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Total No. of Questions : 14 ]

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**III/IV B. PHARMACY (Supple) EXAMINATIONS, NOV/DEC - 2022**

**Sixth Semester**

**MEDICINAL CHEMISTRY III - THEORY**

Time : **Three Hours**

Maximum : **75 Marks**

**SECTION - A**

**Answer any FIVE Questions.**

**5x10 = 50 M**

1. Classify  $\beta$ -Lactam Antibiotics and discuss their mechanism of action. Write a note on chemical degradation of Penicillins.
2. Discuss the etiology of Malaria and classify Antimalarial drugs with examples. Outline the synthesis of Pamaquine.
3. Write the synthesis, mode of action and medicinal uses of (a) Acyclovir (b) Nitrofurantoin.
4. Write the classification and SAR of sulphonamides. Discuss the mechanism of action, synthesis and therapeutic benefits of Dapsone.
5. Give a brief account on Pharmacophore modeling and docking techniques.
6. Write the structures of various synthetic Antifungal agents and enumerate the synthesis and mechanism of action of Miconazole.
7. Enumerate the mechanism of action and synthesis of
  - a) Chloramphenicol
  - b) Para aminosalicylic acid.

**SECTION - B**

**Answer any FIVE Questions.**

**5x5 = 25 M**

8. Write the structure and medicinal uses of Neomycin and Chlortetracycline.
9. Discuss the applications of Prodrug design.
10. Write the SAR of quinolones as urinary anti infective agents.
11. Classify Antitubercular drugs and outline synthesis of Isoniazid.
12. Write the structure, IUPAC Name, Synthesis and Therapeutic uses of Mebendazole.
13. Write a note on electronic parameters used in QSAR.
14. Define combinatorial chemistry and discuss its applications.

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III/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Sixth Semester

**MEDICINAL CHEMISTRY III - THEORY**

Time : Three Hours

Maximum : 75 Marks

**SECTION - A**

Answer any FIVE Questions.

5x10 = 50 M

1. Write the structures of various Tetracyclines. Discuss their chemical aspects, mechanism of action and medicinal uses.
2. Write a note on
  - a) Applications of Prodrugs design.
  - b) Chloramphenicol.
3. Discuss the SAR of Quinolones. Write the structures and medicinal uses of Norfloxacin, Sparfloxacin, Lomefloxacin and Ofloxacin.
4. Classify Sulphonamides. Discuss the SAR and MOA of Sulphonamides.
5. Discuss the concept and applications of combinatorial chemistry.
6. Classify cephalosporins with examples and their structures. Discuss their SAR and mode of action.
7. Write the synthesis and medicinal uses of
  - a) Tolnaflate.
  - b) Acyclovir.

**SECTION - B**

Answer any FIVE Questions.

5x5 = 25 M

8. Write the IUPAC name, Synthesis, MoA and uses of Metronidazole.
9. Classify Antimalarial drugs with examples.
10. Write a note on Hammett's electronic parameter and Taft's steric parameter.
11. Write a brief note on Macrolides.
12. Enumerate the chemical degradation of Penicillins.
13. Classify Antiviral agents with examples and their structures.
14. Give a brief account on Antifungal antibiotics.

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**III/IV B. PHARMACY (SUPPLY) DEGREE EXAMINATIONS,  
FEBRUARY- 2022  
Sixth Semester**

**MEDICINAL CHEMISTRY III - THEORY**

Time : Three Hours

Maximum : 75 Marks

**SECTION - A**

Answer any FIVE Questions.

5x10 = 50 M

1. Define and classify antibiotics. Explain SAR and MOA of  $\beta$ -Lactam antibiotics.
2. What are prodrugs ? Explain briefly about prodrug design.
3. Give the classification and MOA of Anti-tubercular Agents. Write a note on anti-tubercular antibiotics with Synthesis and MOA of Para amino salicylic acid.
4. Classify Antiprotozoal agents giving one example with structure under each class.
5. Write in detail on Azole antifungal drugs.
6. What do you know of Urinary tract anti-infective agents ? Outline the synthesis of Ciprofloxacin.
7. Explain in detail about physicochemical parameters used in quantitative structure activity relationship (QSAR).

**SECTION - B**

Answer any FIVE Questions.

5x5 = 25 M

8. Write a note on Aminoglycosides.
9. Outline the synthesis and MOA of Chloramphenicol.
10. Add a short note on Macrolide antibiotics.
11. Give the structure and uses of Isoniazid and Methanamine.
12. Explain in detail the SAR of Sulfonamides.
13. Outline the synthesis and MOA of Trimethoprim.
14. Add a short note on Pharmacophore modeling.

