sensations when biting on tooth 2.5. Palpation of the gums in the area of the root of this tooth is painful. From the anamnesis: the tooth was previously treated endodontically due to complications of caries 5 years ago. Objectively: tooth 2.5 has a filling with a poor marginal seal (chipping) on the chewing and contact surfaces; the filling has become light brown in color. Vertical percussion is painful. Thermal diagnostics: cold test is negative. Tooth mobility is grade 1. EOD 100 μA. The mucous membrane in the projection of the root apex of tooth 2.5 is edematous, hyperemic, and painful on palpation. An intraoral radiograph of tooth 2.5 shows a single root. The root canal is obturated to the radiographic apex. The filling material shadow is homogeneous

		throughout the entire root canal. A well-defined, rounded lesion measuring 8 x 10 mm is identified at the root apex. 
Q	1	Question: Make a preliminary diagnosis and justify it
A		Correct answer: 1. K04.7 Periapical abscess without fistula (Chronic granulomatous periodontitis with acute stage). Based on: 2. Patient complaints, medical history data. 3. Objective and instrumental examination (positive vertical percussion, thermodiagnostic data , EOD data, X-ray diagnostic data)
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2 descriptors of the correct answer have been listed
	Satisfactory	1 descriptor of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	2	Question: Indications for conservative (therapeutic) treatment
A		Correct answer: 1. K 04.4 – acute apical periodontitis. 2. K 04.5 – chronic apical periodontitis. 3. K 04.6 – periapical abscess with fistula. 4. K 04.7 – periapical abscess without fistula.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	3	Question: Name the main stages of endodontic treatment
A		Correct answer: Treatment of periodontitis includes the following stages: 1. Administration of local anesthesia (if necessary and in the absence of general contraindications); 2. Creating access to the tooth cavity; 3. Opening of the tooth cavity; 4. Creating direct access to root canals; 5. Passing a canal or unsealing it in previously depulped teeth; 6. Determination of the working length of the root canal and a control X-ray with a master file; 7. Root canal treatment (mechanical and medicinal); 8. Use of physical methods (as needed); 9. Filling of root canals with temporary and/or permanent filling materials;

		10. X-ray control at the stages of treatment; 11. Restoration of teeth after endodontic treatment.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	7-10 descriptors of the correct answer have been listed
	Satisfactory	3-6 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Name the filling materials for temporary filling of root canals
A		Correct answer: 1. Drugs based on antibiotics and corticosteroids. 2. Pastes based on metronidazole. 3. Pastes based on a mixture of long-acting antiseptics. 4. Pastes based on calcium hydroxide. 5. Pastes based on calcium hydroxide with iodoform
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3-4 descriptors of the correct answer have been listed
	Satisfactory	1-2 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	5	Question: Specify the indications for and methods of surgical treatment in this situation
A		Surgical treatment method: 1. Resection of the root apex (removal of the root apex along with the adjacent pathologically altered tissues). Indications for root apex resection surgery: 2. Chronic destructive processes in the periodontium that are not amenable to full endodontic treatment. 3. The need to save a tooth when full conservative therapy is impossible (root perforation or instrument breakage in the apical third of the root). 4. Excessive removal of filling material beyond the tooth root. 5. Incomplete filling of the canal due to an anatomical obstruction. 6. Odontogenic cysts. 7. Bridge prosthesis supported by the causal tooth. 8. Root fracture in the apical third.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	5-7 descriptors of the correct answer have been listed
	Satisfactory	2-4 descriptors of the correct answer have been listed
R0	Fail	No descriptors of the correct answer have been listed

4. Assessment criteria for learning outcomes

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

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

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

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

Appendix 1

Practical Skills Assessment Checklist

Practical Skill Name: Filling a carious cavity

C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment
F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies

	Action	Performed	Not Performed
1.	Check the quality of the preparation using a caries indicator on a cotton ball secured with forceps. Perform a single antiseptic treatment of the prepared cavity with an antiseptic solution	1 point	-1 point
2.	Prepare glass ionomer cement for filling: apply powder and liquid glass ionomer cement in the proportions to the mixing pad according to the instructions	1 point	-1 point
3.	Mix the filling material with a plastic spatula until the required consistency is achieved according to the instructions	1 point	-1 point
4.	Place the filling material into the cavity using a spatula. Shape the filling using a plugger and spatula	1 point	-1 point
5.	After the glass ionomer cement has hardened, check the occlusion using articulation paper, carry out a correction	1 point	-1 point
6.	Polish the filling	1 point	-1 point
	Total	6 points	

Assessment criteria:

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

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