

Reg. No .....

Name .....

23P310

**M. Sc. DEGREE END SEMESTER EXAMINATION : NOVEMBER 2023**

**SEMESTER 3 : PHARMACEUTICAL CHEMISTRY**

**COURSE : 21P3CPHT09 : DRUG DESIGN AND PHARMACOLOGY**

*(For Regular - 2022 Admission and Supplementary - 2021 Admission)*

Duration : Three Hours

Max. Weights: 30

**PART A**

**Answer any 8 questions**

**Weight: 1**

1. Write notes on LD50 and ED50. (E)
  2. What do you mean by median lethal dose? (U)
  3. Discuss the pharmacological action of Sulindac. (U, CO 3)
  4. Explain the following terms. (U, CO 2)  
a) Therapeutic index b) margin of safety of drugs.
  5. Discuss the pharmacological action of Atenolol. (E)
  6. Prontosil doesn't have any activity in vitro. Why? (A, CO 3)
  7. What are the therapeutic uses of Macrolide? (Cr)
  8. What is the mechanism of action of Calcium channel blockers as antihypertensive agents? (U, CO 3)
  9. Write a note on neurone blockers as antiarrhythmic agent. Explain with example. (A, CO 3)
  10. Write a note on molecular perturbation theory. (E)
- (1 x 8 = 8)**

**PART B**

**Answer any 6 questions**

**Weights: 2**

11. What are structurally specific and non-specific drugs? Give examples. (R, CO 1)
  12. Give an account of the SAR of cardiac glycosides. (An, CO 3)
  13. Outline the synthesis and mode of actions of lidocaine and phenytoin. (U, CO 3, CO 4)
  14. Write a note on glucuronic acid conjugation mechanism with a suitable example. (U, CO 2)
  15. Explain the Phase I and Phase II biotransformation of Ibuprofen. (A, CO 2)
  16. Explain the mechanism of action and side effects of quinine drugs in malaria treatment. (U, CO 3)
  17. Explain the synthesis of Combivir and Dapsone. (Cr)
  18. Discuss in detail the SAR of diphenyl heptanone and its derivatives as narcotic analgesics. (U, CO 3)
- (2 x 6 = 12)**

**PART C**

**Answer any 2 questions**

**Weights: 5**

19. Explain the structural classification of Antihelmintic drugs with suitable examples. Give their properties and mode of action. (A, CO 3)
20. What do you mean by excretion of a drug? Discuss about different routes of drug excretion. (R)

21. Discuss the classification, SAR and uses of the various classes of drugs used for the chemotherapy of tuberculosis. (An, CO 3)
22. Discuss the classification, structure and mode of action of various drugs used as antipyretics and NSAIDs. (U, CO 3)
- (5 x 2 = 10)**

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Explain the fundamental principles of pharmacology.	U	11	2
CO 2	Describe the concepts of toxicology and biotransformations.	A	4, 14, 15	5
CO 3	Illustrate the structure, mechanism of action and SAR studies of anti-infective agents, chemotherapeutic agents, drugs acting on CVS, Analgesics, Antipyretic & Anti-inflammatory drugs.	A	3, 6, 8, 9, 12, 13, 16, 18, 19, 21, 22	27
CO 4	Describe the synthetic studies of different classes of drugs.	U	13	2

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;