QP Code: 621006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
May 2024
Medicinal Chemistry III
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. a) Describe the Structural Activity Relationship (SAR) of antibacterial sulphonamides
   b) Outline the synthesis and mechanism of action of diethylcarbamazine citrate and tolnaftate
2. a) Explain the chemistry and mechanism of action of tetracyclines
   b) Explain the mechanism of action and chemical degradation of penicillins

Short Notes **(7x5=35)**

3. Explain the chemistry and mechanism of action of aminoglycosides
4. Classify antimalarial drugs with structural examples
5. Outline the chemical synthesis and mechanism of action of ciprofloxacin
6. Define and classify antiviral drugs
7. Give the synthesis, mechanism of action and uses of metronidazole
8. Outline the chemical synthesis of trimethoprim and dapsone
9. Explain the important physicochemical parameters in quantitative structure activity relationship

Answer Briefly **(10x2=20)**

10. Write a note on stereochemistry of beta-lactam class of antibiotics
11. Give two structural examples for semi synthetic penicillins along with their therapeutic role.
12. Explain the mechanism of action of chloramphenicol
13. List the major applications of prodrugs
14. Highlight the important structural requirements for antimalarial activity
15. Outline the synthesis of isoniazid
16. Give the structure and uses of following
    a) Acyclovir
    b) Neomycin
17. Give the structure and uses of
    a) Sulphamethoxazole
    b) Mebendazole
18. Write the chemical synthesis of miconazole
19. List any four applications of combinatorial chemistry

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