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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

Head of the Department of Pharmacology
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"8th" of April 2026

COLLECTION OF ASSESSMENT TOOLS
B1.V.EC.04.01 Pharmacology and drug control in sports of the basic educational program of Higher Education

Specialty	**31.05.01 General Medicine (English-language program)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)
Mode of study	**Full-time**
Period of mastering the BEP	**6 years** (nominal length of study)
Department	of Pharmacology and Clinical Pharmacology

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 31.05.01 General Medicine (English-language program), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system).

(BEP HE for the 31.05.01 General Medicine (English-language program), 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**
		Mini-Case Studies
2	**Interim assessment**	**Interview Questions**

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

Tests for continuous assessment

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		**ANSWER TEST QUESTIONS**
		1. MEDICATIONS THAT ARE CONSIDERED DOPING INCLUDE 1) animal- and plant-based adaptogens 2) plant-based anabolic agents +3) central nervous system stimulants +4) sympathomimetic amines 2. A 15-YEAR-OLD BOY HAS COME TO AN APPOINTMENT TO ASK FOR PRESCRIPTION FOR ANABOLIC HORMONES ON THE ADVICE OF HIS COACH. ADVERSE EFFECTS OF ANABOLIC HORMONES DO NOT INCLUDE 1) hypertrophy of testicles +2) decreased levels of high-density lipoproteins 3) toxic hepatitis 4) early ossification of epiphyses 3. BETA-BLOCKERS ARE CONSIDERED DOPING IN +1) modern pentathlon +2) ski jumping 3) long-distance running

4) weightlifting

4. OUT OF THE FOLLOWING OINTMENTS AND GELS, _____ ARE USED IN THE 1ST DAY AFTER BRUISE/CONTUSION
1) Finalgon
+2) Venoruton
+3) heparin ointment
+4) Troxerutin

5. IN ORDER TO IMPROVE AEROBIC ENDURANCE IN COLD ENVIRONMENTS, IT IS REASONABLE TO USE INCREASED DOSES OF VITAMIN
1) B1
2) C
3) B12
+4) E

6. SUBSTANCES ALTERNATIVE TO DOPING INCLUDE
+1) plant-based anabolic agents
2) psychoactive stimulants
3) sympathomimetic amines
4) central nervous system stimulants

7. WADA CODE IS
1) a formula that doping control investigators use to identify themselves to athletes
2) secret code that athletes use to exchange information on the latest performance-enhancing drugs
+3) anti-doping rules created to ensure fair and equal sports worldwide

8. VIOLATION OF ANTI-DOPING RULES INCLUDES
+1) an athlete using or attempting to use prohibited substance or method
2) presence of prohibited substances in feces
+3) presence of prohibited substances or their metabolites in the athlete's sample
+4) refusal or failure to provide samples without due cause after receiving official notice

9. PATHOLOGIES IN WOMEN WHO TAKE ANABOLIC HORMONES THAT CAUSE RAPID VIRILIZATION INCLUDE
+1) general masculinization
+2) development of pseudohermaphroditism
+3) hair growth on the chin and upper lip
4) mammary hypertrophy

10. ACCORDING TO THE IOC RULES, PROHIBITED SUBSTANCES ARE DETECTED USING SAMPLES OF
1) feces
+2) blood
+3) urine
4) saliva

11. ADVERSE EFFECTS OF BETA-2-AGONISTS INCLUDE
1) diarrhea
+2) muscle cramps
+3) irritability
+4) excessive sweating

12. USE OF _____ IS PROHIBITED IN SELECT SPORTS

		1) supplements 2) analgesics +3) beta-blockers 4) glucocorticoids 13. ADVERSE EFFECTS OF BETA-BLOCKERS INCLUDE +1) bradycardia +2) hypotension +3) bronchoconstriction 4) tachicardia 14. ADVERSE EFFECTS OF GLUCOCORTICOIDS INCLUDE 1) headaches +2) weakness of injured muscles, bones, tendons, or ligaments +3) decreased muscle mass +4) slower or halted growth in young people 15. ADVERSE EFFECTS OF STIMULANTS INCLUDE +1) insomnia +2) dehydration +3) weight loss +4) anxiety 16. ADVERSE EFFECTS IN GENITOURINARY SYSTEM OF MEN WHO TAKE ANABOLIC HORMONES THAT INHIBIT SECRETION OF PITUARY HORMONES AND TESTOSTERONE INCLUDE +1) increased libido 2) gynecomastia 3) erectile dysfunction +4) significantly decreased production of seminal fluid 17. SUBSTANCES AND METHODS PROHIBITED DURING COMPETITIONS INCLUDE +1. glucocorticoids +2. cannabinoids 3. kinesio taping +4. stimulants

Assessment criteria

“Very good” – 91-100% correct answers of questions of every level

“Good” - 80-90% correct answers of questions of every level

“Satisfactory” - 70-79% correct answers of questions of every level

“Unsatisfactory” - less than 69% correct answers of questions of every level

Standardized case studies and checklists for **B1.V.EC.04.01 Pharmacology and drug control in sports** course

Case Study No.1

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine (English-language program)
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS**

		This medication has a direct excitatory effect on the central nervous system: regulates and stimulates excitatory processes in the cerebral cortex, respiratory and vasomotor centers, activates positive conditional reflexes and stimulates motor activity, improves cognitive and physical performance, reduces reaction time. Using this substance leads to feelings of increased alertness, temporarily reduced or eliminated fatigue and sleepiness. Respiratory rate and depth increases, especially with inhibited respiratory center. This substance also affects cardiovascular system: increases strength and rate of heart contractions (especially in large doses), raises low blood pressure (does not affect normal blood pressure).
Q	1	Questions: 1. Identify the medication.
Q	2	Question: Write a prescription for this medication.
Q	3	Question: What are the effects of this medication on the metabolism and organs of the digestive tract?
Q	4	Question: What are the indications for using this medication?
Q	5	Question: What are the contraindications for using this medication?
Q	6	Question: What is the range of safe doses of this medication?
Q	7	Question: What doses of this medication cause irregular heartbeat? What doses could trigger depression?
Q	8	Question: What is the lethal dose of this medication?
Q	9	Question: What foods and drinks contain this substance?
Q	10	Question: Can long-term use of this medication cause addiction?

Case Study No.2

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine (English-language program)
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** A weightlifter dislocated his shoulder during training session. While reducing the dislocation, the doctor has injected a medication. This caused a breathing arrest in the athlete.
Q	1	Question: What is the cause of this effect?
Q	2	Question: Outline the required medical aid in this case.

Case Study No.3

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine (English-language program)

C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** A weightlifter dislocated his shoulder during training session. The doctor was not able to reduce the dislocation due to high muscle mass of the athlete.
Q	1	Question: What muscle relaxant should be used in this case to make reducing the dislocation easier?
Q	2	Question: Explain why.

Interview questions

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine (English-language program)
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		**ANSWER THE QUESTIONS**
		1. Pharmacological means of improving recovery rate in athletes. 2. Medication use in sports. 3. Doping and anti-doping control at sports competitions. 4. Vitamin-mineral complexes. 5. Polyunsaturated fatty acid supplements. 6. Dietary fiber and prebiotics in sports. 7. Anabolic agents. 8. Amino acids. 9. Anti-catabolic agents. 10. Protein and carbohydrate-protein cocktails and supplements. 11. Means of urgent compensation of energy expenditure. 12. Substances and methods improving aerobic endurance and performance. 13. Means of protection and recovery of ligamentous apparatus of joints and bone tissue. 14. Substances and methods of losing weight. 15. Substances and methods affecting psycho-physiological reactions. 16. Substances improving eyesight (carotenoids). 17. Substances and methods of improving microcirculation. 18. Substances and methods with all-round general tonic effect and adaptogens. 19. List of prohibited substances and methods in sports. 20. Therapeutic Use Exemptions (using prohibited substances or methods for therapeutic purposes). 21. Methods of identifying doping.

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.