



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – CHEMISTRY**

**FIFTH SEMESTER – APRIL 2023**

**UCH 5602 – MEDICINAL AND PHARMACEUTICAL CHEMISTRY**

Date: 15-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

**PART A**

**Answer ALL questions.**

**(10 x 2 = 20)**

1. Mention the role of WHO.
2. What is arteriosclerosis?
3. Mention the antidote for acid poisoning.
4. Define the term pharmacophore.
5. What is prodrug?
6. What is the therapeutic index and mention its significance.
7. Define Antibiotics.
8. Draw the structure of reserpine and give its uses.
9. What are nutraceuticals?
10. Name the electronic parameters used in QSAR and drug design.

**PART B**

**Answer any EIGHT questions.**

**(8 x 5 = 40)**

11. How is sugar determined in a sample of urine by Benedict's method?
12. What is meant by blood pressure? How are they classified?
13. Describe the biological, chemical and immunology assay.
14. What is chemical name of a drug? How does it differ from other two classes of name of a drug?
15. What is anemia? Explain its types.
16. Draw and explain the structure of camptothecin.
17. Discuss in detail the long acting barbiturates with two examples.
18. Distinguish sedatives from hypnotics. Give suitable examples.
19. Mention any four antidepressant drugs and their mode of action.
20. What are narcotic analgesics? Mention the uses and structure of morphine.
21. Discuss the significance of Hammett constant and Taft's substituent constants.
22. What are known and unknown receptors in molecular modelling?

**PART C**

**Answer any FOUR question.**

**(4 x 10 = 40)**

- 23a. Explain the different methods used in the sterilization of surgical instruments.  
b. List the characteristics of an ideal disinfectant. (5+5)
- 24a. Explain the physiological effect of any two functional groups.  
b. List out the differences between antiseptics and disinfectants. (5+5)
- 25a. Briefly explain the metabolism of drug.  
b. How is random screening used in drug discovery? (5+5)
- 26a. Write a short note on chemotherapy.  
b. Draw the structure of penicillin and explain its functions. (5+5)
- 27a. What are the  $\beta$ -blockers? Explain the action of Propranolol hydrochloride.  
b. Describe salicylic acid and para aminophenol derivatives as potent antipyretic analgesics. (5+5)
- 28a. Explain in detail the structure and uses of streptomycin.  
b. Discuss the computer aided drug designing. (5+5)

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