

# Question Paper

Exam Date & Time: 18-Jan-2021 (09:30 AM - 12:30 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmacognosy and Phytochemistry II [PCO-BP504T - S3]

Marks: 75

Duration: 180 mins.

### I. Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1)  $^{13}\text{C}$  element used in tracer technique is a (1)  
unstable isotope  
stable isotope  
supercritical fluid  
scintillator
- 2) Following is the E-isomer of citral (1)  
Neral  
Citral B  
Gerania  
None of the above
- 3) Chorismic acid in presence of anthranilate synthase give rise to (1)  
Tyrosine  
Tryptophan  
Prephenic acid  
Phenyl alanine
- 4) The reduced intermediate between anthraquinone and anthrone is (1)  
Oxanthrone  
Anthranol  
Dianthrone  
Dianthranol
- 5) Which one of the following is called Curcumin II (1)  
Dimethoxycurcumin  
bis-demethoxycurcumin  
hemethoxycurcumin  
Curcumin
- 6) Presumed precursors are used in the following tracer technique (1)  
Competitive feeding  
Sequential analysis  
Precursor product sequence  
Mutant strains
- 7) Guignard's test is used for the identification of (1)  
Saponin glycosides  
Anthraquinone glycosides  
Cyanogenetic glycosides  
Flavonoids

- 17) Benzyl isoquinoline alkaloid of Opium is (1)
- Morphine  
Codeine  
Thebaine  
Papaverine
- 18) Solubility of the sennoside is optimum in water miscible organic solvents having water content (1)
- 50%  
30%  
75%  
90%
- 19) Digitoxin contain (1)
- 5 membered saturated lactone ring  
6 membered unsaturated lactone ring  
5-membered unsaturated lactone ring  
6 membered saturated lactone ring
- 20) Thin Layer Chromatography is an example for (1)
- Partition chromatography  
Counter current chromatography  
Adsorption chromatography  
Gel filtration chromatography

**II Long Answers**

Answer all the questions.

- 1) a. Elaborate on chemistry and general method of isolation of Glycosides (3+2) (10)  
b. Give the source, family, active constituents and uses of Bitter almond and Digitalis
- 2) Describe the column chromatography and paper chromatography for the separation and identification of the phytoconstituents (10)

**III Short Answers**

Answer all the questions.

- 1) Explain the industrial production, estimation and utilization of Caffeine (5)
- 2) Describe competitive feeding and autoradiography (5)
- 3) Give the biological source and utilization of a) Forskolin b) Artemisin (5)
- 4) Explain Senna with reference to source and family, morphology, chemical constituents and uses(1+2+1+1) (5)
- 5) Give the biological source, explain the isolation, identification and analysis of Quinine (5)
- 6) Explain Nuclear Magnetic Resonance Spectroscopy for the identification and characterization of phytoconstituents. (5)
- 7) What are Tannins? Classify them with examples. Give the tests for their identification (1+2+2) (5)

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