

M.Sc.(Chem.) Semester - 1 (CBCS) Examination
Nov/Dec-2023 (SYLLABUS YEAR JUNE-2018)
ORGANIC CHEMISTRY (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. Figures to the right indicate marks.
 2. All questions are compulsory.
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Que.1(A) Answer the following. (04)

- 1) Explain the factors affecting the stability of carbanion with examples.

Que.1(B) Answer any two question out of three. (10)

Write a note on the following including structure, hybridization, generation and reactivity.

- 1) Ylide
- 2) Free radical
- 3) Benzyne

Que.2(A) Answer the following. (04)

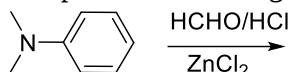
- 1) What is annelation effect? Explain with example.

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

- 1) Give Huckel's rule for aromaticity and discuss with example.
- 2) Explain aromaticity of annulenes.
- 3) Discuss classification of aromatic compound with example.

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

- 1) Complete the following reaction with mechanism.



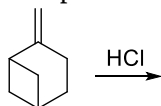
Que.3(B) Answer any two question out of three. (10)

Discuss principal, mechanism and three application of following reaction.

- 1) Dieckmann condensation.
- 2) Appel reaction.
- 3) Nazarov cyclization.

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

- 1) Complete the following reaction with mechanism.



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

Describe Principle, mechanism and migration aptitude for following rearrangement.

- 1) Benzil-Benzilic acid.
- 2) Schmidt.
- 3) Neber.

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

- 1) Give structure of following reagent: Jones reagent (b) Dess-Martin reagent.

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

Write a note on following reagent.

- 1) Birch
- 2) LiAlH₄
- 3) Swern
