Code: BP301T

R19

B.Pharm II Year I Semester (R19) Regular Examinations March 2023

PHARMACEUTICAL ORGANIC CHEMISTRY – II

(For 2021 regular & 2022 lateral entry admitted batches only)

Time: 3 hours Max. Marks: 75

PART – A

(Compulsory Question)

*****

1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Define Huckel's Rule with example.	2M
	(b)	Write the structure and uses of DDT.	2M
	(c)	Write the structure and uses of cresol.	2M
	(d)	Give one identification test for phenol.	2M
	(e)	Define saponification value with example.	2M
	(f)	Define fats and oils with example.	2M
	(g)	Define poly nuclear hydrocarbons with an example.	2M
	(h)	Give structure and uses of phenanthrene.	2M
	(i)	What are cycloalkanes? Give examples.	2M
	(j)	Write any one method of preparation for cycloalkanes.	2M

PART – B

(Answer any two questions: 02 X 10 = 20 Marks)

2	Explain in detail the structure of benzene.	10M
3	Explain in detail the acidity of phenols.	10M
4	Write the principle, reactions and significance involved in the determination of acetyl value and ester value.	10M

PART – C

(Answer any seven questions: 07 X 05 = 35 Marks)

5	Write a note on resonance in benzene.	5M
6	Explain the orbital picture with suitable example.	5M
7	Discuss in brief the effect of substituents on acidity.	5M
8	Write any three important reactions for benzoic acid.	5M
9	Explain in detail drying of oils.	5M
10	Write the principle and significance of saponification value.	5M
11	Write any three reactions of Diphenyl methane.	5M
12	Write any three reactions of cycloaddition.	5M
13	Write a note on Baeyer's strain theory.	5M

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Code: BP301T

R19

B.Pharm II Year I Semester (R19) Supplementary Examinations September 2022

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 75

PART - A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Define Huckel's rule. Give example.
(b) Write the structure and uses of BHC.
(c) Write the synthetic uses of Aryl Diazonium salts.
(d) Give any two qualitative tests for cresols.
(e) Define fats and oils.
(f) Write the principle involved in Acetyl value.
(g) Define polynuclear hydrocarbons. Give examples.
(h) Give the structure and uses of anthracene.
(i) What are cycloalkynes? Give examples.
(j) Write any one reaction for cyclobutane.

PART - B

(Answer any two questions: 02 X 10 = 20 Marks)

2 (a) Explain in detail resonance in benzene.
(b) Write a short note on orbital picture.

3 Discuss in detail the acidity of phenols.

4 Write in detail hydrogenation of oils.

PART – C

(Answer any seven questions: 07 X 05 = 35 Marks)

5 Explain the mechanism of Friedel Crafts alkylation.

6 Discuss the effect of substituents on acidity of phenols.

7 Explain the halogenation reaction in benzene.

8 Write any five important reactions of benzoic acid.

9 Give the important reactions of fatty acids.

10 Explain the rancidity of oils.

11 Write the two synthetic routes for any one polynuclear hydrocarbons.

12 Write in detail Sachse Mohr's theory.

13 Write the limitations of Baeyer's strain theory.

*****

Code: BP301T

R19

B.Pharm II Year I Semester (R19) Supplementary Examinations September 2022

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 75

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Define Huckel's rule. Give example.
(b) Write the structure and uses of BHC.
(c) Write the synthetic uses of Aryl Diazonium salts.
(d) Give any two qualitative tests for cresols.
(e) Define fats and oils.
(f) Write the principle involved in Acetyl value.
(g) Define polynuclear hydrocarbons. Give examples.
(h) Give the structure and uses of anthracene.
(i) What are cycloalkanes? Give examples.
(j) Write any one reaction for cyclobutane.

PART – B

(Answer any two questions: 02 X 10 = 20 Marks)

2 (a) Explain in detail resonance in benzene.
(b) Write a short note on orbital picture.

3 Discuss in detail the acidity of phenols.

4 Write in detail hydrogenation of oils.

PART – C

(Answer any seven questions: 07 X 05 = 35 Marks)

5 Explain the mechanism of Friedel Crafts alkylation.

6 Discuss the effect of substituents on acidity of phenols.

7 Explain the halogenation reaction in benzene.

8 Write any five important reactions of benzoic acid.

9 Give the important reactions of fatty acids.

10 Explain the rancidity of oils.

11 Write the two synthetic routes for any one polynuclear hydrocarbons.

12 Write in detail Sachse Mohr's theory.

13 Write the limitations of Baeyer's strain theory.

*****

Code: BP301T

R19

B.Pharm II Year I Semester (R19) Regular & Supplementary Examinations April 2022

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 75

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Write the structure & uses of DDT.
(b) Write any five aromatic characters of benzene.
(c) Write the structure and use of Napthols.
(d) Give any two qualitative tests for resorcinol.
(e) Define Reichert Meissel value.
(f) What is hydrolysis? Give example.
(g) Give the structure and uses of Napthalene.
(h) Give any two derivatives for anthracene.
(i) Write the limitations of Bayer's strain theory.
(j) Write any one reaction for cyclopropane.

PART – B

(Answer any two questions: 02 X 10 = 20 Marks)

2 (a) Discuss in detail synthetic evidences in the derivation of structure of benzene.
(b) Write the sulphonation reaction in benzene.

3 Explain the effect of substituents on basicity.

4 Write a short note on drying of oils.

PART – C

(Answer any seven questions: 07 X 05 = 35 Marks)

5 Explain the mechanism of Friedel craft acylation.

6 Discuss with example basicity of amines.

7 Write in detail effect of substituents on reactivity in benzene.

8 Write the effect of substituents on acidity of aromatic acids.

9 Explain the principle and significance of saponification value.

10 Define ester value. write the principle and significance of ester value.

11 Explain Baeyer's strain theory.

12 Write any two important reaction of any one polynuclear hydrocarbons.

13 Write in brief Coulson and Moffitt's modifications.

*****

Code: BP301T

R19

B.Pharm II Year I Semester (R19) Regular Examinations March 2021

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 75

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) State Huckel's rule.
(b) What is Friedel crafts alkylation?
(c) Give any two uses of naphthols.
(d) Give any one reaction of benzoic acid.
(e) What is acid value?
(f) What is saponification value?
(g) Give structure of naphthalene and anthracene.
(h) Give medicinal uses of phenanthrene and diphenylmethane.
(i) Give any two limitations of Baeyer strain theory.
(j) Give any one reaction of cyclopropane.

PART – B

(Answer any two questions: 02 X 10 = 20 Marks)

2 (a) Write a note on nitration reaction of benzene.
(b) Add a note on acidity of phenols.

3 (a) Comment on rancidity of oils.
(b) Explain principle in determination of iodine value. Give its significance.

4 (a) Write any five reactions of phenanthrene.
(b) Discuss Mohr's theory of strain less rings.

PART – C

(Answer any seven questions: 07 X 05 = 35 Marks)

5 (a) Write a detail note halogenations reactions of benzene.
(b) Add note on resonance in benzene.

6 (a) Write a note on basicity of amines.
(b) Give structure and uses of resorcinol and cresols.

7 (a) Write a note on hydrolysis of fatty acids.
(b) Explain principle in determination of RM value.

8 (a) Give any two methods of synthesis of naphthalene.
(b) Give any two reactions of anthracene.

9 (a) Give any two methods of synthesis of phenanthrene.
(b) Give the structure and medicinal uses of triphenylmethane.

Contd. in page 2

Code: 13R00303

R13

B.Pharm II Year I Semester (R13) Supplementary Examinations October 2020

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Define aromaticity.
(b) Give two examples of pyridine containing drugs.
(c) Explain Fisher projection with an example.
(d) What is a meso compound?
(e) Write structure for alpha D glucose.
(f) Explain mutarotation.
(g) What is zwitterion?
(h) Explain function of insulin.
(i) Write the mechanism of Beckmann rearrangement.
(j) What is Wittig reaction?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 (a) Explain methods of preparation and reactions of furan.
(b) Compare aromaticity of furan, thiophene and pyrrole.

OR

3 (a) Write in brief about nomenclature of heterocycles.
(b) Show the synthesis of acridine and benzimidazole.

UNIT – II

4 (a) Write an account on configuration of organic compounds.
(b) Explain syn and anti conformations.

OR

5 (a) Describe in detail about R, S nomenclature rules.
(b) Distinguish between E and Z isomers.

UNIT – III

6 (a) Explain osazone formation.
(b) Write about physiological importance of anthraquinone glycosides.

OR

7 (a) Mention how glucose structure was established.
(b) Give details on the structure of starch.

UNIT – IV

8 (a) Give methods of synthesis of peptides.
(b) Explain structure and function of heparin.

OR

9 (a) How are fats and oils classified?
(b) How saponification value is determined and what are its uses?

UNIT – V

10 (a) Write about: (i) Mannich reaction. (ii) Michael addition.
(b) Explain neighbouring group participation.

OR

11 (a) Explain: (i) Birch reduction. (ii) Curtius rearrangement.
(b) Write about transition metal complex catalyzed reductions.

*****

Code: 13R00303

R13

B.Pharm II Year I Semester (R13) Supplementary Examinations November/December 2019

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) What are the medicinal uses of imidazole?
(b) How do you explain aromaticity of pyridine?
(c) Define and give example for an enantiomer.
(d) Explain cis, trans isomerism.
(e) What is Lobry De Bruyn reaction?
(f) Mention one reduction reaction of carbohydrates.
(g) What are the uses of oxytocin?
(h) Explain acid value.
(i) What is Michael addition?
(j) Define and give example for Beckmann rearrangement.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 (a) Write any two methods of preparation of pyridine.
(b) Explain reactions of furan.

OR

3 (a) Write two methods of quinolone synthesis.
(b) Explain reactions of indole (2 reactions).

UNIT – II

4 (a) Define configuration and conformation.
(b) Explain R, S nomenclature.

OR

5 (a) What is pericyclic reaction?
(b) Discuss optical activity of biphenyl compounds.

UNIT – III

6 (a) Write on nomenclature of carbohydrates.
(b) Define glycosidic linkage. Show and alpha and beta linkages with example.

OR

7 (a) Explain structure of sucrose.
(b) Write about pharmaceutical applications of carbohydrates.

UNIT – IV

8 (a) Discuss peptide synthesis.
(b) What is iodine value? Mention its uses.

OR

9 (a) Write a brief note on physical and chemical properties of Amino Acids.
(b) Define and mention uses of saponification value.

UNIT – V

10 (a) Describe Beckmann rearrangement and Mannich reaction.
(b) Discuss catalytic hydrogenation reactions.

OR

11 (a) Explain MPV reduction and Oppenauer oxidation.
(b) Write about Curtis and Schmidt reactions.

*****

Code: 13R00303

R13

B.Pharm II Year I Semester (R13) Supplementary Examinations November 2017

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Write the structures of the following heterocyclics with numbering:
(i) Pyrimidine. (ii) Pyridazine. (iii) Quinoline. (iv) Isoquinoline.

(b) Write the structure of one drug containing furan ring.

(c) Explain the term "plane of symmetry".

(d) Write the structure of meso-tartaric acid.

(e) Write the structure of the product formed on oxidation of glucose with bromine water.

(f) Explain the term "epimerization".

(g) Define 'Saponification value'.

(h) What happens when an amino acid reacts with Ninhydrin? Give its importance.

(i) Give an example for Diels-Alder reaction.

(j) Explain in brief 'Witting reaction'.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 (a) Compare the basicity of pyridine, pyrimidine and ethylamine.
(b) Write a note on electrophilic and nucleophilic substitution reactions of pyridine.
(c) Write the structures of any two medicinal agents containing pyridine.

OR

3 (a) Explain any one method of synthesis of the following heterocyclics: (i) Indole. (ii) Isoxazole.
(b) Write the structures of drugs (one each) containing the following rings: (i) Pyrazine. (ii) Quinoline.

UNIT – II

4 (a) Explain in detail about 'Fischer DL configuration' with suitable examples.
(b) Discuss in detail "Stereoselective" and "Stereospecific" reactions.

OR

5 (a) Write a detailed account on optical activity of biphenyl compounds.
(b) Write notes on: (i) Absolute configuration. (ii) Octant rule. (iii) Meso compound.

UNIT – III

6 (a) Give the classification of carbohydrates and how the ring structure of glucose is established.
(b) Write in detail the formation of osazone from fructose.

OR

7 (a) Write an account on Lobry De Bruyn Van Ekenstein reaction.
(b) Write the structure and physiological importance of anthraquinone glycosides.

UNIT – IV

8 (a) Classify proteins and explain the methods of synthesis of polypeptides.
(b) What is isoelectric point? And explain the Zwitterionic nature of amino acids.

OR

9 (a) Explain the acid value, saponification value and iodine value and discuss their significance in analysis of fats and oils.
(b) Write the chemistry of oxytocin.

UNIT – V

10 (a) Write the mechanism of Michael addition reaction.
(b) Explain in detail the MVP reduction.

OR

11 (a) Write a detailed note on Oppenauer oxidation.
(b) Explain in detail the Witting reaction including its synthetic utility.

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