


Name:	
Enrolment No:	

UPES

End Semester Examination, May 2024

Course: Medicinal Chemistry-I

Semester: VI

Program: B. Pharm

Duration: 03 Hours

Course Code: BP402T

Max. Marks: 75

Instructions: No additional material like graph paper, log table, *etc* is allowed for this examination.

SECTION A

(20 Q x 1 M = 20 Marks)

S. No.	Attempt all questions from section A.	Marks	COs
Q 1	Define Bioisoster with an example.	1	CO1
Q 2	Carbachol differs from acetylcholine by..... a) Ester b) Amide c) Chloro group d) Hydroxyl group	1	CO1
Q 3	Generally, drugs are absorbed in which form? a) In ionized form b) In unionized form c) In both of above form d) In none of above form	1	CO2
Q 4is the NSAIDs drug, which anthranilic acid derivative. a) Mefenamic acid b) Ibuprofen c) Piroxicam d) Zomepirac	1	CO2
Q 5	Choose the basic nucleus present in the sympathomimetic agents. a) Catechol nucleus b) Benzyl nucleus c) Naphthol d) Indole	1	CO2
Q 6	Draw the structure of Ibuprofen.	1	CO3
Q 7	Ultra-short-acting Barbiturates. a) Phenobarbitone b) Butobarbitone c) Pentobarbitone d) Thiopentone	1	CO3
Q 8	Enlist Phase-I reactions.	1	CO3
Q 9	The most significant protein involved in binding with drug is..... a) Albumin b) Glycoprotein c) Lipoprotein d) Globulin	1	CO3
Q 10	Replacement of oxygen at C-2 position of barbituric acid by a sulfur atom a) Has no change in the activity b) Increases the activity c) Decreases the activity d) Show anxiolytic activity	1	CO3

Q 11	Write the structure of Phenylephrine.	1	CO1
Q 12	Write the structure of carbachol.	1	CO1
Q 13	Draw the structure of Aspirin.	1	CO1
Q 14	Which type of ring system found in Diazepam?	1	CO1
Q 15	Propranolol is prepared by condensing..... a) α -naphthol and epichlorohydrin b) α -naphthol and chloropropanol c) Phenol and epichlorohydrin d) Chloro naphthol and propanol	1	CO4
Q 16	Which of the following is precursor of adrenaline synthesis.....? a) Phenylalanine b) Tyrosine c) Tryptophan d) None of the above	1	CO5
Q 17	Barbituric acid is prepared by the condensation of..... a) Malonic acid and urea b) Diethylmalonate and urea c) Malonic acid with methyl urea d) diethylmalonate with methyl urea	1	CO5
Q 18	Introduction of methyl group at alpha (α) position of acetylcholine forms acetyl- α -methyl choline which has more selectivity towards..... a) Nicotinic receptor b) Muscarinic receptor c) Both d) None of the above	1	CO5
Q 19	Dopamine is biosynthesized from..... a) L-Alanine b) L-Tyrosine c) L-Phenylalanine d) L-DOPA	1	CO2
Q 20	Choose the basic nucleus present in the Diazepam. a) Catechol nucleus b) Benzyl nucleus c) Benzodiazepine nucleus d) Tyrosine nucleus	1	CO2
SECTION B (20 Marks) (2 Q x 10 M = 20 Marks)			
	Attempt any two questions from section B.	Marks	
Q 1	Classify cholinergic receptors. Explain the catabolism of acetyl choline and the SAR of direct acting para-sympathomimetic agent.	(2+8)	CO2
Q 2	Give the biosynthesis, metabolism and classification of nor-adrenaline. Write the SAR of adrenergic agents.	(6+4)	CO3
Q 3	Define sedative and hypnotics. Classify them and explain the SAR of barbiturates.	(2+8)	CO4
SECTION-C (35 Marks) (7 Q x 5 M = 35 Marks)			
	Attempt any seven questions from section C.	Marks	
Q 1	Discuss SAR and Classification of Morphine Analogs.	5	CO1

Q 2	Explain the catabolism of acetyl choline and explain the SAR of direct acting parasympathomimetic agent.	5	CO2
Q 3	Classify general anesthetics with examples. Outline the synthesis of Ketamine.	(3+2)	CO3
Q 4	What are hydantoins? Write the chemistry of hydantoins.	(2+3)	CO4
Q 5	Write the biosynthesis of acetylcholine.	5	CO4
Q 6	Give an account on inhalation anesthetics.	5	CO4
Q 7	Discuss in detail SAR of Benzodiazepines.	5	CO4
Q 8	Discuss in detail SAR of Benzodiazepines.	5	CO5
Q 9	Give an account on reversible and irreversible Cholinesterase inhibitors.	5	CO5