



Paper ID : 250543

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Subject Code: BP601T

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**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 $\beta$ -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 $\beta$ -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.           |