

School of Basic Sciences
Bachelor of Science Honours in Chemistry
Mid Term Examination - Mar 2024

Duration : 90 Minutes
Max Marks : 50

Sem VI - C1UB602B - Organic Synthesis

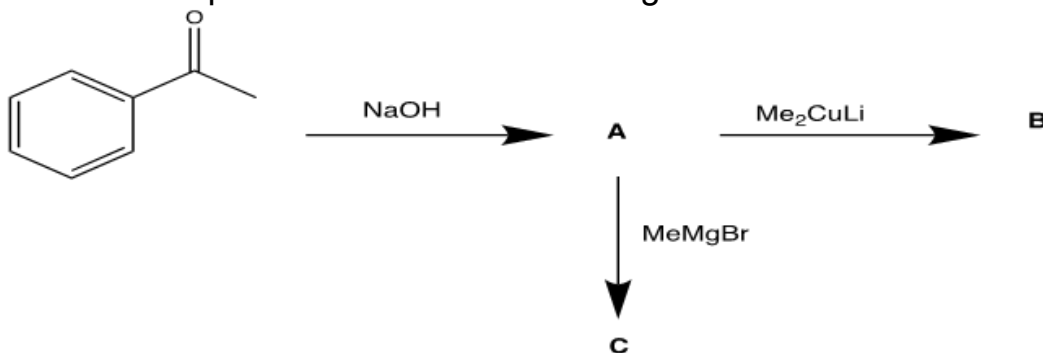
General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Explain the mechanism of $LiAlH_4$ K2 (2)
- 2) Define the role of Jones's reagent K1 (3)
- 3) Explain Meerwein-Ponndorf-Verley reduction. K2 (4)
- 4) Explain the following reducing agents with proper mechanism of $LiAlH_4$, $NaBH_4$, DIBAL-H and Meerwein-Ponndorf-Verley (MPV) reduction K2 (6)
- 5) Illustrate that Gilman reagent favours 1,4-addition with α , β -unsaturated carbonyl compounds? K3 (6)
- 6) Illustrate the products A-C in the following reaction K3 (9)



- 7) Analyze the name of following reaction with proper examples; a) reaction between acetophenone and sodium hydroxide; b) reaction between benzaldehyde and KCN. K4 (8)

- 8) Analyze the reaction pathway and major product in following reactions: a) reaction of grignard reagent and gilman reagent with α , β -unsaturated carbonyl compounds; b) allylic oxidation of alkene using SeO_2 K4 (12)

OR

Analyze the suitable reagents in following conversion with proper mechanism K4 (12)

