

M.Sc.(Chem.) Semester - 1 (CBCS) Examination
OCT/NOV-2024 (AS PER SYLLABUS YEAR JUNE-2023)
Organic Chemistry (Core (New-23))

Time: 2:30 Hours

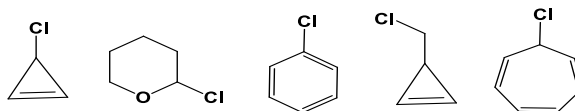
Marks: 70

Instructions:

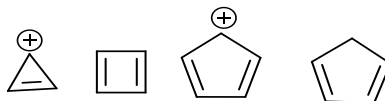
1. All questions are compulsory.
2. Figures to the right indicate marks.

Q.1 (A) Answer the following**(04)**

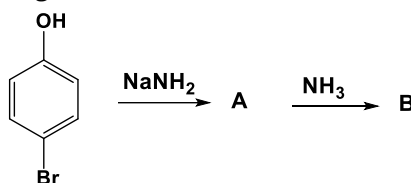
- (1) Which of the following halides will not give precipitation of AgCl when react with AgNO₃? Justify your answer.



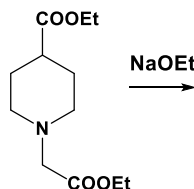
- (2) Arrange the following compounds in their increasing order of stability. Justify your answer.

**Q.1 (B) Answer any two questions out of three.****(10)**

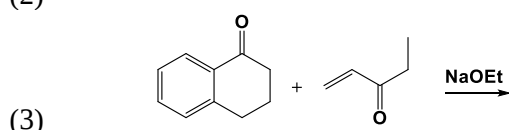
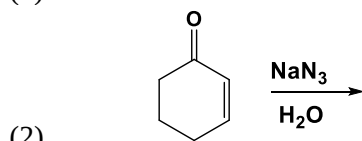
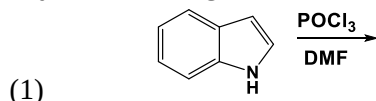
- (1) Write a note on carbanion including structure, hybridization, stability and generation methods.
- (2) Discuss singlet and triplet carbene including their various stability factors.
- (3) Complete the following reaction with mechanism:

**Q.2 (A) Answer the following****(04)**

- (1) Identify the following reaction and write its mechanism:

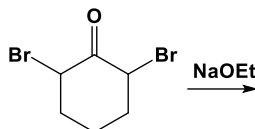
**Q.2 (B) Answer any two question out of three.****(10)**

Identify the following reaction and write product with mechanism:



Q.3 (A) Answer the following (04)

(1) Identify the following rearrangement and write its product mechanism.



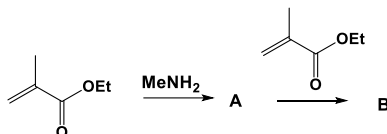
Q.3 (B) Answer any two question out of three. (10)

Write principle, mechanism and three applications of following rearrangement:

- (1) Pinacol-pinacolone
- (2) Schmidt
- (3) Wagner-Meerwein

Q.4 (A) Answer the following (04)

(1) Complete the following reaction with mechanism:



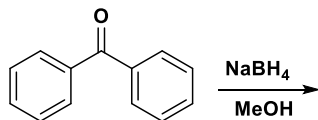
Q.4 (B) Answer any two question out of three. (10)

Write principle, mechanism and three applications of following:

- (1) Wittig.
- (2) HWE
- (3) McMurry

Q.5 (A) Answer the following (04)

(1) Predict the product of the following reaction & write its mechanism.



Q.5 (B) Answer any two question out of three. (10)

Describe preparation and application of following with mechanism:

- (1) Swern reagent
- (2) Dess-Martin reagent.
- (3) SeO₂.
