BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – B.Pharm-2019/B.Pharm-2020/B.Pharm-2021/B.Pharm-2022
Course Name – Pharmaceutical Organic Chemistry I/Pharmaceutical Organic Chemistry I – Theory
Course Code - BP202T
(Semester II)

Full Marks : 75 **Time : 3:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 20=20

1. *Choose the correct alternative from the following :*

(i) What is the full form of IUPAC System?

a) International Union of Pure and Applied Chemistry
b) b.International Union of Pure and Applied Chemistry
c) International Union of Pure and Applied Chemistry
d) International Union of Pure and Applied Chemistry

(ii) In which of the following reactions new carbon-carbon bond is not formed

a) Cannizzaro reaction
b) Wurth reaction
c) Aldol condensation
d) Friedel-Crafts reaction

(iii) Which of the following statements concerning the oxidation of aldehydes and ketones is correct?

a) Aldehydes readily undergo oxidation and ketones are resistant to oxidation
b) Ketones readily undergo oxidation and aldehydes are resistant to oxidation.
c) Both aldehydes and ketones readily undergo oxidation
d) Both aldehydes and ketones are resistant to oxidation

(iv) The process in which the carbon atoms combine with each other to form long chains and different sized rings is known as_____.

a) Catenation
b) atenation
c) atenation
d) Cotenation

(v) Lindlar\'s catalyst is

a) LiAIH
b) Pd/BaSO4 in quinoline
c) NH 2NH 2
d) HCl/ZnCl2

(vi) Liquified petroleum gas is mainly composed of :

a) Methane and ethane
b) Ethane and propane
c) Propane and butane
d) Butane and hexane

(vii) An alkane with 6 carbon atoms will have how many hydrogen atoms?

a) 14
b) 11
c) 13
d) 12

(viii) The _____,the double bond undergoes complete cleavage converting the alkene molecule into smaller fragments.

a) cleavage reaction
b) Alkylation
c) Acylation
d) dcleavage reaction

(ix) The disappearance of the purple color of KMnO4 in its reaction with alkene is known as

a) Markonikov test
b) Grignard test
c) Baeyer test
d) Wurtz test

(x) Which of the following alkanes will have the highest boiling point

a) n-Octane
b) Isopentane
c) n-Butane
d) Neopentane

(xi) The combustion of pentane produces :

a) Pentene
b) HCl+H2O
c) Pentyne
d) CO2+H2O

(xii) Which of the following halide can give best SN2reaction?

a) Primary alkyl halide
b) Tertiary alkyl halide
c) Secondary alkyl halide
d) All can give SN2 reaction at same rate

(xiii) In primary alkyl halides, carbon attached to the halogen atom is further attached to how many carbon atoms?

a) one
b) Two
c) Three
d) Four

(xiv) 2 methylpropan-2-ol is an example of

a) primary alcohol
b) secondary alcohol
c) tertiary alcohol
d) quaternary alcohol

(xv) When choloroform is heated with aqueous NaOH,it gives

a) Formic acid
b) Sodium formate
c) Acetic acid
d) Sodium acetate

(xvi) Which of the following gives positive Iodoform test

a) 1-Propanol
b) 2-Propanol
c) 3-Propanol
d) None of these

(xvii) Which one gives 1st position in priority table?

a) Aldehyde
b) Ketone
c) Nitro
d) Carboxylic acid

(xviii) The compound which have same molecular formula but different structural formula are called

a) Optical isomer
b) Geometrical isomer
c) Position isomer
d) Structural isomer

(xix) The reduction of ketone

a) always gives a primary alcohol
b) always gives a secondary alcohol
c) always gives a carboxylic alcohol
d) always gives a ketal

(xx) Which of the following is a 2° alcohol?

a) 1-Propanol
b) 2-Propanol
c) Cyclohexanol
d) 2-methyl-2-butanol

Group-B

(Short Answer Type Questions) 5 x 7=35

2. Describe Markonvinkov rule (5)
3. Compare between Alkyl Halide, Alkane and distinguish ethyl chloride, vinyl chloride (5)
4. Differentiate between Aldehyde and Ketone ; Primary, secondary, Tertiary Alcohol and describe functional group with examples (5)
5. Describe Diels-Alder reaction and ozonolysis (5)
6. Define carbonyl compounds and describe any three general reactions of ketones (5)
7. Explain name reaction with mechanism- Reformatsky Reaction (5)

OR

Explain name reaction with mechanism- Clemmensen reduction (5)

8. Explain the reaction mechanism involved in crossed aldol condensation (5)

OR

Compare methyl alcohol, ethyl alcohol and explain the Physical properties of Alcohol? (5)

Group-C

(Long Answer Type Questions) 10 x 2=20

9. Explain the mechanism of Benzoin condensation and Cannizzaro reaction (10)
10. Compare between SN1 and SN2 reaction with their mechanism and examples. (10)

OR

Distinguish between Markonikov's and Anti Markonikov's reaction by showing the mechanism of action. (10)

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