

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – CHEMISTRY

FIFTH SEMESTER – NOVEMBER 2022

UCH 5602 – MEDICINAL AND PHARMACEUTICAL CHEMISTRY

Date: 30-11-2022

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

PART - A

Answer ALL questions.

(10 x 2 = 20 Marks)

1. What is blood coagulation?
2. What is arteriosclerosis?
3. Define the term pharmacognosy.
4. Mention the symptoms of anemic patients.
5. What is meant by therapeutic index?
6. What are antibiotics?
7. Give two differences between soft drugs and hard drugs.
8. Mention the therapeutic uses of camptothecin.
9. List two advantages of lead identification.
10. Define the term drug.

PART - B

Answer any EIGHT questions.

(8 x 5 = 40 Marks)

11. Explain the characteristics of an ideal disinfectant.
12. Write short note on storage of drugs.
13. What is proprietary name of a drug? How does it differ from chemical and non-proprietary names?
14. Differentiate sedatives from hypnotics.
15. Explain the structure and function of quinine.
16. Draw the structure of streptomycin and give its functions.
17. How is hesperidin extracted from orange peel?
18. Outline the process of molecular modification of morphine drugs?
19. Discuss the stereochemical aspects of new drug design.
20. Explain the electronic and steric parameters of rational drug design.
21. How are diazepam and barbital synthesized?
22. Write a note on molecular modelling of new drug design.

PART - C

Answer any FOUR questions.

(4 x 10 = 40 Marks)

23. a) Explain the determination of sugar in a sample of urine by Benedict's method.
b) Describe chemical and biological methods used to estimate the potency of drugs.
24. a) Explain the physiological effects of hydroxyl and carboxylic acid groups in drugs.
b) Briefly explain the mode of action of sodium valproate and hydantoins.
25. a) How are acetylsalicylic acid and paracetamol prepared?
b) Describe the structure and function of streptomycin and tetracyclin antibiotics.
26. a) What are the functions of nitrates and beta blockers?
b) Explain the structure, function and therapeutic uses of taxanes.
27. a) Illustrate the structure activity relationship (SAR) of penicillin.
b) Discuss the QSAR parameters of new drug design.
28. a) Explain Hansch analysis and Free Wilson analysis.
b) Discuss the computer aided drug design (CADD).

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