

I/VI PHARM-D (REGULAR) EXAMINATIONS, DECEMBER - 2022

First Year

PHARMACEUTICAL ORGANIC CHEMISTRY

Time : Three Hours

Maximum : 70 Marks

Answer any FIVE Questions.

5x14 = 70 M

All Questions carry equal marks

1. Explain in detail about ionisation of carboxylic acid, the effect of substituent on acidity.
2. Discuss the preparation, test of purity and assay of citric acid & Hoffmann degradation of amides.
3. Explain about preparation, test for purity, assay and medicinal use of
 - (i) Paraldehyde.
 - (ii) Ethylene chloride.
 - (iii) Benzyl benzoate.
4. Brief note on oxidation reaction.
5. Write the mechanism and application of Perkin's reaction & note on electrophilic substitution reaction mechanisms in benzene.
6. Discuss about Sandmeyer's reaction, the basicity of amines, the acidity of phenols & Williamson synthesis.
7. Write about structures and physical properties of acids, bases & mechanism of the E1, SN2 reaction.



I/VI PHARMA-D (REGULAR) DEGREE EXAMINATIONS, DEC- 2021**First Year****PHARMACEUTICAL ORGANIC CHEMISTRY****Time : Three Hours****Maximum : 70 Marks****Answer any FIVE Questions.****5x14 = 70 M****All Questions carry equal marks**

1.
 - a) Describe the chlorination of methane with mechanism and energy graph.
 - b) Write any four methods for preparation of cycloalkanes.
2.
 - a) Explain why boiling point of water is more than ethanol and ethanol boiling point is more than acetone.
 - b) Give a detailed note on isomerism.
 - c) Explain polarity of molecules with examples.
3. Write briefly on
 - a) Kinetics and mechanism of S_N2 reactions.
 - b) Dehydro halogenation of alkyl halides.
4.
 - a) Explain 1, 2 and 1, 4 addition reactions of conjugation dienes.
 - b) Write a note on Markonikov's addition and Peroxide effect.
5. Add a note on
 - a) Effect of substituent groups on aromatic nucleous.
 - b) Chemical properties of carbonyl compounds.
6. Explain the mechanism and uses of following named reactions.
 - a) Perkins condensation.
 - b) Kolbe's reaction.
7.
 - a) Write the bimolecular displacement mechanism of nucleophilic aromatic substitution with examples.
 - b) Add a note on oxidation reactions.
8. Write the preparations, assay and medicinal uses of
 - a) Vanillin.
 - b) Nitroglycerine.



Total No. of Questions :08]

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I/VI Pharm.D (Regular) DEGREE EXAMINATIONS, JULY/AUGUST-2019
(Examination at the end of First year of 6 Year course)

PHARMACEUTICAL ORGANIC CHEMISTRY

Time: Three Hours

Maximum marks:70

Answer any FIVE questions.

All questions carry equal marks.

5X14=70M

1. What are alkanes? Write about mechanism, reactivity, selectivity of halogenations of propane.
2. Write the mechanism, reactivity and orientation of dehydrohalogenation of alkyl halides.
3. Explain electrophilic aromatic substitution with one example and write about orientation, reactivity of substituted benzene.
4. a) Write about (a) Fries rearrangement b) Benzoin condensation
b) Write about Markonikov's rule and peroxide effect
5. a) Write in detail about stability of carbocations.
b) Acidity of phenols and basicity of amines.
6. a) Write about stability reactivity, orientation of free radical addition to conjugated dienes.
b) Write a note on Bayer's strain theory.
7. a) Write about stereochemistry and solvent effect in nucleophilic substitution reactions.
b) Preparation and uses of ethylene diamine dehydrate, citric acid, Aspirin, Dimercaprol.
8. a) Give the structures of (a) N'-ethyl-N-methylpropane-1-amine (b) 4-cyano-5-hydroxy-2-oxo-pentanoic acid (c) 3-ethyl-2-methylpent-ene
b) Write short note on oxidation and reduction reactions.

I/VI Pharm.D (Regular/Supply) DEGREE EXAMINATIONS, SEP-2018
(Examination at the end of First Year of 6 Year Course)

Pharm.D

PHARMACEUTICAL ORGANIC CHEMISTRY

Time: Three Hours

Maximum marks:70

Answer any FIVE questions.

All questions carry equal marks.

5X14=70M

1. a) What do you mean by 'Polarity of chemical bonds'? Write in brief on its significance in pharmaceutical chemistry.
b) Write in brief on Lewis acid-base theory.
2. Write short notes on
a) Stereochemistry of nucleophilic substitution reaction.
b) Angle strain in cycloalkanes
3. Write in brief on
a) Stereochemistry and catalysis of 1,2 elimination reactions
b) Hydrogenation of alkenes
4. Write short notes on
a) Resonance stabilization of allyl radical
b) Electrophilic addition reactions on $-C=O$
5. Write in detail on electrophilic aromatic substitution reactions on monosubstituted benzene ring.
6. Discuss the following
a) Role of substituents on acidity of carboxylic acids.
b) Nucleophilic acyl substitution reactions.
7. Write the reaction, mechanism and synthetic applications of
a) Perkin Condensation b) Wittig reaction
8. Write the synthesis, tests for purity, assay and medicinal uses of
a) Salicylic acid b) Saccharin

I/VI PHARM.D (Regular) DEGREE EXAMINATIONS, JULY/AUGUST- 2017
(Examination at the end of First year of 6 Year course)

Paper IV- PHARMACEUTICAL ORGANIC CHEMISTRY

Time: Three Hours

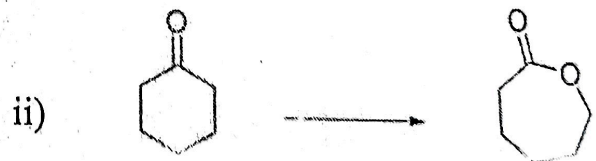
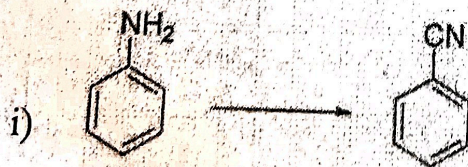
Maximum marks:70

Answer any FIVE questions.

All questions carry equal marks.

5X14=70M

1. Write in brief on
 - a) Intramolecular forces
 - b) Ion pairing and solubility
2. Write structures of the following
 - a) Benzamide
 - b) (E)-4-methylpent-2-ene
 - c) propiophenone
 - d) o-nitrophenol
 - b) What is a leaving group? Explain why-OH group is a poor leaving group? Write methods used to make it a good leaving group.
3. Write short notes on
 - i) Orientation and reactivity in E1 reactions
 - ii) Zaitsev's rule
4. Write short notes on
 - a) Free radical substitution in alkenes
 - b) 1,4-addition reactions in dienes
5. Give reasons for the following
 - a) Phenol decolorizes bromine water but benzene doesnot.
 - b) Acetyl chloride is a better acylating agent than acetic acid
 - c) Acetylacetone is more stable than acetone.
 - d) Phenolic hydroxyl does not undergo nucleophilic substitution easily
6. How do you obtain the following conversions



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7. Write in detail on Mechanism and synthetic applications of
- a) Perkin reaction b) Michael addition reaction
8. Write short notes on
- a) Hoffinan rearrangement
- b) Preparation and use of mephenesin and chlorbutol

