

**Assessment tools for conducting attestation
in discipline «Hygiene»
for students of 2023 year of admission
under the educational programme
31.05.03. Dentistry,
form of study full-time 2025- 2026
academic year**

1. Assessment tools for conducting current certification in the discipline

1.1. Assessment tools for conducting current certification in seminar-type classes

Certification in seminar-type classes includes the following types of tasks: solving situational problems, test paper, interview on test questions.

1.1.1. Examples of situational problems

Checked indicators of achieving competence: ОПК-2.1.1., ОПК-4.1.1., ПК-5.1.1., ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.

1. The office of a surgical dentist is designed for 2 chairs, has an area of 20 m². The windows are oriented to the C (S=3 m²). Winter time of the year. During the examination of the sanitary and hygienic condition it was determined: the walls of the office are finished with glazed light-gray tiles up to the ceiling, the ceiling is white (alkyd-styrene paint), the supply and exhaust ventilation is working (supply-2, exhaust-3), the air temperature in the office is +18° C, the temperature of the outer wall is +15° C, the relative humidity is 60%, the air velocity is 0.2 m/s, KEO is 1.2%, artificial lighting is 500 lux (l.l.), and local shadowless reflectors are equipped near each chair.

Task:

1. Assess the layout, microclimate parameters, aeration, lighting of the office of a surgical dentist.
2. Give the necessary recommendations for correcting the internal environment of the room.

2. A 48-year-old woman came to the doctor with complaints of shortness of breath, heaviness during physical exertion, climbing stairs. The patient works as a teacher, leads a sedentary lifestyle, usually does not have breakfast in the morning, at work she usually has a snack of baked goods bought in the canteen, after work she has a hearty dinner, as a rule, eating fried meat with a side dish of potatoes or pasta.

Objectively: body weight is 81 kg with a height of 1.66 m, no deviations in the internal organs were found.

Task:

1. Assess the woman's nutritional status.
2. Give recommendations for nutritional correction.

1.1.2. Example of a test option

Indicators of achievement of competence to be tested: ОПК-2.1.1., ОПК-4.1.1., ПК-5.1.1., ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.

Option 1.

1. Norms of physiological and hygienic need for water.
2. Measures for the prevention of endemic fluorosis.
3. Basic methods of water purification.

1.1.3. Examples of control questions for the interview

Checked indicators of achievement of competence: ОПК-2.1.1., ОПК-4.1.1., ПК-5.1.1., ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.

1. Criteria for indoor air quality.
2. Ventilation of premises: natural, artificial, air conditioning; indications for their installation.
3. Polymeric and synthetic materials, their hygienic assessment, possible impact on humans.

1.2. Assessment tools for independent work of students

Assessment of independent work includes essay.

2. Assessment tools for conducting midterm assessment in the discipline

Midterm assessment is conducted in the form of a test.

List of questions for preparation for midterm assessment:

№	Questions for midterm assessment	Verifiable indicators of competency achievement
1	Hygiene as the main preventive discipline; the subject, goals, objectives of hygiene, the importance of hygienic measures in the activities of a dentist	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
2	Sources of atmospheric air pollution; impact on public health. Toxic factors of low intensity, the concept.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
3	The impact of biosphere pollution on human health (immediate and long-term effects of adverse effects); prevention.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
4	The main directions of atmospheric air protection.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
5	Physical properties of air, influence on heat exchange and human health.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.
6	Weather and climate, concepts. Classification of weather and climatic conditions. Hygienic aspects of acclimatization.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
7	The air quality of residential and public buildings, the impact on human health. Anthropotoxins, "sick building syndrome", concepts.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1.
8	Sources of anthropogenic indoor air pollution. Ventilation of premises.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
9	Microclimate of residential and public normalization of microclimate parameters.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
10	Natural and artificial lighting of residential and public buildings. Importance for human health.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1.,
11	Urbanization, the concept. Living conditions in modern cities, the impact on public health.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.
12	Physiological, hygienic and epidemiological significance of water	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
13	Methods of purification and disinfection of water.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.
14	Diseases of the population associated with the use of non-standard water. Prevention of water epidemics.	ОПК-2.1.1., ,ПК-5.1.1.,ПК-6.1.1.
15	Endemic diseases associated with non-standard salt and trace element composition. Prevention	ОПК-2.1.1.,ПК-5.1.1., ПК-9.1.1.
16	The content of fluoride in the drinking water of the Volgograd region. The effect on the body of low fluoride content in drinking water,	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1.,

	prevention.	ПК-9.2.1.
17	Comparative characteristics of water supply sources. Zones of sanitary protection of water sources.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1.
18	Hygienic requirements for drinking water; methods for improving its quality.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1.
19	Alimentary-dependent diseases, preventive measures.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1.
20	Principles of rational human nutrition. Balanced nutrition, the concept.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
21	Human energy balance, types of energy costs. Rationing of nutrition of persons of the 1st professional group.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.,
22	Principles of modern rationing of the population's need for energy and nutrients.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
23	Nutrition status: concept, main types, indicators for its assessment.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.
24	Proteins in human nutrition: biological role, rationing, sources.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.
25	Fats in human nutrition: biological role, rationing, sources.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.
26	Carbohydrates in human nutrition: biological role, rationing, sources.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.
27	Minerals and trace elements in nutrition: biological role, sources.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
28	Vitamins: concept, classification, biological role. Types of vitamin deficiency.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
29	Hypovitaminosis: causes, prevention.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
30	Water-soluble vitamins: biological role, rationing, sources in nutrition. Ways to preserve the vitamin value of food and ready meals.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
31	Fat-soluble vitamins: biological role, sources in nutrition	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
32	Diet, concept. The recommended diet for persons of the first professional group.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
33	The value of assessing the quality of food. Diseases transmitted through milk and meat.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
34	Nutritional and biological value of animal products.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
35	Nutritional and biological value of plant products.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
36	Nutritional and biological value of milk.. Milk quality requirements. The importance of dairy products in the formation of the dental system	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.

39	Nutritional and biological value of meat. Meat quality requirements.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
40	Nutritional and biological value of bread. Requirements for the quality of bread.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1., ПК-9.2.1.
41	The importance of vegetables and fruits in daily and dietary nutrition.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.1.1.,
42	Classification of food poisoning. Food toxicoinfection, bacterial toxicosis, pathogenesis, prevention.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1.
43	Hospital construction systems. Centralized and decentralized construction systems, advantages and disadvantages	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
44	Hygienic requirements for the ward section and ward departments from the standpoint of creating optimal conditions for patients to stay in a dental hospital.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1., ПК-9.2.1.
45	Air exchange, microclimate, lighting of the main rooms of the dental laboratory, value, rationing.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.
46	The problem of nosocomial infections; measures of nonspecific prevention, purpose and content.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1., ПК-9.1.1.
47	Sources, causes of the prevalence of nosocomial infections; the main directions of prevention.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.
48	Harmful and dangerous production factors; concept, classification.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,
49	Physical harmful production factors (heating microclimate, noise, vibration), prevention.	ОПК-2.1.1., ОПК-4.1.1., ПК-5.1.1.
50	Chemical harmful production factors, prevention.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.
51	Hygienic classification of working conditions according to the degree of harmfulness and danger. Hygienic standards of working conditions (MPC, remote control), the concept.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.
52	Factors of the labor process that characterize the severity of labor. Prevention of overwork. Recommended working position for dentists.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,
53	Factors of the labor process that characterize the intensity of labor. Recommended working hours for dentists.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1., ПК-9.2.1.
54	Occupational diseases, causes and prevention. The main occupational diseases of a dentist, prevention	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1.
55	Harmful production factors in the work of medical workers; prevention of occupational diseases.	ОПК-2.1.1., ОПК-4.1.1.,ПК-5.1.1.,ПК-6.1.1.

The midterm assessment includes the following types of tasks: interview, assessment of mastery of practical skills (solving a situational problem).

2.1. Examples of tasks for assessing mastery of practical skills (solving a situational problem).

Checked indicators of achievement of competence: OPK-2.1.1., OPK-4.1.1., PC-5.1.1., PC-6.1.1., PC-9.1.1., PC-9.2.1.

1. A 48-year-old woman came to the doctor complaining of shortness of breath, heaviness during physical exertion, and climbing stairs. The patient works as a teacher, leads a sedentary lifestyle, usually does not eat breakfast in the morning, usually has a snack at work on baked goods bought in the canteen, and has a large dinner after work, usually eating fried meat with a side dish of potatoes or pasta. Objectively: body weight is 81 kg with a height of 1.66 m, no abnormalities in the internal organs were found.

Task:

1. Assess the nutritional status of the woman.
2. Give recommendations.

2. The doctor's office of the therapeutic department of a dental clinic, designed for 3 chairs, has an area of 25 m². The windows are oriented to the north, the window area is 5 m, the area of the vents is 0.5 m². The walls are painted with blue oil paint to their full height, the ceiling is painted with white water-based paint (5% sulfur powder is added to the paint). The floor is covered with linoleum with a 10 cm overlap on the walls. General supply and exhaust ventilation operates (air exchange rate is 2 times per 1 hour for the supply and 3 times for the exhaust) and local ventilation above the table for preparing amalgam. In summer, the air temperature in the office is +24°C, relative humidity is 50%, air speed is 0.2 m/s. General artificial lighting is provided by 5 fluorescent lamps of 80 W each, local lighting is equipped at each workstation (reflector-type lamps).

Task:

1. Assess the layout, ventilation system, lighting and microclimate in the office.
2. Suggest measures to improve the quality of the internal environment of the office.

2.3. Sample ticket

Federal State Budgetary Educational Institution of Higher Education "Volgograd State Medical University" of the Ministry of Health of the Russian Federation

Department: General Hygiene and Ecology of the Institute of Health named after N.P.

Grigorenko

Discipline: Hygiene

Specialist in the specialty 31.05.03 Dentistry

Academic year: 20__-20__

Ticket No. 5

Questions:

1. Human energy balance, types of energy expenditure. Standardization of nutrition for persons of the 1st professional group.
2. Fluorine content in drinking water, standardization. Effect of low fluorine content in drinking water on the body, prevention.
3. Factors of the work process characterizing the severity of work. Prevention of overfatigue. Recommended working posture for dentists.
4. Situational task: The doctor's office of the therapeutic department of a dental clinic, designed for 3 chairs, has an area of 25 m². The windows are oriented to the northwest, the window area is 5 m, the area of the vents is 0.5 m². The walls are painted with blue oil paint to the full height, the ceiling is painted with white water-based paint (5% sulfur powder is added to the paint). The floor is covered with linoleum with a 10 cm overlap on the walls. General supply and exhaust ventilation is in operation (air exchange rate is 2 times per 1 hour for supply and 3 times for exhaust) and local ventilation is in operation above the table for preparing amalgam. In summer, the air temperature in the office is +24°C, relative humidity is 50%, air speed is 0.2 m/s. General artificial lighting is provided by 5 fluorescent lamps of 80 W each, local lighting is equipped at each workstation (reflector-type lamps).

Task:

1. Assess the layout, ventilation system, lighting and microclimate in the office.
2. Suggest measures to improve the quality of the internal environment of the office

M.П. Head of Department _____ N.I. Latyshevskaya

The full fund of assessment tools for the discipline is available in the Volgograd State Medical University's EIS at the link: <https://elearning.volgmed.ru/course/view.php?id=6637>

Considered at the meeting of the Department of General Hygiene and Ecology of the Institute of Public Health named after N.P. Grigorenko on May 23, 2025, protocol No. 10



Head of Department

N.I. Latyshevskaya