1. The volatile oils are the complex mixture of…….

A) mono- and sesquiterpenes as well as phenyl-propane derivatives.

B) mono- and diterpene alcohols and ethers.

C) sesquiterpenes and other aromatic compounds.

D) monoterpene acids and lactones.

E) monoterpene ethers and aldehydes.

2. Sesquiterpenes are formed of.....in the plants.

A) farnezyl-pyrophosphate

B) stress compounds

C) colouring material

D) degraded products of triterpenes

E) pathological products

3. What are known as balsams?

A) resins dissolved in volatile oil

B) a mixture of volatile oils with sesquiterpenes

C) resins dissolved in water

D) polysaccharide mixed with volatile oil

E) juice evaporated to dryness

4. Saponin containing drugs are used as.....

A) laxative.

B) bitter tonic.

C) expectorant.

D) emetic.

E) pain killer.

5. Alkaloids are naturally occurring compounds which contain .....in their molecules.

A) one or more N atom(s)

B) two heterocyclic rings

C) one C15 side chain on the benzene ring

D) one or more N atom(s) originated from amino acids

E) one or more O atoms besides the S atoms

6. How to extract the alkaloids in mineral salt form from plant?

A) Heating with organic solvent.

B) Boiling with ammonium-hydroxide and water.

C) Shaking with water containing mineral acid.

D) Boiling with water and lead acetate.

E) Warming with mineral acid in organic solvent.

7. The volatile oils consist of a mixture of.....

A) oxygen free mono- and diterpenes.

B) aliphatic and cyclic mono- and triterpenes.

C) aliphatic and cyclic mono- and sesquiterpenes and phenyl-propane derivatives.

D) highly oxygenated mono- and diterpenes.

E) oxygen free di- and monoterpenes.

8. The iridoids are:

A) constituents of volatile oils.

B) starting unit of the tannin biogenesis.

C) precursor of biosynthesis of saponins.

D) precursors of the biogenesis of certain alkaloids.

E) constituents of fixed oils.

9. What do you do for getting alkaloids in basis form from the plant material?

A) Adding some ammonium-hydroxide and water to the pulverised drug.

B) Making an extract by mineral acid and organic solvent.

C) Making an extract with some basis and organic solvent.

D) Adding to the powdered drug some mineral acid and water.

E) Making an extract with organic solvent and warm it.

10. Morphin is separable from its side alkaloids because:

A) morphine has a piperidine ring.

B) morphine has two methoxy groups.

C) morphine has phenolic hydroxyl group while the side alkaloids have none.

D) morphine has no phenolic hydroxyl group while the side alkaloid has it.

E) morphine and its side alkaloids are inseparable.

11. Which is the right reagent for the detection of rancidity?

A) concentrated nitric acid

B) phloroglucinol dissolved in diluted HCl

C) antimony-III-chloride

D) concentrated sulphuric acid

E) phloroglucinol dissolved in ether and concentrated HCl

12. Choose the right skeleton for Cinchona alkaloids.

A) cevan B) tropane C) isoquinoline D) rubanol E) dammarane

13. Choose the right reagent for alkaloids.

A) 2,4-dinitrophenylhydrazine

B) iron-III-chloride

C) antimony-III-chloride

D) potassium-tetraiodomercurate

E) phloroglucinol in concentrated hydrochloric acid

14. How could be prepared a mucilage extract starting from Linseed?

A) After grinding some water is added to the seed and warm it.

B) The seed is covered with water without grinding and warming.

C) After grinding some alcohol is added to the seed.

D) Without grinding some alcohol is added to the seed.

E) After grinding it is covered with water without warming.

15. Ergot is the.....of the fungus Claviceps purpurea.

A) vegetative form B) dried sclerotium C) ascospore D) conidiospore E) philamentous hyphae

16. What is the difference between the chemical structure of cotton and starch? A) Cotton consists of lines α-glucose molecules while the starch has branched

βglucose residue.

B) Cotton consists of unbranched β-glucose molecules the starch has also unbranched α- and β-glucose molecules.

C) Cotton is built up of glucose residues united by 1,4-β-D-glucose links, starch has branched and linear chains of 1,4-α-,and 1,6-α-D-glucose residue.

D) Both consist of branched and linear 1,2-β-D-glucose residues.

17. The haemolytic index shows:

A) the di- and sesquiterpene content of the volatile oils..

B) the saponin content of the drugs.

C) the steroid content of the drugs.

D) the aliphatic monoterpene content of the drugs.

E) the tannin content of the drugs.

18. Which is the right structure for the flavonoids of Silybum marianum?

A) dimer flavan-3,4-diol

B) monomer flavon-3-ol

C) flavanolignan

D) simple flavanonol-glycoside

E) isoflavanon-diglycoside

19. Cocaine is used as.....in the officinal medicine.

A) narcotic B) emetic C) sedative D) local anaesthetic E) cough suppressant

20. Choose the right test for identification of anthraquinones.

A) Marquis test

B) Froehde test

C) Liebermann-Burchard test

D) Borntraeger test

E) Murexid test

21. How to detect the procyanidins?

A) On heating with diluted NaOH procyanidines show green colour.

B) Procyanidins give yellow colour on concentrated nitric acid.

C) On heating with a mixture of cc. HCl and N BuOH procyanidines show red colour.

D) On heating with resorcinol procyanidins give bluish violet colour.

E) Procyanidins give orange precipitate on Kedde reagent.

22. The anthraquinone content of the drugs tested by .....

A) warming with glacial acetic acid giving red precipitate.

B) shaking the extract made by organic solvent with diluted ammoniumhydroxide the water phase gives red or orange colour.

C) extracting with water and precipitate with lead acetate showing blue colour.

D) making a water extract which shows green colour on sulphuric acid.

E) making organic solvent extract which shows yellow precipitate on heating with dil. HCl and chlorine.

23. What is the right method for making assay for volatile oil content of drugs?

A) water-damp distillation

B) extraction of light petrol

C) distillation by Marcusson's method

D) determination of loss on drying

E) determination of alcohol extract

24. Which is the right test for the cardioactive glycosides of Foxglove leaf?

A) Murexide

B)Liebermann- Burchard

C)EP

D)2,4-dinitro-phenylhydrazine

E)Keller-Kiliani

25. Which of the following compounds makes model for the synthesis of methyl-psoralens?

A) chinine

B) ephedrine

C) tubocurarin

D) xanthotoxin

E) cocaine

answer key

1-A	14-B
2-A	15-B
3-A	16-C
4-C	17-B
5-D	18-C
6-C	19-D
7-C	20-D
8-D	21-C
9-C	22-B
10-C	23-A
11-E	24-E
12-D	25-D
13-D	