

Roll No _____

**Re-appear EXAMINATION
Dec-2024**



Course Code: BP404T

Course Name: Pharmacology-I

Programme Name: B. Pharmacy

Sem: 4th

Time: 3 Hours

Maximum Marks: 75

Instructions: The question paper consists of 32 questions divided into three-part A, B and C. Attempt all questions from section-A comprises 20 MCQs, Any two questions out of three from section-B and Any seven questions out of Nine from section-C

Section-A (20 X 1 = 20 Marks)

1	Which receptor classification includes receptors that are directly linked to ion channels? A) G-protein-coupled receptors B) Transmembrane enzyme-linked receptors C) Ion channel receptors D) Transmembrane JAK-STAT binding receptors	CO-2	L-3
2	Pharmacokinetic drug interactions primarily involve alterations in: A) Drug absorption, distribution, metabolism, or excretion B) Drug-receptor interactions C) Signal transduction mechanisms D) Dose-response relationship	CO-2	L-1
3	What is the primary objective of Phase III clinical trials? A) To assess drug safety and efficacy in a larger population B) To compare the new drug with existing standard treatments or placebo C) To monitor adverse drug reactions in real-world settings D) To gather long-term safety data post-approval	CO-2	L-4
4	What are adverse drug reactions (ADRs) primarily concerned with? A) Drug efficacy B) Drug safety C) Drug metabolism D) Drug distribution	CO-2	L-1
5	Which of the following best describes tachyphylaxis? A) Gradual decrease in response to a drug after repeated doses B) Increased sensitivity to a drug after repeated doses C) Rapid development of tolerance to a drug D) Unpredictable and unrelated reaction to a drug	CO-1	L-3
6	What is the primary route of drug elimination from the body? A) Absorption B) Distribution C) Metabolism D) Excretion	CO-1	L-1
7	Differentiate between agonists and antagonists. A) Agonists increase drug metabolism, while antagonists decrease it. B) Agonists activate receptors, while antagonists block receptor activation. C) Agonists block receptor activation, while antagonists activate receptors. D) Agonists and antagonists have similar mechanisms of action.	CO-1	L-2
8	What does pharmacokinetics primarily study? A) Drug action and effects B) Drug absorption, distribution, metabolism, and excretion C) Drug synthesis D) Drug marketing	CO-1	L-1
9	Which division of the autonomic nervous system (ANS) is responsible for "fight or flight" responses? A) Sympathetic nervous system B) Parasympathetic nervous system C) Enteric nervous system D) Central nervous system	CO-3	L-1
10	Which of the following neurotransmitters is considered a catecholamine? A) Acetylcholine B) Serotonin C) Dopamine D) Glutamate	CO-3	L-3
11	Knowledge Level: Which class of drugs would be used to dilate the pupils for an eye examination?	CO-3	L-1

	A) Parasympathomimetics C) Sympathomimetics	B) Parasympatholytics D) Sympatholytics		
12	Which class of drugs is commonly used to treat myasthenia gravis by inhibiting the breakdown of acetylcholine? A) Anticholinergics C) Beta-blockers		CO-3	L-3
13	What is the primary role of serotonin in the CNS? A) Regulation of mood, sleep, and appetite C) Promotion of alertness and arousal		CO-4	L-2
14	Which of the following is a common mechanism of action for general anesthetics? A) Activation of GABA receptors C) Blockade of sodium channels		CO-4	L-3
15	Which of the following is an example of a pre-anesthetic medication commonly used to reduce anxiety and induce sedation before anesthesia? A) Propofol B) Midazolam		CO-4	L-4
16	What is the primary mechanism of action of disulfiram in the treatment of alcohol dependence? A) Enhancement of GABAergic transmission C) Activation of opioid receptors		CO-4	L-4
17	Which class of drugs is primarily used to treat symptoms of schizophrenia and other psychotic disorders? A) Antidepressants B) Anti-anxiety agents		CO-5	L-1
18	How do antidepressants generally exert their therapeutic effects? A) By blocking dopamine receptors in the brain B) By enhancing the activity of serotonin and/or norepinephrine C) By acting as agonists at GABA receptors		CO-5	L-2
19	What is the primary mechanism of action of acetylcholinesterase inhibitors used in the treatment of Alzheimer's disease? A) Blocking dopamine receptors C) Enhancing the release of serotonin		CO-5	L-3
20	Which of the following medications is classified as an opioid antagonist and is used to reverse opioid overdose? A) Morphine B) Fentanyl		CO-5	L-4

Section B (2 X 10 = 20 Marks)

1	Discuss the pathophysiology of glaucoma, the role of neurotransmitter imbalances and/or neuromuscular dysfunction. Discuss the mechanisms of action of drugs used to treat this condition.	CO-3	L-4
2	Differentiate between G-protein-coupled receptors, ion channel receptors and transmembrane enzyme-linked receptors in terms of their structure and mechanism of action. Provide examples of drugs that target each type of receptor and describe their therapeutic uses.	CO-1	L-3
3	Discuss the clinical efficacy and safety profile of disulfiram in the management of alcohol dependence. Discuss the potential risks and benefits of disulfiram therapy, including the importance of patient education and monitoring.	CO-4	L-5

Section C (7 X 5 = 35 Marks)

1	What do you mean by MAO? Explain the mechanism of MAO inhibition by different drugs with names and pathological states.	CO-3	L-4
2	Analyze the mechanisms of action of neuromuscular blocking agents and skeletal muscle relaxants. Explain how these drugs interfere with neuromuscular transmission and produce muscle relaxation.	CO-4	L-5
3	What is the importance of GABA as the primary inhibitory neurotransmitter in the CNS and its role in regulating neuronal excitability? Discuss any one pathological state where this neurotransmitter play important role.	CO-4	L-2
4	Explain different approaches to drug discovery, including target-based drug discovery,	CO-	L-

	phenotypic screening, and repurposing of existing drugs. Discuss the advantages and limitations of each approach.	2	5
5	Define opioid analgesics and antagonists and describe their mechanisms of action. Explain how opioids modulate pain perception through interactions with opioid receptors in the central nervous system.	CO-5	L-1
6	Define epilepsy and explain its underlying pathophysiology, including the role of abnormal neuronal excitability and synchronization.	CO-4	L-1
7	Classify neurotransmitters and explain their pharmacological role in the human body.	CO-3	L-4
8	Explain the nature of drugs, distinguishing between synthetic and natural drugs. Discuss the sources of natural drugs and provide examples. Evaluate the advantages and disadvantages of synthetic drugs compared to natural drugs.	CO-1	L-2
9	Describe the routes of drug administration and provide examples of drugs administered through different routes. Explain how addiction, tolerance, and dependence develop in response to prolonged drug exposure. Provide examples of drugs associated with each phenomenon.	CO-5	L-3