

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LP 2044)

SEPTEMBER 2019

Sub. Code: 2044

**B.PHARM. DEGREE EXAMINATION
PCI Regulation – SEMESTER IV
PAPER IV – PHARMACOLOGY – I**

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define Pharmacokinetics & Pharmacodynamics. Write in detail about Parenteral routes of drug administration.
2. Classify Anti-cholinergic drugs. Write the pharmacological actions, adverse effects and therapeutic uses of Atropine.
3. Classify Anticonvulsant drugs. Discuss the mechanism of actions, adverse effects and uses of Phenytoin.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Write a note on Tolerance.
2. Brief the stages of general anaesthesia.
3. Classify benzodiazepines. Write the mechanism of action and uses of benzodiazepines.
4. Explain the pharmacology of opioid analgesics.
5. Classify skeletal muscle relaxant. Describe the actions of non-depolarizing agents.
6. Give the diagrammatic representation of Adrenergic neurohumoral transmission.
7. Write a note on SSRIs.
8. Write on the transducer mechanism in G- Protein coupled receptors.
9. Define Parkinsonism. Write briefly on Bromocriptine.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Give two examples of Animal source of drugs.
2. What is prodrug? Give two examples.
3. Define Teratogenicity and give two examples.
4. Mention two uses of local anaesthesia.
5. Define glaucoma and give two examples of anti-glaucoma drugs.
6. Disulfiram reaction.
7. Define hypnotics and give two examples.
8. Two therapeutic uses of adrenaline.
9. Name two antimanic drugs.
10. Name two hallucinogens.

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

(LQ 2044)

MARCH 2020

Sub. Code: 2044

**B.PHARM. DEGREE EXAMINATION
PCI Regulation – SEMESTER IV
PAPER IV – PHARMACOLOGY – I**

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Explain the fluid mosaic model of cell membrane. Write the mechanism of drug transportation via cell membrane.
2. Narrate the pharmacological action of sympatholytics.
3. Define and classify antidepressants. Explain the pharmacological action of Tricyclic antidepressant and SSRIs.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Pharmacology of anticholinesterases.
2. Steroid receptors.
3. Write the mechanism of action and therapeutic application of adrenergic drugs.
4. Pharmacovigilance.
5. Teratogenicity.
6. Volume of distribution.
7. Enzyme induction and inhibition.
8. Adverse drug reactions.
9. Glaucoma.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Drug allergy.
2. Cholinergic receptor.
3. Therapeutic index.
4. Define lead optimization.
5. Succinylcholine.
6. MAOIs.
7. GABA receptor.
8. First pass metabolism.
9. Post marketing surveillance.
10. Disulfiram.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0321]

MARCH 2021

Sub. Code: 2044

(SEPTEMBER 2020 EXAM SESSION)

B. PHARMACY DEGREE EXAMINATION

PCI Regulation SEMESTER – IV

PAPER IV – PHARMACOLOGY I

Q.P. Code : 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Describe the various Factors of Modifying Drug Action.
2. Classify Local Anaesthetics. Write the Therapeutic uses of Local Anaesthetics.
3. Classify Anti-epileptics. Write the Pharmacological action of any one Antiepileptic.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write about the Regulation of Receptors.
2. Write about the Signal transduction mechanism of receptors reactions.
3. Write about adverse drug.
4. Write the Pharmacokinetic Drug Interactions.
5. Write the Clinical evaluation of new Drugs.
6. Write the Organization and functions of the ANS.
7. Write the Drugs used in Myasthenia gravis.
8. Classify Antipsychotics.
9. Write the Opioid Analgesics & Antagonists.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Spare receptors.
2. Addiction.
3. Tachyphylaxis.
4. Distribution.
5. Enzyme inhibition.
6. Glycine.
7. Anti anxiety agents.
8. Nootropics.
9. Drug abuse.
10. Dependence.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0122]

**JANUARY 2022
(MARCH 2021 EXAM SESSION)**

Sub. Code: 2044

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER IV

PAPER IV – PHARMACOLOGY I

Q.P. Code : 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Describe the Nature and Sources of Drugs.
2. Classify the Parasympathomimetics and Parasympatholytics.
3. Describe the General Anaesthetics and Preanaesthetics.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Principles and Mechanisms of Drug Action.
2. Drug Receptors Interactions.
3. Ion Channel Receptor.
4. Explain Adverse Drug reactions with examples.
5. Write about the Drug Discovery.
6. Write about the Pharmacovigilance.
7. Classification and Therapeutic uses of Neuro muscular blockers.
8. Write short Notes on Disulfiram.
9. Drugs used in Parkinsons disease.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Agonists.
2. Tolerance.
3. Idiosyncrasy.
4. Membrane transport.
5. Metabolism.
6. Therapeutic index.
7. Serotonin.
8. CNS Stimulants.
9. Anti-Manics.
10. Drugs used in Alzheimer's disease.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0522]

MAY 2022

Sub. Code: 2044

(SEPTEMBER 2021 EXAM SESSION)

B. PHARMACY DEGREE EXAMINATION

PCI Regulation SEMESTER - IV

PAPER IV – PHARMACOLOGY I

Q.P. Code : 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Explain different routes of Drug Administration.
2. Classify Sympathomimetics and Sympatholytics.
3. Classify Sedatives and Hypnotics. Write the Pharmacological action of any one Sedative & Hypnotic.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Classify Receptors.
2. Write about the JAK-STAT binding receptors.
3. Write about the G-Protein Coupled Receptors.
4. Write the Combined effects of drugs with examples.
5. Write the Pharmacodynamic Drug interactions.
6. Write the different phases of Clinical Trials.
7. Write the Neurohumoral Transmission and Neurotransmitters in the ANS.
8. What is Glaucoma? Write the Drugs used in Glaucoma.
9. Write about the Antidepressants.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Antagonists.
2. Dependence.
3. Absorption.
4. Excretion.
5. Enzyme induction.
6. Glutamate.
7. Dopamine.
8. Hallucinogens.
9. Drug addiction.
10. Tolerance.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 1022]

**OCTOBER 2022
(MARCH 2022 EXAM SESSION)**

Sub. Code: 2044

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER IV

PAPER IV – PHARMACOLOGY I

Q.P. Code : 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define pharmacokinetics. Enumerate and brief on the various factors that affect the absorption of drugs from the gastro intestinal tract.
2. Define local anaesthetics and describe the mode of action. Brief on the various types of local anaesthesia.
3. Classify antiepileptic agents. Describe the mode of action, pharmacological effects, pharmacokinetic parameters, therapeutic uses and adverse effects of phenytoin.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Define an agonist. Explain the various types of agonists.
2. Define tachyphylaxis. Describe the various mechanisms that contribute to tachyphylaxis.
3. Structure and mechanism of activation of various voltage-gated ion channels.
4. Describe the various phases of clinical trials.
5. Compare the two classes of peripherally acting skeletal muscle relaxants.
6. Write a note on the various classes of drugs used to treat myasthenia gravis.
7. Describe the various components in pre-anaesthetic medication.
8. Classify sedatives according to their mode of action. Add a note on the mechanism of benzodiazepines.
9. Pharmacological strategies to treat Alzheimer's disease.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Idiosyncrasy.
2. Animal sources of drugs (any four).
3. Therapeutic index.
4. Write about the JAK – STAT binding receptor.
5. Difference between the effects of atropine and scopolamine in central nervous system.
6. Types and sub types of adrenergic receptors.
7. Adverse effects of carbamazepine.
8. Disulfiram reaction.
9. Define nootropics and give examples.
10. Define drug addiction and give examples of drugs that cause addiction.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 0323]

**MARCH 2023
(SEPTEMBER 2022 EXAM SESSION)**

Sub. Code: 2044

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER IV

PAPER IV – PHARMACOLOGY I

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define pharmacodynamics. Enumerate the various drug targets. Describe the structure and mechanism of activation of the G-protein coupled receptors.
2. Define neurohumoral transmission and neurotransmitter. Describe the various steps involved in the parasympathetic (cholinergic) neurotransmission with clear illustration.
3. Define opioids and mention the opioid receptors and opioid peptides. Describe the pharmacological effects, pharmacokinetic parameters, therapeutic uses and adverse effects of morphine.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Enumerate four examples each for various sources of drugs.
2. Write notes on enzyme induction and enzyme inhibition.
3. Preclinical evaluation of a new drug candidate.
4. Classify beta adrenoceptor antagonists. Mention the therapeutic uses of beta adrenoceptor antagonists.
5. Describe about the synthesis of glutamine neurotransmitter. Mention the various types of serotonin receptors.
6. Describe the mode of action and pharmacological actions of sodium valproate.
7. Describe the physiological effects of alcohol.
8. Classify antipsychotic agents. Describe the pharmacological effects of chlorpromazine.
9. Classify drugs used in the treatment of Parkinsonism. Enumerate the adverse effects of levodopa.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Routes of administration with 100% bioavailability.
2. Significance of plasma protein binding of drugs.
3. Significance of receptor internalisation.
4. Define drug-drug interactions. Give examples.
5. Mode of action and examples of adrenergic drugs used in benign prostatic hyperplasia.
6. Reason for using adrenaline along with local anaesthetics.
7. Classes of drugs that act on gamma amino butyric acid receptor. Give examples for each.
8. Mechanism of action and examples for centrally acting skeletal muscle relaxants.
9. Examples and advantage of mono amine oxidase B inhibitors.
10. Define hallucinogens. Give examples.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 0823]

**AUGUST 2023
(MARCH 2023 EXAM SESSION)**

Sub. Code: 2044

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER IV
PAPER IV – PHARMACOLOGY I**

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define Antipsychotics, classify them and explain the mechanism of action, adverse drug reaction and therapeutic uses of Phenothiazines.
2. Classify Anticholinesterases. Explain their mechanism and pharmacology.
3. What is biotransformation? Write the essay on various biotransformation reactions with suitable examples.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Write short note on Opioid receptors.
2. Dale's Vasomotor reversal phenomenon.
3. Why the combination of carbidopa with levo-dopa?
4. Why Neostigmine is preferred to physostigmine in myasthenia gravis?
5. Write note on Drug – Drug interaction.
6. Compare and Contrast the Competitive and Non-Competitive Antagonists.
7. Write note on Selective β_2 agonists.
8. Write the symptoms and line of treatment for Methanol Poisoning.
9. Write short note on the Factors modifying Drug action.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Name two drugs used in glaucoma.
2. Therapeutic uses of Lithium and precautions to be taken while using Li.
3. Define Spare receptors.
4. List out various Routes of Excretion of Drugs.
5. Give the side effects of haloperidol.
6. Define Idiosyncrasy with example.
7. Role of CPCSEA in pre-clinical trials.
8. Write the different stages of General anesthetics.
9. Mention two ganglion blockers and their uses.
10. Give any two specific symptoms for Atropine poisoning.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 1223]

**DECEMBER 2023
(SEPTEMBER 2023 EXAM SESSION)**

Sub. Code: 2044

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER IV
PAPER IV – PHARMACOLOGY I**

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Explain in detail about Mechanism and Pharmacology of Morphine. How will you treat Morphine overdose?
2. Define Receptors. Classify receptors and explain each type of receptor.
3. Define Cholinomimetics. Classify Anti-Cholinesterase drugs and explain their Mechanism of action and Therapeutic uses.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Write short note on Central Neurotransmitters.
2. Explain the mechanism of Local Anesthetics.
3. Explain various Routes of Drug administration.
4. Write notes on Pre-Anesthetic medication.
5. Write note on Pharmacokinetic interactions.
6. Compare and Contrast the Depolarizing and Non-Depolarizing muscle relaxants.
7. Symptoms and treatment of Organophosphorus poisoning.
8. Write about Phases of Clinical trials.
9. Write short on Drug addiction and Drug dependence.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Give two examples of CNS stimulants.
2. What are Secondary messengers in G-protein coupled receptor?
3. What is Pro drug? Give example.
4. List out various Routes of Excretion of Drugs.
5. Give the side effects of Benzodiazepines.
6. Define Sedatives and Hypnotics with example.
7. Define Neurotransmitters with example.
8. Enlist any two β -Blockers.
9. Define therapeutic index.
10. Define Local anesthetics with example.

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER IV
PAPER IV – PHARMACOLOGY I

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define Convulsion. Classify Anti-Convulsant and explain the mechanism of action, adverse drug reaction and therapeutic uses of Hydantoins.
2. Define Neuromuscular Blockers. Classify them and explain the mechanism and pharmacology of Peripherally Acting Neuromuscular blockers.
3. Define Receptors. Classify receptors and write the essay on different Drug-Receptor Theories.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Write short note on JAK-STAT Binding Receptor.
2. Write the Mechanism of Tricyclic Antidepressants.
3. Advantages of combination of Adrenaline with Local anesthetics.
4. Aldehyde Dehydrogenase Inhibitors.
5. Write note on Volume of Distribution.
6. Compare and Contrast the Directly and Indirectly acting Cholinesterase Inhibitors.
7. Write note on different types of Adverse Drug Reactions.
8. Write about Pre anesthetic medication.
9. Write short note on Benzodiazepines.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Give two examples Narcotic antagonists.
2. Therapeutic uses of Adrenaline.
3. Define Spare receptors.
4. Name any two Dopaminergic agonists.
5. Give the side effects of Carbamazepine.
6. Define Pre-clinical trials.
7. Enlist any two uses of Selective Serotonin Reuptake Inhibitors.
8. Define Glaucoma with types.
9. Mention two ganglion blockers and their uses.
10. Define drug synergism.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 1024]

**OCTOBER 2024
(SEPTEMBER 2024 EXAM SESSION)**

Sub. Code: 2044

B. PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER IV

PAPER IV – PHARMACOLOGY I

Q.P. Code: 562044

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. Describe the Preanesthetic medication. Explain the stages involved in the general anesthetics.
2. a) Write the pharmacological action of Adrenaline.
b) Write the pharmacological action of Acetylcholine.
3. Discuss the cholinergic transmission with carbachol. Mention the drugs acting on cholinergic transmission.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Special drug delivery system.
2. Describe directly acting muscle relaxant.
3. Define and classify the drug dependence. Explain the mechanism of action of drug dependence.
4. Write about atropine poisoning and its treatment.
5. Write pharmacological action of Alcohol.
6. Describe the Three major effector pathway through which the G protein Coupled receptor function.
7. Classify Anti Parkinson's drugs with example. Write the mechanism of action, ADR of Dopamine Precursor.
8. Differentiate enzyme induction and enzyme inhibition.
9. Explain about factor modifying drug action.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. What is the rationality and combining Adrenaline with Local Anesthetic?
2. Enlist the excitatory neurotransmitter present in CNS and ANS.
3. Define bioavailability. Why the bioavailability of drugs is lower after oral administration?
4. What is drug addiction? Give examples.
5. Define potency and efficacy.
6. Differentiate synergism and potentiation.
7. Differentiate different types of agonists with E value.
8. Any four drugs acting on NMDA receptors.
9. Define Antipsychotics. Give two examples.
10. Define apparent volume of distribution.
