## GUJARAT TECHNOLOGICAL UNIVERSITY M.PHARM. - SEMESTER-I • EXAMINATION – WINTER-2016

Subject Code: 910201 Date:04/01/2017

**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)	Define and classify carbohydrates with chemical structure. Determine structure of Glucose.	06
	<b>(b)</b>	Explain epimers, anomers and tautomers in terms of monosaccharide with suitable examples.	05
	(c)	Write a note on oligosaccharides.	05
Q.2	(a)	Define and classify alkaloids. Give general methods of degradation and structure determination of alkaloids.	06
	<b>(b)</b>	Determine structure of Reserpine.	05
	<b>(c)</b>	Write chemical constituents and biological importance of Vinca Alkaloids.	05
Q.3	(a)	What are proteins? Classify it and explain quaternary structure of protein.	06
	<b>(b)</b>	Discuss structure and chemistry of oxytocine.	05
	<b>(c)</b>	Explain solid phase peptide synthesis.	05
Q.4	(a)	What are heterocyclic compounds? Explain preparations and reactions of any one six member hetero cyclic compound.	06
	<b>(b)</b>	Give orientation and reactivity of pyridine towards electrophile.	05
	<b>(c)</b>	Write any two methods for synthesis of thiophene.	05
Q.5	(a)	What are anthocyanins? Discuss general method for synthesis of anthocyanidin.	06
	<b>(b)</b>	Explain chemistry of purines.	05
	<b>(c)</b>	Discuss biological significance of flavones and isoflavones.	05
Q. 6	(a)	What is an amino acid? Give classification and synthesis of any two amino acids.	06
	<b>(b)</b>	Explain structure and functions of DNA	05
	(c)	Write a note on Fischer Indole Synthesis with mechanism.	05
Q.7	(a)	Explain stereochemistry and nomenclature of steroids.	06
	<b>(b)</b>	Discuss the chemistry of cholesterol.	05
	<b>(c)</b>	Explain SAR of Glucocorticoids.	05

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