

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – SUMMER • 2015

Subject Code: 183504**Date:** 05/05/2015**Subject Name:** Sustainable Development & Green Chemistry**Time:** 10.30am to 1.00pm**Total Marks:** 70**Instructions:**

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

- Q.1** (a) Enlist ten commandments in proper sequence and any one in detail? **07**
(b) Enlist twelve basic principles of green chemistry **07**
- Q.2** (a) Explain atom economy with suitable example **07**
(b) Explain terms Atomic Mass, Atomic Number and Isotope **07**
- OR**
- (b) Explain solvent free system in detail? **07**
- Q.3** (a) Write all methods of waste prevention and minimization also explain any one in detail. **07**
(b) Write note on super critical fluid. **07**
- OR**
- Q.3** (a) Write a note on ionic liquids. **07**
(b) Write a note on Helium as a first noble gas. **07**
- Q.4** (a) Enlist and briefly explain classification mechanism of photochemical reaction. **07**
(b) Write a note on photochemical reactor and explain any one in detail. **07**
- OR**
- Q.4** (a) Briefly write about ND:YAG and Dye Laser in organic photochemistry. **07**
(b) Write note on Suzuki type coupling. **07**
- Q.5** (a) Explain following terms with respect to Microwave irradiation. **07**
1) Dipolar polarization 2) Conduction Heating
(b) Explain Cleaner Development Mechanism **07**
- OR**
- Q.5** (a) Explain Sono chemistries' contribution in green chemistry with one example? **07**
(b) Explain significance of CMD for Chemical Industry. **07**
