PHARMACOLOGY EXAM QUESTIONS

1. Subject, problems, methods of pharmacology.
2. Routes of drug administration. Enteral way of introduction. Absorption of drugs and speed of development of effect.
3. Parenteral way of introduction. Speed of development and expressiveness of effect at various ways of parenteral introduction.
4. Features of resorption, transport and distribution of drugs in organism.
5. Biotransformation (metabolism) of drugs. Significance of microsomal enzymes of the liver.
6. Interaction of drugs in an organism. Synergism. Kinds of synergism. Antagonism in medical effects of medicinal substances.
7. Classification of the drugs influencing on afferent part of the peripheral nervous system.
8. Classification of local anaesthetics on their chemical structure. The mechanism of cellular action, the factors influencing effect on local anaesthesia. Resorptive action of local anaesthetics and clinical application. Toxic effects and medical assistance.
9. Anatomical-physiological features of efferent nerves: motor and vegetative (sympathetic and parasympathetic). Classification of nerves on character of mediation of a nervous impulse.
10. General principles actions of synaptic drugs. Divisions of the peripheral nervous system. Neurochemical basis of synaptic transmission. Ways of intervention into synaptic transmission of pharmacological substances. Localization of M-and N-cholinoceptors.
11. Classification of cholinergic drugs.
12. M-N-cholinomimetics (Parasympathomimetic). Anticholinesterases. Mechanism of action. Classification. Effects. Clinical use. Side-effects.
13. M - cholinoblocers: classifications, effects on organs and systems, clinical use. Side effects.
14. N - cholinoblocers: classifications. Skeletal muscle relaxants: classifications, mechanism of action, clinical use.
15. Classification of adrenergic drugs.
16. α -, β- adrenomimetics: classifications, effects on organs and systems, clinical use, side effects.
17. Sympathomimetics: effects on organs and systems, clinical use, side effects.
18. Sympatholytics: effects on organs and systems, clinical use, side effects.
19. α -adrenomimetics: classifications, effects on organs and systems, clinical use, side effects.
20. α -adrenoblockers: classifications, effects on organs and systems, clinical use, side effects.
21. β- adrenomimetics: classifications, effects on organs and systems, clinical use, side effects.
22. β- adrenoblockers: classifications, effects on organs and systems, clinical use, side

23. A general characteristic of narcosis. Classification of general anaesthetics. The mechanism of action of general anaesthetics. The stages of anesthesia.
24. The pharmacological characteristics of drugs for an inhalation narcosis. Features of action of drugs for not inhalation narcosis. Measures to help at overdose.
25. Classification of opioid analgesics. The comparative characteristic of opium alkaloids - derivatives of phenantrene (Morphinum, Codeinum) and isoquinoline derivatives (Papaverinum).
26. The mechanism of action of narcotic analgesics. The pharmacological characteristics of alkaliods and preparations of opium (Morphinum, Codeinum, Omnoponum). Clinical use.
27. Acute poisoning morphine and measures to help. Specific antagonists narcotic analgesics (Nalorphinum, Naloxone).
28. Synthetic substitutes morphine (Promedolum, Phentanylum, Pentazocine). Clinical use. Side effects. Neuroleptanalgesia.
29. Classification of Antiparkinsonian drugs. The mechanism of action and the pharmacological characteristics of dopaminomimetics Antiparkinsonian drugs (Levodopa, Carbidopa,). Application. The mechanism of action and the pharmacological characteristics of anticholinergic, antiparkinsonian drugs (Cyclodolum,). Appliance.
30. Drugs used for treatment of epilepsy, mode of action, principles of antiepileptic administration, drug of choice and recent development in epilepsy drug treatment Parkinson Disease Neurochemistry. Drug Therapy. Classification. Mechanism of action.
31. Classification of psychotropic drugs.
32. Psychosis. Pathogenesis of psychosis. Neuroleptics - Mechanism of action.
33. Classification of neuroleptics. Neuroleptics – pharmacological characteristic, clinical use, side effects.
34. Classification of Anxiolytics. Benzodiazepines, mode of action, molecular pharmacology, effect at organ level and therapeutic uses.
35. Anxiolytics – pharmacological characteristic, clinical use, side effects.
36. The general classification of the drugs stimulating the central nervous system.
37. Classification of psychomotor stimulants, mechanism of action, clinical use, side effects.
38. Psychometabolic stimulators (nootropic drugs): classification.
39. Nootropic drugs: mechanism of action, clinical use, side effects
40. The plants containing cardiac glucosides. History and structure of cardiac glucosides. Role of glycon and aglycon in their action. Concept about biological standardization of cardiac glucosides.
41. Classification of cardiac glucosides. The mechanism of action of cardiac glucosides.
42. Antiarrhythmic drugs. Classification, the mechanism of action and the pharmacological characteristic. Antidepolarizing type of action. Depolarizing type of action.
43. Antianginal drugs - classification, the mechanism of action and the pharmacological characteristic (nitrates, beta blockers, calcium channel blockers).

44. Antihypertensive drugs – classification, pharmacological characteristics, clinical use.
45. Diuretics. Classification. Mechanisms of potassium reabsorbtion.
46. Drugs affecting blood and blood formation: classification.
47. Pharmacological characteristics of drugs used for treatment anaemias, classification, mechanism of action, clinical use, side effects.
48. Respiratory system drugs, classification, general characteristic.
49. Drugs for cough: classification, mechanism of action, clinical use, side effects.
50. Drugs for bronchial asthma: classification, mechanism of action, clinical use, side effects.
51. Drugs that affect the gastrointestinal system: classification.
52. Pharmacological characteristics of drugs reducing gastric acid secretion, classification, mechanism of action, clinical use, side effects.
53. Pharmacological characteristics of drugs that neutralize acid (Antacids), classification, mechanism of action, clinical use, side effects.
54. Pharmacological characteristics of ulcer protective and ulcer healing drugs, classification, mechanism of action, clinical use, side effects.
55. Pharmacological characteristics of emetics and antiemetics drugs, classification, mechanism of action, clinical use, side effects.
56. Pharmacological characteristics of laxatives, classification, mechanism of action, clinical use, side effects.
57. Vitamins drugs: classification, general characteristic.
58. Fat soluble vitamins: Retinol (Vit.A): absorption and fate, physiological role and action, deficiency symptoms, clinical use, hypervitaminosis A.
59. Vitamine E: source, physiological role and action, deficiency symptoms, clinical use, toxicity.
60. Vitamine D: source, physiological role and action, affecting calcium homeostasis, toxicity.
61. Water soluble vitamins: Tiamine, Ridoflavine, Pyridoxine: source, physiological role and action, clinical use.
62. Ascorbic acid: source, physiological role and action, deficiency symptoms, clinical use.
63. Hormones and related drugs: classification. Mechanism of regulation of hormones level.
64. Anterior pituitary hormones: classifications, physiological functions, clinical use.
65. Thyroid hormone and thyroid inhibitors: synthesis, actions, clinical use, side effects.
66. Insulin, oral hypoglycaemic drugs and glucagons: mechanism of action, clinical use, side effects.
67. Glucocorticoids: Synthesis and release.
68. Glucocorticoids: classification, effects, mechanism of action, clinical use, side effects.
69. Androgens and anabolic steroids, drugs used in prostatic hyperplasia
70. Non-steroid anti-inflammatory drugs (NSAIDs): classification, effects, mechanism of action.

71. The goal of chemotherapeutic treatment, classification of chemotherapeutical drugs, principles of chemotherapy.
72. Sulfonamides: classification, mechanism of action, clinical use, side effects.
73. Antibiotics: history, classification.
74. Natural penicillins: classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
75. Semisintetic penicillins: classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
76. Cephalosporins classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
77. Inhibitors of cell membrane function: classification, mechanism of action, clinical use, side effects.
78. Aminoglycosides: classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
79. Macrolides: classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
80. Tetracyclines: classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
81. Antituberculosis drugs: classification, mechanism of action, antibacterial spectrum, clinical use, side effects.
82. Antiviral Agents: classification.
83. Inhibitors of penetration of host cell and inhibitors of transcription of the viral genome: classification, mechanism of action, clinical use, side effects.