

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm - SEMESTER-VII • EXAMINATION – SUMMER-2017

Subject Code: 2270012

Date: 10/05/2017

Subject Name: Green Chemistry

Time: 02:30 PM to 05:30 PM

Total Marks: 80

Instructions:

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

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| Q.1 | (a) Discuss the importance of starting materials in designing green synthesis. | 06 |
| | (b) Make a detailed note on bio catalysts. | 05 |
| | (c) Discuss the use of microwaves and ultrasonic energy in green synthesis. | 05 |
| Q.2 | (a) Define green solvents, immobilized solvents and ionic solvents with suitable examples. | 06 |
| | (b) Write a note on international organizations promoting green chemistry. | 05 |
| | (c) Write in brief on inception of green chemistry. | 05 |
| Q.3 | (a) Enlist principles of green chemistry. Explain any two in detail. | 06 |
| | (b) Discuss the obstacles in achieving the goals of green chemistry. | 05 |
| | (c) Define green chemistry. What are the necessities of it? | 05 |
| Q.4 | (a) Discuss about combinatorial green chemistry. | 06 |
| | (b) Write the future scopes of solventless reactions. | 05 |
| | (c) Write the applications of green chemistry. | 05 |
| Q.5 | (a) Write the green synthesis of ibuprofen and paracetamol. | 06 |
| | (b) Write a note on microwave assisted Diels-Alder reaction. | 05 |
| | (c) Discuss the microwave assisted oxidation of alcohols. | 05 |
| Q. 6 | (a) Explain various ways to avoid unnecessary derivatization in green synthesis. | 06 |
| | (b) Write a short note on polymer supported catalysts. | 05 |
| | (c) Explain the rationale behind the use of protecting groups in green synthesis. | 05 |
| Q.7 | (a) Enumerate ultrasound assisted reactions. Explain any one detail. | 06 |
| | (b) Explain the decarboxylation by use of microwave energy. | 05 |
| | (c) Write a note on microwave assisted Claisen rearrangement. | 05 |
