

CCE-554

Drugs and Pharmaceuticals

M.Sc. CHEMISTRY(MSCCH - 12/13/16/17)

Second Year, Examination-2019

Time: 3 Hours

Max. Marks :80

Note: This paper is of eighty (80) marks containing three (03) sections A, B and C. attempt the questions contained in these sections according to the detailed instructions given therein.

Section - A

(Large answer type questions)

Note: Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer two (02) questions only.

- 1 What is SAR? Give the advantages of SAR. Explain SAR of Sulphonamides. 19
- 2 (a) Discuss systematic action of drugs. 10
(b) Discuss concept of drug receptors. 09
- 3 (a) Discuss the salient features of the prodrug approach. Enumerate the fundamental concepts of prodrug with suitable examples. 10
(b) Give mechanism of action for the Anticonvulsants by ion channels. 09
- 4 (a) Discuss the mode of action of antipyretic by citing the examples of some typical drugs which you have studied. 07
(b) What do you understand by reversible Enzyme Inhibitors? Discuss the integrity of reversible inhibition. 06

(c) Discuss pathways of Drug metabolism. 06

Section -B

(Short answer type questions)

Note: Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer four (04) questions only.

1. Give a brief account on the importance of Drug Discovery via Enzyme Inhibition with a few suitable examples.
2. Write short notes on the following : 4 each
 - (a) Combination Chemotherapy
 - (b) Channel receptor
3. Give the structure, chemical name and others names of the four naturally occurring penicillins. 08
4. (a) Give a brief account of the mode of action of antimalarials 04
(b) Discuss HIV drug under the spotlight 04
5. (a) Give the synthesis of captopril 04
(b) Write a short note on Receptor-ligand complexes 04
6. (a) What are the main cardinal requirements of a substance to be called an “antibiotic”? 04
(b) Discuss systematic action of drugs. 04
7. Give a comprehensive account of the “Bile Acids’ How ar they isolated from the natural bile? Support your answer with the structure of known bile acids. 08

8. (a) Discuss pharmacokinetics, pharmacodynamic and mode of action of antineoplastic agents 04
(b) Discuss the various factors governing drug-design 04

Section - C

(Short answer type questions)

Note: Section 'B' contains ten (10) objective type questions of one (01) mark each. All questions of this section are compulsory.

Choose/tick the correct option:

1. Aspirin is:
(a) Barbituric acid (b) Seconal
(c) Chloroxylenol (d) Acetyl Salicylic acid
2. Sulphonamides act as:
(a) Hypnotics (b) Antidepressants
(c) Antimicrobials (d) Antiseptics
3. Vitamin C is:
(a) Citric acid (b) Lactic acid
(d) Paracetamol (d) Ascorbic acid
4. Which of the following statement is true:
(a) Drugs and Drug targets generally have similar molecular weights.
(b) Drugs are generally smaller than drug targets
(c) Drugs are generally larger than drug targets
(d) There is no general rule regarding the relative size of drugs and their targets
5. The blood cancer is known as:
(a) Haemolysis (b) Leukamia
(c) Haemophilia (d) Thrombosis

6. Pharmacokinetics is:
- (a) The study of biological and therapeutic effects of drugs.
 - (b) The study of absorption, distribution, metabolism and excretion of drugs.
 - (c) The study of mechanism of drug action.
 - (d) The study of methods of new drug development.
7. AIDS can be transmitted by
- (a) Blood Transfusion (b) Courtship
 - (c) Handshake (d) All of the above
8. Which of the following pairs of diseases is caused by virus?
- (a) Rabies, Mumps (b) AIDS, Syphilis
 - (c) Typhoid, Tetanus (d) Cholera, Tuberculosis
9. Who makes the active components of medicine.
- (a) Pharmacists (b) Chemists
 - (c) Doctors (d) Pharmacologists
10. Paracetamol is used as:
- (a) Antipyretic (b) Analgesics
 - (c) Antiseptics (d) Antibiotics
