

Roll Number \_\_\_\_\_

(Total Number of Questions 13)

(Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	4 <sup>th</sup>
Subject	Pharmacology-I
Subject Code	BP404T
Paper ID	75846
Time	3Hours
Maximum Marks	75

**Instructions to Candidates:** No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.

\*Section A consists of Ten parts of 2 marks each (Objective Type); Attempt **ALL**.

\*\*Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO**.

\*\*\*Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.

### Section A

(10 X 2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	What are Nuclear receptors? Give examples of drugs binding to these receptors.
ii.	Define Mydriatics and give two examples.
iii.	Write the mechanism of Nicotine.
iv.	Give the example of typical antipsychotics.
v.	Define plasma half-life of drug and give its significance.
vi.	Explain Child dose calculation.
vii.	Explain Tachyphylaxis.
viii.	Enlist Cholinergic receptors.
ix.	Write the mechanism of Phenytoin.
x.	Define enzyme induction with example.

### Section B

(2 X 10 = 20)

2.	Define Pharmacology. Write a note on Pharmacokinetics and Pharmacodynamics.
3.	Write the classification of Cholinomimetics. Explain the pharmacology of Acetylcholine.
4.	Classify sedatives and hypnotics. Explain the pharmacology of Diazepam.

### Section C

(7 X 5 = 35)

5.	Write a note on different types of receptors.
6.	Classify anti-depressants. Explain the pharmacology of tricyclic antidepressants.
7.	Explain the phase of general anaesthesia.
8.	Outline pharmacotherapy of glaucoma.
9.	Write a note on monoaminoxidase (MAO) inhibitors.
10.	What is zero order and first order elimination kinetics.
11.	Classify Anxiolytics. Explain about Phenobarbitone.
12.	Classify peripherally acting skeletal muscle relaxants. Explain the pharmacology of D-tubocuraine.
13.	Outline organization and function of ANS.

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27/6/2022 M

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**Section A (10 X 2 = 20)**

1. Give very short answers to the followings (2 marks each):

i.	Write the uses of Benzodiazepines.
ii.	Explain concept of Therapeutic Index.
iii.	Give examples of pharmacokinetic drug-drug interactions.
iv.	Define Pharmacovigilance.
v.	What are enzyme induction and inhibition?
vi.	Write down MOA of Disulfiram.
vii.	What are drug dependence and drug abuse?
viii.	What are Nootropics?
ix.	What is the Myasthenia Gravis?
x.	Explain the function of serotonin.

**Section B (2 X 10 = 20)**

2.	Define Drug discovery and clinical evaluation of new drugs. What are the different drug discovery phases?
3.	Explain Neurohumoral transmission in the CNS.
4.	Write a detail note on different type of receptors.

**Section C (7 X 5 = 35)**

5.	Write a short note on local anesthetic agents.
6.	Define centrally acting muscle relaxants.
7.	Explain the pharmacology of Glaucoma.
8.	Describe the opioid analgesics and explain pharmacology of Morphine.
9.	Write a note on Clinical Trial and its Significance.
10.	Describe the Pharmacology of Phenytoin.
11.	Discuss about Pharmacology of Cholinomimetic drugs?
12.	Define Parkinson. Classify the Anti-parkinson drug
13.	Write a short note on sympatholytics.

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200123

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**Section- A (10X2=20)**

1.	Give very short answers to the followings:
i.	Define the following with examples: (a) Essential drugs (b) Drug tolerance
ii.	Define the following: (a) Idiosyncrasy (b) loading dose
iii.	Write mechanism of action of levodopa and sodium valproate.
iv.	Justify the combination of adrenaline with local anesthetic agents.
v.	Classify anti-cholinesterase drugs with examples.
vi.	Write the uses of benzodiazepines.
vii.	Write the functions of GABA and dopamine in CNS.
viii.	What is pharmacovigilance?
ix.	Give examples of pharmacokinetic drug-drug interactions.
x.	Write mechanism of action of disulfiram.

**Section- B (2X10=20)**

2.	Describe in detail G-Protein coupled receptors and receptors regulating transcription factors with examples.
3.	Classify anti-psychotics and write the pharmacology of phenothiazine. Differentiate between typical and atypical anti-psychotics.
4.	Write pharmacotherapy of glaucoma and myasthenia gravis.

**Section- C (7X5=35)**

5.	Discuss preclinical and clinical phases of drug discovery process.
6.	Write short note on beta blockers.
7.	Classify opioid analgesics and write the pharmacology of pure opioid antagonists.
8.	What are the factors affecting drug absorption from GIT?
9.	Write pharmacological actions of serotonin and uses of serotonin antagonists.
10.	Write short note on pre-anaesthetic medication.
11.	Write short note on Phase I and II biotransformation reactions.
12.	Describe the pharmacology of acetylcholine.
13.	Classify anti-depressants. Write a note on SSRIs. .

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14 JUN 2023

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**Section- A**

**(10 X2 = 20)**

1.	Give very short answers to the followings
i.	Explain the functions of Dopamine.
ii.	Explain concept of therapeutic index.
iii.	What is the therapeutic effect of drug on the body?
iv.	What is impulse conduction?
v.	What are enzyme induction and inhibition?
vi.	Write down MOA of Atropine.
vii.	What are drug dependence and drug addiction?
viii.	What are Nootropics?
ix.	What is the Myasthenia gravis?
x.	Classify any two anti-anxiety drugs.

**Section- B**

**(2X10 = 20)**

2.	Define anti-psychotic agents & classify. Explain the pharmacology of any two agents.
3.	Define pharmacology and explain pharmacokinetic in details.
4.	Write a detail note on different types of receptors.

**Section- C**

**(7 X5 = 35)**

5.	Write a short note on anti-epileptic drugs.
6.	Define anaesthetics agents and discuss the different stages of general anaesthetic agents.
7.	Give the pharmacology outline of drug used in Glaucoma.
8.	Describe the opioid analgesics and explain pharmacology of Morphine.
9.	Write a note on clinical trial and its significance.
10.	Describe the pharmacology of Phenytoin.
11.	Discuss about pharmacology of Cholinomimetic drugs?
12.	Define Parkinson. Classify the anti-parkinson drug
13.	Write a short note on various route of administration.

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(M)

260523

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*\*\*\*Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.*

**Section- A**

**(10 X2 = 20)**

1.	Give very short answers to the followings:
i.	Define the following with examples: a. Inverse agonist b. Competitive antagonism
ii.	Define the following: a. Enzyme induction b. Co-transmission
iii.	Justify the use of ethyl alcohol in methyl alcohol poisoning.
iv.	Write the use of Pralidoxime and Flumazenil.
v.	Write mechanism of action of Amphetamine and Clozapine.
vi.	What are the adverse effects of Phenytoin?
vii.	Explain giving examples therapeutic index and dose response relationship.
viii.	What are the functions of Serotonin and Glycine in CNS?
ix.	Give examples of drug and food interactions.
x.	What is Dale's vasomotor reversal phenomenon?

**Section- B**

**(2X10 = 20)**

2.	Classify anti-depressants. Write the pharmacology of tricyclic anti-depressants and Mono Amino Oxidase (MAO) inhibitors.
3.	Classify general anaesthetics. Explain in detail mechanism of action of general anaesthetics and stages of general anaesthesia.
4.	Compare and contrast Neostigmine and Physostigmine. What are the uses of anticholinergic drugs?

**Section- C**

**(7 X5 = 35)**

5.	Write short note on plasma protein binding.
6.	Write advantages and disadvantages of oral and parenteral routes of administration.
7.	Explain four phases of clinical trial.
8.	Classify sympathomimetic agents. Write the pharmacological actions, adverse effects and uses of any one class.
9.	Classify anti-epileptic agents. Write pharmacology of drugs used in grand mal epilepsy.
10.	Write the pharmacology of lithium.
11.	Classify anti-parkinsonian drugs. Write short note on COMT inhibitors.
12.	Describe different types of ADR with suitable examples.
13.	Write about synthesis, storage, release and metabolism of Adrenaline and drugs affecting each of these steps.

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231123  
(Morning)

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\*\*\*Section C consists of nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.

**Section A**

(10 X 2 = 20)

1.	Give very short answers to the followings:
i.	Enlist two classes of anti-Parkinson's drugs.
ii.	Explain concept of Therapeutic Index.
iii.	What is the therapeutic effect of drug on the body?
iv.	Define pharmacovigilance.
v.	What are enzyme induction and inhibition?
vi.	Write down mode of action of disulfiram.
vii.	What are drug dependence and drug abuse?
viii.	What are Nootropics write with examples?
ix.	Write two drugs used in Myasthenia Gravis.
x.	Write clinical indication for SSRIs.

**Section B**

(2 X 10 = 20)

2.	Enumerate drug discovery and clinical evaluation of new drugs. What are the different drug discovery phases?
3.	Explain neurohumoral transmission in the CNS with reference of Ach.
4.	Write a detail note on different type of receptors.

**Section C**

(7 X 5 = 35)

5.	Write a short note on local anesthetic agents.
6.	Discuss centrally acting muscle relaxants and discuss its pharmacology.
7.	Explain the pharmacology of drugs used in Glaucoma.
8.	Describe the opioid analgesics and explain pharmacology of Morphine.
9.	Write a note on pharmacokinetic.
10.	Describe the Pharmacology of Phenytoin.
11.	Discuss about Pharmacology of Cholinomimetic drugs?
12.	Classify the Anti-alzheimer's drugs and explain the mode of action of donepezil.
13.	Write a short note on sympatholytics.

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070624

(Morning)

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Semester	4 <sup>th</sup>
Subject	Pharmacology-I
Subject Code	BP404T
Paper ID	75846
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\*\*\*Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.

**Section- A (10X2=20)**

1.	Give very short answers to the followings:
i.	Name the receptor that gives fast action.
ii.	Define tachyphylaxis.
iii.	What is myasthenia gravis? Give its pathophysiology.
iv.	Provide the formula for therapeutic index.
v.	Define following: a) Idiosyncrasy b) loading dose
vi.	Name the neurotransmitters that regulate mood.
vii.	What is drug dependency and drug addiction?
viii.	What is Dale's viscometer reversal phenomenon?
ix.	Write two purposes of pharmacovigilance.
x.	Give examples of drug and food interactions.

**Section- B (2X10=20)**

2.	Classify the different types of receptors. Explain in detail the nuclear receptor.
3.	Give the classification of antiepileptic drugs. Write about the pharmacology of valproic acid.
4.	Write the classification of cholinomimetics. Explain the pharmacology of acetylcholine.

**Section- C (7X5=35)**

5.	Write the outline the organization and function of the autonomic nervous system (ANS).
6.	Explain the pharmacotherapy of glaucoma.
7.	Write a note on clinical trials and their significance.
8.	Classify opioid analgesics and write about the pharmacology of morphine.
9.	What is Parkinson's disease? What are the clinical symptoms of Parkinsonism?
10.	Describe different types of adverse drug reactions (ADRs) with suitable examples.
11.	Explain the pharmacokinetics.
12.	Write a short note on local anesthetic agents.
13.	Provide an account of sympatholytics.

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(Marking)

27 11 24

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Subject	Pharmacology I
Subject Code	BP 404 T
Paper ID	75846
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\*\*\* Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.

**Section- A (10X2=20)**

1.	Give very short answers to the followings:
i.	Define the term: A) Pharmacology B) Pharmacokinetics
ii.	What are antagonists? Explain the types of antagonism.
iii.	Define the term: A) Receptor B) Pharmacodynamics
iv.	Explain the pre-clinical phase of drug discovery.
v.	What are the two main divisions of the ANS, and what are their primary functions?
vi.	Explain the mechanisms of action of parasympatholytic drugs.
vii.	Give two examples of neurotransmitters along with their function.
viii.	What are sedatives? Give at least two examples.
ix.	What is the primary mechanism of action of opioid analgesics?
x.	What are psychopharmacological agents? What diseases are they used to treat?

**Section- B (2X10=20)**

2.	Explain in detail the different routes of drug administration.
3.	Explain in detail adverse drug reactions.
4.	What are parasympathomimetics? Also, give their pharmacological actions. Explain in detail the mechanism of action and uses of anticholinesterase drugs.

**Section- C (7X5=35)**

5.	Write a short note on the principles of drug action.
6.	What is pharmacokinetics? Briefly explain membrane transport.
7.	Write a short note on drug interactions.
8.	What are GPCRs? Explain the adenylyl cyclase pathway for GPCR function.
9.	Write a short note on the different types of adrenergic receptors.
10.	What is epilepsy? Classify the different types of anti-epileptic drugs.
11.	Explain the different stages of general anesthesia.
12.	What is the role of tricyclic antidepressants in the treatment of depression?
13.	Write a short note on drug tolerance and drug dependence.

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(Morning)  
200625

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Programme	B. Pharmacy
Semester	4 <sup>th</sup>
Subject	Pharmacology-II
Subject Code	BP404T
Paper ID	75846
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Maximum Marks	75

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**\*\*Section- B** consists of three questions, each carrying 10 marks (Long Answer Type); Attempt any two.

**\*\*\*Section- C** consists of nine questions, each carrying 5 marks (Short Answer Type); Attempt any seven.

**Section- A (10X2=20)**

1.	Give very short answers to the followings:
i.	Define idiosyncrasy.
ii.	Name the different routes of drug administration.
iii.	Which type of receptor activates the JAK-STAT pathway?
iv.	Write two examples of excitatory neurotransmitters.
v.	Give two examples of parasympathomimetics.
vi.	Define myasthenia gravis.
vii.	What is glycine?
viii.	What is the nuclear receptor?
ix.	Name any two centrally acting muscle relaxants.
x.	What is drug abuse?

**Section- B (2X10=20)**

2.	What is the autonomic nervous system? Differentiate between the parasympathetic and sympathetic nervous systems in detail.
3.	Write a descriptive note on serotonin and dopamine, with suitable examples.
4.	Give the therapeutic treatments for Alzheimer's disease and elaborate on the mechanisms of action of Memantine.

**Section- C (7X5=35)**

5.	Differentiate between competitive and non-competitive agonists with suitable examples.
6.	Write briefly on the concept of tolerance with a relevant example.
7.	Illustrate the processes of enzyme induction and enzyme inhibition using appropriate examples.
8.	Write a note on the role of G-protein coupled receptors in cellular signaling.
9.	Examine the nature of drug-receptor interactions and provide suitable examples.
10.	Outline the steps involved in neurohumoral transmission within the central nervous system.
11.	Present a brief account of the GABA receptor and the actions of neurotransmitters on it.
12.	Summarize the different phases of clinical trials, highlighting their objectives and importance.
13.	Define local anesthetic agents and describe the pharmacology of any one drug.

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18 12 25  
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**Section- A (10X2=20)**

1.	Give very short answers to the followings:
i.	Explain idiosyncrasy and tachyphylaxis.
ii.	Define additive effects with examples.
iii.	Classify the serotonin receptor.
iv.	Enlist receptor theory.
v.	Write the mechanism of action of Ach.
vi.	Explain the function of GABA in the brain.
vii.	Explain therapeutic index.
viii.	Write about the functions of ANS.
ix.	What are the withdrawal symptoms of antidepressants?
x.	What are the therapeutic uses of nalorphine.

**Section- B (2X10=20)**

2.	Give the detail about various neurotransmitters with their applications in neurohumoral transmission.
3.	Write the classification of anti-epileptics with examples. Explain the pharmacology, side effects and uses of phenytoin.
4.	Write detail note on different type of receptors.

**Section- C (7X5=35)**

5.	Write short note on local anaesthetic agents.
6.	Explain pharmacology of glaucoma.
7.	Write a short note on sympatholytic.
8.	Write a note on clinical trial and its significance.
9.	Describe the opioid analgesics and explain pharmacology of morphine.
10.	Write the pharmacology of $\beta$ adrenergic antagonist.
11.	Write short notes on adverse drug reaction with suitable examples.
12.	What do you understand by metabolism? Explain its phases with example.
13.	Explain the steps involved in neurohumoral transmission of ANS.

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