

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – WINTER 2013

Subject Code: 910201

Date: 26-12-2013

Subject Name: Chemistry of Natural Products

Time: 10.30 am - 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)	What are carbohydrates? Classify them. Discuss the configuration of monosaccharides.	06
	(b)	Write a note on heteropolysaccharides.	05
	(c)	Discuss the structure of lactose.	05
Q.2	(a)	Define and classify proteins. Write a note on biologically important polypeptides.	06
	(b)	Give any two methods of synthesis of aminoacids and polypeptides.	05
	(c)	What are purines? Prove the structure of Uric acid.	05
Q.3	(a)	What are heterocyclic compounds? Give the synthesis and reactions of pyrimidine.	06
	(b)	Give the following synthesis with mechanism (1) Hantzsch pyridine synthesis (2) Fischer-Indole synthesis	05
	(c)	Write a note on aromaticity of furan, thiophene and pyrrole.	05
Q.4	(a)	Discuss the general methods for structural elucidation of alkaloids.	08
	(b)	Prove the structure of morphine.	08
Q.5	(a)	What are steroids? Discuss stereochemistry of steroids.	08
	(b)	Discuss chemistry and SAR of glucocorticoids.	08
Q. 6	(a)	What are nucleic acids? Discuss the structure of DNA. Give the function of DNA and RNA.	08
	(b)	What are anthocyanins? Give the methods of synthesis of anthocyanidine.	08
Q.7	(a)	What are flavones and flavonoids? Discuss the structure of flavones.	06
	(b)	Discuss the structure of oxytocin.	05
	(c)	Write a note on lignin and pectins.	05
