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**B.Pharma (2012 to 2016) (Sem.-5)****PHARMACOGNOSY-IV****Subject Code : BPHM-504****M.Code : 70430****Time : 3 Hrs.****Max. Marks : 80****INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **FIFTEEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **FOUR** questions carrying **TEN** marks each and students have to attempt any **THREE** questions.

**SECTION-A****Answer briefly/Fill in the blank :**

1. Draw chemical structures of ephedrine and caffeine.
2. How will you test the presence of pilocarpine in the given sample using a chemical test?
3. In which portion of the nux-vomica seeds the alkaloids brucine and strychnine are present?
4. Which one of the two, Mayer's and Dragendorff's reagent is more sensitive for testing alkaloids? Also write their chemical composition.
5. Arrange the following techniques in increasing order of their sensitivity : HPLC, GC, Paper chromatography, TLC, Column chromatography, HPTLC.
6. Give uses of papain and Diastase.
7. Name two plant sweeteners with their complete biological source.
8. Explain the principle of DCCC.
9. Give one example of a glyco- and steroidal-alkaloid with their complete biological source and major use.
10. Define Quassinoids. Give one example with its source and major use.
11. Give examples of two alkaloids for which *L*-ornithine acts as a precursor.



12. Name the basic pathway for biosynthesis of terpenoids and alkaloids.
13. Give biological source, important chemical constituent and important uses of cola.
14. Give chemical test for ergot.
15. \_\_\_\_\_ & \_\_\_\_\_ are formed from the coumaryl-s-coA.

#### SECTION-B

16. Give complete biological source, chemical constituents and uses of kurchi and colchicum.
17. Write a note on the cultivation and collection of cinchona.
18. Give complete source, preparation, uses and identification tests of Pancreatin.
19. Explain the role of medicinal and aromatic plants in national economy.
20. Explain the biosynthetic pathway for lignans.

#### SECTION-C

21. Write a detailed note on Plant bitters and their applications.
22. Write a note on TLC and HPTLC highlighting their principle, instrumentation and their role in evaluation of herbal drugs. Also highlight the difference between the two techniques.
23. Write a detailed note on Cinchona and Opium. Also highlight their commercial importance.
24. Write biological source, chemical constituents and uses of :
  - a) Datura
  - b) Catharanthus
  - c) Pilocarpus
  - d) Veratrum

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**