

M. SC. (Organic Chemistry) Sem-IV (Choice Based Credit & Grade System) : WINTER - 2018

SUBJECT : ELECTIVE : GREEN CHEMISTRY

Day : Thursday
Date : 25/10/2018

W-2018-1006

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

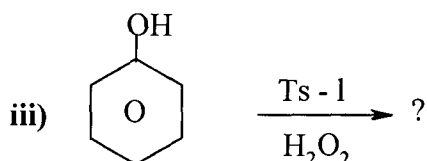
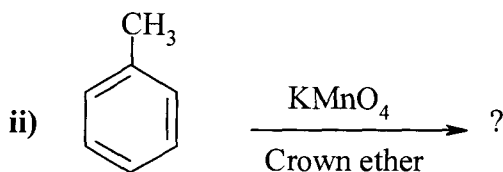
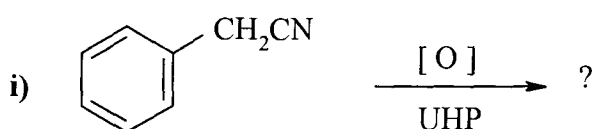
N.B.:

- 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 books.

SECTION - I

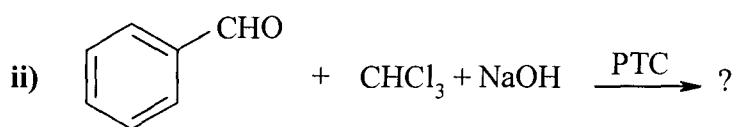
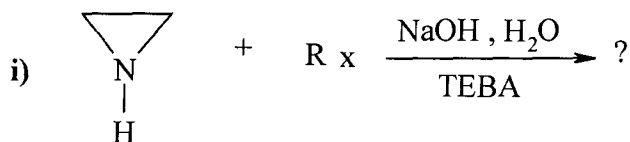
Q.1 Attempt ANY THREE of the following: [15]

- a) Write the basic principles of green chemistry.
- b) Define green solvent with example.
- c) What are the different types of catalysts? Explain any one.
- d) What are the alternatives for the pollution free chemical synthesis? Explain in short.
- e) Predict the product/s ANY TWO of the following:



Q.2 Attempt ANY THREE of the following: [15]

- a) Define phase transfer catalyst. Name few PTC.
- b) What are the advantages of the PTC over conventional reaction?
- c) What is the role of crown ether in chemical reactions? Write the structure of 18-crown 6.
- d) How does microwave help in chemical reaction? Give any two application.
- e) Predict the product/s in the following:



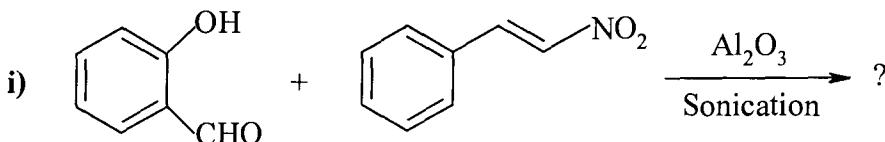
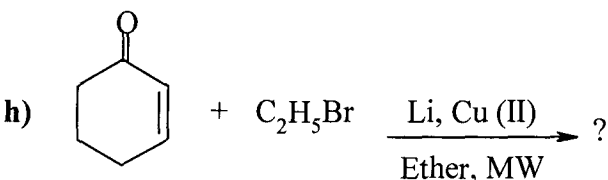
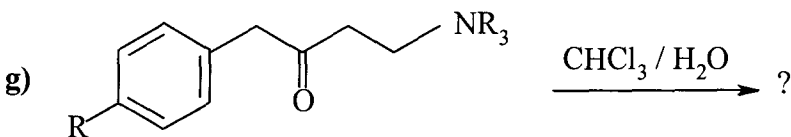
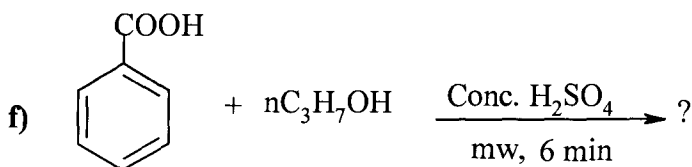
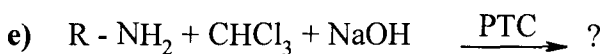
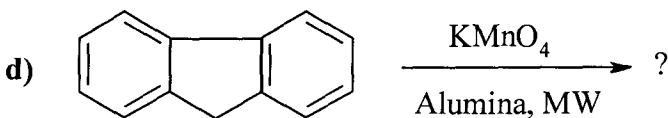
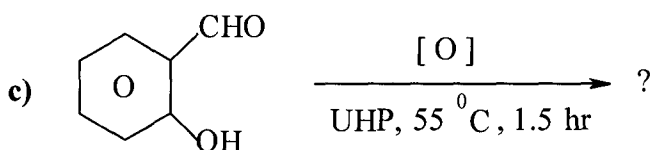
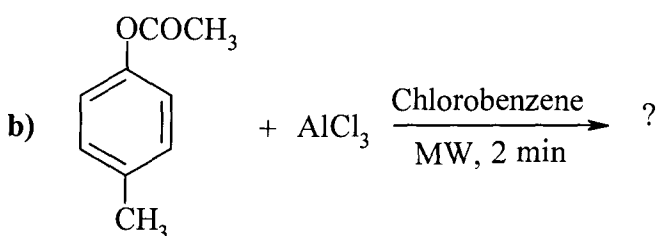
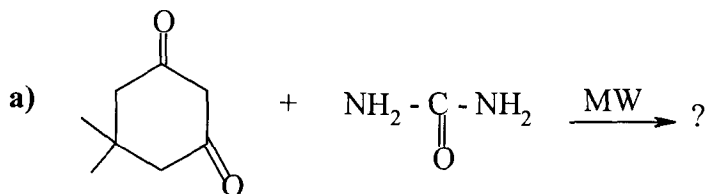
P.T.O.

SECTION – II

Q.3 Attempt ANY THREE of the following: [15]

- a) Write the advantages and disadvantages of water as a solvent.
- b) How adipic acid is prepared by green chemistry approach?
- c) How Ibuprofen is prepared by green chemistry method?
- d) What is the conventional method used for the synthesis of 4 – amino diphenyl amine?
- e) Write a note on : Ultrasound assisted organic synthesis.

Q.4 Attempt ANY SIX of the following: [15]



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