

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

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

**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**

- 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-dysentery 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: **06**
    - (i) *Ephedra sinica* and *Ephedra equisetina*
    - (ii) Egyptian Henbane and Indian Henbane
    - (iii) Indian Rauwolfia and African Rauwolfia
  - (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) **06**
    - (i) Tropane alkaloids (ii) Indole alkaloids (iii) Cinchona alkaloids
    - (iv) Purine alkaloids
  - (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**