

S.Y.B.SC. SEM – IV (2014 Course) : SUMMER - 2019

SUBJECT : CHEMISTRY : ORGANIC & INORGANIC CHEMISTRY – IV (C – 42)

Day : Saturday
Date : 20/04/2019

S-2019-0984

Time : 03.00 PM TO 05.00 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 **SEPARATE** answer books.

SECTION – I

Q.1 Attempt **ANY TWO** of the following: [10]

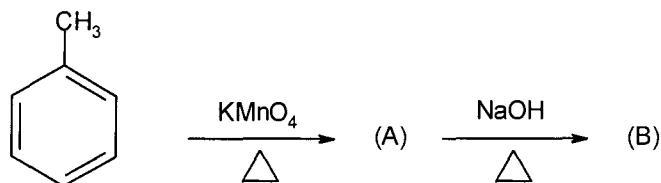
- a) Give Killiani – Fischer synthesis of aldotetrose.
- b) How will you effect following conversions:
i) Benzene to aniline ii) Methyl iodide into Ethylamine
- c) Write a note on Green solvents.

Q.2 Attempt **ANY ONE** of the following: [05]

- a) Discuss the mechanism of nitration of toluene.
- b) Describe the microwave technique used in green chemistry.

Q.3 Attempt **ANY TWO** of the following: [05]

- a) Give the effect of following reagents on glucose:
i) H_2 / Ni ii) Br_2 water
- b) Predict the products:



- c) Give any two methods for the reduction of aromatic nitro compounds.

SECTION – II

Q.4 Attempt **ANY TWO** of the following: [10]

- a) Explain Lewis acid-base theory with suitable examples. Also write merits and demerits of Lewis concept.
- b) Define hydrogen bonding. What are causes and conditions for the formation of hydrogen bond?
- c) Write a comparison between Organic and Inorganic polymers.

Q.5 Attempt **ANY ONE** of the following: [05]

- a) Explain the effect of hydrogen bonding on 'Volatility' of the substance.
- b) Explain the importance of following nutrients:
i) Nitrogen ii) Phosphorus

Q.6 Attempt **ANY TWO** of the following: [05]

- a) Explain any two types of Van Der Waal's forces.
- b) Describe in brief 'PON Polymers'.
- c) Write a short note on: 'Aluminum based antacids'.

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