

[This question paper contains 4 printed pages.]

1972

Your Roll No. ....

**B.Sc. (H) Maths / B.Sc. Prog. / III** **E**

EL 310 (i) – GREEN CHEMISTRY

(Admissions of 2005 and onwards)

Time : 2 Hours

Maximum Marks : 38

*(Write your Roll No. on the top immediately  
on receipt of this question paper.)*

*Attempt **four** questions in all including  
Question No. 1 which is compulsory.*

1. Fill the blanks with appropriate words :

- (i) Elimination reactions are atom .....  
reaction. (1)
- (ii) Barry Trost is associated with the concept of  
..... (1)
- (iii) A Green bleaching agent used in the production  
of paper from wood pulp is ..... (1)
- (iv) Dry cleaning of clothes can be achieved in an  
eco friendly way by using ..... as a solvent.  
(1)

P.T.O.

- (v) Sc-CO<sub>2</sub> stands for ..... (1)
- (vi) An ultrasonic transducer converts ..... energy into ..... energy. (2)
- (vii) ..... and ..... are the examples of green house gases. (2)
- (viii) Nitrous oxide causes environmental pollution by acting as ..... as well as ..... (2)
2. (a) Write down the twelve basic principles of green chemistry. (6)
- (b) Discuss the use of diphenyl carbonate in solid state polymerization of amorphous polymers. (3)
3. (a) Provide green route for the synthesis of (**any Three**):
- (i) Paracetamol
- (ii) Acetaldehyde
- (iii) Ibuprofen
- (iv) Methylmethacrylate (6)
- (b) Calculate the % atom economy for the following chemical reactions :



- (iii) Microbial Oxidation. (6)
- (b) Discuss the advantages of using polymer supported reagents in a chemical reaction. Illustrate with an example. (3)