



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

US03MAICH02 – 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 (c) $\text{CH}_3\text{-Li}$
(b) $\text{R}_2\text{-Li-X}$ (d) R-Mg-X
- The IUPAC name of $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CHO}$.
(a) Prop-2-enal (c) Butanal
(b) Butanone (d) Butanol
- Which of the following is a heterocyclic compound?
(a) Benzene (c) Pyridine
(b) Cyclohexane (d) Toluene
- A mixture of equal parts of two enantiomers, is called...
(a) meso mixture (c) colloids mixture
(b) racemic mixture (d) diastereomers mixture
- Which instrument is used to determine optical activity of any compound?
(a) Oscillator (c) Polarimeter
(b) Refractometer (d) pH meter

Q-2 Write a note on "Oxymercuration-demercuration" for preparation of alcohol. [6]
OR

Q-2 Discuss acid catalyzed cleavage of epoxide. [6]

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

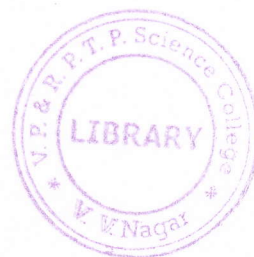
Q-3 Write a note on Cannizzaro and Crossed Cannizzaro Reaction. [6]

Q-4 Write a note on electrophilic aromatic substitution reactions in Pyridine. [6]
OR

Q-4 Discuss the structure of Pyrrole. [6]

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

Q-5 Write differences between enantiomers and diastereomers. [6]



No of printed pages: 01

Supervisor sign

Seat No.:



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B.Sc. Industrial Chemistry (Semester - 3) Quiz September- 2025
US03MAICH02 – 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 Alkenes into (**Acids / Alcohols**)
2. Williamson Ether Synthesis involves the reaction of an alkoxide ion with a(n) to form an ether. (**Alkyl halide/ Carboxylic acid**)
3. is the general formula for a Grignard reagent (**R-Mg-X/ R-Zn-X**)
4. is a chemical reaction that combines an alcohol and an acid to produce an ester and water. (**Esterification/ Aldol condensation**)
5. A heterocyclic compound is a cyclic compound that contains at least one atom other than carbon in the ring. (**Homo/Hetero**)
6. The sulfonation of pyridine primarily yields (**pyridine-3-sulfonic acid / pyridine-1-sulfonic acid**)
7. A mixture of equal parts of two enantiomers, is called (**racemic mixture/ meso mixture**)
8. are non-superimposable and not mirror images of each other. (**Diastereomers / Enantiomer**)

Q-2 State whether the following statement is true or false. [07 Marks]
(Write your answer in the box) **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 $\text{CH}_3\text{-CHO}$ is Ethanal. []
4. In Cannizzaro reaction, one molecule of aldehyde is oxidized, and another is reduced. []
5. Furan is a five-membered heterocyclic compound containing nitrogen. []
6. An enantiomer 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. []
