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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.31 Orthodontics and children's prosthetics
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
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
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
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness

I	ANSWER THE QUESTIONS 1. The principle of organizing orthodontic care for children. 2. Characteristics of the period of development of the dental system from 0 to 6 months. 3. Characteristics of the development of the dental system during the period of primary dentition. 4. Characteristics of the development of the dental system during the period of mixed dentition. 5. Characteristics of the development of the dental system during the period of permanent dentition. 6. Timing of eruption of milk and permanent teeth. 7. What are the main causes of premature and delayed teething? 8. Examination methods necessary to make a final diagnosis. 9. The essence and methodology of determining the Tone index. 10. The essence and methodology of determining the Pohn index. 11. Describe the essence of the method of teleradiography of the facial skeleton. 12. Explain the importance of control diagnostic models in examining patients during an orthodontic appointment. 13. Describe the main indices used in the study of KDM. 14. Bad habits leading to the development of dental anomalies. 15. Maternal diseases leading to the development of dental anomalies. 16. Describe the two main types of swallowing. 17. What is the preparation before starting orthodontic treatment? 18. What are the main causes and mechanisms of relapses that occur during the treatment of dental anomalies? 19. Describe the retention period and retention devices. 20. What are the optimal forces used in the treatment of dental anomalies? 21. What are the morphological changes in the temporomandibular joints during orthodontic treatment? 22. Restructuring of bone tissue under the influence of orthodontic devices. 23. Restructuring of the TMJ under the influence of orthodontic devices. 24. Outline the basic rules for performing myogymnastics. 25. Explain the essence of the reduction of the dental system. 26. Treatment tactics of an orthodontist in the presence of supernumerary teeth. 27. Provide recommendations for the selection of hygiene products during treatment with fixed orthodontic appliances. 28. Surgical methods used in the treatment of dental anomalies. 29. Indications for plastic surgery of the frenulum of the tongue, age at which the plastic surgery is performed. 30. Indications for plastic surgery of the frenulum of the upper lip, age at which the plastic surgery is performed. 31. Name the groups for outpatient observation at an orthodontic appointment. 32. State the main tasks to be solved in dispensary groups I and II. 33. State the main tasks to be solved in the III and IV dispensary groups. 34. Classification of orthodontic appliances (by mechanism of action, by location). 35. Mechanical orthodontic devices, design features, operating principle, area of application.
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	36. Functional orthodontic appliances, design features, operating principle, area of application. 37. Combined action orthodontic devices, design features, operating principle, area of application. 38. What is the purpose of using preventive orthodontic appliances? 39. What force acts in mechanically acting (active) orthodontic appliances. 40. Design features of the Schwartz mouthguard, area of application. 41. Design features of the Bruckl apparatus, area of application. 42. Design features of the Persin apparatus. 43. Describe the operating principle of the Frenkel function regulators. 44. What are the components of modern edgewise technology? 45. Classification of dental anomalies (by shape, size, quantity, color, position). 46. Anomalies in the position of teeth, causes and methods of treatment. 47. Anomalies in the number of teeth, the causes of their occurrence and methods of treatment. 48. What are the main causes of abnormal position of teeth? 49. Classification of dental anomalies (by shape, size, location in three planes). 50. Angle's classification, advantages and disadvantages. 51. Persin's classification of dentoalveolar anomalies. 52. Classification of dentoalveolar anomalies of Moscow State University of Medicine and Dentistry. 53. WHO classification of dentoalveolar anomalies. 54. Name the main designs of dental prostheses used in childhood, clinical cases of their use. 55. What are the indications for dental prosthetics in children? 56. State the rationale for the need for dental prosthetics in children. 57. Principles of orthodontic treatment of deep incisor overlap, devices used. 58. Principles of orthodontic treatment of vertical incisor disocclusion. 59. Principles of orthodontic treatment of distal occlusion. 60. Principles of orthodontic treatment of mesial bite, devices used. 61. Principles of orthodontic treatment of crossbite. 62. What are the main causes of distal bite development? 63. Clinical picture of mesial bite. 64. Clinical picture of deep incisor overlap. 65. Clinical picture of distal occlusion. 66. Clinical picture of vertical incisor disocclusion. 67. Principles of prevention of distal bite. 68. Principles of prevention of mesial bite. 69. Principles of prevention of deep incisor overlap. 70. Principles of prevention of vertical incisor disocclusion. 71. What are the morphological changes in the temporomandibular joints during orthodontic treatment? 72. Restructuring of bone tissue under the influence of orthodontic devices. 73. Restructuring of the TMJ under the influence of orthodontic devices. 74. Outline the basic rules for performing myogymnastics.
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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-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
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
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)
		1. Situations in which an abnormally erupted permanent canine may be removed include 1) palatal position of the canine with a lack of space of less than 1/2 the width of the crown 2) vestibular position of the canine above the first premolar with a complete absence of space 3) vestibular eruption of the canine with localization between the lateral incisor and the first premolar with a complete absence of space 4) vestibular eruption of the canine above the lateral incisor with a complete absence of space 2. A 7-year-old child has lingually erupted lateral incisors with a space deficit of less than 1/2 the width of their crowns. The primary objective in treatment is 1) expansion of the dental arch 2) normalization of the incisal overlap 3) removal of the temporary canine tooth in order to create space 4) movement of incisors into the dental row using devices 3. Situations in which a supernumerary tooth can be preserved in a child aged 9 years include 1) the supernumerary tooth has not erupted, there is a 4 mm diastema 2) a supernumerary tooth has erupted outside the dental arch, but the position of the complementary teeth is not disturbed 3) the supernumerary tooth has not erupted, there is retention of the central incisors 4) a supernumerary tooth has erupted in place of a complete tooth, has the correct shape, the complete tooth is located outside the dental arch

4. The optimal treatment method for retention of the upper jaw canines, located obliquely vertically, is
 - 1) expansion of the dental arch with removable devices
 - 2) lengthening of the dental arch with extraoral structures
 - 3) removal of the first premolar with subsequent preservation of its place in the dental row
 - 4) **exposure of the canine crown followed by hardware treatment**
5. The causes of canine retention do NOT include
 - 1) shortening of the dental arch
 - 2) abnormal shape of the canine tooth
 - 3) **macrodontia of the canine**
 - 4) an anomaly in the canine tooth formation
6. The most informative method for determining the anomaly in the number of teeth is the
 - 1) intraoral radiograph
 - 2) teleroentgenogram
 - 3) panoramic radiograph
 - 4) **orthopantomogram**
7. Medical devices are used for
 - 1) eliminating bad habits
 - 2) **correction of the position of the teeth, the shape and size of the dental arch and normalization of the relationship of the dental arches**
 - 3) normalization of nasal breathing
 - 4) to correct the bite
8. Bruckl apparatus is used to treat
 - 1) **reverse incisal overlap**
 - 2) retrusion of the lower frontal teeth
 - 3) crowding of the lower front teeth
 - 4) protrusion of the lower frontal teeth
9. Bruckl apparatus uses
 - 1) bite pad
 - 2) **inclined plane**
 - 3) occlusal pad
 - 4) lingual pelota
10. Frankl function regulator type I is used to treat
 - 1) **distal occlusion with sagittal incisor disocclusion**
 - 2) mesial occlusion
 - 3) direct incisor occlusion
 - 4) anterior cross occlusion
11. Duration of treatment with the Frankel function regulator is
 - 1) 6 months
 - 2) 4 weeks
 - 3) **about 1.5 years**
 - 4) 2 months
12. Andresen-Haupl apparatus is used

		1) during the period of mixed dentition 2) during the period of temporary occlusion 3) in permanent dentition 4) during the period of temporary and permanent bite 13. The face bow belongs to the 1) devices with functional type of action 2) devices with mechanical type of action 3) devices with combined type of action 4) retention devices 14. To eliminate the harmful habit of thumb sucking, _____ is used 1) lingual plate with screw 2) vestibular and palatine arch 3) vestibular plate 4) face bow 15. For vertical separation of the frontal group of teeth the _____ is used 1) palatal arch 2) bite plate 3) lip bumper 4) vestibular plate 16. Indications for the use of braces are 1) any impairment in occlusion, the shape of the dental arches and the position of individual teeth during the period of temporary occlusion 2) any impairment of occlusion, the shape of the dental arches and the position of individual teeth during the period of permanent dentition 3) any impairment of occlusion, the shape of the dental arches and the position of individual teeth in all age periods of bite formation 4) any impairment of the occlusion of the shape of the dental arches and the position of individual groups of teeth 17. Reconstructive surgeries on the jaws are performed in patients 1) not younger than 14 years of age 2) at the age of 10 years 3) at any age 18. The main task of the orthodontist at the second stage of rehabilitation of children with congenital isolated cleft lip, cleft upper lip and alveolar process is to make a 1) floating obturator 2) nasal insert 3) protective plate 19. What devices are used to organize feeding of a child with isolated cleft of the soft palate, cleft of soft and hard palate? 1) elastic obturator 2) double-nipple bottle 3) a bottle nipple with a flange 4) floating obturator
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	20. The measures carried out by an orthodontist for children with congenital isolated cleft lip, cleft upper lip and alveolar process during the period of temporary occlusion include 1) tissue stripping of the temporary lateral incisor 2) removal of supernumerary teeth in the cleft area according to indications 3) elimination of obstacles to the growth and development of the jaws 4) Hotz tooth extraction 21. The orthodontic measures carried out for children with congenital isolated cleft lip, cleft upper lip and alveolar process during the period of mixed and permanent bite include 1) production of a plate with an obturating part 2) production of a nasal insert 3) correction of the position of individual teeth on the upper jaw 22. The tasks of the orthodontist at the first stage of rehabilitation of children with congenital isolated cleft of the soft palate, cleft of soft and hard palate include 1) production of protective plates 2) production of special devices for feeding the child and normalizing the swallowing function 23. The second stage of rehabilitation of children with congenital isolated cleft soft palate, cleft soft and hard palate includes 1) production of protective plates 2) production of a floating obturator 3) elimination of dental anomalies 4) control over general growth and development 24. What is the purpose of a protective plate? 1) to prevent the food bolus from entering the surgical area 2) retention of postoperative iodoform turundas 3) normalization of respiratory function 4) to form and deepen the vault of the palate after healing of the surgical wound 25. How often after completion of active hardware treatment are children with isolated cleft palates monitored? 1) once every 0.5 years until the permanent bite is fully formed 2) once every 3 months until the permanent bite is fully formed 3) once a year until the permanent bite is fully formed 26. Until what age should children with congenital isolated cleft lip and alveolar process undergo outpatient observation by an orthodontist? 1) 12–13 years 2) 18 years 3) 25 years 27. Orthopedic treatment of children and adolescents at different stages of bite formation is aimed at 1) to prevent the development of secondary deformations in the area of the dental arches 2) preventing disruption of the position of individual teeth
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		3) to restore aesthetics 28. Preventive orthodontic devices include 1) devices used for the treatment of dental anomalies 2) retention devices 3) devices that prevent the development of deformations of the teeth and jaws 4) medical devices 29. For what purpose can preventive devices be used? 1) to normalize the functions of the dental system 2) consolidation of the achieved results 3) prevention of recurrence of dentoalveolar anomalies 4) to prevent the development of dental anomalies 30. By what age the functions of the dental system are formed? 1) by 2 years 2) by 3 years 3) by 4 years 31. How often should one brush their teeth? 1) 3 times a day for 5 minutes 2) every time after meals 3) 1 time before bed 4) 2 times a day for 3 minutes 32. How often should one change the toothbrush? 1) every six months 2) every 3 months 3) every month 4) as it becomes dirty and loses rigidity 33. The purpose of early orthodontic treatment is 1) ensuring conditions for achieving balance in the action of the muscles of the lips, cheeks, and tongue 2) restoration of the defect 3) elimination of anomalies 4) prevention of anomalies 34. The change of teeth occurs in the age period of 1) 3 to 6 years 2) 4 to 10 years 3) 6 to 12 years 4) 8 to 14 years 35. The causes of the anomaly may be 1) bad habits 2) improper feeding 3) periodontal diseases 4) all of the above 36. The orthodontic ring with spacer is intended for 1) restoration of the crowns of damaged teeth; 2) restoration of a dental arch defect after early loss of temporary teeth;
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		3) prevention of displacement of teeth towards the defect after early loss of primary teeth
		ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)
		1. Micrognathia, adentia, hypodontia are characterized by 1) abnormal number of teeth 2) underdevelopment of the jaw bones 3) normal size of the jaws 4) excessive development of the jaw bones 5) backward displacement of the lower or upper jaw 6) forward displacement of the lower or upper jaw 2. Telerentgenogram points, corresponding to the angle of the lower jaw and the lower point of the sella turcica, are 1) G 2) S 3) N 4) B 5) A 6) F 3. Telerentgenogram points corresponding to the angle of the lower jaw and the connection of frontal and nasal bones, are 1) N 2) G 3) A 4) B 5) S 6) F 4. Prognathia is characterized by 1) normal size of the jaws 2) forward displacement of the lower or upper jaw 3) excessive development of the jaw bones 4) abnormal number of teeth 5) underdevelopment of the jaw bones 6) backward displacement of the lower or upper jaw 5. Retrognathia characterized by 1) normal size of the jaws 2) by shifting the lower or upper jaw backwards 3) excessive development of the jaw bones 4) abnormal number of teeth 5) underdevelopment of the jaw bones 6) forward displacement of the lower or upper jaw 6. Vertical anomalies of occlusions include 1) distal occlusion 2) open bite 3) mesial occlusion 4) deep bite 5) vestibulocclusion 6) lingual occlusion

	7. Sagittal anomalies of occlusions include 1) distal occlusion 2) open bite 3) mesial occlusion 4) deep bite 5) vestibulocclusion 6) lingual occlusion 8. Transversal anomalies of occlusions include 1) distal occlusion 2) open bite 3) mesial occlusion 4) deep bite 5) vestibulocclusion 6) lingual occlusion 9. Anomalies of dental arcs ratio include 1) macrognathia 2) micrognathia 3) distal bite 4) deep bite 5) open bite 6) mesial bite 10. Clinical diagnostic methods in orthodontics include 1) patient interview 2) Korhaus method 3) visual inspection 4) Pon's method 5) Tone Method 6) Gerlach method 11. During anthropometric examination morphological width of the face is determined usign points 1) Zy-Zy 2) go-go 3) eu-eu 4) gl-op 5) n-pr 6) pr-gn 12. Dental anomalies characteristic for patients with isolated cleft of upper lip, and cleft of alveolar process include 1) sagittal malocclusion; 2) narrowing of the upper dental arch; 3) anomalies in the shape and number of teeth, positions of the upper anterior teeth 4) deep bite 5) suproocclusion 1.3,2.3. 13. What is the goal of using protective plate after uranoplasty surgery? 1) normalization of the position of individual teeth 2) expansion of the upper dental arch 3) retention of postoperative iodoform turundas
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	4) formation and deepening of the palate 5) normalization of respiratory function 6) expansion of the upper dental arch in the frontal region
	14. Contraindications of using multibonding systems include 1) decompensated form of caries 2) no contraindications 3) systemic enamel hypoplasia 4) adentia of the central incisors 5) presence of impacted teeth 6) presence of supernumerary teeth
	15. During the period of permanent bite, orthodontic treatment of children with two-sided penetrating cleft of the lips, alveolar process, and palate includes 1) uneven expansion of the narrowed areas of the upper dental arch 2) normalization of speech function 3) correction of the position of individual teeth 4) uneven expansion of the narrowed areas of the lower dental arch 5) formation and deepening of the palate 6) normalization of respiratory function
	16. Diastema causes include 1) supernumerary tooth 2) incorrect shape of teeth 3) microdontia 4) anomaly in the number of teeth 5) delayed teething 6) short frenulum of the upper lip
	17. Biting fingers leads to 1) tongue injury 2) protrusions of the upper incisors 3) cheek biting 4) retrusion of the lower incisors 5) vestibulocclusion 6) reverse disocclusion
	18. Vertical anomalies include 1) direct incisor occlusion 2) deep incisor occlusion 3) incisor disocclusion 4) sagittal incisor disocclusion 5) disocclusion in the lateral sections 6) vestibulo-occlusion
	19. Causes of tremas on the upper jaw include 1) microdontia 2) small vestibule of the oral cavity 3) short frenulum of the upper lip 4) macrognathia 5) macrodontia 6) presence of impacted teeth
	20. Morphological classifications include classifications according to

	1) Katz 2) Simone 3) Kantorovich 4) Kalvelis 5) Andresen 6) Kalamkarova 21. At the age 4-6 years, there are 1) tight dental contacts 2) diastemas 3) physiological tremas and diastemas 4) physiological abrasion of the chewing surfaces of the teeth 5) changes in the position of teeth 6) deep occlusion
	ANSWER LEVEL 3 TEST QUESTIONS (MATCHING QUESTIONS)
	1. Match the operating principle with the intraoral device Intraoral devices: 1) Angle's apparatus 2) Angle's sliding arc 3) stationary Angle's arc 4) Angle's expansive arc 5) Ainsworth apparatus 6) single-jaw plate without screw Operating principle: A) can be used in two planes: vertical and transverse B) the design of the device includes crowns or rings on the first permanent molars (support elements), a vestibular retraction arch (active element), sleeves soldered horizontally from the oral surface (auxiliary elements) C) the device consists of a vestibular spring arch made of stainless steel wire with a diameter of 0.9 – 1.2 mm D) works in the sagittal plane. The active element, in addition to the vestibular retraction arch, is the elastic traction E) is used to move individual teeth or groups of teeth. When used simultaneously with two fixed devices with intermaxillary rubber traction, it can cause sagittal, vertical, and transverse movements. F) is used to correct the position of individual teeth, crowding, correction of the shape of dental arches, open and deep bite 2. Match the devices with their design characteristics Devices: 1) arc 2) block 3) lamellar 4) frame 5) elastic 6) functional monoblock Design characteristics: A) plastic plates with an expansion screw or spring, fixing devices and additional active elements B) four replaceable springs with a compression force of 0.4; 0.7; 1.2; 1.8 kg/cm, replaceable attachments of two types, handles and rubber inserts C) a fixed orthodontic appliance using thin, light round wire arches

- D) the device has a frame
- E) the device has a block
- F) consist of a wire arch, an acrylic base, plastic plates for placement along the dental arches in order to form the correct position of the teeth, active elements

3. Match the type of bite with the ratio of the teeth

Type of bite:

- 1) orthognathic
- 2) progenic
- 3) biprognathic
- 4) straight
- 5) physiological
- 6) open bite

Teeth ratio:

- A) the lower incisors overlap the upper ones, i.e. the ratio is the opposite of the orthognathic bite
- B) the front teeth of the upper jaw overlap the teeth of the lower row, and the degree of overlap varies from 2 to 3-4 mm, but not more than half the height of the crown
- C) there is contact between all teeth, which ensures full chewing function
- D) is characterized by a forward tilt of the anterior teeth of the upper and lower jaws, while maintaining, to a lesser extent, the overlap of the upper teeth with the lower teeth
- E) is characterized by direct contact between the cutting surfaces of the anterior teeth and the slopes of the cutting tubercles of the chewing teeth
- F) when the jaws are closed there is no contact between the upper and lower teeth

4. Match the type of dental anomaly with its characteristic

Dental anomaly:

- 1) tooth shapes
- 2) structure of hard dental tissues
- 3) position of teeth
- 4) tooth color
- 5) number of teeth
- 6) tooth size

Characteristic:

- A) oral, vestibular, distal, mesial, infraposition, supraposition, rotation around the longitudinal axis, transposition
- B) Hutchinson's, Fournier's, Pfluger's teeth
- C) partial and complete adentia (hypodontia), hyperdontia
- D) hypoplasia, hyperplasia, imperfect dentinogenesis, amelogenesis imperfecta
- E) pigmented coloration of enamel or dentin
- F) microdentia, macrodentia

5. Match the type of dental anomaly with its characteristic

Anomaly of teeth position:

- 1) vestibular
- 2) oral
- 3) mesial

		4) distal 5) supraposition 6) translocation Characteristic A) the teeth are shifted towards the central incisors B) the central incisors, canines or the entire group of front teeth are tilted towards the lip B) the teeth are higher than the others C) the central incisors, canines or the entire group of front teeth are tilted towards the palate D) the teeth are displaced from the central incisors E) the tooth erupts in an unusual place, but remains within the arch line
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Assessment criteria

“Very good” - more than 91% correct answers of questions of every level

“Good” - 81-90% correct answers of questions of every level

“Satisfactory” - 71-80% correct answers of questions of every level

“Unsatisfactory” - less than 71% correct answers of questions of every level

Standardized case studies and checklists for the **B1.C.31 Orthodontics and children's prosthetics** course

Case Study No.1

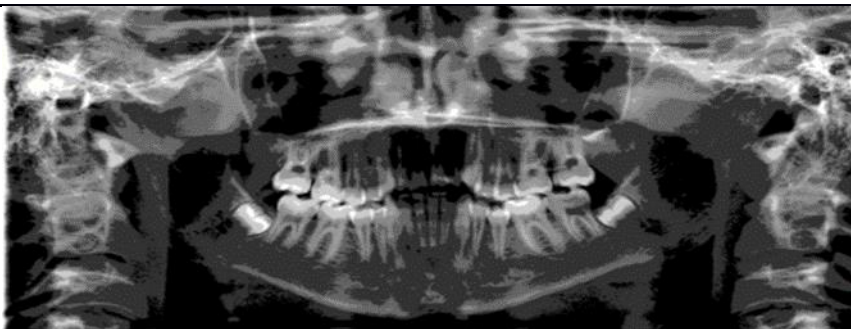
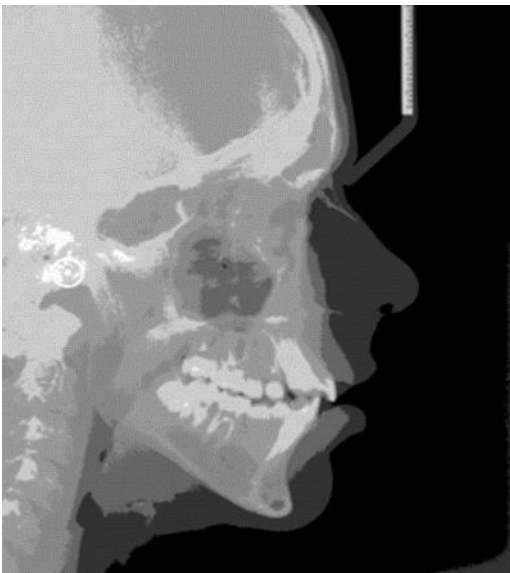
	Code	Competence description / name of labor function / name of work activity / text
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F	A/01.7	Patient examination. Making a diagnosis
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS Patient K., 17 years old, came to the clinic complaining of malpositioned teeth. Clinical picture: Results of additional research methods: • The sum of the mesiodistal dimensions of the upper incisors is 30 mm • The sum of the mesiodistal dimensions of the lower incisors is 25 mm • Parameters of dental arches:

- Width of the dental arch in the area of the upper premolars – 34 (N=35.5)
- Width of the dental arch in the area of the lower premolars – 35 (N=35.5)
- Width of the dental arch in the area of the upper molars – 40 (N=46.0)
- Width of the dental arch in the area of the lower molars – 42 (N=46.0)
- Length of the anterior segment of the upper dental arch – 15 (N=17.5)
- Length of the anterior segment of the lower dental arch – 15 (N=15.5)

Data from the teleradiography of the head in lateral projection (Appendix No. 2):

- SNA – 80° (normal $82^{\circ} \pm 2^{\circ}$)
- SNB – 80° (normal $80^{\circ} \pm 2^{\circ}$)
- ANB – 0° (normal $2^{\circ} \pm 2^{\circ}$)
- NSL/MP – 42° (normal $32^{\circ} \pm 2^{\circ}$)
- NSL/ Spp - 7° (normal $7^{\circ} \pm 2^{\circ}$)
- Spp / M P – 35° (normal $25^{\circ} \pm 2^{\circ}$)
- Spp /upper incisor – 110° (normal $115^{\circ} \pm 5^{\circ}$)
- M R/lower incisor – 95° (normal $95^{\circ} \pm 5^{\circ}$)
- interincisal angle - 125° (normal $125^{\circ} \pm 5^{\circ}$)

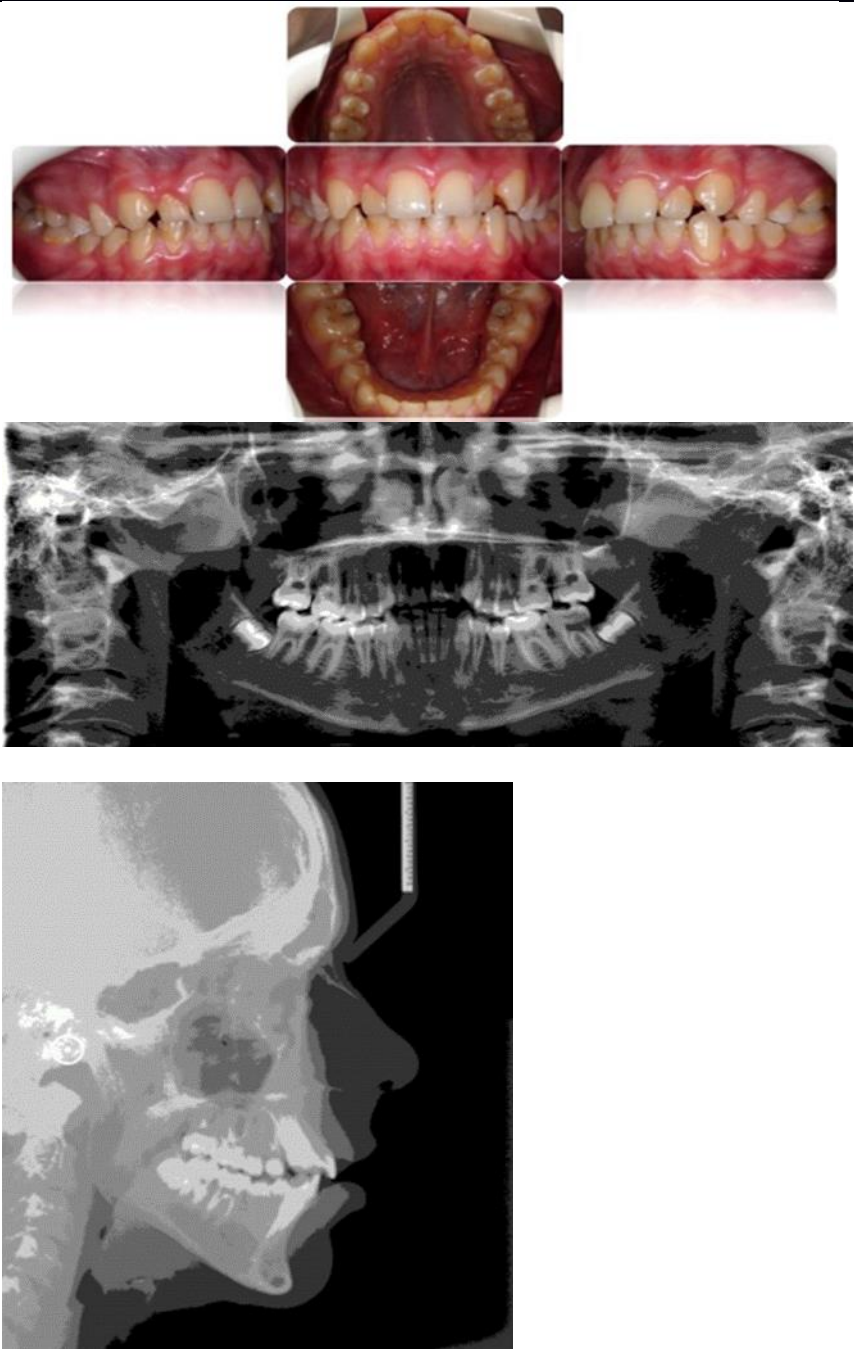


		 
Q	1	Question: Describe the objective clinical picture
Q	2	Question: Analyze the results of anthropometric research methods
Q	3	Question: Analyze the results of X-ray examination methods
Q	4	Question: Provide a detailed diagnosis
Q	5	Question: Suggest a treatment plan (comprehensive rehabilitation)

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)
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F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness

I	READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS Patient K., 17 years old, came to the clinic complaining of malpositioned teeth. Clinical picture: Results of additional research methods: • The sum of the mesiodistal dimensions of the upper incisors is 30 mm • The sum of the mesiodistal dimensions of the lower incisors is 25 mm • Parameters of dental arches: • Width of the dental arch in the area of the upper premolars – 34 (N=35.5) • Width of the dental arch in the area of the lower premolars – 35 (N=35.5) • Width of the dental arch in the area of the upper molars – 40 (N=46.0) • Width of the dental arch in the area of the lower molars – 42 (N=46.0) • Length of the anterior segment of the upper dental arch – 15 (N=17.5) • Length of the anterior segment of the lower dental arch – 15 (N=15.5) Data from the teleradiography of the head in lateral projection (Appendix No. 2): • SNA – 80° (normal $82^\circ \pm 2^\circ$) • SNB – 80° (normal $80^\circ \pm 2^\circ$) • ANB – 0° (normal $2^\circ \pm 2^\circ$) • NSL/MP – 42° (normal $32^\circ \pm 2^\circ$) • NSL/ Spp - 7° (normal $7^\circ \pm 2^\circ$) • Spp / M P – 35° (normal $25^\circ \pm 2^\circ$) • Spp /upper incisor – 110° (normal $115^\circ \pm 5^\circ$) • M R/lower incisor – 95° (normal $95^\circ \pm 5^\circ$) • interincisal angle - 125° (normal $125^\circ \pm 5^\circ$) 
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Q	1	Question: Describe the objective clinical picture
A		Correct answer: 1. The face is asymmetrical, the chin is shifted to the right, the profile is straight, the lower third of the face is enlarged, the lips are not closed at rest. 2. Tension of the mentalis muscle. 3. In the oral cavity: vestibular and supraposition 13, 1.2, 2.2, retrusion, palatal position. 2.2. in cross occlusion. 4. Crowding of the lower front teeth. The upper dental arch is V-shaped, narrowing of the upper dental arch. 5. The first molars are occluded according to Angle's class III, the occlusion of the 2.3 is according to class III, and the 1.2 is according to class II. The midline is shifted to the right.
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	2	Question: Analyze the results of anthropometric research methods
A		Correct answer: 1. The incisors are not proportional, since the Tone index = $30:25 = 1.2$ (normal 1.33). 2. Consequently, proportionally the upper incisors are smaller than the lower ones. 3. According to Pohn's measurements, there is a narrowing of the upper dental arch in the area of the premolars and molars. 4. Measurements of the length of the anterior segment according to Korhaus showed a shortening of the upper dental arch, the lower dental arch is normal
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	2-3 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: Analyze the results of X-ray examination methods
A		Correct answer: 1. On the OPTG: the rudiments of teeth 18, 28, 38, 48 are present. 2. The roots of all teeth are formed according to age. 3. According to the results of the TRG analysis in the lateral projection: mesial occlusion ($ANB = 0^\circ$) retrognathia. 4. Vertical growth type, increase in the lower third of the face, since the vertical parameters are increased ($NSL/MP = 42^\circ$, $Spp/MP = 35^\circ$).
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: Provide a detailed diagnosis
A		Correct answer: 1. According to ICD-10: K07.2 – Anomalies of dental arch relationships. Narrowing of the upper dental arch, narrowing of the lower dental arch, mesial occlusion, vertical growth pattern. in the position of teeth. Vestibule and supraposition of tooth 23. 1.2, 2.2, retrusion, palatal position. 2.2. in cross occlusion
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	5	Question: Suggest a treatment plan (comprehensive rehabilitation)
A		Correct answer: 1. Myogymnastics to strengthen the tone of the orbicularis oris muscle (exercise with a “bottle”, inflating balloons, holding a spatula). 2. Normalization of the shape and size of the upper dental arch (lengthening) followed by placement of teeth 1.2, 2.2, 2.3 in the dental arch using sequential arch changes using a full fixed appliance (brace system). Disengagement of occlusion using occlusal pads. 3. Normalization of the shape and size of the lower dental arch, elimination of crowding in the frontal region with the help of sequential replacement of arches on a full fixed appliance (brace system). 4. Normalization of sagittal occlusion using intermaxillary traction according to class III.

		5. Adjustment. 6. Retention period (retention cap for the upper row of teeth, non-removable) retainer 33-43).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 descriptors of the correct answer have 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
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
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
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS Patient Z., 17 years old, came to the clinic with complaints of incorrect positioning of teeth, disruption of their closure, and protrusion of the lower jaw forward. Clinical picture: Results of additional research methods: • The sum of the mesiodistal dimensions of the upper incisors is 30 mm • The sum of the mesiodistal dimensions of the lower incisors is 24 mm • Parameters of dental arches: • Width of the dental arch in the area of the upper premolars – 34 (N=35.5) • Width of the dental arch in the area of the lower premolars – 35 (N=35.5) • Width of the dental arch in the area of the upper molars – 40 (N=46.0) • Width of the dental arch in the area of the lower molars – 42 (N=46.0) • Length of the anterior segment of the upper dental arch – 17 (N=17.5)

		• Length of the anterior segment of the lower dental arch – 16 (N=17.5) Teleradiography data in lateral projection: • SNA – 78° (normal 82°±2°) • SNB – 85° (normal 80°±2°) • ANB – -7° (normal 2°±2°) • NSL/MP – 40° (normal 32°±2°) • NSL/ Spp – 30° (normal 7°±2°) • Spp / M P – 10° (normal 25°±2°) • Spp /upper incisor – 115° (normal 115°±5°) • M R /lower incisor – 97° (normal 95°±5°) • interincisal angle – 127° (normal 125°±5°) 
Q	1	Question: Describe the objective clinical picture
Q	2	Question: Analyze the results of anthropometric research methods
Q	3	Question: Analyze the results of X-ray examination methods
Q	4	Question: Provide a detailed diagnosis
Q	5	Question: Suggest a treatment plan (comprehensive rehabilitation)

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
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
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
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS Patient Z., 17 years old, came to the clinic with complaints of incorrect positioning of teeth, disruption of their closure, and protrusion of the lower jaw forward. Clinical picture: Results of additional research methods: • The sum of the mesiodistal dimensions of the upper incisors is 30 mm • The sum of the mesiodistal dimensions of the lower incisors is 24 mm • Parameters of dental arches: • Width of the dental arch in the area of the upper premolars – 34 (N=35.5) • Width of the dental arch in the area of the lower premolars – 35 (N=35.5) • Width of the dental arch in the area of the upper molars – 40 (N=46.0) • Width of the dental arch in the area of the lower molars – 42 (N=46.0) • Length of the anterior segment of the upper dental arch – 17 (N=17.5) • Length of the anterior segment of the lower dental arch – 16 (N=17.5) Teleradiography data in lateral projection: • SNA – 78° (normal 82°±2°) • SNB – 85° (normal 80°±2°) • ANB – -7° (normal 2°±2°) • NSL/MP – 40° (normal 32°±2°) • NSL/ Spp – 30° (normal 7°±2°) • Spp / M P – 10° (normal 25°±2°) • Spp /upper incisor – 115° (normal 115°±5°) • M R /lower incisor – 97° (normal 95°±5°) • interincisal angle – 127° (normal 125°±5°)

		
Q	1	Question: Describe the objective clinical picture
A		Correct answer: 1. The face is asymmetrical (the chin is slightly shifted to the right), the profile is concave, the chin protrudes forward, the lower third of the face is enlarged, the chin fold is smoothed out. 2. In the oral cavity: disocclusion in the lateral sections in the area of teeth 1.4, 1.5, 1.2, 1.3, 2.2, 2.3, 2.4, 2.5. Crowded position of 4.1, 4.2, 3.1, 3.2. 3. Crossbite on the left and right in the area of teeth 1.4, 1.5, 1.2, 1.3, 2.2, 2.3, 2.4, 2.5. Tortioanomaly 3.1,1.1, retrusion 4.2.3.2. 4. Narrowing/shortening of the upper dental arch and narrowing of the lower dental arch. 5. Occlusion of the first molars according to Angle's class III. Occlusion of the canines according to Angle's class III. Mesial occlusion, displacement of the central line on the lower dental arch to the right.
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	2	Question: Analyze the results of anthropometric research methods
A		Correct answer: 1. Ton index = $30/24 = 1.33$ - the cutters are proportional. 2. According to Pohn's measurements, there is a sharp narrowing of the upper and lower dental arches in the molar area.

		3. The width of the lower row of teeth is normal. 4. According to measurements of the length of the anterior segment according to Korkhaus - shortening of the anterior segment of the lower dental arch.
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: Analyze the results of X-ray examination methods
A		Correct answer: 1. On the OPG, the roots of all teeth are formed in accordance with their age. 2. TRG analysis: SNA 78 retrognathia, SNB 85 lower prognathia. 3. NSL / Mp 40, NSL / Spp vertical growth type. 4. The lower third of the face is lowered (Spp /MP=10°)
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 descriptor of the correct answer has been listed
R0	Fail	No descriptors of the correct answer have been listed
Q	4	Question: Provide a detailed diagnosis
A		Correct answer: 1. According to ICD-10: K07.2 – Anomalies of the relationships of the dental arches (Occlusion of the first molars according to Angle's class III. Closure of canines according to Angle's class III) 2.K07.3 – Anomalies of the position of teeth (Tortoanomaly 3.1, 1.1, retrusion 4.2.3.2)
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	1-2 incomplete 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	5	Question: Suggest a treatment plan (comprehensive rehabilitation)
A		Correct answer: 1. Forced expansion of the upper dental arch using a Derichsweiler appliance. Or a mechanical appliance with sagittal cutting and occlusal pads to separate the bite. 2. Normalization of the shape and size of the upper dental arch by means of sequential replacement of arches on a complete fixed appliance (brace system). 3. Normalization of the shape and size of the lower dental arch (and elimination of crowding in the frontal region using sequential replacement of arches on a complete fixed appliance (brace system). 4. Normalization of sagittal occlusion using intermaxillary traction according to class III. 5. Adjustment. 6. Retention period (retention cap for the upper row of teeth, fixed retainer 33-43).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	4-5 descriptors of the correct answer have been listed
	Satisfactory	1-3 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
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
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
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS Patient A., 13, presented to the clinic complaining of malpositioned teeth and irregular occlusion. She had previously undergone orthodontic treatment using removable orthodontic appliances. Clinical picture: Results of additional research methods: • The sum of the mesiodistal dimensions of the upper incisors is 32 mm • The sum of the mesiodistal dimensions of the lower incisors is 23 • Parameters of dental arches: • Width of the dental arch in the area of the upper premolars – 33 (norm 37.5 mm) • Width of the dental arch in the area of the lower premolars – 34 • Width of the dental arch in the area of the upper molars – 44 (standard 49.0 mm) • Width of the dental arch in the area of the lower molars – 45 • Length of the anterior segment of the upper dental arch – 16 (standard 18.5 mm) • Length of the anterior segment of the lower dental arch – 14 (normal 16.5 mm) Data from the teleradiography of the head in lateral projection: • SNA – 78 (normal 82 ± 2) • SNB – 84 (norm 80 ± 2) • ANB- -6 (normal 2 ± 2) • NSL/MP – 40 (norm 32 ± 2) • NSL/ Spp – 5 (norm 7 ± 2) • Spp /MP – 35 (normal 25 ± 2) • Spp /upper incisor – 130 (normal 115 ± 5) • MP/lower incisor – 78 (normal 95 ± 5) • interincisal angle – 152 (normal 125 ± 5)



Orthopantomogram :



Data from the teleradiography of the head in lateral projection:



Q	1	Question: Describe the objective picture
Q	2	Question: Analyze the results of anthropometric research methods
Q	3	Question: Analyze the results of X-ray examination methods
Q	4	Question: Provide a detailed diagnosis
Q	5	Question: Suggest a comprehensive rehabilitation plan for the patient

Case Study No.3 Checklist

Code	Competence description / name of labor function / name of work activity / text
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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
C	PC-3	ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients
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
F	A/03.7	Developing, implementing and monitoring the individual rehabilitation programs effectiveness
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS Patient A., 13, presented to the clinic complaining of malpositioned teeth and irregular occlusion. She had previously undergone orthodontic treatment using removable orthodontic appliances. Clinical picture: Results of additional research methods: • The sum of the mesiodistal dimensions of the upper incisors is 32 mm • The sum of the mesiodistal dimensions of the lower incisors is 23 • Parameters of dental arches: • Width of the dental arch in the area of the upper premolars – 33 (norm 37.5 mm) • Width of the dental arch in the area of the lower premolars – 34 • Width of the dental arch in the area of the upper molars – 44 (standard 49.0 mm) • Width of the dental arch in the area of the lower molars – 45 • Length of the anterior segment of the upper dental arch – 16 (standard 18.5 mm) • Length of the anterior segment of the lower dental arch – 14 (normal 16.5 mm) Data from the teleradiography of the head in lateral projection: • SNA – 78 (normal 82 ± 2) • SNB – 84 (norm 80 ± 2) • ANB- -6 (normal 2 ± 2) • NSL/MP – 40 (norm 32 ± 2) • NSL/ Spp – 5 (norm 7 ± 2) • Spp /MP – 35 (normal 25 ± 2) • Spp /upper incisor – 130 (normal 115 ± 5) • MP/lower incisor – 78 (normal 95 ± 5) • interincisal angle – 152 (normal 125 ± 5)



Orthopantomogram :



Data from the teleradiography of the head in lateral projection:



Q	1	Question: Describe the objective picture
A		Correct answer: 1. The face is asymmetrical (the chin is slightly shifted to the right), the profile is concave, the chin protrudes forward, the lower third of the face is enlarged, the chin fold is smoothed out. 2. In the oral cavity: palatal position of tooth 1.5, supra- and vestibulo - eruption of tooth 1.3, 100% space deficiency in the dental arch, mesial shift of teeth 1.4-1.6, displacement of all upper front teeth to the right, tortoanomaly of tooth 2.4, retrusion of the upper incisors, secondary

		adentia of teeth 3.4, 4.4, slight crowding of the lower incisors, their retrusion. The shape of the dental arches is unchanged. 3. Narrowing and shortening of the upper and lower dental arches. 4. Occlusion of the first molars according to Angle's class III. Mesial occlusion, reverse incisor occlusion, vertical disocclusion in the premolar area, cross occlusion in the lateral section on the right, direct occlusion along the transverse in the area of teeth 2.4, 2.5/3.5, 3.6. Shift of the central line on the upper dental arch to the right.
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: Analyze the results of anthropometric research methods
A		Correct answer: Ton index = $32/24=1.33$ – the cutters are proportional. Pohn measurements – a sharp narrowing of the upper and lower dental arches. 3. According to measurements of the length of the anterior segment according to Korkhaus – shortening of the anterior segment of the upper and lower dental arches.
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: Analyze the results of X-ray examination methods
A		Correct answer: 1. On the OPG, the rudiments of teeth 1.8, 2.8, 3.8, 4.8 are present, teeth 3.4, 4.4 are missing. The roots of all teeth are formed in accordance with age. 2. TRG analysis: gnathic form of mesial occlusion (angle ANB = -6°); vertical growth type, enlarged lower third of the face (Spp / MP = 35°); the upper incisors are in slight retrusion (Spp / upper incisor = 112°); the lower incisors are in sharp retrusion (MP / lower incisor = 78°).
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	1-2 incomplete 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: Provide a detailed diagnosis
A		Correct answer: 1. According to ICD-10: K07.2 – Anomalies of dental arch relationships. 2. K07.3 – Anomalies in the position of teeth. Vestibule o- and supra -eruption of 1.3, complete lack of space in the dental row, secondary adentia of 3.4 and 4.4. 3. Narrowing and shortening of the dental arches, mesial occlusion, reverse incisor occlusion, displacement of the center of the upper jaw to the right, cross occlusion in the lateral section on the right, direct occlusion along the transverse on the left.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	3 incomplete 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: Suggest a comprehensive rehabilitation plan for the patient
A		Correct answer: 1. Forced expansion of the upper dental arch using the Derichsweiler apparatus. 2. Normalization of the shape and size of the upper dental arch by means of sequential replacement of arches on a complete fixed appliance (brace system). 3. Freeing up space for tooth 1.3 using a release spring between teeth 1.2 – 1.4. 4. Placing the 1.3 tooth into the dental row. 5. Normalization of the shape and size of the lower dental arch (its lengthening) and elimination of crowding in the frontal region using sequential replacement of arches on a complete fixed appliance (brace system). 6. Normalization of sagittal occlusion using intermaxillary traction according to class III. 7. Adjustment. 8. Retention period (retention cap for the upper dentition, fixed retainer 3.3-4.3. 9. Dynamic monitoring of the growth of the lower jaw: if its active growth continues and the patient has aesthetic complaints about the profile, upon reaching the age of 18, carry out orthodontic treatment in combination with orthognathic surgery.
R2	Very good	All descriptors of the correct answer have been listed
R1	Good	5-7 incomplete descriptors of the correct answer have been listed
	Satisfactory	1-4 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.

Practical Skills Assessment Checklist

Practical Skill Name: Fixation of braces on the incisors of the upper/lower jaw

C	PC-2	ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment		
F	A/02.7	Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies		
	Action	Performed	Not Performed	
1.	Inform the patient about the procedure. Ask for the patient's consent. Provide the patient with a disposable drape (on the chest).	1 point	-1 point	
2.	Conduct an assessment of the plaster model of the patient's dentition	1 point	-1 point	
3.	Using a pencil, mark the boundaries of the width of the vestibular surface of the incisor	1 point	-1 point	
4.	Using a ruler, place at least two points, equidistant from the width boundaries, on the vestibular surface of the incisor	1 point	-1 point	
5.	Using a pencil, draw the long axis of the tooth along the constructed points	1 point	-1 point	
6.	Using a ruler, measure the height of the clinical crown of the incisor	1 point	-1 point	
7.	Using a pencil and a ruler, mark a point (the middle of the height of the clinical crown of the incisor)	1 point	-1 point	
8.	Remember the indicator	1 point	-1 point	
9.	Using a pencil, draw a perpendicular to the long axis of the tooth through the marked point	1 point	-1 point	
10.	Use hand sanitizer. Put on goggles. Put on a mask and examination gloves.	1 point	-1 point	
11.	Ask the patient to open his mouth	1 point	-1 point	
12.	Using a dental unit gun in the “air” mode, dry the tooth surface.	1 point	-1 point	
13.	Apply the contents of the syringe with etching gel to the area of the point that is the intersection of two lines drawn on the vestibular surface of the tooth: - in case of fixation on a natural tooth crown, use a syringe with orthophosphoric acid, - in case of fixation on a metal-ceramic tooth crown, use a syringe with hydrofluoric acid	1 point	-1 point	
14.	Using a dental unit gun in the “water” mode, remove the etching gel from the tooth surface.	1 point	-1 point	
15.	Using a dental unit gun in the “air” mode, dry the tooth surface.	1 point	-1 point	
16.	Take the applicator. Apply the bond to the applicator: - in case of fixation on a natural tooth crown, use OrthoSolo bonding - in case of fixation on a metal-ceramic tooth crown, use a bonding agent for ceramics (silane)	1 point	-1 point	
17.	Apply the bond using the applicator to the vestibular surface of the tooth, in the area of the point that is the intersection of two lines drawn on the vestibular surface of the tooth.	1 point	-1 point	
18.	Using the dental unit gun in the “air” mode, inflate the bond over the tooth surface for 1 second.	1 point	-1 point	
19.	- In case of bonding to a natural tooth crown: put on UV protection glasses and, using an LED lamp, cure the bond for 5 seconds, then remove the UV protection glasses.	1 point	-1 point	

	- In case of fixation on a metal-ceramic dental crown: dry the bond with a strong stream of air, using a gun for a dental unit in the “air” mode for 3 seconds		
20.	Open the kraft paper bag and remove the reverse-action tweezers. Remove the bracket using the reverse-action tweezers.	1 point	-1 point
21.	Take a spatula. Using the spatula, apply the dental material to the surface of the bracket base. Set the spatula aside.	1 point	-1 point
22.	Place the bracket on the tooth. Position the bracket in the center of the clinical crown of the tooth.	1 point	-1 point
23.	Open the kraft paper bag and remove the probe. Remove excess material using the probe. Set the probe aside.	1 point	-1 point
24.	Open the paper bag and remove the positioner. Find the numerical value on the positioner (the midpoint of the incisor's clinical crown height) and match it with the bracket installed on the tooth. Set the positioner aside.	1 point	-1 point
25.	Put on UV protection glasses. Using the LED lamp, expose the material to light for 40 seconds. Set the LED lamp aside. Remove the UV protection glasses.	1 point	-1 point
26.	Take off gloves	1 point	-1 point
	Total		

Assessment criteria:

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

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