

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – V • EXAMINATION – SUMMER 2013

Subject Code: 250006**Date: 15-06-2013****Subject Name: Pharmacognosy - IV****Time: 02.30 pm - 05.30 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) Describe Shikimic acid pathway and the secondary metabolites produced through it. | 06 |
| | (b) Describe general techniques to study biosynthetic pathway. | 05 |
| | (c) Draw well labelled diagrammatic transverse section of Vasaka leaf. | 05 |
| Q.2 | (a) Describe source, active constituents and medicinal importance of Opium. Mention morphine free species of Opium. | 06 |
| | (b) Write a note on Camptotheca. | 05 |
| | (c) Write a note on Vinca alkaloids and their semi-synthetic derivatives. | 05 |
| Q.3 | (a) Define alkaloids. Classify them with examples according to heterocyclic ring present in the structure. | 06 |
| | (b) What are protoalkaloids? Write a note on any one protoalkaloid containing drug. | 05 |
| | (c) Give specific chemical tests for following.
(i) Quinine (ii) Caffeine (iii) Emetine (iv) Ergometrine (v) Strychnine | 05 |
| Q.4 | (a) Write sources, chemical constituents and symptoms of toxicity of Cinchona and Hyoscyamus. | 06 |
| | (b) Write a note on any one steroidal alkaloid containing drug. | 05 |
| | (c) Discuss the pathway for the biosynthesis of monoterpenes. | 05 |
| Q.5 | (a) Differentiate following drugs
(i) <i>Datura innoxia</i> and <i>Datura metel</i>
(ii) <i>Nicotiana tabacum</i> and <i>Nicotiana rustica</i>
(iii) Bada chand and Chhota chand | 06 |
| | (b) Write a pharmacognostic note on Ashwagandha. Why it is called as Indian Ginseng? | 05 |
| | (c) Discuss allied drugs and adulterants of Nux-vomica. | 05 |
| Q. 6 | (a) What is stereoisomerism? Discuss types of stereoisomers taking examples of natural products. | 06 |
| | (b) What are purine alkaloids? Write a note on any one drug containing purine alkaloids? | 05 |
| | (c) Enlist the drugs containing tropane alkaloids. Write a note on Cocca. | 05 |
| Q.7 | (a) Discuss source and life cycle of Ergot with labelled diagram. | 06 |
| | (b) Write a note on phenolic and non phenolic alkaloids of Ipecac. | 05 |
| | (c) Write pharmacognosy of Aconite. | 05 |
