



**DUDHNOI COLLEGE**  
SESSIONAL EXAMINATION: DECEMBER- 2021



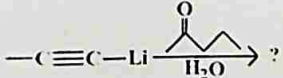
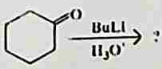

**Semester**  
**III**

**CHEMISTRY (HONOURS)**

Paper: CHE-HC-3026: Organic Chemistry II

Time: 1 hour  
Full marks: 20

Answer all questions. The figure in the margin indicates the full mark for the question.

1. Answer any five of the following: 1x5=5
- What happens when alkyl halides are treated with magnesium metal in dry ether?
  - Arrange the aryl, vinyl and alkyl halides in the decreasing order of relative reactivity.
  - How will you synthesize Benzoic acid from borobenzene?
  - What are Organometallic compounds? Give examples
  - How will you convert aniline to chlorobenzene?
  - Why dry condition is necessary for synthesis of Grignard reagent.
2. Answer any two of the following: 5x2=10
- Discuss the mechanism of  $S_N1$  reaction of alkyl halides.
  - Discuss the mechanism of  $S_N2$  reaction of alkyl halides.
  - Write about the elimination-addition mechanism of conversion of chlorobenzene into aniline. Give evidence in support of this mechanism.
3. Complete any five of the following reactions: 1x5=5
- $C_6H_5-CH_2-CH_2-CHBr-CH_3 \xrightarrow{alc. KOH} ?$
  -   $\xrightarrow[Mg]{THF} ?$
  -   $\xrightarrow[THF]{Li} ?$
  -   $\xrightarrow[H_2O]{O} ?$
  -   $\xrightarrow[H_3O^+]{BuLi} ?$
  -   $\xrightarrow[H_2O]{CH_3O} ?$