| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII • EXAMINATION - SUMMER 2016

| Su | bject | Code: 183504 Date:16/5/2016 | • |
|--|------------|---|----------|
| Subject Name: Sustainable Development & Green Chemistry Time: 10:30 AM to 01:00 PM Instructions: Total Mark | | s: 70 | |
| 11150 | 1. 2. | Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. | |
| Q.1 | (a) | What do you mean by sustainable development? Which are the different ways to achieve it? | 07 |
| | (b) | What is ScCO ₂ ? Give its advantages and problems for using it. | 07 |
| Q.2 | (a) | Explain the comparison of Conventional versus Microwave assisted synthesis for any of the two reactions. 1)Coumarin 2) Chalcone | 07 |
| | (b) | What are the advantages of solvent less chemistry? | 07 |
| | | OR | |
| | (b) | Write a note on Selectivity. | 07 |
| Q.3 | (a) (b) | Write a short note on supercritical fluid. Explain Cleaner Production analysis approach with appropriate figure. OR | 07 07 |
| Q.3 | (a) (b) | Explain the alternatives of VOCs. Write a note on nitrogen species as primary pollutants. | 07 07 |
| Q.4 | (a) (b) | Explain whole process of bio-fuel. Define: POP, VOC,PAN | 07 07 |
| O 4 | () | OR | 0.5 |
| Q.4 | (a) (b) | Write a note on atom economy. What do you mean by Enhanced Green House effect? | 07 07 |
| Q.5 | (a) (b) | Explain the use of plasma technique in Effluent treatment process. Draw vertical structure of atmosphere and associated temperature and pressure variation. Write the reactions involved in ozone depletion. OR | 07 07 |
| Q.5 | (a) | Explain Heck reaction in detail. | 07 |
| | (b) | Write principals of green chemistry. | 07 |
