



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(AUTONOMOUS) (Grant-in-Aid)
Affiliated to Sardar Patel University
VALLABH VIDYANAGAR-388120



Bachelor of Science (Semester-3) Internal Examination September- 2025

US03MAICV02 – INTRODUCTION TO ORGANIC CHEMISTRY

Date: 24-09-2025, Wednesday

Time: 02:45 PM to 04:15 PM

Total marks: 30

Q-1 Write the answer of following multiple-choice questions. (All are compulsory) [6]

- Oxymercuration-demercuration is a two-step reaction that converts alkenes into ...
(a) alcohols (c) carboxylic acids
(b) halides (d) alkynes
- What is Grignard reagent formula?
(a) Na-Hg-X (c) R-Mg-X
(b) R₂-Li-X (d) R-Cu-X
- The IUPAC name of CH₃-CH₂-CO-CH₃.
(a) 2-butanone (c) Butanal
(b) 3-Butanone (d) Butanol
- Which reagent is commonly used to convert primary aromatic amines into diazonium salts?
(a) HCl and NaNO₂ (at 0–5°C) (c) KMnO₄
(b) NaOH and H₂SO₄ (d) LiAlH₄
- A racemic mixture is a 50:50 mixture (equal quantities) of two ...
(a) chain isomers (c) diastereomers
(b) enantiomers (d) geometrical isomers
- Which instrument is used to determine optical activity of any compound?
(a) Oscillator (c) Polarimeter
(b) Refractometer (d) pH meter

Q-2 Discuss 'Oxymercuration-demercuration' for preparation of alcohol. [6]
OR

Q-2 Write a note on 'Williamson Synthesis' of ethers. [6]

Q-3 Write a note on Aldol and Crossed Aldol Condensation. [6]
OR

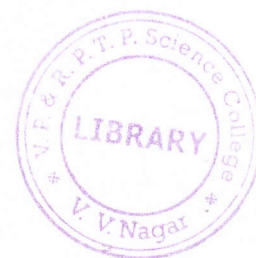
Q-3 Write a note on addition of Grignard reagents in Aldehydes and Ketones. [6]

Q-4 Write a note on 'Sandmeyer Reaction'. [6]
OR

Q-4 Discuss the reactions of Amine with Nitrous acid. [6]

Q-5 Write a note on Polarimeter. [6]
OR

Q-5 What is isomers? Discuss types of structural isomers. [6]



No of printed pages: 01

Supervisor sign

Seat No.:



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B.Sc. Industrial Chemistry Vocational (Semester - 3) Quiz September- 2025

US03MAICV02 – INTRODUCTION TO ORGANIC CHEMISTRY

Date: 24-09-2025, Wednesday

Time: Maximum 20 minutes

Total marks :15

Q-1 Fill in the blanks with the appropriate answer given in the bracket. [08 Marks]

1. Oxymercuration-demercuration is a two-step reaction that converts into Alcohols. (**Acids / Alkenes**)
2. Williamson Ether Synthesis involves the reaction of an alkoxide ion with a(n) to form an ether. (**Carboxylic acid / Alkyl halides**)
3. is a chemical reaction that combines an alcohol and an acid to produce an ester and water. (**Esterification/ Aldol condensation**)
4. is the general formula for a Grignard reagent (**R-Mg-X/R-Zn-X**)
5. The key intermediate in the Sandmeyer reaction is..... (**Diazonium salt / Free radical**)
6. The general formula for a primary amine is..... (**RNH₂ / R₂NH**)
7. A mixture of equal parts of two enantiomers, is called (**racemic mixture/ meso mixture**)
8. are non-superimposable and mirror images of each other. (**Diastereomers / Enantiomer**)

Q-2 State whether the following statement is true or false. (Write your answer in the box)

[07 Marks]

True/False

1. Oxymercuration-demercuration is a two-step organic reaction used to convert alkenes into alcohols using Markovnikov addition. []
2. Phenol reacts with aqueous NaOH to form an Alcohols. []
3. The IUPAC name of CH₃-CH₂-CHO is Ethanal. []
4. In Cannizzaro reaction, one molecule of aldehyde is oxidized, and another is reduced. []
5. Primary aromatic amines react with nitrous acid (HNO₂) at 0–5°C to form Diazonium salts. []
6. Diastereomers is one of a pair of molecules that are non-superimposable mirror images of each other. []
7. A compound that rotates plane-polarized light is said to be optically inactive. []