

[90/A-27]

SEAT No. _____

No. of Printed Pages : 02

Sardar Patel University

B. Sc. (Semester – III) Examination

Industrial Chemistry Vocational

COURSE NO: US03CICV01 (UNIT PROCESSES)

Date: 22/11/2019, Friday

Time: 02:00 to 05:00pm

Notes: Figures to the right indicate full marks.

Total marks: 70

Q.1 Answer the following Multiple-Choice Questions. (All are compulsory) (10)

- The kinetic of NITRATION process depends upon...
 - Compound to be nitrated
 - SO₂.
 - HNO₂
 - D₂O
- Nitration is.....
 - Electrophilic substitution reaction
 - Nucleophilic substitution reaction
 - Electrolysis reaction
 - Precipitation reaction
- The process include both oxidation & nitration is known as ...
 - Oxy-nitration
 - Nitration
 - Hydrolysis
 - Oxidation
- Conversion of alcohol to aldehyde is an example of.....
 - Alkylation
 - Oxidation
 - Reduction
 - Esterification
- Which of the following is/are oxidizing agent....
 - Peroxide.
 - Permanganates
 - Dichromate
 - All of these
- The formation of acetic acid, is an example of.....
 - Liquid-phase oxidation
 - Vapor-phase oxidation
 - Both of themes
 - None of these
- Halogenation reaction involved
 - Addition type
 - Substitution type
 - Addition & Substitution type
 - All of them
- The majority of organic fluid produced by.....
 - Electro-chemical process
 - Inter halogen fluorination
 - Antimony halide
 - None of these
- The rate of esterification in case of alcohol is...
 - 1° > 2° > 3°
 - 3° > 2° > 1°
 - 2° > 3° > 1°
 - 1° > 3° > 2°
- Ingold has proposed _____ possible mechanism for ester hydrolysis.
 - 01
 - 04
 - 06
 - 08

①

(P.T.O.)

Q.2 Answer the following short questions. (Any TEN) (20)

1. Give the use and properties on Nitro compounds.
2. Write a reaction for preparation of primary amines.
3. Define term unit processes giving suitable examples.
4. Define term Sulfoxidation.
5. Enlist various sulfonating agents.
6. Write an example of peroxidation.
7. Give an outline of Hydrogenation of acids and esters to alcohols.
8. Define term "Catalytic reforming"
9. List out the different chlorination agents.
10. Define term "trans esterification"
11. Enlist various examples of hydrolysis reactions.
12. Write about various Alkylating agents.

Q.3 Write a note on Following: (10)

1. Manufacturing of Aniline manufacture.
2. Various reduction products of nitrobenzene under different condition.

OR

Q.3 Write a notes on Following: (10)

1. Manufacturing of Nitrobenzene by continuous process.
2. Liquid phase nitration of Olefin.

Q.4 Write in detail about different types of Oxidative reactions. (10)

OR

Q.4 Discuss the commercial manufacturing of Acetic acid and Benzene sulfonic acid. (10)

Q.5 Write note on "Hardening of vegetable oil". (10)

OR

Q.5 Important methods for preparation of chlorinated compound. (10)

Q.6 Write note on Types of different hydrolysis reaction mechanism. (10)

OR

Q.6 Discuss the following: (10)

1. Esterification by Carboxylic acid derivatives and
2. Manufacturing of Ethyl acetate.

— X —
(2)