

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 5- EXAMINATION –WINTER - 2018

Subject Code: 250006

Date: 03/12/2018

Subject Name: Pharmacognosy - IV

Time: 10:30 AM TO 01:30 PM

Total Marks: 80

Instructions:

- 1. Attempt any five questions.**
- 2. Make Suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks**

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| Q.1 | (a) Give a short note on Tracer-technique and its importance in pharmacognosy. | 06 |
| | (b) Explain Shikimic acid pathway for the biogenesis of alkaloids and amino acids. | 05 |
| | (c) Give outline of the biosynthetic pathways of Atropine and Anthracene derivatives. | 05 |
| Q.2 | (a) What is alkaloid? Give chemical classification of alkaloids according to the heterocyclic ring present in their structures, along with examples. | 06 |
| | (b) Describe pharmacognostic and phytochemical profile of Nux vomica seed. | 05 |
| | (c) Discuss isolation method and general qualitative phytochemical tests of Alkaloids. | 05 |
| Q.3 | (a) Explain the saprophytic reproduction of Ergot along with its life cycle. | 06 |
| | (b) Give biological sources, family, chemical constituents and uses of any two drugs containing volatile liquid alkaloid. | 05 |
| | (c) Write a detailed pharmacognostic and phytochemical profile of any one anti-cancer alkaloidal drug. | 05 |
| Q.4 | (a) Discuss pharmacognosy, phytochemistry and pharmacology of the bark containing anti-dysentetic alkaloidal principles. | 06 |
| | (b) Write the biological source, family, morphology, chemical constituents and uses of anti-malarial alkaloidal drug. | 05 |
| | (c) Give pharmacognostic note on Datura leaf. | 05 |
| Q.5 | (a) Differentiate the following:
(i) <i>Ephedra sinica</i> and <i>Ephedra equisetina</i>
(ii) Egyptian Henbane and Indian Henbane
(iii) Indian Rauwolfia and African Rauwolfia | 06 |
| | (b) Give pharmacognostic details of colchicum. | 05 |
| | (c) Write the biological source, chemical constituents and uses of Veratrum and Lobelia. | 05 |
| Q.6 | (a) Give phytochemical tests, used for identification of the following: (Any three)
(i) Tropane alkaloids (ii) Indole alkaloids (iii) Cinchona alkaloids
(iv) Purine alkaloids | 06 |
| | (b) Write a pharmacognostic note on anti-hypertensive alkaloidal drug. | 05 |
| | (c) Draw well labeled diagram of transverse section of Quinazoline alkaloid containing drug. | 05 |
| Q.7 | (a) Give biological source, chemical constituents, pharmacological actions of the alkaloidal drug used in treatment of glaucoma. | 06 |
| | (b) Elaborate the aspects of stereochemistry with suitable examples of natural products. | 05 |
| | (c) Write an essay on stereoisomerism of Alkaloids. | 05 |