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

Enrollment No.....

Faculty of Pharmacy

End Sem (Odd) Examination Dec-2022

PY3CO18 Medicinal Chemistry-II

Programme: B. Pharm. Branch/Specialisation: Pharmacy

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

Note: All questions are compulsory. Internal choices, if any, are indicated.

Q.1	i.	How histamine get biosynthesized?	**2**
	ii.	Give the name of anyone drug with structure of proton pump inhibitors.	**2**
	iii.	Explain importance of thiol group in ACE inhibitors.	**2**
	iv.	Give the name of anyone drug with its structure that inhibit angiotensin II receptors.	**2**
	v.	What is role of HMG CoA-Reductase enzyme?	**2**
	vi.	Explain mechanism of action of cardiac glycosides.	**2**
	vii.	Write about importance of cholesterol in steroid.	**2**
	viii.	Write down any two differences between glucocorticoids and mineralocorticoids.	**2**
	ix.	Which group is responsible for the potency and toxicity of local anaesthetics. Why?	**2**
	x.	Write about structure of insulin.	**2**
Q.2		Attempt any two:	
	i.	Classify Anti-neoplastic agents; discuss mechanism of action of alkylating agents and antimetabolites.	**10**
	ii.	Give classification of diuretics; write structural activity Relationship (SAR) of thiazides diuretic.	**10**
	iii.	(a) Give synthesis of promethazine hydrochloride and cimetidine	**5**
		(b) Discuss structural activity relationship (SAR) and mechanism of action (MOA) of calcium channel blockers.	**5**

P.T.O.

Q.3		Attempt any seven: Two questions from each section is compulsory.	
		Section - A	
	i.	Classify antiarrhythmic drugs. Write down synthesis and uses of disopyramide phosphate.	**5**
	ii.	Write a note on anti-hyperlipidaemic agents.	**5**
	iii.	Discuss chemistry and SAR of digoxin and digitoxin.	**5**
		Section - B	
	iv.	Write a note on nomenclature and stereochemistry of steroids.	**5**
	v.	Discuss chemistry and mechanism of action of hydrocortisone.	**5**
	vi.	Discuss biosynthesis and mechanism of action of thyroxin.	**5**
		Section - C	
	vii.	Write SAR of local anaesthetics and give synthesis of benzocaine.	**5**
	viii.	Write an exhaustive note on antidiabetic agents.	**5**
	ix.	Write SAR of sulphonylureas and give synthesis of any one oral hypoglycaemic agent.	**5**

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Marking Scheme
PY3CO18 Medicinal Chemistry-II

Q.1	i.	How histamine get biosynthesized?		**2**
	ii.	Give the name of anyone drug with structure of proton pump inhibitors.		**2**
	iii.	Explain importance of thiol group in ACE inhibitors.		**2**
	iv.	Give the name of anyone drug with its structure that inhibit angiotensin II receptors.		**2**
	v.	What is role of HMG CoA-Reductase enzyme?		**2**
	vi.	Explain mechanism of action of cardiac glycosides.		**2**
	vii.	Write about importance of cholesterol in steroid.		**2**
	viii.	Write down any two differences between glucocorticoids and mineralocorticoids.		**2**
	ix.	Which group is responsible for the potency and toxicity of local anaesthetics.	1 mark	**2**
		Why	1 mark	
	x.	Write about structure of insulin.		**2**
Q.2		Attempt any two:		
	i.	Classify Anti-neoplastic agents	4 marks	**10**
		Mechanism of action of alkylating agents	3 marks	
		Antimetabolites.	3 marks	
	ii.	Give classification of diuretics	4 marks	**10**
		Structural activity Relationship (SAR) of thiazides diuretic	6 marks	
	iii.	(a) Synthesis of promethazine hydrochloride	2.5 marks	**5**
		Cimetidine	2.5 marks	
		(b) Discuss structural activity relationship (SAR)	2.5 marks	**5**
		Mechanism of action (MOA)	2.5 marks	
Q.3		Attempt any seven: Two questions from each section is compulsory.		
		Section - A		
	i.	Classify antiarrhythmic drugs	2 marks	**5**
		Synthesis of disopyramide phosphate.	2 marks	
		uses of disopyramide phosphate	1 mark	
	ii.	Write a note on anti-hyperlipidaemic agents.		**5**
		As per explanation		
	iii.	Chemistry of digoxin and digitoxin.	2 marks	**5**
		SAR of digoxin and digitoxin	3 marks	
		Section - B		
	iv.	Nomenclature of steroids.	2 marks	**5**
		Stereochemistry of steroids	3 marks	
	v.	Chemistry of action of hydrocortisone	3 marks	**5**
		Mechanism of action of hydrocortisone	2 marks	
	vi.	Biosynthesis of action of thyroxin.	3 marks	**5**
		Mechanism of action of thyroxin	2 marks	
		Section - C		
	vii.	SAR of local anaesthetics	3 marks	**5**
		Synthesis of benzocaine.	2 marks	
	viii.	Write an exhaustive note on antidiabetic agents.		**5**
		As per the explanation		
	ix.	SAR of sulphonylureas	3 marks	**5**
		Synthesis of any one oral hypoglycaemic agent	2 marks	

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