



FACULTY: NILANJAN GHOSH

PROGRAM: M. PHARM

Course Code: MPT 1082

Course Name: ADVANCED PHARMACOLOGY-I

BASICS OF SYLLABUS PORTION TO BE COVERED

1. General Pharmacology

a. Pharmacokinetics: The dynamics of drug absorption, distribution, biotransformation and elimination. Concepts of linear and non-linear compartment models. Significance of Protein binding.

b. Pharmacodynamics: Mechanism of drug action and the relationship between drug concentration and effect. Receptors, structural and functional families of receptors, quantitation of drug receptors interaction and elicited effects.

2 Neurotransmission

a. General aspects and steps involved in neurotransmission.

b. Neurohumoral transmission in autonomic nervous system (Detailed study about neurotransmitters - Adrenaline and Acetyl choline).

c. Neurohumoral transmission in central nervous system (Detailed study about neurotransmitters- histamine, serotonin, dopamine, GABA, glutamate and glycine].

d. Non adrenergic non cholinergic transmission (NANC). Co-transmission

Systemic Pharmacology

A detailed study on pathophysiology of diseases, mechanism of action, pharmacology and toxicology of existing as well as novel drugs used in the following systems

Autonomic Pharmacology

Parasympathomimetics and lytics, sympathomimetics and lytics, agents affecting neuromuscular junction

3 Central nervous system Pharmacology : General and local anesthetics, Sedatives and hypnotics, drugs used to treat anxiety. Depression, psychosis, mania, epilepsy, neurodegenerative diseases. Narcotic and non-narcotic analgesics.

4 Cardiovascular Pharmacology

Diuretics, antihypertensives, antiischemics, anti- arrhythmics, drugs for heart failure and hyper- lipidemia. Hematinics, coagulants , anticoagulants, fibrinolytics and antiplatelet drugs.

5 Autocoid Pharmacology

The physiological and pathological role of Histamine, Serotonin, Kinins Prostaglandins Opioid autocoids. Pharmacology of antihistamines, 5HT antagonists.



Suggested Books for the Course (with links):

Sl. No.	Book Name, Ed., Vol	Authors	Weblink(s)
1.	THE PHARMACOLOGICAL BASIS OF THERAPEUTICS, 12 TH EDITION	GOODMAN & GILMAN	https://drive.google.com/file/d/1V8E6iXpluewkPrf6jqR0GriDpT1kbo2/view?usp=sharing
2.	Basic & Clinical Pharmacology, 9 TH EDITION	BERTRAM KATZUNG	https://drive.google.com/file/d/1YBUpr6qyDhh7_JEwgkZZ5bbSurPT6YOH/view?usp=sharing
3.	A Textbook of Clinical Pharmacology and Therapeutics, 5 TH EDITION	RITTER & LEWIS	https://drive.google.com/file/d/1yBDtUsNCwb9gLPe5DYA7e8s7V11LXX6x/view?usp=sharing

Supplementary Materials for Reference and Self Study:

Date	Module (as per Lesson Plan)	Topic	Live Recording Link	Powerpoint Presentation Link	Suppl ement ary Notes / Resou rces	Rema rks, if any
07-11-2020	UNIT I	DRUG TARGETS	click here	click here	---	---
10-11-2020	UNIT I	RECEPTORS	click here	click here	---	---
17-11-2020	UNIT I	RECEPTORS	click here	click here	---	---
21-11-2020	UNIT I	RECEPTORS	click here	click here	--	--
01-12-2020	UNIT II	NEUROTRA NSMISSION	click here click here	click here	--	--



05-12-2020	UNIT II	NEUROTRANSMISSION	click here	click here		--
08-12-2020	UNIT II	NEUROTRANSMISSION	click here	click here		
12-12-2020	UNIT II	NEUROTRANSMISSION	click here	click here		
15-12-2020	UNIT IV	CVS	click here	click here		
16-01-2021	UNIT IV	CVS (RAS)	click here	click here		
19-01-2021	UNIT IV	CVS (RAS)	click here	click here		
06-02-2021	UNIT IV	CVS DIURETICS	click here	click here		
13-02-2021	UNIT IV	CVS HYPERTENSION	click here	click here		
19-02-2021	UNIT IV	CVS HYPERTENSION	click here	click here		