LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – **NOVEMBER 2018**

16UCH5ES02– MEDICINAL AND PHARMACEUTICAL CHEMISTRY

Date: 03-11-2018 Dept. No. Max. : 100 Marks

Time: 09:00-12:00

Part-A

Answer ALL questions. **(10 × 2= 20)**

1. Mention the treatment for acid poisoning.
2. What is coagulation of blood?
3. Define the term pharmacognosy.
4. Draw the structure of reserpine and give its uses.
5. What are nutraceuticals?
6. How is coumarin prepared from salicyladehyde and acetic anhydride?
7. Define the term therapeutic index.
8. What is called a metabolic product? Write an example.
9. Define mathematically the parameter that measures the forces of intermolecular attraction.
10. What are unknown receptors? Give an example.

Part-B

Answer any EIGHT questions. **(8 × 5= 40)**

11. List the characteristics of an ideal disinfectant.
12. What are lipoproteins? Mention their types and roles.
13. Mention the physiological effects of two functional groups in drug.
14. What are narcotic analgesics? Write down the uses and structure of morphine.
15. a) Distinguish between sedatives and hypnotics. **(2)**

    b) Mention any two depressant drugs and their uses. **(3)**

16. Write a note on chemotherapy.

17. Write a note on structural modification of quinone.

18. Distinguish between hard drug and soft drug with suitable examples.

19. Describe the stereochemical aspects of drug action.

20. Explain the various parameters used in QSAR studies.

21. How is the partition coefficient of a drug determined experimentally?

22. Write a note on natural products used as drugs.

Part-C

Answer any FOUR questions. **(4 × 10= 40)**

23. (a) What is anaemia? Explain its classification. **(5)**

(b) Explain the determination of urine sugar by Benedict's method. **(5)**

24. (a) What are biological and chemical assay? **(4)**

(b) Discuss briefly the salicylic acid and *p*-aminophenol derivatives as potent antipyretic analgesics. **(6)**

25. (a) Explain anti anginal agents and calcium channel blockers with suitable example. **(6)**

(b) Give the structures and uses of tetracycline and streptomycin. **(4)**

26. (a) Describe the structure and uses of streptomycin **(5)**

(b) Discuss the serendipity in drug discovery citing a suitable example. **(5)**

27. (a) Explain the characteristics of a prodrug. **(5)**

(b) Describe the structure activity relationship of a drug molecule based on Hansch's plot **(5)**

28. (a) Explain the functions of linkers in solid phase combinatorial synthesis. **(5)**

(b) Discuss the significance of QSAR electronic parameters like Hammett constant and Taft's substituent constants. **(5)**

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