

# Question Paper

Exam Date & Time: 02-Jan-2024 (10:00 AM - 01:00 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) Anabasine is formed from which of the following amino acid? (1)

[Glycine](#)

[Alanine](#)

[Tyrosine](#)

[Lysine](#)

2) Cinnamon oil belongs to which group of chemical classification? (1)

[Oxide](#)

[Hydrocarbon](#)

[Alcohol](#)

[Aldehyde](#)

3) How many isoprene units are required to form monoterpenoids? (1)

[2](#)

[4](#)

[6](#)

[8](#)

4) Deadly night shade is the synonym for (1)

[Opium](#)

[Belladonna](#)

[Digitalis](#)

[Rauwolfia](#)

5) Which of the following test is used for the identification of Caffeine? (1)

[Borntrager's](#)

[Keller-kiliani](#)

[Murexide](#)

[Vitali-Morin's](#)

6) Which of the following is **NOT** a flavonoid glycoside? (1)

[Quercetin](#)

[Astragalin](#)

[Myricin](#)

[Vitexin](#)

7) Rutin is the constituent of (1)

[Tea](#)  
[Ruta](#)  
[Coffee](#)  
[Nutmeg](#)

8) The constituent used for the synthesis of sex hormones is (1)

[Yamogenin](#)  
[Isoliquiritin](#)  
[Liquiritin](#)  
[Diosgenin](#)

9) Meconic acid is present in (1)

[Cinchona](#)  
[Cannabis](#)  
[Opium](#)  
[Tobacco](#)

10) For synthesis of Vit-A, which of the following phytoconstituents is used? (1)

[Menthol](#)  
[Citral](#)  
[Atropine](#)  
[Reserpine](#)

11) Crystal of potassium chlorate is used for (1)

[Modified Borntragers' test](#)  
[Keller kiliani test](#)  
[Thalleioquin test](#)  
[Murexide test](#)

12) Which of the following is a diferruloylmethane (1)

[Curcumin](#)  
[Rserpine](#)  
[Forskolin](#)  
[Diosgenin](#)

13) Following compound answers Salkowski test (1)

[Sennosides](#)  
[Reserpine](#)  
[Glycyrrhizin](#)  
[Rutin](#)

14) A member of a small group of compounds possessing a four-membered oxetane ring and a complex (1) ester side-chain in their structures

[Forskolin](#)  
[Vinblastine](#)  
[Taxol](#)  
[Curcumin](#)

15) "Kedde's test" is performed for (1)

[Anthracene glycoside](#)  
[Bitter glycoside](#)

[Saponin glycoside](#)

[Cardiac glycoside](#)

16) Keller-Killiani test signifies presence of (1)

[5 membered unsaturated lactone ring](#)

[Activated methylene group at C-21](#)

[Desoxy sugar](#)

[6-membered unsaturated lactone ring](#)

17) Following is a Labdane Diterpene compound (1)

[Podophyllotoxin](#)

[Atropine](#)

[Reserpine](#)

[Forskolin](#)

18) Apparatus used for determination of volatile oil content by steam distillation method (1)

[Vacuum distillation apparatus](#)

[Spiro meter apparatus](#)

[Clevenger apparatus](#)

[Soxhlet's apparatus](#)

19) Carbon dioxide is most commonly used supercritical fluids and has critical temperature and pressure (1)

[Critical temperature 36.5oC and 72.7 pressure](#)

[Critical temperature 9.3oC and 50.4 pressure](#)

[Critical temperature 31.1oC and 73.8 pressure](#)

[Critical temperature 374.2 oC and 220.5 pressure](#)

20) What is the radiations frequency of Microwaves? (1)

[0.1 GHz to 300 GHz](#)

[0.1MHz to 300 GHz](#)

[0.3 MHz to 300 MHz](#)

[0.3 GHz to 300 GHz](#)

## II Long Answers

Answer all the questions.

- 1) What are volatile oils and give their isolation. Add a note on Clove and Fennel. (10)
- 2) Give the biological source and explain the industrial production, test for identification and utilization of Caffeine. (10)

## III Short Answers

Answer all the questions.

- 1) Briefly discuss on methods used in Tracer technique. (5)
- 2) How mutant strains are useful in biogenetic studies? (5)
- 3) Give the source, active constituents, chemical tests and uses of Senna and Aloes. (5)
- 4) Write the source, explain the isolation, identification test for Atropine. (5)
- 5) Briefly discuss soxhlet extraction process with its merits and demerits. (5)
- 6) Give a brief note on Thin Layer Chromatography and its applications. (5)

- 7) Explain and give the significance of (5)
- a) Liebermann-Burchard reaction
  - b) Thalleoquin test
  - c) Shinoda test

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