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Roll Number ---------- **(Total Number of Questions 13)** **(Total number of Printed Pages 01)**

Programme	B. Pharmacy
Semester	6th
Subject	Medicinal Chemistry-III
Subject Code	BP601T
Paper ID	77986
Time	3Hours
Maximum Marks	75

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
Section A consists of Ten parts of 2 marks each (Objective Type); Attempt **ALL.*
***Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO**.*
**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section A **(10 X2 = 20)**

1. Give very short answers to the followings (2 marks each):

i.	Classify Cephalosporin's.
ii.	What are Aminoglycosides?
iii.	Give the structure of Streptomycin.
iv.	What is Docking?
v.	What are uses of Ciprofloxacin?
vi.	Give structure of Sulfasalazine.
vii.	What are uses of Econazole?
viii.	What are antifungal agents?
ix.	Give structure of Amantadine.
x.	Define Prodrug-design.

Section B **(2 X 10 = 20)**

2.	Explain SAR of Aminoglycosides & Tetracycline.
3.	Give applications of Prodrug.
4.	Explain antiviral agents.

Section C **(7 X 5 = 35)**

5.	Explain macrolides antibiotics in detail by giving suitable examples.
6.	Give classifications & etiology of Antimalarial agents
7.	Explain stereochemistry of penicillin & cephalosporins
8.	Classify Anti-tubercular agents. Give synthesis of Isoniazid.
9.	Give synthesis of Miconazole & Acyclovir.
10.	Give synthesis of Trimethoprim & Sulfacetamide.
11.	Give uses and mechanism of action of urinary tract-infective agents.
12.	Give uses & synthesis of Metronidazole.
13.	Write a short note on Combinatorial Chemistry.

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Section A (10 X2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	Give structure and uses of Sulfamethoxazole.
ii.	Give significance of Partition coefficient in drug design.
iii.	Give synthesis of Diethylcarbamazine citrate.
iv.	Give Structure and uses of Ciproflaxacin.
v.	Give structure of Streptomycin.
vi.	Classify UTI's.
vii.	Define Lead.
viii.	Write Hansch equation.
ix.	Give Structure and uses of Dapsone.
x.	What is Pharmacophore?

Section B (2 X 10 = 20)

2.	Define and classify Antimalarial agents with suitable examples. Discuss SAR of quinolines as antimalarial agents.
3.	Write a note on Reverse transcriptase inhibitors as antiviral agents. Give synthesis of Acyclovir.
4.	Define and classify Anti Protozoal agents. Give synthesis and MOA of Metronidazole.

Section C (7 X 5 = 35)

5.	Give short note on Folate reductase inhibitors and MOA of Trimethoprim.
6.	Explain Combinatorial Chemistry.
7.	Explain SAR of Sulfonamides.
8.	Give synthesis, MOA and uses of Miconazole.
9.	What is Docking analysis? Describe its advantage over other CADD techniques.
10.	Write short note on Aminoglycosides as antibiotics.
11.	What do you mean by Anthelmintics? Give their chemical structures.
12.	Give synthesis, MOA and uses of Isoniazid.
13.	What is Prodrug? Elaborate basic concepts and application of prodrug design.

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100123

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Section- A **(10X2=20)**

1.	Give very short answers to the followings
i.	What do you mean by term lead?
ii.	Give chemical structure of any two cephalosporins.
iii.	Give mechanism of action of β lactam antibiotics.
iv.	Give structure and uses of ciprofloxacin.
v.	What is a Pharmacophore?
vi.	Give significance of Taft's equation.
vii.	What is prodrug?
viii.	What is docking?
ix.	Give Structure and uses of metronidazole.
x.	Give structure of Amantadine

Section- B **(2X10=20)**

2.	Define and classify antiviral agents with suitable examples. Give method of synthesis and MOA of acyclovir.
3.	Explain lifecycle of malaria parasite and drug acting on each stage of life cycle. Give synthesis of chloroquine.
4.	Define and classify antitubercular agents. Give synthesis of isoniazid.

Section- C **(7X5=35)**

5.	Give classification of penicillin with suitable examples.
6.	Describe substituent constants of Hansch's QSAR model with mathematical equation.
7.	Explain SAR of tetracycline.
8.	Give synthesis, MOA and uses of dapsone.
9.	Write short note on parameters used in drug design.
10.	Write short note on aminoglycosides as antibiotics.
11.	What do you mean by anthelmintics? Give there chemical structures.
12.	Give synthesis, MOA and uses of chloramphenicol.
13.	Write a short note on anti fungal agents.

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180523

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**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section- A **(10 X2 = 20)**

1.	Give very short answers to the followings:
i.	Classify Cephalosporins.
ii.	What are Aminoglycosides?
iii.	Give the structure of Streptomycin.
iv.	What is Docking?
v.	What are uses of Ciprofloxacin?
vi.	Give structure of Sulfasalazine.
vii.	What are uses of Econazole?
viii.	What are antifungal agents?
ix.	Give structure of Amantadine.
x.	Define Prodrug-design.

Section- B **(2 X 10 = 20)**

2.	Explain SAR of Aminoglycosides and Tetracycline.
3.	Give applications of Prodrug.
4.	Explain antiviral agents.

Section- C **(7 X 5 = 35)**

5.	Explain macrolides antibiotics in detail by giving suitable examples.
6.	Give classifications and etiology of Antimalarial agents.
7.	Explain stereochemistry of Penicillin and Cephalosporins.
8.	Classify Anti-tubercular agents. Give synthesis of Isoniazid.
9.	Give synthesis of Miconazole and Acyclovir.
10.	Give synthesis of Trimethoprim and Sulfacetamide.
11.	Give uses and mechanism of action of urinary tract-infective agents.
12.	Give uses and synthesis of Metronidazole.
13.	Write a short note on combinatorial chemistry.

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201123
(evening)

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**** Section C consists of nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section A (10 X2 = 20)

1.	Give very short answers to the following:
i.	What are Prodrugs? Give two examples.
ii.	Write down the structure and uses of Tinidazole.
iii.	What are anthelmintics?
iv.	What do you mean by Quantitative structure- activity relationship (QSAR)?
v.	Define Hansch analysis.
vi.	What are β-Lactam antibiotics?
vii.	What are antifungal agents? Give two examples.
viii.	What do you mean by Docking analysis?
ix.	What are Protozoa?
x.	What are folate reductase inhibitors?

Section B (2 X 10 = 20)

2.	What are urinary tract infections (UTIs)? Classify them. Explain the SAR of Quinolones as UTIs.
3.	What are Sulphonamides? Explain the chemistry and SAR of Sulphonamides.
4.	Discuss the sources, stereochemistry and chemical degradation of Penicillin and Cephalosporins.

Section C (7 X 5 = 35)

5.	Define Combinatorial Chemistry. Write the applications of Solid Phase Synthesis.
6.	Write down the structure, IUPAC Name and uses of Dapsone and Sufacetamide.
7.	Write a short note on Protease inhibitors as antiviral agents.
8.	Write down the structure and mechanism of action of Nitrofurantoin and Norfloxacin.
9.	Write a short note on macrolide antibiotics with suitable examples.
10.	What is the mechanism of action of Tetracyclines?
11.	Write a short note on carrier- linked Prodrugs
12.	Write down the structure and uses of Miconazole and Tolnaftate.
13.	What are the steps involved in the Docking procedure?

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(Evening)

220524

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Programme	B. Pharmacy
Semester	6th Sem
Subject	Medicinal Chemistry-III
Subject Code	BP601T
Paper ID	77986
Time	3Hours
Maximum Marks	75

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Section A consists of Ten parts of 2 marks each (Objective Type); Attempt **ALL.*

***Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO**.*

**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section- A (10X2=20)

1.	Give a very short answers to the followings:
i.	Define molecular docking.
ii.	Enlist the uses of econazole.
iii.	Define the term bioisosterism.
iv.	Illustrate the structure and uses of isoniazid.
v.	Explain quantitative structure-activity relationship (QSAR).
vi.	Classify antimalarial agents.
vii.	Explain the mechanism of action of β-lactam antibiotics.
viii.	Define pharmacophore modeling.
ix.	What are monobactams?
x.	Define prodrugs.

Section- B (2X10=20)

2.	Define and classify antiviral agents with examples. Give synthesis and mechanism of action of Acyclovir.
3.	Comment on sulphonamides in detail.
4.	Give a detailed account of quinolones as urinary tract anti-infective agents, including structure-activity relationship (SAR) with examples.

Section- C (7X5=35)

5.	Write a short note on various approaches used in drug design.
6.	Give the structure of: a) Azithromycin b) Chloramphenicol
7.	What are folate reductase inhibitors, and how do they function in pharmacology?
8.	Enumerate macrolide antibiotics with two examples.
9.	Give the structure and uses of the following: a) Proguanil b) Clindamycin
10.	Illustrate the applications of combinatorial chemistry.
11.	Define and classify antitubercular agents with suitable examples.
12.	Discuss the stereochemistry of penicillin.
13.	Give the structure and synthesis of mebendazole and trimethoprim.

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(Evening)

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Roll Number ---------- (Total Number of Questions 13) (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	6th Sem
Subject	Medicinal Chemistry-III
Subject Code	BP601T
Paper ID	77986
Time	3Hours
Maximum Marks	75

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Section A consists of Ten parts of 2 marks each (Very Short Answer); Attempt **ALL.*

***Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO**.*

**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section- A **(10X2=20)**

1.	Give very short answers to the followings:
i.	What do you mean by partition coefficient?
ii.	Write uses of albendazole.
iii.	Enlist structure and uses of clindamycin.
iv.	Define drug design.
v.	What are anthelmintics?
vi.	Illustrate combinatorial chemistry.
vii.	Give synthesis of chloramphenicol.
viii.	What is UTI?
ix.	Write the uses of kanamycin and doxycycline.
x.	Define QSAR.

Section- B **(2X10=20)**

2.	Write down the synthesis and uses of following: a) Dapsone b) Miconazole c) Cotrimoxazole d) Proguanil
3.	Define and classify antitubercular agents. Give synthesis and MOA of isoniazid.
4.	Give detail account on SAR of aminoglycosides.

Section- C **(7X5=35)**

5.	Illustrate applications of prodrug.
6.	Give etiology of malaria.
7.	Write significance of Hammet's electronic parameter and tafts steric parameter.
8.	Discuss structure and uses of following: a) Nalidixic acid b) Zidovudine
9.	Mention the chemical structure and synthesis of fluconazole.
10.	Write short note on biguanides.
11.	Describe short note on β-lactam antibiotics.
12.	Enlist classification of sulfonamides.
13.	Write structure, uses and synthesis of para amino salicylic acid.

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(Evening)

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**** Section -C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.*

Section- A (10X2=20)

1.	Give very short answers to the followings:
i.	Give the structure and uses of Streptomycin.
ii.	Classify Cephalosporins.
iii.	Define prodrugs and explain their basic concept.
iv.	Give the structure and uses of Quinine Sulphate.
v.	Draw the structure of Nalidixic Acid and state its uses.
vi.	Classify urinary tract infections (UTIs).
vii.	Give the synthesis of Diethylcarbamazine Citrate.
viii.	What are the uses of Econazoles?
ix.	State the significance of the partition coefficient in drug design.
x.	Define Combinatorial Chemistry.

Section- B (2X10=20)

2.	Classify antimalarial drugs with examples and explain the structure–activity relationship (SAR) of quinolines.
3.	How are antiviral agents classified? Mention examples and write the synthesis of Acyclovir.
4.	Give classification and examples of antifungal drugs. Explain the synthesis of Miconazole.

Section- C (7X5=35)

5.	Classify β- Lactam antibiotics with suitable examples.
6.	Briefly describe the etiology of malaria.
7.	Give classification and examples of macrolide antibiotics.
8.	Discuss the SAR of quinazolone derivatives.
9.	Classify antitubercular agents with relevant examples.
10.	Write a brief note on anti-protozoal drugs.
11.	Mention folate reductase inhibitors and explain Trimethoprim's mechanism of action.
12.	Outline key approaches used in drug design.
13.	State the importance of partition coefficient in drug development.

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**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section- A (10X2=20)

1.	Give very short answers to the followings:
i.	What do you mean by partition coefficient?
ii.	Define Docking
iii.	Define the term bioisosterism.
iv.	Give the structure and uses of Doxycycline.
v.	Define Prodrug.
vi.	Write uses of Albendazole.
vii.	Give mechanism of action of β-Lactam antibiotics.
viii.	Define Pharmacophore modeling.
ix.	Enlist the uses of Nalidixic acid.
x.	What is combinatorial chemistry?

Section- B (2X10=20)

2.	Define and classify antitubercular agents. Give synthesis and MOA of Isoniazid
3.	Define and classify antifungal agents with examples. Give synthesis and MOA of Griseofulvin.
4.	Give a detailed account of Quinolone as urinary tract antiinfective agents which include SAR with examples.

Section- C (7X5=35)

5.	Write significance of Hammet's electronic parameter and Tafts steric parameter.
6.	Enlist the uses of- a) Nitrofurantoin b) Miconazole.
7.	Explain on Folate Reductase inhibitors.
8.	Enumerate macrolide antibiotics with two examples.
9.	Give the structure of following: a) Clindamycin b) Streptomycin
10.	Enlist classification of Sulfonamides.
11.	Write short note on Biguanides.
12.	Discuss stereochemistry of Penicillin.
13.	Write short note on various approaches used in drug design.

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