

**RAN-2403080204050002**

M. Sc. (Sem. - IV) Examination September - 2025
Chemistry (Paper - V) Skill Enhancement : Green Chemistry

Time: 2 Hours]**[Total Marks: 35**

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book (2) Figures to the right indicate full marks of the questions.	Seat No.: <table border="1"> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Student's Signature						

Q. 1. Answer any three of the following: (18)

- Discuss role of solvent selection for greener approach. Justify with merits, how volatile organic solvents used in conventional Michael reaction are replaced by using water as a solvent?
- What is atom economy? Compare atom economy of addition and elimination reactions with suitable example.
- Write a note on polymer based oxidising, reducing and dehydrating reagents along with their applications.
- Explain green approaches over conventional reactions with their merits for,
 - Benzoin condensation, &
 - Heck reaction

Q. 2. Answer any three of the following: (17)

- Write a note on green acid and basic catalysts with their merits.
- Write a note on polymer supported Phase Transfer Catalysts.
- Discuss the role of PNBS and Bu_4NBr_3 for green bromination reaction.
- Explain with application of following green catalysts,
 - Polymeric super acid catalysts, and
 - Pyridinium Fluorochromate (PFC)