

Total No. of Questions: 3

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Enrollment No.....



Faculty of Pharmacy

End Sem Examination Dec 2024

PY3CO09 Pharmaceutical Organic Chemistry -II

Programme: B. Pharma

Branch/Specialisation: Pharmacy

Duration: 3 Hrs.

Maximum Marks: 75

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

		Marks	BL	PO	CO	PSO
Q.1	i. Why benzene is an aromatic compound?	2	1	1	1	
	ii. Draw structure and uses of DDT and BHC.	2	1	1	1	
	iii. Give structure and use of aryldiazonium salt.	2	1	1	1	
	iv. Write any two qualitative tests for phenol.	2	1	1	1	
	v. What is saponification reaction of fats and oils?	2	2	2	1	
	vi. Explain the principle of iodine value.	2	1	2	1	
	vii. Classify polynuclear hydrocarbons.	2	2	3	1	
	viii. Give structure and uses of diphenylmethane.	2	1	3	1	
	ix. Write any two reactions of cyclobutane.	2	2	4	1	
	x. What is the stability order of cycloalkanes?	2	2	4	1	
Q.2	Attempt any two:					
	i. Discuss the reaction mechanism of nitration and sulphonation of benzene in detail.	10	2	1	1	
	ii. Define acidity, effect of substituents on acidity on benzoic acid and important reactions of benzoic acid.	10	2	1	1	
	iii. (a) Discuss halogenation reaction or friedel crafts alkylation- reaction of benzene in detail.	5	1	1	1	
	(b) Define basicity and explain the effect of substituents on basicity of amines.	5	1	1	1	

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Q.3 Attempt any seven: Two questions from each section is compulsory.

Section - A

i.	Write a note on the determination of acid value in fats and oils.	5	2	2	1
ii.	Explain the hydrolysis and hydrogenation reactions of fatty acids.	5	2	2	1
iii.	Write a note on the types of rancidity and the methods for prevention of rancidity.	5	2	2	1

Section - B

iv.	Explain the Haworth synthesis for naphthalene?	5	2	3	1
v.	Explain any two methods for the synthesis of phenanthrene.	5	2	3	1
vi.	Write any five reactions of anthracene.	5	2	3	1

Section - C

vii.	Write a note on Bayer's strain theory.	5	2	4	1
viii.	Describe about Coulson and Moffitt's modification.	5	2	4	1
ix.	What is Sachse Mohr theory of strainless rings?	5	2	4	1

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## Marking Scheme

### PY3CO09 Pharmaceutical Organic Chemistry-II

Q.1	i)	Why benzene is an aromatic compound?		<b>2</b>
		Reason	2 mark	
	ii)	Draw structure and uses of DDT	0.5 mark	<b>2</b>
		And Draw structure and uses BHC	0.5 mark	
	iii)	Give structure and use of aryldiazonium salt	1 mark	<b>2</b>
	iv)	Write any two qualitative tests for Phenol.	Each 1 mark	<b>2</b>
	v)	What is saponification reaction of fats and oils?		<b>2</b>
	vi)	Explain the principle of iodine value.		<b>2</b>
	vii)	Classify polynuclear hydrocarbons?		<b>2</b>
	viii)	Give structure and Any two uses of Diphenylmethane.	1 mark	<b>2</b>
Q.2	ix)	Write any two reactions of cyclobutene.	Each 1 mark	<b>2</b>
	x)	What is the stability order of cycloalkanes?		<b>2</b>
		Attempt any two:		
	i.	Discuss the reaction mechanism of nitration and sulphonation of benzene in detail.	5 marks	<b>10</b>
			5 marks	
	ii.	Define Acidity	2 marks	<b>10</b>
		Effect of substituents on acidity on benzoic acid	5 marks	
		and important reactions of Benzoic acid.	3 marks	
	iii.	(a)Discuss halogenation reaction or Friedel crafts alkylation- reaction of benzene in detail.		<b>5</b>
		(b) Define Basicity and effect of substituents on basicity of amines in detail.		<b>5</b>
Q.3		Basicity	2 marks	
		Effect	3 marks	
		Attempt any seven: Two questions from each section is compulsory.		

### Section - A

i.	Write a note on the determination of acid value in fats and oils.		<b>5</b>
	Principle	2 marks	
	Procedure	2 marks	
	Formula	1 mark	
ii.	Explain the Hydrolysis and Hydrogenation reactions of fatty acids.	2.5 marks	<b>5</b>
iii.	Write a note on the 3 types of rancidity the methods for prevention of rancidity.	Each 1 mark	<b>5</b>
		2 marks	

### Section - B

iv.	Explain the Haworth synthesis for Naphthalene?		<b>5</b>
	Structures and reaction	2.5 marks	
	Explanation	2.5 marks	
v.	What are the methods used for the synthesis of phenanthrene.		<b>5</b>
	Any 2 methods of synthesis	2.5 marks	
vi.	Write any five reactions of anthracene.	Each 1 mark	<b>5</b>

### Section – C

vii.	Write a note on Bayer's strain theory.		<b>5</b>
viii.	Describe about Coulson and Moffitt's modification.		<b>5</b>
ix.	What is Sachse Mohr theory of Strainless rings?		<b>5</b>

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