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I/IV B. PHARMACY (Regular) EXAMINATIONS, DECEMBER - 2022
Second Semester

PHARMACEUTICAL ORGANIC CHEMISTRY I - THEORY

Time : Three Hours

Maximum : 75 Marks

SECTION - A

Answer any FIVE Questions.

5x10 = 50 M

1. What is Isomerism ? Discuss various types of Structural isomerism with examples. Define Nomenclature of organic compounds with examples.
2. Describe in detail about E_1 and E_2 reactions.
3. What are SN_1 and SN_2 reactions ? Discuss the kinetics, mechanism and factors affecting the SN_1 and SN_2 reactions.
4. Write about Vanillin and Benz aldehyde in detail.
5. Give a short note on cannizzaro reaction and aldol condensation.
6. Write Qualitative test, structure and uses of ethanolamine and Amphetamine.
7. Discuss acidity of carboxylic acids. Give an account of qualitative test for ester.

SECTION - B

Answer any FIVE Questions.

5x5 = 25 M

8. Give an account of common and IUPAC systems of nomenclature of organic compounds with examples.
9. Explain Diel's alder reaction with mechanism.
10. Explain with examples Markowinkoff's rule.
11. Write about basicity of aliphatic amines and factors affecting it.
12. Explain the mechanism of Benzoin condensation.
13. Define hybridization ? Explain SP_3 hybridization in ethane.
14. Explain ionization of carboxylic acid and write the structure of carboxylate Anion.



I/IV B.PHARMACY (Supply) DEGREE EXAMINATIONS, DEC-2019/JAN-2020

Second Semester

B.PHARMACY

PHARMACEUTICAL ORGANIC CHEMISTRY-I-Theory

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X10=50M

1. What is hybridisation? Describe the distinguishing features of Sp^3 and Sp^2 orbitals with suitable examples.
2.
 - a) How will you synthesize ethylene glycol from ethane?
 - b) Explain the factors affecting E_1 & E_2 reactions.
3. Describe the mechanism of Markovnikov's rule.
4.
 - a) Write the differences between SN_1 and SN_2 .
 - b) Structure and uses of Iodoform and Ethyl chloride.
5. Write about
 - a) Perkin's condensation
 - b) Cannizaro reaction
6. Explain the following.
 - a) Saytzeff's orientation.
 - b) Effect of substituents on basicity of amines.
7.
 - a) Discuss the effect of substituents on the acidity of monocarboxylic acids.
 - b) How will you distinguish between Formic acid and acetic acid.

SECTION-B

Answer any FIVE Questions

5X5=25M

8. Discuss the orbital structure of ethane.

P.T.O

9. Give evidence to show that chlorination of methane involves a free radical mechanism.
10. Explain the Tautomerism.
11. How are alcohols prepared?
12. Explain why aldehydes are more reactive than ketones.
13. Discuss the mechanism of acid-catalysed hydrolysis of nitriles.
14. How will you distinguish among 1° , 2° and 3° amines.



I/IV B.PHARMACY (Regular & Supply) DEGREE EXAMINATIONS, AUGUST-2019

Second Semester

B.Pharmacy

PHARMACEUTICAL ORGANIC CHEMISTRY-I-Theory

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions.

5X10=50M

1. What is hybridisation? Write notes on sp^3 , sp^2 and sp hybridisation.
2. a) How will you distinguish between 1,3-butadiene and n-butane.
b) Discuss the molecular orbital structure of 1,3-butadiene.
3. Describe the mechanism of AntiMarkovnikov's rule.
4. a) Discuss the mechanism of SN_1 & SN_2 reaction of Alkylhalides.
b) Structure & uses of chloroform and dichloro-methane.
5. Write about
 - a) Aldol condensation
 - b) Benjoin condensation
6. Explain the following
 - a) Diel's alder reaction.
 - b) Acidity of carboxylic acids.
7. Explain about the effect of substituents on the
 - a) acidity of monocarboxylic acids.
 - b) HVZ reaction

SECTION-B

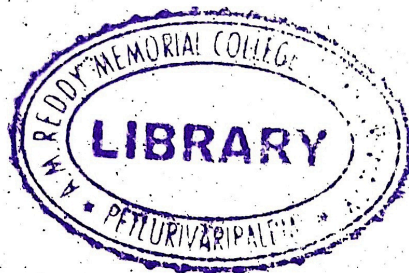
Answer any FIVE Questions.

5X5=25M

- *8. Discuss the orbital structure of Ethylene.

P.T.O

9. How are alkanes prepared? Describe their important reactions.
10. Explain the Metamerism.
11. How will you distinguish among 1° , 2° and 3° alcohols.
12. Give the mechanism of nucleophilic addition reactions of carbonyl compounds.
13. Discuss the mechanism of base-catalysed hydrolysis of nitriles.
14. Explain why amines are more basic than amides?



I/IV B.PHARMACY DEGREE EXAMINATIONS, JULY/AUGUST-2017**First & Second Semesters****B.PHARMACY****PHARMACEUTICAL CHEMISTRY-I (Organic-I)**

Time: Three Hours

Maximum marks:70

SECTION-A**Answer any FOUR questions****4X10=40M**

1. What are intermolecular forces? Write in detail on hydrogen bond.
2. With a neat scheme, explain electrophilic addition reactions. Add a note on the peroxide effect.
3. Write the general methods used for synthesis of alcohols. Explain how alcohols can be converted to amines and aldehydes.
4. What is SN1 reaction? Explain the role of temperature, polarity of solvent and pH on SN1 reaction kinetics.
5. Write three methods for synthesis of aldehydes. Write in detail on Perkin reaction.
6. a) Write in brief on effect of substituents on acidity of carboxylic acids.
b) Write the reaction mechanism and synthetic applications of Claisen condensation.

SECTION-B**Answer any TEN questions****10X3=30M**

7. Describe the characteristics of hydrogen bond.
8. Write briefly on hybridization and its role on stability of an organic compound.
9. Explain the reason why cyclohexane prefers chair conformation?
10. Give the mechanism and applications of Hoffmann elimination reaction.
11. Explain the chemistry involved in tests for distinguishing 1°, 2° and 3° alcohols.
12. Write three important reactions of alkyl halides.
13. Write short note on aldol condensation.
14. Write structures of
a) Cyclohex-3-en-1-one b) (E)-pent-2-enoic acid.
15. How can you synthesize propionic acid from malonic ester.
16. Explain why acetic anhydride or acetyl chloride are used for acetylation but not acetic acid?
17. Differentiate SN1 and SN2 reactions.
18. Write in brief on synthetic applications of acetoacetic ester.

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I/IV B.PHARMACY(Regular) DEGREE EXAMINATIONS, JULY/AUG-2016**(1st & 2nd Semesters)****PHARMACEUTICAL CHEMISTRY-I (ORGANIC-I)****Time: Three Hours****Maximum marks:70****SECTION-A****Answer any FOUR questions. (4 x 10=40 M)**

1. What are reactive intermediates? Write in detail on methods of preparation and reactivity of carbocations.
2. What is a nucleophilic substitution reaction? Write in detail on "leaving groups". How can you activate/deactivate a leaving group?
3. How can you achieve the following conversions
a) But-2-ene to but-2-one b) Acetone to iodoform c) Benzaldehyde to benzoin
4. Write in detail on
a) Reformatsky reaction b) Claisen condensation
5. Explain the theory involved in acidity of carboxylic acids. Add a note on factors effecting acidity and reactivity of carboxylic acids.
6. Write short notes on
a) Stability of conjugated dienes b) Reactions of aldehydes

SECTION-B**Answer any TEN questions. (10 x 3=30 M)**

7. Describe the characteristics of hydrogen bond.
8. Write in brief on electrophiles.
9. Explain Markovnikov's rule with an example.
10. What is steric hindrance? Write in brief on its importance in medicinal chemistry.
11. Write in brief on absolute alcohol.
12. Write three important reactions of alkyl halides.
13. Write short note on aldol condensation.
14. Write structures of
a) Cyclohex-3-en-1-one b) (E)-pent-2-enoic acid

15. How can you synthesize propionic acid from malonic ester.
16. Explain why acetic anhydride or acetyl chloride are used for acetylation but not acetic acid?
17. Explain the mechanism and applications of ozonolysis.
18. Write the mechanism and synthetic applications of Williamson's ether synthesis.



I/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Third Semester

PHARMACEUTICAL ORGANIC CHEMISTRY II - THEORY

Time : Three Hours

Maximum : 75 Marks

SECTION - A

Answer any FIVE Questions.

5x5 = 25 M

1. Explain Huckel's Rule and write the synthetic and other evidences in the derivation of structure of benzene.
2. Describe the acidity of Aromatic acids and discuss the effect of substituents on acidity of aromatic acids.
3. Write a note on Saponification, Rancidity and Drying of Oils.
4. Discuss the synthesis, reactions and medicinal uses of Naphthalene.
5. Describe Baeyer's strain theory and add a note on its limitations.
6. Explain the significance and principle involved in the determination of Ester value and Iodine value.
7. Write a note on basicity of amines and give an emphasis on synthetic uses of aryl diazonium Salts.

SECTION - B

Answer any FIVE Questions.

5x10 = 50 M

8. Write the sulphonation and halogenation reactions of Benzene.
9. Write the structure and uses of Cresols, Naphthols and Resorcinol.
10. Give an account on Reichert Meissl (RM) Value.
11. Write the structure, synthesis and medicinal uses of Anthracene.
12. Give an account on Sachse Mohr's Theory.
13. Briefly outline the reactions of Cyclopropane.
14. Give the structure and uses of DDT, BHC and Saccharin.