

Total No. of Questions: 3

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Enrollment No.....

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. (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 H2-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 |

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## Marking Scheme

### PY3CO18 Medicinal Chemistry -II

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

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

Section - A			
i.	Write a note on H2-antagonists.		<b>5</b>
ii.	Discuss the chemistry - 2 marks mechanism of action of alkylating agents. – 3 marks		<b>5</b>
iii.	Write a note on natural products used as antineoplastic agents.		<b>5</b>
Section - B			
iv.	Write a note on the nomenclature -2 marks and stereochemistry of steroids -3 marks		<b>5</b>
v.	Write short note on corticosteroids.		<b>5</b>
vi.	Give detailed notes on biosynthesis – 3 marks MOA of thyroid hormones. 2 marks		<b>5</b>
Section - C			
vii.	Define - 1 mark classify antidiabetic agents with examples and structures. – 4 marks		<b>5</b>
viii.	Procaine Synthesis uses	1.5 marks 1 mark	<b>5</b>
	Benzocaine Synthesis Uses	1.5 marks 1 mark	
ix.	Explain the MOA- 2 marks SAR of benzoic acid derivatives. - 3 marks		<b>5</b>
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