

AL-FARABI KAZAKH NATIONAL UNIVERSITY
Faculty of chemistry and chemical technology
**Department of chemistry and technology of organic substances, natural
compounds and polymers**

Final exam program for the discipline
OF 4223 **“Fundamentals of Pharmacology”**

Educational program:
6B072 - Technology of pharmaceutical production

Almaty 2021

Final exam program the discipline is compiled by PhD, Associate Professor, Senior lecturer **Akhayeva Tamila A** and **Satbaeva Elmira Maratovna**, PhD, Associate Professor on the department of chemistry and technology of organic substances, natural compounds and polymers

Reviewed and recommended at the meeting of the department of chemistry and technology of organic substances, natural compounds and polymers

«16» November 2021, Protocol № 4

Head of the department _____ Mun G.A.
(signature)

Introduction

Exam formats: synchronous format - the student takes the exam in real time "here and now"

Exam form –Written exam

Exam platform: Oqylyq LMS

Exam type — online

Exam control – Availability of proctoring

The exam lasts: 2 hour

On the exam in this discipline, the following types of questions are encountered (*short description of questions*)

In this discipline, you will be provided with 2 questions of the same degree of complexity

Topics for which test tasks will be drawn up (or ticket questions, etc.)

1. Introduction to the discipline. Subject, objects and methods of pharmacology. Place of discipline in the specialty "Technology of pharmaceutical production".
2. General prescription. Recipe structure. Rules for prescribing medicines. Dosage forms.
3. Normative legal acts regulating the prescription, storage and dispensing of drugs. Pharmacopoeia.
4. Pharmacokinetics of drugs. Basic concepts.
5. Pharmacodynamics of drugs
6. Anti-inflammatory drugs. The pathogenesis of the inflammatory process. Classification and mechanisms of action of anti-inflammatory drugs.9. Antiallergic and immunosuppressant drugs
7. Pathogenesis of allergic reactions of immediate and delayed type. Antiallergic drugs. Classification and mechanisms of their action.
8. Nociceptive and antinociceptive systems. Analgesics, their difference from local anesthetics. Classification and mechanisms of action.
9. Diseases of the gastrointestinal tract, pathogenesis. Medicines affecting the functions of the digestive system. Their classification and mechanisms of action
10. Drugs used in emergency conditions (anaphylactic shock, acute coronary insufficiency, bronchospasm, hypertensive crisis, hyper- and hypoglycemic coma).
11. Antimicrobial agents. Classification. Basic principles of prescribing antibacterial agents.
12. Antibiotics - principles of prescription and choice. Antibiotic resistance.
13. Synthetic antimicrobial agents.

14. Principles of prescribing and choosing antifungal and antiviral agents. Classification.

15. Etiopathogenesis of tuberculosis. Principles of tuberculosis treatment. Classification of anti-tuberculosis drugs

List of drugs to repeat before final examination

1. Epinephrine
2. Paracetamol
3. Ibuprofen
4. Diclofenac
5. Penicillin G
6. Morphine
7. Fentanyl
8. Azitromycine
9. Tobramycine
10. Itraconazole
11. Oseltamivir
12. Maraviroxi
13. Etanercept
14. Acetylsalicylic acid
15. Fluticasone
16. Ketoprofen
17. Salbutamol (Albuterol) 18. Loratadine
19. Amoxicillin/clavulanate
20. Cortisol (hydrocortisone)
21. Fexofenadine
22. Diphenhydramine

Types of questions for final exam:

. Tell the mechanism of action of the drug. Explain the mechanism of drug side effects Explain the mechanism of drug interaction

Explain the pharmacologic basis of switching one drug to another

Compare mechanism of action of two drugs with similar effect 6. Propose agonist/antagonist of hormone

Explain the mechanism of action of hormone, and how

drugs can affect it. Describe the drug – partial agonist, agonist, inverse agonist

List the additional medication, that can help in this condition

Explain how the side effects are linked with drug mechanism of action

Rules for conducting the exam form

Passing the written exam on the Oqulyq platform, proctoring will be carried out.

Therefore, in order for the testing session to be successful, the following steps must be taken immediately before the test:

- 1. provide good illumination in the room,*
- 2. check the availability and speed of the Internet connection,*
- 3. Check that the camera and microphone are turned on, and the camera lens is not covered with a plug,*
- 5. Plug the laptop into the network (battery power may reduce the performance of the device),*
- 6. Restart your computer for maximum performance,*
- 7. turn off all unnecessary programs and tabs in the browser (use Windows task Manager, which is invoked by Ctrl+Shift+Esc; close program button to Remove the task),*
- 8. remove the headphones, books and notes (unless they are permitted by the rules of the exam),*
- 9. disable duplicate monitors (if any).*

Student instruction

- 1. Log in to the Oqulyq system.*
- 2. In the window that opens, type your login password, you can log in using the Office 365 e-mail password - Student ID. Click Log in.*
- 3. Open the course you need (double-click on the course name).*
- 4. To start the exam, click on it with the left mouse button*
- 5. Provide access to the camera and microphone, as well as to screen recording*
- 6. Following the instructions on the screen, go through the identification by face (bring your head closer, turn it to the left, then to the right)*
- 7. It is forbidden to use objects that hide your identity (masks, etc.)*
- 8. When using a hijab, make sure that the main part of the face is visible to the camera.*
- 9. After clicking on the "start" button, you can proceed to the exam.*

10. The answer is made by entering text from the keyboard into the program editor

11. You can answer questions in any sequence.

12. To send an answer, click the "Send" button for each question.

You can make changes to already

Evaluation policy

the correct full answer for the first question is estimated at 50 points the

correct full answer for the second question is estimated at 50 points the

As much as possible, with the correct answer to 2 questions, the student scores 100 points.

Recommended Literature Sources for Exam Preparation

Basic & Clinical Pharmacology [Electronic resource] : collection / ed.: B. G. Katzung, A. J. Trevor. - 13th ed. - New York ; Ghicago ; San Francisco : McGraw-Hill Education, 2015. - 1837 p. - ISBN 978-0-07-182641-9