

BP 301 T

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**II/IV B. PHARMACY (Supple) DEGREE EXAMINATIONS,
NOVEMBER - 2022**

Third Semester

PHARMACEUTICAL ORGANIC CHEMISTRY - II - THEORY

Time : Three Hours

Maximum : 75 Marks

SECTION - A

Answer any FIVE Questions.

5x10 = 50 M

1. Discuss in detail the mechanism involved in Friedelcrafts alkylation and acylation of Benzene.
2. Explain the acidity of phenols and effect of substituents on acidity of Phenols.
3. Give an account on significance and principle involved in determination of saponification value and Reichert Meissl (RM) Value.
4. Write the structure, synthesis, reactions and medicinal uses of Phenanthrene.
5. Describe Coulson and Moffitt's modification and Sachse Mohr's theory.
6. Write a note on the effect of substituents on reactivity and orientation of mono substituted benzene compounds towards electrophilic substitution reaction.
7. Write a detailed note on
 - a) Rancidity of Oils.
 - b) Basicity of amines.

SECTION - B

Answer any FIVE Questions.

5x5 = 25 M

8. Write the orbital picture of Benzene and explain resonance in benzene.
9. Write the important reactions of Benzoic acid.
10. What are fatty acids ? Write the hydrolysis and hydrogenation of oils.
11. Give the structure and medicinal uses of Naphthalene, Diphenylmethane and Triphenylmethane.
12. Outline Baeyer's Strain theory.
13. Write the structure and uses of Chloramine, Saccharin and Resorcinol.
14. Briefly describe the principle involved in determination of Iodine value and Acetyl value of fats and oils.



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II/IV B.PHARMACY (Regular) DEGREE EXAMINATIONS, DEC-2019/JAN-2020

Third Semester

B.PHARMACY

PHARMACEUTICAL ORGANIC CHEMISTRY-II-Theory

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X10=50M

1. What is Huckel's rule? Write the structure of two compounds that follow this rule.
2. Describe the theory of orientation and reactivity of monosubstituted benzene compounds.
3. Write the reactions of cyclopropane and explain the theory of strainless rings.
4. Write notes on
 - a) Hydrolysis of oils.
 - b) Acetyl value.
 - c) RM value.
 - d) Rancidity.
5. Write the chemistry of Aryl diazonium salts.
6. Describe the methods of preparation and effect of substituents on acidity of phenols.
7. Explain the basicity of amines and effect of substituents on basicity of amines.

SECTION-B

Answer any FIVE Questions

5X5=25M

8. Write the structure and uses of DDT and BHC.
9. Explain about Azocoupling reaction. -

P.T.O

10. Describe the Iodine value and Acid Value significance in analysis of Oils & Fats.
11. Write the reactions of Cyclobutane.
12. Describe the structure and medicinal uses of naphthalene and Diphenyl methane.
13. Explain acidity, effect of substituents on acidity of Benzoic acid.
14. Write the chemical properties of Resorcinol.



II/IV B.PHARMACY (Regular) DEGREE EXAMINATIONS, FEB-2019

Third Semester

B.PHARMACY

PHARMACEUTICAL ORGANIC CHEMISTRY-II

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X10=50M

1. a) How is benzene prepared? Describe its important reactions.
b) Explain why phenol is nitrated more readily than benzene.
2. Describe the theory of Orientation and reactivity of mono substituted benzene derivatives.
3. Write the methods of preparation and effect of substituents an acidity of phenols.
4. Write notes on
 - a) Hydrogenation
 - b) Saponification
 - c) Iodine value
 - d) Reichert Meissl Value
5. Write the chemical properties of Aryldiazonium salts.
6. Write the structure, numbering, preparation and chemical reactions of Anthracene.
7. Write the reactions of cyclo propane and explain Bayers strain theory and its limitations.

SECTION-B

Answer any FIVE Questions

5X5=25M

8. How will you distinguish between Benzene and cyclohexene.
9. Write the structure and uses of DDT and BHC.
10. Discuss the mechanism of Diazotization.
11. Describe the basicity of aromatic amines.

P.T.O

12. Write the chemical properties of cresol.
13. Write the structure and uses of phenanthrene.
14. Give the reactions of cyclobutane.



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II/IV B.PHARMACY (Supple) DEGREE EXAMINATIONS, JUNE-2018

Third Semester

PHARMACEUTICAL CHEMISTRY-II (ORGANIC)

Time: Three Hours

Maximum marks:70

SECTION-A

Answer any FOUR Questions

4X10=40M

1. Write short notes on
 - a) Relative configuration
 - b) Resolution of racemic mixture
2. How do you achieve the following chemical conversions?
 - a) Phenol to salicylic acid
 - b) Aniline to phenol
 - c) aniline to p-bromoaniline
3. With a neat sketch explain the aromaticity of naphthalene. Write two methods of preparation and reactions of naphthalene.
4. Write reasons for the following
 - a) Pyrrole is not basic
 - b) Phenanthrene undergoes readily addition reactions
 - c) Toluidine is more basic than aniline
5. Write mechanism, reaction conditions and synthetic applications of
 - a) Oppenauer oxidation
 - b) Beckmann rearrangement
6. Write in detail on methods of preparation and synthetic applications of diazonium salts.

SECTION-B

Answer any TEN Questions

10X3=30M

7. Write in brief on optical isomerism in biphenyls.
8. "Friedal crafts acylation on benzene gives monosubstituted product". Discuss.

P.T.O

9. Write structure and identify the heterocycle present in
a) Nicotinic acid b) Chloroquine
10. Write three reactions of pyrrole
11. What is pyridine? Write a note on its basic nature.
12. Write in brief on Clemmenson reduction.
13. Write a note on industrial applications of Mannich reaction.
14. Write two methods for preparation of quinoline.
15. Compare the reactivity of benzene with toluene.
16. Write a note on Schmidt rearrangement.
17. Write structure and uses of (i) Mepyramine ii) Sulphadiazine
18. Write in brief on asymmetric synthesis.



II/IV B.PHARMACY DEGREE EXAMINATIONS, JAN-2017

Third Semester

B.PHARMACY

PHARMACEUTICAL CHEMISTRY-II (ORGANIC)

Time: Three Hours

Maximum marks:70

SECTION-A

Answer any FOUR Questions

4X10=40M

1. Define geometric isomerism. Write in detail on the principles, nomenclature and significance in medicinal chemistry.
2. Explain the following
 - a) Aniline readily forms tribromoaniline with bromine water. But benzene is unreactive
 - b) Proton present on beta carbon of $\alpha\beta$ -unsaturated carbonyl compounds is acidic.
3. Write in detail on synthesis and reactions of anthracene.
4. Explain the aromaticity in pyridine. Write three methods for its synthesis. Add a note on basicity of pyridine.
5. Write mechanism, reaction conditions and synthetic applications of
 - a) Michael addition reaction
 - b) Clammensens reduction
6. Write method of preparation, storage, synthetic applications and limitations of NBS.

SECTION-B

Answer any TEN Questions

10X3=30M

7. Write in brief on stereochemistry of alicyclic compounds.
8. Write structures of i) (E)-hept-3-ene ii) o-toluidine iii) 2-(1H-indol-3-yl) acetic acid.
9. What is a racemic mixture? Write in brief on chemical methods used for resolution of racemic mixture.
10. Write three reactions of pyrrole.
11. What is isoquinoline? Write a note on its significance in medicinal chemistry.
12. How do you convert phenol to p-hydroxyacetophenone.
13. Write a note on uses of LiAlH_4 .
14. Write two methods for preparation of pyrrole.
15. Write structures and identify the heterocycles present in i) Diazepam ii) Histamine.
16. Write a note on mannich reaction.
17. Write structure and uses of i) Codeine ii) Naphazoline
18. Write synthetic applications of lead tetra acetate.



II/IV B.PHARMACY DEGREE EXAMINATIONS, JUNE/JULY- 2016
Third Semester

PHARMACEUTICAL CHEMISTRY-II(ORGANIC-II)

Time: Three Hours

Maximum marks:70

SECTION-A

Answer any FOUR questions.

4x10=40M

All questions carries equal marks.

1. Write short notes on
 - a. Elements of symmetry
 - b. Resolution of racemic mixture
2. a. With a neat sketch explain the aromaticity of benzene ring.
b. Write mechanism, reaction conditions and applications of Friedal Craft's acylation.
3. What is diazotization reaction? Write in detail on the reactions of diazonium compounds.
4. What are polynuclear aromatic compounds? Write synthesis of Naphthalene and reactions of Naphthalene.
5. Write the method of preparation and synthetic uses of
 - a. N-bromosuccinimide
 - b. Lithium Aluminium Hydride
6. Write mechanism, industrial applications and limitations of
 - a. Beckmann rearrangement
 - b. Mannich reaction

SECTION-B

Answer any TEN questions.

10x3=30M

7. Differentiate absolute and relative configuration.
8. Why benzene does not prefer nucleophilic substitution reaction?
9. Write two methods for preparing phenols.
10. Write in brief on stereochemistry of biphenyls
11. Write structure and identify the heterocyclic ring present in nicotinic acid and histamine
12. How do you synthesize 2,5-dimethylpyrrole?
13. Explain the aromaticity of thiophene
14. Explain the importance of stereochemistry in medicinal chemistry.
15. How can you synthesize p-hydroxyacetophenone?
16. Write in brief on Oppenauer oxidation.
17. Write reactions of Naphthalene.
18. Write the structures of (a) Indole (b) Isoxazole (c) Purine

II/IV B.PHARMACY DEGREE EXAMINATIONS, DECEMBER-2016

301-PHARMACEUTICAL CHEMISTRY-II(ORGANIC-II)

Time: Three Hours

Maximum marks:70

SECTION-A

Answer any FOUR questions. (4 x 10=40 M)

1. Write short notes on
 - a) Asymmetric synthesis
 - b) Sequence rules for R and S configuration
2. Explain the theory behind benzene ring activation or deactivation effects of substituents on electrophilic aromatic substitution. Propose a protocol for synthesis of p-bromoaniline.
3. How do you achieve following conversions
 - a) Benzene to phenol
 - b) Aniline to benzoic acid
 - c) Phenol to salicylic acid
4. Compare aromaticity and reactivity of benzene, naphthalene and phenanthrene.
5. Write the structure, numbering and two methods of synthesis for
 - a) Pyridine
 - b) Quinoline
6. Write mechanism, industrial applications and limitations of
 - a) Clemmenson's reduction
 - b) Schmidt rearrangement

SECTION-B

Answer any TEN questions. (10 x 3=30 M)

7. What is racemic modification? Write its applications.
8. How can you synthesize n-butylbenzene without polysubstitution side products?
9. Write two methods for preparing anilines.
10. Write structure, numbering and identify the aromatic ring present in propranolol, naphazoline and codeine.
11. Write the structures and medicinal uses of
 - a) Isonicotinic acid hydrazide
 - b) Diazepam
12. Write Friedlander synthesis of quinoline
13. Compare the aromaticity of pyrrole and furan.
14. Write in brief on stereochemistry of oximes.
15. How do you synthesize benzylbromide from toluene?
16. How can you convert benzamide to aniline?
17. Write in brief on Sandmeyer reaction.
18. Write in brief on Michael addition reaction.

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