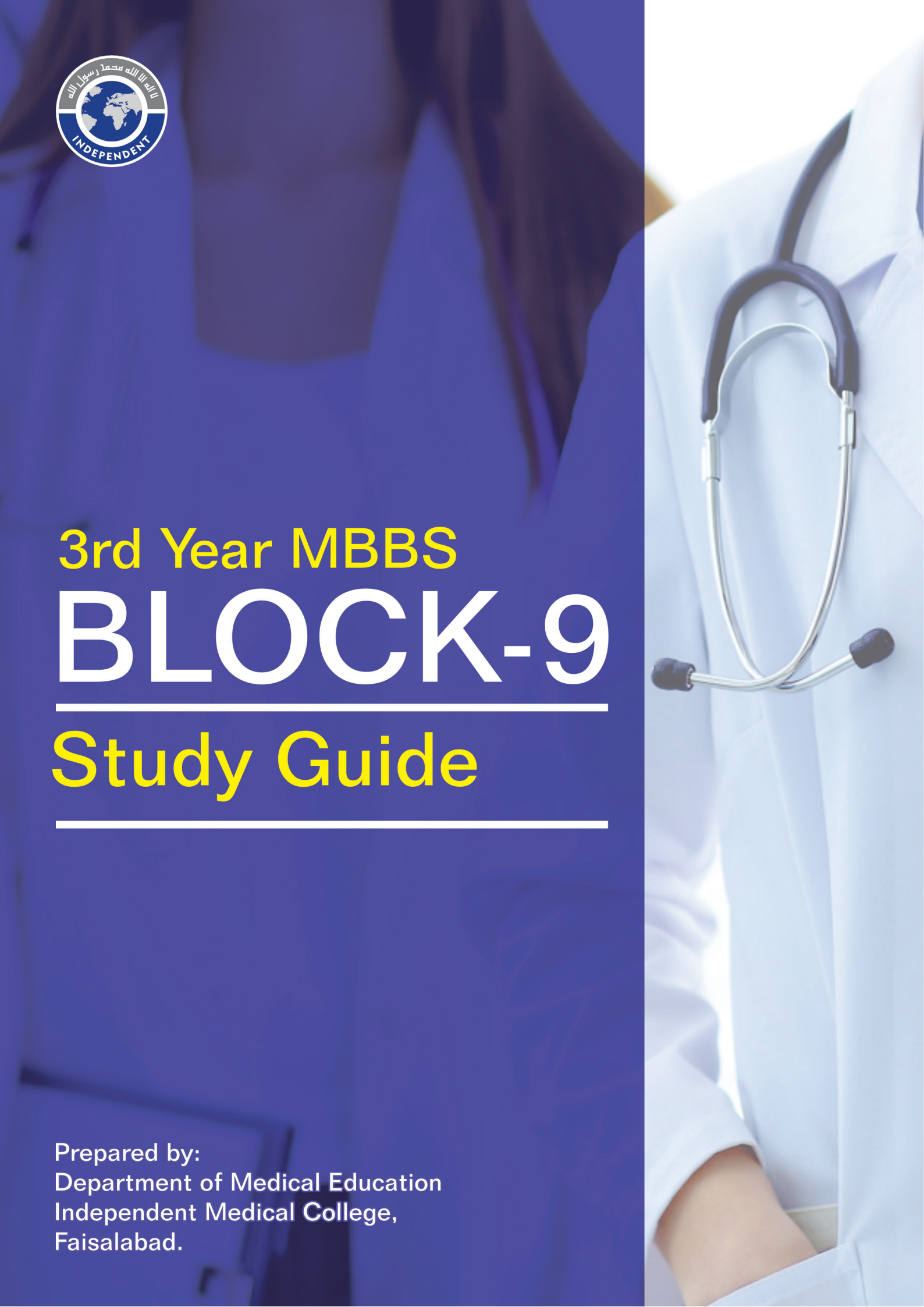

3rd Year MBBS

BLOCK-9

Study Guide

Prepared by:
Department of Medical Education
Independent Medical College,
Faisalabad.

BLOCK 11
4th Year MBBS

Table of Content

Curricular Framework

The modular integrated curriculum aligns the MBBS program outcomes with the nationally defined competencies of seven-star doctors. The program outcomes are at par with the outcomes that the national regulatory authorities have processed till date for the MBBS graduates. Curriculum outcomes translate the seven-star competencies to the objectives specific learning outcomes for the sessions. The outcomes are fragmented to objectives representing the three domains of learning and then graduated in spirals and horizontally integrated so as to acquire a professional approach, develop a broad-based practical knowledge, to nurture the learner's epistemic curiosity and to promote higher order thinking.

The horizontal integration is evident in the modular configuration where different basic disciplines approach the themes simultaneously. Module has been structured where all the basic disciplines are represented based on their respective weightage of content. Assessment framework ensures that the applied/clinical aspect also is inculcated in the concept development of the learner keeping the clinical relevance and context at the core.

Clinical Skills follow a spiral which is entirely skills dominant. This spiral is the core of psychomotor training. The clinical orientation along with the applied/clinical component of the knowledge base will channelize the learner for the practical and professional aspect of learning.

All module objectives are preceded by the recommended themes and clinical relevance. These are grounded in the rationale of the module so that pattern of learning could be steered for a practical professional approach. However institutional discretion does not prohibit adopting any other thematic approach provided that the program outcomes are adequately achieved.

<table>
<tr><th colspan="3">FOURTH YEAR MBBS</th></tr>
<tr><th>BLOCK X</th><th>BLOCK XI</th><th>BLOCK XII</th></tr>
<tr><td rowspan="2">Community Medicine & Family Health-II</td><td>Neurosciences-II</td><td rowspan="2">Endocrine & Reproduction- II</td></tr>
<tr><td>Psychiatry & Behavioural Sciences</td></tr>
<tr><td>GIT & Nutrition- II</td><td>Renal-II</td><td>Dermatology</td></tr>
<tr><td>Eye & ENT-I</td><td>Eye & ENT-II</td><td>Eye & ENT-III</td></tr>
<tr><td>11 WEEKS</td><td>14 WEEKS</td><td>11 WEEKS</td></tr>
<tr><td colspan="3">PERLS-4</td></tr>
<tr><td colspan="3">C-FRC 4 (CLINICAL – FOUNDATION, ROTATION CLERKSHIPS.</td></tr>
</table>

INTRODUCTION TO STUDY GUIDE

WHAT IS A STUDY GUIDE?

It is an aid to: Inform students how student learning program of the subject has been Organized
Help students organize and manage their studies throughout the module/block
Guide students on assessment methods, rules and regulations

THE STUDY GUIDE:

- Communicates information on organization and management of the module.
- This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the program.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills,
- Demonstration, tutorial and case based learning that will be implemented to achieve the Learning objectives.
- Provides a list of learning resources such as books, computer assisted learning program, web-links, and journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous and semester examinations on the Student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's
- Achievement of objectives.
- Focuses on information pertaining to examination policy, rules and regulations

TIMELINE FOR BLOCK 11

BLOCK 11

Block 11			
1	20-07-26 to 25-07-26	Module 27: Neurosciences - II	Module 27 test: 15-08-26
2	27-07-26 to 01-08-26		
3	03-08-26 to 08-08-26		
4	10-08-26 to 15-08-26		
5	17-08-26 to 22-08-26	Module 28: Psychiatry & Behavioral Sciences	Module 25 test: 19-09-26
6	24-08-26 to 29-08-26		
7	31-08-26 to 05-09-26		
8	07-09-26 to 12-09-26		
9	14-09-26 to 19-09-26	Module 29: Renal - II	Module 25 test: 03-10-26
10	21-09-26 to 26-09-26		
11	28-09-26 to 03-10-26		
12	05-10-26 to 10-10-26	Module 29: EYE & ENT - II	Module 25 test: 24-10-26
13	12-10-26 to 17-10-26		
14	19-10-26 to 24-10-26		
15	26-10-26 to 31-10-26	Block 10 exam	
Parent Teacher Meeting		07-11-26	

Clinical rotation:

	ENT	EYE	Surgery - I	Surgery - II	Medicine - I	Medicine - II
20-07-26 to 25-07-26	A	B	C1	C2	D1	D2
27-07-26 to 01-08-26			C2	C1	D2	D1
03-08-26 to 08-08-26	B	A	D1	D2	C1	C2
10-08-26 to 15-08-26			D2	D1	C2	C1
17-08-26 to 22-08-26	C	D	A1	A2	B1	B2
24-08-26 to 29-08-26			A2	A1	B2	B1
31-08-26 to 05-09-26	D	C	B1	B2	A1	A2
07-09-26 to 12-09-26			B2	B1	A2	A1

ASSESSMENT

BLOCK EXAM

Block-X						
Modules	Theory		Practical			
	MCQs (1 mark each)	Marks	OSCE (8 marks each)	OSVE (10 marks each)	Short Case (20 marks each)	Marks
Community Medicine-II & Family health-II	25 + 15	40	2	1	-	26
GIT & Nutrition-II	35 + 5	40	2	1	-	26
Eye-I	30	30	3	-	1	44
ENT-I	30	30	3	-	1	44
Total	140 MCQs	140 Marks	10 stations x 8=80 Marks	2 stations x 10=20 Marks	2 short cases x 20=40 Marks	140 Marks
Grand Total=280 Marks						

Internal Assessment (Theory)			
No.	Scoring Parameter	Marks out of 20%	Marks distribution
1	Attendance in Lectures	85-90%=1%, > 90%=2%	85-90%= 01 mark > 90%=02 marks
		Remedial classes – re-sit examination allowed only after case endorsed and submitted by the college Principal and approval given by the Competent Authority. However, no marks given	
		Remedial classes – re-sit exam allowed only in genuine cases after approval from Competent Authority. However, no marks given	
2	Block Examination	15%	27
3	Continuous Internal Assessment/ Class Quiz/Class participation/ Professional Behaviour/ Ethical practices/ Leadership traits/ Module Exam Discipline/ Punctuality	3%	06

Internal Assessment (Theory)			
No.	Scoring Parameter	Marks out of 20%	Marks distribution
1	Attendance in Lectures	85-90%=1%, > 90%=2%	85-90%= 01 mark > 90%=02 marks
		Remedial classes – re-sit examination allowed only after case endorsed and submitted by the college Principal and approval given by the Competent Authority. However, no marks given	
		Remedial classes – re-sit exam allowed only in genuine cases after approval from Competent Authority. However, no marks given	
2	Block Examination (OSPE/OSCE/OSVE)	13%	23
3	CFRC Log Book / PERLs Portfolio	02%	06
4	Ward / Clinical / Bedside assessment based on the clinical rotation / DOPS	02%	04

EDUCATIONAL RESOURCES

Pathology

- Vinary Kumar, Abul K. Abbas and Nelson Fausto Robbins and Cotran, Pathologic basis of disease. WB Saunders.
- Robbins and Cotran Pathological Basis of Disease. Kumar, V., Abbas, A. and Aster, J. Latest Edition
- Richard Mitchall, Vinary Kumar, Abul K. Abbas and Nelson Fausto Robbins and Cotran, Pocket Companion to Pathologic basis of diseases, Saunder Harcourt.
- Walter and Israel. General Pathology. Churchill Livingstone.
- Robbins & Kumar, Medical Microbiology and Immunology Levinson.

General Medicine

- Principles and Practice of Medicine by Davidson (latest edition)
- Clinical Medicine by Parveen J Kumar & Michaell Clark
- Oxford Handbook of Medicine
- Macleod's Clinical Examination book
- Medicine and Toxicology by C.K. Parikh
- Hutchison's Clinical Methods by Michael Swash. 21st edition

Pharmacology And Therapeutics

- Katzung and Trevor's Pharmacology: Examination and Board Review- 15th Edition
- Basic and Clinical Pharmacology by Bertram G Katzung (case scenarios only) - 16th Edition-
- Current Medical Diagnosis and Treatment- reference book –Edition-2024
- Basic and Clinical Pharmacology by Bertram G Katzung (case scenarios only) - 15th Edition
- Basic and Clinical Pharmacology by Katzung, McGraw-Hill. 16th Edition. 305
- Pharmacology by Champe and Harvey, Lippincott Williams & Wilkins 8th Edition.
- Katzung Basic and Clinical pharmacology, Lippincot Illustated reviews.
- Clinical Pathology Interpretations by A. H. Nagi

Behavioural Sciences

- Handbook of Behavioural Sciences by Prof. Mowadat H.Rana, 3rd Edition
- Medical and Psychosocial aspects of chronic illness and disability 6th edition by Donna R.Falvo and Beverely E.Holland,
- Integrating behavioral sciences in healthcare, Asma Humayun,2003, 1st edition

Community Medicine

- Parks Textbook of Preventive and Social Medicine. K. Park
- Public Health and Community Medicine by Ilyas Ansari
- MSDS manual of Government of Punjab
- Text book of Community Medicine by Park J E. Latest Edition

Surgery

- Bailey & Love's Short Practice of Surgery (latest edition)
- Browse's Introduction to the Symptoms & Signs of Surgical Disease 4th Edition
- Bailey & Love Short Practice of Surgery, Clinical Surgery pearls by Dayananda Babu
- RACS for Surgical Audits.

Pediatrics Medicine

- Nelson Textbook of Pediatrics
- Basis of Pediatrics by Pervez Akbar Khan

Gynecology

- Gynecology by Ten Teachers

Infection Control

- National Guidelines Infection Prevention and control, National Institute of Health Pakistan

Family Medicine

- Oxford Handbook of General Practice, 5th Edition

Orthopedics

- Apley and Solomon's System of Orthopaedics and Trauma by Ashley Blom (Editor)

MODULE - 27
NEUROSCIENCES - II

Module weeks	Recommended Minimum Hours

End of module assessment
Written paper
25 MCQ, s 5 SEQ, s

	Subject	MCQ, s	SEQ	

Module committee

Co Ordinator		
Co-coordinator		
Member		
Member		
Member		
Member		
Member		
Member		
Member		

Module Rationale

Building upon the foundational understanding developed in Neurosciences Module I (covered in Block 6), which focused on the basic sciences of CNS, Neurosciences Module II extends this knowledge toward clinical application. This module emphasizes neurology, pharmacology, pathology, and the clinical aspects of neurological disorders, enabling students to connect underlying mechanisms with clinical presentation and management. By integrating basic concepts with pharmacological and therapeutic approaches, the module promotes deeper comprehension of disease processes, rational drug use, and patient-centered care. It also encourages the development of clinical reasoning and critical thinking by linking structure, function, and dysfunction within the nervous system. Overall, Neurosciences Module II serves as a bridge between foundational sciences and clinical practice, ensuring vertical and horizontal integration across disciplines while preparing students for future clinical rotations and decision-making in neurological care.

Module outcomes

- Explain the pathophysiological basis of common neurological disorders by linking structural and functional alterations in the nervous system to clinical manifestations.
- Describe the pharmacological basis of drugs used in neurological conditions, including their mechanisms of action, therapeutic uses, adverse effects, and rational prescribing principles.
- Integrate knowledge of basic neuroscience with clinical decision-making to interpret signs, symptoms, and investigations relevant to neurological diseases.
- Discuss the principles of multidisciplinary management in neurological disorders, incorporating pharmacological, rehabilitative, and preventive perspectives.
- Counsel patients with neurological diseases with empathy demonstrating effectivecommunication skills.

SUBJECTS INTEGRATED IN THE MODULE

1. Neurology
2. Pathology
3. Pharmacology
4. General Medicine
5. Pediatric Surgery/ Neurosurgery

WEEK 6: Time Table Fourth year MBBS block 10, Module 27, Dated:							
	Lecture 08:00 to 08:45	Lecture 08:45 to 09:30	Ward 09:30 to 11:00	Practical/tutorial 11:00 to 12:15	Lecture 12:15 to 01:00	BREAK	Tutorial 01:15 to 02:00
Mon							
Tue							
Wed							
Thur							
Fri							
Sat							

THEORY			
CODE	SPECIFIC LEARNING OUTCOMES	INTEGRATING DISCIPLINE	TOPIC
NS2-Pa-001	Explain the etiology and pathophysiological mechanisms of acute viral, lymphocytic, and purulent meningitis. Describe the etiology, pathogenesis, and clinical implications of a brain abscess. Discuss the causative factors and pathophysiology of chronic meningitis. Explain the pathogenesis and complications of tuberculous meningitis. Explain the etiology, transmission, and neuropathological changes associated with viral encephalitis.	Pathology/ Microbiology	CNS Infections
NS2-Neu-002	Identify signs and symptoms of meningitis. Enlist the diagnostic approach. Outline medical management plan. Identify the potential complications.	Neurology/ Medicine	Meningitis
NS2-Neu-003	List the common viral and non-viral causes of encephalitis. Identify the typical clinical presentation. Outline the diagnostic workup. Plan the management strategies Identify short- and long-term complications.	Neurology/ Medicine	Encephalitis
NS2-Neu-004	Define ischemic stroke. Diagnose ischemic stroke based on clinical presentation. Enlist investigations to determine the cause. Describe management including emergency intervention and prevention of ischemic stroke.	Neurology/ Medicine	Ischemic stroke
NS2-Neu-005	Define subarachnoid and intracerebral hemorrhage. Enlist causes and predisposing factors. Identify key clinical manifestations and possible complications. Outline essential investigations with management and preventive measures.	Neurology/ Medicine	Subarachnoid and intracerebral hemorrhage
NS2-PS-003	Define neural tube defects and hydrocephalus. Classify types. Identify risk factors and clinical features. Outline management plan with early referral.	Pediatric Surgery	Hydrocephalus and spinal malformations
NS2-Neu-004	Define epilepsy. Describe clinical presentations of seizures. Enlist different investigative modalities for diagnosis of epilepsy. Outline the management plan.	Neurology	Epilepsy
NS2-Ph-005	Classify Anti-epileptics. Describe their mechanism of action, uses, adverse effects, drug interactions and contraindications. Enlist differences between sodium Valproate, Phenytoin, Carbamazepine, Gabapentin, Lamotrigine and Ethosuximide. Discuss role of antiseizure and benzodiazepines in essential tremors.	Pharmacology	Anti-epileptics
NS2-Pa-006	Classify central nervous system (CNS) tumors based on the WHO classification. Describe the genetic mutations, pathogenesis, morphology, and clinical manifestations of major primary brain tumors, including gliomas, ependymomas, medulloblastomas, and meningiomas. Discuss the pathogenesis, common primary sites, and clinical features of metastatic brain tumors.	Pathology	CNS tumors

NS2-Pa-007	Define and enlist the major types of neurodegenerative disorders affecting the central nervous system. Explain the role of abnormal protein aggregation in the pathogenesis of neurodegenerative diseases. Describe the molecular genetics, pathogenic mechanisms, and morphological changes associated with Alzheimer's disease. Identify the clinical features and diagnostic criteria of Alzheimer's disease. Explain the molecular genetics and pathogenesis of Parkinson's disease. Describe the key morphological findings, clinical manifestations, and diagnostic criteria of Parkinson's disease.	Pathology	Neurodegenera-ti ve diseases
NS2-Neu-008	Describe the etiology and risk factors associated with Alzheimer's disease. Identify the key clinical features and stages of cognitive and behavioral decline. Differentiate Alzheimer's disease from other causes of dementia. Outline the diagnostic approach. Discuss the management strategies. Identify the common complications and their impact on patient quality of life and caregiver burden.	Neurology/ Medicine	Alzheimer's disease
NS2-Ph-009	Classify the drugs used in the management of Alzheimer's disease and other dementias. Explain the mechanism of action, pharmacological effects, therapeutic uses, and adverse effects of cholinesterase inhibitors. Describe the mechanism of action, clinical role, and side effects of NMDA receptor antagonist (Memantine). Discuss the rationale and benefits of combination therapy (cholinesterase inhibitor + memantine) in moderate to severe Alzheimer's disease.	Pharmacology	Pharmacotherap y of Alzheimer's Disease and Dementia
NS2-Neu-010	Describe the etiology and risk factors of Parkinson's disease. Diagnose Parkinson's disease based on the cardinal motor and non-motor symptoms. Describe the clinical stages of the disease. Differentiate Parkinson's disease from other parkinsonian syndromes. Outline the important investigations. Describe treatment options and complications.	Neurology/ Medicine	Parkinson's disease
NS2-Ph-011	Classify Anti-Parkinson drugs. Explain the mechanism of action, pharmacological effects, therapeutic uses, adverse effects, drug interactions, and contraindications of anti-Parkinsonian agents. Discuss the rationale, advantages, and disadvantages of combining Carbidopa with Levodopa therapy. Describe the On–Off phenomenon, its underlying mechanisms, and management strategies. Explain the etiology, clinical features, and pharmacological management of drug-induced parkinsonism. Outline the pharmacokinetics and therapeutic approaches for drug-induced and other dyskinesias.	Pharmacology	Anti-Parkinson Drugs
NS2-Neu-012	Classify motor neuron diseases. Describe the diagnostic criteria and key clinical features of motor neuron disease. Enlist relevant investigations. Explain supportive and disease-modifying treatment strategies.	Neurology/ Medicine	Motor neuron disease
NS2-Ph-013	Classify drugs used in the management of movement disorders (Parkinsonism, Huntington's disease, dystonias, tremors, and drug-induced dyskinesias). Describe the mechanism of action, pharmacological effects, clinical uses, adverse effects, drug interactions, and contraindications of drugs used for hyperkinetic movement disorders. Discuss pharmacological strategies for the management of drug-induced movement disorders, including acute dystonia, akathisia, and parkinsonism. Explain the principles of drug selection, rationale for combination therapy, and the use of newer therapeutic agents in movement disorders.	Pharmacology	Pharmacotherap y of Movement disorders

NS2-Pa-014	Explain the pathophysiology of inflammatory neuropathies, including Guillain–Barré Syndrome (Acute Inflammatory Demyelinating Polyneuropathy). Describe the clinical features, pathological changes, and disease progression of Guillain–Barré Syndrome. Explain the pathophysiology and morphological changes of poliomyelitis, including anterior horn cell involvement. Describe the pathogenesis, morphological features, and clinical implications of prion diseases.	Pathology	Guillain–Barré Syndrome, poliomyelitis & prion diseases
NS2-Neu-015	Define neuropathy and classify peripheral neuropathies. Identify the clinical features of neuropathies. Explain the functional impact of neuropathies on gait, sensation, and daily activities. Outline the diagnostic approach and management plan.	Neurology/ Medicine	Neuropathies
NS2-Pa-016	Describe the structural and functional differences between Type I and Type II muscle fibers. Explain the pathogenesis, morphological features, and diagnostic criteria of inflammatory myopathies, including dermatomyositis and polymyositis. Discuss the etiology, pathophysiology, and histopathological characteristics of inherited skeletal muscle diseases, including Duchenne and Becker muscular dystrophies. Correlate pathological findings with clinical presentation and disease progression in the above disorders.	Pathology/ Neurology	Myopathies
NS2-Neu-017	Define and classify paraplegia. Differentiate paraplegia from quadriplegia and hemiplegia. Differentiate between upper and lower motor neuron lesions. Identify the key clinical features that help localize the spinal cord lesion. Discuss the management and identify potential complications.	Neurology/ Medicine	Paraplegia
NS2-Neu-018	Describe multiple sclerosis with its types and clinical variants. Explain the etiology, immunopathogenesis, and risk factors associated with multiple sclerosis. Identify the characteristic clinical features. Outline the diagnostic approach. Describe the management strategies.	Neurology/ Medicine	Multiple Sclerosis
NS2-Ph-019	Describe the pharmacological classification of antimigraine drugs. Explain the mechanism of action of triptans and ergot alkaloids in the management of migraine. Describe the pharmacokinetic properties and clinical uses of different triptans and ergot derivatives. Describe the adverse effects, contraindications, and drug interactions.	Pharmacology	Anti-migraine drugs
NS2-Ph-020	Classify local anesthetic agents based on their chemical structure and duration of action. Explain the mechanism of action, pharmacological effects, and clinical applications of local anesthetics. Compare amide and ester local anesthetics in terms of metabolism, stability, and allergic potential. Describe the rationale, benefits, and risks of adding vasoconstrictors to local anesthetic preparations. Identify commonly used agents for short-, intermediate-, and long-duration procedures, including minor and major peripheral nerve blocks. Discuss the adverse effects, contraindications, and significant drug interactions of local anesthetics.	Pharmacology/ Anesthesia	Local Anesthetics
NS2-Ph-021	Classify general anesthetic agents based on their route of administration and duration of action. Describe the clinical uses, adverse effects, contraindications, and major drug interactions of commonly used general anesthetics. Discuss the principles and agents used for the reversal and recovery from anesthesia.	Pharmacology/ Anesthesia	General Anesthetics

NS2-Neu-022	Define coma and unconsciousness. Describe the pathophysiology underlying loss of consciousness. Apply the Glasgow Coma Scale for assessment. Outline the diagnostic approach. Discuss the complications, prognosis, and criteria for brain death determination.	Neurology/ Medicine	Coma and unconscious-ness

MODULE - 28
PSYCHIATRY & BEHAVIORAL SCIENCES

Module weeks	Recommended Minimum Hours

End of module assessment
Written paper
25 MCQ, s 5 SEQ, s

	Subject	MCQ, s	SEQ	

Module committee

Co Ordinator		
Co-coordinator		
Member		
Member		
Member		
Member		
Member		
Member		
Member		

Module Rationale

The Psychiatry & Behavioral Sciences module equips medical students with a holistic understanding of health and illness by integrating psychological, social, cultural, and biological perspectives. It emphasizes the Bio-Psycho-Social model, communication skills, stress management, personality, coping mechanisms, ethics, professionalism, and the doctor-patient relationship to foster empathy and compassionate practice. Building on this foundation, students are introduced to the principles of psychiatry, gaining structured knowledge of common mental disorders including organic conditions, substance use, psychotic, mood, anxiety, trauma-related, developmental, and personality disorders along with their clinical presentation, diagnosis, and evidence-based management. Focus on pharmacological and non-pharmacological interventions ensures students develop the competence to provide comprehensive, patientcentered, and ethical care in healthcare settings.

Module outcomes

- Apply the Bio-Psycho-Social model in assessing health and illness.
- Demonstrate effective communication, empathy, and professionalism during patient interactions.
- Analyze the influence of stress, personality, coping mechanisms, culture, and social factors on patient behaviour and treatment outcomes.
- Adhere to ethical principles, confidentiality, and cultural sensitivity in clinical practice.
- Describe the etiology, clinical features, and management of common psychiatric disorders and emergencies.
- Perform a psychiatric history and mental state examination.
- Formulate management plans for psychiatric conditions using both pharmacological and onpharmacological approaches.
- Collaborate with interdisciplinary teams to ensure comprehensive patient management.

SUBJECTS INTEGRATED IN THE MODULE

1. Psychiatry
2. Behavioral Sciences
3. Pharmacology
4. Gynecology & Obstetrics
5. Community Medicine

WEEK 6: Time Table Fourth year MBBS block 10, Module 28, Dated:							
	Lecture 08:00 to 08:45	Lecture 08:45 to 09:30	Ward 09:30 to 11:00	Practical/tutorial 11:00 to 12:15	Lecture 12:15 to 01:00	BREAK	Tutorial 01:15 to 02:00
Mon							
Tue							
Wed							
Thur							
Fri							
Sat							

THEORY			
BEHAVIORAL SCIENCES			
CODE	SPECIFIC LEARNING OUTCOMES	INTEGRATING DISCIPLINE	TOPIC
PsyBhS1-BhS-001	Explain the bio-psycho-social model of health and its application in patient care. Differentiate normalcy versus abnormalcy.	Behavioral Sciences	Bio-sychosocial model of health
PsyBhS1-BhS-002	Describe sensation, perception, attention, and concentration, and explain their relevance in clinical practice. Define memory, describe its stages and types, and suggest methods to improve it. Define thinking and describe its types. Define cognition and describe its levels. Discuss problem-solving and decision-making steps, barriers, and strategies in clinical practice.	Behavioral Sciences	Understanding Behavior
PsyBhS1-BhS-003	Define personality and its types. Explain developmental theories of personality. Explain defense mechanisms. Explain its significance in clinical practice. Define intelligence and describe its types. Explain the relevance of IQ and EQ in a doctor's professional and personal life. Discuss methods to enhance emotional intelligence (EQ) and intellectual intelligence (IQ).	Behavioral Sciences	Individual differences - Personality & Intelligence
PsyBhS1-BhS-004	Elaborate emotions and motivation and explain their influence on health and illness behavior. Apply basic motivational strategies to enhance patient adherence and lifestyle modification.	Behavioral Sciences	Emotions & Motivation
PsyBhS1-BhS-005	Explain the relationship between stress, stressors, and illness. Define coping skills and describe their role in managing stress. Explain the concepts of adjustment and maladjustment in response to stress.	Behavioral Sciences	Stress management
PsyBhS1-BhS-006	Describe the concept of life events and their significance in daily life. Discuss conflict resolution, crisis intervention, and psychological first aid.	Behavioral Sciences	Life events - Psychotrauma
PsyBhS1-BhS-007	Discuss the concepts of transference, countertransference, and boundaries in the doctor–patient relationship. Describe different models of doctor–patient relationship. Identify ethical dilemmas in doctor-patient relationships (e.g., confidentiality, end-of-life care, pharmaceutical interactions). Explain the rights of doctors and patients and discuss their importance in promoting ethical and safe medical practice.	Behavioral Sciences	Doctor-Patient Relationship
PsyBhS1-BhS-008	Define attitude, values, beliefs, and myths, and explain their influence on behavior. Explain the impact of social class, stigma, and the sick role on health. Describe health belief models and treatment adherence and their relevance to patient care. Describe cultural competence.	Behavioral Sciences	Culture and medical practice
PsyBhS1-BhS-009	Explain the process of grief and its impact on patients and families. Explain psychological reactions to illness and hospitalization. Explain strategies to manage them effectively.	Behavioral Sciences	Psychological reactions
PsyBhS1-BhS-010	Outline the stages of sleep and describe sleep disorders. Discuss non-pharmacological methods for sleep hygiene.	Behavioral Sciences	Sleep and consciousness
PsyBhS1-BhS-011	Define pain and describe its physical and psychological aspects relevant to patient care. Explain subjective factors influencing pain. Manage pain using non pharmacological interventions.	Behavioral Sciences	Pain
PsyBhS1-BhS-012	Define child-rearing practices and their influence on personality development. Explain the effects of child-rearing practices on health and illness.	Behavioral Sciences	Child rearing practices

PSYCHIATRY			
PsyBhS1 -Psy-001	Describe mood and affect. Describe and classify hallucination. Describe and classify delusion. Describe the abnormalities of speech in psychiatric disorders. Describe obsession and compulsion.	Psychiatry	Introduction to Key Psychiatric Terms
PsyBhS1 -Psy-002	Classify the types of non-pharmacological interventions. Describe the principles and applications of common psychotherapies. Explain the importance of social and rehabilitative approaches. Discuss the role of somatic therapies and lifestyle modifications in psychiatry.	Psychiatry/ Behavioural sciences	Non pharmacological interventions in Psychiatry
PsyBhS1 -Psy-003	Differentiate between delirium and dementia. Discuss causes and types of dementias. State manifestations and risk associated with dementia. Enumerate mental state examination, and mini mental state examination findings of delirium and dementias. Discuss prognostic factors of memory related disorders. Outline a treatment plan including pharmacological and non-pharmacological interventions.		Delirium and dementia
PsyBhS1 -Psy-004	Define Generalized anxiety disorder (GAD) and describe common risk factors. Identify typical mental state examination findings of GAD. Differentiate GAD from eustress. Outline pharmacological and psychotherapeutic treatment of GAD.	Psychiatry	Anxiety Disorders
	Identify hallmark symptoms of panic disorder based on Mental Status Examination. Differentiate panic attacks from angina, myocardial infarction, and asthma. Describe strategies for supporting patients with panic disorder.	Psychiatry	
	Define and classify phobias. Outline treatment approaches for phobias, including psychological therapies and pharmacological options.	Psychiatry	
PsyBhS1 -Ph-001	Classify anxiolytic drugs. Explain the mechanism of action of different anxiolytic drugs. Discuss the pharmacokinetics and pharmacodynamics of anxiolytics. Identify the clinical indications of anxiolytic drugs. List the contraindications and precautions for the use of anxiolytic drugs. Describe the adverse effects and risks of dependence, tolerance, and withdrawal associated with anxiolytics. Classify sedative-hypnotic drugs. Explain the mechanism of action of sedativehypnotics. Describe the pharmacokinetics and pharmacodynamics of commonly used sedativehypnotics. Identify the clinical indications of sedative–hypnotics. List the contraindications to the use of sedative–hypnotics in clinical practice. Identify adverse effects of sedative-hypnotics.	Pharmacology	Anxiolytic drugs
PsyBhS1 -Psy-005	Classify depressive disorders. Describe risk factors of depressive disorders. Diagnose moderate depressive disorder on the basis of mental state examination findings. Outline management plan including pharmacological options and psychotherapy.	Psychiatry	Depressive Disorders
	Describe suicide and deliberate self-harm, including associated factors. Describe management of suicide and deliberate selfharm.	Psychiatry	
	Differentiate postpartum depression from postpartum blues. Formulate a management plan for postpartum blues and postpartum depression.	Psychiatry	

PsyBhS1 -Ph-002	Classify anti-depressants. Describe their mechanism of action, pharmacological effects, uses, adverse effects, drug interactions and contraindications. Discuss rationale of choosing an antidepressant for a particular condition	Pharmacology	Anti-depressants
PsyBhS1 -Psy-006	Describe Bipolar I and Bipolar II disorders according to standard diagnostic criteria. Differentiate the clinical features of mania and hypomania. Differentiate bipolar disorders from schizophrenia and substance-induced mania on the basis of clinical presentation and course. Interpret mental state examination (MSE) findings in mania. Formulate a basic management plan for bipolar disorder.	Psychiatry	Bipolar affective disorder
PsyBhS1 -Ph-003	Classify and enumerate mood stabilizers. Describe their mechanism of action, pharmacological effects, uses, adverse effects, drug interactions and contraindications.	Pharmacology	Mood Stabilizers
PsyBhS1 -Psy-007	Describe the etiology, risk factors, and underlying neurobiological, psychological, and social factors contributing to Obsessive–Compulsive Disorder (OCD). Enumerate the diagnostic criteria of OCD according to ICD-11/DSM-5 TR. Identify the common clinical features and course of illness. Interpret the characteristic findings on mental state examination in OCD. Discuss the impact of OCD on daily functioning and quality of life. Outline the treatment options including pharmacological and psychological approaches.	Psychiatry	Obsessive–Compulsive and Related Disorders
	Define Body Dysmorphic Disorder (BDD) Differentiate from BDD from eating disorders Explain the clinical findings of a case of BDD based on mental state examination. Outline the management plan to treat BDD.	Psychiatry	
PsyBhS1 -Psy-008	Define and classify dissociative disorders Identify key clinical features of dissociative disorders Describe principles of management of dissociative disorders Define and classify somatoform disorders with emphasis on conversion disorder Identify key clinical features of conversion disorder Describe principles of management of conversion disorder	Psychiatry	Dissociative and somatoform disorders (conversion disorder)
PsyBhS1 -Psy-009	Explain the characteristic mental state examination (MSE) findings in PTSD. Differentiate PTSD from acute stress disorder. Outline the management plan for PTSD. Define adjustment disorder. Identify the emotional and behavioral symptoms that occur within three months of an identifiable stressor.	Psychiatry	Trauma- and Stressor-Related Disorders
PsyBhS1 -Psy-010	Define schizophrenia. Describe the positive and negative symptoms of schizophrenia. Outline the differential diagnosis of schizophrenia. Explain the characteristic mental state examination (MSE) findings in schizophrenia. Outline the management plan to treat a patient of schizophrenia.	Psychiatry	Schizophrenia and Psychotic Disorders
PsyBhS1 -Ph-004	Classify antipsychotic drugs. Explain the mechanism of action of typical and atypical antipsychotics. Describe the pharmacokinetics and pharmacodynamics of antipsychotic drugs. Identify the clinical indications of antipsychotic drugs. List the contraindications and precautions for the use of antipsychotics. Describe the adverse effects of antipsychotics.	Pharmacology	Antipsychotic Drugs

PsyBhS1 -Psy-011	Define paranoid, schizoid, and schizotypal personality disorders. Describe the characteristic symptoms and behavioral patterns of each disorder. Interpret relevant findings on the mental state examination in these disorders. Differentiate Cluster A disorders from schizophrenia and delusional disorders. Outline the principles of management, including psychotherapy and pharmacotherapy where appropriate.	Psychiatry	Personality Disorders I
PsyBhS1 -Psy-012	Define antisocial, borderline, histrionic, and narcissistic, anxious avoidant, dependent, and obsessive compulsive personality disorders. Explain the clinical features and psychopathology of each disorder. Identify mental state examination findings typical of Cluster B and C personality disorders. Differentiate these disorders from mood disorders, substance use, and other psychiatric conditions. Summarize management strategies, including risk assessment, crisis intervention, and psychotherapy.	Psychiatry	Personality Disorders II
PsyBhS1 -Psy-013	Classify commonly abused substances (e.g., alcohol, opioids, cannabis, stimulants, sedatives, caffeine, nicotine). Describe the clinical features and diagnostic criteria of substance-related disorders. Identify signs and symptoms of intoxication and withdrawal for common substances. Explain the psychological, social, and medical complications associated with substance use. Outline the approach to assessment, including history, examination, and mental state examination. Explain the principles of management for substance use disorders. Discuss preventive strategies and the role of psychoeducation in reducing substance use. Manage the patients of acute and chronic alcoholism.	Psychiatry	Substance-Related Disorders
PsyBhS1 -Ph-005	Classify CNS stimulants. Explain the mechanism of action. Discuss the clinical indications for the therapeutic use of CNS stimulants. Identify the common contraindications to CNS stimulant use. Describe the signs and symptoms of overdose of CNS stimulants. Summarize the adverse effects and toxic manifestations of CNS stimulants.	Pharmacology	CNS Stimulants
PsyBhS1 -Ph-006	Classify types of alcohol. Describe the mechanism of action, pharmacological effects, uses, adverse effects, drug interactions and contraindications of Ethyl Alcohol. Enlist the enzyme systems involved in ethanol and methanol metabolism. Describe treatment of methanol and ethanol poisoning with alcohol. Describe pharmacological treatment of acute alcohol intoxication, alcohol withdrawal syndrome and Wernicke Korsakoff syndrome Identify the clinical features of the disulfiram–ethanol reaction and list the drugs that produce a disulfiramlike effect when combined with alcohol. Describe fetal-alcohol syndrome.	Pharmacology	Alcohol
PsyBhS1 -Psy-014	Define and classify psychosexual disorders Identify key clinical features of psychosexual disorders Describe principles of management of psychosexual disorders	Psychiatry	Psychosexual disorders
PsyBhS1 -Psy-015	Describe the characteristic clinical features of anorexia nervosa. Differentiate anorexia nervosa from hyperthyroidism and depression. Explain the typical mental state examination findings. Outline the management plan to treat a patient diagnosed with anorexia nervosa.	Psychiatry	Eating Disorders
	Diagnose bulimia nervosa on the basis of signs and symptoms and mental state examination findings. Describe the binge–purge cycle. Outline management strategies, including pharmacotherapy and psychotherapy.	Psychiatry	

PsyBhS1 -Psy-016	Describe the clinical signs and symptoms in children and adolescents with Attention Deficit Hyperactivity Disorder (ADHD). Analyze mental state examination (MSE) findings in individuals with ADHD. Explain the etiological factors contributing to the development of ADHD. Differentiate ADHD from normal childhood behavior. Formulate a management plan to treat individuals with ADHD.	Psychiatry	Neurodevelop-mental Disorders
	Describe the clinical presentation of Autism Spectrum Disorder (ASD) in children. Identify early signs of ASD. Interpret behavioral observations relevant to diagnosis during assessment. Develop a basic management plan for children with Autism Spectrum Disorder incorporating early intervention and multidisciplinary care.	Psychiatry	
	Differentiate types of learning disorders, including dyslexia, dysgraphia, and dyscalculia. Discuss the academic difficulties despite normal intelligence as a feature of learning disorders. Identify the emotional and behavioral consequences of learning disorders. Outline the role of mental state examination in evaluating children with learning disorders. Explain the management strategies for learning disorders.	Psychiatry	
	Define enuresis and differentiate between primary and secondary types. Explain the psychological and psychosocial factors that contribute to enuresis in children. Describe the emotional and behavioral consequences of enuresis. Identify psychiatric comorbidities commonly associated with enuresis. Outline the psychological and pharmacological management strategies for enuresis.	Psychiatry	

MODULE - 29
RENAL - II

Module weeks	Recommended Minimum Hours

End of module assessment
Written paper
25 MCQ, s 5 SEQ, s

	Subject	MCQ, s	SEQ	

Module committee

Co Ordinator		
Co-coordinator		
Member		
Member		
Member		
Member		
Member		
Member		
Member		

Module Rationale

The Renal II module builds upon the foundational knowledge acquired in Renal I, which focused on the basic sciences of the renal system, including anatomy, physiology, and biochemistry. In this second phase, students will integrate and apply that foundational understanding to clinical contexts. The module emphasizes the recognition and interpretation of signs and symptoms of renal diseases, understanding their underlying pathophysiological mechanisms, and exploring diagnostic approaches and management principles. Through an integrated approach involving pathology, nephrology, radiology, and urology perspectives, students will develop a holistic understanding of renal disorders.

Module outcomes

- Explain the pathophysiological mechanisms underlying common renal and urinary tract disorders.
- Correlate clinical features with the underlying renal pathology.
- Interpret relevant laboratory investigations and imaging findings to support diagnosis of renal and urinary diseases.
- Outline the basic principles of management and prevention of common renal conditions from nephrology and urology perspectives.
- Demonstrate essential clinical skills, including history taking, physical examination, and procedural observation related to renal disorders.
- Counsel patients and their families with empathy regarding disease understanding, lifestyle modification, and adherence to treatment plans..

SUBJECTS INTEGRATED IN THE MODULE

1. Pathology
2. Pharmacology
3. Nephrology
4. Urology

WEEK 6: Time Table Fourth year MBBS block 10, Module 29, Dated:							
	Lecture 08:00 to 08:45	Lecture 08:45 to 09:30	Ward 09:30 to 11:00	Practical/tutorial 11:00 to 12:15	Lecture 12:15 to 01:00	BREAK	Tutorial 01:15 to 02:00
Mon							
Tue							
Wed							
Thur							
Fri							
Sat							

THEORY			
GLOMERULAR DISEASES			
CODE	**SPECIFIC LEARNING OUTCOMES**	**INTEGRATING DISCIPLINE**	**TOPIC**
Re2-Pa-001	Describe the etiological factors causing nephrotic syndrome (primary and secondary including diabetic nephropathy). Explain the pathogenesis of proteinuria, hypoalbuminemia, and edema. Describe the gross and microscopic changes in glomeruli associated with nephrotic syndrome. Diagnose nephrotic syndrome based on clinical presentation and findings.	Pathology	Nephrotic Syndrome
Re2-Pa-002	Explain the etiopathogenesis and morphology of podocytopathies: • Minimal Change Disease • Focal Segmental Glomerulosclerosis (FSGS)	Pathology	Podocytopa-thies
Re2-Pa-003	Enumerate the etiological factors including idiopathic and secondary causes. Explain the pathogenesis and morphology of membranous nephropathy.	Pathology	Membranous Nephropathy
Re2-Neph-004	Enumerate the common causes of nephritic syndrome. Explain the pathophysiological mechanisms of glomerular inflammation and injury. Correlate the clinical presentation with underlying morphological changes. Analyze the laboratory findings characteristic of nephritic presentations. Outline the management strategies and potential complications.	Nephrology	Nephritic Syndrome
Re2-Pa-005	Describe the etiology and precipitating infections leading to PSGN. Explain the immunopathogenesis involving immune complex deposition. Identify the gross and microscopic features characteristic of PSGN.	Pathology	Post-Streptococcal Glomerulone-phritis (PSGN)
Re2-Neph-006	Describe the etiological factors and risk associations of IgA-mediated renal disease. Explain the pathogenesis focusing on IgA immune complex deposition in the mesangium and small vessels. Identify the characteristic gross and microscopic changes in renal tissue. Correlate histopathological features with clinical manifestations. Outline the relevant laboratory investigations for diagnosis, monitoring, and follow-up. Discuss the management plan. Describe prognostic factors and potential progression to chronic kidney disease. Differentiate IgA nephropathy from Henoch–Schönlein Purpura based on clinical presentation, systemic involvement, and severity.	Nephrology/ Pathology	IgA Nephropathy (Berger's Disease) and Henoch - Schönlein Purpura (IgA Vasculitis)
Re2-Pa-007	Enumerate the etiological and immunological types of RPGN. Explain the pathogenesis of crescent formation and rapid renal failure. Describe the gross and microscopic features of each type.	Pathology	Rapidly Progressive Glomerulone-phritis (RPGN)
TUBULOINTERSTITIAL DISORDERS			
Re2-Pa-008	Define acute tubular necrosis and differentiate it from other causes of acute kidney injury. Describe the etiological factors of ischemic and nephrotoxic ATN. Explain the pathogenesis and sequence of tubular injury and repair. Describe the gross and microscopic changes in ischemic and nephrotoxic ATN. Correlate pathological changes with clinical features and laboratory findings. Outline the principles of management and prognosis.	Pathology/ Nephrology	Acute tubular necrosis

Re2-Pa-009	Classify tubulointerstitial nephritis (TIN) into acute and chronic forms. Describe the etiological factors, predisposing conditions, and commonly implicated drugs causing renal injury. Explain the pathogenesis and mechanisms of tubular and interstitial injury, including drug-induced nephritis. Correlate pathological changes with clinical presentation and laboratory findings. Outline the principles of diagnosis, management, and prognosis for both idiopathic and drug-induced forms.	Nephrology	Tubulointerstitial and druginduced nephritis
Re2-Pa-010	Describe the etiological and genetic factors of polycystic kidney disease. Explain the pathogenesis of cyst formation in PKD. Describe the gross and microscopic morphological features. Correlate pathological features with clinical manifestations. Enumerate the laboratory and imaging investigations used in diagnosis. Outline the principles of management and prognosis.	Pathology	Polycystic kidney disease
RENAL FAILURE AND ITS PROGRESSION			
Re2-Neph-001	Describe the etiology and risk factors of Acute Renal Failure. Explain the underlying mechanism. Identify the clinical features and potential complications. Interpret the laboratory investigations. Outline the management plan. Discuss the role and limitations of diuretics in the management of Acute Renal Failure.	Nephrology	Acute Renal failure
Re2-Neph-002	Describe the etiology and risk factors of Chronic Renal Failure. Identify the clinical features and systemic manifestations. Interpret the laboratory investigations and diagnostic criteria. Outline management plan.	Nephrology	Chronic Renal failure (Chronic Kidney Disease)
Re2-Neph-003	Describe end-stage renal disease. Discuss the pathophysiology and progression of chronic kidney disease to ESRD. Enumerate the indications for initiating dialysis. Describe types of dialysis. Explain the purpose, and care of an arteriovenous fistula. Discuss the treatment options for ESRD. Identify the complications associated with dialysis and their management principles. Outline the principles of patient education and longterm follow-up in dialysis care.	Nephrology	End-stage renal disease and Dialysis (hemodialysis and peritoneal dialysis)
METABOLIC AND SYSTEMIC RENAL DISORDERS			
Re2-Neph-004	Describe diabetic nephropathy with its clinical significance. Identify the structural and functional renal changes. Enlist the laboratory investigations used for diagnosis and monitoring. Outline the principles of prevention, early detection, and management. Describe the complications and prognosis.	Nephrology	Diabetic nephropathy
Re2-Neph-005	Define hypertensive nephrosclerosis. Differentiate benign and malignant forms. Describe the structural and functional renal changes. Correlate clinical manifestations with renal function impairment. Outline investigations and management plan. Discuss the prognosis and long-term outcomes.	Nephrology	Hypertensive nephrosclerosis
Re2-Neph-006	Describe the role of kidneys in electrolyte and acid–base balance regulation. Explain the pathophysiological mechanisms underlying hypo- and hypernatremia, and hypo- and hyperkalemia. Describe the compensatory responses in metabolic acidosis and metabolic alkalosis. Interpret clinical and laboratory findings in common electrolyte and acid–base disorders. Correlate abnormalities in serum electrolytes and arterial blood gases with underlying renal dysfunction. Outline the investigations, management and complications.	Nephrology	Electrolyte and Acid–Base Disorders

OBSTRUCTIVE AND INFECTIVE DISORDERS OF THE URINARY TRACT			
Re2-Uro-007	Define obstructive uropathy and hydronephrosis. Describe etiology and clinical presentation. Enlist the investigations. Outline management plan. Identify complications.	Urology/ Surgery	Obstructive Uropathy and Hydronephrosis
Re2-Uro-008	Define urolithiasis and classify urinary stones by composition. Explain the pathogenesis and predisposing factors for stone formation. Describe the clinical presentation and diagnostic evaluation. Discuss the principles of medical and surgical management. Outline preventive strategies and patient education.	Urology/ Surgery/ Pediatric Surgery	Urolithiasis
Re2-Neph-009	Identify etiological factors and predisposing conditions of acute and chronic pyelonephritis. Explain the pathogenesis of ascending and hematogenous spread of infection. Correlate pathological features with clinical manifestations and complications. Outline relevant investigations and management plan.	Nephrology	Acute and Chronic Pyelonephritis
Re2-Uro-010	Classify urinary tract infections by site and severity. Explain the clinical features of acute cystitis and prostatitis. Discuss diagnostic investigations and interpretation of urine analysis. Outline management principles, antibiotic stewardship, and prevention.	Urology	Cystitis and Prostatitis
Re2-Uro-011	Define hematuria and differentiate between microscopic and macroscopic types. Enumerate common causes of hematuria. Describe the diagnostic approach and interpretation of investigations. Correlate clinical features with underlying renal or urological pathology.	Urology/ Nephrology	Hematuria

FUNCTIONAL BLADDER DISORDERS			
Re2-Uro-012	Define neurogenic bladder and describe its types based on neurological involvement. Explain the pathophysiology of bladder dysfunction in neurological diseases. Correlate clinical features with the level of neural lesion. Discuss diagnostic methods and management principles, including catheterization and rehabilitation	Urology	Neurogenic Bladder
Re2-Uro-013	Define urinary retention and urinary incontinence. Classify types of incontinence based on mechanism. Describe the etiological factors and pathophysiology of each condition. Discuss clinical features, investigations, and management approaches.	Urology	Urinary Retention and ncontinence
Re2-Ph-014	Enumerate the drugs used in the management of urinary retention, including i. α-adrenergic blockers ii. 5-α reductase inhibitors iii. Muscarinic agonists iv. Cholinesterase inhibitors v. Phosphodiesterase inhibitors Explain the mechanism of action, indications, and adverse effects of each drug class in improving bladder emptying or relieving outlet obstruction.	Pharmacology	Pharmacotherapy of Urinary Retention
Re2-Ph-015	Enlist the drugs used in the management of urinary incontinence. Explain the mechanism of action of antimuscarinic agents and β3-adrenergic agonists in overactive bladder. Describe the role of duloxetine and estrogen in stress urinary incontinence. Outline the use of botulinum toxin in neurogenic detrusor overactivity. State the common adverse effects and contraindications of these drugs. Discuss the rationale for drug selection based on the type of urinary incontinence (OAB, stress, mixed, neurogenic).	Pharmacology	Pharmacotherapy of Urinary Incontinence

PROSTATE AND MALE GENITOURINARY DISORDERS			
Re2-Pa-007	Explain the etiology, pathogenesis, and morphology of benign prostatic hyperplasia (BPH), prostatitis, and prostate cancer. Identify the tumor marker for prostate cancer and its use in diagnosis and monitoring.	Pathology	Prostatic Diseases (BPH, Prostatitis, Prostate Cancer)
Re2-Uro-008	Describe the anatomy and physiology of the prostate gland. Differentiate between benign and malignant prostatic diseases. Describe clinical features of: • BPH • Prostatitis • Prostate cancer Discuss diagnostic evaluation, including PSA testing and imaging. Outline management plan.	Urology	
Re2-PS-008a	Enlist contraindications to circumcision. Plan circumcision (methods). Discuss counselling points regarding timing of surgery and follow-up.	Pediatric Surgery	Circumcision

RENAL, UROTHELIAL, AND TESTICULAR TUMORS			
Re2-Pa-009	Classify renal tumors into benign and malignant types. Describe the etiological factors and risk associations of renal cell carcinoma. Explain the pathogenesis and molecular mechanisms involved in renal tumor development. Describe the gross and microscopic features of renal cell carcinoma. Correlate pathological features with clinical manifestations and complications. Discuss the prognostic factors influencing outcome and survival. Outline the principles of diagnosis and management.	Pathology/ Nephrology	Renal Cell Carcinoma (RCC)
Re2-Pa-010	Define Wilms' tumor and describe its epidemiological features. Explain the genetic and developmental basis of its pathogenesis. Describe the gross and microscopic morphological features of Wilms' tumor. Correlate the pathological findings with clinical manifestations. Discuss the prognostic factors influencing outcome and survival. Outline the basic principles of diagnosis and management.	Pathology/ Nephrology	Wilms Tumor (Nephroblastoma)
Re2-Pa-011	Describe the etiology and risk factors of Urothelial cell carcinoma. Explain the pathogenesis and morphological features (gross and microscopic).	Pathology	Urothelial cell carcinoma
Re2-Uro-012	Describe the clinical features and common presentations of Urothelial cell carcinoma Enlist the diagnostic investigations used in the evaluation. Outline management plan and factors affecting prognosis.	Urology	
Re2-Pa-013	Classify testicular tumors. Describe etiology, pathogenesis, and morphology of germ cell and sex cord tumors of testis. Describe the lab diagnosis of testicular tumors including tumor markers.	Pathology	Testicular tumors

TRAUMA AND EMERGENCY UROLOGY			
Re2-Uro-014	Describe the mechanisms and patterns of renal, ureteric, bladder, and urethral trauma. Discuss clinical presentation and diagnostic evaluation. Outline principles of initial management and surgical repair. Identify the potential complications and rehabilitation needs.	Urology	Genitourinary Injuries

CONGENITAL GENITOURINARY ANOMALIES			
Re2-Uro-015	Describe the embryological basis and classification of congenital urinary tract anomalies including PUJ obstruction and vesicoureteric reflux. Explain the pathophysiology and potential renal complications. Identify the diagnostic modalities. Outline management plan. Counsel parents regarding prognosis, long-term renal monitoring, and preventive strategies.	Urology	PUJ obstruction and vesicoureteric reflux
Re2-PS-016	Define Posterior urethral valve. Describe clinical features. Outline investigations and management plan.	Pediatric Surgery	Posterior urethral valve
Re2-PS-017	Define and classify hypospadias and epispadias. Identify associated anomalies. Outline management plan.	Pediatric Surgery	Hypospadias and epispadias
Re2-PS-018	Classify the types of Undescended testis. Identify complications. Outline management and timing of surgery and referral.	Pediatric Surgery	Undescended testis
Re2-PS-019	Describe testicular torsion considering it as surgical emergency. Describe its pathophysiology. Identify the clinical presentation. Outline investigations and management plan including timely referral.	Pediatric Surgery	Torsion testis

MODULE - 30
EYE & ENT - II

ENT - II

Module weeks	Recommended Minimum Hours

End of module assessment
Written paper
25 MCQ, s 5 SEQ, s

	Subject	MCQ, s	SEQ	

Module committee

Co Ordinator		
Co-coordinator		
Member		
Member		
Member		
Member		
Member		
Member		
Member		

Module Rationale

The inclusion of module related to otorhinolaryngology in the undergraduate medical curriculum is imperative to ensure that future physicians acquire the essential knowledge and skills to diagnose and manage both common and potentially serious otorhinolaryngological conditions. Such training not only contributes to improved patient care but also alleviates the burden on specialized ENT (ear, nose, throat) services, thereby enhancing overall healthcare delivery and efficiency. The objective of this module is to outline the essential knowledge, skills, attitudes, and competencies in otorhinolaryngology that must be attained during undergraduate medical training.

Module outcomes

- Explain the pathophysiology and clinical features of common ear, nose, and throat disorders.
- Identify and diagnose prevalent otorhinolaryngological conditions through history-taking and clinical evaluation.
- Perform basic otorhinolaryngological examination techniques competently.
- Initiate appropriate first-line management for common ENT conditions and determine indications for timely referral to specialist care.
- Recognize and provide initial stabilization for otorhinolaryngological emergencies, such as airway obstruction and severe epistaxis, followed by appropriate referral.
- Communicate effectively with patients regarding ENT conditions, management options, and preventive strategies, ensuring clarity and patient-centered care.
- Demonstrate professionalism, ethical conduct, and a respectful attitude in the care of patients with otorhinolaryngological conditions

SUBJECTS INTEGRATED IN THE MODULE

1. Anatomy
2. Physiology
3. Pharmacology
4. Forensic Medicine

WEEK 6: Time Table Fourth year MBBS block 10, Module 30, Dated:							
	Lecture 08:00 to 08:45	Lecture 08:45 to 09:30	Ward 09:30 to 11:00	Practical/tutorial 11:00 to 12:15	Lecture 12:15 to 01:00	BREAK	Tutorial 01:15 to 02:00
Mon							
Tue							
Wed							
Thur							
Fri							
Sat							

THEORY			
ENT-II (NOSE)			
CODE	**SPECIFIC LEARNING OUTCOMES**	**INTEGRATING DISCIPLINE**	**TOPIC**
ENT2-Nose-001	Identify important structures in the surgical anatomy of the nose that require care during surgery. Describe the surgical anatomy of the paranasal sinuses, emphasizing relations with vital structures. Describe mucociliary clearance and its role in sinus health and postoperative outcomes. Correlate surgical anatomy and physiology with common clinical conditions (e.g., epistaxis, sinusitis) and their surgical management.	ENT/Anatomy/ Physiology	Surgical anatomy and physiology of nose and paranasal sinuses
ENT2-Nose-002	Describe the clinical features, management, and complications of following infections. i. Boil ii. Cellulitis iii. Vestibulitis Diagnose on basis of the clinical features, outline management plan, and discuss the complications of following: i. Foreign bodies in nose ii. Maggots nose iii. Rhinolith	ENT	Diseases of the External Nose and Nasal Vestibule
ENT2-Nose-003	Differentiate between simple snoring and obstructive sleep apnea syndrome (OSAS). Explain the underlying mechanisms and causes. Describe the clinical presentation and complications. Identify the diagnostic methods and investigations. Discuss the various treatment options.		Snoring and Sleep Apnea
ENT2-Nose-004	Identify the etiology of Deviated Nasal Septum (DNS) and its types. Describe clinical presentation. Enlist the surgical procedures to correct DNS. Identify complications of nasal septal surgery. Enlist the causes of Septal Perforation. Describe its clinical presentation. Enlist investigations to rule out cause of septal perforation. Outline the management plan. Enlist the causes of Septal Abscess. Identify its clinical presentation and complications. Outline the treatment of septal abscess.		Nasal Septum Deformities
ENT2-Nose-005	Define and classify Rhinitis. Describe clinical features of infective rhinitis with management. Describe the clinical features of following types of noninfective rhinitis and their management: i. Allergic Rhinitis ii. Vasomotor Rhinitis iii. Atrophic Rhinitis iv. Hypertrophic Rhinitis v. Rhinitis Medicamentosa	ENT	Rhinitis (Infective and Non-infective)
ENT2-Nose-006	Define Sinusitis. Describe clinical presentation. Enlist investigations. Describe the treatment of acute and chronic Sinusitis. Enlist the surgical procedures done in case of chronic Sinusitis. Identify complications of Sinusitis.	ENT	Infections of the Paranasal Sinuses
ENT2-Nose-007	Define Nasal Polyp. Describe its etiology and clinical features. Differentiate between Antro choanal and ethmoidal polyps. Outline the management plan.		Nasal Polyps

ENT2-Nose-008	Enlist the causes of Epistaxis. Describe its clinical features. Outline initial management and preventive strategies.	ENT	Epistaxis
ENT2-Nose-009	Identify clinical features of maxillofacial trauma. Enlist necessary investigations. Outline steps for initial management. Discuss the management of the following: i. Fracture nasal bone ii. Mandibular fracture iii. Maxillary bone fracture iv. Zygomatic fracture v. Orbital blowout fracture Enlist the etiology of CSF Rhinorrhoea. Describe its clinical presentation. Outline investigations and management plan. Describe the medico-legal implications of maxillofacial trauma, including proper documentation, reporting requirements, and preservation of evidence for legal purposes. (Integrate with Forensic Medicine-see annexure A)	ENT/Forensic medicine	Facial Trauma (Maxillofacial)
ENT2-Nose-010	Describe the clinical features and ENT manifestations of Nasal Tuberculosis. Explain the pathology, clinical presentation, and complications of leprosy involving the nose. Discuss the clinical features, diagnosis, and management of invasive Aspergillosis of the paranasal sinuses. Describe the presentation, rapid progression, and surgical importance of Mucormycosis. Explain the nasal and systemic manifestations of Wegener's granulomatosis and its diagnostic approach. Describe ENT features of Systemic Lupus Erythematosus with emphasis on nasal involvement. Discuss the clinical features and diagnostic findings of Sarcoidosis affecting the nose and paranasal sinuses.	ENT	Granulomatous Disorders of Nose & Paranasal Sinuses
ENT2-Nose-011	Describe the pathology, clinical features, and surgical importance of Inverted Papilloma. Explain the clinical presentation, diagnosis, and management principles of Transitional cell carcinoma of the sinonasal region. Correlate the surgical anatomy of the sinonasal region with the spread and complications of these neoplasms.	ENT/Pathology	Sino nasal neoplasm

MODULE - 30
EYE & ENT - II

EYE - II

Module weeks	Recommended Minimum Hours

End of module assessment
Written paper
25 MCQ, s 5 SEQ, s

	Subject	MCQ, s	SEQ	

Module committee

Co Ordinator		
Co-coordinator		
Member		
Member		
Member		
Member		
Member		
Member		
Member		

Module Rationale

Ophthalmology is a vital medical specialty dedicated to the diagnosis, treatment, and prevention of eye diseases. It is essential for medical students to have a thorough understanding of the eye's basic anatomy, physiology, and pathology in order to manage common ocular conditions effectively. This module aims to equip medical students with the knowledge and clinical skills necessary to identify and manage a wide range of ophthalmic conditions frequently encountered in general practice and emergency settings.

Module outcomes

- Identify common ophthalmic diseases and disorders encountered in OPD, IPD, multidisciplinary and emergency settings.
- Apply fundamental clinical skills in the examination of the eye and adnexa, including visual acuity assessment and basic use of ophthalmic instruments.
- Formulate differential diagnosis and initial management plans for common ophthalmic conditions, including appropriate referral when necessary.
- Integrate knowledge of ophthalmic health into the broader context of systemic diseases and public health considerations.

SUBJECTS INTEGRATED IN THE MODULE

1. Medicine
2. Pharmacology
3. Forensic Medicine
4. Rheumatology

WEEK 6: Time Table Fourth year MBBS block 10, Module 30, Dated:							
	Lecture 08:00 to 08:45	Lecture 08:45 to 09:30	Ward 09:30 to 11:00	Practical/tutorial 11:00 to 12:15	Lecture 12:15 to 01:00	BREAK	Tutorial 01:15 to 02:00
Mon							
Tue							
Wed							
Thur							
Fri							
Sat							

THEORY			
EYE-II			
CODE	SPECIFIC LEARNING OUTCOMES	INTEGRATING DISCIPLINE	TOPIC
Eye2-001	Define uveitis and classify based on anatomical location and etiology. Describe the pathophysiology of uveitis. Identify the key clinical features of uveitis. Differentiate uveitis from other causes of red eye using history and clinical examination. Explain the principles of treatment, including corticosteroid therapy, immunosuppressive agents, and management of complications.	Ophthalmology	Uveal tract
Eye2-002	Describe the normal pupillary reactions (direct light reflex, consensual light reflex, and accommodation reflex). Describe abnormal pupillary reactions (Marcus Gunn pupil/RAPD, Argyll Robertson pupil, Adie's pupil and Horner's syndrome with their underlying causes).		Pupil
Eye2-003	Classify cataract. Describe cataract secondary to systemic diseases. Explain the symptoms, signs, investigations, and management plan for congenital cataract. Diagnose acquired cataract based on symptoms, signs, pathophysiology and investigation findings. Justify selection of treatment options for acquired cataract. Enumerate the per and post-operative complications of cataract surgery Explain congenital cataract secondary to TORCH infections.		Lens
Eye2-004	Define glaucoma. Classify the different types of glaucoma. Describe the anatomy of the anterior chamber angle and aqueous humor outflow/ Drainage pathways in relation to glaucoma. Explain the etiology and pathophysiology of various types of glaucoma. (open, close, primary, secondary, congenital, acquired) Enumerate the different types of secondary glaucoma. Describe the details of lens induced glaucoma. Identify the characteristic clinical features of angleclosure glaucoma./ different types of glaucoma (open, close, primary, secondary, congenital, acquired) Formulate the differential diagnosis of glaucoma. Outline the diagnostic investigations used for glaucoma. Outline the treatment plan for angle-closure glaucoma. Outline the treatment plan for open-angle and other types of glaucoma. Explain pathophysiology of congenital glaucoma Outline the treatment plan for congenital glaucoma	Ophthalmology	Glaucoma
	Classify anti-glaucoma medications. Explain the mechanisms of action of antiglaucoma drugs and their effect on intraocular pressure. Discuss the indications, contraindications, and adverse effects of antiglaucoma medications. Write prescription of glaucoma.(Pharmacology)	Ophthalmology/ Pharmacology	
Eye2-005	Define retinitis pigmentosa and describe its pathophysiology. Identify the characteristic signs and symptoms, including night blindness, peripheral field loss, and typical fundus changes (classical triad). Outline the treatment and supportive management options for patients with retinitis pigmentosa. Discuss the important counselling points in retinitis pigmentosa.	Ophthalmology	Retina and Vitreous
	Describe the pathophysiology of diabetic retinopathy, including microvascular changes. Outline the clinical signs and imaging methods used for diagnosis, including fundus examination and optical coherence tomography, fundus fluorescein angiography, ultrasound B scan. Explain the principles of management, including glycemic control, laser photocoagulation, intravitreal therapy, and vitrectomy.	Ophthalmology	

	Define retinopathy of prematurity and describe its pathophysiology. Identify the risk factors and etiological factors associated with retinopathy of prematurity. Recognize/ Explain the clinical features, grading and complications of retinopathy of prematurity. Outline the methods for diagnosis and screening protocols in retinopathy of prematurity. Describe the management options, including medical, laser, and surgical interventions. Explain preventive strategies and the importance of timely screening in at-risk infants.		
Eye2-006	Define refractive errors and describe their impact on vision. Differentiate the main types (myopia, hyperopia, astigmatism, and presbyopia). Explain the optical and anatomical basis of each refractive error. Identify key clinical features and diagnostic methods used to detect refractive errors. Outline the main management options, including spectacles, contact lenses, and refractive surgery.	Ophthalmology	Refractive errors

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