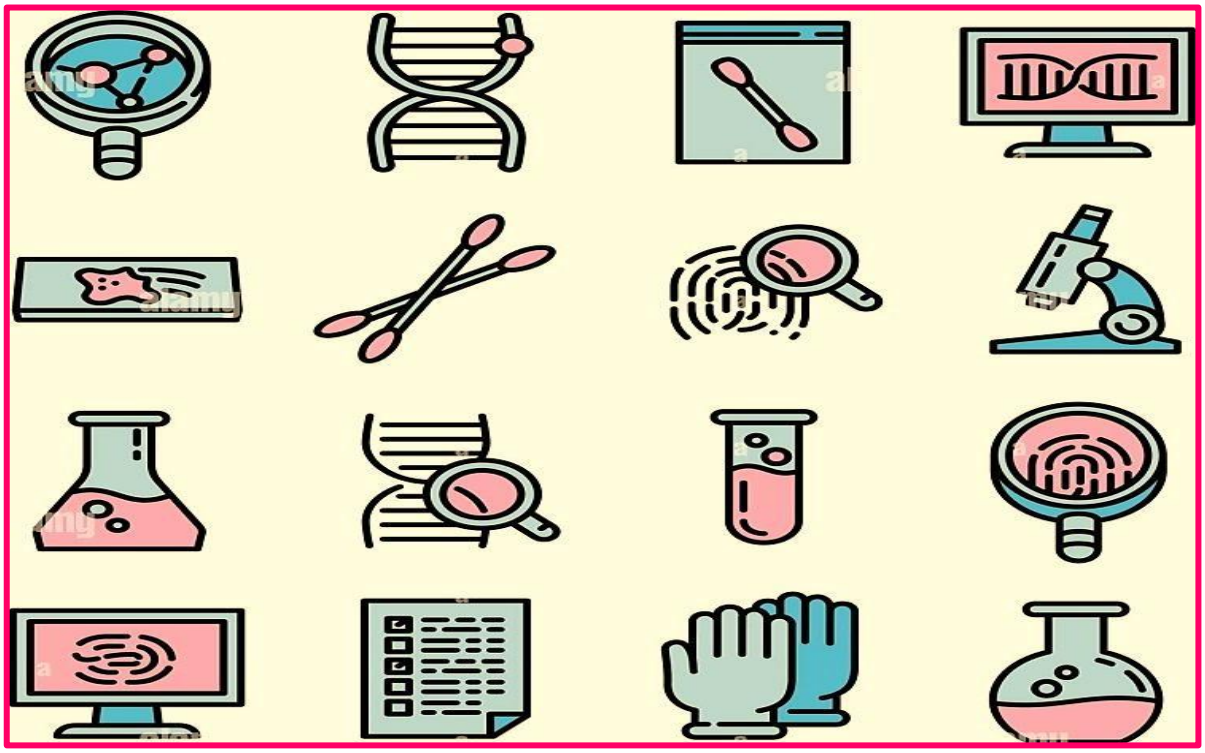
STUDY GUIDE

3RD YEAR MBBS

(CIC SPIRAL II – PART I)

2026-2027



BAQAI MEDICAL COLLEGE

BAQAI MEDICAL UNIVERSITY

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CONTENTS

PREFACE

The landscape of medical education is evolving rapidly, embracing a shift from teacher-centered to student-centered learning approaches across undergraduate and postgraduate levels. In response to these advancements, this study guide for the integrated modular system has been meticulously crafted to align with these changes, following the SPICES model of curriculum development.

1) Student-centered Approach: The course organization, content, and activities are predominantly structured around student engagement and empowerment.
2) Problem-Oriented Learning: Case-based learning is integrated into our modules to foster problem solving skills among students.
3) Explicit Integration: Basic sciences content is seamlessly integrated with pre-clinical and clinical subjects to provide a comprehensive understanding of medical concepts.
4) Community Engagement: Field visits to satellite clinics and community healthcare centers offer students firsthand exposure to community-related health issues.
5) Elective Opportunities: Students are encouraged to pursue electives within our institution and other institutes to broaden their learning experiences.
6) Structured Program: Our curriculum unfolds systematically, starting from foundational medicine concepts and encompassing all facets of medical sciences in Spiral integration.

Therefore, this study guide serves as a comprehensive resource, offering content-related information, guidance on learning strategies, curriculum management, and outlines of student activities. It is designed to support the undergraduate MBBS program in a multidimensional manner, facilitating holistic learning and development.

VISION & MISSION

VISION OF BAQAI MEDICAL UNIVERSITY
To evolve as a nucleus for higher learning witha resolution to be socially accountable, focused on producing accomplished health care professionals for services in all spheres oflife at the national and global level”
MISSION OF BAQAI MEDICAL UNIVERSITY
University is dedicated to the growth of competencies in its potential graduates through dissemination of knowledge for patient care, innovation in scholarship, origination of leadership skills, and use of technological advancements and providing.
MISSION OF BAQAI MEDICAL COLLEGE
The mission of the Baqai Medical College is to produce medical graduates, who are responsible and accomplished individuals andhave skills for problem-solving, clinical judgment, research & leadership for medical practice at the international level and are also aware of the health problems of the less privileged rural and urban population of Pakistan.

OUTCOMES OF THE MBBS PROGRAM

By the end of five-year MBBS Program the Baqai Medical College graduate will be able to:

1. Write focused history, perform physical examination, and formulate a diagnosis and management plan for common health problems.
2. Write focused history, perform physical examination, formulate a diagnosis, and management plan for common health problems.
3. Use knowledge of basic and clinical sciences for patient care.
4. Apply evidence-based practices for protecting, maintaining, and promoting the health of the individuals, families, and community.
5. Identify the emerging health issues, review literature, and conduct evidence-based research.
6. Demonstrate leadership and communication skills as per situational needs for quality health service.
7. Demonstrate lifelong learning with empathy and cultural sensitivity in health care.

INTRODUCTION TO THE SIPRAL II (PART I) –

3rd YEAR MBBS

SPIRAL II – Part 1, 3rd year MBBS marks a key academic transition where students build upon earlier foundations and engage with more advanced, clinically relevant concepts. Structured into six integrated modules over 36 weeks, this phase reinforces core knowledge in pathology, pharmacology, community medicine, forensic medicine, and clinical sciences while promoting diagnostic reasoning and problem-solving skills.

Teaching strategies—such as interactive lectures, case-based discussions, practical demonstrations, and simulation—ensure that learners connect basic science mechanisms with real patient scenarios.

In alignment with the mission of Baqai Medical College, this spiral prepares students to become competent, ethical, and socially accountable individuals capable of addressing the health needs of both urban and underserved communities.

Through ongoing formative work and structured modular assessments, students develop the scientific understanding and professional competencies required for safe and effective medical practice.

POLICIES AND PROCEDURES

Code of Conduct and Maintenance of Discipline of Students Regulations Under section 25(e) BMU Act.1996

All University students shall be under the full disciplinary control of the University. No students shall be allowed to participate in politics. The action against the act of indiscipline shall include fines, debarring from attending class, and cancellation of admission, depending on the gravity of indiscipline.

The following shall constitute acts of indiscipline for which action may be taken against the student or students:

(a) Breach of any rule of public morals, such as:
- Use of indecent or filthy language;
- Use of immodest dress:
- Use of undesirable remarks or gestures; and
- Disorderly behavior, such as shouting, abusing, quarrelling, fighting and insolence.

(b) Defiance of authority
(c) Action, defamatory of and derogatory to Islam
(d) Immorality
(e) Being found under the effect of an intoxicant or misuse of drugs, including marijuana, LSD, dope, and other opioids.
(f) False personation or giving false information or willful suppression of information, cheating, or deceiving.
(g) Inciting or staging a walk-out, a strike, or an unauthorized procession.
(h) Shouting of slogans derogatory to the prestige of the University or the reputation of its officers or teachers.
(i) Visiting without a pass place which are not to be visited without a pass.
(j) Visiting places declared out of bounds for students.

Every student must carry his / her Identity Card, which will be open to examination and will be demanded at the time of entrance to the various University Faculties and functions.

No student will be admitted to the facilities of the library, transport, or the canteen unless he /she is in possession of the Identity Card

SUMMARY OF THE INTEGRATED MODULES

CIC SPIRAL II – PART I

(3rd YEAR MBBS)

S. NO	*MODULES*	*DURATION 36 WEEKS*
1st Module	FOUNDATION MODULE	8 Weeks
2nd Module	ONCOGENETICS MODULE	4 Weeks
3rd Module	INFECTIOUS DISEASES & IMMUNOLOGY MODULE	8 Weeks
4th Module	NEUROSCIENCE MODULE II	4 Weeks
5th Module	CVS & BLOOD MODULE II	8 Weeks
6th Module	RESPIRATORY MODULE II	4 Weeks

FACULTY INFORMATION

DEPARTMENT OF PATHOLOGY		
Name	***Qualifications***	***Designation***
Prof. Dr. Rafiq Khanani rafiq.khanani@baqai.edu.pk	MBBS, M. Phil., FC Path (H), Ph.D.	Chairman & Professor
Prof. Dr. Nasima Iqbal drnasimaiqbal@baqai.edu.pk	MBBS, M.Phil., CHPE	Professor
Prof. Dr. Maeesa Sajeel drmaeesasajeel@baqai.edu.pk	MBBS, M.Phil., M.S, CHPE, CHQP, Ph.D. (scholar)	Professor
Dr. Muhammad Rizwan drmrizwan@baqai.edu.pk	MBBS, M. Phil., CQAP, CHQP, CCIM, Ph.D., CHPE	Associate Professor
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Name	***Qualifications***	***Designation***
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Dr. Sarah Saeed sarasaeed@baqai.edu.pk	BDS	Lecturer
Dr. Sumreen Mujahid sumreenfawaz@baqai.edu.pk	Pharm D, M.Phil.	Senior Pharmacist

DEPARTMENT OF FORENSIC MEDICINE		
Name	***Qualifications***	***Designation***
Dr. Rafay Ahmed Siddiqui rafaya@baqai.edu.pk	MBBS, Dip (Medical Jurisprudence), CHPE	HOD & Assistant Professor
Dr. Jan e Alam janealam@baqai.edu.pk	MBBS	Assistant Professor
Dr. Ijlal	MBBS	Lecturer

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Name	***Qualifications***	***Designation***
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Prof. Dr. Imtiaz Ahmed Jafry **drimtiazjafry@baqai.edu.pk**	MBBS, MPH, CHPE	Professor
Dr. Syed Muhammad Zulfiqar HyderNaqvi **zulfiqarnaqvi@baqai.edu.pk**	MBBS, M.S.B.E., CHPE	Associate Professor
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Ms. Maria Rahim **maria.rahim@baqai.edu.pk**	M.Sc., M. Phil. (Statistics), Ph. D. Scholar	Head of Research

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Name	*Qualifications*	*Designation*
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Prof Karim Kammeruddin drkarim@baqai.edu.pk	MBBS, FCPS	Professor
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Dr. Saima Askari saimaaskari@baqai.edu.pk	MBBS, FCPS	Assistant Professor Endocrinology
Dr. Sumayyah Liaquat sumayyahliaquat@yahoo.com	MBBS, FCPS	Assistant Professor of Neurology

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Name	*Qualifications*	*Designation*
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Dr. Asad Hanif Shaikh drasadhanif@gmail.com	MBBS, FCPS	Senior Registrar, Orthopedic Surgery

DEPARTMENT OF GYNECOLOGY & OBSTETRICS		
Name	*Qualifications*	*Designation*
Prof Dr. Farrukh Naheed drfarrukhnaheed@baqai.edu.pk	MBBS, MCPS, FCPS	HOD & Professor
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Dr. Farah Liaquat syedafarah2009@hotmail.com	MBBS, FCPS	Assistant Professor
Dr. Erum Illyas	MBBS, FCPS	Assistant Professor

DEPARTMENT OF PEDIATRIC MEDICINE		
Name	*Qualifications*	*Designation*
Dr. Arshad Hamid Khan drarshadhamid@baqai.edu.pk	MBBS, MCPS. DCH, MD	HOD & Associate Professor
Prof Dr Bushra Rafique bushrarafique@baqai.edu.pk	MBBS, FCPS	Professor
Dr Tahira Saeed tahirasaeed@baqai.edu.pk	MBBS, FCPS	Assistant Professor
Dr Saleem Ahmed saleemahmed@baqai.edu.pk	MBBS, FCPS	Senior Registrar
Dr. Sidra Saleem sidrasaleem@baqai.edu.pk	MBBS, FCPS	Senior Registrar

TEACHING METHODOLOGY

		
Interactive Lectures	**Case-based Learning**	**Student's Presentations**
		
Flipped Classroom	**Small group discussions**	**Practical demonstration**
		
Hands-on practice of clinical skills in a simulated Environment	**Virtual teaching sessions**	**Self-directed learning**

ASSESSMENT

Formative Assessment

- Assignment
- Quiz (face-to-face or online)
- Student Presentation
- Class participation in small group discussions & case-based learning sessions
- Project / Poster

3rd Year MBBS Students are directed to maintain their practical journals for formative assessment.

Summative Assessment

- Modular Exam:

With reference to the Assessment Policy of BMC, dated 14-06-21) (Point 5: Process; Summative assessment point a, b & d); a single modular exam will be conducted at the end of each module which will include all the subjects of basic medical sciences.

*Module exam will be assessed by any of the following assessment methods:

- MCQ
- SEQ
- OSPE.

- Annual Exam:
- Internal Evaluation = 20%
- Final Exam= 80%

  Theory: MCQs & SAQs

  Practical: Viva & OSPE

LEARNING RESOURCES

PATHOLOGY	
Robbins & Cotran Pathologic Basis of Disease 10th Edition Kumar, Abbas & Aster	Pathology Illustrated 8th Edition Alasdair D. T. Govan
Curran's Atlas of Histopathology 4th Edited Edition Robert Curran	Rubin's Pathology: Clinicopathologic Foundations of Medicine, 09th Edition Raphael Rubin & David S. Strayer
PHARMACOLOGY & THERAPEUTICS	
Basic and Clinical Pharmacology 14th Edition Bertram Katzung	Lippincott's illustrated review of Pharmacology 7th Edition Karen Whalen
Katzung and Trevor's Pharmacology Examination and Board Review 14th Edition Katzung and Trevor	Goodman & Gillman The Pharmacological Basis of Therapeutics 14th Edition Laurence L Brunton & Bjorn C. Knollmann
FORENSIC MEDICINE	
Parikh's Textbook of Medical Jurisprudence and Toxicology (8th edition)	Textbook of Forensic Medicine and Toxicology by Krishan Vij (6th edition)
MEDICINE	**SURGERY**
Davidson's Principles & Practice of Medicine	Bailey & Love's Short Practice of Surgery
GYNAECOLOGY & OBSTETRICS	**PAEDIATRICS**
Gynaecology by Ten Teachers Obstetrics by Ten Teachers	Basis of Pediatrics (Pervez Akbar)

COMMUNITY MEDICINE	
Public Health & Community Medicine 8th Edition M. Ilyas	Park's Textbook of Preventive & Social Medicine 20th Edition K. Parks

SUGGESTED WEBSITES & SEARCH ENGINES

https://www.medscape.com	https://www.PathologyOutlines.com
https://pubmed.ncbi.nlm.nih.gov	https://scholar.google.com
https://medlineplus.gov	https://medicine.nus.edu.sg/pathweb

FOUNDATION MODULE

FOUNDATION MODULE

Rationale

The Foundation Module-II has been designed to strengthen students' understanding of core medical sciences while integrating them with clinical relevance. It builds upon the fundamental concepts of pathology, pharmacology, community medicine, and forensic medicine to promote analytical and problem-solving skills essential for patient care. The module encourages critical thinking, ethical practice, and community-oriented learning, aligning with Baqai Medical University's mission of producing competent, compassionate, and socially accountable healthcare professionals. It emphasizes a student-centered, integrated, and evidence-based learning approach to prepare learners for clinical application and lifelong learning in medical practice.

Learning Outcomes of Foundation Module

By the end of Foundation Module-II, the MBBS student will be able to:

- Integrate basic and clinical science concepts to explain the mechanisms of disease processes and their relevance to patient management.
- Demonstrate problem-solving and critical-thinking skills in analyzing case-based scenarios related to cellular injury, inflammation, healing, and pharmacological interventions.
- Apply ethical and medico-legal principles in professional decision-making in accordance with national laws and global medical ethics.
- Recognize the importance of public health determinants and community-based preventive strategies for improving population health.
- Exhibit effective communication, teamwork, and leadership skills during collaborative learning sessions and patient-centered discussions.

- Commit to professionalism, empathy, and continuous self-directed learning to serve both urban and rural communities in alignment with the social accountability mission of Baqai Medical University

Modular Duration

Module Number	Module Name	Duration	Module In charge	Tentative Assessment Date & Pattern
1.	Foundation Module	8 weeks	Dr. Sarah Azhar	(Subject to minor changes) 16th February, 2026 MCQs, SEQs & OSPE/Viva

DEPARTMENT OF PATHOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

CELL INJURY, CELL DEATH, CELLULAR ADAPTATIONS				
TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Cell Injury	Lecture # 1	1	Define cell injury. Categorize the causes of cell injury. Differentiate between reversible and irreversible cell injury on the basis of morphological features.	MCQ, SEQ, VIVA
Cell Injury	Lecture # 2	1	Describe the pathogenesis of cell injury. Define Ischemic and hypoxic injury, Ischemic/reperfusioninjury. Describe oxidative stress induced cell injury. List free oxygen reactive species with antioxidants. Describe chemical injury.	MCQ, SEQ, VIVA
Cell Death	Lecture # 3	1	Define necrosis. Describe types of necrosis with examples.	MCQ, SEQ, VIVA
Cell Death	Lecture # 4	1	Recall cell cycle. Define Apoptosis. List the examples of Apoptosis. Describe the step-by-step patho-physiology of Apoptosis.	MCQ, SEQ, VIVA
Intra-cellular accumulations pathological pigmentation,	Lecture # 5	1	List different types of Intra-cellular accumulations. Define pathological pigmentation. List types of pigments.	MCQ, SEQ, VIVA

Pathological calcification			Differentiate between endogenous and exogenous pigments. Define pathological calcification. List the differences between dystrophic and metastatic calcification with examples of each.	
Cellular Adaptations I	Lecture # 6	1	Define cellular adaptations.List the types. Describe mechanism of Hypertrophy. Describe mechanism of Hyperplasia. Describe the mechanism of atrophy. List physiological & pathological examples of theseadaptations.	MCQ, SEQ, VIVA
Cellular Adaptations II	Lecture # 7	1	Describe the mechanism of Metaplasia with its physiological & pathological examples.	MCQ, SEQ, VIVA
Cellular aging	Lecture # 8	1	Define cellular aging and identify its primary mechanisms, including DNA damage, cellular senescence, and deregulated nutrient sensing. Explain the role of telomere attrition, protein homeostasis, and the IGF-1 signaling pathway in the aging process. Describe the impact of defective DNA repair mechanisms on premature aging syndromes. Compare the effects of caloric restriction on longevity through IGF-1 attenuation and sirtuin activation	MCQ, SEQ, VIVA

INFLAMMATION				
TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Acute Inflammation	Lecture # 9	1	Define inflammation. List the hall marks of inflammation. List the types of inflammation. Define acute inflammation. List the causes of acute inflammation. Tabulate plasma derived mediators & cell derived mediators.	MCQ, SEQ, VIVA
	Lecture # 10	2	Describe the sequence of cellular events involved in acute inflammation in relation with chemical mediators. Describe the sequence of vascular events involved in acute inflammation in relation with chemical mediators.	MCQ, SEQ, VIVA
Chronic Inflammation	Lecture # 11	1	Define chronic inflammation. List the causes of chronic inflammation. Define granulomatous & agrnulomatous inflammation. Discuss the pathogenesis of granulomatous & agrnulomatous inflammation and role of chemical mediators.	MCQ, SEQ, VIVA
Outcomes of inflammation	Lecture # 12	1	Describe the outcomes inflammation. Classify the various defects of inflammation. Classify the systemic effects of inflammation.	MCQ, SEQ, VIVA
DISORDERS OF HEALING & REPAIR				
Overview to tissue healing and repair	Lecture # 13	1	Define Healing, Repair, Regeneration & Scarring. Differentiate between regeneration and repair. Enlist the organs that undergo regeneration.	MCQ, SEQ, VIVA
Repair by scarring	Lecture # 14	1	Describe the various steps involved in process of repair by scarring (Primary & Secondary intention healing). List the various mediators involved in the steps of scarring.	MCQ, SEQ, VIVA

Factors affecting wound healing& Defects in wound healing / Scarring	Lecture # 15	1	List the various factors that influence wound healing. List the defects of wound healing and their consequences.	MCQ, SEQ, VIVA
HEMODYNAMIC DISORDERS				
Hyperemia, congestion & Haemorrhage	Lecture # 16	1	Define hyperemia and congestion. Differentiate between congestion & hyperemia according to its pathophysiology. List the different types of congestion with examples. Define hemorrhage. List the cause of hemorrhage. List types of hemorrhage on the basis of size.	MCQ, SEQ, VIVA
Edema	Lecture # 17	1	Define Edema, effusion, ascites, hydrothorax and anasarca. List the pathophysiological categories of edema with their examples. Differentiate between transudate and exudate. Describe the mechanisms of systemic edema in heart failure, renal failure, malnutrition, hepatic failure, and nephrotic syndrome.	MCQ, SEQ, VIVA
Thrombosis	lecture # 18	1	Define thrombosis. Describe Virchow's triad in thrombosis. Differentiate between arterial and venous thrombi. Define vegetations. Discuss the fate of the thrombus	MCQ, SEQ, VIVA
Embolism	Lecture # 19	1	Define Embolism and Thromboembolism. List the different types of emboli. Discuss the pathogenesis. List the common sites. List the consequences.	

Infarction	Lecture # 20	1	Define Infarction. Discuss the factors that influence in the development of an infarct Compare the different types of infarcts according to their site, morphology & presence or absence of infection.	MCQ, SEQ, VIVA
Shock	Lecture # 21	1	Define shock Discuss the three main types of shock with their examples Discuss the pathophysiology of Septic shock.	MCQ, SEQ, VIVA

By the end of small group session, the students of 3rd. year MBBS will be able to:

CELL INJURY, CELL DEATH, CELLULAR ADAPTATIONS				
TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Specimen Collection & Tissue Processing, Morphology ofCell Injury	Practical # 1	2	Define tissue processing. List the steps of histo-technology. Identify the use of different reagents and stains. Identify the morphological features of types of cell injury. Observe & perform how to operate the microscope and focus theglass slide.	VIVA, OSPE
Morphology of different types of Necrosis	Practical # 2	2	List the types of necrosis. Identify the gross & microscopic pathological features of different types of necrosis.	VIVA, OSPE
Morphology of different types of Cellular Adaptations	Practical # 3	2	List the types with examples. Identify the gross & microscopic pathological features of different types of necrosis.	VIVA, OSPE

INFLAMMATION				
Morphology of Acute Inflammation and Chronic Inflammation	Practical # 4	2	Identify the gross & microscopic pathological features of acute inflammation in the given specimen / slide. List the types of chronic inflammation on the basis ofmorphology. Identify the gross & microscopic pathological features of chronic inflammation in the given specimen / slide.	VIVA, OSPE
DISORDERS OF HEALING & REPAIR				
Morphology of Granulation tissue and Keloid	Practical # 5	2	Identify the gross & microscopic features of granulation tissue. Identify the gross & microscopic pathological features of keloid.	VIVA, OSPE
HEMODYNAMIC DISORDERS				
Hyperemia, congestion & Haemorrhage	Practical # 6	2	Identify the gross & microscopic features of hyperemia, congestion & Haemorrhage.	VIVA, OSPE
Thrombus & Embolism	Practical # 7	2	Identify the gross & microscopic features of Thrombus & Embolism	VIVA, OSPE
Shock	Tutorial # 8	2	Identify with the help of a case a patient in septic shock Discuss its pathogenesis	VIVA, OSPE

DEPARTMENT OF PHARMACOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Introduction of pharmacology& routes of drug administration	Lecture # 1	1	Define Pharmacology Classify Pharmacology Define Drug Classify the routes of drug administration. List the specific advantages and disadvantages of Enteral route of drug administration. List the specific advantages and disadvantages of Parenteral route of drug administration.	SEQ, MCQ, VIVA
Principles of drug development	Lecture # 2	1	Define the process of drug development. List the phases of drug development. Define pre-clinical studies of drug development. Explain the different phases of clinical trials. Explain the role of FDA in drug development. Define post-marketing surveillance of drugs.	SEQ, MCQ, VIVA
Cellular mechanisms of drug absorption	Lecture # 3	1	Define drug absorption. Explain various cellular mechanisms of drug absorption. Explain various factors influencing drug absorption. Define bioavailability. List various factors affecting bioavailability of a drug with examples.	SEQ, MCQ, VIVA

			Explain area under the curve.	
Cellular mechanisms ofdrug distribution	Lecture # 4	1	Define drug distribution. Explain drug distribution in various compartments of body. List various factors influencing drug distribution with examples. Explain the effects of the physiological barriers for drug distribution. Define volume of distribution. Define half-life. List factors influencing drug half-life.	SEQ, MCQ, VIVA
Cellular mechanism ofdrug metabolism	Lecture # 5	1	Define drug metabolism. Define biotransformation List the consequences of biotransformation List the phases of metabolic reactions of a drug. Differentiate between the phases of metabolic reactions with examples Define enzyme inducers and inhibitors with examples. Define first pass effect with example.	SEQ, MCQ, VIVA
Cellular mechanism ofdrug excretion	Lecture # 6	1	Define excretion of a drug. Explain different modes of drug excretion. List factors affecting excretion of a drug. Define steady state concentration of a drug Define first and zero order kinetics of drug elimination Define total drug clearance.	SEQ, MCQ, VIVA
Cellular receptors	Lecture # 7	1	Define Receptor, Receptor site & Effector. Explain major types of drug receptors with examples.	Dr. Faraz

			Explain signal transduction pathway. Define Tachyphylaxis. Define up regulation & down regulation of receptors.	
Cellular receptor agonists & antagonists	Lecture # 8	1	Define drug agonist and antagonist. Differentiate between various types of agonists used in therapeutics. Differentiate between various types of antagonists used in therapeutics. Define graded dose response and quantal dose response curve. Define therapeutic index and therapeutic window. Define potency and Efficacy.	SEQ, MCQ, VIVA
Pharmacology of chemicalmediators &ergot alkaloids	Lecture # 9	1	Classify chemical mediators & ergot alkaloids. Explain mechanism of action of Misoprostol, Latanoprost and Ergotamine. List the pharmacokinetic properties of these drugs. List common adverse effects and contraindications of these drugs. List the clinical uses of these drugs.	SEQ, MCQ, VIVA
Histamine and antihistamines	Lecture # 10	1	Define histamine and its role as a chemical mediator List types of histamine receptors with their distribution. Explain the mechanism of action of Chlorpheniramine, Cyclizine and Cetirizine. List the pharmacokinetic properties of these drugs. List the common adverse effects and contraindications of these drugs.	SEQ, MCQ, VIVA
Serotonin agonists &antagonists	Lecture # 11	1	Define serotonin and its role as a chemical mediator.	SEQ, MCQ, VIVA

			List types of serotonin receptors with their distribution. Classify serotonin receptors agonists and Antagonists with examples. List the clinical uses of Sumatriptan & Ondansetron. List the common adverse effects and contraindications of these drugs.	
NSAIDS I	Lecture # 12	1	Outline the pathophysiology of Inflammation Define NSAIDs. Classify NSAIDS. Explain the mechanism of action of Ibuprofen, Aspirin, Celecoxib and Acetaminophen.	SEQ, MCQ, VIVA
NSAIDS II	Lecture # 13	1	Discuss the pharmacokinetic properties of Ibuprofen, Aspirin, Celecoxib and Acetaminophen. List the clinical uses of these drugs. List common adverse effects and contraindications of these drugs.	SEQ, MCQ, VIVA
Management of salicylate and acetaminophen poisoning	Lecture # 14	1	Define salicylate. List the pharmacological effects of Salicylate toxicity. Explain the management of acute and chronic salicylate poisoning. Explain the role of N-Acetyl cysteine for the management of Acetaminophen poisoning	SEQ, MCQ, VIVA
Adverse drug reactions	Lecture # 15	1	Define adverse drug reactions. Classify adverse drug reactions. Compare predictable and unpredictable drug reactions with examples. Outline the general management of adverse drug reactions. List factors affecting susceptibility to adverse drug reactions.	SEQ, MCQ, VIVA

Drug-drug interactions	Lecture # 16	1	Define drug-drug interactions Classify different categories of drug interactions on the basis of pharmacodynamics and pharmacokinetics Define the terms synergism, addition, summation and antagonistic drug interaction List commonly encountered drug interactions. Explain the consequences of drug interactions	SEQ, MCQ, VIVA
Pharmacogenetics	Lecture # 17	1	Define Pharmacogenetics Identify the genetic variations in enzyme that influence drug effect. Explain the genetic variations in transporters that influence drug effects Describe the importance of Pharmacogenetics in clinical practice. Discuss the genetic variations in immune system functions that influence drug effect.	SEQ, MCQ, VIVA
Introduction To ANS pharmacology	Lecture # 18	1	Classify ANS. List different autonomic neurotransmitters with examples. Classify cholinergic & adrenergic receptors according to their site of action. List the steps of synthesis of neurotransmitter at cholinergic neurons. List the steps of synthesis of neurotransmitter at adrenergic neurons.	SEQ, MCQ, VIVA
Cholinergicagonists	Lecture # 19	1	Classify cholinergic agonists with examples. Explain the mechanism of action of Bethanechol, Pilocarpine, Nicotine, &Neostigmine. List the pharmacokinetic properties of these drugs. List the clinical uses of these drugs List the adverse effects and contraindications of these drugs	SEQ, MCQ, VIVA

Cholinergic antagonists	Lecture # 20	1	Classify cholinergic antagonists with examples. Explain the mechanism of action of Atropine and Pralidoxime. List the pharmacokinetics properties of these drugs. List the clinical uses of these drugs List the adverse effects and contraindications of these drugs	SEQ, MCQ, VIVA
Adrenergic agonists	Lecture # 21	1	Classify adrenergic agonists. Explain mechanism of action of Epinephrine, Dobutamine, Amphetamine and Ephedrine. List the pharmacokinetics properties of these drugs. List the clinical uses of these drugs List the adverse effects and contraindications of these drugs Classify the drugs used to treat cataract. Discuss the therapeutic role of pharmacological agents in cataract treatment.	SEQ, MCQ, VIVA
Adrenergic antagonists	Lecture # 22	1	Classify adrenergic antagonists. Explain mechanism of action of Phenoxybenzamine, Prazosin and Labetalol. List the pharmacokinetics properties of these drugs. List the clinical uses of these drugs List the adverse effects and contraindications of these drugs Classify drugs used to treat Glaucoma. Explain the rationale for the use of β-blockers, α_2-adrenergic agonists and cholinergic agonists in glaucoma management.	SEQ, MCQ, VIVA

By the end of each Small group session (practical), the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Laboratory Equipments	Practical # 1	2	Identifyvarious instrumentsused in Pharmacology Lab List the uses of each instrument. List various safety measures used inhandling of laboratory equipment	OSPE
Demonstration of the effects of miotics & mydriatics on Rabbit'seye	Practical # 2	2	Differentiate between miotics and mydriatics. List various miotics and mydriatics. Demonstrate the various reflexes affected by using normal saline, Atropine and Pilocarpine on eye of a rabbit.	OSPE

By the end of each Small Group Session (Tutorial) the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Overview of Pharmacology	Tutorial # 1	2	List various branches of Pharmacology. List the different sources of drugs with examples. Define Drug Nomenclature with examples.	OSPE
Pharmaceutical Preparations	Tutorial # 2	2	List different pharmaceutical preparations Correlate the use of different pharmaceutical preparations according to needs of a patient	OSPE
IV Infusions	Tutorial # 3	2	List different Intravenous Infusions Correlate the use of different IV infusions according to needs of a patient	OSPE

			List precautions related to these IV infusions	
Rate of IV flow Calculations	Tutorial # 4	2	List various formulas used to calculate rate of flow, infusion time and total volume ofinfusion Interpret the given clinical scenarios related to rate of flow.	OSPE
International System ofUnits	Tutorial # 5	2	Define International system of unitswith help of examples. List different ways of conversions used inpharmaceutical practical. List different household measurements.	OSPE
Introduction to prescriptionwriting	Tutorial # 6	2	Define Prescription. List different parts of Prescription. Correlate the use of abbreviations in Prescription Writing. Discuss the guidelines for rational use of drugs.	OSPE
Anti-histamines	Tutorial # 7	2	Write down the prescription of given case of Allergic Urticaria. Discuss the rationale of prescribing Anti-histamines in Allergic Urticaria.	OSPE
NSAIDs	Tutorial # 8	2	Discuss the adverse effects ofNSAIDs through the given case. Explain the pharmacologicalmanagement of given case ofReye Syndrome.	OSPE
Organophosphate poisoning	Tutorial # 9	2	Discuss the sign and symptoms of Organophosphate poisoning Discuss the rationale for usinganti-cholinergic in Organophosphate poisoning.	OSPE
Anaphylaxis	Tutorial # 10	2	Discuss the sign and symptoms of Anaphylaxis Discuss the rationale for using Epinephrinein Anaphylaxis	OSPE

DEPARTMENT OF FORENSIC MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd year MBBS will be able to: By the end of each lecture, the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Introduction to Forensic Medicine I	Lecture # 1	01	Distinguish between Forensic Medicine, Medical Jurisprudence, Legal Medicine, Forensic Pathology, State Medicine, Forensic Science. Detail Major Subdivisions/ Firm Pillars of Forensic Medicine Describe Inquest & its Types Learn about Medico-legal Systems Define Law with the mention of its Types Define Ethics & Medical Ethics with mention of Basic Ethical Principles	SEQ, MCQ, VIVA
Introduction to Forensic Medicine II	Lecture # 2	01	Explain Organization of Law Courts in Pakistan Enlist Punishments/ Sentences authorized by Law as per PPC. Describe Oath/ Solemn Affirmation. Explain Recording of Evidence of a Witness in a Court of Law. Describe Medical Evidence& its Types Explain Professional Misconduct (Infamous Conduct). Define Consent, its Types & the Role of Consent in Medical Examination	SEQ, MCQ, VIVA

Introduction to Forensic Medicine III	Lecture # 3	01	Detail Kinds of Witnesses Interpret documents prepared by a medical man Differentiate between Dying Declaration & Dying Deposition Describe Pakistan Penal Code (PPC), Criminal Procedure Code (CPC), etc., their execution and delivery. Describe Professional Negligence / Medical Negligence / Malpraxis, Res- Ipsa- Loquitar, Novus Actus Interveniens. Explain Professional Secrets / Medical Secrecy / Legal Obligation of Confidentiality Discuss Privileged Communication	SEQ, MCQ, VIVA
Death & Causes of Death I	Lecture # 4	01	Define Death with Scientific Concepts Describe the 2 Phases i.e., Somatic & Molecular Death. Detail Mode, Manner, Mechanism& Cause of Death as per WHO criterion. Enlist Gordon's Classification of Death with examples.	SEQ, MCQ, VIVA
Death & Causes of Death II	Lecture # 5	01	Describe Brain Death with its ML aspects, especially in relation to Organ Transplantation Define Suspended Animation/ Apparent Death & its Types with examples. Explain Presumption of Death & Survivorship. Detail Medical Certification of Cause of Death / A Doctor's Approach to Death Certification as per WHO.	SEQ, MCQ, VIVA

Death & Causes of Death III	Lecture # 6	01	list Methods of Estimation of Time since Death / Postmortem Interval from the Immediate, Early & Late Signs of Death, & Factors influencing such changes. Differentiate between Postmortem Staining (PM Lividity or Suggilation) & Bruise, Hypostasis & Congestion, Rigor Mortis & Cadaveric Spasm, Rigor Mortis & Conditions simulating Rigor Mortis, Primary & Secondary Relaxation of Muscles, etc.	SEQ, MCQ, VIVA
Injuries I	Lecture # 7	01	Define Injury, Hurt, Wound, Assault & Battery according to Pakistan Penal Code / Qisas & Diyat Act	SEQ, MCQ, VIVA
Injuries II	Lecture # 8	01	Classify Mechanical Trauma or Physical Injuries Describe the Blunt Force Trauma	SEQ, MCQ, VIVA
Injuries III	Lecture # 9	01	Describe the Firearms & Explosive Injuries (Wound Ballistics) Describe Explosive Injuries Describe Thermal Injuries Express Dating / Age & Sub-classification of every Injury / Wound.	SEQ, MCQ, VIVA
Injuries IV	Lecture # 10	01	Describe Types & Healing Phenomena of every Injury / Wound. Differentiate Antemortem Wounds / Fractures from Postmortem Wounds / Fractures.	SEQ, MCQ, VIVA

By the end of each small group session (practical) , the students of 3rd year MBBS will be able to:

TOPIC	MODE OFTEACHING	TIME (hours)	LEARNINGOBJECTIVES	ASSESSMENT
Personal Identity	Practical#1	2	Define Personal Identity with mention of its Types. Discuss Factors / Parameters establishing Personal Identity	OSPE, VIVA
Personal Identity	Practical#2	2	Determine Sex by Microscopic Study of Sex Chromatins Explain Intersex States Determine Sex by Examination of Bones	OSPE, VIVA
Personal Identity	Practical#3	2	Determine Age by examination of Teeth Determine Age by examination of Lower Jaw	OSPE, VIVA
Personal Identity	Practical#4	2	Determine Age by Ossification Activity Detail the ML importance of Age.	OSPE, VIVA
Personal Identity	Practical#5	2	Define Dactylography Describe Poroscopy, Foot Prints & Lip Prints Describe Anthropometry / Bertillon System Discuss the ML Importance of Hair, Tattoo Marks	OSPE, VIVA
Personal Identity	Practical#6	2	Categorize Identification in “Mass Disasters” according to World Health Organization Describe various methods to identify dead bodies in mass disasters	OSPE, VIVA
Personal Identity	Practical#7	2	. Enumerate the specialized techniques used for identification of human remains in mass disasters	OSPE, VIVA

Personal Identity	Practical#8	2	Describe DNA Fingerprinting / Profiling / Testing / Patterning, & PCR Process. Differentiate between Human & Animal Blood. Differentiate between Human & Animal Semen	OSPE, VIVA

DEPARTMENT OF COMMUNITY MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

Topic	Mode Of Teaching	Time (hours)	Learning Objectives	Assessment
Introduction to Community Medicine	Lecture # 1	1	Define Community Medicine. Define health, disease & wellbeing Explain the ice berg phenomenon. Explain natural history of disease.	MCQ
Concepts of Health &Disease	Lecture # 2	1	Differentiate between clinical medicine & community medicine. Describe the McKeown's concept. Define ecological triad. Discuss concepts of causation including the ecological triad.	MCQ
Levels of Prevention	Lecture # 3	1	Describe the levels of prevention. Identify two strategies for each level of prevention related to a common health issue.	MCQ
Sustainable Development Goals	Lecture # 4	1	Enumerate and discuss the MDGs List the Sustainable Development Goals Differentiate between targets and indicators of SDGs	MCQ
Sustainable Development Goals	Lecture # 5	1	Discuss the health-related goals of SDGs globally Discuss the health-related goals of SDGs in context to Pakistan	MCQ
Revision	tutorial	2	Recall essential topics covered in previous classes of this module	
Formative Assessment	Quiz	1	Short quiz	MCQ

DEPARTMENT OF RESEARCH

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	PROPOSED NAME OF FACILITATOR
Topic Selection and Literature Search	Small group discussion	2	Identify a pertinent topic for research project Utilize appropriate search engine Apply the steps of literature search Utilize the techniques of literature search	Group supervisors

DEPARTMENT OF MEDICINE & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Introduction to acute and chronic inflammatory disease	Lecture # 1	1	Recite definition and recognize clinical features of inflammatory disorders Differentiate between acute and chronic inflammatory disorders Predict common causes of inflammatory disorders Appraise investigations required to diagnose inflammatory disorders	MCQ

DEPARTMENT OF SURGERY & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Wound healing and repair	Lecture # 1	1	Define wound. Classify wounds based on: Cause (incised, lacerated, contused, penetrating, punctured, crush injury, gunshot) Cleanliness (clean, clean-contaminated, contaminated, dirty) Duration (acute vs chronic) Difference between primary, secondary and tertiary (delayed primary) wound healing. Identify local factors and systemic factors affecting wound healing Differentiate between regeneration and repair. Recognize different types of scars (hypertrophic, keloid, atrophic). Describe initial wound care List common wound complications	MCQ
Shock and haemorrhage	Lecture # 2	1	Define shock. Explain the pathophysiology of shock List and describe the major types of shock: Define hemorrhage and classify it based on: Site (internal/external) Source (arterial, venous, capillary) Timing (primary, reactionary, secondary) Severity (Class I–IV according to ATLS) Identify early and late signs of shock. Differentiate types of shock based on key clinical features. Apply ABCDE approach in a patient of shock.	MCQ

			Enlist appropriate laboratory tests and key imaging modalities in haemorrhage and shock Outline the general principles of shock management.	
DVT & pulmonary embolism	Lecture # 3	1	Define venous thromboembolism, deep vein thrombosis, and pulmonary embolism. Describe Virchow's triad: Identify surgical, medical, and patient-related risk factors for DVT and pulmonary embolism Describe the pathophysiology of DVT and pulmonary embolism; Identify clinical signs and symptoms DVT and pulmonary embolism; Enlist the investigations for DVT and pulmonary embolism; Describe the principles of management of DVT and pulmonary embolism; Explain VTE prophylaxis in surgical patients. Enumerate the complications of DVT and pulmonary embolism.	MCQ

DEPARTMENT OF GYNAECOLOGY & OBSTETRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Reproductive medicine	Lecture # 1	1	Define reproductive health and reproductive Medicine. Identify the components of reproductive Medicine. Describe the Factors affecting reproductive health. Endocrinological evaluation of reproductive health	MCQ
Concept of high-risk pregnancy	Lecture # 2	1	Define high risk pregnancy. Classify the high-risk pregnancy. Explain the role of preconception care and counselling.	MCQ
Termination of Pregnancy & Abortion law of Pakistan Penal code	Lecture # 3	1	Define termination of pregnancy. Classify the methods used for termination of pregnancy according to gestation period. Explain the Pakistan Penal Code Law for termination of pregnancy.	MCQ

ONCOGENETICS MODULE

ONCOGENETICS MODULE

Rationale

The Onco-Genetics Module has been designed to integrate fundamental concepts of oncology and genetics, highlighting the molecular basis of carcinogenesis and its clinical correlations. It aims to enable students to understand the genetic and environmental determinants of neoplastic diseases and their implications in diagnosis, prevention, and management. The module fosters an understanding of the interplay between genetic mutations, cellular pathways, and tumor progression, linking pathology, pharmacology, community medicine, forensic medicine, and clinical sciences.

In alignment with Baqai Medical University's mission, it prepares the graduates to be capable of addressing the growing burden of cancer in both urban and rural populations.

Learning Outcomes of Onco-genetics Module

By the end of Foundation Module-II, the MBBS student will be able to:

- Integrate molecular, pathological, pharmacological, and clinical concepts to explain the mechanisms of neoplasia, carcinogenesis, and genetic disorders.
- Analyze case-based scenarios to identify the genetic, environmental, and occupational risk factors associated with cancer and apply this understanding to patient diagnosis and management.
- Discuss the key principles in cancer pharmacotherapy, including the rationale for chemotherapy, drug mechanisms, and adverse effects.

- Discuss ethical and medico-legal principles in the investigation, reporting, and management of cancer-related cases in accordance with national regulations and international standards.
- Recognize the role of community health approaches in cancer prevention, screening, and occupational safety, promoting public awareness and early detection strategies.

Modular Duration

Module Number	Module Name	Duration	Module In charge	Tentative Assessment Date & Pattern
2.	Onco-genetics Module	4 weeks	Dr Sarah Azhar	*(Subject to minor changes)* 13th March, 2026 MCQs, SEQs & OSPE

DEPARTMENT OF PATHOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

NEOPLASIA				
TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Introduction to Neoplasia & Differences of Benign & Malignant Tumours	Lecture # 1	01	Define Oncology, Tumor, Neoplasia, Anaplasia, Dysplasia, Metaplasia, Malignant Tumor and Benign tumor. Recognize the type of tumor based upon the nomenclature Differentiate benign tumors with malignant tumors based upon their macroscopic & microscopic features, behavior of tumors and differentiation with examples	MCQ, SEQ, VIVA
Molecular Basis of Carcinogenesis I	Lecture # 2	01	List the common chemical and physical agents with their mechanism leading to carcinogenesis Discuss the effects of radiation, which causes cancer List 5 major occupational carcinogens in Pakistan. List the common microbes and viruses related to human cancer. List the hereditary causes associated with cancers	MCQ, SEQ, VIVA
Molecular Basis of Carcinogenesis III	Lecture # 3	02	List the hallmarks of cancer. Discuss the alterations in cell cycle control proteins in cancer cells. Describe the role of proto-oncogenes, oncogenes & onco-proteins that cause self-sufficiency in growth promoting signals.	MCQ, SEQ, VIVA

			Describe the pathogenesis of evasion of apoptosis in carcinogenesis	
Molecular Basis of Carcinogenesis III	Lecture # 4	02	Describe that impairment in the repair of damaged/mutated DNA leads to cancer. Describe the mechanism of reactivation of telomerase and its association with unlimited proliferation capacity during carcinogenesis Describe the role of sustained angiogenesis in carcinogenesis.	MCQ, SEQ, VIVA
Metastasis	Lecture # 5	01	Define metastasis List the different routes of metastasis Describe the process of invasion and metastasis of malignant tumors	MCQ, SEQ, VIVA
Tumour Immunity & Tumour Markers	Lecture # 6	01	Discuss tumor antigens and anti-tumor effector mechanisms. Explain immune surveillance and immune evasion by tumors	MCQ, SEQ, VIVA
Clinical Aspects of Neoplasia	Lecture # 7	01	Discuss the local and systemic effects of tumors Define cancer cachexia. List the causes that can lead to Cachexia Classify paraneoplastic syndrome & their origins Recognize the criteria upon which malignant tumors can be graded & staged to determine the prognosis of malignant tumors	MCQ, SEQ, VIVA
Lab Diagnosis of Neoplasia	Lecture # 8	01	List the various laboratory techniques that help in the diagnosis of tumors List the tumor markers used in the diagnosis and management of cancers. Describe the role of molecular analysis in prompt diagnosis of cancers.	MCQ, SEQ, VIVA

GENETICS				
Introduction to Genetics	Lecture # 9	01	Define the basic vocabulary of genetics, i.e. Gene, Allele, Chromosome. Define Mutation List types of mutations Recall the structure of DNA & ribosome	MCQ, SEQ, VIVA
Basics of Genetic Abnormalities	Lecture # 10	01	Explain the nature of genetic abnormalities contributing to human disease Discuss the Mendelian disorders caused by single gene defects Describe the transmission pattern of single gene disorders List common sex linked, autosomal dominant and autosomal recessive disorders	MCQ, SEQ, VIVA
Complex Multigenic & Cytogenic Disorders	Lecture # 11	01	Describe complex multigenic disorders. List the common cytogenic disorders involving autosomes and sex chromosomes. Discuss the karyotypic abnormality and clinical features of Trisomy 2.251 and Down syndrome. Describe the characteristics features of Klinefelter's syndrome and Turner`s syndrome.	MCQ, SEQ, VIVA
Molecular Diagnosis of Genetic Disorders	Lecture # 12	01	Describe the molecular techniques used for the diagnosis of genetic disorders. List the common indications for prenatal and postnatal genetic analysis.	MCQ, SEQ, VIVA

By the end of small group session, the students of 3rd. year MBBS will be able to:

NEOPLASIA				
TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Leiomyoma & Lipoma	Practical # 1	2	Predict the type of tumour based on its nomenclature. Define Leiomyoma. List the common sites. Identify the gross & microscopic pathological features of Leiomyoma. Define Lipoma. List the common sites. Identify the gross & microscopic pathological features of lipoma. Predict the type of tumour based on its nomenclature.	VIVA, OSPE
Fibroadenoma & Hydatidiform Mole	Practical # 2	2	Predict the type of tumour based on its nomenclature. Define Fibroadenoma. List the common sites. Identify the gross & microscopic pathological features of Fibroadenoma. Define Hydatidiform mole. List the common sites. Identify the gross & microscopic pathological features of Hydatidiform mole.	VIVA, OSPE
Squamous Cell Papilloma & Squamous Cell Carcinoma	Practical # 3	2	Predict the type of tumour based on its nomenclature. Define Squamous cell papilloma. List the common sites.	VIVA, OSPE

			Identify the gross & microscopic pathological features of Squamous cell papilloma. Define Squamous cell carcinoma. List the common sites. Identify the gross & microscopic pathological features of Squamous cell carcinoma.	
Adenocarcinoma	Practical # 4	2	Define Adenocarcinoma. List the common sites. Identify the gross & microscopic pathological features of Adenocarcinoma.	VIVA, OSPE

DEPARTMENT OF PHARMACOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Principles of Cancer Chemotherapy	Lecture # 1	01	Outline pathophysiology of cancer. Define cancer chemotherapy Explain the different treatment modalities of cancer therapy. Explain different mechanisms of resistance to chemotherapeutics agents. Discuss the adverse effects of cancer chemotherapy. Discuss the use of radiation therapy in the treatment of cancer.	MCQ, SEQ, VIVA
Anti-cancer drugsI (Cell cycle specific drugs)	Lecture # 2	01	Explain Cancer cell cycle kinetics Classify Cell Cycle specific anticancer drugs. Explain the mechanism of action of Fluorouracil, Methotrexate, Vincristine,Bleomycin Discuss clinical uses of these drugs. Discuss adverse effects of thesedrugs.	MCQ, SEQ, VIVA
Anti -cancer drugs II (Cell cycle non-specific and miscellaneous drugs)	Lecture # 3	01	Classify Cell Cycle non-specific and miscellaneous anticancer drugs. Explain the mechanism of action of, Cyclophosphamide, Doxorubicin, Imatinib, Transtuzumab, Tamoxifen Discuss clinical uses of these drugs. Discuss adverse effects of thesedrugs.	MCQ, SEQ, VIVA

By the end of each Small Group Session (Tutorial) the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Rationale prescription writing (cancer chemotherapy)	Tutorial # 1	2	Write prescription for the treatment ofAcute Myeloid Leukemia and ChronicMyeloid Leukemia. Write prescription for the treatment of Acute Lymphocytic Leukemia and ChronicLymphocytic Leukemia. Write prescription for the treatment of Hodgkin's Lymphoma and non-Hodgkin'sLymphoma. Write prescription for the treatment ofCarcinoma of breast	OSPE

DEPARTMENT OF FORENSIC MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Injuries V	Lecture 1	01	list ML Classification of Injuries Differentiate b/w Suicidal, Homicidal, Accidental wounds Describe Defense Wounds, Sports Injury Define Head Injury as per National Advisory Neurological Diseases & Stroke Council. Classify Cranio-Cerebral Injury (Scalp, Skull & Brain).	MCQ, SEQ, VIVA
Injuries VI	Lecture 2	01	Classify Brain Injury Explain Mechanism of production of brain injury Describe Coup &Contre-Coup Injury. Enlist Bone Fragmentation / Skull Fractures. Discuss Intracranial Hemorrhages/Hematomas, & Brain Swelling (Cerebral Edema).	MCQ, SEQ, VIVA
Injuries VII	Lecture 3	01	Express Diffuse Axonal Injury (DAI), Diffuse Neuronal Injury (DNI), Diffuse Vascular Injury (DVI). Explain Injury to Neck & Neck Structures / Cervical Trauma, specially Causes, Mechanism, Signs Symptoms & Autopsy findings of Whiplash Injury.	MCQ, SEQ, VIVA
Injuries VIII	Lecture 4	01	Explain Cerebral Concussion, Contusions & Lacerations Describe Fabricated / Fictitious / Forged Wounds (Self-Inflicted & Self-Suffered). Explain Injury to Chest / Thorax & Thoracic Structures	MCQ, SEQ, VIVA

			Explain Injury to Limb Skeletal Bone Injuries (Fractures, etc.), & Joint Injuries	
Injuries IX	Lecture 5	01	Discuss Transportation Injuries to Pedestrians Discuss Transportation Injuries Driver	MCQ, SEQ, VIVA
Injuries X	Lecture 6	01	Describe high voltage Electrical Injuries Describe lightning injuries Describe Radiation Injuries	MCQ, SEQ, VIVA

By the end of each small group session (practical) , the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Autopsy I	Practical 1	2	Define Autopsy List the Aims & Objectives of Autopsy Discuss the Types of Autopsies Differentiate between Medico - legal & Pathological Autopsy	OSPE, VIVA
Autopsy II	Practical 2	2	Enumerate the Autopsy Protocol / Rules / Precautions. Enlist Instruments required for Autopsy. List the Autopsy Incisions for opening Cranial, Thoracic &Abdominal cavities, & Vertebral Column / Spinal Cord. Discuss Collection, Preservation, & Dispatch of Viscera and other Articles in Suspected Poisoning Cases & Rules for Transmitting to the Chemical Examiner / Histopathologist / Clinical Pathologist	OSPE, VIVA
Autopsy III	Practical 3	2	Describe the Techniques of Autopsy Describe the Procedure of Dissection of Neck Structures, Respiratory Tract, Heart, Abdominal Viscera & Pelvic Organs Detail Fetal Autopsy	OSPE, VIVA
Sexual Jurisprudence I	Practical 4	2	Define Natural Sexual Offences List the punishments for said offences Describe method of examination of rape	OSPE, VIVA

DEPARTMENT OF COMMUNITY MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

Topic	Mode Of Teaching	Times (hours)	Learning Objectives	Assessment
Occupational Cancers 1	Lecture # 1	1	Define occupational cancers. Describe the risk factors and causes of occupational cancers.	MCQ
Occupational Cancers 2	Lecture # 2	1	Explain types of occupational cancers Discuss the prevention strategies of occupational cancers.	MCQ
HIMS - 1	Lecture #3	1	Define health information management system in Pakistan Discuss the needs for the management information system in PHC programs List the requirements and components of HIMS	MCQ
HIMS- 2	Lecture # 4	1	Briefly explain the important features of HIMS Discuss the sources of HIMS Explain the functions of HIMS	MCQ
Disaster management 1	Lecture # 5	1	Define Disasters and Classify Disasters. Discuss Natural and Man-Made Disasters and Their Impact. Describe Thermonuclear Warfare, Its Concept, and Effects	MCQ
Disaster management 2	Lecture # 6	1	Discuss the Effects, Magnitude, and Public Health Consequences of Disasters. Discuss Disaster Preparedness and Management	MCQ
Revision	tutorial	2	Recall essential topics covered in the previous classes of this module	MCQ
Formative Assessment	Quiz	1	Short quiz	MCQ

DEPARTMENT OF MEDICINE & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Introduction to medical aspects of oncogenetics	Lecture # 1	01	Predict definition of onco-genetics Establish diagnosis and pathology of oncogenes and carcinogen Correlate common malignant disorders with their oncogenes	MCQ

DEPARTMENT OF SURGERY & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Principles of Oncology	Lecture # 1	02	Define and Classify Neoplasia. Explain carcinogenesis, tumor growth, invasion, metastasis, and tumor markers. Outline the diagnostic approach including clinical evaluation, imaging, biopsy techniques, and staging systems. Describe major treatment modalities: surgery, chemotherapy, radiotherapy, immunotherapy, and palliative care in oncosurgery. Explain oncologic surgical principles such as resection margins, lymph node management, staging laparotomy, and the concept of curative vs palliative surgery.	MCQ
Disaster surgery	Lecture # 2	01	Define disaster, mass casualty incident (MCI), and disaster surgery. Explain the components of a disaster management cycle Define triage and its importance in mass casualties. Describe common injury patterns in disasters: Blast injuries Crush injuries & crush syndrome Burns compartment syndrome Explain the importance of infection control and tetanus prophylaxis	MCQ

DEPARTMENT OF GYNAECOLOGY & OBSTETRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Cervical Screening	Lecture # 1	01	1. Understand the significance of transformation zone. 2. Understand the process of detecting precancerous cell changes early by cervical screening. 3. Recognize the rationale behind cervical screening. Identify the high-risk population and age group recommended for cervical screening.	MCQ
Hyperplasia of endometrium	Lecture # 2	01	1. Understand endometrial hyperplasia. 2. Classify its types. Recognize the clinical manifestation of endometrial hyperplasia.	MCQ
Clinical spectrum of Gestational Trophoblastic Disease (GTD)	Lecture # 3	01	1. Classify the gestational trophoblastic disease GTD). 2. Understand the different types of GTD. Recognize the clinical presentation and symptoms associated with each type.	MCQ

DEPARTMENT OF PAEDIATRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Down Syndrome	Lecture # 1	01	Describe Clinical features and management	MCQ
Solid tumours in Children	Lecture # 2	02	Enumerate tumours in children	MCQ

INFECTIOUS DISEASES & IMMUNOLOGY MODULE

INFECTIOUS DISEASES & IMMUNOLOGY

MODULE

Rationale

Infectious diseases remain a leading cause of morbidity and mortality globally and are of particular concern in Pakistan due to endemic infections, emerging antimicrobial resistance, and limited healthcare resources. Understanding the interplay between infectious agents and the human immune system is therefore fundamental to clinical competence.
This module provides a comprehensive understanding of: Mechanisms of infection and host response and Principles of diagnosis and prevention.
Through this integration, students develop the ability to apply foundational microbiological and immunological knowledge to clinical decision-making, community health initiatives, and rational use of antimicrobial agents.

Learning Outcomes of Infectious Diseases and Immunology Module

By the end of Infectious diseases and immunology module, the MBBS student will be able to:

- Explain the structure, classification, pathogenesis, and laboratory diagnosis of major bacterial, viral, fungal, and parasitic infections relevant to human disease.
- Describe the principles of innate and adaptive immunity, including hypersensitivity, immunodeficiency, autoimmunity, and immunization.

- Correlate clinical features, diagnostic findings, and pathophysiological mechanisms of common infectious diseases such as tuberculosis, malaria, dengue, typhoid, HIV, COVID-19 etc.
- Demonstrate safe laboratory practices including staining, culture techniques, sterilization, disinfection, and interpretation of diagnostic tests (e.g., Gram stain, ZN stain, ELISA, PCR).
- Formulate rational antimicrobial and immunomodulatory treatment plans based on mechanisms of action, pharmacokinetics, adverse effects, and principles of antimicrobial stewardship.
- Discuss public health measures for prevention and control of communicable diseases, including vaccination programs, vector control, and infection prevention strategies.

Modular Duration

Module Number	Module Name	Duration	Module In charge	Tentative Assessment Date & Pattern
3.	Infectious diseases and Immunology Module	8 weeks	Dr. Faraz Salim	(Subject to minor changes) 15th May, 2026 MCQs, SEQs & OSPE/Viva

DEPARTMENT OF PATHOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Structure of Bacterial Cell	LECTURE # 1	1	Differentiate between eukaryote and prokaryote cells. List and compare important features of different pathogenic organisms. Discuss the structure of a typical bacterium.	MCQ, SEQ, VIVA
Bacterial Growth and Genetics	LECTURE # 2	1	Discuss bacterial growth curve. Describe the factors that affect bacterial growth. List the methods of DNA transfer in bacteria. State the significance of DNA transfer in drug resistance.	MCQ, SEQ, VIVA
Bacterial Classification and Normal Flora	LECTURE # 3	1	Classify bacteria based on their morphology, gram staining and respiratory method. Define normal flora. List members of normal flora according to their anatomical position.	MCQ, SEQ, VIVA
Antibiotics: Mode of Action and Resistance	LECTURE # 4	1	Explain bacteriostatic and bactericidal activity.	MCQ, SEQ, VIVA

			Describe the mechanism of action of antibacterial drugs. Describe the mechanism of resistance against antibacterial drugs.	
Gram Positive Cocci – I: Staphylococci	LECTURE # 5	1	Describe the important properties of Staphylococcus species. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Gram Positive Cocci – II: Streptococci	LECTURE # 6	1	Describe the important properties of Streptococcus species. Classify Streptococcus species based on hemolysis. Explain their transmission, pathogenesis, and clinical features. Briefly describe their laboratory diagnosis and prevention. Discuss post streptococcal infections.	MCQ, SEQ, VIVA
Gram Negative Cocci	LECTURE # 7	1	Discuss important properties of Neisseria species. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Gram Positive Spore Forming Bacilli	LECTURE # 8	1	Classify Spore Forming Bacilli and discuss their important properties. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA

Spirochetes, Chlamydia and Rickettsia	LECTURE # 9	1	Discuss important properties of Spirochetes, Chlamydia and Rickettsia. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Acid Fast Bacilli	LECTURE # 10			MCQ, SEQ, VIVA
Structure and Classification of Viruses	LECTURE # 11	1	Describe the structure of virus. Discuss the various shape of viruses. Classify viruses based on their genome and envelope.	MCQ, SEQ, VIVA
DNA Enveloped Viruses	LECTURE # 12	1	Discuss important properties of Herpes virus family. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
DNA Nonenveloped Viruses	LECTURE # 13	1	Discuss important properties of Adenovirus, papillomavirus, and Parvovirus. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
RNA Enveloped Viruses – I	LECTURE # 14	1	Discuss important properties of Influenzae virus, Corona virus and Respiratory Syncytial Virus. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA

RNA Enveloped Viruses – II	LECTURE # 15	1	Discuss important properties of MMR viruses and Rabies virus. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention. Discuss important properties of Polio virus, Rhino virus and Rota virus. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
RNA Nonenveloped Viruses	LECTURE # 16	1	Discuss important properties of Dengue virus. Explain its transmission and pathogenesis. Discuss its clinical features. Briefly describe its laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Arboviruses	LECTURE # 17	1	Discuss important properties of Human Immunodeficiency virus. Explain its transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention. Classify and briefly discuss Prions.	MCQ, SEQ, VIVA
Systemic Mycoses	LECTURE # 18	1	Discuss important properties of Coccidioides, Histoplasma, Blastomyces and Paracoccidioides. Explain their transmission and pathogenesis. Discuss their clinical features.	MCQ, SEQ, VIVA

			Briefly describe their laboratory diagnosis and prevention.	
Opportunistic Mycoses	LECTURE # 19	**1**	Discuss important properties of Candida, Cryptococcus and Aspergillus. Explain their transmission and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Intestinal and Urogenital Protozoa	LECTURE # 20	1	Discuss important properties of Entamoeba, Giardia and Trichomonas. Explain their life cycle, transmission, and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Blood and Tissue Protozoa	LECTURE # 21	1	Discuss important properties of Plasmodium and Toxoplasma. Explain their life cycle, transmission, and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Cestodes and Trematodes	LECTURE # 22	1	Discuss important properties of Taenia, Diphyllobothrium, Echinococcus and Schistosoma. Explain their life cycle, transmission, and pathogenesis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Nematodes	LECTURE # 23	1	Discuss important properties of Enterobius, Trichuris and Ascaris. Explain their life cycle, transmission, and pathogenesis.	MCQ, SEQ, VIVA

			Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	
Sterilization & Disinfection	LECTURE # 24		Define the term sterilization & disinfection. Discuss different modes of sterilization & disinfection. List heir uses.	MCQ, SEQ, VIVA
Innate and Adaptative Immunity	LECTURE # 25	1	Define and classify immunity. Discuss First line, Second line and Third line of defense. Differentiate between innate and adaptative immunity. Distinguish active and passive immunity with examples. Classify antibodies on the basis of their structure and function.	MCQ, SEQ, VIVA
Hypersensitivity	LECTURE # 26	1	Define and classify hypersensitivity reactions. Discuss various types of hypersensitivity reactions with examples.	MCQ, SEQ, VIVA
Complement System	LECTURE # 27	1	Identify the key components and pathways of the complement system. Understand the roles of the complement system in immune defense.	MCQ, SEQ, VIVA

By the end of small group session, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Microscope and Simple Saining	PRACTICAL # 1	2	Describe the different parts of the microscope. Handle and focus the microscope independently. Discuss the uses of a microscope Prepare slide from the given sample for simple staining independently. Perform Simple Staining and interpret its result independently. Describe Simple staining technique and its significance.	VIVA, OSPE
Gram Staining	PRACTICAL # 2	2	Discuss the Gram staining principle. Discuss the technique of Gram staining and its significance. Prepare slide from the given sample for Gram staining independently. Perform Gram staining and interpret its microscopic findings independently. State the differentiating characteristics of Gram positive and Gram-negative bacteria. List the Medically important bacteria that cannot be seen in the Gram stain, reasons, and the alternative microscopic approach.	VIVA, OSPE
Ziehl Neelsen Staining	PRACTICAL # 3	2	Prepare slide from the given sample for ZN staining independently Perform ZN staining and interpret its microscopic findings independently. Discuss the technique of ZN staining and its clinical significance.	VIVA, OSPE

Capsule and Endospore Staining	PRACTICAL # 4	2	Prepare slide from the given sample for Capsule and Endospore staining independently Perform Capsule and Endospore staining and interpret its findings independently. Discuss the technique of Capsule and Endospore staining and its clinical significance.	VIVA, OSPE
Culture Media	PRACTICAL # 5	2	Define culture media. List composition and uses of culture media. Classify and discuss culture media on the basis of consistency and chemical composition.	VIVA, OSPE
Sterilization and Disinfection	PRACTICAL # 6	2	Define sterilization and disinfection. List various methods used for sterilization. Describe various methods used for sterilization and disinfection and their application in hospitals, OTs, Labs, and health related institutions. Differentiate between sterilization and disinfection. Explain the different processes involved in sterilization and disinfection and their significance. Explain the principle of working of autoclave, hot air oven and incubator.	VIVA, OSPE
Microbiology Diagnostic Techniques	PRACTICAL # 7	2	Describe the principle and procedure of ELISA, PCR and Blotting List their uses in laboratory testing of various pathogens.	VIVA, OSPE
Significance of ELISA + PCR	TUTORIAL # 8	2	Discuss significance in laboratory testing of various viruses. Discuss the significance of Polymerase chain reaction (PCR) in relation to viral infections like HBV, HCV and HIV.	VIVA

DEPARTMENT OF PHARMACOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
PRINCIPLES OF ANTIMICROBIAL THERAPY	Lecture # 1	**1**	Define Optimal antimicrobial prescription. List reasons of appropriate antimicrobial use Identify selection criteria of antimicrobial drugs. Classify antimicrobial drugs according to mode ofaction, spectrum of activity and origin. Define anti-microbial susceptibility testing. List recommended common combinations ofantimicrobial drugs.	MCQ, SEQ, VIVA
PENICILLINS &OTHER BETA LACTAM ANTIBIOTICS	Lecture # 2	**1**	Define beta lactam antibiotics. Classify beta lactams antibiotics Explain mechanism of action of Amoxicillin, Imipenem-cilastatin, Aztreonam, Vancomycin and Daptomycin. List the pharmacokinetic properties of these drugs List clinical uses of these drugs List common adverse effects and contraindications ofthese drugs	MCQ, SEQ, VIVA
CEPHALOSPORINS	Lecture # 3	**1**	Classify cephalosporin with respect to generation ofdrug.	MCQ, SEQ, VIVA

			Explain mechanism of action of Cephalosporins. List the pharmacokinetic properties of these drugs. 1st generation: Cefradine and Cefadroxil. 2nd generation: Cefaclor and Cefuroxime. 3rd generation: Ceftriaxone and Cefixime. 4th generation: Cefepime and Cefpirome. List the clinical uses of these drugs. List the common adverse effects and contraindicationsof these drugs.	
AMINOGLYCOSIDES	Lecture # 4	**1**	Classify protein synthesis inhibitors. Classify aminoglycosides Explain mechanism of action of aminoglycosides List the pharmacokinetic properties of Amikacin, Gentamicin and Streptomycin. List the clinical uses of these drugs. List common adverse effects and contraindications of these drugs	MCQ, SEQ, VIVA
TETRACYCLINES	Lecture # 5	**1**	Classify tetracyclines. Explain mechanism of action of tetracyclines. List the pharmacokinetic properties of tetracyclines. List the clinical uses of tetracyclines. List the adverse effects & contraindications oftetracyclines.	MCQ, SEQ, VIVA
	Lecture # 6	**1**	Classify Macrolides.	MCQ, SEQ, VIVA

MACROLIDES			Explain mechanism of action of Macrolides. List the pharmacokinetic properties of Erythromycin,Azithromycin and Clarithromycin. List clinical uses of these drugs. List common adverse effects and contraindications ofthese drugs.	
CHLORAMPHENICOLAND CLINDAMYCIN	Lecture # 7	**1**	Explain mechanism of action of Chloramphenicol andClindamycin. List the pharmacokinetic properties of these drugs. List the clinical uses of these drugs. List the common adverse effects andcontraindications of these drugs.	MCQ, SEQ, VIVA
FLUOROQUINOLONES	Lecture # 8	**1**	Classify Fluoroquinolones. Explain the mechanism of action of Fluoroquinolones. List the pharmacokinetic properties of Ofloxacin,Ciprofloxacin and levofloxacin. List the clinical uses of these drugs. List the common adverse effects and contraindicationsof these drugs.	MCQ, SEQ, VIVA
FOLIC ACID ANTAGONISTS	Lecture # 9	**1**	Classify Antifolate drugs. Explain the mechanism of Sulfonamides,Trimethoprim and Sulphamethoxazole List the pharmacokinetic properties of these drugs. List the clinical uses of these drugs. List the common adverse effectsand contraindications of these drugs. .	MCQ, SEQ, VIVA
	Lecture # 10	**1**	Classify drugs used to treat tuberculosis.	MCQ, SEQ, VIVA

DRUGS FOR TUBERCULOSIS			Explain Mechanism of action of Isoniazid, Rifampin,Ethambutol and Pyrazinamide. List the pharmacokinetic properties of these drugs. List common adverse effects and contraindications ofthese drugs.	
DRUGS FOR HEPATIC VIRAL INFECTIONS	Lecture # 11	**1**	Define virus List the Types of viruses Classify drugs used to treat hepatitis Explain mechanism of action of Ribavirin &Interferon alpha. List the pharmacokinetic properties of these drugs. List the clinical uses of these drugs List common adverse effects and contraindications of these drugs.	MCQ, SEQ, VIVA
DRUGS FOR HIVINFECTIONS	Lecture # 12	**1**	Classify drugs used to treat HIV infections Explain mechanism of action of Zidovudine, Abacavir(NRTIs), Efavirenz (NNRTI), Ritonavir (PI) List the clinical uses of these drugs. List the pharmacokinetic properties of these drugs. List common adverse effects and contraindications ofthese drugs.	MCQ, SEQ, VIVA
ANTI FUNGALS	Lecture # 13	**1**	Outline types of mycotic infections. Classify antifungal drugs. Explain the mechanism of action of Amphotericin B,Flucytosine and Griseofulvin.	MCQ, SEQ, VIVA

			List the pharmacokinetic properties of these drugs. List indications, common adverse effects and contraindications of these drugs.	
DRUGS FORMALARIA	Lecture # 14	**1**	Outline the lifecycle of Malarial parasites Classify antimalarial drugs Explain the mechanism of action of Chloroquine,Arthemeter & Quinine List the pharmacokinetic properties of these drugs. List common adverse effects and contraindications ofthese drugs.	MCQ, SEQ, VIVA
AMEBICIDAL DRUGS	Lecture # 15	**1**	Classify amoebicidal drugs according to site of action. Explain the mechanism of action of Metronidazole,Diloxanide furoate and Emetine. List clinical uses of these drugs List the pharmacokinetic properties of these drugs List its common adverse effects and contraindicationsof these drugs	MCQ, SEQ, VIVA
ANTI HELMINTHIC DRUGS	Lecture # 16	**1**	Classify anti-helminthic drugs. Explain mechanism of action ofAlbendazole, Mebendazole and Ivermectin. List the pharmacokinetic properties of these drugs. List clinical uses of these drugs List common adverse effects and contraindications ofthese drugs.	MCQ, SEQ, VIVA
	Lecture # 17	**1**	Define disinfectants and antiseptics. List properties of standard Antiseptics andDisinfectants.	MCQ, SEQ, VIVA

ANTI-SEPTICS AND DISINFECTANTS			List common Antiseptics and Disinfectants. Explain mechanism of action of an Antiseptic and aDisinfectant. List common uses of Anti-septics and Disinfectants.	
IMMUNOMODULATORS	Lecture # 18	**1**	Define immunomodulators. Classify immunomodulators. Explain mechanism of action of Cyclosporin, Prednisone and Azathioprine as Immunosuppressants. Explain mechanism of action of Interferons asImmune potentiators. List the pharmacokinetic properties of these drugs. List clinical uses of these drugs List common adverse effects and contraindications ofthese drugs.	MCQ, SEQ, VIVA
IMMUNIZATION & VACCINATION	Lecture # 19	**1**	Define immunization. Differentiate between active and passive immunization. Define a vaccine. List the types of vaccines with examples.	MCQ, SEQ, VIVA

By the end of each Small Group Session (Tutorial) the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME HOURS	LEARNING OBJECTIVES	ASSESSMENT
Infective endocarditis	TUTORIAL# 1	2 HOURS	Define Infective Endocarditis. List drugs used to treat Infective Endocarditis. Write down the prescription of the given case.	OSPE
Tuberculosis	TUTORIAL# 2	2 HOURS	Classify 2nd line drugs used to treat TB. Discuss the pharmacodynamics and pharmacokineticsof 2nd line drugs used to treat TB.	OSPE

			Describe the pharmacological management of multidrug-resistant tuberculosis. Write down the prescription of the given case.	
Malaria	TUTORIAL# 3	2 HOURS	List the drugs used for the prophylaxis of malaria Discuss the pharmacodynamics and pharmacokineticsof Mefloquine & Primaquine. List the drugs used to treat malaria during pregnancy. Define cerebral malaria. List drugs used to treat cerebral malaria. Write down the prescription of the given case.	OSPE
Amoebic dysentery	TUTORIAL# 4	2 HOURS	Define Amoebic Dysentery List drugs used to treat Amoebic Dysentery Write down the prescription of the given case.	OSPE
Fungal infections	TUTORIAL# 5	2 HOURS	List the topical drugs for superficial fungal infections. Define candidiasis. Discuss the pharmacodynamics and pharmacokineticsof Fluconazole & Nystatin. Write down the prescription of the given case.	OSPE
Typhoid fever	TUTORIAL# 6	2 HOURS	Define Typhoid fever. List the drugs used to treat Typhoid fever Write down the prescription of the given case.	OSPE
Herpes viral infections	TUTORIAL# 7	2 HOURS	List drugs used to treat herpes viral infections Explain mode of action of Acyclovir. List indications, common adverse effects and contraindications of the drug. Write down the prescription of the given cases.	OSPE

By the end of each small group session (practical) , the students of 3rd year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Overview of Ointments + Preparation & Dispensing of Zinc Oxide Ointment	PRACTICAL# 1	2	Demonstrate the steps of preparation and dispensing of Zinc Oxide Ointment List the uses of Zinc Oxide Ointment	OSPE

Overview of Solutions + Preparation & Dispensing of Compound sodium chloride mouthwash.	PRACTICAL# 2	2	Define Mouthwash List the types of Mouthwashes List the ingredients of an antiseptic mouthwash. Demonstrate the steps of preparation and dispensing of Compound sodium chloride mouthwash. List the uses of sodium chloride mouthwash.	OSPE

DEPARTMENT OF FORENSIC MEDICINE

LEARNING OBJECTIVES

By the end of each small group session (practical), the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Sexual Jurisprudence II	Practical # 1	2	Define Unnatural Sexual Offences List the punishments for said offences Describe method of examination of sodomy	OSPE, VIVA
Sexual Jurisprudence III	Practical # 2	2	Give Legal Definition of Rape Define Indecent Assault Detail Feigned Rape & ML Questions on Rape	OSPE, VIVA
Sexual Jurisprudence IV	Practical # 3	2	Define Incest & its ML importance list & Classify Sexual Perversions Define Adultery & its ML importance.	OSPE, VIVA
MLR I	Practical # 6	2	Write the Medico-legal Reports of: • Age Certification • Drunk / Alcoholic Poisoning	OSPE, VIVA
MLR II	Practical # 7	2	Write the Medico-legal Reports of: • Assault • Burns Vitriolage	OSPE, VIVA
Introduction to Toxicology I	Practical # 8	2	Define Toxicology & Poison Classify Poisons based on Medico-legal ground	OSPE, VIVA

DEPARTMENT OF COMMUNITY MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

Topic	Mode Of Teaching	Time (hours)	Learning Objectives	Assessment
Introduction to communicable diseases	Lecture #1	1	Define infectious diseases Explain the key definitions associated with infectious diseases. Discuss different preventive measures for common infectious diseases in Pakistan.	MCQ
Classification of communicable diseases	Lecture # 2	1	Discuss the classification in communicable diseases in detail	MCQ
Introduction to Immunization	Lecture # 3	1	Define immunization Explain the types of immunization Discuss the EPI schedule in Pakistan.	MCQ
Tuberculosis - 1	Lecture # 4	1	Identify the common risk factors for tuberculosis in Pakistan Discuss the prevention strategies of Tuberculosis	MCQ
Tuberculosis -2	Lecture # 5	1	Discuss the management of TB. Describe the components of the Directly Observed Treatment, Short-course (DOTS) program	MCQ

Prevention of malaria & dengue	Lecture # 6	2	Explain the vector control measures for preventing malaria and dengue. Discuss the importance of personal protective measures and community-based interventions in controlling malaria and dengue outbreaks	MCQ
Prevention of Covid Infection	Lecture # 7	1	Describe the key preventive strategies for COVID-19. Explain the role of public health policies, quarantine, and community awareness in preventing the spread of COVID-19.	MCQ
Prevention of Typhoid and cholera	Tutorial	2	Explain the causes and risk factors typhoid Explain the causes and risk factors cholera Describe the key preventive strategies for typhoid and cholera	MCQ
Revision	Tutorial	2	Recall essential topics covered in the previous classes of this module	MCQ
Formative Assessment	Quiz	1	Short quiz	MCQ

DEPARTMENT OF MEDICINE & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Introduction to infectious disorders	Lecture # 1	1	Classify and categorize common infectious agents Illustrate common infectious diseases which are the cause 5 most common causes of death in lower world countries	MCQ
Clinical presentation of common infectious disorders	Lecture # 2	1	Appraise common clinical manifestation of common clinical infectious diseases Establish clinical investigation pool to determine common clinical infections Summarize treatment of common clinical infections	MCQ
Introduction to clinical aspects of immunology	Lecture # 3	1	Demonstrate clinical aspect of immune system and immunology	MCQ
	Lecture # 4	1	Describe application of immunology in medical practice including autoimmune disorders, hypersensitivity disorders, immunodeficiency and immunotherapy	MCQ

DEPARTMENT OF SURGERY & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Surgical infection	Lecture # 1	1	Define Surgical site infections (SSI) Describe the Classification of Surgical Infections Enlist the Etiology and Risk Factors of Surgical Infections Explain Pathophysiology of Surgical Infections Enumerate the factors affecting Surgical Infections Recognize Clinical Features of Surgical Infections Outline Principles of Management of Surgical Infections including incision and drainage, debridement, antimicrobial therapy, wound care, and supportive treatment.	MCQ
Intestinal tuberculosis	Lecture # 2	1	Describe the Etiology and Pathogenesis of Intestinal TB Identify Common Anatomical Sites and Patterns of Disease Recognize Clinical Features and Differential Diagnosis of Intestinal TB List typical symptoms of Intestinal TB Outline appropriate investigations of Intestinal TB Explain Principles of Medical and Surgical Management of Intestinal TB Enlist the indications for surgical intervention Enumerate complications of Intestinal TB	MCQ
Typhoid perforation	Lecture # 3	1	Describe the Pathogenesis of Typhoid Fever Leading to Perforation Identify Clinical Features of Typhoid Perforation Outline the Diagnostic Approach of Typhoid Perforation Explain Principles of Preoperative and Emergency Management of Typhoid Perforation Outline Surgical Management Options of Typhoid Perforation Discuss Postoperative Care and Complications of Typhoid Perforation.	MCQ

DEPARTMENT OF GYNAECOLOGY & OBSTETRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Clinicopathological classification of vaginal discharge	Lecture # 1	1	1. Classify physiological and pathological vaginal discharges. 2. Discuss the clinical manifestation of various pathological discharges.	MCQ
Consequences of Pelvic inflammatory disease (PID)	Lecture # 2	1	1. Define pelvic inflammatory disease. 2. Recognize the causative organisms for PID. 3. Discuss the clinical manifestations of PID. 4. Understand the consequences of PID.	MCQ

DEPARTMENT OF PAEDIATRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Enteric Fever	Lecture # 1	1	Describe clinical features, diagnosis and treatment.	MCQ

NEUROSCIENCE

MODULE II

NEUROSCIENCE MODULE II

Rationale

The Neurosciences Module–II aims to provide an integrative understanding of the structure, function, and pathology of the nervous system, emphasizing the continuum from basic mechanisms to clinical manifestations and community health implications. A comprehensive understanding of their pathogenesis, pharmacologic management, and prevention strategies is therefore essential for developing competent and socially accountable physicians.

Through this module, students will develop the ability to correlate structural and functional alterations in the nervous system (Pathology) with rational therapeutic approaches (Pharmacology) and population-level prevention and control strategies (Community Medicine). The integration fosters analytical thinking, diagnostic reasoning, and ethical clinical decision-making aligned with patient safety and community health priorities.

Learning Outcomes of Neurosciences Module

By the end of Neurosciences module, the MBBS student will be able to:

- Explain the pathophysiological basis, clinical manifestations, and epidemiology of major neurological disorders, including cerebrovascular diseases, infections, neurodegenerative conditions etc.
- Correlate morphological and laboratory findings with clinical features to establish diagnostic reasoning in neurological diseases.
- Describe the pharmacological principles underlying the use of anesthetics, antiepileptics, antidepressants, antiparkinsonian, and neuroprotective drugs, ensuring rational and safe prescribing.
- Discuss the community burden, risk factors, and preventive strategies for neurological and mental health disorders, including stroke, Parkinson's disease, and substance abuse.

- Demonstrate skills in identifying key pathological specimens, interpreting pharmacologic data, and formulating management plans for common neurological conditions.

Modular Duration

Module Number	Module Name	Duration	Module In charge	Tentative Assessment Date & Pattern
4.	Neurosciences Module - II	4 weeks	Dr. Sarah Azhar	(Subject to minor changes) 17th July, 2026 MCQs, SEQs & OSPE

DEPARTMENT OF PATHOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Patterns of injury in the Nervous System	Lecture #1	1	List the causes of Injuries to nervous system. Discuss the pattern of response of the cellular constituents of the nervous system to various forms of injury. List the symptoms and signs related to injuries.	MCQ, SEQ, VIVA
Cerebrovascular Diseases I	Lecture #2	1	List the causes of cerebrovascular diseases. Discuss the pathogenesis List the morphological patterns of hypoxia, cerebral ischemia (focal & global) and cerebral infarction.	MCQ, SEQ, VIVA
Cerebrovascular Diseases II	Lecture #3	1	List the causes of intracranial haemorrhage. Discuss the pathogenesis of intracranial hemorrhage, aneurysms & vascular malformations, traumatic parenchymal and vascular cerebral injuries. Differentiate between epidural and subdural hematoma. List the symptoms and signs.	MCQ, SEQ, VIVA
Central Nervous System Infections	Lecture # 4		Identify the pathogens responsible for Central Nervous System Infections. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
Infections of the Nervous System - I	Lecture # 5	1	List the various infectious agents of the nervous system. Describe the pathogenesis and related morphology of epidural and subdural infections. Compare aseptic meningitis, acute bacterial meningitis and chronic meningitis.	MCQ, SEQ, VIVA

Infections of the Nervous System - II	Lecture # 6	1	Discuss the pathophysiology and related morphological findings of parenchymal infections of CNS i.e., Viral Encephalitis, Brain abscess, Fungal Encephalitis Meningoencephalitides and Prion diseases	MCQ, SEQ, VIVA
Neuro-degenerative Diseases & Dementia	Lecture # 7	1	List the different neurodegenerative diseases of brain. Discuss the causes, pathogenesis & morphology of Alzheimer disease. Discuss the pathophysiology, clinical and morphological features of Parkinsonism. Explain the pathology and diagnosis of 2Huntington disease and spinocerebellar degenerations.	MCQ, SEQ, VIVA
Edema, Herniation & Hydrocephalus	Lecture # 8	1	List the causes of generalized cerebral edema, vaso-genic edema, cytotoxic edema & focally expanding mass lesions. List the causes of Hydrocephalus. Discuss the pathogenesis & morphology of Hydrocephalus causing disorders. Compare and Contrast Edema & Hydrocephalus. Differentiate different types of herniation, i.e., Sub-falcine (cingulate), Trans-tentorial (uncinate) & Tonsillar herniation.	MCQ, SEQ, VIVA
Primary diseases of Myelin	Lecture # 9	1	List the causes of primary diseases of myelin. Discuss the pathogenesis & morphology of Multiple Sclerosis, other Acquired Demyelinating diseases.	MCQ, SEQ, VIVA
Tumors of Central Nervous System- I	Lecture # 10	1	Classify the tumours of CNS. Define and classify Glioma. Compare Astrocytoma, Oligo-Dendroglioma and Ependymoma based on their etiology, pathogenesis and morphology.	MCQ, SEQ, VIVA
Tumors of Central Nervous System- II	Lecture # 11	1	Discuss poorly differentiated neoplasms of CNS i.e., Medulloblastoma, Meningioma & other metastatic tumors with their pathogenesis and morphology.	MCQ, SEQ, VIVA
Disorders and Demyelinating Diseases of Peripheral Nervous System	Lecture # 12	1	List the causes of peripheral Neuropathy. Describe the causes, pathogenesis & morphology of Guillain-Barré Syndrome.	MCQ, SEQ, VIVA

			Explain Segmental Demyelination and Axonal Degeneration Classify demyelinating disorders. Discuss demyelinating disorders on the basis of their pathogenesis, morphology and clinical features	
Tumors of Peripheral Nervous System	Lecture # 13	1	Classify the tumors arising from peripheral nervous system. Discuss the causes, pathogenesis and morphology of Schwannoma, Neuro-fibroma, and Malignant Peripheral Nerve Sheath Tumor.	MCQ, SEQ, VIVA

By the end of small group session, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Cerebro-vascular diseases	Tutorial # 1	2	Comprehend a given a clinical scenario Identify the gross & microscopic features of cerebrovascular accident.	VIVA
Infections Of CNS	Tutorial # 2	2	Differentiate between different types of infective encephalitis based on the given scenarios. Comprehend the lab findings. Differentiate between different types of infective meningitis based on the given scenarios. Comprehend the lab findings. Identify the specimen on the basis of morphology	VIVA, OSPE
Tumours of CNS	Practical #3	2	Recall the classification List the gross & microscopic features of important tumours of CNS.	VIVA, OSPE

DEPARTMENT OF PHARMACOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Local anesthetics	Lecture # 1	1	Define anesthesia. Define Local anesthetics. Classify local anesthetics withexamples. Explain mechanism of actionof Lidocaine. List the pharmacokinetic propertiesof Lidocaine. List the common side effectsand contraindications of Lidocaine. List the drug interactions of Lidocaine.	MCQ, SEQ, VIVA
General anesthetics i(inhaled)	Lecture # 2	1	Define general anesthesia. Classify General anesthetics Discuss stages of Anesthesia (1to 4). Discuss patient protocol for Anesthesia selection. Explain mechanism of action of inhaled anesthetics. (Halothane, NO2, Isoflurane) List the pharmacokineticproperties of these drugs List the pharmacological effects of these drugs on various organ systems. List the common adverse effects and contraindications of these drugs.	MCQ, SEQ, VIVA
General anesthetics ii(intravenous)	Lecture # 3	1	Classify intravenous anesthetics	MCQ, SEQ, VIVA

			Explain mechanism of action of Propofol and Ketamine. List the pharmacokinetic properties of Propofol and Ketamine. List the pharmacological effects of Propofol and Ketamine on various organsystems. List the common adverse effects and contraindicationsof Propofol and Ketamine.	
Sedative-hypnotics	Lecture # 4	1	Classify Benzodiazepines and Barbiturates according to duration of action. Explain the mechanism of action of Benzodiazepine (Diazepam)(Phenobarbital) List the pharmacokinetics properties of these drugs. List the clinical uses of these drugs List the adverse effects and contraindications of these drugs	MCQ, SEQ, VIVA
Anti- depressants	Lecture # 5	1	Outline pathophysiology of depression. Classify antidepressants onbasis of their mechanism ofaction. List the pharmacokineticsproperties of Fluoxetine, Venlafaxine,Imipramine, Phenelzine. List the clinical uses of these drugs List the adverse effects &contraindications of these drugs	MCQ, SEQ, VIVA
Drugs used in epilepsy	Lecture # 6	1	Define and classify seizures. Classify anti-epileptic drugs. Explain mechanism of aCarbamazepine and Valproic acid. List the pharmacokineticsproperties of these drugs.	MCQ, SEQ, VIVA

			Correlate the clinical usesof these anti-epileptics with the type of seizures. List the adverse effects andcontraindications of these drugs	
Anti- Parkinson drugs	Lecture # 7	1	Classify Anti Parkinson'sdrugs. Explain mechanism of action of Levodopa and Carbidopa. List the pharmacokineticsproperties of these drugs. List the clinical uses of List the adverse effects and contraindications ofthese drugs.	MCQ, SEQ, VIVA
Drugs used in neurodegenerative disorders	Lecture # 8	1	Classify the drugs used totreat Alzheimer's disease, multiple sclerosis and Amyotrophic lateral sclerosis (ALS). Explain the mechanism ofaction of Rivastigmine, Interferon-beta, Riluzole. List the pharmacokineticsproperties of these drugs. List the adverse effects of thesedrugs	MCQ, SEQ, VIVA
Drugs for bipolar disorder	Lecture # 9	1	Outline pathophysiology ofbipolar disorder. List the drugs for bipolar disorder. Explain mechanism ofaction of Lithium. List the pharmacokineticsproperties of Lithium. List the common adverseeffects and contraindications of Lithium.	MCQ, SEQ, VIVA
Opioid agonists and antagonists	Lecture # 10	1	List the opioid agonists and antagonists with respect to target receptors. Explain mechanism of action of Morphine and Codeine. Correlate clinical use of Morphine and Codeine.	MCQ, SEQ, VIVA

			List the pharmacokinetics properties of Morphine and Codeine. List the common adverseeffects and contraindicationsof opioids.	
Drugs of abuse	Lecture # 11	1	Define Drug Abuse Classify Drugs of Abuse Enumerate various stepsof the management of various drugs of abuse.	MCQ, SEQ, VIVA
Anti-psychotic disorders	Lecture # 12	1	Outline pathophysiology of psychotic disorder. Classify anti-psychotic drugs. Explain mechanism of action of Chlorpromazine, Haloperidol and Fluphenazine. List the pharmacokineticsproperties of these drugs. List the clinical uses ofdrugs List the common adverse effectsand contraindications of thesedrugs.	MCQ, SEQ, VIVA

By the end of each Small Group Session (Tutorial) the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Anesthesia	Tutorial # 1	2	List pre-anesthetic medications. Discuss the role of anti-cholinergic and benzodiazepines as pre-anestheticmedications. Discuss the pharmacodynamics and pharmacokinetics Thiopental. Explain the pharmacological management of the given case	OSPE
Anxiety disorders	Tutorial # 2	2	Discuss the pharmacodynamics and pharmacokinetics of Lorazepam. Write down the prescription of the givencase.	OSPE

Depression	Tutorial # 3	2	Define serotonin syndrome. List the common drug-interactions associated with the use of anti- depressants. Write down the prescriptions of the givencases.	OSPE
Epilepsy & Status Epilepticus	Tutorial # 4	2	Define Status Epilepticus. List drugs used to treat Status Epilepticus. Discuss the pharmacodynamics and pharmacokinetics of Ethosuximide,Gabapentin and Lamotrigine. Write down the prescriptions of the given case.	OSPE
Parkinson's disease	Tutorial # 5	2	Discuss the pharmacodynamics and pharmacokinetics of Entacapone, Selegeline and Bromocriptine. Explain the pharmacological management of the given case.	OSPE
Opioids	Tutorial # 6	2	Discuss the sign and symptoms of Opiatewithdrawal syndrome. List the drugs used to treat Opiatewithdrawal syndrome. Discuss the pharmacodynamics andpharmacokinetics of Methadone, Naloxone and Nalbuphine. Explain the pharmacological managementof the given case.	OSPE
Introduction to powders	Tutorial # 7	2	Define Powders. List the ingredients of powders. ` Classify Powders with examples. List the advantages and disadvantages ofpowders.	OSPE

By the end of each small group session (practical) , the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Preparation and dispensing of simple powder	Practical # 1	2	Define simple powders along withexamples Demonstrate the steps of preparation anddispensing of Phenobarbitone powder.	OSPE

			List the uses of Phenobarbitone powder.	
Preparation and dispensing of compound powder	Practical # 2	2	Define compound powders along withexamples Demonstrate the steps of preparation anddispensing of Hyoscine Hydro Bromide and pilocarpine powder. List the uses of pilocarpine powder,hyoscine Hydro Bromide powder	OSPE
Demonstration ofthe effects of local anesthetic on leg of frog	Practical # 3	2	Differentiate between surface anesthesiaand infiltrative anesthesia. Demonstrate the effects of local anesthetic i.e. Lidocaine 2% as surfaceanesthetic and infiltrative anesthetic onleg of frog.	OSPE

DEPARTMENT OF FORENSIC MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd year MBBS will be able to:

TOPIC	MODE OFTEACHING	TIME (hours)	LEARNINGOBJECTIVES	FACILITATORS
Forensic Psychiatry	Lecture#1	1	Describe salient features of Mental Health Ordinance 2001. Diagnose & Certify Mental Illness. Learn about Mental Retardation / Mental Sub-normality or Deficiency ---- Psychosis & Neurosis.	SEQ, MCQ, VIVA
Forensic Psychiatry	Lecture#2	1	Detail Restraint of the Mentally ill (Insane) person Explain different Subjective Disorders like Delusion, Hallucination, Illusion, Obsession, Impulse Explain psychiatric disorders like Bipolar Schizophrenia	SEQ, MCQ, VIVA
Forensic Psychiatry	Lecture#3	1	Recognize Motives of Feigned insanity. Discuss Civil & Criminal Responsibilities of the insane person	SEQ, MCQ, VIVA

By the end of each small group session (practical) , the students of 3rd year MBBS will be able to:

TOPIC	MODE OFTEACHING	TIME (hours)	LEARNINGOBJECTIVES	FAcilitator
Deliriant Poisons	Practical#2	2	List the Uses of all the above Deliriant Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all. Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	VIVA, OSPE
Spinal Poisons	Practical#3	2	List the Uses of all the above Spinal Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all. Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	VIVA, OSPE
Organophosphates Poison	Practical#4	2	List the Uses of all the above Organophosphate Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all. Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	VIVA, OSPE
Somniferous Poisons	Practical#5	2	List the Uses of Sonniferous Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute	VIVA, OSPE

			Poisoning as well as Chronic Poisoning of all. Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	
Peripheral Nerve Poisons	Practical#6	2	List the Uses of all the above Peripheral nerve Poisons. Describe the Mechanism of Action of all these. List the treatment Diagnose the Acute Signs & Symptoms of all these Poisonings	VIVA, OSPE
CNS Stimulants	Practical#7	2	Describe mechanism of action Diagnose the Acute Signs & Symptoms of all these Poisonings List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all.	VIVA, OSPE
Oil & Inebriant Poisons	Practical#8	2	List the Uses of all the above Oil & Inebriant Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all. Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	VIVA, OSPE

DEPARTMENT OF COMMUNITY MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

Topic	Mode Of Teaching	Time duration (Hours)	Learning Objectives	Assessment
Stroke prevention	Lecture	1	Describe the prevalence, burden, and impact of stroke on individuals and communities List modifiable and non-modifiable risk factors for stroke Discuss the primary and secondary prevention strategies for stroke	MCQ
Parkinson's disease prevention	Lecture	1	Discuss the epidemiology of Parkinson's disease. List the risk factors for Parkinson's disease Describe the prevention strategies for Parkinson's disease	MCQ
Neurological diseases in children	Lecture	1	List prevalent neurological diseases in children Discuss the strategies, interventions and practices for the prevention of neurological diseases in children	MCQ
Self-medication	Lecture	1	Define self-medication and list common practices. Discuss risk factors of self-medication, such as drug interactions and misuse. Discuss safe practices by emphasizing the importance of following medication instructions	MCQ
Child abuse	Lecture	1	Define child abuse, its forms, risk factors, and the physical, emotional, and psychological effects. Describe legal protections against child abuse	MCQ
Mental health	Tutorial	2	Describe the common mental health disorders in the community, including depression, anxiety, and psychosis, and their epidemiological significance. Identify the risk factors and social determinants contributing to mental health disorders, including stigma, poverty, and substance abuse. Explain the principles of mental health promotion, prevention strategies, and the role of primary healthcare in managing mental illnesses at the community level.	MCQ
Formative assessment	quiz	2	Short quiz	MCQ

DEPARTMENT OF MEDICINE & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Stroke	Lecture # 1	1	Define and classify strokes: Differentiate between ischemic and hemorrhagic strokes Identify the common signs and symptoms of stroke, including motor deficits, sensory deficits, speech disturbances, and visual changes. Interpret neuroimaging studies: Understand the role of CT scans and MRI in diagnosing and characterizing different types of strokes. Describe the principles of acute stroke management.	MCQ
Acute Bacterial Meningitis	Lecture # 2	1	Identify the typical clinical manifestations of acute bacterial meningitis. Describe the most common bacterial pathogens responsible for acute bacterial meningitis. Explain the appropriate diagnostic tests used to confirm acute bacterial meningitis. Discuss the significance of cerebrospinal fluid (CSF) analysis, including cell count, protein, and glucose levels. Describe the principles of treatment for acute bacterial meningitis, including the use of antibiotics.	MCQ
Parkinson's Disease	Lecture # 3	1	Understand and describe what Parkinson's disease is, its clinical manifestations. Identify the prevalence of PD and common risk factors associated with the development of the disease. Recognize the hallmark clinical features of PD. Understand the diagnostic criteria and methods used to confirm PD. Discuss the pharmacological approaches used to manage PD symptoms.	MCQ

DEPARTMENT OF SURGERY & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Head Injury	Lecture # 1	1	Define head injury Classify head injury Recognize common causes of head injury Describe the Pathophysiology of Head Injury Recognize Clinical Features and Warning Signs of head injury Describe primary and secondary survey (ATLS principles), Glasgow Coma Scale (GCS) assessment, and relevant imaging (CT scan, MRI). Outline initial resuscitation, airway management, stabilization, medical management of raised ICP. Enlist the indications for surgical intervention	MCQ
Hydrocephalus	Lecture # 2	1	Define hydrocephalus Explain the Classification of Hydrocephalus Describe Etiology of hydrocephalus. Explain the Pathophysiology of hydrocephalus Recognize Clinical Features of hydrocephalus Outline Diagnostic Approaches for hydrocephalus Explain Principles of Management of hydrocephalus Enlist the Complications of hydrocephalus	MCQ

DEPARTMENT OF PAEDIATRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Lower Motor Neuron Lesion / Acute flaccid paralysis	Lecture # 1	1	Describe LMN and AFP	MCQ
Upper motor neuron lesion / Cerebral Palsy	Lecture # 2	1	Describe LMN and CP.	MCQ

CVS & BLOOD
MODULE II

CVS & BLOOD MODULE II

Rationale

The Cardiovascular System (CVS) & Blood Module – II is designed to build upon students' foundational knowledge of pathology, pharmacology, and clinical sciences, integrating them into a holistic understanding of cardiovascular and hematological disorders. Cardiovascular and hematologic diseases are among the leading causes of morbidity and mortality worldwide, making their comprehension essential for every physician. This module emphasizes the pathophysiological basis, clinical correlations, and rational therapeutic approaches to common diseases such as ischemic heart disease, hypertension, anemia, leukemias, and coagulation disorders. Through integrated teaching, students develop clinical reasoning, diagnostic interpretation, and decision-making skills.

Learning Outcomes of CVS and Blood Module

By the end of CVS and Blood module, the MBBS student will be able to:

- Explain the normal structure and function of the cardiovascular and hematopoietic systems, and describe how pathological alterations lead to disease.
- Discuss the etiopathogenesis, morphology, and clinical features of major cardiovascular and hematologic disorders including ischemic heart disease, hypertension, heart failure, anemia, leukemias, and lymphomas etc.
- Correlate clinical manifestations with laboratory and pathological findings to formulate differential diagnoses and management plans.
- Demonstrate understanding of pharmacological principles underlying the use of drugs in hypertension, heart failure, arrhythmias, anemia, and coagulation disorders etc.
- Apply principles of preventive and community medicine in recognizing risk factors, screening strategies, and prevention of cardiovascular and hematologic diseases.
- Perform basic hematological investigations and correlate them with clinical findings.

MODULAR DURATION

Module Number	Module Name	Duration	Module In charge	Tentative Assessment Date & Pattern
5.	Cardio-vascular System & Blood Module	8 weeks	Dr. Faraz Salim	(Subject to minor changes) 11th September, 2026 MCQs, SEQs & OSPE

DEPARTMENT OF PATHOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Atherosclerosis	Lecture # 1	1	Define Atherosclerosis, Arteriolosclerosis and Monckeberg Medial Calcific sclerosis. List the causes and risk factors of atherosclerosis. Describe the pathogenesis. List five common vessels affected by atherosclerosis. Identify the gross and microscopic morphological features of Atherosclerosis. List the complications of atherosclerosis	MCQ, SEQ, VIVA
Vasculitis	Lecture # 2	1	Define Vasculitis. Classify vasculitis on the basis of size of blood vessels involved. Describe the pathogenesis. Identify the morphological features of different types of vasculitis.	MCQ, SEQ, VIVA
Tumours of blood vessels	Lecture # 3	1	Classify benign and malignant tumors of blood vessels. List the morphological features of the tumors of blood vessels.	MCQ, SEQ, VIVA
Hypertension	Lecture # 4	1	Define hypertension. List the causes and risk factors. Classify Hypertension. Discuss pathophysiology. List the consequences of hypertension on different organs of the body.	MCQ, SEQ, VIVA

IHD 1 (Angina pectoris)	Lecture # 5	1	Define IHD. List the different types of IHD. List the causes and risk factors of IHD. Define angina pectoris. List the three types of angina. Describe their pathogenesis.	MCQ, SEQ, VIVA
IHD II (Myocardial infarction)	Lecture # 6	1	Define Myocardial infarction. Differentiate between transmural and sub endocardial myocardial infarction. Corelate the morphological changes of myocardial infarction (MI) in co-relation to the changes in levels of cardiac markers List the complications.	MCQ, SEQ, VIVA
Cardiac failure	Lecture # 7	1	Define cardiac failure. List the causes. List the types of cardiac failure. Discuss the pathogenesis of cardiac failure. Differentiate between the types of cardiac failure based on their pathophysiology, morphology and clinical features.	MCQ, SEQ, VIVA
Congenital heart diseases Cyanotic & acyanotic heart disease.	Lecture # 8	1	List the various congenital anomalies of heart. Differentiate between Stenosis and Atresia. List the morphological features of Tetralogy of Fallot and coarctation of Aorta. Differentiate between cyanotic & a cyanotic heart diseases	MCQ, SEQ, VIVA
Valvular heart diseases.	Lecture # 9	1	Describe the pathophysiology of Valvular Heart Disease. Discuss the clinical manifestations and diagnosis of valvular heart disease.	MCQ, SEQ, VIVA
Cardiac Infections	Lecture # 10		Identify the pathogens responsible for Cardiovascular Infections. Discuss the etiopathogenesis of Endocarditis, Myocarditis and Pericarditis. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA

Rheumatic Heart Disease & Infective Endocarditis	Lecture # 11	1	Define rheumatic fever and rheumatic heart disease. Discuss etio-pathogenesis, morphological & clinical features. Discuss the etio-pathogenesis, morphology and clinical features. Discuss the Duke's criteria of infective endocarditis.	MCQ, SEQ, VIVA
Myocarditis & Pericarditis Cardiac tumour	Lecture # 12	1	Define myocarditis. List the causes of myocarditis. Discuss the morphological features of myocarditis. Define pericarditis. List the causes of pericarditis. Discuss the morphological features of pericarditis. Classify cardiac tumours. List the morphological features of common cardiac tumors.	MCQ, SEQ, VIVA
Introduction to hematology	Lecture # 13	1	Classify the disorders of blood according to its components. Classify anemia	MCQ, SEQ, VIVA
Iron deficiency anemia	Lecture # 14	1	Recall the nutritional and metabolic aspects of iron metabolism, including dietary iron, iron absorption, body iron distribution and transport. List the common causes of iron deficiency anemia. Describe the signs and symptoms of iron deficiency anemia. Outline the investigations of a patient with iron deficiency anemia. Discuss morphology of iron deficiency anemia	MCQ, SEQ, VIVA
Megaloblastic anemia	Lecture # 15	1	List the common causes of macrocytic anemia. Summarize the nutritional and metabolic aspects of vitamin B12 and folate metabolism including dietary aspects, absorption, body distribution and transport. Describe the pathophysiology of megaloblastic anemia and the effect of vitamin B12 and folate deficiency on inhibition of DNA synthesis.	MCQ, SEQ, VIVA

			Compare B12 and folate deficiency with respect to underlying causes, clinical manifestations, and laboratory diagnosis. Define pernicious anemia. Describe the morphology of megaloblastic anemia.	
Sickle cell anemia	Lecture # 16	1	Define hemoglobinopathies. Explain the pathogenesis of sickle cell disease. Recognize the signs and symptoms of the different types of sickle cell crises in a patient of sickle cell disorder. Relate the clinical consequences of Sickle cell anemia with its pathology. Describe the laboratory diagnosis of sickle cell disease	MCQ, SEQ, VIVA
G6PD deficiency & heredity spherocytosis	Lecture # 17	1	Summarize the etiological agents that are responsible for causing G6PD deficiency. Discuss the mechanism involved in the development of anemia in G6PD deficiency. Explain the clinical and morphological features of G6PD deficiency anemia. Discuss etiology and pathogenesis of HS. Identify the morphological and clinical features of Hereditary Spherocytosis.	MCQ, SEQ, VIVA
Immune hemolytic anemia	Lecture # 18	1	Classify immune hemolytic anemias. Compare warm autoimmune hemolytic anemias with cold autoimmune hemolytic anemias. Describe the pathological mechanism that leads to autoimmune hemolytic anemia. List the common drugs which may induce immune hemolytic anemia.	MCQ, SEQ, VIVA
Thalassemia	Lecture # 19	1	Define thalassemia. Classify thalassemia on clinical and genetics basis. Discuss how genetic alterations affect the normal physiology of red blood cell. Describe the pathophysiology and clinical consequences of Thalassemia.	MCQ, SEQ, VIVA

			Differentiate between blood picture and clinical feature of Beta Thalassemia Minor & Major.	
Paroxysmal Nocturnal Hemoglobinuria & Aplastic anemia	Lecture # 20	1	Describe the pathogenesis of PNH. Explain the different clinical sequelae. Outline the laboratory findings List the etiological factors of acquired and inherited aplastic anemias. Discuss the pathophysiological mechanisms of anemia in bone marrow failure syndrome. Describe the characteristic peripheral blood and bone marrow features in aplastic anemia.	MCQ, SEQ, VIVA
White blood cell disorders	Lecture # 21	1	Classify white blood cell disorders. Explain the common causes of increases and decreases in the number of the different leucocytes.	MCQ, SEQ, VIVA
Infectious Mononucleosis	Lecture # 22	1	Describe the clinical signs and symptoms and diagnosis of infectious mononucleosis (IM). Recognize the important morphological features of IM	MCQ, SEQ, VIVA
Acute Myeloid Leukemia	Lecture # 23	1	Define and classify myeloid neoplasm. Differentiate between leukemia and leukemoid reaction. Explain the pathogenesis, clinical features and morphology of AML. Discuss WHO classification of AML with the prognostic factors of AML	MCQ, SEQ, VIVA
Chronic Myeloid Leukemia	Lecture # 24	1	Discuss the pathophysiology of Chronic Myeloid Leukemia (CML) and the mechanism of action of BCR–ABL fusion. Discuss clinical features of CML. Discuss the natural history of CML as, chronic phase, accelerated phase and blast crisis. Identify the morphological features of CML on peripheral blood smear.	MCQ, SEQ, VIVA
Multiple Myeloma	Lecture # 25	1	Define and Classify plasma cell dyscrasia.	MCQ, SEQ, VIVA

			Explain the pathology and clinical manifestations of multiple myeloma. Discuss pathogenesis of multiple myeloma. Identify the salient morphological feature of multiple myeloma.	
Chronic Lymphocytic Leukemia & Acute Lymphoblastic Leukemia	Lecture # 26	1	Discuss the pathogenesis, clinical features and morphology of CLL. Identify morphological features of CLL on peripheral blood smear. Explain the pathogenesis of ALL. Describe the clinical features. Discuss the laboratory findings of ALL	MCQ, SEQ, VIVA
Lymphoma	Lecture # 27	1	Define lymphoma. Classify Hodgkin's lymphoma. Discuss the pathogenesis and morphology of Hodgkin's lymphoma. Describe the staging of lymphoma and list the criteria used for staging. Classy of non-Hodgkin's lymphoma. Differentiate between Hodgkin's and Non-Hodgkin's Lymphoma.	MCQ, SEQ, VIVA
Myelodysplasia	Lecture # 28	1	Define myelodysplasia and describe its etiology, pathogenesis and clinical signs and symptoms. Describe the morphological disturbances in the red blood cells, white blood cells and platelets of Myelodysplastic Syndrome and compare them to normal red blood cells, white blood cells and platelets respectively. Discuss salient morphological features of MDS	MCQ, SEQ, VIVA
Myelo-proliferative Disorders	Lecture # 29	1	Classify Myeloproliferative disorders. Discuss pathogenesis, clinical features, and morphology of; Polycythemia Vera, Primary Myelofibrosis and Essential thrombasthenia	MCQ, SEQ, VIVA
Thrombotic Micro-angiopathies	Lecture # 30	1	Define "Thrombotic Microangiopathies".	MCQ, SEQ, VIVA

			List the conditions leading to Thrombotic Microangiopathies. Describe the main causes of HUS and discuss its predominance in children. Describe the mechanism of TTP	
Platelet disorders	Lecture # 31	1	List the congenital defects of platelets. Explain the common causes of thrombocytopenia. Describe the signs and symptoms of a patient with thrombocytopenia. Distinguish between acute ITP and chronic ITP	MCQ, SEQ, VIVA
Coagulation disorders	Lecture # 32	1	Classify coagulation disorders. Discuss the pathophysiology and clinical features of Hemophilia and Von Willebrand Factor Complex. Describe the significance of coagulation profile	MCQ, SEQ, VIVA

By the end of small group session, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Atherosclerosis & Myocardial infarction	Tutorial # 1	2	Corelate the morphological changes of myocardial infarction (MI) in co-relation to the changes in levels of cardiac markers	VIVA, OSPE
Vasculitis & Vascular Tumours	Tutorial # 2	2	Identify the gross & microscopic features	VIVA, OSPE
Iron deficiency anemia & Sickle cell anemia	Practical # 1	2	Identify the microscopic features	VIVA, OSPE
Megaloblastic anemia	Practical # 2	2	Identify the microscopic features	VIVA, OSPE
AML/CML	Practical # 3	2	Identify the microscopic features	VIVA, OSPE
ALL/CLL	Practical # 4	2	Identify the microscopic features	VIVA, OSPE

Blood transfusion & Blood banking	Tutorial # 5	2	List the blood components commonly used in blood banking Discuss the indications of each component. Classify blood transfusion reactions. Discuss the causes, Pathogenesis, Clinical features and diagnosis each blood transfusion reaction.	VIVA, OSPE
Formative assessment	Interactive session Followed by quiz and its feedback	2	Assess the comprehension of key concepts Identify any misconceptions Facilitate peer review Understand the immediate feedback by which they can reflect on their learning and make improvements.	VIVA, OSPE

DEPARTMENT OF PHARMACOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
DRUGS USED IN HYPERTENSION (I)	Lecture # 1	1	Define hypertension. Classify hypertension Explain pathophysiology ofhypertension. Classify anti-hypertensive drugsaccording to different grades of hypertension. Classify anti-hypertensive drugs onthe basis of their mechanism of action.	MCQ, SEQ, OSPE
DRUGS USED IN HYPERTENSION (II)	Lecture # 2	1	Explain the mechanism of action ofPropranolol (beta blockers) and Verapamil (calcium channel blocker). List the pharmacokinetic propertiesof these drugs. List indications, contraindications& adverse effects of these drugs	MCQ, SEQ, OSPE
DRUGS USED IN HYPERTENSIVE EMERGENCY	Lecture # 3	1	Differentiate between HypertensiveEmergency & Hypertensive Urgency. Classify drugs used in HypertensiveEmergency. Explain the mechanism of action ofSodium Nitroprusside & Labetalol. List the pharmacokinetic propertiesof Sodium Nitroprusside and Labetalol. List indications, contraindications& adverse effects of these drugs	MCQ, SEQ, OSPE

DRUGS USED IN TREATMENT OF ANGINA PECTORIS	Lecture # 4	1	Define angina. Classify angina. Explain pathophysiology of angina. Classify anti-anginal drugs. Explain the mechanism of action ofNitrates. List the pharmacokinetic properties of Nitrates. List indications, contraindications& adverse effects of Nitrates.	MCQ, SEQ, OSPE
DRUGS USED IN HEART FAILURE I	Lecture # 5	1	Define heart failure. Classify heart failure. Explain pathophysiology of heartfailure. Classify drugs used in treatment ofheart failure on basis of their mechanism of action. Explain the mechanism of action ofCaptopril and Losartan List the pharmacokinetic propertiesof drugs List indications, contraindications& adverse effects of these drugs	MCQ, SEQ, OSPE
DRUGS USED IN HEART FAILURE II	Lecture # 6	1	Recall the drugs used in treatment of heart failure on basis of their mechanism of action. Explain the mechanism of action ofDigoxin List the pharmacokinetic propertiesof Digoxin List the common adverse effectsand contraindications of Digoxin	MCQ, SEQ, OSPE
DIURETICS I	Lecture # 7	1	Recall structure of nephron. Define diuretics. Classify diuretics. Explain mechanism of action ofloop diuretics. List the pharmacokinetic propertiesof Furosemide List clinical uses of Furosemide List common adverse effects andcontraindications of Furosemide	MCQ, SEQ, OSPE

DIURETICS II	Lecture # 8	1	Recall the classification ofdiuretics. Explain mechanism of action of Mannitol, Hydrochlorothiazide andSpironolactone. List the pharmacokinetic propertiesof these drugs List clinical uses of these drugs List common adverse effects andcontraindications of these drugs.	MCQ, SEQ, OSPE
ANTI ARRHYTHMICS (1)	Lecture # 9	1	Define arrhythmias. Classify arrhythmias. Classify anti-arrhythmic drugs onbasis of mechanism of action. Explain mechanism of action ofLidocaine. List the pharmacokinetic propertiesof Lidocaine. List clinical uses, adverse effects and contraindications of Lidocaine. Describe the role of beta blockers in the treatment of variousarrhythmias.	MCQ, SEQ, OSPE
ANTIARRYTHMICS2	Lecture # 10	1	Recall the classification of anti-arrhythmic drugs on basis of mechanism of action. Explain mechanism of action ofAmiodarone. List the pharmacokinetic propertiesof Amiodarone. List clinical uses of these drugs, adverse effects and contraindications of Amiodarone. Describe the role of Calcium channel blockers (Diltiazem, Verapamil) in the treatment ofvarious arrhythmias.	MCQ, SEQ, OSPE
ANTI HYPERLIPIDEMICS	Lecture # 11	1	Recall types of hyperlipidemias. Classify anti hyperlipidemic. Explain mechanism of action ofStatins, Niacin and Fibrates. List the pharmacokinetic propertiesof these drugs. List common adverse effects andcontraindications of these drugs.	MCQ, SEQ, OSPE

			List common drug-drug interactions associated with the use of Simvastatin.	
ANTI COAGULANTS	Lecture # 12	1	Outline of coagulation cascade. Classify anticoagulants. Explain mechanism of action ofHeparin and Warfarin. List the pharmacokinetic propertiesof these drugs List clinical uses of these drugs List common adverse effects andcontraindications of these drugs List common drug-drug interactionsassociated with use of Heparin and Warfarin.	MCQ, SEQ, OSPE
THROMBOLYTICS AND ANTIPLATELETS	Lecture # 13	1	Classify anti-platelets andthrombolytics. Explain mechanism of actions of Aspirin, Clopidogrel, Alteplase and Streptokinase. List the pharmacokinetic propertiesof these drugs. List clinical uses of these drugs. List common adverse effects andcontraindications of these drugs.	MCQ, SEQ, OSPE
DRUGS USED IN BLEEDING DISORDERS	Lecture # 14	1	List types of bleeding disorders. Classify drugs used for bleedingdisorders. Explain mechanism of action of Vitamin K and Tranexamic acid. List the pharmacokinetic propertiesof these drugs List common adverse effects andcontraindications of these drugs	MCQ, SEQ, OSPE
DRUGS USED IN STROKE	Lecture # 15	1	Define stroke. Explain pathophysiology of stroke. Classify stroke List the general guidelines of strokemanagement. list the drugs used to treat differenttypes of strokes Describe the role of drugs used in the management of ischemic andhemorrhagic stroke	MCQ, SEQ, OSPE

DRUGS FORANEMIA	Lecture # 16	1	Classify anemia. Classify drugs used to treat anemia. Explain the role of Ferrous sulphatein the treatment of anemia. List the pharmacokinetic propertiesof these drugs. List common adverse effects and contraindications of these drugs.	MCQ, SEQ, OSPE

By the end of each Small Group Session (Tutorial) the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
HYPERTENSION	Tutorial # 1	2	List the drugs used to treat pregnancy induced hypertension. Discuss the pharmacodynamics and pharmacokinetics of Methyldopa and Hydralazine. List clinical uses of these drugs List common adverse effects of thesedrugs Explain the pharmacologicalmanagement of the given cases Write down the prescription of thegiven case.	OSPE
ACUTE CORONARY SYNDROME	Tutorial # 2	2	Define Acute coronary syndrome. Explain the pharmacological management of the given case. Discuss the role of beta blockers and calcium channel blockers in the treatment of Angina.	OSPE

CONGESTIVE HEART FAILURE	Tutorial l # 3	2	Discuss the role of ACE inhibitors, beta blockers and diuretics and in thetreatment of Congestive heart failure. List the sign and symptoms ofDigitalis toxicity. Explain the pharmacologicalmanagement of Digitalis toxicity. Explain the pharmacological management of the given cases	OSPE
HYPERLIPIDEMIA	Tutorial # 4	2	Discuss the pharmacodynamics and pharmacokinetics of Bile acid–binding resins & Cholesterolabsorption inhibitors. Explain the pharmacological management of the given cases.	OSPE
STROKE	Tutorial l # 5	2	List the drugs in the prevention ofstroke. Discuss the role of Alteplase and Mannitol in the treatment of stroke. Explain the pharmacologicalmanagement of the given case.	OSPE
BLEEDING DISORDERS	Tutorial # 6	2	Discuss the role of Clotting Factors and Desmopressin in the treatment ofbleeding disorders. Discuss their pharmacodynamics andpharmacokinetics. Explain the pharmacological management of the given cases.	OSPE
ANEMIA	Tutorial l # 7	2	Explain the role of Vitamin B12 (Cyanocobalamin) & Folic acid in thetreatment of anemia. Discuss their pharmacodynamics andpharmacokinetics. Write down the prescription of thegiven case.	OSPE
CPR	Tutorial l # 8	2	Define Cardiopulmonary resuscitation List the drugs used in Cardiopulmonary resuscitation Discuss the role of Procainamide, Dopamine, and Sodium Nitroprusside in CPR. Explain pharmacokinetics and pharmacodynamics of these drugs.	OSPE

			Explain the pharmacological management of the given case.	
RHEUMATIC HEART DISEASE	Tutorial l # 9	2	Define Rheumatic heart disease Discuss the sign and symptoms ofRheumatic heart disease. List the drugs used to treat Rheumaticheart disease. Discuss the role of Penicillin G in thetreatment of Rheumatic heart disease	OSPE

DEPARTMENT OF FORENSIC MEDICINE

By the end of each small group session (practical) , the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME hours	LEARNING OBJECTIVES	Facilitator
Corrosives I	Practical # 1	2	Classify Corrosives Describe the Mechanism of Action	OSPE VIVA
Corrosives II	Practical # 2	2	List the Uses & Misuses Differentiate between Organic and Inorganic acids Diagnose Carbolism&Carboluria	OSPE VIVA
Metal Poisons 1	Practical # 4	2	List the Uses of all the above Heavy Metals. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all.	OSPE VIVA
Metal Poisons 2	Practical # 5	2	Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	OSPE VIVA

Cardiac Poisons 1	Practical # 6	2	List the Uses of all the above Cardiac Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all.	OSPE VIVA
Cardiac Poisons 2	Practical # 7	2	Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	OSPE VIVA

DEPARTMENT OF COMMUNITY MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

Topic	Mode Of Teaching	Time	Learning Objectives	Assessment
Heart Disease Prevention	Lecture	1	Discuss the significance of heart disease as a global health concern Identify key risk factors contributing to heart disease. Describe the strategies for preventing heart disease	MCQ
Blood Donation	Lecture	1	Explain the importance of blood donation and its impact on healthcare. Describe the role of individuals in promoting safe and voluntary blood donation.	MCQ
Blood Transfusion	Lecture	1	Explain the different blood components and their applications in medical treatments. Describe the safety measures and protocols in blood donation and transfusion	MCQ
Anemia and Iron Deficiency	Lecture	1	Define anemia Discuss various types of anemia and their risk factors Identify the signs and symptoms of iron deficiency anemia Describe the preventive measures to reduce the risk of iron deficiency anemia	MCQ
Thalassemia Prevention	Lecture	1	Define thalassemia and its various types. Identify the genetic causes and risk factors for thalassemia. Describe the importance of thalassemia screening and genetic counseling. Describe preventive measures for thalassemia.	MCQ
Formative Assessment	Quiz	1	Short quiz	MCQ

DEPARTMENT OF MEDICINE & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Acute coronary syndrome	Lecture # 1	1	Describe the pathophysiology of acute coronary syndrome. Identify the typical signs and symptoms of acute coronary syndrome Interpret the common ECG changes associated with acute coronary syndrome	MCQ
Heart failure	Lecture # 2	1	Describe the pathophysiology of heart failure Distinguish the different classification and stages of heart failure	MCQ
Valvular heart disease	Lecture # 3	1	Demonstrate pathogenic processes leading to valvular heart disease Predict signs and symptoms pointing towards valvular heart disease Summarize investigations which help in diagnosis of the disease Develop a treatment plan regarding management of valvular heart disease	MCQ
Rheumatic fever	Lecture # 4	1	Demonstrate risk factors predisposing to rheumatic fever Appraise clinical presentation of rheumatic fever Determine investigations required for diagnosis Critique options available for treatment	MCQ
Anaemia	Lecture # 5	1	Define anaemia and describe patho-physiology. Enlist signs and symptoms of anaemia. Classify anaemia on the basis of morphology and etiology.	MCQ

DEPARTMENT OF SURGERY & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Varicose veins	Lecture # 1	1	Define varicose veins Describe normal venous anatomy and physiology of the lower limb Summarize classification of varicose veins Enlist the etiological factors and pathophysiology of varicose veins Identify the clinical features and complications of varicose veins Outline the diagnostic approach of varicose veins Discuss the principles of conservative and interventional management of varicose veins	MCQ
Ischemia & Gangrene	Lecture # 2	1	Define ischemia and gangrene Explain the etiological factors and pathophysiology of acute and chronic limb ischemia Identify the clinical features of ischemia Discuss different types of gangrene (dry, wet, gas gangrene) Describe the diagnostic approach of ischemia and gangrene Discuss the principles of management of ischemia and gangrene	MCQ
Blood Transfusion	Lecture # 3	1	Define blood transfusion and list its main components Discuss blood grouping and cross matching Describe the pre-transfusion requirements Enlist the indications and contraindications of blood transfusion Discuss the procedure and monitoring of a blood transfusion Enumerate the complications of blood transfusion.	MCQ

DEPARTMENT OF GYNAECOLOGY AND OBSTETRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Pregnancy with Peripartum Cardiomyopathy	Lecture # 1	1	1. Define peripartum cardiomyopathy. 2. Classify peripartum cardiomyopathy. 3. Recognize its clinical features.	MCQ
Pathophysiology of Anemia in Pregnancy	Lecture # 2	1	1. Define Anaemia in Pregnancy. 2. Classify Anaemia. 3. Discuss Pathophysiology of Anaemia in pregnancy. 4. List the clinical features of Anaemia in pregnancy.	MCQ

DEPARTMENT OF PAEDIATRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Congenital Heart Disease	Lecture # 1	2	Enumerate common CHDs	MCQ

RESPIRATORY MODULE II

RESPIRATORY MODULE II

Rationale

The Respiratory Module II is designed to build upon the foundational concepts introduced in earlier phases of the curriculum, focusing on the pathophysiology, clinical presentation, prevention, and management of respiratory disorders encountered in medical practice. Respiratory diseases such as asthma, COPD, pneumonia, tuberculosis, and lung malignancies remain major causes of morbidity and mortality globally and locally. This module emphasizes integration of basic and clinical sciences—Pathology, Pharmacology, Medicine, Surgery, Community Medicine, Forensic Medicine, and Pediatrics. Students will engage in lectures, tutorials, CBL, and practical sessions that encourage critical thinking, diagnostic reasoning, and professional competence.

Learning Outcomes of Respiration Module

By the end of Respiration module, the MBBS student will be able to:

- Explain the etiology, pathogenesis, morphology, and clinical features of major respiratory diseases including COPD, asthma, pneumonia, tuberculosis, interstitial lung diseases, and lung tumors etc.
- Correlate clinical signs and symptoms of respiratory disorders with underlying pathological and physiological mechanisms.
- Apply pharmacological principles to rationalize the selection and safe administration of drugs used in respiratory diseases, including bronchodilators, corticosteroids, and antibiotics.
- Demonstrate skills in basic respiratory care techniques such as inhaler and nebulizer use, chest tube management, and emergency management of asthma and COPD exacerbations.
- Identify preventive and control measures for respiratory diseases at individual and community levels, with emphasis on air pollution control and vaccination programs.
- Describe medico-legal and forensic aspects related to asphyxial deaths and poisoning by asphyxiants.

Modular Duration

Module Number	Module Name	Dates	Duration	Module In charge	Tentative Assessment Date & Pattern
6.	Respiratory Module		4 weeks	Dr. Faraz Salim	(subject to minor changes) 09th October, 2026 MCQs SEQs, OSPE

DEPARTMENT OF PATHOLOGY

LEARNING OBJECTIVES

By the end of each Lecture the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
ACUTE LUNG INJURY & ATELECTASIS	Lecture # 1	1	Describe acute lung injury and identify its presentation. Define atelectasis. Categorize atelectasis on the basis of its underlyingmechanism	MCQ, SEQ, VIVA
ACUTE RESPIRATORY DISTRESS SYNDROME	Lecture # 2	1	Elucidate the etiology, pathogenesis, morphology &clinical features of adult respiratory distress syndrome	MCQ, SEQ, VIVA
COPD/ EMPHYSEMA	Lecture # 3	1	Define and categorize the various types of COPD &emphysema. Comprehend Emphysema on the basis of etiology,pathogenesis, morphology and clinical features	MCQ, SEQ, VIVA
CHRONIC BRONCHITIS	Lecture # 4	1	Elucidate the etiology, pathogenesis, morphology &clinical features.	MCQ, SEQ, VIVA
ASTHMA	Lecture # 5	2	Elucidate the etiology, pathogenesis, morphology &clinical features of asthma.	MCQ, SEQ, VIVA
CHRONIC INTERSTITIAL LUNG DISEASES I (RESTRICTIVE LUNG DISEASE)	Lecture # 6	1	Enumerate the clinical conditions associated withrestrictive lung diseases. Elucidate the pathogenesis, morphology and clinicalfeatures of idiopathic pulmonary fibrosis	MCQ, SEQ, VIVA
CHRONIC INTERSTITIAL LUNG DISEASES II (INFILTRATIVE LUNG DISEASE)	Lecture # 7	1	Discuss the pathology, morphology & clinical features of sarcoidosis and hypersensitivity pneumonitis.	MCQ, SEQ, VIVA

Respiratory Tract Infections	Lecture # 8	1	Identify the pathogens responsible for Respiratory Tract Infections. Discuss the etiopathogenesis of Tuberculosis and Pneumonia. Discuss their clinical features. Briefly describe their laboratory diagnosis and prevention.	MCQ, SEQ, VIVA
COMMUNITYACQUIRED PNEUMONIA	Lecture # 9	1	Discuss the microbial agents, morphology & clinicalfeatures of atypical pneumonia. Elucidate the etiology, pathogenesis, morphology &clinical features of acute bacterial pneumonia	MCQ, SEQ, VIVA
CHRONIC PNEUMONIAS (TB, FUNGAL)	Lecture # 10	1	Describe the etiology, pathogenesis & clinical features of tuberculosis of the lung. Enumerate the Fungi (candida, pneumocystis carinii)causing lung infections.	MCQ, SEQ, VIVA
LUNG ABSCESS	Lecture # 11	1	Explain the etiology, pathogenesis, morphology &clinical features of lung abscess	MCQ, SEQ, VIVA
PULMONARY VASCULAR DISEASES	Lecture # 12	1	Define pulmonary embolism, hemorrhage and infarction. Describe the pathogenesis, morphology & clinicalfeatures of pulmonary thromboembolism. Elucidate the morphology & clinical features of pulmonary infarction. Explain the clinical features of good pasture's syndrome.	MCQ, SEQ, VIVA
PULMONARY HYPERTENSION	Lecture # 13	1	Enumerate the causes of Pulmonary hypertension Explain the pathogenesis of pulmonary hypertension	MCQ, SEQ, VIVA
LUNG TUMORS	Lecture # 14	2	Classify lung tumors Discuss the etiology, pathogenesis and clinical features of bronchogenic carcinoma	MCQ, SEQ, VIVA

PLEURALLESIONS	Lecture # 15	1	Discuss pleural effusion, hemo-thorax, hydro-thorax,pleuritis, pneumothorax and chylo-thorax Elucidate etiology, pathogenesis and morphology ofmesothelioma.	MCQ, SEQ, VIVA

By the end of small group session, the students of 3rd. year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Bronchiectasisis	Tutorial # 1	2	Discuss the predisposing factors, pathogenesis, morphology List the clinical features of bronchiectasis	VIVA, OSPE
Tuberculosis	Tutorial # 2	2	Comprehend the clinical scenario Identify the gross & microscopic features of Tuberculosis	VIVA, OSPE
Pneumonia	Tutorial # 3	2	Comprehend the clinical scenario Identify the gross & microscopic features of Pneumonia	VIVA, OSPE
Covid infection	Tutorial # 4	2	Comprehend the clinical scenario Identify the gross & microscopic features of Covid infection in lungs	VIVA, OSPE
Lung Tumour	Tutorial # 5	2	Identify the gross & microscopic features of Covid infection in lung tumours	VIVA, OSPE
Quiz		2	Short revision and quiz	MCQs

DEPARTMENT OF PHARMACOLOGY

LEARNING OBJECTIVES

By the end of each Lecture, the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
DRUGS USED TO TREAT COPD	Lecture # 1	1	Define COPD. Outline the pathophysiology ofCOPD. Classify drugs used to treatCOPD with examples. Explain the pharmacological role of bronchodilators and corticosteroids in the treatmentof COPD. Explain the mechanism ofaction of these drugs. List pharmacokinetic properties of these drugs. List common adverse effects and contraindications of thesedrugs. List the drugs used to treat Acute exacerbation of COPD	MCQ, SEQ, VIVA
DRUGS USED TO TREAT ASTHMA	Lecture # 2	1	Define Asthma Outline pathophysiology ofAsthma. Classify the drugs used to treatAsthma with examples. Explain the mechanism ofaction of Albuterol, Salmeterol, Methylxanthines, Fluticasone and Montelukast. List the pharmacokineticproperties of these drugs. List common adverse effects and contraindications of thesedrugs.	MCQ, SEQ, VIVA
ANTI TUSSIVES	Lecture # 3	1	Outline the pathophysiology ofcough	MCQ, SEQ, VIVA

			Define anti-tussives. Classify anti-tussives Compare the mode of action of Cough Suppressants, Expectorants, Mucolytic agents List the common adverse effects and contraindications ofthese drugs.	

By the end of each Small Group Session (Tutorial) the students of 3rd year MBBS will be able to:

TOPIC	MODE OF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
ASTHMA + COPD (ER management + Prescription writing)	Tutorial # 1	2	Discuss the pharmacological managementof acute exacerbation of asthma. Discuss the pharmacological managementof allergic asthma. Discuss the pharmacological management of the given case of COPD. Discuss the rationale for prescribing the drugs for the pharmacologicalmanagement of the given case of COPD	OSPE

By the end of each small group session (practical), the students of 3rd year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Identification of inhalational devices and preparation of aqueous inhalation solution	Practical # 1	2	Identify different inhalers and nebulizers. Explain the basic working principles of inhalers and nebulizers. Explain the role of these devices in the management of different respiratory diseases. Demonstrate the accurate use ofthese devices. Demonstrate the steps of preparation and dispensing of an aqueous inhalation solution List the clinical uses of an aqueous inhalation solution	OSPE
Herbal remedies to treat lung diseases	Practical # 2	2	Define Phytotherapy. Discuss importance of Phytotherapy. List the names of various herbs used in the treatment of common respiratory diseases. Explain the mechanism of action of various herbs used to treat common respiratory diseases. List the adverse effects of various herbs used in the treatment of common respiratory diseases. List the active constituents of common medicinal herbs used in the treatment of common respiratory diseases. List the marketed herbal formulations used in the treatment of common respiratory diseases.	OSPE

DEPARTMENT OF FORENSIC MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd year MBBS will be able to:

TOPIC	MODEOF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Deaths from Asphyxia 1	Lecture#1	1	Define Asphyxia with the mention of its Types. Demonstrate Anatomy of the Neck & Effects of Pressure on the Neck. Classify Asphyxial Deaths.	MCQ, SEQ, VIVA
Deaths from Asphyxia 2	Lecture#2	1	Demonstrate Levels of Obstruction to Types of Mechanical Asphyxia. Describe Physiology, Biochemistry & Pathology of Fatal Asphyxia.	MCQ, SEQ, VIVA
Deaths from Asphyxia 3	Lecture#3	1	Discuss the Etiology and Pathophysiology of Asphyxia. List Suffocation & its Types. Detail Asphyxial Stigmata / Traditionally accepted Signs of Asphyxia on the basis of their Pathogenesis.	MCQ, SEQ, VIVA

By the end of each practical, the students of 3rd year MBBS will be able to:

TOPIC	MODEOF TEACHING	TIME (hours)	LEARNING OBJECTIVES	ASSESSMENT
Asphyxiants 1	Practical 1	2	List the Uses of all the above Asphyxiants Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all.	VIVA, OSPE

Animal Poison 1	Practical 3	2	List the Uses of all the above Animal Poisons. Describe the Mechanism of Action of all these. List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all.	VIVA, OSPE
Animal Poison 2	Practical 4	2	Diagnose the Chronic Signs & Symptoms of all. Diagnose the Acute Signs & Symptoms of all these Poisonings	VIVA, OSPE
Vegetable Poisons 1	Practical 5	2	List the Uses of all the above Vegetable Poisons. Describe the Mechanism of Action of all these.	VIVA, OSPE
Vegetable Poisons 2	Practical 6	2	List the Treatment options for Acute Poisoning as well as Chronic Poisoning of all. Diagnose the Chronic Signs & Symptoms of all.	VIVA, OSPE

DEPARTMENT OF COMMUNITY MEDICINE

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

Topic	Mode Of Teaching	Learning Objectives	Assessment
Prevention of asthma	Lecture	Define asthma Explain the risk factors of asthma Discuss the prevention strategies of asthma	MCQ
Air pollution 1	Lecture	Describe the composition of air and its major components. Define Air pollution List the common causes of air pollution, including natural and human-made sources.	MCQ
Air pollution 2	Lecture	Explain the process and methods used for air purification. List diseases caused by air pollution Explain the ways to prevent air pollution	MCQ
COPD	Lecture	Define COPD Explain the risk factors of COPD Discuss the prevention strategies of COPD	MCQ
Lung Cancer	Lecture	Explain the clinical symptoms and risk factors of lung cancer Discuss preventive strategies and the importance of early detection through screening methods for lung cancer	MCQ

DEPARTMENT OF MEDICINE & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Asthma	Lecture # 1	1	Discuss symptoms during acute episodes of asthmaSummarize signs of an episode of asthma Identify the importance of spirometry and Peak expiratory flow meter in the diagnosis and management of asthma Discuss medication use in the treatment of asthma Summarize steps for the management of acute asthma attack Discuss step ladder therapy in the management of stable asthma	MCQ
Pneumonia	Lecture # 2	1	Describe Community acquired Pneumonia and Hospitalacquired Pneumonia Exemplify aspiration Pneumonia Discuss clinical symptoms of Pneumonia4- Report clinical signs of pneumonia Recognize tests used in the diagnosis of pneumonia Identify severity of pneumonia by a simple CURB-65 score7- Discuss steps for the management of pneumonia 8- Recognize at risk population group can benefit from pneumococcal vaccination	MCQ
Arterial blood gases	Lecture # 3	1	Appraise components of arterial blood gases report Analyze ABGs report to diagnose conditions like metabolic acidosis, metabolic alkalosis, respiratory alkalosis, respiratory acidosis as well as type 1 and 2 respiratory failure	MCQ

Pleural diseases	Lecture # 4	1	Discuss clinical signs and symptoms of pneumothorax and pleural effusion Determine investigation required for diagnosis of pleural diseases Critique treatment of the pleural disorders	MCQ
Bronchogenic Carcinoma	Lecture # 5	1	Demonstrate risk factors predisposing to bronchogenic carcinoma Summarize clinical signs and symptoms of bronchogenic carcinoma Sort out investigations required to diagnose bronchogenic carcinoma Describe treatment option available for treatment of the disorder	MCQ

DEPARTMENT OF SURGERY & ALLIED

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Pneumothorax	Lecture # 1	1	To be familiar with the physiology of pleural fluid To understand clinical features and investigation of Pneumothorax To understand clinical features and investigation of tension Pneumothorax To understand clinical features and investigation of Open Pneumothorax	MCQ
Management of hemothorax and flail chest	Lecture # 2	1	Define hemothorax and flail chest Identify the key clinical features of hemothorax and flail chest Describe the diagnostic workup of hemothorax and flail chest Explain the principles of emergency management of hemothorax Enumerate the indications for thoracotomy Discuss the management of flail chest.	MCQ
Management of chest trauma	Lecture # 3	1	Define chest trauma Classify chest trauma into blunt and penetrating injuries Describe the initial assessment of chest trauma using the ABCDE approach, Explain the clinical features and diagnostic evaluation of major chest injuries. Discuss the principles of emergency management of chest trauma Outline the definitive management of specific chest trauma.	MCQ

DEPARTMENT OF PAEDIATRICS

LEARNING OBJECTIVES

By the end of each lecture, the students of 3rd. year MBBS will be able to:

TOPIC	**MODE OF TEACHING**	**TIME (hours)**	**LEARNING OBJECTIVES**	**ASSESSMENT**
Integrated Management of Neonatal and Childhood Illness (IMNCI)	Lecture # 1	2	Describe steps of IMNCI	MCQ

BAQAI MEDICAL COLLEGE

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