DEPARTMENT OF PHARMACOLOGY

Sindh Institute of Oral Health Sciences (SIOHS)

Jinnah Sindh Medical University (JSMU)

COURSE TOPIC: General Pharmacology

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Introduction to Pharmacology	By the end of session student should know: 1. Definition and nomenclature of drug 2. Branches / divisions of Pharmacology 3. Sources of drugs with active principles of drug 4. Routes of drug administration 5. Practice to calculate various Drugs used in pharmacology (Youngs & Clarks Formula)	• Lectures • Tutorials • Practicals	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
2.	Absorption of drugs	By the end of session student should know: 1. Definition 2. Mechanism of Absorption 3. Factors Affecting Absorption	• Lectures • Tutorial	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
3.	Bioavailability	By the end of session student should know: 1. Definition 2. Mechanism 3. Factors	• Lectures • Tutorial	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
4.	Drug distribution,	By the end of session student should know:	• Lectures	• Class Test

	plasma protein binding and volume of distribution	1. Definition 2. Mechanism 3. Factors	• Tutorials	• Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
5.	Biotransformation of drugs	By the end of session student should know: 1. Definition of biotransformation 2. Types of biotransformation 3. Mechanism of biotransformation 4. Clinical significance of biotransformation 5. Pro-drug 6. Enzyme induction 7. Enzyme inhibition 8. Entero-hepatic circulation	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
6.	Plasma half-life and steady state concentration of drugs	By the end of session student should know: 1. Definition 2. Factors 3. Clinical significance	• Lectures • Tutorials	• Class Test • Theory Final Examination • OSPE Final Exam
7.	Excretion of drugs	By the end of session student should know: 1. Definition 2. Factors 3. Clinical significance	• Lecture	• Class Test • Theory Final Examination • OSPE Final Exam
8.	Mechanism of drug action	By the end of session student should know: 1. Definition 2. Factors 3. Clinical significance	• Lecture • Tutorials	• Class Test • Theory Final Examination • OSPE Final Exam
9.	Dose response relationship	By the end of session student should know: 1. Definition 2. Factors / types 3. Efficacy and potency 4. Clinical significance	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

10	Receptors	By the end of session student should know: 1. Definition 2. Types 3. Clinical significance	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
11	Adverse drug reactions	By the end of session student should know: 1. Definition 2. Types 3. Clinical significance	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Drugs Acting on Gastrointestinal Tract

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Drugs used to treat PUDs (Peptic Ulcer Disease)	By the end of session student should know: 1. Definition of PUDs 2. Classification of drugs used to treat PUDs 3. Clinical significance of drugs used to treat PUDs 4. Composition of tyrode solution & Ringers Lactate 5. Practice the effects of given drugs on intestine of rabbit (Ach, Epi, Atropine)	• Lectures • Tutorials • Practicals	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
2.	Anti-emetics	By the end of session student should know: 1. Definition 2. Classification 3. Clinical Uses & MOA 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

3.	Laxatives	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses & MOA 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam
4.	Anti-diarrheal drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses & MOA 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Cardiovascular Drugs

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Diuretics	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
2.	Anti-hypertensive drugs	By the end of session student should know: 5. Definition 6. Classification 7. Clinical uses 8. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
3.	Anti-anginal drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses & MOA 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

4.	Drugs used to treat Cardiac Failure	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses & MOA 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
5.	Anti-coagulants and thrombolytic drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses & MOA 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
6.	Anti-arrhythmic drugs	By the end of session student should know: 1. Definition 2. Classification	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
7.	Anti-hyperlipidemic drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Autacoids

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Autacoids Ecosonioids Histamine & Anti histamine	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Drugs Acting on Autonomic Nervous System

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Introduction to ANS Pharmacology	By the end of session student should know: 1. Definition 2. Classification + Receptors	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam
2.	Sympathomimetic drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
3.	Sympatholytic drugs.	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
4.	Cholinomimetic drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials • Practicals	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
5.	Anti-muscurinic drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

6.	Skeletal muscle relaxants	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
7.	To observe the effects of ANS drugs on rabbit eye (Atropine pilocarpine epinephrine)		Practical	

COURSE TOPIC: Drugs Acting on Central Nervous System

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Sedative-hypnotics	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
2.	Antiepileptics	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
3.	Anti-parkinsonian drugs	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

4.	General anesthetics	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
5.	Local Anesthetics	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
6.	Alcohol	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Antidote treatment 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
7.	Drugs for migraine	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
9.	Anti-psychotics	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
10	Anti-depressant and anti-manic drugs	By the end of session student should know: 5. Definition 6. Classification 7. Clinical significance 8. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Drugs Acting on Endocrine System

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Hypothalamic and Pituitary drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam
2.	Adrenocorticoids	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam
3.	Thyroid drugs	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses 4. Adverse effects	• Lectures • Tutorials	• Class Test • Theory Final Examination • OSPE Final Exam
4.	Insulin preparations and oral hypoglycemic agents	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses 4. Adverse effects	• Lectures • Tutorials	• Class Test • Theory Final Examination • OSPE Final Exam
5.	Gonodal hormones • Estrogen & AntiEstrogen • Progesterone & Antagonist • OCP • Testosterone & Antagonist	By the end of session student should know: 1. Definition 2. Classification 3. Clinical significance	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Antibiotics

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Introduction to anti-microbial therapy (Provisional Diagnosis, Investigation, Empirical Therapy, prescribing after culture and sensitivity)	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
2.	Cell wall synthesis inhibitors	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
3.	Protein synthesis inhibitors	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
4.	Fluoroquinolones	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
5.	Anti-tuberculous drugs	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
6.	Antiprotozoal drugs	By the end of session student should know:	• Lectures	• Class Test • Individual /

		1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects		Group Assignments • Theory Final Examination • OSPE Final Exam
7.	Anti-virals	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
8.	Anti-fungals	By the end of session student should know: 1. Definition 2. Classification MOA , Resistance 3. Clinical significance 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Analgesics

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	NSAIDs and Acetaminophen	By the end of session student should know: 1. Definition 2. Classification 3. Clinical Uses & MOA 4. Adverse effects	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam
2.	Opioid analgesics	By the end of session student should know: 1. Definition 2. Classification 3. Clinical Uses & MOA 4. Adverse Effests	• Lectures • Tutorials	• Class Test • Individual / Group Assignments • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Blood

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Drugs used for Iron deficiency anemia.	By the end of session student should know: 1. Definition 2. Classification 3. Clinical Uses & MOA 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam
2.	Drugs used for Megaloblastic Anemia	By the end of session student should know: 1. Definition 2. Classification 3. Clinical Uses & MOA 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam

COURSE TOPIC: Respiratory system

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1.	Drugs used for the treatment of Asthma and COPD.	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses 4. Practice prescription writing	• Lectures • Tutorials	• Class Test • Theory Final Examination • OSPE Final Exam
2.	Anti –tussives	By the end of session student should know: 1. Definition 2. Classification & MOA 3. Clinical significance 4. Adverse effects	• Lectures	• Class Test • Theory Final Examination • OSPE Final Exam
3.	Anti-histamines	By the end of session student should know: 1. Definition 2. Classification 3. Clinical uses 4. Adverse effects	• Lectures • Tutorials	• Class Test • Theory Final Examination • OSPE Final Exam

4.	Advantages of inhalers & nebeulizers	1. Clinical Uses	Practical	

Dr. Samia Perwaiz Khan
Professor of Pharmacology
Jinnah Medical & Dental College
0333-1277755

Dr. Rabia Arshad
Assistant Professor
Department of Pharmacology
Altamash Institute Of Dental Medicine
0333-2179605

Dr. Afshan Abbas
Assistant Professor
Department of Pharmacology
Sir Syed College of Medical Sciences
0336-2557108

Dr. Ittifaq Hussain
Associate Professor
Department of Pharmacology
Laiquat College of Medicine & Dentistry
0333-3029945

Dr. Shamama Islam
Associate Professor
Department of Pharmacology
Sindh Institute of Oral Health Sciences
0300-9230499