

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER-6 EXAMINATION – WINTER -2023**

**Subject Code: 2260006****Date: 16/12/2023****Subject Name: Pharmacognosy-IV****Time:02.30 p.m. to 5.30 p.m.****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) Provide detailed chemical classification of Alkaloids with examples. **06**  
(b) Write physical and chemical properties of Alkaloids. **05**  
(c) Describe cultivation, collection, processing and chemical test of Opium alkaloids. **05**
- Q.2** (a) Write name, source and draw structure of alkaloid indicated for following uses. **06**  
1. Anti-cancer 2. Local Anesthetic 3. Cough suppressant  
(b) Write different sources, commercial varieties and chemistry of Tropane alkaloids. **05**  
(c) Describe life cycle of ergot and saprophytic production of ergot alkaloids. **05**
- Q.3** (a) Write definition and classification of enzymes. Explain animal source enzymes in detail. **06**  
(b) Give source, method of production and uses of Maltase and Papain. **05**  
(c) Write a note on streptokinase as therapeutic enzyme. **05**
- Q.4** (a) Enlist different types of Pharmaceutical aids. Explain applications of diatomite in Pharmaceutical Industry. **06**  
(b) Differentiate cotton and wool in detail. **05**  
(c) Write a note on natural colors with their application in Pharmaceutical industry. **05**
- Q.5** (a) Enlist different sources of ephedrine. Draw morphology ephedra stem, draw chemical structures and write their pharmacological uses. **06**  
(b) Describe in detail Rauwolfia alkaloids and their structure activity relationship. **05**  
(c) Write sources, isolation method and chemical test of caffeine. **05**
- Q.6** (a) Write chemical constituents and uses of Kantakari and Kurchi. **06**  
(b) Provide chemical test for; 1. Atropine 2. Ergotamine **05**  
3. Quinine 4. Nicotine 5. Strychnine  
(c) Draw detailed transverse section of Cinchona bark with label. **05**
- Q.7** (a) Write source, chemical constituents and uses of Pilocarpus and Colchicum. **06**  
(b) Describe present bio-active molecules and future prospects of Marine Pharmacognosy. **05**  
(c) Write a short note on anti-cancer Marine source compounds. **05**

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