Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – V • EXAMINATION – WINTER – 2015

Subject Code: 250006 Date: 21/12/2015

Subject Name: Pharmacognosy-IV

Time: 10.30 AM to 1.30 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 the biogenesis of any one phenathrene alkaloid synthesized from tyrosine.	**06**
	(b)	Write a note on Tracer-technique.	**05**
	(c)	Describe Photosynthesis.	**05**
Q.2	**(a)**	Enumerate the phytoconstituents synthesized via the acetate- malonate pathway and write the biogenesis of anthracene derivatives.	**06**
	(b)	Explain the morphology and microscopy of Vasaka leaf and draw well labelled diagrams.	**05**
	(c)	Define alkaloids. Classify alkaloids according to the heterocyclic ring present in their structures giving examples in each class.	**05**
Q.3	**(a)**	Explain the life cycle of ergot with well labelled diagram.	**06**
	(b)	Write the cultivation and collection process of cinchona bark.	**05**
	(c)	Describe properties and general tests for identification of Alkaloids.	**05**
Q.4	**(a)**	Write the biological source, family, chemical constituents and uses of steroidal alkaloid containing bark.	**06**
	(b)	Write the morphology, biological source, family, chemical constituents and uses of aconite.	**05**
	(c)	Write the pharmacognosy of belladonna root.	**05**
Q.5	**(a)**	Differentiate between Rio and *Cartegena ipecacuanha*.	**06**
	(b)	Give pharmacognostic details of Vinca.	**05**
	(c)	Enlist Tropane Alkaloids and write Pharmacognostic profile of any one drug contain it.	**05**
Q. 6	**(a)**	Give chemical constituents, pharmacological actions and uses of an antihypertensive drug.	**06**
	(b)	Give adulterant and substitutes of Pilocarpus and Cola.	**05**
	(c)	Describe microscopical characters of *Nux vomica* seed.	**05**
Q.7	**(a)**	Explain the chemical test used for identification of : i) Strychnine and brucine ii) caffeine iii) Indole alkaloids iv) cinchona alkaloids	**06**
	(b)	Explain the concept of stereochemistry with suitable examples of natural products.	**05**
	(c)	Write an assay on stereoisomerism of Alkaloids.	**05**

****