INTERNATIONAL HIGHER SCHOOL OF MEDICINE

Department of Fundamental disciplines

SYLLABUS
Basic Pharmacology

2026-2027 academic year
for students of medical faculty
2 nd course, 4 th semester, 3 groups
5 credits (150 h, including auditorial – 90 h, independent work – 60 h)

Practical classes: **Baktybekova N.B. (1-3 groups)**
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Venue: Educational and Morphological Center
Lev Tolstoy street 114/1, 5th floor

The Syllabus is considered
at the meeting of Fundamental Disciplines Department
Protocol № 1 dated 07.09.2026
Head of the department Dzh.N. Abdullaev

Course Objective: The study of the interaction of drugs with the human body: general patterns, features of pharmacokinetic and pharmacodynamic properties of groups and individual pharmacological drugs, side effects, indications and contraindications for use.

After study of the discipline the student must:

Knowledge:
• The use of drugs, disinfectants and their combinations in solving professional problems;
• Organization of qualified treatment for the patient;
• Dosage forms, routes of drug administration, types of their action and interaction;
• Main drug groups and pharmacotherapeutic actions of drugs by groups;
• Side effects of drugs and measures for their prevention and relief;
• Types of drug therapy complications;
• Types of drug interactions and types of drug incompatibility.

Skill:
• Apply drugs, disinfectants and their combinations in solving professional problems;
• Find information about medicines in available databases;
• Navigate the nomenclature of medicines;
• Prescribe medicines.

Attitude:
• Skill in the use of drugs, disinfectants and their combinations in solving professional problems;
• The ability to present information about pharmacological interventions in a way that is understandable to the patient,
• The skill of explaining to the patient the essence of pharmacological interventions;
• The ability to implement pharmacological intervention, interacting with participants in the treatment process.
• The skill of using medications in accordance with the rules for their use.
• The skill of using the regulatory framework, reference and scientific literature to solve professional problems.

Pre-requisites. Latin language, Biology, Anatomy, Normal physiology, Biochemistry.
Post-requisites. Internal Medicine, Pathology, Children's Diseases, Obstetrics and Gynecology, Dermatovenereology, Ophthalmology, Otorhinolaryngology, Neurology and Fundamentals of Neurosurgery, Phthisiopulmonology, Infectious Diseases, Psychiatry and Narcology, Anesthesiology.

THEMATIC PLAN OF LECTURES IN PHARMACOLOGY FOR 2ND YEAR STUDENTS, 4TH SEMESTER

	Theme	Time	Date
1	Introduction in chemotherapy. General principles of chemotherapy.	2 h	15.09-19.09
2	Beta-lactam antibiotics.	2 h	
3	Protein synthesis inhibitors: Macrolides.	2 h	21.09-26.09
4	Protein synthesis inhibitors: Aminoglycosides.	2 h	
5	Protein synthesis inhibitors: Tetracyclines, Chloramphenicol.	2 h	28.09-03.10
6	Sulphonamides and Cotrimoxazole.	2 h	
7	Quinolones and Urinary tract antiseptics.	2 h	05.10-10.10
8	Antiamoebic drugs.	2 h	
9	Antimalarial drugs.	2 h	12.10-17.10
10	Anthelmintic drugs.	2 h	
11	Antifungal drugs.	2 h	19.10-24.10
12	Antitubercular drugs.	2 h	
13	Anti-viral drugs. Anti-retroviral drugs.	2 h	26.10-31.10
14	Anticancer drugs: alkylating drugs, nitrosoureas, antimetabolites.	2 h	

15	Anticancer drugs: purine analogs, pyrimidine analogs, anticancer antibiotics, miscellaneous.	2 h	02.11-07.11
16	Nonsteroidal anti-inflammatory drugs (NSAIDS).	2 h	
17	Drugs for Rheumatoid arthritis and Gout.	2 h	09.11-14.11
18	Pharmacotherapy of Peptic ulcer and gastroesophageal reflux disease.	2 h	
19	Antiemetics drugs.Antidiarrheal and drugs for constipation.	2 h	16.11-21.11
20	Pharmacotherapy of Bronchial asthma. Drugs for cough.	2 h	
21	Autacoids: histamine and antihistamines, 5-Hydroxytryptamine, ergot alkaloids.	2 h	23.11-28.11
22	Introduction to Endocrine Pharmacology, anterior Pituitary hormones.	2 h	30.11-05.12
23	Thyroid hormones and antithyroid drugs.	2 h	07.12-14.12
24	Corticostroids.	2 h	21.12-26.12
25	Drugs acting on Reproductive system.	2 h	28.12-02.01
26	Insulin and oral hypoglycaemics.	2 h	04.01-09.01
27	Drugs affecting calcium balance.	2 h	11.01-16.01
28	**Clinical training**		18.01-23.01
	Total	54 h	

THEMATIC PLAN OF PRACTICAL CLASSES IN PHARMACOLOGY FOR 2ND YEAR STUDENTS, 4TH SEMESTER

	Theme	Time	Date
1	General principles of chemotherapy. Beta-lactam antibiotics.	2 h	15.09-19.09
2	Protein synthesis inhibitors.	2 h	21.09-26.09
3	Sulphonamides and Cotrimoxazole. **Unit № 1**	2 h	28.09-03.10
4	Quinolones and Urinary tract antiseptics.	2 h	05.10-10.10
5	Antiprotozoal drugs.	2 h	12.10-17.10
6	Anthelmintic drugs. Antifungal drugs.	2 h	19.10-24.10
7	Antitubercular drugs. **Unit № 2**	2 h	26.10-31.10
8	Anti-viral drugs.	2 h	02.11-07.11
9	Anticancer drugs.	2 h	09.11-14.11
10	Nonsteroidal anti-inflammatory drugs (NSAIDS). Drugs for Rheumatoid arthritis and Gout. Chelating and Immunocorrecting drugs. **Unit № 3**	2 h	16.11-21.11
11	Pharmacotherapy of Peptic ulcer and gastroesophageal reflux disease.	2 h	23.11-28.11
12	Antiemetics, antidiarrheal and drugs for constipation.	2 h	30.11-05.12
13	Pharmacotherapy of Bronchial asthma.	2 h	07.12-12.12
14	Drugs for cough. **Unit № 4**	2 h	14.12-19.12
15	Autacoids: histamine and antihistamines, 5-Hydroxytryptamine, ergot alkaloids	2 h	21.12-26.12
16	Thyroid hormones and antithyroid drugs. Corticostroids.	2 h	28.12-02.01

17	Drugs acting on Reproductive system.	2 h	04.01-09.01
18	Insulin and oral hypoglycaemics. Drugs affecting calcium balance. **Unit № 5**	2 h	11.01-16.01
19	**Clinical training**	2 h	18.01-23.01
	Total	36 h	

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

№	Theme of independent work	Hours	Date
Unit I	Preparation of an abstract on the topic: «Antibiotic resistance in the modern world. Ways to solve the problem». Preparation of an abstract on the topic: «The history of obtaining and using antibiotics». Writing recipes Solution of test Work with literature.	12 h	15.09-03.10
Unit II	Preparation of an abstract on the topic: «Antifungal agents: clinical and pharmacological characteristics, uses». Preparation of an abstract on the topic: «Modern anti-tuberculosis drugs». Writing recipes Solution of test Work with literature.	12 h	05.10-31.10
Unit III	Preparation of an abstract on the topic: «Anticancer drugs: clinical and pharmacological characteristics, Toxic reactions». Preparation of an abstract on the topic: « Antiretroviral therapy. Features». Writing recipes Solution of test Work with literature.	12 h	02.11-21.11
Unit IV	Preparation of an essay on the topic: «Drug for peptic ulcer disease». Preparation of an essay on the topic: «Biological therapy of bronchial asthma» Filling in the table Solution of situational problems Crossword solution Work with literature.	12 h	23.11-19.12
Unit V	Preparation of an abstract on the topic: «Uses of corticosteroids in acute allergic reactions». Preparation of an abstract on the topic: «The evolution of antihistamines» Writing recipes Solution of test Work with literature.	12 h	21.12-16.01

Recommended reading for the discipline:

1. Basic

1) Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015, Wolters Kluwer Health
2) Harvey R.A., Clark M.A., Finkel R. Lippincott Illustrated Review of Pharmacology. – 5 ed., 2012, Wolters Kluwer
Health
3) Trevor A.J., Katzung G., Masters S.B. Pharmacology. – 8 ed., 2009, MC Graw Hill Medical
4) Garg G.R. Pharmacology. – 2 ed.,2019, Jaypee Brothers Medical Publishers
5) Tripathy K.D. Essentials of Medical Pharmacology. – 6 ed., 2008, Jaypee Brothers
6) Tripathy K.D. Essentials of Medical Pharmacology. – 7 ed., 2015, Jaypee Brothers

7) Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019, Jaypee Brothers
8) Nawaz Sh. Essentials of Pharmacology. – 9 ed., 2014, Jaypee Brothers Medical Publishers

2. Additional

1) Garg G.R. Pharmacology. Exam Review Series. 2015, Jaypee Brothers Medical Publishers
2) Garg G.R. Review of Pharmacology.2014, Jaypee Brothers Medical Publishers
3) Katzung B.G. Basic and Clinical Pharmacology - 8th ed., 2001, MC Graw Hill Medical
4) Katzung B.G. Basic and Clinical Pharmacology - 8th ed., 2004, MC Graw Hill Medical
5) Katzung B.G. Basic and Clinical Pharmacology - 10th ed., 2007, MC Graw Hill Medical
6) Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015, MC Graw Hill Medical
7) Mycek M.J., Harvey R.A., Champe P.C. Pharmacology – 2 nd ed., 2000, Richland, Washington, United States
8) Satoskar R.S. Pharmacology and Pharmacotherapeutics. -25th ed., 2017, Elsevier Health
9) Baird S.M. USMLE Step1 Pharmacology, 2000, Kaplan Publishing

Resources of the information and telecommunication network «Internet»

1. https://pharmaceuticals.gov.in/sites/default/files/NLEM.pdf
2. https://pharmacomedicale.org/images/cnpm/CNPM_2016/katzung-pharmacology.pdf
3. https://ismexams.com

Grading policy and procedures for all types of work

For the period of studying the discipline, the student gains points for the relevant parameters (per unit):
current score - 40 points
independent work - 20 points
control score (final assessment of knowledge per unit) - 40 points
Maximum score - 100 (40+20+40)

Grading system for student's achievements

Grading criteria per discipline				
Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control- 40	0-23	24-30	31-35	36-40
Interval description	Does not know the definition and classification of side effects of drugs. He does not know the indications for use and contraindications for the use of drugs. Does not answer additional questions asked by the teacher.	Knows the definition and classification of medicines. Knowledge of pharmacokinetics and pharmacodynamics of drugs. Does not know the mechanisms of action of drugs. Knows the therapeutic and toxic doses and side effects of drugs. Knows the indications for use and contraindications for the use of drugs. Hesitantly answers additional questions asked by the teacher.	Knows the definition and classification of medicines. Knowledge of pharmacokinetics and pharmacodynamics of drugs. Knows the therapeutic and toxic doses and side effects of drugs. Does not know the mechanisms of action of drugs. Knows the indications for use and contraindications for the use of drugs. Hesitantly answers additional questions asked by the teacher.	Knows the definition and classification of medicines. Knowledge of pharmacokinetics and pharmacodynamics of drugs. Knows the mechanisms of action of drugs and can explain them. Confidently knows the therapeutic and toxic doses and side effects of drugs. Confidently knows the indications for use and contraindications for the use of medicines. Confidently answers additional questions asked by the teacher.
Independent work-20	0-11	12-15	16-17	18-20

Interval description	Doesn't do homework. Did not prepare an abstract, report Can't write prescription. Can't complete the table. Not able to solve situational problems. Does not know how to solve crossword puzzles, test tasks. Does not know how to work with visual materials.	Does not complete homework. Prepared a defective abstract, report. Wrote a recipe with two or more mistakes. Didn't complete the table. Not confident in problem solving. Has doubts when solving crossword puzzles, test tasks. Not confident with visual materials	Completely completes homework. Prepared an abstract, a report. Wrote a recipe with no more than two mistakes. Completed the table. Solves situational problems, test tasks. Solve crossword puzzles with hesitation. Weakly works with visual materials	Completely completes homework, confidently answers questions. Prepared an abstract, report, confidently answers the questions asked by the teacher. Confident in writing recipes. Confidently solves situational problems, tests Confidently fills in the table, knows how to work with visual materials, crossword puzzles
Control work (module)-40	0-23	24-30	31-35	36-40
Interval description	Less than 60% of correct answers from the total number of questions during control testing	The presence of 60% to 75% correct answers from the total number of questions during testin	The presence of 76% to 89% correct answers of the total number of questions during control testing	The presence of 90% or more correct answers from the total number of questions during control testing

Conduct Policy: (lateness, absence, behavior in the auditorium, late submission of work).
- Punctuality and completion of tasks.
- Mandatory attendance of classes.
- Attending class in a clean medical uniform.
- Eliminating conversations on a cell phone in the classroom.
- Active participation in the learning process.
- Doing homework on time.
- Academic detention at the time specified by the teacher.

For violations of the Conduct Policy, the total points for discipline might be reduced to 1-10 points.

Academic Ethics Policy.
- Be tolerant, respect the opinions of others.
- Formulate objections in the correct form.
- Constructively support feedback in all classes.
- Plagiarism and other forms of dishonest work are unacceptable. Plagiarism includes the following: the absence of references when using printed and electronic materials, quotes, thoughts and works of other authors or students.
- Prompting and cheating during tests, exams, classes is unacceptable as well as passing an exam for another student, unauthorized copying of materials.

For violations of the Academic Ethics Policy, the total points for the discipline may be reduced to 1-10/

Guidelines for the lectures of the discipline

Unit I. Introduction in chemotherapy. Antibiotics

Key questions covered in lecture №1: *Introduction in chemotherapy. General principles of chemotherapy.*

1.1. The History of Chemotherapy.

1.2. Classification of antimicrobial drugs
1.3. General Side Effects.
1.4. Antimicrobial Resistance.

Recommended reading for the lecture №1:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 688-703.
2. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp.471-482.
3. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 509-514.

Key questions covered in lecture №2: *Beta-lactam antibiotics.*

2.1. Classification of b-lactam antibiotics.
2.2. Penicillins. Classification. Mechanism of action. Uses. Side effect.
2.3. Cephalosporins. Classification. Mechanism of action. Uses. Side effect.
2.4. Carbapenems. Classification. Mechanism of action. Uses. Side effect.
2.5. Monobactam. Classification. Mechanism of action. Uses. Side effect.

Recommended reading for the lecture №2:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 716-732.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 526-537.

Key questions covered in lecture №3: *Protein synthesis inhibitors: Macrolides.*

3.1. Definition.
3.2. Indications.
3.3. Pharmacokinetics.
3.4. Pharmacodynamics.
3.5. Contraindications
3.6. Uses.
3.7. Side effects.

Recommended reading for the lecture №3:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 752-756.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 544-551.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp.499-512.

Key questions covered in lecture №4: *Protein synthesis inhibitors: Aminoglycosides.*

4.1. Definition.
4.2. Indications.
4.3. Pharmacokinetics.
4.4. Pharmacodynamics.
4.5. Contraindications
4.6. Uses.
4.7. Side effects.

Recommended reading for the lecture №4:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 743-751.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 538-543.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp.499-512.

Key questions covered in lecture №5: *Tetracyclines, Chloramphenicol.*

5.1. Definition.
5.2. Indications.
5.3. Pharmacokinetics.
5.4. Pharmacodynamics.
5.5. Contraindications
5.6. Uses.
5.7. Side effects.

Recommended reading for the lecture №5:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 733-742.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 544-551.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp.499-512.

Key questions covered in lecture №6: *Sulphonamides and Cotrimoxazole.*

6.1. Classification of Sulphonamides
6.2. Pharmacokinetics.

6.3. Pharmacodynamics.
6.4. Uses.
6.5. Toxicity of Sulphonamides. Side effects.
6.6. Cotrimoxazole. Mechanism of action.
6.7. Therapeutic uses.
6.8. Side effects.

Recommended reading for the lecture №6:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 704-715.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 515-525.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 513-524.

Unit II. Pharmacotherapy of Infections and Infestations

Key questions covered in lecture №7: *Quinolones and Urinary tract antiseptics.*

7.1. Classification of Quinolones.
7.2. Mechanism of action.
7.3. Therapeutic uses.
7.4. Side effects.
7.5. Urinary tract antiseptics. Classification. Example.
7.6. Uses. Drug interaction.
7.7. Side effects.

Recommended reading for the lecture №7:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 752-764.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.).
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 513-524

Key questions covered in lecture №8: *Antiamoebic drugs.*

8.1. Classification.
8.2. Mechanism of action.
8.3. Pharmacokinetics.
8.4. Pharmacodynamics.
8.5. Therapeutic uses.
8.6. Uses. Drug interaction.
8.7. Side effects.

Recommended reading for the lecture №8:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 836-848.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 606-620.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 547-560

Key questions covered in lecture №9: *Antimalarial drugs.*

9.1. Malaria. Types. Life Cycle
9.2. Antimalarial drugs. Classification.
9.3. 4-Aminoquinoline derivatives. Mechanism of action. Side effects etc.

Recommended reading for the lecture №9:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 836-848.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 606-620.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 547-560

Key questions covered in lecture №10: *Anthelmintic drugs.*

10.1. Types of helminths.
10.2. Anthelmintic drugs. Classification.
10.3. Benzimidazoles.
10.4. Albendazole. Uses. Pharmacokinetics and -dynamics. Adverse effects.
10.5. Mebendazole. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
10.6. Pyrantel pamoate. Uses. Adverse effects. Contraindciations.
10.7. Piperazine. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
10.8. Diethylcarbamazine.Uses. Adverse effects.

Recommended reading for the lecture №10:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 849-856.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 621-629.

3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 561-566.

Key questions covered in lecture №11: *Antifungal drugs.*

11.1. Antifungal agents.
11.2. Azoles. Spectrum of action. Mechanism of action. Examples.
11.3. Amphotericin B. Uses. Side effects. Examples.
11.4. Flucytosine. Uses. Pharmacokinetics and -dynamics. Adverse effects.

Recommended reading for the lecture №11:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 787-797.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 596-605.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 535-546.

Key questions covered in lecture №12: *Antitubercular drugs.*

12.1. Tuberculosis.
12.2. Antitubercular drugs. First-Line and Second-Line drugs.
12.3. 4-Aminoquinoline derivatives. Mechanism of action. Side effects etc.
12.4. Isoniazid. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
12.5. Rifampin. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
12.6. Pyrazinamide. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
12.7. Ethambutol. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
12.8. Second-Line anti TB drugs. Examples.

Recommended reading for the lecture №12:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 780-786.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 557-566.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 525-534.

Unit III. Pharmacotherapy of Viral Infections, Neoplastic Diseases, and Inflammatory Disorders

Key questions covered in lecture №13: *Anti-viral drugs. Anti-retroviral drugs.*

13.1. Classification of viral infection.
13.2. Anti-viral drugs. Classification. Examples.
13.3. Anti-herpes agents. Pharmacokinetics and -dynamics.Side effects. Uses. Examples.
13.4. Anti-cytomegalovirus agents. Examples.
13.5. Anti-retroviral treatment. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
13.6. Anti-influenza agents. Examples.

Recommended reading for the lecture №13:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 798-815.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 567-695.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 567-586.

Key questions covered in lecture №14: *Anticancer drugs: alkylating drugs, nitrosoureas, antimetabolites.*

14.1. Anticancer drugs. Classification.
14.2. Alkylating agents. Uses. Toxicity. Examples.
14.3. Nitrosoureas. Uses. Toxicity. Examples.
14.4. Antimetabolites. Uses. Toxicity. Examples.

Recommended reading for the lecture №14:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 857-877.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 638-656.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 587-618.

Key questions covered in lecture №15: *Anticancer drugs: purine analogs, pyrimidine analogs, anticancer antibiotics, miscellaneous.*

15.1. Anticancer drugs. Classification.
15.2. Antibiotics. Uses. Toxicity. Examples.
15.3. Pyrimidine analogs. Uses. Toxicity. Examples.
15.4. Purine analogs. Uses. Toxicity. Examples.
15.5. Miscellaneous.

Recommended reading for the lecture №15:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 857-877.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.

3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 587-618.

Key questions covered in lecture №16: *Nonsteroidal anti-inflammatory drugs (NSAIDS).*
16.1. NSAIDS. Routes of drug administration. Classification.
16.2. Mechanism of action. Pharmacokinetics and -dynamics.
16.3. Uses.
16.4. Adverse effects.
16.5. Paracetamol.
Recommended reading for the lecture №16:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 192-209
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 447-470.

Key questions covered in lecture №17: *Drugs for Rheumatoid arthritis and Gout.*
17.1. Rheumatoid arthritis.
17.2. Drugs for Rheumatoid arthritis. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
17.3. Gout.
17.4. Drugs for Gout. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
Recommended reading for the lecture №17:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 210-217.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 447-470.

Unit IV. Pharmacotherapy of Respiratory and Gastrointestinal Disorders
Key questions covered in lecture №18: *Pharmacotherapy of Peptic ulcer and gastroesophageal reflux disease.*
18.1. Peptic ulcer. Differential diagnosis of duodenal and gastric ulcers. GERD. H.pylori.
18.2. Pharmacotherapy of Peptic ulcer. Triple and Quarter therapy.
18.3. H2 antagonists. Pharmacokinetics and -dynamics. Uses. Adverse effects.
18.4. Proton Pump Inhibitors. Pharmacokinetics and -dynamics. Uses. Adverse effects.
18.5. Prostaglandin analogues.
18.6. Antacids. Uses. Adverse effects. Routes of drug administration
Recommended reading for the lecture №18:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 647-660.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 401-414.

Key questions covered in lecture №19: *Antiemetics drugs. Antidiarrheal and drugs for constipation.*
19.1. Antiemetics drugs. Pathophysiology of emesis. Classification. Examples.
19.2. Antidiarrheal drugs. Diarrhoea. Classification. Examples.
19.3. Drugs for constipation. Classification. Examples.
Recommended reading for the lecture №19:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 661-687.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 401-414.

Key questions covered in lecture №20: *Pharmacotherapy of Bronchial asthma. Drugs for cough.*
20.1. Bronchial asthma. Pathophysiology.
20.2. Pharmacotherapy of Bronchial asthma. Classification.
20.3. B-sympathomimetics. Types. Examples.
20.4. Methylxanthines. Mechanism of action. Pharmacological action. Pharmacokinetics and -dynamics. Adverse effects.
20.5. Anticholinergics.
20.6. Corticosterpids. Inhaled, systemic steroid therapy.
20.7. Cough. Physiology. Treatment.
20.8. Antitussives. Classification.
20.9. Mucolytic. Examples.
Recommended reading for the lecture №20:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 218-233.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 381-392.

Unit V. Autacoids. Pharmacotherapy of Endocrine Disorders

Key questions covered in lecture №21: *Autacoids: histamine and antihistamines, 5-Hydroxytryptamine, ergot alkaloids.*

21.1. Autacoids. Classification.
21.2. Histamine. Physiology. Pharmacological effects. Uses.
21.3. Antihistamines. Classification. Uses.
21.4. 5-Hydroxytryptamine. Physiology. Pharmacological effects. Uses.
21.5. Prostaglandins. Pharmacological effects. Uses.
21.6. Ergot alkaloids. Pharmacological effects. Uses.

Recommended reading for the lecture №21:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 159-180.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015)

Key questions covered in lecture №22: *Introduction to Endocrine Pharmacology, anterior Pituitary hormones.*

22.1. Introduction to Endocrine Pharmacology. Hormones. Classification.
22.2. Anterior Pituitary hormones.
22.3. Growth hormone (GH). Physiology. Uses. Adverse effects.
22.4. GH-inhibitors. Physiology. Uses. Adverse effects.
22.5. Prolactin. Prolactine inhibitors. Physiology. Uses. Adverse effects.
22.6. Gonadotropins. Physiology. Uses. Adverse effects.

Recommended reading for the lecture №22:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 159-191.
2. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 325-334.

Key questions covered in lecture №23: *Thyroid hormones and antithyroid drugs.*

23.1. Thyroid hormones. Physiology. Pharmacokinetics and -dynamics. Uses. Adverse effects.
23.2. Thyroid inhibitors. Classification. Pharmacokinetics. Adverse effects. Uses.
23.3. Iodine and iodides. Uses. Adverse effects.

Recommended reading for the lecture №23:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 245-257.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 742-753.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 325-334.

Key questions covered in lecture №24: *Corticostroids.*

24.1. Corticostroids. Action.
24.2. Classification.
24.3. Pharmacokinetics and -dynamics.
24.4. Uses. Adverse effects.

Recommended reading for the lecture №24:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 282-295.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 686-703.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 365-374.

Key questions covered in lecture №25: *Drugs acting on Reproductive system.*

25.1. Drugs acting on Reproductive system. Hormones. Classification.
25.2. Androgens. Pharmacokinetics and -dynamics. Uses. Adverse effects.
25.3. Estrogens. Pharmacokinetics and -dynamics. Uses. Adverse effects. Antiestrohens.
25.4. Progestins. Pharmacokinetics and -dynamics. Uses. Adverse effects.
25.5. Hormonal contraceptives. Types.

Recommended reading for the lecture №25:

1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 296-334
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 704-734.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 351-364.

Key questions covered in lecture №26: *Insulin and oral hypoglycaemics.*
26.1. Diabetes mellites. Types.
26.2. Insulin. Classification. Pharmacokinetics and -dynamics. Uses. Adverse effects.
26.3. Oral hypoglycaemic drugs. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
Recommended reading for the lecture №26:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 258-281.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 763-776.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 335-350.

Key questions covered in lecture №27: *Drugs affecting calcium balance.*
27.1. Physiological importance of calcium. Calcium requirements.
27.2. Calcium. Pharmacokinetics and -dynamics. Uses. Side effects.
27.3. Vitamin D. Preparations. Dosage.
27.4. Treatment of hypercalcaemia
Recommended reading for the lecture №27:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 335-346.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 754-762.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015)

Guidelines for the lessons (practical class) of the discipline
Unit I. Introduction in chemotherapy. Antibiotics.
Key questions covered in lesson №1: *General principles of chemotherapy. Beta-lactam antibiotics.*
1.1. The History of Chemotherapy.
1.2. Classification of antimicrobial drugs
1.3. Antimicrobial Resistance.
1.4. Classification of b-lactam antibiotics
1.5. Penicillins. Classification. Mechanism of action. Uses. Side effect.
1.6. Cephalosporins. Classification. Mechanism of action. Uses. Side effect.
1.7. Carbapenems. Classification. Mechanism of action. Uses. Side effect.
1.8. Monobactam. Classification. Mechanism of action. Uses. Side effect.
Recommended reading for the lesson №1:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 688-703, 716-732.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 509-514, 526-537
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 471-498.

Key questions covered in lesson №2: *Protein synthesis inhibitors.*
2.1. Classification.
2.2. Macrolides. Pharmacokinetics. Pharmacodynamics. Uses. Side effects.
2.3. Aminoglycosides. Classification. Pharmacokinetics. Pharmacodynamics. Uses. Side effects.
2.4. Tetracyclines. Classification. Pharmacokinetics. Pharmacodynamics. Uses. Side effects.
2.5. Chloramphenicol. Pharmacokinetics. Pharmacodynamics. Uses. Side effects.
Recommended reading for the lesson №2:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 733-756.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 544-551.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp.499-512.

Key questions covered in lesson №3: *Sulphonamides and Cotrimoxazole. Unit №1.*
3.1. Classification of Sulphonamides. Pharmacokinetics. Pharmacodynamics. Uses. Toxicity of Sulphonamides. Side effects.
3.2. Cotrimoxazole. Mechanism of action. Therapeutic uses. Side effects.
Unit 1: MSQ (40 multiple choice questions) or oral questions.
Recommended reading for the lesson №3:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 704-715
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 515-525.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 512-524.

Unit II. Pharmacotherapy of Infections and Infestations
Key questions covered in lesson №4: *Quinolones and Urinary tract antiseptics.*
4.1. Classification of Quinolones. Mechanism of action. Therapeutic uses. Side effects.

4.2. Urinary tract antiseptics. Classification. Example. Uses. Drug interaction. Side effects.
Recommended reading for the lesson №4:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 752-764.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.)
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015)

Key questions covered in lesson №5: *Antiprotozoal drugs.*
5.1. Chemotherapy for amebiasis. Classification. Preparations.
5.2. Chemotherapy for malaria. Classification. Preparations.
5.3. Chemotherapy for leishmaniasis. Classification. Preparations.
Recommended reading for the lesson №5:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 836-848.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 606-620.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 547-560.

Key questions covered in lesson №6: *Anthelmintic drugs. Antifungal drugs.*
6.1. Types of helminths. Anthelmintic drugs. Classification.
6.2. Albendazole. Mebendazole. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
6.3. Piperazine. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
6.4. Pyrantel pamoate. Uses. Adverse effects. Contraindciations.
6.5. Antifungal agents.
6.6. Azoles. Spectrum of action. Mechanism of action. Examples.
6.7. Amphotericin B. Uses. Side effects. Examples.
6.8 Flucytosine. Uses. Pharmacokinetics and -dynamics. Adverse effects.
Recommended reading for the lesson №6:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 787-797, 849-856.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 621-629.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 535-546, 561-566.

Key questions covered in lesson №7: *Antitubercular drugs.Unit № 2*
7.1. Tuberculosis. Antitubercular drugs. First-Line and Second-Line drugs.
7.2. 4-Aminoquinoline derivatives. Mechanism of action. Side effects etc.
7.3. Isoniazid. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
7.4. Rifampin. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
7.5. Pyrazinamide. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
7.6. Ethambutol. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
7.7. Second-Line anti TB drugs. Examples.
Unit 2: MSQ (40 multiple choice questions) or oral questions.
Recommended reading for the lesson №7:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 765-779.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 557-566
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 525-534.

Unit III. Pharmacotherapy of Viral Infections, Neoplastic Diseases, and Inflammatory Disorders
Key questions covered in lesson №8: *Anti-viral drugs.*
8.1. Classification of viral infection.
8.2. Anti-viral drugs. Classification. Examples.
8.3. Anti-herpes agents. Pharmacokinetics and -dynamics.Side effects. Uses. Examples.
8.4. Anti-cytomegalovirus agents. Examples.
8.5. Anti-retroviral treatment. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Side effects.
8.6. Anti-influenza agents. Examples.
Recommended reading for the lesson №8:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 798-815.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 567-595.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) 567-586.

Key questions covered in lesson №9: *Anticancer drugs.*
9.1. Anticancer drugs. Classification.
9.2. Alkylating agents. Uses. Toxicity. Examples.

9.3. Nitrosoureas. Uses. Toxicity. Examples.
9.4. Antimetabolites. Uses. Toxicity. Examples.
9.5. Antibiotics. Uses. Toxicity. Examples.
9.6. Pyrimidine analogs. Uses. Toxicity. Examples.
9.7. Purine analogs. Uses. Toxicity. Examples.
Recommended reading for the lesson №9:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 857-877.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 638-656.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 587-618.

Key questions covered in lesson №10: *Nonsteroidal anti-inflammatory drugs (NSAIDS). Drugs for Rheumatoid arthritis and Gout. Chelating and Immunocorrecting drugs. Unit № 3 Nonsteroidal anti-inflammatory drugs (NSAIDS).*
10.1. NSAIDS. Routes of drug administration. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
10.2. Rheumatoid arthritis. Drugs for Rheumatoid arthritis. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
10.3. Gout. Drugs for Gout. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
10.4. Chelating and Immunocorrecting drugs.
Unit 3: MSQ (40 multiple choice questions) or oral questions.
Recommended reading for the lesson №10:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 192-217.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 447-470.

Unit IV. Pharmacotherapy of Respiratory and Gastrointestinal Disorders
Key questions covered in lesson №11: *Pharmacotherapy of Peptic ulcer and gastroesophageal reflux disease.*
11.1. Peptic ulcer. Differential diagnosis of duodenal and gastric ulcers. GERD. H.pylori
11.2. Pharmacotherapy of Peptic ulcer. Triple and Quarter therapy.
11.3. H2 antagonists. Pharmacokinetics and -dynamics. Uses. Adverse effects.
11.4. Proton Pump Inhibitors. Pharmacokinetics and -dynamics. Uses. Adverse effects.
11.5. Prostaglandin analogues.
11.6. Antacids. Uses. Adverse effects. Routes of drug administration
Recommended reading for the lesson №11:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 647-660.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 401-414.

Key questions covered in lesson №12: *Antiemetics drugs. Antidiarrheal and drugs for constipation.*
12.1. Antiemetics drugs. Pathophysiology of emesis. Classification. Examples.
12.2. Antidiarrheal drugs. Diarrhoea. Classification. Examples.
12.3. Drugs for constipation. Classification. Examples.
Recommended reading for the lesson №12:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 661-687.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 401-414.

Key questions covered in lesson №13: *Pharmacotherapy of Bronchial asthma.*
13.1. Bronchial asthma. Pathophysiology.
13.2. Pharmacotherapy of Bronchial asthma. Classification.
13.3. B-sympathomimetics. Types. Examples.
13.4. Methylxanthines. Mechanism of action. Pharmacological action. Pharmacokinetics and -dynamics. Adverse effects.
13.5. Anticholinergics.
13.6. Corticosterpids. Inhaled, systemic steroid therapy.
Recommended reading for the lesson №13:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 218-233.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.

3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 381-392.

Key questions covered in lesson №14: *Drugs for cough. Unit № 4*
14.1. Cough. Physiology. Treatment.
14.2. Antitussives. Classification.
14.3. Mucolytic. Examples.
Unit 4: MSQ (40 multiple choice questions) or oral questions.
Recommended reading for the lesson №14:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 218-233.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 381-392.

Unit V. Autacoids. Pharmacotherapy of Endocrine Disorders.
Key questions covered in lesson №15: *Autacoids: histamine and antihistamines, 5-Hydroxytryptamine, ergot alkaloids.*
15.1. Autacoids. Classification.
15.2. Histamine. Physiology. Pharmacological effects. Uses.
15.3. Antihistamines. Classification. Uses.
15.4. 5-Hydroxytryptamine. Physiology. Pharmacological effects. Uses.
15.5. Prostaglandins. Pharmacological effects. Uses.
15.6. Ergot alkaloids. Pharmacological effects. Uses.
Recommended reading for the lesson 15:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 159-191.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015)

Key questions covered in lesson №16: *Thyroid hormones and antithyroid drugs. Corticostroids.*
16.1. Thyroid hormones. Physiology. Pharmacokinetics and -dynamics. Uses. Adverse effects.
16.2. Thyroid inhibitors. Classification. Pharmacokinetics. Adverse effects. Uses.
16.3. Iodine and iodides. Uses. Adverse effects.
16.4. Corticostroids. Action. Classification. Pharmacokinetics and -dynamics. Uses. Adverse effects.
Recommended reading for the lesson №16:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 245-257, 282-295.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 742-753.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp.325-334.

Key questions covered in lesson №17: *Drugs acting on Reproductive system.*
17.1. Drugs acting on Reproductive system. Hormones. Classification.
17.2. Androgens. Pharmacokinetics and -dynamics. Uses. Adverse effects.
17.3. Estrogens. Pharmacokinetics and -dynamics. Uses. Adverse effects. Antiestrohens.
17.4. Progestins. Pharmacokinetics and -dynamics. Uses. Adverse effects.
17.5. Hormonal contraceptives. Types.
Recommended reading for the lesson №17:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 296-334.
2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 704-734.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 351-374.

Key questions covered in lecture №18: *Insulin and oral hypoglycaemics. Drugs affecting calcium balance. Unit № 5*
17.1. Diabetes mellites. Types.
17.2. Insulin. Classification. Pharmacokinetics and -dynamics. Uses. Adverse effects.
17.3. Oral hypoglycaemic drugs. Classification. Mechanism of action. Pharmacokinetics and -dynamics. Uses. Adverse effects.
17.4. Physiological importance of calcium. Calcium requirements.
17.5. Calcium. Pharmacokinetics and -dynamics. Uses. Side effects.
17.6. Vitamin D. Preparations. Dosage.
17.7. Treatment of hypercalcaemia
Unit 5: MSQ (40 multiple choice questions) or oral questions.
Recommended reading for the lecture №18:
1. KD Tripathi. Essentials of Medical Pharmacology (7th ed.) pp. 258-281.

2. Charles R. Craig. Modern pharmacology with Clinical Applications (5th ed.) pp. 763-776.
3. Karen Whalen Lippincott Illustrated Reviews: Pharmacology. (6th ed., 2015) pp. 335-350.

Methodological instructions for the implementation of independent work on the discipline.

Unit I. Introduction in chemotherapy. Antibiotics. Students are given an individual learning project which must be completed. The results should be reported in the form of abstracts on the topic: «Antibiotic resistance in the modern world. Ways to solve the problem» and «The history of obtaining and using antibiotics». Students have to know the classification, mechanisms of action, and spectrum of activity of various antibiotic groups on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. Solution of tests and work with specialized literature.

Unit II. Pharmacotherapy of Infections and Infestations. Every student is given an individual learning project which must be completed. The results should be reported in the form of abstracts on the topic: «Antifungal agents: clinical and pharmacological characteristics, uses» and «Modern anti-tuberculosis drugs». Students should analyze the specific action of UTA, antitubercular, antifungal, antiprotozoal, anthelmintic drugs. To write out in recipes medical products in various medicinal forms. Solution of tests and work with literature.

Unit III. Pharmacotherapy of Viral Infections, Neoplastic Diseases, and Inflammatory Disorders. Every student is given an individual learning project which must be completed. The results should be reported in the form of abstracts on the topic: «Anticancer drugs: clinical and pharmacological characteristics. Toxic reactions» and «Antiretroviral therapy. Features». Students have to know the principles of chemotherapy, pharmacokinetics, and pharmacodynamics of cytostatic and antiviral agents. To write out in recipes medical products in various medicinal forms. To estimate an opportunity of toxic action of medicine and ways of management of side effects.

Unit IV. Pharmacotherapy of Respiratory and Gastrointestinal Disorders. Every student is given an individual learning project which must be completed. The results should be reported in the form of essays on the topic: «Drugs for peptic ulcer disease» and «Biological therapy of bronchial asthma». Students should analyze the mechanisms of action of anti-ulcer drugs, drugs for constipation, drugs for cough, antiemetics, antidiarrhea drugs. To fill in the comparative tables, solve situational problems and crosswords. Work with specialized literature is required.

Unit V. Autacoids. Pharmacotherapy of Endocrine Disorders. Students are given an individual learning project which must be completed. The results should be reported in the form of abstracts on the topic: «Uses of corticosteroids in acute allergic reactions» and «The evolution of antihistamines». Students have to know the action of hormones, autovoids on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. Solution of tests and work with literature.