

Examination questionssub-questions –Basics of Research of Natural Products –

1. Chemical composition of natural raw materials and products;
2. Importance of Natural Products for medicine and pharmacy;
3. Short historical review of application of natural products;
4. Traditional systems of medicine;
5. Medicinal plants as sources of biologic active substances;
6. Primary and secondary metabolism and metabolites;
7. Mineral substances of plants;
8. Active and accompanying and ballast substances;
9. Plant raw material base: Wild-grown and cultivated medicinal plants;
10. The plant cell and tissue culture; their classification;
11. Basics of the production of medicinal plant raw materials: collection, primary processing, drying; standardization, packing, labelling, transporting and storing in standard condition;
12. Standardization of medicinal plant raw materials;
13. Normative documents;
14. Quality control of medicinal plant materials, pests of plant raw materials and fighting with them.
15. Influence of anthropogenic factors on the quality of medicinal plant raw materials.
16. Methods of discovering new medicinal plants: study of folk medicine experience and treasures, method of screening, phylogenetic method.
17. Mineral raw materials: clays, mineral waters, physical and chemical composition, perspectives of their application in medicine.
18. Medicinal raw materials of animal origin and natural products. Bee products: honey, propolis, royal jelly, bee venom, wax, pollen.
19. Medicinal raw materials of animal origin and natural products: Snake venom, leeches, spongilla, Mumijo.
20. Medicinal raw materials of animal origin and natural products;
21. Animal fats and fatty substances, their raw materials;
22. Fish oil, spermaceti, lanolin; Their physical and chemical properties, application in medicine and pharmacy.
23. Rules of reception of natural raw materials, methods of samping, intermediate and analytical samples.
24. Methods of analysis of medicinal plant raw materials: macroscopic and microscopic analysis;
25. External diagnostic signs and microscopy of leaves, herbs, flowers, mastery of wetmount and cross section preparation techniques.
26. Mastering the technique of preparation and staining of cross section of plant raw materials, external diagnostic signs of fruits and seeds and their microscopy.
27. Histochemical and microchemical reactions.
28. Mastering the technique of preparation and staining of cross section of plant raw materials;
29. External diagnostic signs of barks, roots, rhizoms, bulbs, tubers and their microscopy. Histochemical and microchemical reactions.
30. Determination of impurity content.