

October 2025
B.A./B.Sc.
Third Semester
MULTI-DISCIPLINARY COURSE – 3
CHEMISTRY
Course Code: CHO 3.11
(Green Chemistry)

Total Mark: 50
Time: 2 hours

Pass Mark: 20

I. Answer the following questions.

1. (a) Discuss the principles of green chemistry. 6
(b) What is atom economy? Give the applications of atom economy in rearrangement and elimination reaction with examples. 6
2. (a) Write a note on minimisation of hazardous toxicity in terms of green chemistry. 6
(b) What do you mean by Bhopal gas tragedy? Explain the greener alternative methods to avoid such tragedy. 6
3. (a) Write a note on each of the following: 2×3=6
(i) Adipic acid
(ii) Hoffman elimination
(iii) Diels-Alder reaction
(b) Write a note on dry cleaning of garments in green chemistry. 4
(c) Write a note on photocatalysis. 2

II. Answer any two of the following questions.

4. (a) How will you design a green synthesis using the principles of green chemistry? 3
(b) What are supercritical fluids? Explain its application in green chemistry. 4
5. (a) Explain in detail about the use of catalytic reagents in preference to stoichiometric reagents. 4
(b) Compare heterogeneous with homogeneous catalysis. 3

6. (a) Write a note on biomimetic multifunctional reagents. 4
- (b) What is ozone layer? Explain the mechanism of its depletion in the stratosphere. 3
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