

**M. SC. (ORGANIC CHEMISTRY) SEM-IV (CHOICE BASED
CREDIT & GRADE SYSTEM) : WINTER - 2017
SUBJECT: ELECTIVE: a) GREEN CHEMISTRY**

Day: Tuesday
Date: 07/11/2017

W-2017-0793

Time: 03.00 PM TO 06.00 PM
Max. Marks: 60

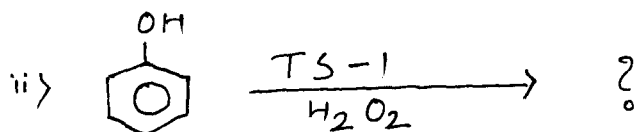
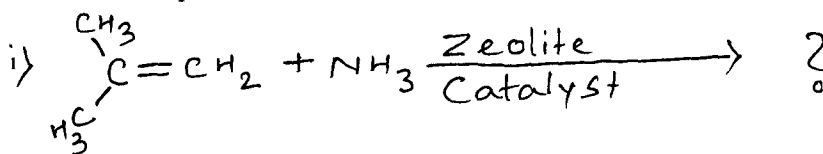
N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

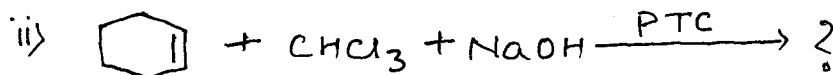
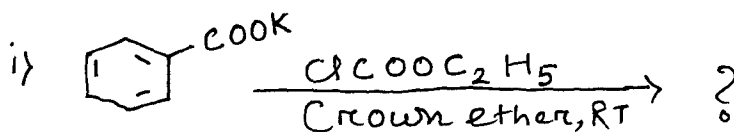
Q.1 Answer any **THREE** of the following: **(15)**

- a) What are the alternative approaches towards pollution free chemical synthesis?
- b) Write down the basic principles of green chemistry.
- c) What do you mean by polymer supported reagent? Name them. How will you prepare epoxide from olefin using such reagent?
- d) Define green catalyst. What are different types of green catalyst?
- e) Predict the products:



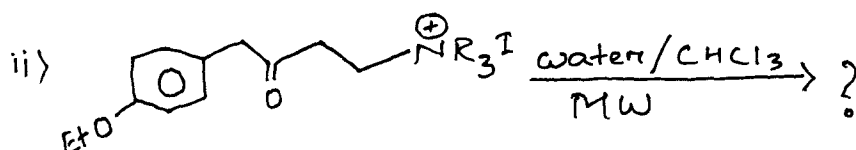
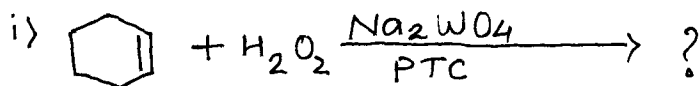
Q.2 Answer any **THREE** of the following: **(15)**

- a) Define green reagents. Give few examples with application.
- b) Name some PTC catalyst with structures. Write any one synthesis of PTC.
- c) Predict the product:



d) 'Water is the best solvent'. Explain.

e) Find the products:



P. T. O.

SECTION-II

Q.3 Answer any **THREE** of the following: (15)

- What are 'Crown Ethers'? Write the structure of 18-Crown-6. What is the role of crown ethers in chemical reaction?
- Write a note on use of microwave with example.
- Write conventional and green route of synthesis of urethane.
- Write the synthesis of adipic acid using green pathway.
- Write the synthesis of methyl methacrylate by conventional as well as green chemistry approach.

Q.4 Answer any **SIX** of the following: (15)

