

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharmacy Sem-V Examination June 2011

Subject code: 250006

Subject Name: Pharmacognosy-IV

Date: 29/06/11

Total Marks: 80

Time: 10:30 am to 1:30pm

Instructions:

Total Marks: 80

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

- Q.1** (a) Enumerate the phytoconstituents synthesized via the acetate- malonate pathway and write the biogenesis of anthracene derivatives. **06**
- (b) Which techniques are widely used for biogenetic studies of primary and secondary metabolites? Write a note on radiotracer techniques. **05**
- (c) Explain the morphology and microscopy of vasaka leaf and draw well labelled diagrams. **05**
- Q.2** (a) Define alkaloids. Classify alkaloids according to the heterocyclic ring present in their structures giving examples in each class. **06**
- (b) Give a flow chart of the general procedure for isolation of alkaloids. **05**
- (c) Give the biogenesis of any one alkaloid synthesized from ornithine. **05**
- Q.3** (a) Explain the chemical test used for identification of : **06**
- i) Strychnine and brucine iii) caffeine
ii) Indole alkaloids iv) cinchona alkaloids
- (b) Write the cultivation and collection process of cinchona bark. **05**
- (c) Why fatty acids possess even number of "C" atoms? Explain with the help of biogenetic pathway. **05**
- Q.4** (a) Explain the life cycle of ergot with well labelled diagram. **06**
- (b) Write a note on nux-vomica and its adulterants. **05**
- (c) Name the precursors for biogenesis of indole alkaloids and write the biogenetic pathway for synthesis of reserpine. **05**
- Q.5** (a) Differentiate between two species of alkaloidal amine containing drug used as bronchodilator. **06**
- (b) Explain the steps involved for preparation of tea for marketing. **05**
- (c) Differentiate between Rio and Cartegena ipecacuanha. **05**
- Q. 6** (a) Give examples of acyclic and monocyclic monoterpenes and write the biogenesis of any two. **06**
- (b) Write the biological source, family, chemical constituents and uses of steroidal alkaloid containing bark. **05**
- (c) Write the morphology, biological source, family, chemical constituents and uses of aconite. **05**
- Q.7** (a) Explain the terms giving examples of natural product: **06**
- i) Meso form ii) Cis-trans isomerism
- (b) Write the collection and processing of opium. **05**
- (c) Write the pharmacognosy of belladonna root. **05**
