Enrollment No.

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER - 2017

M.Sc. Organic Chemistry

16PCEOC01 – ORGANIC REACTIONS, REARRANGEMENTS & REAGENTS

Duration of Exam – 3 hrs	Semester – III	Max. Marks – 70
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 $\underline{Part A} (5X2 = 10 marks)$

Answer <u>ALL</u> questions

- 1. Give any two application of Pinacol-Pinacolone rearrangement.
- 2. Write any two preparation of Organozinc Precursors useful for the Negishi reaction.
- 3. Arrange the following compounds in increasing order of their stability.

- 4. Give any two application of OsO₄.
- 5. Complete the following reactions.



<u>Part B</u> (5x5= 25 marks) Answer <u>ALL</u> questions

6a. Identify the following reaction and give its mechanism.





- 6b. Write principle, mechanism and applications of Mannich reaction.
- 7a. Identify the following reaction and give its mechanism.



OR

7b. How to prepare Danishefsky's diene? Give any two application of Danishefsky's diene.

8a. Identify the reaction and write its product with mechanism.



OR

8b. Write principle, mechanism and applications of Hunsdiecker reaction.

9a. Identify the reaction and write its product with mechanism.



OR

- 9b. Write principle, mechanism and application of Wolf rearrangement.
- 10a Give any five applications of LiAlH₄.

OR

10b Give any five applications of Aluminium Isopropoxide.

<u>Part C</u> (5x7= 35 marks) Answer <u>ALL</u> questions

11a. How to prepare Grignard reagent? Complete the following reaction with mechanism:



OR

- 11b. Give principle, mechanism and applications of Benzil-Benzilic acid rearrangement.
- 12a. How to prepare Enamines. Write principle and mechanism Stork-Enamine alkylation and acylation.

OR

12b. Give principle, mechanism and applications of Schmidt rearrangement.

13a. Write principle, mechanism and applications of Fischer-indole synthesis.

OR

13b. Identify the following reaction and give its product with mechanism:



14a. Write principle, mechanism and applications of Suzuki reaction.

OR

- 14b. Write principle, mechanism and applications of Heck reaction.
- 15a. Write a brief note on m-CPBA.

OR

15b. Write a brief note on DCC.