Total No. of Questions: 3 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Pharmacy
End Sem Examination May-2024
PY3CO14 Medicinal Chemistry -I

Programme: B. Pharm. Branch/Specialisation: Pharmacy

Duration: 3 Hrs. **Maximum Marks: 75**

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1	i.	Define Partition coefficient.	**2**
	ii.	Define Drug Metabolism.	**2**
	iii.	Draw the structure of Phenylephrine.	**2**
	iv.	Draw the structure of Propranolol.	**2**
	v.	Draw the structure of Acetylcholine.	**2**
	vi.	Give the structure and uses of Ipratropium bromide.	**2**
	vii.	Define Sedatives with structure of any one drug.	**2**
	viii.	Give the structure and uses of Chlorpromazine hydrochloride.	**2**
	ix.	Give the name of any four drugs of Narcotics.	**2**
	x.	Give the structure and uses of Ibuprofen.	**2**

Q.2		Attempt any two:	
	i.	Define Drug metabolism. Explain the Phase I & II along with factors affecting metabolism.	**10**
	ii.	Define, Classify and give SAR of Adrenergic Antagonist. Give the synthesis of Propanol.	**10**
	iii.	(a) Write a short note on Protein Binding & Geometrical Isomerism.	**5**
		(b) Define Sympathomimetic agents. Give the Synthesis of Salbutamol.	**5**

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

Section - A

	i.	Give the structure and synthesis of Neostigmine.	**5**

P.T.O.

	ii.	Explain the Biosynthesis of acetylcholine.	**5**
	iii.	Define Cholinergic Blocking agents. Give the SAR of Cholinolytic agents.	**5**

Section - B

	iv.	Define Barbiturates. Give the synthesis and Uses of Phenobarbitone.	**5**
	v.	Give the synthesis of Diazepam & Barbital.	**5**
	vi.	Explain the SAR of Benzodiazepines.	**5**

Section - C

	vii.	Give the structure & synthesis of Halothane.	**5**
	viii.	Give the structure & synthesis of Ketamine Hydrochloride.	**5**
	ix.	Define Narcotic Antagonist. Give the structure & uses of any one drug of this class.	**5**

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Scheme of Marking

Faculty of Pharmacy

End Sem Examination May-2024

Medicinal Chemistry -I (T) - PY3CO14 (T)

Programme: B. Pharm. | Branch/Specialisation: Pharmacy

Duration: 3 Hrs. **Maximum Marks: 75**

Note: The Paper Setter should provide the answer wise splitting of the marks in the scheme below.

Q.1	i)	Definition.....2 Mark	2
	ii)	Definition.....2 Mark	2
	iii)	Structure .....2 Mark	2
	iv)	Structure .....2 Mark	2
	v)	Structure .....2 Mark ~~1 mark~~ uses → 1 mark	2
	vi)	Structure .....2 Mark 1 mark uses - 1 marks	2
	vii)	Definition.....1 Mark Name of drug..Str.....1 Mark	2
	viii)	~~Definition~~ Structure.....1 Mark Any one use of drug..... 1 Mark	2
	ix)	Name of Four drugs..... 0.5 Mark Each	2
	x)	Structure.....1 Mark Any one use of drug..... 1 Mark	2
Q.2	Attempt any two:		
	i.	Definition .....2 Mark Phase I & II.....~~2.5 Mark Each~~ 2+2 = 4 Factors .....4 marks	10
	ii.	Definition .....1 Mark Classification.....4 Marks	10
		SAR ..... 3 Marks Synthesis.....2 Marks	
	iii.	Short note .....5 Mark Protein bind → 3 marks, geometrical isomerism - 2 marks	5
		Definition .....2 Mark Synthesis .....~~4~~ 3 Marks	5
Q.3	Attempt any seven: Two questions from each section is compulsory.		
		Section - A	
	i.	structure and synthesis.....~~2.5 Mark Each~~ ↳ 1 marks ↳ 4 marks	5
	ii.	Diagram of Biosynthesis.....2 Mark Explanation .....3 Mark	5
	iii.	Definition .....1 Mark SAR 4Marks	5
		Section - B	
	iv.	Definition .....2.5 .....~~1 Mark~~ ~~SAR Synthesis.....~~ ~~3 Marks~~ Uses .....2.5.....1 Mark	5
	v.	Synthesis.....2.5 Mark Each	5
	vi.	SAR.....2.5 Mark ~~each~~	5
		Section - C	
	vii.	Structure & Synthesis.....~~2.5 Mark Each~~ ↳ 1 mark ↳ 4 marks	5
	viii.	Structure & Synthesis.....2.5 Mark Each ↳ 1 mark ↳ 4 marks	5
	ix.	Definition .....1 Mark Structure.....3 Marks Uses .....1 Mark	5

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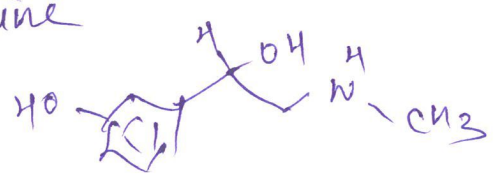
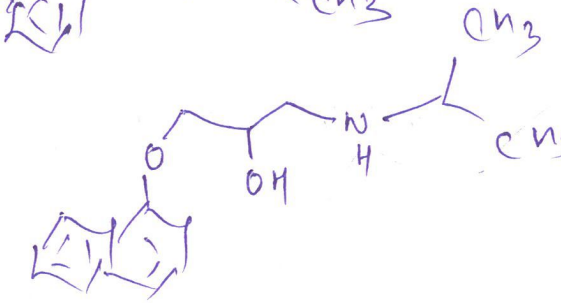
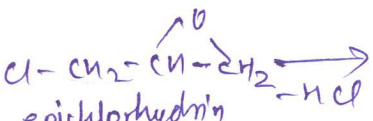
Phenylephrine



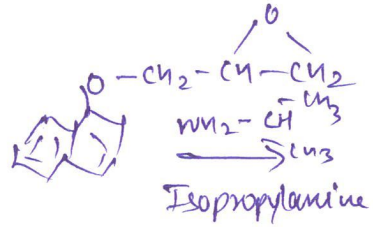
Propranolol →



α-naphthol



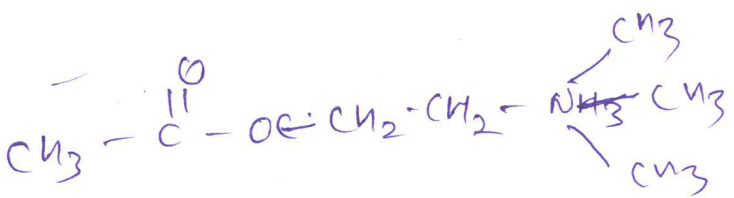
epichlorhydrin



Isopropylamine

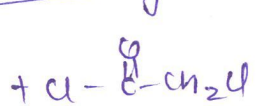
Propranolol

Acetylcholine

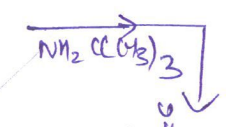


Salbutamol Syn →

o-onbenzyl alcohol



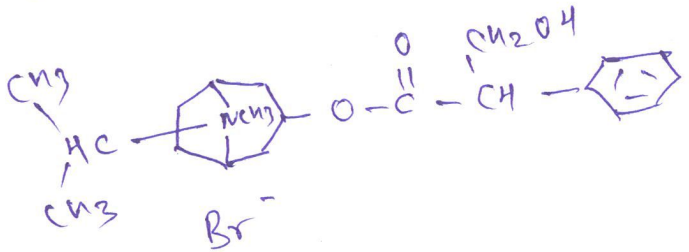
chloroacetyl chloride



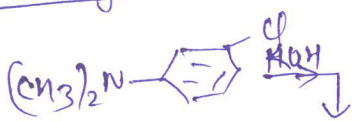
MPV reduct^n

Salbutamol

Ipratropium Bromide –



Neostigmine →



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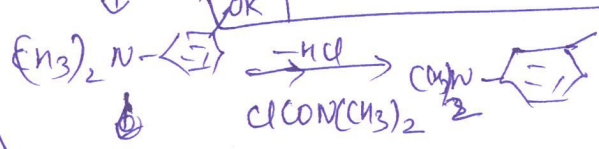
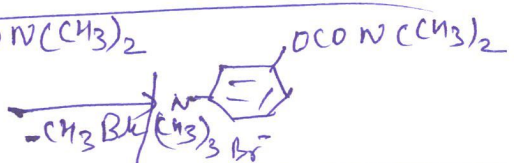
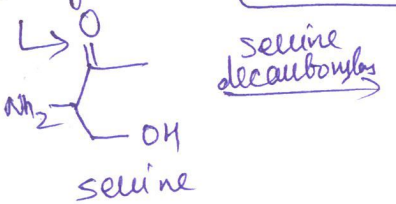


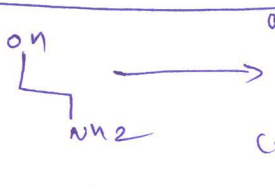


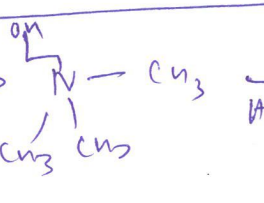
Acetylcholine



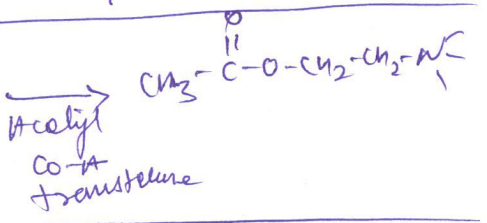
serine

serine decarboxylase

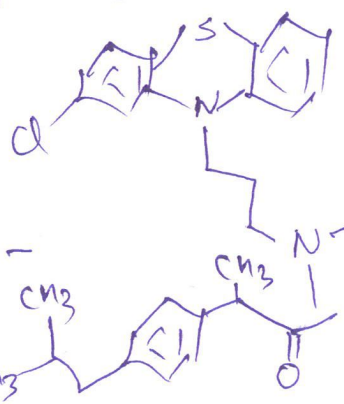




Acetyl Co-A transferase

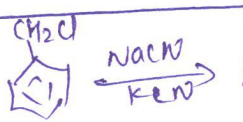


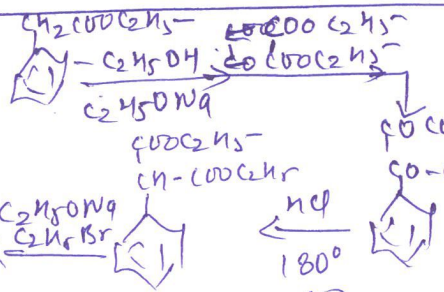
Chlorpromazine

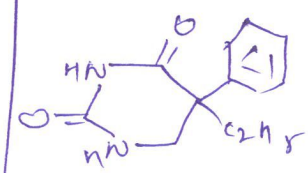


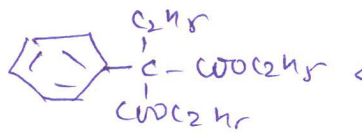
Ibuprofen –

phenobarbitone →

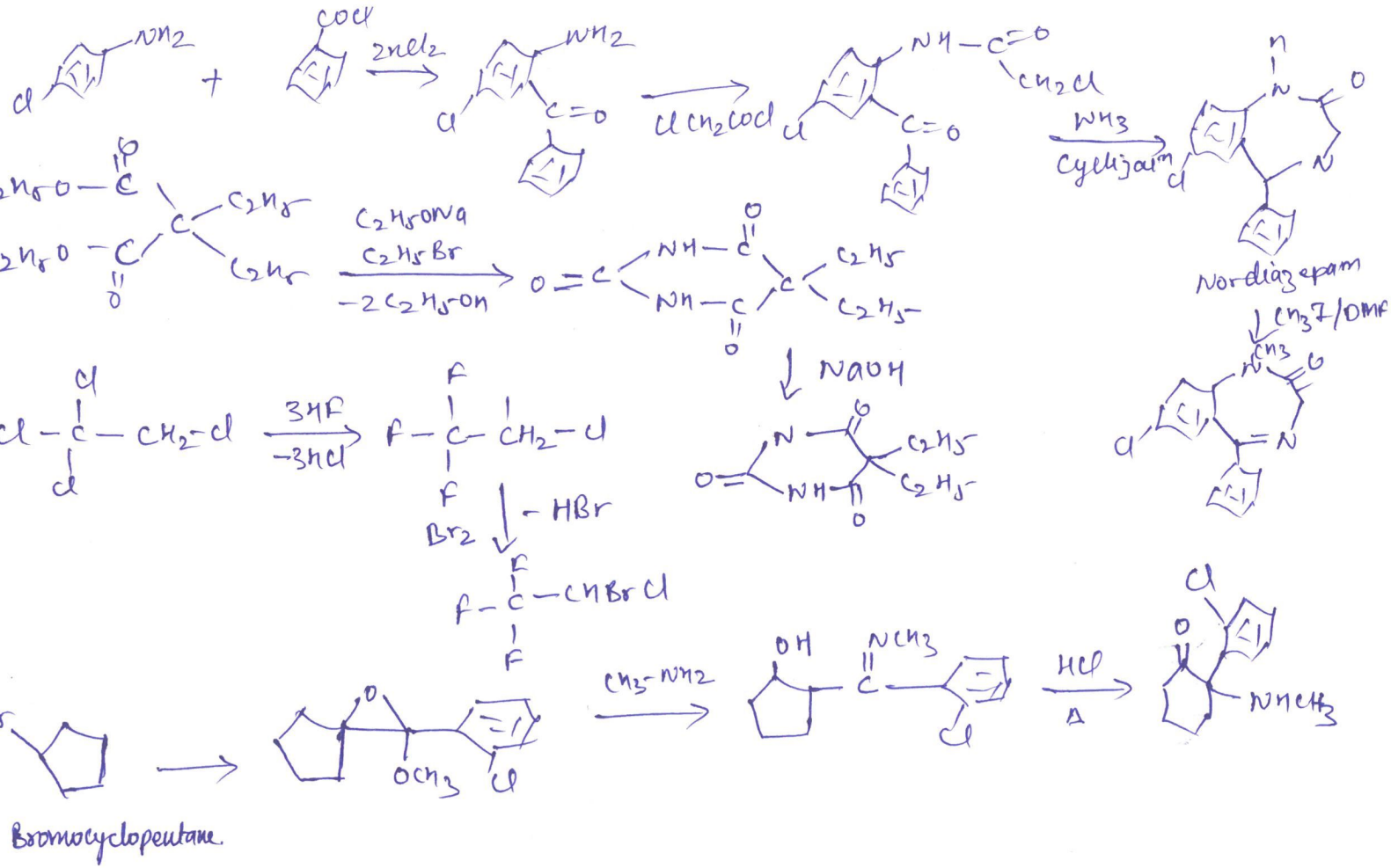








Diazepam Synthesis –



Barbital Synthesis →

Halothane →

Ketamine →