

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Pharm - SEMESTER-V • EXAMINATION – SUMMER 2017**

**Subject code: 250006**

**Date: 16/06/2017**

**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.**

- Q.1** (a) Illustrate the biogenetic pathway of the biogenesis of unsaturated fatty acids in plants and animals. **06**  
(b) Write the biogenesis of any alkaloid synthesized from ornithine. **05**  
(c) Write a brief note on tracer techniques used for biogenetic studies in plants. **05**
- Q.2** (a) Write a detailed note on drugs containing steroidal alkaloid. **06**  
(b) Enlist the physical and chemical properties of alkaloids. **05**  
(c) Differentiate between any two varieties of ephedra species. **05**
- Q.3** (a) Write a note on stepwise preparation of black tea. **06**  
(b) Write a note on morphine free species. **05**  
(c) Write a note on Indian ginseng. **05**
- Q.4** (a) Give the biological source, chemical constituents, chemical tests and uses of a seed containing indole alkaloids. **06**  
(b) Write a note on adulterants of the drug mentioned in Q.4 (a). **05**  
(c) Give examples of therapeutically active natural products which show cis-, trans- and cis-trans isomerism. **05**
- Q.5** (a) Differentiate between rauwolfia and its most common adulterant. **06**  
(b) Write a note on cultivation and collection of aconite. **05**  
(c) Draw schematic T.S. and powder microscopy of vasaka. **05**
- Q. 6** (a) Write chemical test for identification of: **06**  
    i. Ergotamine  
    ii. Caffeine  
    iii. Quinine  
(b) Classify tropane alkaloids. Write a pharmacognostic note on any one tropane alkaloid containing drug. **05**  
(c) Write atleast six species of cinchona. Draw a detailed T.S. of the bark. **05**
- Q. 7** (a) Differentiate between two varieties of ipecacuanha. **06**  
(b) Explain meso forms giving suitable examples of natural products **05**  
(c) Write a note on production of ergot alkaloids by saprophytic culture. **05**

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