Enrolment No.\_\_\_\_\_

## **GUJARAT TECHNOLOGICAL UNIVERSITY B.PHARM – SEMESTER – VII • EXAMINATION – WINTER – 2015** Subject Code: 2270012

Date: 16/12/2015

**Subject Name: Green Chemistry** 

Time: 10.30 AM to 1.30 PM

## **Instructions:**

## **Total Marks: 80**

- 1. Attempt any five questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1	(a) (b)	Define Green Chemistry with goals and limitations. Write down the twelve principles of Green Chemistry. Explain any two with the help of suitable examples. Write a note on inception of Green Chemistry	06 05 05
Q.2	(c) (a) (b) (c)	Write a note on meepton of oreen chemistry. Write short notes on prevention on waste/byproducts and Atom economy. Explain the role of Green Chemistry in polymer industry. Define the terms : Green Solvents and Saponification.	06 05 05
Q.3	(a) (b) (c)	Explain the role of Green Chemistry in pharmaceutical industry. Write a note on MAOS. Catalytic reagents are superior to stoichiometric reagents. Justify with suitable examples.	06 05 05
Q.4	(a)	Give the Green Synthesis of any two :	06
	<b>(b</b> )	<ul> <li>i) Paracetamol ii) Catechol iii) Benzyl Broamide</li> <li>Explain the Hofmann elimination in water reaction when induced by microwaves.</li> </ul>	05
	(c)	Write a note on microwave assisted Diels Alder reaction.	05
Q.5	(a)	Define ionic liquids and discuss the advantages of water as solvents over the organic solvents.	06
	<b>(b</b> )	Write a note on microwave assisted solid state reactions with any one suitable example.	05
	(c)	Explain the term 'Solvent less processes'.	05
Q. 6	<b>(a)</b>	Discuss the future aspects of Green Chemistry in various areas.	06
	(b) (c)	Write a note on Combinatorial Green Chemistry. Explain the terms Hazardous solvents	05 05
Q.7	(e) (a)	Discuss any two reactions under sonication taking a suitable example	06
	<b>(b</b> )	Describe the role of 'Clayan' as a nonmetallic oxidative reagents in various reactions.	05
	(c)	Write a note on Fries rearrangement microwave assisted reaction in water.	05

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