

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm-Semester-V May-2012 Examination

Subject code: 250006

Subject Name: Pharmacognosy-IV

Time: 02:30pm to 5:30pm

Date: 22-05-2012

Total Marks: 80

### Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw figures and diagrams wherever necessary.

- Q.1** (a) Define alkaloids. Discuss general properteries of alkaloids. **06**  
(b) Write general methods of isolation of alkaloids **05**  
(c) Clarify a role of alkaloids in plant. **05**
- Q.2** (a) Give detail classification of alkaloids giving suitable examples. **06**  
(b) Give specific chemical test and commercial importance of tropane alkaloids. **05**  
(c) Discuss adulterants and substituents of Belladonna herb. **05**
- Q.3** (a) How can you differentiate *Datura innoxia* from *Datura metel* by its morphology and microscopical characters? **06**  
(b) Write a note on Vinca alkaloids and their semi-synthetic derivatives. **05**  
(c) Write a note on purine alkaloids **05**
- Q.4** (a) Elaborate importance of stereoisomerism in natural product by giving suitable examples. **06**  
(b) Comment: Ashwagandha is called as rasayana drug in Ayurveda. **05**  
(c) Describe histology of Nuxvomica seed. **05**
- Q.5** (a) Give source, chemical constituents and therapeutic importance of Quinoline alkaloid containing drugs. **06**  
(b) Explain source and life-cycle of Ergot. **05**  
(c) Give specific chemical test and commercial importance of ergot alkaloids. **05**
- Q. 6** (a) Give brief introduction to basic metabolic pathways. Give outline of shikkimic acid pathway and products derived from it. **06**  
(b) Mention Botanical source, pharmacological uses and toxicity of Ma-huang **05**  
(c) Give source, cultivation and collection method for opium alkaloids. **05**
- Q.7** (a) Describe source, pharmacological uses and chemical test of morphine. Mention morphine free species of opium. Give biogenesis of papaverine and morphine **06**  
(b) Illustrate acetate mevalonate pathway **05**  
(c) Give different varieties of Tobacco in India. Explain method of cultivation of it. **05**

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