

F.Y.B.Sc. SEM – I (CBCS 2018 COURSE) : SUMMER - 2019

SUBJECT: CHEMISTRY: ORGANIC & INORGANIC CHEMISTRY – I

Day: Wednesday

Date: 10/04/2019

S-2019-0768

Time: 03.00 PM TO 06.00 PM

Max. Marks: 60

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.

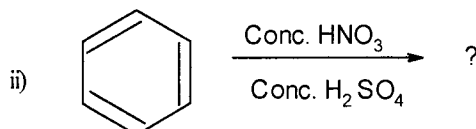
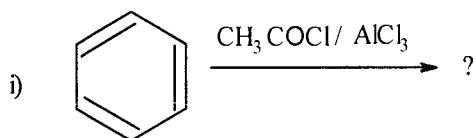
SECTION-I (Organic Chemistry)

Q.1 Attempt any **TWO** of the following: **(12)**

- a) What is Sulphonation? Discuss the mechanism of Sulphonation of benzene. How it differs from other electrophilic substitution reactions?
- b) What are aldehydes and ketones? How will you carry out following conversions?
 - i) Phenyl cyanide to Acetophenone
 - ii) Acetic acid to Acetaldehyde
- c) Write a note on: Types of organic reaction.

Q.2 Attempt any **TWO** of the following: **(12)**

- a) Explain the following:
 - i) Phenol is acidic whereas cyclohexanol is a neutral compound even though both contain hydroxyl group.
 - ii) In non-polar solvent dimethyl amine is a stronger base than methyl amine.
- b) Predict the product/s and suggest the mechanism.



- c) Write a note on Grignard's reaction.

P. T. O.

- Q.3** Attempt any **THREE** of the following: (12)
- What are free radicals? Discuss their generation and stability.
 - What is chlorination? Discuss the mechanism of chlorination of benzene.
 - Explain the terms:
 - Hyper conjugation effect
 - Steric effect
 - Write a note on: Perkin's reaction.

SECTION-II (Inorganic Chemistry)

- Q.4** Attempt any **TWO** of the following: (12)
- Explain anomalous behaviour of Lithium in the family of Alkali metals.
 - Comment on special position of hydrogen in the long form of periodic table.
 - What are different applications of s-block elements and their compounds in various fields?
- Q.5** Attempt any **FOUR** of the following: (12)
- Comment on ionization potential of alkali metals.
 - What are the trends in atomic and ionic size of the alkaline earth metals in their family?
 - Write a short note on 'Solutions of Alkali metals in liquor Ammonia.
 - Explain in brief, the diagonal relationship between Lithium and Magnesium.
 - Write electronic configuration:
 - Be (At.No.4)
 - K (At.No.19)
 - Mg (At.No.12)
 - s-block elements are electropositive.

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