

## Examination questions- subquestions - Pharmacognosy 1

1. Pharmacognosy, aim and importance for medicine and Pharmacy.
2. Carbohydrates, classification, tests of identification, medical importance;
3. Monosaccharides, polysaccharides: starch, inulin, pectins, mucus-containing plant raw materials
4. Plantain and coltsfoot leaves, Marshmallow herb and root, flax seeds; their morphological description, chemical constituents and medical importance;
5. Vitamins, classification, medical use;
6. Fat-soluble and water-soluble Vitamins;
7. Vitamin K1 containing medicinal plants: Nettle leaf, shepherd`s purse herb, corn mustache, guelder-rose bark, their morphological description, chemical constituents and medical importance;
8. Carotene-containing plant crude drugs:, pot marigold flowers, sea buckthorn, their morphological description, chemical constituents and medical importance;
9. Vitamin C and Vitamin P containing crude drugs: dog rose fruit, Black Currant Fruit, their morphological description, chemical constituents and medical importance;
10. Structure of fats, classification, properties, research and extraction methods: almond, peach, oil of fruit, peanut, corn, flax, castor oil, cocoa butter, importance in medicine.
11. Characterization, classification, acyclic, monocyclic, bicyclic monoterpenes, sesquiterpenes and aromatic compounds, terpenoids and essential oils;
12. Essential oil distribution, localization and biological role for plants, properties, separation and research methods, their medical-biological importance.
13. Essential oils and raw materials containing acyclic and monocyclic monoterpenes: Rose and lavender flowers, coriander and cranberry fruits, eucalyptus, sage, mint leaves, their morphological description, chemical constituents and medical importance.
14. Bicyclic monoterpenes, sesquiterpenes. Essential oils and vegetable raw materials containing them: valerian roots, camphor sources. Calamus root, birch leaves and buds. absinthe herb, chamomile and common yarrow flowers, their morphological description, chemical constituents and medical importance.
15. Essential oils and crude drugs containing aromatic compounds: aniseed, fennel fruit, thyme and oregano herb. Plants and balsamic plants: pine, spruce, fir, their morphological description, chemical constituents and medical importance.
16. Glycosides, classification, characterization.
17. Structure of cardiac glycosides (cardiosteroids), classification: cardenolides and buffadienolides and distribution in plants, isolation, identification, properties.
18. Medicinal Plants and crude materials containing cardiac glycosides, their use in medicine, medications.
19. Medicinal plants containing cardiac glycosides: foxglove leaf, strophanthus seed, lily herb, silk vine bark, pheasant's eye herb, erisime grass, hellebore rhizomes with roots. Their morphological description, chemical constituents and medical importance;
20. Structure, classification of saponins, triterpene and steroidal saponins, properties, research methods, medical-biological importance.
21. Plant crude materials containing steroid saponins: Dioscorea rhizome, Yucca and cathead herb, their morphological description, chemical constituents and medical importance;
22. Structure, classification of triterpene saponins, their containing plant crude materials:

- licorice roots, horsetail, java tea herb, aralia and ginseng roots. Saponin containing plant`s morphological description, chemical constituents and medical importance;
23. Monoterpene glycosides and iridoids, their Structure, classification, properties, distribution, medical-biological importance;
  24. Medicinal plant containing iridoids: dandelion roots, centaurea herb, water clover leaf, common hop, their morphological description, chemical constituents and medical importance.
  25. Thioglycosides and cyanogenic glycosides, their crude materials: mustard seeds, garlic and onion bulbs, medicinal watercress leaf, bitter almond seeds, black elder flower, their morphological description, chemical constituents and medical importance.
  26. Preparation of wet mount and cross section of leaf (on the example of primrose
  27. and eucalyptus leaves) preparation and histochemical reactions of cross section of the bark, root, fruit, seeds.
  28. Macroscopic and microscopic analysis of mucus-containing plant raw materials: plantain and coltsfoot leaves, marshmallow herb and root, flax seeds, tilia flowers.
  29. Identification reactions of mucilage.
  30. Vitamin-containing medicinal herbs and crud drugs: Macroscopic, microscopic and phytochemical analysis of Dog rose fruits.
  31. Quantitative determination of ascorbic acid in dog rose fruits by titration method.
  32. Macroscopic and microscopic analysis of vitamin-containing plant crud materials: nettle leaf, shephard`s purse herb, guelder rose bark.
  33. Medicinal plants and crud drugs containing lipids.
  34. Identification of lipids by TLC (Thin layer chromatographic analysis)
  35. Phytochemical analysis of medicinal plant raw materials containing essential oils.
  36. Identification and determining quality of essential oils: reactions on alcohol content, determination of refractive index, identification by thin-layer chromatographic method.
  37. Macroscopic and microscopic analysis of essential oils and plant raw materials containing acyclic and monocyclic monoterpenes: coriander fruit, eucalyptus, sage and mint leaves.
  38. Macroscopic and microscopic analysis of bicyclic monoterpenes, sesquiterpenes containing crud drugs: valerian roots, absinthe herb;
  39. Macroscopic and microscopic analysis of aromatic compound containing medicinal plant material: fennel fruit, thyme and oregano herb.
  40. Phytochemical analysis of medicinal plant materials containing cardiac glycosides.
  41. Extraction, identification reactions (on the example of foxglove and lily leaves).
  42. Macroscopic and microscopic analysis of Medicinal plants and material containing Cardiac glycosides: foxglove leaf, lily of the valley leaf.
  43. Phytochemical analysis of raw materials containing saponins.
  44. Identification reactions, determining the type of saponins (cyclamen tubers and licorice roots);
  45. Macroscopic and microscopic analysis of medicinal plants and material containing triterpene saponins: licorice roots and java tea herb;
  46. Macroscopic and microscopic analysis of medicinal plants and material containing bitter glycosides and iridoids: Macro and microscopic analysis of Dandelion root and bogbean leaf.