

JAMIA HAMDARD
Department of Medical Elementology & Toxicology
School of Chemical and Life Sciences

Course Name: BSc Toxicology, Semester-I End term Examination (2022-23)

Paper Name: BASIC PRINCIPLES OF PHARMACOLOGY Paper Code: BTX CC08
Time: 3h Maximum Marks: 75

Note: This paper has 3 section A, B and C, Attempt all the three sections.

SECTION A

Very Short Type Questions

[25]

Q. No.	Question
1.	Who is the founder of modern pharmacology?
2.	The science which deals with how drugs produce their effects on the body, and what the body does to the drugs we take is known as.....
3.	Quinolones is an example of (microbial/synthetic/semisynthetic) of drug.
4.	A chemical compound that affects human metabolism and provides cure from diseases is called
5.	According to Fick's first law of diffusion, drug molecules always diffuse from the site of (higher/lower) concentration to the site of (higher/lower) concentration until equilibrium is attained.
6.	The amount of drug in the body is directly proportional to the concentration of the drug in plasma. True/false
7.	Write Henderson-Hasselbalch equation.
8.	If drug has pKa value of 3 then at pH value of 3 what would be the degree of ionization of the drug?
9.	The apparent space a drug appears to distribute in the body is known as
10.	Write formulae of Volume of distribution.
11.	1/Fraction lost in one dosing interval =
12.	Who makes the active components of medicines? (Medicinal Chemist/Pharmacologist. Choose one
13.	Write the name of a drug which is obtained from human source.
15.	In drug-protein binding which interactions play important role? Name only two interactions.
16.	What is the p in pH and pKa?
18.	Polar molecules are most likely to be hydrophobic. True or false?
19.	Bioavailability is used to describe the fraction of the dose of drug administered that is present within the body and facilitates the desired physiological effects. True/ False
20.	What is systemic clearance?
21.	An inactive drug that is transformed in the body to an active drug is known as
22.	A toxic effect which endangers life by markedly affecting vital functions is called

	poisoning. True/False
23	Repeated self-administration of morphine to derive euphoria is called drug addiction/drug abuse
24	What is analgesic?
25	Amonxicilin is a semisynthetic molecule of ampicillin. True / false

SECTION B

Long type Question (answer any two)

[25]

Q. No.	Question
1.	a. What do you understand by synthetic and semisynthetic drugs. Explain them with examples. b. Write a short note on plant and animal sources of drugs.
2.	a. Explain drug permeation in detail b. What do you understand by drug resistance? Explain in details
3.	a. The pK_a value of aspirin, which is a weak acid, is about 3.5. What are the ratios of ionized and unionized forms of the drug in the stomach (pH 2) and in the plasma (pH 7.4)? b. Describe Fick's law of diffusion in details.
4.	Write short note on any two a. Volume of distribution b. Betal blockers c. Antibiotic d. Half-life of drug.

SECTION C

Short-type Questions. (Attempt any five questions)

[25]

Q. No.	Question
1.	What is recombinant source of drugs? Explain in short
2.	Discuss microbial source of drugs in short
3.	Explain agonist and antagonist with suitable diagram.
4.	What is the equation for clearance? What will be the elimination rate if the clearance is 130ml/min and drug concentration is 0.8 g/ml?
5.	What will be volume of distribution (V_d) of a drug which half-life ($t_{1/2}$) and clearance (CL) are 11 hour and 9 L/h/70Kg, respectively.
6.	What do you understand by Bioavailability? Describe in short b. If the clearance of a drug remains constant, doubling the dose rate will increase the steady-state plasma drug concentration by a factor of.....
7.	Write a short note one physical nature of drugs. Explain why drug size should not be less than 100 Dalton or more than 1000 Dalton.
8.	What do you understand by hydrogen bond and hydrophobic interaction? Explain in short.

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