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MINISTRY OF SCIENCE AND HIGHER EDUCATION

RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education

NORTH-CAUCASUS FEDERAL UNIVERSITY

APPROVED

Assoc. Prof. Kubanov S.I.

PhD in Medical Sciences

Dean

Faculty of Medicine and Biology

ASSESSMENT TOOLS FUND FOR THE DISCIPLINE

«Introduction to Nutrition Science»

- Specialty: 31.05.01 General Medicine
- Mode of training: Full-time
- Year of commencement of studies: 2026
- Delivered in Semester, 7

Introduction

1. Intended for carrying out current control of academic performance progress and intermediate attestation in the discipline of ««Introduction to Nutrition Science»» for students of the specialty (majoring in) 31.05.01 General Medicine.
2. The ATF is an appendix to the program of the discipline «Introduction to Nutrition Science»
3. Developer(s): Ivchenko G.S., Cand. of Med.Sc. Acting Head Department of Propedeutics of Internal Diseases.
4. Expert examination of the ATF has been completed.

Expert group:

Chairperson: Kubanov S. I., Associate Professor of the Department of Surgery, Orthopedics and Traumatology.

Committee members: T. I. Dzhandarova, Head of the Department of Anatomy and Histology.
Pozdnyakova O.Yu., Professor of the Department of General Medicine

Employer organization representative: Vilensky I.L., Chief Physician of Independent CDL, LLC

Expert conclusion – the ATF allows evaluating the level of competency levels and is recommended to be employed in the educational process.

5. The validity period for the ATF shall be determined by the period of implementation of the educational program.

1. Description of Evaluation Criteria at Various Stages of Their Formation, Description of Evaluation Scales

Levels of formation of competence(s), indicator(s)	Descriptors			
	Minimum level not achieved (Unsatisfactory) 2 points	Minimum level (Satisfactory) 3 points	Intermediate level (Good) 4 points	High level (Excellent) 5 points
Competency: PC-6				
Learning outcomes for the discipline (module): Acquisition of special medical skills and their application in practical healthcare. Indicator: ID-1 PC-6 Is capable of planning measures for medical rehabilitation of the patient, determining medical indications and contraindications for carrying them out, taking into account the diagnosis in accordance with current procedures for rendering medical care, clinical recommendations (treatment protocols) on issues of medical care provision, taking into account standards of medical care	Not capable of planning measures for the patient's medical rehabilitation	Capable of planning measures for the patient's medical rehabilitation	Capable of planning measures for the patient's medical rehabilitation, determining medical indications and contraindications for carrying them out, taking into account the diagnosis following current procedures for offering medical care	Capable of planning measures for the patient's medical rehabilitation, determining medical indications and contraindications for carrying them out, taking into account the diagnosis following current procedures for offering medical care, clinical recommendations (treatment protocols) on issues of medical care provision, taking into account standards of medical care

Learning outcomes for the discipline (module): Acquisition of special medical skills and their application in practical healthcare. Indicator: ID-2 PC-6 Determines medical indications for conducting medical rehabilitation measures, including during the implementation of an individual program of rehabilitation or habilitation of disabled persons, in accordance with current procedures for rendering medical care, clinical recommendations (treatment protocols) on issues of medical care provision, taking into account standards of medical care	Does not determine medical indications for conducting medical rehabilitation measures	Determines medical indications for conducting medical rehabilitation measures	Determines medical indications for conducting medical rehabilitation measures, including during the implementation of an individual program of rehabilitation or habilitation of disabled persons, in accordance with current procedures for rendering medical care	Determines medical indications for conducting medical rehabilitation measures, including during the implementation of an individual program of rehabilitation or habilitation of disabled persons, in accordance with current procedures for rendering medical care, clinical recommendations (treatment protocols) on issues of medical care provision, taking into account standards of medical care
Competency: PC-8				
Learning outcomes for the discipline (module): Acquisition of special medical skills and their application in practical healthcare. Readiness for	Not capable of clearly presenting in popular terms	Capable of clearly presenting in popular terms	Capable of clearly presenting in popular terms the significance of risk factors	Capable of clearly presenting in popular terms the significance of risk factors in diseases of internal organs and measures for exacerbation prevention

communication in verbal and written forms. Indicator: ID-1 PC-8 Is capable of clearly presenting in popular terms the significance of risk factors in diseases of internal organs and measures for prevention of exacerbations				
Learning outcomes for the discipline (module): Acquisition of special medical skills and their application in practical healthcare. Readiness for communication in verbal and written forms. Indicator: ID-2 PC-8 Identifies characteristics, determines the forms and methods of educational activity of medical workers among patients and the population to eliminate risk factors and form skills of a healthy lifestyle	Does not identify characteristics, does not determine forms and methods	Identifies characteristics, determines forms and methods	Identifies characteristics, determines forms and methods of educational activity of medical employees	Identifies characteristics, determines the forms and methods of educational activity of medical employees among patients and the population to eliminate risk factors and shape skills of a healthy lifestyle

The evaluation of the competency formation level in the discipline is carried out on the basis of the Regulations on conducting current control of academic progress and intermediate attestation of students in higher education educational programs – Bachelor’s programs, Specialist’s programs, Master’s programs – at the Federal State Autonomous Educational Institution of Higher Education NORTH-CAUCASUS FEDERAL UNIVERSITY in its current edition.

ASSESSMENT TOOLS FOR CHECKING THE LEVEL OF COMPETENCY DEVELOPMENT

Task Number	Correct Answer	Content of the Question	Competency
		Semester, 7	
1.	d	Digestibility in digestion is: a) the degree of usefulness of a food product or nutrient for supporting the physiological functions of the human body; b) the degree to which structural components of food penetrate through cell membranes; c) the ability of food components to be acted upon by enzymes; d) the proportion of a food product or nutrient that is directly used to sustain human life.	PC-6
2.	b	Nutrition science (nutriciology) is: a) a science that studies the properties and significance of food components; b) a general concept integrating a complex of sciences whose methodology helps address population nutrition issues; c) a branch of hygiene that studies the quality and significance of food products; d) a science that studies the processes of transformation (metabolism) of food components in the body.	PC-6
3.	b	Bioavailability in the context of digestion is: a) the degree to which food components pass through the intestinal barrier; b) the extent to which a nutrient becomes available to the target tissue after administration or exposure; c) a property of a food substance determined by its susceptibility to enzyme action; d) a property of a food substance determined by its ability to be absorbed in the gastrointestinal tract.	PC-6
4.	c	Nutrients are: a) food products; b) structural elements of food; c) food substances; d) biologically active substances.	PC-6
5.	b	Choose the most correct definition of food hygiene: a) A science that studies the quality and significance of food products, their impact on the human body, and develops the structure and rational nutrition system aimed	PC-6

		at improving public health. b) A branch of hygiene that studies the quality and significance of food products, their impact on the human body, and develops the structure and rational nutrition system aimed at improving public health. c) A science about healthy, rational, therapeutic, and preventive nutrition. d) One of the hygienic sciences that studies the role of nutrition in human life processes.	
6.	d	Basal metabolism (BM) / Basal metabolic rate (BMR) — this is: a) the level of the body's energy metabolism that determines its optimal functioning; b) the level of the body's energy metabolism that determines its ability to function under conditions of food deficiency; c) the minimum amount of energy required to maintain the body's functioning in everyday life; d) the minimum amount of energy required to sustain the body's life in a state of complete rest while lying down.	PC-6
7.	a	Rational nutrition is: a) an optimally selected set of traditional food products, standardized at the population level; b) nutrition determined by the socio-economic capabilities of an individual or population; c) nutrition determined by the current level of socio-economic development of society; d) nutrition that involves using a rationally selected set of dishes and products.	PC-6
8.	b	Specialized food: a) Nutrition using special diets tailored to the individual needs of the human body. b) Diets for groups with specific living conditions and influencing factors. c) Special nutrition for relatively healthy people to prevent the impact of harmful factors. d) Dietary rations for groups with special supplements.	PC-6
9.	b	Alternative (non-conventional) nutrition — this is: a) the use of food products without thermal processing; b) the use of non-conventional diets and products in nutrition; c) the use of food components officially	PC-6

		prohibited for consumption; d) the use of dietary traditions from the ancient and antique world.	
10.	c	The nutritional value of food is: a) a concept characterizing the completeness of nutrition based on the content of proteins, fats, carbohydrates, vitamins, minerals, and biologically active substances; b) a concept reflecting the degree to which the content of proteins, fats, carbohydrates, vitamins, minerals, and biologically active substances in the diet corresponds to physiological norms; c) a concept reflecting the full range of beneficial properties of a food product, including the extent to which it meets the human body's physiological needs for essential nutrients, energy, and organoleptic qualities; d) a concept reflecting the degree to which the organoleptic properties of food correspond to the established taste preferences of the population.	PC-6
11.	a	The energy value (caloric content) of a diet (food product, nutrient) is: a) the amount of energy released from a diet (product, nutrient) in the human body to support its physiological functions; b) the amount of energy contained in the potential of a diet, food product, or nutrient; c) the amount of energy released when a diet, food product, or nutrient is burned; d) the portion of the energy from a diet, food product, or nutrient that is directly used by the body.	PC-6
12.	c,d	The concept of "dietary regimen" (or "eating pattern") includes: a) the set of foods in the diet; b) the set of nutrients in the diet; c) the timing of meals; d) the conditions under which meals are consumed.	PC-6
13.	b,c	The following can develop due to calcium deficiency: a. anaemia; b. osteoporosis; c. thyroid dysfunction; d. hepatitis.	PC-6
14.	b, d	With phosphorus deficiency, the following may develop: a. anemia	PC-6

		b. osteoporosis c. urolithiasis d. decreased liver function	
15.	a, c	The errors in the use of dietary supplements in the treatment process include: a. prescribing dietary supplements without indications; b. prescribing dietary supplements for a wide range of diseases and disorders; c. completely replacing the established therapy with dietary supplements; d. prescribing several dietary supplements simultaneously.	PC-6
16.	c,d	The main effects of using dietary supplements in disease therapy are: a. economic effect; b. replacing the conventional therapy with dietary supplements; c. correcting the dietary support for the main therapy; d. increasing the effectiveness of the main therapy.	PC-6
17.	a.b	The biological effects of iodine include: a. It supports healthy skin condition. b. It is used for the synthesis of thyroid hormones. c. It is an important component of the antioxidant system. d. It stimulates the functions of the renal tubules.	PC-6
18.	Probiotics	Microorganisms used for therapeutic purposes, as well as food products and dietary supplements containing live microbial cultures.	PC-6
19.	Micronutrients	Food substances (vitamins, minerals, and trace elements) that are present in food in very small amounts — milligrams or micrograms — are not sources of energy, but they participate in food absorption, regulation of bodily functions, and the processes of growth, adaptation, and development of the organism.	PC-6
20.	Therapeutic nutrition	Nutrition that ensures the satisfaction of the human body's physiological needs for nutrients and energy, taking into account the mechanisms of disease development and the characteristics of the course of the primary and concomitant diseases, and that fulfills preventive and therapeutic tasks.	PC-6

21.	The body's energy expenditure is associated with maintaining physiological functions determined by the work of various body systems — the nervous, cardiovascular, respiratory, digestive, and excretory systems — as well as with various types of activity. Each person's energy needs depend on sex, age, physical activity, and a number of environmental factors.	Body energy expenditure and energy requirements	PC-6
22.	Theory of balanced nutrition. Theory of adequate nutrition. Ancient theory of nutrition. Vegetarianism. Raw food diet (or rawism). Reduced-calorie diet (or restricted/reduced nutrition).	List the theories of nutrition	PC-6
23.	Body Mass Index (BMI).	The value that allows assessing the degree to which a person's weight corresponds to their height, and thus indirectly judging whether the weight is underweight, normal, or excessive.	PC-6
24.	d	Digestibility in digestion is: a) the degree of usefulness of a food product or nutrient for supporting the physiological functions of the human body; b) the degree to which structural components of food penetrate through cell membranes; c) the ability of food components to be acted upon by enzymes; d) the proportion of a food product or nutrient that is directly used to sustain human life.	PC-8
25.	b	Nutrition science (nutriciology) is: a) a science that studies the properties and	PC-8

		significance of food components; b) a general concept integrating a complex of sciences whose methodology helps address population nutrition issues; c) a branch of hygiene that studies the quality and significance of food products; d) a science that studies the processes of transformation (metabolism) of food components in the body.	
26.	b	Bioavailability in the context of digestion is: a) the degree to which food components pass through the intestinal barrier; b) the extent to which a nutrient becomes available to the target tissue after administration or exposure; c) a property of a food substance determined by its susceptibility to enzyme action; d) a property of a food substance determined by its ability to be absorbed in the gastrointestinal tract.	PC-8
27.	c	Nutrients are: a) food products; b) structural elements of food; c) food substances; d) biologically active substances.	PC-8
28.	b	Choose the most correct definition of food hygiene: a) A science that studies the quality and significance of food products, their impact on the human body, and develops the structure and rational nutrition system aimed at improving public health. b) A branch of hygiene that studies the quality and significance of food products, their impact on the human body, and develops the structure and rational nutrition system aimed at improving public health. c) A science about healthy, rational, therapeutic, and preventive nutrition. d) One of the hygienic sciences that studies the role of nutrition in human life processes.	PC-8
29.	d	Basal metabolism (BM) / Basal metabolic rate (BMR) — this is: a) the level of the body's energy metabolism that determines its optimal functioning; b) the level of the body's energy metabolism that determines its ability to function under conditions of food deficiency; c) the minimum amount of energy required to maintain the body's functioning in everyday life; d) the minimum amount of energy required	PC-8

		to sustain the body's life in a state of complete rest while lying down.	
30.	a	Rational nutrition is: a) an optimally selected set of traditional food products, standardized at the population level; b) nutrition determined by the socio-economic capabilities of an individual or population; c) nutrition determined by the current level of socio-economic development of society; d) nutrition that involves using a rationally selected set of dishes and products.	PC-8
31.	b	Specialized food: a) Nutrition using special diets tailored to the individual needs of the human body. b) Diets for groups with specific living conditions and influencing factors. c) Special nutrition for relatively healthy people to prevent the impact of harmful factors. d) Dietary rations for groups with special supplements.	PC-8
32.	b	Alternative (non-conventional) nutrition — this is: a) the use of food products without thermal processing; b) the use of non-conventional diets and products in nutrition; c) the use of food components officially prohibited for consumption; d) the use of dietary traditions from the ancient and antique world.	PC-8
33.	c	The nutritional value of food is: a) a concept characterizing the completeness of nutrition based on the content of proteins, fats, carbohydrates, vitamins, minerals, and biologically active substances; b) a concept reflecting the degree to which the content of proteins, fats, carbohydrates, vitamins, minerals, and biologically active substances in the diet corresponds to physiological norms; c) a concept reflecting the full range of beneficial properties of a food product, including the extent to which it meets the human body's physiological needs for essential nutrients, energy, and organoleptic qualities; d) a concept reflecting the degree to which the organoleptic properties of food	PC-8

		correspond to the established taste preferences of the population.	
34.	a	The energy value (caloric content) of a diet (food product, nutrient) is: a) the amount of energy released from a diet (product, nutrient) in the human body to support its physiological functions; b) the amount of energy contained in the potential of a diet, food product, or nutrient; c) the amount of energy released when a diet, food product, or nutrient is burned; d) the portion of the energy from a diet, food product, or nutrient that is directly used by the body.	PC-8
35.	c,d	The concept of “dietary regimen” (or “eating pattern”) includes: a) the set of foods in the diet; b) the set of nutrients in the diet; c) the timing of meals; d) the conditions under which meals are consumed.	PC-8
36.	b,c	The following can develop due to calcium deficiency: a. anaemia; b. osteoporosis; c. thyroid dysfunction; d. hepatitis.	PC-8
37.	b, d	With phosphorus deficiency, the following may develop: a. anemia b. osteoporosis c. urolithiasis d. decreased liver function	PC-8
38.	a, c	The errors in the use of dietary supplements in the treatment process include: a. prescribing dietary supplements without indications; b. prescribing dietary supplements for a wide range of diseases and disorders; c. completely replacing the established therapy with dietary supplements; d. prescribing several dietary supplements simultaneously.	PC-8
39.	c,d	The main effects of using dietary supplements in disease therapy are: a. economic effect; b. replacing the conventional therapy with dietary supplements; c. correcting the dietary support for the main therapy;	PC-8

		d. increasing the effectiveness of the main therapy.	
40.	a.b	The biological effects of iodine include: a. It supports healthy skin condition. b. It is used for the synthesis of thyroid hormones. c. It is an important component of the antioxidant system. d. It stimulates the functions of the renal tubules.	PC-8
41.	Probiotics	Microorganisms used for therapeutic purposes, as well as food products and dietary supplements containing live microbial cultures.	PC-8
42.	Micronutrients	Food substances (vitamins, minerals, and trace elements) that are present in food in very small amounts — milligrams or micrograms — are not sources of energy, but they participate in food absorption, regulation of bodily functions, and the processes of growth, adaptation, and development of the organism.	PC-8
43.	Therapeutic nutrition	Nutrition that ensures the satisfaction of the human body's physiological needs for nutrients and energy, taking into account the mechanisms of disease development and the characteristics of the course of the primary and concomitant diseases, and that fulfills preventive and therapeutic tasks.	PC-8
44.	The body's energy expenditure is associated with maintaining physiological functions determined by the work of various body systems — the nervous, cardiovascular, respiratory, digestive, and excretory systems — as well as with various types of activity. Each person's energy needs depend on sex, age, physical activity, and a number of environmental factors.	Body energy expenditure and energy requirements	
45.	Theory of balanced nutrition.	List the theories of nutrition	PC-8

	Theory of adequate nutrition. Ancient theory of nutrition. Vegetarianism. Raw food diet (or rawism). Reduced-calorie diet (or restricted/reduced nutrition).		
46.	Body Mass Index (BMI).	The value that allows assessing the degree to which a person's weight corresponds to their height, and thus indirectly judging whether the weight is underweight, normal, or excessive.	PC-8

2. Description of the Evaluation Scale

Within the framework of the rating system, students' academic progress in each discipline is evaluated during current control and intermediate attestation. The rating system for assessing students' knowledge is based on the use of a combination of control activities to check the covered material (checkpoints), optimally located throughout the entire time interval of studying the discipline. The principles of the rating system for assessing students' knowledge are based on the requirements described in the Regulations on the organization of the educational process based on the rating system for assessing students' knowledge at NCFU.

3. Criteria for Evaluating Competencies

The grade **Excellent** shall be awarded to a student if the theoretical content of the course has been mastered completely, without gaps; the material is presented exhaustively, consistently, clearly, and logically; the student freely copes with tasks, questions, and other types of knowledge application; uses additional material in the answer; all tasks provided for by the program are completed, and the quality of their execution is evaluated by a number of points close to the maximum; analyzes the obtained results; demonstrates independence when performing tasks.

The grade **Good** is to be awarded to a student if the theoretical content of the course is mastered completely, the necessary practical competencies are mainly formed, all educational tasks provided for by the training program are completed, and the quality of their execution is sufficiently high. The student firmly knows the material, presents it competently and strictly on the merits of the matter, without allowing significant inaccuracies in answering the question.

The grade **Satisfactory** is awarded to a student in case the theoretical content of the course has been mastered in part only, but the gaps are not of a significant nature, most of the tasks provided for by the program are completed, but contain errors, the student allows inaccuracies and insufficiently correct wording when answering the question, and violations of logical sequence are observed in the presentation of the program material.

The grade **Unsatisfactory** is awarded to a student if they do not know a significant part of the program material, allow significant errors, perform practical works with great difficulty and uncertainty, the necessary practical competencies are not formed, most of the educational tasks provided for by the training program are not completed, and the quality of their execution is evaluated by a number of points close to the minimum.

