



Notes : 1. All question are compulsory.

## 1. Multiple Choice Questions

$$\begin{matrix} 20 & \times & 1 \\ \hline & = & 20 \end{matrix}$$

- 1) Jesuit's bark is synonym of:  
a) Digitalis                      b) Cinchona  
c) Cinnamon                  d) Menthol
- 2) Following are the processes used for extraction except  
a) Infusion                      b) Digestion  
c) Sublimation                d) Maceration
- 3) Schoenteten reaction is the name of which test,  
a) Bromine test                b) Borax test  
c) Nitric acid test             d) Nitrous acid test
- 4) Pyrogallol is produce in,  
a) Hydrolysable tannin        b) Condensed tannin  
c) Pseudo tannin              d) Both a & b
- 5) Glycyrrhizin, a sweet principle of mulethi is,  
a) K and Mg salts of Glycyrrhizinic acid  
b) Na and Mg salts of Glycyrrhetic acid  
c) K and Ca salts of Glycyrrhizinic acid  
d) Na and Ca salts of Glycyrrhetic acid
- 6) Tropane alkaloid are fusion of which heterocyclic ring,  
a) Piperidine and Pyrrolidine ring  
b) Pyridine and Pyrrolidine ring  
c) Pyridine and Indole ring  
d) Benzopyrrole and Indole ring
- 7) Which of the following is not present in opium,  
a) Morphine and Codeine      b) Mucilage and Wax  
c) Papaverine and Narceine   d) Tannin and Oxalic acid
- 8) Colorless bitter glycoside known as amygdalin is obtain from which genus,  
a) Prunus                      b) Aloe  
c) Cassia                      d) None of above
- 9) Propagation of aloe are done by,  
a) Seed                        b) Stem  
c) Root Sucker                d) None of above

- 10) Derivatization techniques in HPLC are intended to enhance,
  - a) Molecular weight
  - b) Detectability
  - c) Reversibility
  - d) Reproducibility
- 11) Diterpenes contain number of isoprene units:
  - a) One
  - b) Five
  - c) Three
  - d) Four
- 12) Family of drug Zingiber officinale
  - a) Solanaceae
  - b) Zingiberaceae
  - c) Umbelliferae
  - d) Acanthaceae
- 13) Modern methods of extraction are also known as,
  - a) Blue extraction
  - b) Blue chemistry
  - c) Green extraction
  - d) Green chemistry
- 14) Cultivation of Afim is done under the control of,
  - a) Narcotic Drugs and Psychotropic Substances Act, 1985
  - b) Narcotic Drugs and Psychotropic Substances Act, 1989
  - c) Narcotic Drugs and Psychotropic Substances Act, 1995
  - d) None of above
- 15) Paper chromatography method was first introduced for the analysis of,
  - a) Alkaloid mixture
  - b) Glycoside mixture
  - c) Amino acid mixture
  - d) None of the above
- 16) Half life of tracer isotopes should be
  - a) Sufficiently long
  - b) Moderate
  - c) Sufficiently less
  - d) None
- 17) ----- & ----- are modern methods of extraction,
  - a) Ultrasound Sound Assisted Extraction & Decoction
  - b) Microwave Assisted Extraction & Ultrasound Sound Assisted Extraction
  - c) Decoction & Maceration
  - d) Both a & b
- 18) Mevalonic acid pathway is also known as ---
  - a) HMG CoA Reductase pathway
  - b) Isoprenoidal pathway
  - c) Mevalonate pathway
  - d) All of them
- 19) ----- is used to cardiotoxic.
  - a) Digitalis
  - b) Cinchona
  - c) Cinnamon
  - d) Menthol
- 20) Condensed tannins are called as
  - a) Hydrolysable tannin
  - b) Condensed tannin
  - c) Pseudo tannin
  - d) None Hydrolysable tannin

2. Solve **any two** **10x2**  
**=20**
- a) Define and classify Glycoside along with its types. Write a note on its identification tests.
  - b) Differentiate between extraction and isolation. Write in detail about various methods of extraction.
  - c) Elaborate the term primary and secondary metabolites. Explain the Shikimic acid pathway forming different secondary metabolites in details.
3. Solve **any Seven** **5x7=**  
**35**
- a) Give Industrial production, estimation and utilization of citral.
  - b) Differentiate between Tinnevely and Alexandrian Senna.
  - c) Write a Note on Tannins.
  - d) Isolation, identification and analysis of caffeine.
  - e) Write about Industrial production, estimation and utilization of Forskohlin.
  - f) Define radioactive isotopes and explain the technique of radioisotope.
  - g) Explain the Biological source, Chemical Tests, Chemical constituents, microscopy and therapeutic uses of Benzoin or Guggul.
  - h) Give the account on Amino acid pathway.
  - i) Define and classify Alkaloid.

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