

Duration: 3 Hours

Total marks: 75

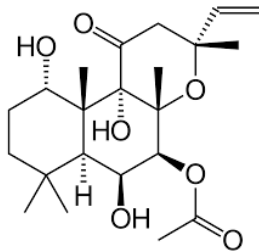
- N.B.:** 1. All questions are compulsory
2. Figures to right indicate full marks

Q. I Choose appropriate option for following multiple choice-based questions. **20**

- 1 Dimethyl allyl pyrophosphate is an isomer of **1**
 a. Farnesyl pyrophosphate
 b. Isopentenyl pyrophosphate
 c. Squalene
 d. Mevalonic acid

- 2 _____ is an unorganised drug **1**
 a. Diosgenin
 b. Reserpine
 c. Aloes
 d. Digitalis

- 3 Following compound is from the chemical class of _____ **1**



- a. Picoside
 b. Forskolin
 c. Taxine
 d. Gentiopicrin
- 4 Pentacyclic triterpenoid class is represented by which of the following drug? **1**
 a. Opium
 b. Artemisia
 c. Vinca
 d. Liquorice

- 5 Asafoetida belongs to family _____. **1**
 a. Scrophulariaceae
 b. Papaveraceae
 c. Rutaceae
 d. Umbelliferae

- 6 Heroin is also called as **1**
 a. Diacetylmorphine
 b. Methylmorphine
 c. Papaverine
 d. Acetylmorphine

- 7 Vittae are present in 1
a. *Foeniculum vulgare*
b. *Pinus spp*
c. *Eugenia caryophyllus*
d. *Mentha spicata*
- 8 Basic nucleus of eugenol is _____. 1
a. Alcoholic
b. Phenolic
c. Ether
d. Propanol
- 9 Catechu respond positive to _____ test 1
a. Dragendroff's test
b. Match stick test
c. Murexide
d. Meyers test
- 10 _____ is also called as acid resin 1
a. Colophony
b. Benzoin
c. Guggul
d. Myrrh
- 11 Liebermann Burchard test is positive for 1
a. Guggul
b. Vinca
c. Rauwolfia
d. Fennel
- 12 Cyanogenetic glycosides are present in _____. 1
a. Senna
b. Aloe
c. Digitalis
d. Bitter almond
- 13 Choose the correct statement for Senna glycosides 1
a. Senoside A,B, C,D are Homo dianthrone
b. Senoside A,B, C,D are Hetero dianthrone
c. Senoside C& D are Hetero dianthrone
d. Senoside C& D are Homo dianthrone
- 14 _____ is laevorotatory & antimalarial in nature 1
a. Quinine
b. Quinidine
c. Atropine
d. Ephedrine

- 15 _____ is the most appropriate method of analysis for menthol **1**
- HPLC
 - Gas chromatography
 - Titration
 - Gel electrophoresis
- 16 Iridoids are **1**
- Bitter in taste and contain condensed cyclopentane with pyran
 - Sweet in taste and contain condensed cyclopentane with pyran
 - Bitter in taste and contain condensed cyclopentane with indole
 - Sweet in taste and contain condensed cyclopentane with indole
- 17 Gitaloxin is characterized by the presence of **1**
- OH group at 16 position
 - Formyl group at 17 position
 - Formyl group at 16 position
 - OH group at 17 position
- 18 Difference between digoxin and digitoxin is that digoxin has **1**
- Glucose
 - Digitoxose
 - Acetyl- digitoxose
 - Arabinose
- 19 Enfleurage is the method used for the extraction of **1**
- Alkaloids
 - Glycosides
 - Volatile oils
 - Tannins
- 20 Most appropriate method for the separation of proteins is **1**
- Prep TLC
 - Electrophoresis
 - HPTLC
 - HPLC

Q. II A Answer any TWO out of THREE **20M**

- 1** a. Write a note on biological source, chemical constituents, chemical tests & uses of Myrrh. **10M**
- b. Discuss various methods for introduction of labelled compound in the biological system. Write a note on precursor product sequence.
- 2** Write principle, advantages & disadvantages of the following- **10M**
- Super critical fluid extraction
 - Microwave assisted extraction
- 3** Write a short note on source, industrial production, estimation and uses of following. **10M**
- Artemisinin
 - Taxol

Q.II B. Answer any SEVEN out of NINE 35 M

- 1 Write a note on aromatic amino acid pathway mention structure and name of the enzymes involved. **5 M**
 - 2 Write a note on various techniques used to study biosynthetic pathways. **5 M**
 - 3 Discuss source, chemistry & chemical tests for Rauwolfia alkaloids. **5 M**
 - 4 Write source, chemistry & uses of steroidal saponin containing drug. **5 M**
 - 5 Give the source, phytochemistry and uses of Gentian. **5M**
 - 6 Discuss the following phytoconstituents with respect to their isolation and identification. **5 M**
 - a. Citral
 - b. Rutin
 - 7 Write a note on the analysis and uses of following phytoconstituents **5 M**
 - a. Atropine
 - b. Caffeine
 - 8 Write a note on various chromatographic techniques used for identification of drugs. **5 M**
 - 9 Discuss principle and applications of UV spectroscopy **5 M**
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