JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester IV) Examination May 2025

Programme: B. Pharm
Course: Pharmacology I **Full Marks: 75**
Course Code: BP404T **Time: 3 Hrs.**
Enrolment no. _____

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
	Section I			
1	**Objective Type Questions**			
	i. The route of drug administration that involves the drug being injected directly into the bloodstream is: a) Oral b) Intravenous c) Subcutaneous d) Topical ii.The phenomenon where a drug's effect diminishes after repeated administration due to receptor desensitization is called: a) Tachyphylaxis b) Addiction c) Tolerance d) Idiosyncrasy iii.The process by which the body eliminates drugs is called: a) Excretion b) Absorption c) Distribution d) Metabolism iv.The process of drug absorption primarily occurs through the: a) Blood-brain barrier b) Cell membranes c) Kidneys d) Lungs v. Receptors that regulate gene transcription are known as: a) Nuclear receptors b) Ion channel receptors c) G-protein-coupled receptors d) Tyrosine kinase receptors	CO1	Remember	**1 x 20 = 20**
	vi.The drug-receptor interaction that leads to a change in cell function is called: a) Signal transduction b) Receptor regulation c) Membrane transport d) Agonist binding vii.The neurotransmitter released by the parasympathetic nervous system is: a) Norepinephrine b) Acetylcholine c) Serotonin d) Dopamine viii.Which drug is classified as a sympatholytic? a) Epinephrine b) Propranolol c) Albuterol d) Prazosin ix.Which of the following is an example of a local anaesthetic? a) Morphine b) Propofol c) Lidocaine d) Diazepam x. Which of the following drugs is used to treat glaucoma? a) Propranolol b) Pilocarpine c) Diazepam d) Albuterol			
	xi. Which neurotransmitter is most commonly associated with anxiety? a) Glutamate b) GABA c) Dopamine d) Acetylcholine xii.Which drug is commonly used as a pre-anaesthetic? a) Diazepam b) Ketamine c) Atropine d) Lorazepam xiii.Which drug class is commonly used to treat epilepsy? a) Antidepressants b) Anti-epileptics c) Opioid analgesics d) Antihistamines xiv.Opioid analgesics primarily work by binding to: a) GABA receptors b) Dopamine receptors c) Opioid receptors d) Serotonin receptors xv. Selective serotonin reuptake inhibitors (SSRIs) are primarily used to treat: a) Epilepsy b) Depression c) Anxiety disorders d) Schizophrenia			
	xvi.Which drug is used to treat Parkinson's disease by increasing dopamine levels? a) Levodopa b) Haloperidol c) Fluoxetine d) Risperidone xvii.Which class of drugs is used to manage generalized anxiety disorder? a) Antipsychotics b) Antidepressants c) Anxiolytics d) Antiepileptics xviii.Which drug is used to reverse opioid overdose? a) Naloxone b) Morphine c) Buprenorphine d) Ketamine xix.Hallucinogens primarily affect which neurotransmitter system? a) Serotonin b) GABA c) Dopamine d) Norepinephrine xx.Which of the following is an adverse drug reaction that involves an exaggerated response to a drug? a) Drug addiction b) Drug toxicity c) Drug dependence d) Drug tolerance			
	Section II			
2. Short Answer type questions.				

a	What are agonists? Classify different types of agonists with examples.	CO1	Remember	
b	With the help of diagram highlight the mechanism involved in the transmembrane receptor activities.	CO2	Understand	
c	Classify routes of drug administration and its types with suitable example.	CO1	Understand	
d	Write in brief about the pharmacological actions and clinical indications of adrenergic blockers.	CO3	Understand	
e	Classify anti-epileptics with examples.	CO4	Remember	
f	Name two typical antipsychotics and explain their MOA.	CO5	Understand	**7 x 5 = 35**
	or			
	What is the mechanism of action of benzodiazepines in the treatment of anxiety disorders.	CO5	Understand	
g	Explain CAMP Pathway with neat and labelled diagram.	CO2	Understand	
	or			
	Explain a type of enzyme linked receptor pathway with neat and labelled diagram.	CO2	Understand	
Section III				
Long Answer Type questions				
3	Explain the steps of neurohumoral transmission mechanism with appropriate diagram in details.	CO3	Evaluate	
	or			
	Compare between general anesthetic and local anesthetic. Write the MOA of general anesthesia and its common complications?	CO3	Analyze	**2 x 10 = 20**
4	Explain generalized anxiety disorder (GAD) and discuss the treatment options among the class of benzodiazepines with their detail pharmacology.	CO5	Evaluate	
	or			
	Discuss the potential side effects and contraindications of tricyclic antidepressants (TCAs) and how they differ from SSRIs.	CO5	Analyze	

Course Outcomes (CO):

CO1: Define the various terminologies, Route of administration and sources of drugs as well as pharmacokinetic process.

CO2: Discuss the principle and mechanisms of different drugs and receptors interaction including signaling mechanism.

CO3: Describe the pharmacology of drugs acting on peripheral nervous system.

CO4: Employ drugs used in management of pain.

CO5: Describe the pharmacology of drugs acting on central nervous system.