Roll No:

BPHARMA
(SEM VI) THEORY EXAMINATION 2021-22
MEDICINAL CHEMISTRY III - THEORY

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	What is B-lactam antibiotics? Give some examples.
b.	Draw the chemical structures of minocycline and doxycycline.
c.	Write the mechanism of action of Chloramphenicol.
d.	Define prodrugs with examples.
e.	Enlist urinary tract anti-infective agents.
f.	Write the mode of action and uses of zidovudine.
g.	Write mode of action and synthesis of isoniazid.
h.	Define anthelmintic agents. Write the synthesis of Mebendazole.
i.	Define QSAR.
j.	Describe applications of combinatorial Chemistry.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Discuss in detail about cephalosporins with suitable examples.
b.	Explain SAR of tetracycline. Discuss its mechanism of action and uses.
c.	Describe structure activity relationship of 4-amino quinolone. Explain mechanism of action and synthesis of Chloroquine.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain substituent hydrophobicity constant in relation to drug design.
b.	Explain in detail about aminoglycosides with examples.
c.	Discuss chemistry, classification and SAR of Sulfonamides with suitable examples.
d.	Classify synthetic antifungal agents. Describe mechanism of action, synthesis and uses of Miconazole.
e.	Define combinatorial chemistry and explain in detail about solid phase synthesis.
f.	Define and classify anti tubercular agents. Explain in detail with suitable example.
g.	Describe the synthesis and uses of Acyclovir, Ciprofloxacin and Dapsone.

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Sub Code: BP-601T
Roll No.

B. PHARM
(SEM VI) THEORY EXAMINATION 2022-23
MEDICINAL CHEMISTRY III

Time: 3 Hours *Total Marks: 75*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Describe the nomenclature of beta-lactam antibiotics.

b. Give two examples of tetracycline antibiotics.

c. Describe the concept of Prodrug in drug development.

d. Outline the synthesis of Chloramphenicol.

e. Enlist anti-tubercular antibiotics.

f. Outline the synthesis for Acyclovir.

g. Describe the synthesis of Dapsone.

h. Define antiprotozoal agents with examples.

i. Illustrate combinatorial synthesis in drug discovery.

j. Define Molecular Docking.

SECTION B

2. Attempt any *two*parts of the following: **2 x 10 = 20**

a. Outline the classification of beta-lactam antibiotics with examples. Explain structure activity relationship for Penicillin.

b. Outline classification of anti-infective agents used in urinary tract infections. Explain structure activity relationship for Quinolones and synthesis of Ciprofloxacin.

c. Enlist and illustrate the physicochemical parameters used in QSAR.

SECTION C

3. Attempt any *five*parts of the following: **7 x 5 = 35**

a. Describe the synthesis and uses of Diethylcarbamazine citrate and Mebendazole.

b. Illustrate Solid Phase and Solution Phase Synthesis along with their applications.

c. Outline the synthesis, and uses of Isoniazid and Nitrofurantoin.

d. Illustrate in detail about types of Prodrugs with their applications.

e. Classify antiviral agents with examples and explain their mechanism of action.

f. Illustrate the classification of Sulphonamides with synthesis of Sulfacetamide.

g. Describe azoles as antifungal agents with suitable examples.

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PAPER ID-410371

Roll No:

BPHARM
(SEM VI) THEORY EXAMINATION 2023-24
MEDICINAL CHEMISTRY III THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Write in briefabout Betalactamase inhibitorswithexamples.
b.	Define Polyenes antibiotics with examples.
c.	Define prodrug with examples
d.	Draw the structure of Mebendazole and Diethylcarbamazine citrate.
e.	Enlist Anthelmintics drugs.
f.	Outline the synthesis of Dapsone.
g.	Write in brief about aminoglycosides antibiotics with their clinical uses.
h.	Enlist Macrolide antibiotics with clinical uses.
i.	Explain solid phase synthesis in combinatorial chemistry.
j.	Write the structure and uses of Chloramphenicol.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	What are Tetracyclines? Classifyitwith suitable examples. Write theSAR and mechanism of action.
b.	Give the SAR of 4-amino quinolines with structural examples. Describe the synthesis of Chloroquine and Pamaquine.
c.	Classify Sulfonamides with structural examples. Give the SAR of Sulfonamides and synthesis of sulfacetamide.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 =35**

a.	
b.	Classify antiprotozoal agents? Give synthesis, mechanism of action and clinical applications of Metronidazole.
c.	Define and classify antitubercular agents. Write the synthesis and SAR of Isoniazid.
d.	Classify synthetic antifungal agents with suitable examples. Synthesis and clinical uses of Miconazole.
e.	Discuss SAR for quinolones antibiotics used in urinary tract infection. Give synthesis of Ciprofloxacin.
f.	Draw the structure of Acyclovir and Zidovudine with their mechanism of action and clinical uses in detail.
g.	Classify β-Lactam antibiotics with structural examples. Discuss SAR in detail.
	Write down the physicochemical parameters of QSAR in detail.

Paper ID : 250543

Roll No:

BPHARM
(SEM VI) THEORY EXAMINATION 2024-25
MEDICINAL CHEMISTRY III – THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Describe the chemical structure and therapeutic applications of Tetracycline.
b.	Outline the synthesis of Isoniazid.
c.	Illustrate the chemical structure of Chloramphenicol and explain its clinical use.
d.	What are anthelmintic agents? Provide two examples.
e.	Define molecular docking and explain its significance in drug discovery.
f.	What is the difference between SAR and QSAR.
g.	Give the name and use of β-Lactamase inhibitor.
h.	Write about the structure and use of metronidazole.
i.	Define anti-tubercular agents? Name the causative organism for tuberculosis.
j.	List out important anti-viral agents. Draw the structure of acyclovir.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Define prodrug? Discuss their applications in detail.
b.	Define and classify antimalarial agents with examples. Give the mechanism of action and outline the synthesis of chloroquine.
c.	What are antibiotics? Classify with examples. Discuss the SAR & MOA of tetracyclines.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Define the Concept and applications of combinatorial Chemistry.
b.	Discuss in detail about SAR of β-Lactam antibiotics with suitable examples
c.	What are Sulphonamides? Explain their SAR.
d.	What are aminoglycosides? Write the mechanism and SAR of aminoglycoside antibiotics
e.	Give the synthesis of Chloramphenicol.
f.	Define and classify the Physicochemical parameters used in QSAR.
g.	Write a short note on antifungal antibiotics and synthesis of Miconazole.

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Paper ID : 261107

Roll No:

BPHARM

(SEM. VI) THEORY EXAMINATION 2025-26

MEDICINAL CHEMISTRY III – THEORY

TIME: 3 HRS M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.** 2x10 = 20

(a) What is Beta-Lactam Ring in Beta-Lactam Antibiotics?

(b) Draw two chemical structures of Minocycline and Doxycycline

(c) Briefly describe the therapeutic use of Proguanil

(d) Define and classify prodrugs with examples.

(e) Compare Fluoroquinolones and Nalidixic Acid based on spectrum of activity.

(f) Classify Anti-infective agents.

(g) Write mode of action and synthesis of Miconazole.

(h) State the therapeutic use of Folate reductase inhibitors

(i) Define Hansch analysis.

(j) Differentiate between rigid docking and flexible docking.

SECTION B

2. **Attempt any *two* of the following:** 10 x 2 = 20

(a) Describe the nomenclature and stereochemistry and SAR of Cephalosporin

(b) Classify antimalarial agents with examples. Describe the mode of action and synthesis and use of Chloroquine.

(c) Explain physicochemical parameter used in QSAR.

SECTION C

3. **Attempt any five part of the following:** 7 x 5 = 35

(a) Discuss SAR of Quinolones. Draw the synthetic route of Ciprofloxacin.

(b) Discuss chemistry, classification and SAR of Sulfonamides with suitable examples.

(c) Describe the steps involved in molecular docking.

(d) Explain mode of action and therapeutic use of Erythromycin Clarithromycin and Azithromycin.

(e) Write the synthesis and use of Isoniazid and acyclovir.

(f) Classify Anti-protozoal agents with suitable examples. Explain the synthesis of Metronidazole

(g) Define combinatorial chemistry and explain in detail about solid phase synthesis.