

Day: Thursday
Date: 02/11/2017

W-2017-0619

Time: 12.00 NOON TO 02.00 PM
Max. Marks: 40

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Attempt any **TWO** of the following: (10)

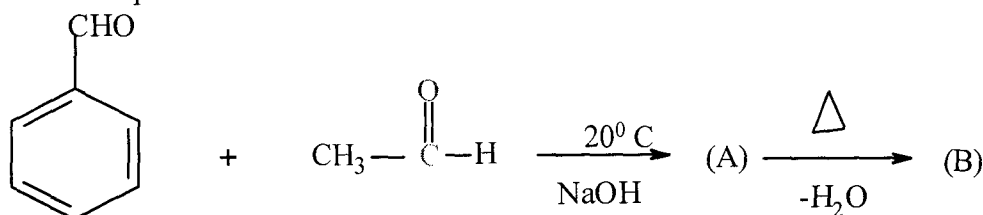
- a) Draw the Newman projection for both conformers of methyl cyclohexane. Explain e-methyl cyclohexane is more stable than a-methyl cyclohexane.
- b) What are epoxides? Discuss the effects of basic and acidic reagents on the epoxides.
- c) What is S_N1 reaction? Discuss the mechanism of S_N1 reaction with suitable example.

Q.2 Attempt any **ONE** of the following: (05)

- a) Give two methods for the synthesis of pyridine.
- b) Write a note on Peroxide effect.

Q.3 Attempt any **TWO** of the following: (05)

- a) Explain the following terms with suitable example:
 - i) Locking of conformation
 - ii) Angle strain
- b) What is the action of following reagents on quinoline?
 - i) H_2SO_4
 - ii) H_2SO_4/HNO_3
- c) Predict the products:

**SECTION-II**

Q.4 Attempt any **TWO** of the following: (10)

- a) Why d-block elements are called as transition elements? Write general characteristic properties of d-block elements.
- b) What is meant by 'Roasting in metallurgy'? Explain different types of Roasting.
- c) Discuss biological importance of iron.

Q.5 Attempt any **ONE** of the following: (05)

- a) Explain Baeyer's process for refining of bauxite.
- b) Comment on 'complex formation ability' of d-block elements.

Q.6 Attempt any **TWO** of the following: (05)

- a) How the ore is purified by using Electrostatic separation method?
- b) Give different applications of Aluminum metal.
- c) Write a note on Non- Stoichiometry exhibited by d-block elements.