Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University) Coimbatore-641043.

Master's Degree Examination – November - 2018
Semester : III

Class : II PG
Major : CHEMISTRY

Time: 3 hours
Max. Marks: 60

17MCHC19 – Phytochemical Methods and Medicinal Chemistry

Part A **10 x 1/2 = 5**

Choose the correct answer

1. Soxhleting is used for the extraction of organic compounds provided the impurities are
   a. Soluble in solvent used for extraction. b. Insoluble in solvent used for extraction.
   c. partially soluble in solvent used for extraction d. None of these.
2. Mixture of amino acids can be separated and identified by the application of
   a. Partition chromatography b. column chromatography
   c. gas chromatography d. paper chromatography.
3. The type of forces present in drug molecule is
   a. covalent bond b. dipole – dipole interactions c. hydrogen bond d. all the above.
4. The property of an object that makes it non – super imposable on its mirror image is known as
   a. achirality b. chirality c. Conformational analysis d. enantiomerism.
5. The absolute amount of a drug required to produce a given pharmacological effect is called as
   a. depression b. therapeutic index c. potency d. None of the above.
6. $\log K = \log K^0 + \underline{\sigma\rho}$. This equation is called as
   a. Bragg equation b. Yukawa – Tsuno equation c. Hammett equation d. Taft's equation.
7. The important antihistamine drug is
   a. Benadryl b. Digoxin c. Clonidine d. Paracetamol.
8. Which one is used as antimalarial?
   a. cinchona alkaloids b. 4 – amino quinoline c. Pyrimidine d. all the above
9. The chemical substances that are produced by microorganisms and that inhibit the growth of other Microorganism is called as
   a. antiseptics b. analgesics c. antibiotics. d. anaesthetics.
10. Chloramphenicol was discovered by
   a. Alexander Flemming b. Victor Grignard c. Burkholder et al d. Bentley

Part B **5 x 4 = 20**

Answer ALL questions

Each answer should not exceed 200 words or one page

11.a. Describe the principle, experimental techniques and applications of paper chromatography.

(Or)

11.b. What is the use of following in phytochemistry?

(i) Distillation and reduced pressure (ii) Fractional distillation (iii) Sublimation.

12.a. Illustrate the enantiomerism and dia stereomerism in drugs with suitable examples.

(Or)

12.b. Give a short note on harmful drugs and their side effects.

13.a. What are the Correlation between physio chemical parameters and biological activity ?

(Or)

13.b. Discuss about structure activity relationship.

14.a. Illustrate the broad classification of cardiovascular drugs. Explain the mechanism of action of Cardiacglycocides.

(Or)

14.b. What are antibiotics? Give examples.

15.a. What are hypotensive agents? Give examples. Explain mode of action.

(Or)

15.b. What do you mean by anti – arrythmic agents? Give examples. Mention their uses.

Part C **5 x 7 = 35**

Answer ALL questions

Each answer should not exceed 600 words or three pages

16.a. What do you mean by melting and freezing point? What is the effect of impurities on m.p? How can you determine the b.p of a chemical substance? (Or)

16.b. Describe the following:

(i) preliminary methods of identification of extracts. (4)

(ii) Experimental techniques of TLC (3)

17.a. Discuss the specific role of absorption distribution, excretion and biotransformation to enable a drug reach the active site. (Or)

17. b. Explain the various kinds of forces involved in Drug.

18.a. Explain the applications of Hammet equation and Taft equation.

(Or)

b. Write a short note on (i) potency (ii) Isosters and Bioisosters (iii)Lipophilicity effects.

19.a. Describe the mode of action and structural features of chloramphenicol and penicillin.

(Or)

19.b. What are antifungal antibiotics? Give examples. Explain their mode of action.

20.a. What are antimalarials? Give examples Explain their mechanism of action.

(Or)

20.b. Write short notes on (i) Antitubercular drugs and (ii) Antihistamines.