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Faculty of Pharmacy
End Sem Examination Dec 2024
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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

		Marks	BL	PO	CO	PSO
Q.1	i. Draw the structure of nitroglycerin and acetazolamide.	2	2	1	1	
	ii. Enlist any four target sites for diuretics.	2	2	1	1	
	iii. Write any four drugs acting as Sodium channel blockers as Antiarrhythmic agents.	2	2	1	1	
	iv. Write the chemistry of digitoxin.	2	2	1	1	
	v. Write synthesis of diphenhydramine.	2	2	1	2	
	vi. Write about methotrexate.	2	2	1	3	
	vii. Give names and uses of any two antithyroid drugs.	2	2	1	4	
	viii. Write the structure and uses of progesterone.	2	2	1	4	
	ix. Comment on aniline derivatives as local anesthetics.	2	2	1	5	
	x. Enlist any four enzymes and receptors for the treatment of diabetes Mellitus.	2	2	1	4	
Q.2	Attempt any two:					
	i. Classify Antihypertensive agents with structures. Write SAR of ACE inhibitors.	10	2	1	1	
	ii. Write classification, MOA and SAR of HMG Co-A reductase inhibitors.	10	2	1	1	
	iii. (a) Write about calcium channel blockers in detail.	5	2	1	1	
	(b) Give structure, synthesis and IUPAC name of Disopyramide Phosphate.	5	2	1	1	

[2]

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

Section - A

i.	Write a note on H ₂ -antagonists.	5	2	1	2
ii.	Discuss the chemistry and mechanism of action of alkylating agents.	5	2	1	3
iii.	Write a note on natural products used as antineoplastic agents.	5	2	1	3

Section - B

iv.	Write a note on the nomenclature and stereochemistry of steroids.	5	2	1	4
v.	Write short note on corticosteroids.	5	2	1	4
vi.	Give detailed notes on biosynthesis and MOA of thyroid hormones.	5	2	1	4

Section - C

vii.	Define and classify antidiabetic agents with examples and structures.	5	2	1	4
viii.	Write Synthesis & uses of Procaine and Benzocaine.	5	2	1	5
ix.	Explain the MOA and SAR of benzoic acid derivatives.	5	2	1	5

Marking Scheme

PY3CO18 Medicinal Chemistry -II

Q.1	i)	Draw the structure of nitroglycerin and acetazolamide. 1M for each	2
	ii)	Enlist target sites for diuretics. 0.5 for each	2
	iii)	Write drugs acting as Sodium channel blockers as Antiarrhythmic agents. 0.5 for each	2
	iv)	Write the chemistry of digitoxin. 1 mark	2
	v)	Write synthesis of diphenhydramine.	2
	vi)	Write about methotrexate.	2
	vii)	Give names and uses of any two antithyroid drugs. 1M for each	2
	viii)	Write the structure 1 mark uses of progesterone. 1 mark	2
	ix)	Comment on aniline derivatives as local anesthetics.	2
	x)	Enlist any four enzymes and receptors for the treatment of diabetes Mellitus. 0.5 for each	2
Q.2	Attempt any two:		
	i.	Antihypertensive agents with structures. 5 marks Write SAR of ACE inhibitors. 5 marks	10
	ii.	Write classification 3 marks MOA 3 marks SAR of HMG Co-A reductase inhibitors. 4 marks	10
	iii.	(a) Write about calcium channel blockers. 5 marks	5
		(b) Give structure, 1 mark synthesis 3 marks IUPAC name of Disopyramide Phosphate. 1 mark	5

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

Section - A

- | | | |
|------|--|---|
| i. | Write a note on H2-antagonists. | 5 |
| ii. | Discuss the chemistry - 2 marks
mechanism of action of alkylating agents. – 3 marks | 5 |
| iii. | Write a note on natural products used as antineoplastic agents. | 5 |

Section - B

- | | | |
|-----|---|---|
| iv. | Write a note on the nomenclature -2 marks
and stereochemistry of steroids -3 marks | 5 |
| v. | Write short note on corticosteroids. | 5 |
| vi. | Give detailed notes on biosynthesis – 3 marks
MOA of thyroid hormones. 2 marks | 5 |

Section - C

- | | | |
|-------|--|---|
| vii. | Define - 1 mark
classify antidiabetic agents with examples and structures. – 4 marks | 5 |
| viii. | Procaine
Synthesis 1.5 marks
uses 1 mark
Benzocaine
Synthesis 1.5 marks
Uses 1 mark | 5 |
| ix. | Explain the MOA- 2 marks
SAR of benzoic acid derivatives. - 3 marks | 5 |
