Enrollment No._____

NAVRACHANA UNIVERSITY
a UGC recognized University

School: School of Science
Program: B. Sc. in Chemistry
Year: 3rd **Semester:** 5th
Examination: End Semester Examination
Examination year: December - 2022

Course Code: SE302 **Course Name:** MEDICINAL CHEMISTRY-I
Date: 08/12/2022
Time: 2:30 to 4:30 pm

Total Marks: 40
Total Pages: 2

Instructions:

- *Write each answer on a new page.*
- *Use of a calculator is not required.*
- ** COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping*

Q. No.	Details	Marks	COs*	BTL#
Q.1	Fill in the blanks (Write complete statements in answer book) 1. 'Concept of Ring Equivalents' was suggested by ..... 2. Acidic drug binds to ..... present in blood. 3. An agent that activates a receptor to produce an effect is known as ..... 4. Extra substances added to drug to form tablets are called as ..... 5. Amount of drug available in the body for action is known as ..... 6. Replacement or modification of a functional group with other groups having similar properties is known as ..... replacement.	6	CO1, CO2, CO3	BT1, BT2, BT3
Q.2	Answer the following a) Explain concept of pro-drug with suitable diagram and its advantages. b) Explain factors affecting absorption of drug. c) Explain why drugs show different effects on different people.	9	CO1, CO2	BT1, BT2, BT3
Q.3	Explain the following in detail **(any one)** (a) Explain various modes of administration of drug to a body. (b) Explain various modes of drug and receptor interactions with suitable diagrams.	5	CO1, CO2, CO3	BT1, BT2, BT3
Q.4	Fill in the blanks (Write complete statements in answer book) 1. The active group in β-lactam is ..... 2. The R group in Amoxicillin is ..... 3. Full form of NAG is	6	CO2, CO3	BT1, BT2, BT3

4. Penicillin G is less active against .....

5. Streptomycin is more active at ..... pH.

6. In chloramphenicol, the replacement of _____ functional group destroys the antibacterial activity of drug.

Q.5 Answer the following

a)	Draw the structure of Penicillin and discuss their cleavages with diagram and also state the products formed when it is hydrolyzed with dilute acids.	9	CO3 CO4 BT1, BT2, BT3
b)	Discuss in detail the bacterial cell wall synthesis.		
c)	Explain in brief the chemistry of tetracyclines and its pharmacokinetics.		

Q.6 Explain the following in detail **(any one)**

(a)	Discuss Streptomycin in detail.	5	CO2, CO3, CO4 BT1, BT2, BT3
(b)	Explain in brief Sulbactam and Avibactam.		

**********End of Question Paper**********