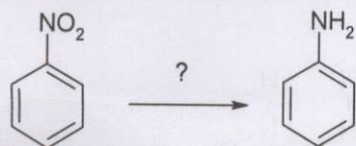


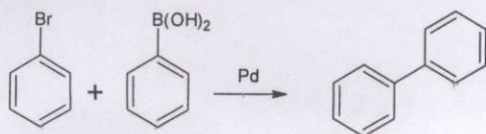
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**Answer key of SET-A
Organic Chemistry-II
Examination 2023**

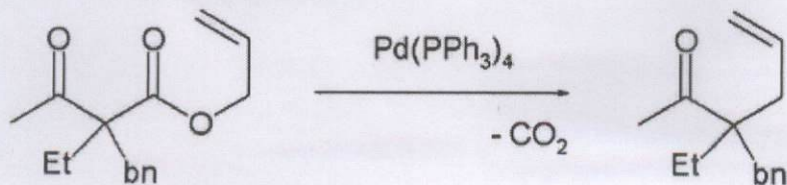
- a) Name the reactants in Sonogashira coupling.
➤ terminal alkyne and an aryl or vinyl halide.
- b) Identify the reagent required in following transformation.



- Fe in HCl
- c) Name the reagents used in Swern oxidation.
➤ oxalyl chloride ($C_2O_2Cl_2$), an organic base, and dimethyl sulfoxide
- d) Reduction employing Na in alcohol proceeds through which type of mechanism?
➤ Free radical mechanism
- e) Enlist the rearrangement which proceeds through isocyanate as an intermediate
➤ . Curtius rearrangement, Lossen rearrangement
- f) Name the reagent used in Etard reaction.
➤ CrO_2Cl_2
- g) Identify the following coupling reaction.



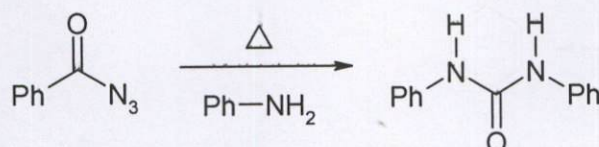
- Suzuki coupling
- h) What is Carroll rearrangement?
➤ The Carroll rearrangement is a rearrangement reaction in organic chemistry and involves the transformation of a β -keto allyl ester into a α -allyl- β -keto-carboxylic acid.



- i) Identify the ylide in Sommelet-Hauser rearrangement.
➤ N-ylide
- j) Write steps involved in mechanism of Heck coupling.
➤ Oxidative Addition Step.

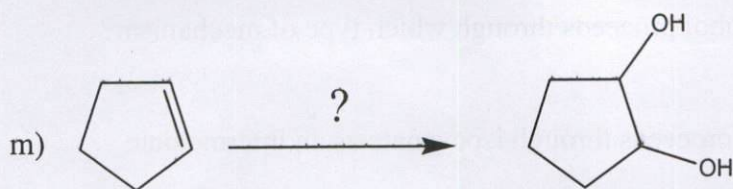
Transmetalation Step.
Reductive Elimination Step

- k) Write coupling partners for Buchwald-Hartwig coupling.
➤ Aryl halides or pseudohalides (for example triflates) and primary or secondary amines.
- l) Identify the following rearrangement.



➤ Curtius rearrangement

Complete following transformations.



➤ Woodward reagent-I2/CH₃COOAg, H₂O

