

Enrollment No.....



Faculty of Pharmacy
End Sem (Even) Examination May-2022
PY3CO23 Medicinal Chemistry -III

Programme: B. Pharma

Branch/Specialisation: Pharmacy

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

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

- Q.1
- i. Give 2 examples of β -lactam antibiotics with structure. **2**
 - ii. What are Aminoglycosides? **2**
 - iii. Define Prodrug. **2**
 - iv. Give any 2 examples of Macrolide antibiotics. **2**
 - v. Give 2 examples of Synthetic Anti-tubercular agents with structure. **2**
 - vi. Give the structure of Ciprofloxacin and Para amino salicylic acid. **2**
 - vii. Give the rationale for the combination of sulfamethoxazole and trimethoprim. **2**
 - viii. Enlist 2 drugs used as anti-protozoal agents with structure. **2**
 - ix. Enlist various physicochemical parameters used in Quantitative Structure Activity Relationship (QSAR). **2**
 - x. What is the purpose of QSAR in drug designing? **2**

- Q.2
- Attempt any two:
- i. Give the Classification of Tetracycline. **10**
Discuss the SAR of Tetracycline.
 - ii. Give the mechanism of action, synthesis & SAR of Chloramphenicol. **10**
 - iii. (a) Discuss in brief about aminoglycosides. **5**
(b) Write down the mode of action and SAR of 4-aminoquinoline Anti-malarial drugs. **5**

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

Section - A

- i. Enlist the antiviral agents. Give the mode of action of Antiviral agents. **5**

- ii. Give the synthesis and therapeutic applications of Isoniazid. **5**
- iii. Discuss the SAR of Quinolones **5**

Section - B

- iv. Define antifungal agents. Classify the antifungal agents with a note on its mechanism of action. **5**
- v. Write classification of sulphonamides. **5**
Give a brief account on Folate reductase inhibitors.
- vi. Write the SAR of sulfonamides with structural representation. **5**

Section - C

- vii. Explain in detail Free Wilson analysis. **5**
- viii. Give a brief about combinatorial chemistry. **5**
- ix. What is Hansch analysis? Give the merits and limitations of Hansch analysis. **5**

Marking Scheme
PY3CO23 Medicinal Chemistry -III

Q.1	i.	Any 2 examples of β -lactam antibiotics with structure	2
		(1 mark *2)	
	ii.	Aminoglycosides	2
	iii.	Definition of Prodrug	2
	iv.	Any 2 examples of Macrolide antibiotics	2
		(1 mark *2)	
	v.	Any 2 examples of Synthetic Anti-tubercular agents with structure.	2
		(1 mark *2)	
	vi.	Structure of Ciprofloxacin	2
		Para amino salicylic acid	1 marks
	vii.	Rationale for the combination of sulfamethoxazole and trimethoprim.	2
	viii.	Any 2 drugs with structure	2
		(1 mark *2)	
	ix.	Physicochemical parameters used in Quantitative Structure Activity Relationship	2
	x.	Purpose of QSAR in drug designing?	2

Q.2		Attempt any two:	
	i.	Classification of Tetracycline.	5 marks
		SAR of Tetracycline.	5 marks
	ii.	Mechanism of action	3 marks
		Synthesis	2 marks
		SAR of Chloramphenicol	5 marks
	iii.	(a) Brief explanation of aminoglycosides	5 marks
		(b) Mode of action	2 marks
		SAR of 4-aminoquinoline Anti-malarial drugs	3 marks

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

Section - A

i.	Antiviral agents lists	2 marks	5
	Mode of action of Antiviral agents	3 marks	
ii.	Synthesis of Isoniazid	3 marks	5
	Therapeutic applications of Isoniazid	2 marks	
iii.	SAR of Quinolones		5
	As per explanation		

Section - B

iv.	Definition of antifungal agents	1 mark	5
	Classification	2 marks	
	Mechanism of action	2 marks	
v.	Classification of sulphonamides	3 marks	5
	Folate reductase inhibitors	2 marks	
vi.	SAR of sulfonamides with structural representation		5
	As per explanation		
Section - C			
vii.	Free Wilson analysis		5
	As per explanation		
viii.	Combinatorial chemistry		5
	As per explanation		
ix.	Hansch analysis, its equation	3 marks	5
	Merits and limitations	2 marks	
