



Competition Exam for Master in Clinical Lab. Sciences

2026- 2027

Subjects	Topics	Reference Text:
	<ul style="list-style-type: none"> Carbohydrate metabolism (chapter 12) ● Plasma lipids and lipoproteins (chapter 13) ● Proteins in plasma and urine (chapter 19) ● Patient sample collection and use of the laboratory (chapter 29) ● 	<p>Clinical biochemistry & metabolic medicine, Martin A Crook, eighth edition, 2012.</p>
	<p>Microbiology and immunology</p> <p>Diagnostic microbiology (antibiotic sensitivity tests), Unit 1, chapter 4</p>	<p>Roitt's essential immunology, 13th edition, 2017.</p> <p>Lippincott illustrated microbiology, 4th edition, 2020.</p>
	<ul style="list-style-type: none"> Alterations in blood pressure (chapter 16) ● Renal failure (chapter 24) ● Thyroid and adrenal disorders (chapter 31) ● 	<p>Pathophysiology, Concepts of altered health states, Porth & Matfin, 8th edition.</p>

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COLLEGE OF PHARMACY



Competition Exam for Master in Pharmaceutical Chemistry

2026- 2027

Subject	Reference
1. Drug discovery: Finding a lead	An introduction to Medicinal Chemistry, 4 th edition, Graham L. Patrick. (part C)
2. Drug design: Optimizing target interaction	An introduction to Medicinal Chemistry, 4 th edition, Graham L. Patrick. (part C)
3. Metabolic Changes of Drugs and Related Organic Compounds	Organic Medicinal and Pharmaceutical Chemistry, 12 th edition, Wilson and Gisvold's. (Chapter 3).
4. Nonsteroidal Anti-inflammatory Drugs	Organic Medicinal and Pharmaceutical Chemistry, 12 th edition, Wilson and Gisvold's. (Chapter 24).
5. Anxiolytic, Sedative, and Hypnotic Agents	Organic Medicinal and Pharmaceutical Chemistry, 12 th edition, Wilson and Gisvold's. (Chapter 12).
6. Antibacterial Antibiotics	Organic Medicinal and Pharmaceutical Chemistry, 12 th edition, Wilson and Gisvold's. (Chapter 8).
7. Infrared Spectroscopy	Spectrometric Identification of Organic Compounds, 8 th edition, Robert M. Siverstein.



بسم الله الرحمن الرحيم

وزارة التعليم العالي والبحث
العلمي
جامعة الموصل
كلية الصيدلة
الدراسات العليا

Ministry of Higher
Education
& Scientific Research
University of Mosul
College of Pharmacy



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العدد:
التاريخ:

Competition Exam for Master in Pharmacology

2026- 2027

Subjects	Reference Text:
Cardiovascular-renal drugs.	Katzungs Basic and Clinical Pharmacology 16th ed, 2023
Drugs used to treat diseases of the blood, inflammation and gout.	
Endocrine drugs.	
Heavy metal intoxication and chelators.	
Management of the poisoned patient.	





Competition Exam for Master in Pharmacy

2026- 2027

Clinical lab. sciences	Pharmacology	Clinical Pharmacy	Pharmaceutics	Pharmaceutical chemistry	Pharmacognosy	Scientific Branch
1. Carbohydrates metabolism, (Chapter 12) Plasma lipids and lipoprotein (Chapter 13) Vitamins, minerals and trace elements (Chapter 15). Reference Martin A. Crook Clinical biochemistry and metabolic medicine. Eighth edition, 2012.	Cardiovascular-renal drugs.	Chronic Heart Failure	Pharmaceutical pre-formulation study	Antibiotics in pharmaceutical chemistry	Separation techniques (Phytochemistry)	1
	Heavy metal intoxication and chelators	Posttraumatic Stress Disorder and Obsessive-Compulsive Disorder	Summary on Tablet dosage form (Tablet classification)	Physicochemical properties in drug action	Alkaloids	2
2. Microbiology and Immunology 3. Diagnostic microbiology (antibiotic sensitivity tests), Unit 1, chapter 4 References Roitt's essential immunology, 13th edition, 2017. Lippincott illustrated microbiology, 4th edition, 2020.		Diabetes Mellitus	Dissolution and solubility	Drug design: finding led compounds.	Glycosides	3
		Breast Cancer		Drug design: optimizing target interaction.		4
		Pancreatitis		Drug targeting in anticancer chemotherapy		5
References						
	Katzungs Basic and Clinical Pharmacology 16th ed, 2023	DiPiro's Pharmacotherapy: A Pathophysiologic Approach, 13th Edition Stuart T. Haines, Thomas D. Nolin, Vicki L. Ellingrod, L. Michael Posey, Jennifer Cocohoba, Lisa Holle	Pharmaceutics by Aulton, 2013	Wilson and Gisvold's Textbook of organic medicinal and pharmaceutical chemistry	Treas and Evans, W.C., Pharmacognocny	

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الدراسات العليا

العدد:
التاريخ:

An introduction of
medicinal
chemistry, Graham
L. Patrick.

Robbers JE, Speedie
MK, Tyler VE,
Pharmacognosy and
Pharmacobiotechnology.

Medicinal chemistry
of anticancer drugs,
Carmen Avendan O
and J. Carlos
Mene'ndez





Competition Exam for PhD in Pharmacy

2026- 2027

Scientific Branch	Pharmacology and Toxicology	Pharmaceutical Chemistry	Clinical Lab Sciences	Clinical Pharmacy	Pharmaceutics	Pharmacognosy and Medicinal Plants
Topics	1. Endocrine drugs. 2. Management of the poisoned patient.	1. Antiaging agents 2. Targeting of anticancer drugs 3. Five-membered heterocyclic compounds: synthesis, reactions, and bioactivity 4. Six-membered heterocyclic compounds: synthesis, reactions, and bioactivity 5. Mechanisms of some named chemical reactions	1. The kidneys; (Chapter 3) 2. Pregnancy and infertility (Chapter 10). 3. Point of care testing (Chapter 30). 4. Microbiology and immunology. 5. Clinically important microorganisms (Chapter 32). 6. Heart failure and circulatory shock (Chapter 18). 7. Renal failure (Chapter 24)	1. Prostate cancer 2. Bipolar disorder 3. Arrhythmia 4. Multiple Sclerosis 5. Sickle Cell Disease 6. Human Immunodeficiency Virus Infection	1. Chemical kinetics and stability 2. Biopharmaceutics 3. Molecular biotechnology: From DNA sequence to therapeutic protein	1. Glycosides 2. Alkaloids 3. Chemotherapeutics 4. Bioactive Plant Molecules, Sources and Mechanism of Action in the Treatment of Cardiovascular Disease 5. Novel Targets in Drug Discovery 6. Methods in natural product chemistry
References						
	Katzung's Basic and Clinical Pharmacology 16th ed, 2023	1. Emerging Anti-Aging Strategies, Springer, 2023, Edited by Syed Ibrahim Rizvi. 2. Medicinal Chemistry Of	1. Martin A. Crook Clinical biochemistry and metabolic medicine. Eighth edition, 2012.	1. DiPiro's Pharmacotherapy: A Pathophysiologic Approach, 13th Edition	1. MARTIN'S PHYSICAL PHARMACY AND PHARMACEUTICAL SCIENCES. Physical Chemical and Biopharmaceutical.	1. Delgoda R. Pharmacognosy: Fundamentals, applications and strategies. Academic Press; 2016 Nov 11.



		<p>Anticancer Drugs, Elsevier, 2008, Edited by Carmen Avendan˜o And J. Carlos Mene´Ndez. 3. Heterocyclic Chemistry, Taylor and Francis, 2020, Edited by John A. Joule. 4. Organic reaction mechanisms, John Wiley & Sons, 2008, Edited by A. C. Knipe</p>	<p>2. Roitt’s essential immunology, 13th edition, 2017. 3. Lippincott illustrated microbiology, 4th edition, 2020. 3. Pathophysiology , Concepts of altered health states, Porth & Matfin, 8th edition.</p>	<p>2. Applied Therapeutics: The Clinical Use of Drugs (Koda Kimble and Youngs Applied Therapeutics) Twelfth, North American Edition by Caroline S Zeind, Michael G Carvalho</p>	<p>Principles in the Pharmaceutical Sciences. Sixth Edition 2. Daan J. A. Crommelin, Robert D. Sindelar Bernd Meibohm, Editors. Pharmaceutical Biotechnology Fundamentals and Applications. Fifth Edition</p>	<p>2. Heinrich M, Barnes J, Prieto-Garcia J, Gibbons S, Williamson EM. Fundamentals of Pharmacognosy and Phytotherapy: Fundamentals of Pharmacognosy and Phytotherapy E-Book. Elsevier Health Sciences; 2012</p>
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