

MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE MIRPUR

DEPARTMENT OF MEDICAL EDUCATION



NEUROSCIENCES-1A MODULE

2ND YEAR MBBS (BATCH-17)

BLOCK: E

DURATION: 6-WEEKS

FROM: 27TH APRIL TO 14TH JULY 2026

MODULE CODE: MB2-E-NS-IA-08

Contents

1.	Instructions: _____	3
2.	Module Committee: _____	4
3.	Our Vision Statement _____	4
4.	Our Mission Statement _____	4
5.	Module Mapping of MBBS Program _____	5
6.	What Is A Study Guide? _____	6
7.	Recommended List Of Icons _____	7
8.	Organization of Module _____	8
9.	Teaching and learning strategies _____	10
10.	General Learning Objectives _____	11
11.	Specific learning objectives _____	12
12.	Examination and Methods of Assessment: _____	31
13.	Learning Opportunities and Resources _____	32
14.	Tentative Timetables _____	33
15.	For inquiry and troubleshooting _____	42
16.	Course Feedback Form _____	43
17.	Scan To Submit End of Module Feedback _____	45
18.	Students Diary/Notes _____	46

Disclaimer:

The development of study guides and the associated curriculum is an iterative process of quality enhancement, informed by stakeholder feedback. All elements—including content, delivery modes, scheduled hours, and assessment—are subject to periodic review and potential revision. Students are advised that the provided topics and learning outcomes represent the essential foundation for approximately 70% of examinations. The remainder will be derived from lecture content and directives issued by course instructors.

1. Instructions:

1. Maintain a minimum attendance of 85% in all scheduled academic activities; otherwise, you will not be allowed to sit in the annual exam.
2. Always adhere strictly to the prescribed college uniform and professional dress code.
3. Demonstrate professionalism and respect toward peers, faculty, staff, and patients.
4. Uphold academic integrity and ethical conduct in all learning and assessment activities.
5. Comply with all institutional policies regarding conduct, use of facilities, and digital etiquette.

2. Module Committee:

s.no	Name	Department	Role
1.	Prof..Dr.Col Shafqat Ali	Anatomy	HOD
2.	Prof. Dr. M. Naqib	Biochemistry	HOD
3.	Prof. Dr. Ayyaz Ahmed	Physiology	HOD
4.	Dr. M Junaid Khan	DME	HOD

3. Our Vision Statement

To be a renewed nationwide and world class academia maintaining a prominent role in medical education, innovative research and delivery of best health care services of international standards.

4. Our Mission Statement

To take this medical college to the international ranking by providing healthcare professional's excellent knowledge, extraordinary skill sets, leadership in research and empathy with Islamic Spirit.

5. Module Mapping of MBBS Program

Module Mapping (MBBS Program) Tentative

Year	Blocks	Modules			Horizontal Module	
1 st year	A	Foundation-I (5-weeks)	Blood & Immunology -I (5-weeks)		Quran Kareem	PRIME <i>(Professionalism, Research, Identity formation, Management & leadership, Ethics)</i>
	B	Locomotor/MSK-I (8-weeks)				
	C	CVS – I (4-weeks)	RES – I (4-weeks)			
2 nd year	D	Gastrointestinal, Hepatobiliary and Metabolism Module -I (9-weeks)	Renal-I (3-weeks)			
	E	Neurosciences 1A (6-weeks)	Neurosciences 1B (5-weeks)			
	F	Endocrine – I (4-weeks)	Repro – I (3-weeks)			
3 rd year	G	Foundation - II	Infection & Inflammation-II			
	H	Multisystem-I	Blood & Immunology-II	Locomotor/MSK-II		
	I	CVS - II	RES – II			
4 th year	J	Neurosciences-II			M1=ENT M2=EYE	Arts & Humanities
	K	GIT & Hepatobiliary - II				
	L	Renal-II	Endo & Repro- II			
PRIME Year	N	Foundation-III	Blood & Immunology-III	Locomotor/MSK-III	Clerkship, Electives, /Capstone/Observer ship	
	O	Cardiorespiratory-III				
	P	Renal-III	Endo & Repro-III			
	Q	Neurosciences-III	GIT & Hepatobiliary-III	Multisystem-III		

- 1st Year MBBS: 3 blocks, 5 Modules-27 weeks (945 Hours/AY)
 - 2nd Year MBBS: 3 blocks 6 Modules – 30 weeks (1050 Hours/AY)
- Per week teaching hours=35
Total weeks/hours are tentative
PRIME Year: Year of Professionals Ready for Innovative Medical Excellence
PRIME: Professionalism, Research, Identity formation, Management & leadership, Ethics.

6. What Is A Study Guide?

The Purpose and Structure of a Study Guide

A study guide serves as the central contract and roadmap between the educational program and the student. Its primary purpose is to demystify the learning process by clearly communicating how a module is organized, managed, and assessed. It empowers students to take ownership of their learning by providing all necessary information to plan their studies, identify appropriate resources and support, and understand precisely how their performance will be evaluated.

Core Components of an Effective Study Guide:

Module Administration & Overview

This section provides the essential framework for the module. It includes:

- **Module Identification:** Code, title, teaching hours, and placement within the curriculum.
- **Personnel & Coordination:** Clear points of contact (Module Coordinator, teaching faculty) with roles and responsibilities defined, enabling students to seek the right help efficiently.
- **Timetable & Schedule:** A structured overview of the teaching sequence, including dates, topics, and formats (e.g., lectures, practicals).
- **Learning Objectives & Instructional Strategy**
This is the academic core of the guide, aligning intent with action.
- **Module & Theme Objectives:** A precise list of what students are expected to know, understand, and be able to do by the module's end, directly mapped to program and PMDC competencies.
- **Teaching-Learning Methods:** A description of the instructional strategies employed (e.g., interactive lectures, small group discussions, lab sessions, case-based learning) and their role in achieving the objectives.
- **Learning Resources & Support**
This component directs students to the tools for successful learning.
- **Curated Resource List:** A categorized list of essential and recommended resources, including core textbooks, key journal articles, vetted online links, and specific software or simulation tools.
- **Assessment Strategy:** A detailed breakdown of all formative (continuous) and summative assessments, including their format, weighting, schedule, and how they contribute to the final grade.
- **Rules and Policies:** Clear statements on examination rules, grading criteria, policy on late submissions, academic integrity, and the appeals process.

In summary, a well-constructed study guide transforms a module from a series of disjointed events into a coherent, transparent, and manageable learning journey. It is a fundamental tool for achieving constructive alignment and enhancing the student learning experience.



7. Recommended List Of Icons



Introduction To Case



For Objectives



Critical Questions



Assessment



Resource Material

8. Organization of Module

Introduction to Neurosciences I A

Neurosciences I A is the first module of Block E, focusing on the foundational study of the human nervous system. This module integrates the core basic sciences—**Anatomy, Physiology, and Biochemistry**—to explain the structure, development, function, and chemistry of neural pathways. This foundation is essential for understanding neurological health and disease.

To connect this science to clinical practice, learning is organized around six major **clinical themes or presentations**, each explored in depth over one week. These themes guide the integrated teaching of relevant clinical disciplines, including **Pharmacology, Pathology, Radiology, Medicine, Neurosurgery, and the PRIME domains**.

Rationale and Importance

The nervous system is the master regulatory network for all voluntary and involuntary bodily functions and is the substrate for higher cognitive abilities that define human experience. Neurological disorders represent a significant global burden of disease.

A firm grasp of neuroscience is therefore a critical competency for any physician. Understanding the integrated anatomy, physiology, and biochemistry of the nervous system enables the **timely diagnosis and management of acute conditions** (e.g., stroke, infection), which can prevent mortality and reduce long-term disability. It is equally vital for the **recognition and treatment of chronic degenerative and demyelinating diseases** (e.g., Parkinson's disease, Multiple Sclerosis), improving quality of life and lessening the societal burden of care.

Module Themes & Schedule

The six-week module is organized around the following clinical presentations:

<i>Week</i>	Clinical Theme / Presentation	Brief Description
<i>1</i>	Numbness and Tingling	Exploration of peripheral nerve anatomy, sensory pathways, and the pathophysiology behind common conditions like neuropathy, radiculopathy, and compression syndromes.
<i>2</i>	Paraplegia	Study of spinal cord anatomy, motor pathways (corticospinal tracts), and the mechanisms of injury or disease leading to lower limb paralysis, differentiating between upper and lower motor neuron lesions.
<i>3</i>	Syncope	Investigation of autonomic nervous system control, cardiovascular physiology, and the various causes of transient loss of consciousness, from vasovagal responses to cardiac arrhythmias.

4	Hemiplegia/Aphasia	Correlation of cerebral hemisphere anatomy (motor cortex, Broca's/Wernicke's areas) with stroke pathophysiology, focusing on unilateral weakness and language disorder localizations.
5	Tremors	Examination of the basal ganglia, cerebellum, and their circuits to understand the pathophysiology of movement disorders, differentiating essential tremor from parkinsonian tremors.
6	Headache	Analysis of meningeal and vascular innervation, pain pathways, and the biochemical mechanisms underlying primary headaches (migraine, tension-type) and secondary causes.

Note: These descriptions link the presenting symptom directly to the underlying anatomical structures, physiological processes, and core pathologies you will learn about in an integrated manner throughout the week.

9. Teaching and learning strategies

How You Will Learn:

This guide outlines the diverse learning methods you will experience, each carefully chosen to help you grow from a student of science into a capable, independent future clinician. Think of this as your map to not only *what* you will learn, but *how* you will learn most effectively.

Part 1: Learning Together – Facilitated Sessions

These sessions provide the foundation, context, and interactive space to build knowledge with your peers and faculty.

- a. **Interactive Lectures:** These are not passive events. In the lecture hall, your teacher will introduce core concepts and clinical principles using slides, animations, and real patient stories. We encourage you to engage—ask questions, respond to polls, and connect the dots live. This is where the roadmap for each topic is drawn.
- b. **Small-Group Sessions:** This is where knowledge becomes skill. In smaller classrooms, you will roll up your sleeves with a facilitator and a group of peers.
 - In **Tutorials**, you'll dissect clinical cases, clarify challenging concepts from lectures, and learn through discussion and debate.
 - In **anatomical dissection**, your group will engage directly with the reality of the human body from the very first session. Your mission is to explore, map, and trace the architecture of tissues—identifying key landmarks, surface contours, and gross anatomical features while following the precise pathways of neurovascular and lymphatic systems. This hands-on exploration actively animates and integrates the principles from your anatomy, histology, and embryology lectures, transforming theoretical knowledge into a tangible, three-dimensional understanding—mirroring the very essence of foundational discovery and clinical reasoning.
 - **Practical Demonstrations** in labs will bring the textbook to life, allowing you to see, touch, and understand the human body and its functions.
 - **Journal Club** sessions will train you to critically evaluate new medical research, a skill vital for a lifetime of evidence-based practice.

Part 2: Learning on Your Own – The Engine of Mastery

True expertise in medicine requires you to become the director of your own learning. These are your key tools.

- **Directed Self-Learning (DSL):** Consider this structured, independent practice. For specific modules, you will be given clear tasks, objectives, and a list of resources. Your job is to work through them independently. This builds the disciplined study habits and foundational understanding you need. Faculty are there to guide you if you hit a roadblock.
- **Self-Directed Learning (SDL):** This is the ultimate goal of your professional development in which you take full responsibility. You will identify your own learning gaps (“I don’t understand heart murmurs well enough”), set your own goals, seek out your own resources, and assess your progress. The college provides the support—the library, online databases, and faculty office hours—but you drive the process. This is the skill that will sustain your clinical competence for decades.

We are here to guide you in this transition from learning what we teach, to learning what you need to know. Embrace each method—the collaborative and the independent—as essential parts of your growth into a physician.



10. General Learning Objectives

By the end of this module the students would be able to;

Knowledge

1. Explain the gross and microscopic structural and functional features of peripheral nerves, spinal cord, and brain.
2. Describe the development of the forebrain, midbrain, and hindbrain.
3. Describe the basic functions of synapses, neurotransmitters, and mechanisms of electrical events during neuronal excitation.
4. Explain the structure and functions of different receptors during neuronal excitation.
5. Describe the mechanisms and pathways of sensory inputs in the nervous system.
6. Explain the organization, structure, functions, and neurotransmitters of the autonomic nervous system.
7. Describe the blood supply and venous drainage of the brain and spinal cord.
8. Describe the organization, structure, and functions of the motor system of the brain and spinal cord.
9. Explain the organization, structure, and functions of the cerebellum and basal ganglia.
10. Explain the structure, formation, and drainage of cerebrospinal fluid in the brain and spinal cord.
11. Describe the functions of the limbic system and reticular activating system.
12. Describe the pathophysiology and prevention of common diseases like stroke, epilepsy, hydrocephalus, and brain injuries.
13. Identify the microscopic structure of the spinal cord, cerebral cortex, and cerebellar cortex.

Skills

14. Examine the nervous system of a standardized patient (assessing sensations, motor functions, higher cortical functions, and tendon reflexes).
15. Perform a focused neurological history-taking to localize a lesion within the central or peripheral nervous system.

Attitude

16. Demonstrate empathy and a patient-centered approach when discussing symptoms related to sensitive neurological conditions (e.g., loss of independence, cognitive decline).
17. Respect patient privacy, modesty, and autonomy during the conduct of a neurological examination.
17. Collaborate effectively with peers in small-group discussions to analyze neurological cases, demonstrating respect for diverse viewpoints and shared responsibility for learning.

11. Specific learning objectives

THEME-1 NUMBNESS AND TINGLING					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Overview of nervous system	Describe the general features of neurons and its classification Differentiate between central and peripheral nervous system. Describe the general features of brain (forebrain, midbrain and hindbrain) Describe the general features of spinal cord including its enlargements at different levels Describe the general features of cranial and spinal nerves Differentiate between the anatomical aspects of sympathetic and parasympathetic system	LGIS -1	1	MCQs/SAQs OSPE/VI VA
EMBRYOLOGY					
2.	Forebrain, midbrain and hindbrain	Describe the development of primary and secondary brain vesicles Enlist the derivatives of the brain vesicles Describe the development of prosencephalon, mesencephalon and rhombencephalon Discuss congenital anomalies associated with each region of brain	LGIS -2	1	MCQs/SAQs OSPE/VI VA
PHYSIOLOGY					
3.	Organization of the Nervous System	Describe general design of the nervous system Describe various divisions of the nervous system. Describe structural and functional unit of CNS. Describe Functional components of Neuron. Describe Functional and Structural classification of Neurons Describe major levels of central nervous system function Describe Glial cells and their functions. Compare nervous system to a computer	LGIS -1	1	MCQs/SAQs OSPE/VI VA
4.	Basic Functions of Synapses-I	Define and classify synapses Explain physiological structure of synapse Describe Mechanism by Which an Action Potential Causes Transmitter Release from the Presynaptic Terminals	LGIS -2	1	MCQs/SAQs OSPE/VI VA
5.	Basic Functions of Synapses-II	Describe synaptic transmission and explain properties of synaptic transmission. Describe mechanism of action of neurotransmitter on the post synaptic membrane. Describe Second messenger system in the post synaptic neuron	LGIS -3	1	MCQs/SAQs OSPE/VI VA
6.	Functions of Neurotransmitters	Define the characteristics of a neurotransmitter Enumerate the neurotransmitters involved in central nervous system.	LGIS -4	1	MCQs/SAQs OSPE/VI

		Classify neurotransmitters and describe the actions of some common neurotransmitters in central nervous system.			VA
7.	Electrical Events during Neuronal Excitation	Describe resting membrane potential of the neuronal soma. Describe Effect of Synaptic Excitation on the Postsynaptic Membrane-Excitatory Postsynaptic Potential.	LGIS -5	1	MCQs/ SAQs OSPE/VI VA
8.	Electrical Events during Neuronal Inhibition	Describe Effect of Inhibitory Synapses on the Postsynaptic Membrane-Inhibitory Postsynaptic Potential. Describe Generation of Action Potentials in the Initial Segment of the Axon Leaving the Neuron-Threshold for Excitation	LGIS -6	1	MCQs/ SAQs OSPE/VI VA
9.	Sensory Receptors	Define and classify receptors. Classify receptors according to their location in the body. Describe specific functions of receptors. Describe Receptor or generation potential Discuss mechanism of action of sensory transduction.	LGIS -7	1	MCQs/ SAQs OSPE/VI VA
10.	Coding of Sensory Information	Describe Doctrine of specific nerve energies Describe Modality of Sensation—The “Labeled Line Principle” Define and discuss law of projection Discuss properties of stimulus; modality, Stimulus location Stimulus intensity Stimulus duration Describe Frequency of action potentials with threshold level of receptor potential	LGIS -8	1	MCQs/ SAQs OSPE/VI VA
11.	Transmission and Processing of Signals in CNS	Describe Relaying of signals through Neuronal pools; Divergence, Convergence, Prolongation of Signals	LGIS -9	1	MCQs/ SAQs OSPE/VI VA
12.	Types of nerve fibers, its regeneration and degeneration	Describe the mechanism of degeneration & regeneration. Describe the duration required for regeneration inside & out of CNS. Enumerate the causes of degeneration. Discuss Wallerian degeneration Identify the microscopic appearance of degenerating neurons	LGIS -10	1	MCQs/ SAQs OSPE/VI VA
13.	Transmission in the Dorsal column–medial Lemniscal system	Describe ascending pathways and enumerate the differences between the two. Describe Transmission in the Dorsal column–medial Lemniscal system Describe Spatial Orientation of the Nerve Fibers in the Dorsal Column–Medial Lemniscal System Describe two-point discrimination	LGIS -11	1	MCQs/ SAQs OSPE/VI VA
14.	Somatosensory Cortex	Identify the diagrammatic representation of different areas of the body in the somatosensory cortex I Identify Broadman’s areas of cerebral cortex and correlate each one of them with their respective functions. Describe the functions of somatosensory area I.	LGIS -12	1	MCQs/ SAQs OSPE/VI VA

		Describe layers of the somatosensory cortex and their function.			
		Describe the functions of somatosensory association area			
BIOCHEMISTRY					
15.	Phosphosphingolipids-I	Describe the metabolism (biosynthesis/ degradation) of phosphosphingolipids	LGIS -1	1	MCQs/SAQs OSPE/VI VA
16.	Phosphosphingolipids-II	Explain the functional role of phosphosphingolipids in membrane stability, cell signaling, and myelin sheath formation.	LGIS -2	1	MCQs/SAQs OSPE/VI VA
		Correlate defects in phosphosphingolipid metabolism with clinical conditions such as Niemann-Pick disease.			
		Interpret the significance of phosphosphingolipids in neurological disorders and demyelinating diseases.			
GENERAL MEDICINE					
17.	Peripheral neuropathies	Describe the etiology and types of peripheral neuropathies	LGIS -1	1	MCQs/SAQs OSPE/VI VA
		Discuss the clinical presentation and complications of diabetic neuropathies			

DIRECTED SELF LEARNING					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Adaptation of receptors (Tonic and Phasic Receptors)	Define sensory receptor adaptation Differentiate between tonic and phasic receptors Describe characteristics of tonic & phasic receptors (slow/rapid adaptation) Explain physiological basis of receptor adaptation Correlate receptor types with sensory functions	DSL	1	MCQs/ SAQs
2.	Pacinian corpuscles hyperplasia	Describe normal structure and function of Pacinian corpuscles Explain causes and pathophysiology of corpuscle hyperplasia Identify clinical features associated with the condition (pain, sensitivity) Correlate histological changes with clinical presentation	DSL	1	MCQs/ SAQs
3.	Transmission of Sensory signals in the Anterolateral pathway-I	Differentiate the submodalities of nondiscriminative touch, temperature and nociception based on receptor transduction mechanism, localization within the spinal gray matter, and central termination of the pathways.	DSL	1	MCQs/ SAQs
4.	Transmission of Sensory signals in the Anterolateral pathway-II	Describe functional organization at all levels and sub-modalities served by the anterolateral system and the equivalent components of the spinal trigeminal system.	DSL	1	MCQs/ SAQs

LAB WORK					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
ANATOMY					
1.	Identify, draw, and label the light microscopic structure of: • Peripheral nerve • Sensory ganglia • Autonomic ganglia	Identify, draw, and label the light microscopic structure of: • Peripheral nerve • Sensory ganglia • Autonomic ganglia	Demonstration / Practical	1.5	OSPE
PHYSIOLOGY					
2.	Examination of sensations	Examine the sensations (tactile, position, pain, thermal, vibration) of lower limb on a standardized patient	Demonstration / Practical	1.5	OSPE

SMALL GROUP DISCUSSIONS					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Somatic Sensations & Ascending tracts	Describe Tactile receptors in the skin and their functions: Pacinian corpuscles, Meissner's corpuscles, Ruffini endings, Merkel cell, A-delta and C free nerve endings	SGDs	1.5	MCQs/SAQs
BIOCHEMISTRY					
2.	Myelin Sheath and Sphingomyelin	Explain the role of sphingomyelin in myelin sheath formation Correlate sphingomyelin deficiency/damage with impaired nerve conduction	SGDs	1.5	MCQs/SAQs

THEME-2 PARAPLEGIA					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Externals features of	Describe the shape, grooves and sulci and extension of spinal cord	LGIS-3	1	MCQs/SAQs

	Spinal Cord	Enlist the segments of spinal cord			OSPE/VI VA
		Differentiate between white and grey matter of spinal cord			
		Describe the meningeal covering of spinal cord			
		Describe the blood supply of spinal cord			
2.	Internal structure of Spinal Cord	Describe the distribution of spinal cord into horns	LGIS -4	1	MCQs/ SAQs OSPE/VI VA
		Differentiate between anterior, lateral and posterior horns			
		Describe the distribution of sensory and motor neuron within the grey matter			
		Explain formation of Rexed lamina of spinal cord			
3.	Ascending Tracts	Enumerate the ascending tracts	LGIS -5	1	MCQs/ SAQs OSPE/VI VA
		Explain the origin, pathway and termination of dorsal column medial lemniscal system			
		Explain the origin, pathway and termination of anterolateral spinothalamic tract.			
4.	Descending Tracts	Enumerate the descending tracts	LGIS -6	1	MCQs/ SAQs OSPE/VI VA
		Explain the origin, pathway and termination of pyramidal tracts			
		Explain the origin, pathway and termination of extrapyramidal tracts			
		Differentiate between pyramidal and extrapyramidal tracts			
EMBRYOLOGY					
5.	Spinal cord	Discuss the development of alar and basal plate and its derivatives	LGIS -7	1	MCQs/ SAQs OSPE/VI VA
HISTOLOGY					
6.	Spinal cord	Identify the light microscopic transverse section of spinal cord at cervical, thoracic, lumbar and sacral regions	LGIS -8	1	MCQs/ SAQs OSPE/VI VA
PHYSIOLOGY					
7.	Organization of Spinal Cord & General Principles	Describe organization of the spinal cord for motor functions	LGIS -13	1	MCQs/ SAQs OSPE/VI VA
		Give an overview of the components of nervous system involved in motor control			
		Identify and differentiate upper and lower motor neurons			
		Describe the types of anterior horn cells			
		Describe the concept of Final Common Path			
		Describe broad types of motor activities			
8.	Motor functions of Spinal cord I: Stretch Reflex	Describe structural organization of the muscle spindle	LGIS -14	1	MCQs/ SAQs OSPE/VI VA
		Define a reflex action and enlist components of reflex arc.			
		Describe types of reflexes and their level of integration.			
		Describe Stretch Reflex			
9.	Motor functions of Spinal cord II: Stretch Reflex	Differentiate between Static (Tonic) and Dynamic (Phasic) stretch reflex	LGIS -15	1	MCQs/ SAQs OSPE/VI VA
		Describe Functions of muscle spindle			
		Discuss physiological significance of these reflexes.			
		Describe Functions of Gamma efferent system			
		Describe the role of the muscle spindle in voluntary motor activity			
10.		Describe Golgi Tendon Reflex	LGIS -16	1	MCQs/ SAQs
		Differentiate between muscle spindle and Golgi tendon			

	Motor functions of Spinal cord III: Golgi Tendon Reflex, Withdrawal Reflexes	organ. Describe types of polysynaptic reflexes and their level of integration. Discuss physiological significance of these reflexes. Describe reciprocal inhibition and reciprocal innervation			OSPE/VI VA
11.	Brain Stem functions	Discuss functions of brainstem Role of ventricular and vestibular nuclei in agonist and antagonist muscles.	LGIS -17	1	MCQs/ SAQs OSPE/VI VA
12.	Support of the body against gravity, Reflexes of Posture And Locomotion	Describe Positive Supportive Reaction Describe Cord "Righting" Reflexes. Describe stepping and walking movements Describe Excitatory-Inhibitory Antagonism Between Pontine and Medullary Reticular Nuclei	LGIS -18	1	MCQs/ SAQs OSPE/VI VA
13.	Vestibular Sensations and Maintenance of Equilibrium	Describe the physiologic anatomy of vestibular apparatus Describe function of the utricle and saccule in the maintenance of static equilibrium Describe function of semicircular ducts Describe Neuronal Connections of the Vestibular Apparatus Describe Vestibular mechanism for stabilizing the eyes	LGIS -19	1	MCQs/ SAQs OSPE/VI VA
14.	Lesions of the Spinal Cord: Upper and Lower Motor Neuron lesion-I	Define muscle tone and describe its significance. Explain the sequence of events during development of muscle tone.	LGIS -20	1	MCQs/ SAQs OSPE/VI VA
15.	Lesions of the Spinal Cord: Upper and Lower Motor Neuron lesion-II	Discuss spinal shock Differentiate between signs of the upper and lower motor neurons.	LGIS -21	1	MCQs/ SAQs OSPE/VI VA

GENERAL MEDICINE

16.	Hemi-section of spinal cord	Describe the clinical features of Brown Sequard syndrome Describe the etiology, clinical features, investigations and management of a patient with paraplegia	LGIS -2	1	MCQs/ SAQs OSPE/VI VA
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DIRECTED SELF LEARNING

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Brown Sequard Syndrome	Describe causes of spinal cord hemisection Explain tracts involved (corticospinal, spinothalamic, dorsal columns) Correlate lesion with ipsilateral motor loss and proprioception loss & contralateral loss of pain and	DSL	1	MCQs/ SAQs

2.	Withdrawal and Stretch Reflexes	temperature.	DSL	1	MCQs/ SAQs
		Identify segmental signs at the level of lesion			
		Define withdrawal (flexor) reflex & stretch (myotatic) reflex			
		Describe components of the reflex arc			
		Explain monosynaptic/ polysynaptic nature of the reflexes			

DISSECTION

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
ANATOMY					
1.	Spinal Cord	Describe external features of spinal cord	Dissection-1	1.5	OSPE/VI VA
		Identify meninges covering spinal cord			
		Demonstrate dorsal and ventral nerve roots			
		Identify dorsal root ganglion and spinal nerves			
		Trace spinal nerve formation and course			
		Correlate spinal cord segments with vertebral levels			
		Relate spinal cord anatomy to lumbar puncture			
2.	Ascending Tracts	Identify major ascending tracts of spinal cord	Dissection-2	1.5	OSPE/VI VA
		Describe origin, course, and termination of sensory pathways			
		Explain modalities carried by different ascending tracts			
		Correlate lesions with sensory deficits			
3.	Descending Tracts	Identify major descending tracts of spinal cord	Dissection-3	1.5	OSPE/VI VA
		Describe origin, course, and termination of motor pathways			
		Explain functions of pyramidal and extrapyramidal tracts			
		Correlate tract lesions with motor deficits			
		Localize lesions based on patterns of motor impairment			

LAB WORK

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
ANATOMY					
1.	Spinal Cord	Identify the slide of transverse section of spinal cord under the microscope	Demonstration / Practical	1.5	OSPE
PHYSIOLOGY					
2.	Examination of deep tendon reflexes-1	Examine a standardized patient for deep tendon reflexes of lower limbs	Demonstration / Practical	1.5	OSPE

SMALL GROUP DISCUSSIONS

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Spinal Reflexes	Define spinal reflex and reflex arc Classify spinal reflexes (monosynaptic and polysynaptic) Explain stretch reflex and its mechanism. Describe withdrawal and crossed extensor reflexes. Explain role of spinal reflexes in posture and protection. Demonstrate clinical reflexes (deep tendon reflexes). Correlate changes in reflexes with upper and lower motor neuron lesions.	SGDs	1.5	MCQs/SAQs

THEME-3 SYNCOPE

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	External features of brain stem	Enlist the components of brain stem Describe the external features of brainstem	LGIS -9	1	MCQs/SAQs OSPE/VI VA
2.	Internal structures of brain stem	Describe the transverse section of medulla at the level of sensory decussation, motor decussation and inferior Olivary nuclei Enumerate the cranial nerves nuclei present within the medulla Describe the transverse section of pons at the level of cranial and caudal parts Enumerate the cranial nerves nuclei present within the pons Describe the transverse section of pons at the level of superior colliculus and inferior colliculus Enumerate the cranial nerves nuclei present within the midbrain	LGIS -10	1	MCQs/SAQs OSPE/VI VA
PHYSIOLOGY					
3.	Involuntary function of brain, Functions of reticular activating system, Coma and brain death	Describe the involuntary functions of the brain Describe the structure and functions of RAS Define coma and describe brain death	LGIS -22	1	MCQs/SAQs OSPE/VI VA
4.	General Organization of the Autonomic Nervous System	Describe the differences in the locations, level and organization of sympathetic and parasympathetic nervous system. Identify the target organs of sympathetic and	LGIS -23	1	MCQs/SAQs OSPE/VI VA

		parasympathetic nervous system.			
5.	The Autonomic Nervous System 1	Describe the distribution of afferent and efferent sympathetic and parasympathetic fibers to their respective target organs. Contrast the sympathetic and parasympathetic branches of the autonomic nervous system based on: spinal cord division of origin, length of preganglionic and postganglionic neurons, neurotransmitters and receptors at the ganglionic and target organ synapse.	LGIS -24	1	MCQs/ SAQs OSPE/VI VA
6.	The Autonomic Nervous System 2	Discuss basic characteristics of sympathetic and parasympathetic functions Describe receptors on the effector organs Describe function of the adrenal medullae Describe sympathetic and parasympathetic “tone” Describe “alarm” or “stress” response of the sympathetic nervous system	LGIS -25	1	MCQs/ SAQs OSPE/VI VA
PHARMACOLOGY					
7.	Drugs acting on sympathetic & parasympathetic nervous system	Enlist the drugs acting on SNS and describe their mechanism of actions Enlist the drugs acting on PNS and describe their mechanism of action	LGIS -1	1	MCQs/ SAQs OSPE/VI VA
FORENSIC MEDICINE					
8.	Brain death	Certify brain death Describe the medicolegal importance of brain death	LGIS -1	1	MCQs/ SAQs OSPE/VI VA

DISSECTION					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Medulla	Identify external features of medulla oblongata Describe internal structure at key levels Identify cranial nerve nuclei in medulla Explain ascending and descending tracts in medulla Correlate lesions with clinical features	Dissection-4	1.5	OSPE/VI VA
2.	Pons	Identify external features of pons Describe internal structure and nuclei of pons Identify cranial nerve nuclei in pons Explain tract organization within pons Correlate pontine lesions with clinical signs	Dissection-5	1.5	OSPE/VI VA
3.	Midbrain	Identify external features of midbrain Describe internal structures at superior and inferior colliculi levels Identify cranial nerve nuclei in midbrain Explain major ascending and descending tracts in midbrain Correlate midbrain lesions with clinical manifestations	Dissection-6	1.5	OSPE/VI VA

LAB WORK

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Examination of deep tendon reflexes-2	Examine a standardized patient for upper limbs tendon reflexes	Demonstration / Practical	1.5	OSPE

SMALL GROUP DISCUSSIONS					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Reticular Activating system & Autonomic Nervous System	Define reticular activating system (RAS) & describe its anatomical location in brainstem Explain its role in consciousness and arousal Identify ascending and descending connections of RAS Correlate dysfunction with altered states of consciousness Explain basic functions of ANS in organ regulation Identify neurotransmitters involved in ANS Correlate ANS dysfunction with common clinical conditions	SGDs	1.5	MCQs/SAQs

THEME-4 HEMIPLEGIA					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Cerebrum • Grey matter of cerebrum • White matter of cerebrum	Division of cerebrum into different lobes, its surfaces, sulci and gyri Distribution of grey matter in cerebral hemispheres Enumerate the types of white matter fibers Differentiate between association, projection and commissural fibers Detailed account of corpus callosum	LGIS -11	1	MCQs/SAQs OSPE/VI VA
2.	Diencephalon	Structure and important nuclei of Thalamus and Hypothalamus	LGIS -12	1	MCQs/SAQs OSPE/VI VA
3.	Blood supply of brain	Describe the formation of circle of Willis	LGIS -13	1	MCQs/SAQs OSPE/VI VA

EMBRYOLOGY

4.	Development of cerebrum	Describe development of cerebrum from telencephalon	LGIS -14	1	MCQs/ SAQs OSPE/VI VA
		Explain formation and growth of cerebral hemispheres			
		Development of cerebral cortex, sulci and gyri			
		Describe development of basal ganglia			
		Explain formation of lateral ventricles			
		Describe development of corpus callosum			

HISTOLOGY

5.	Cerebral cortex	Identify the cerebral cortex on light microscope	LGIS -15	1	MCQs/ SAQs OSPE/VI VA
		Enlist the different histological layers of cerebral cortex			

PHYSIOLOGY

6.	Cortical Control of Motor Functions	Describe Motor Functions of Specific Cortical Areas	LGIS -26	1	MCQs/ SAQs OSPE/VI VA
		Describe transmission of signal from the motor cortex to the muscles. (Pyramidal and extrapyramidal).			
		Explain the excitation of the spinal cord motor control areas by the primary motor cortex and red nucleus.			
7.	Functions of Descending Tracts	Describe the functions of Descending Tracts	LGIS -27	1	MCQs/ SAQs OSPE/VI VA
		Describe Decerebrate and Decorticate Rigidity			

COMMUNITY MEDICINE

8.	Epidemiology of cerebrovascular diseases	Define cerebrovascular diseases and their types	LGIS -1	1	MCQs/ SAQs OSPE/VI VA
		Describe the incidence and prevalence of cerebrovascular diseases			
		Identify major risk factors (modifiable and non-modifiable)			
		Explain the distribution by age, gender, and geography			
		Describe the burden of disease (morbidity and mortality)			
		Outline preventive strategies at primary, secondary, and tertiary levels			
		Explain basic concepts of screening and early detection			

GENERAL MEDICINE

9.	Stroke	Differentiate between hemorrhagic and ischemic stroke	LGIS -3	1	MCQs/ SAQs OSPE/VI VA
		Describe the etiology, clinical features, investigations and prevention of stroke			

DIRECTED SELF LEARNING

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Functions of Pyramidal and Extrapyramidal Tracts	Describe origin, course, and termination of pyramidal and extrapyramidal tracts	DSL	1	MCQs/ SAQs
		Explain functional role in voluntary motor control, posture, tone, and involuntary movements.			
		Correlate lesions with upper motor neuron signs & movement disorders			
		Differentiate extrapyramidal from pyramidal functions			

DISSECTION

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Thalamus	Identify location and boundaries of thalamus	Dissection-7	1.5	OSPE/VI VA
		Describe major nuclei and their functions			
		Explain afferent and efferent connections of thalamus			
		Correlate thalamic lesions with sensory and motor deficits			
		Relate thalamus to cortical sensory processing			
	Hypothalamus	Identify location and anatomical boundaries of hypothalamus			
		Describe major nuclei and their functions			
		Explain hypothalamic control of endocrine system via pituitary			
		Discuss role in autonomic and homeostatic regulation			
2.	Cerebral Hemisphere (Superolateral & Medial Surface)	Correlate hypothalamic dysfunction with clinical disorders	Dissection-8	1.5	OSPE/VI VA
		Identify lobes and major sulci of superolateral surface			
		Locate functional cortical areas (motor, sensory, language)			
		Describe blood supply and cortical vascular territories			
		Correlate cortical areas with neurological deficits			
		Apply knowledge to common clinical lesion patterns			
		Identify major structures on medial surface (corpus callosum, cingulate gyrus, paracentral lobule)			
		Describe functional areas related to medial surface			
		Explain limbic system components and functions			
		Correlate medial surface lesions with clinical presentations			
		Relate medial cortical areas to motor and sensory homunculus			

LAB WORK

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
ANATOMY					
1.	Cerebral cortex	Identify the histological layers of cerebral cortex under the microscope	Demonstration / Practical	1.5	OSPE
PHYSIOLOGY					
2.	Examination of motor functions of the brain and spinal cord	Examine a standardized patient for power, tone and movements of upper and lower limbs, speech, memory and other higher cortical functions	Demonstration / Practical	1.5	OSPE

THEME-5 TREMORS					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Basal nuclei	Enumerate the components of basal nuclei Describe the structure and relation of corpus striatum, red nucleus and substantia nigra	LGIS -16	1	MCQs/ SAQs OSPE/VI VA
2.	Cerebellum (Gross Anatomy & Histology)	Describe the general features of cerebellum Name the lobes of cerebellum and discuss its anatomical and physiological classification Enumerate the intracerebellar nuclei of cerebellum Describe the input and output of cerebellum Identify the cerebellar cortex on light microscope Enlist the different histological layers of cerebellar cortex	LGIS -17	1	MCQs/ SAQs OSPE/VI VA
PHYSIOLOGY					
3.	Cerebellum I: Basic Circuit and Connections	Describe the divisions of cerebellum into 3 lobes and their connections. Describe Interconnections of neurons of cerebellar cortex Describe Cerebellar afferent fibers Describe Cerebellar efferent fibers Describe the functional circuits of cerebellum	LGIS -28	1	MCQs/ SAQs OSPE/VI VA
4.	Cerebellum II: Functions and Disorders	Explain the functional differences between vermis and cerebellar hemispheres. Describe Functions of vestibulocerebellum Describe Functions of spinocerebellum Describe Functions of cerebrocerebellum Describe the clinical abnormalities of cerebellum	LGIS -29	1	MCQs/ SAQs OSPE/VI VA
5.	Basal Ganglia I: Pathways and connections	Describe the anatomical and physiological classification of basal ganglia. Describe the functional circuits of basal ganglia. Describe connections of putamen circuit. Describe connections of caudate circuit. Enlist the differences between direct and indirect pathways	LGIS -30	1	MCQs/ SAQs OSPE/VI VA
6.	Basal Ganglia II: Functions and Diseases	Describe functions of putamen circuit. Describe functions of caudate circuit. Explain the clinical problems related to basal ganglia	LGIS -31	1	MCQs/ SAQs OSPE/VI VA
BIOCHEMISTRY					
7.	Lipid Storage Diseases	Define Lipid Storage Diseases and explain their biochemical basis Classify major lipid storage diseases according to accumulated lipid and enzyme deficiency Discuss neurological and systemic manifestations of lipid storage diseases	LGIS -3	1	MCQs/ SAQs OSPE/VI VA
PHARMACOLOGY					
8.	Drugs used in Parkinson's disease	Describe the groups of drugs used in Parkinson's disease and their mechanism of actions	LGIS -2	1	MCQs/ SAQs OSPE/VI

					VA
GENERAL MEDICINE					
9.	Parkinson's disease	Describe the pathology, clinical features and treatment of Parkinson's disease	LGIS -4	1	MCQs/ SAQs OSPE/VI VA
		Differentiate between cerebellar and parkinsonian tremors			

DIRECTED SELF LEARNING					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
BIOCHEMISTRY					
1.	Complex lipids in nerve conduction	Classify major complex lipids present in nervous tissue Relate lipid abnormalities with neurological symptoms such as numbness and tingling	DSL	1	MCQs/ SAQs
2.	Gangliosides and Cerebrosides	Define Gangliosides and state their location in neuronal membranes Explain their role in cell signalling Discuss neurological consequences of abnormal Gangliosides metabolism Describe Cerebrosides structure and distribution in nervous tissue Explain their role in myelin stability Correlate Cerebrosides metabolism defects with neurological disease	DSL	1	MCQs/ SAQs

DISSECTION					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
ANATOMY					
1.	Cerebellum	Identify cerebellum and its external features Describe lobes and fissures of cerebellum Identify cerebellar peduncles Explain basic functional divisions Correlate lesions with ataxia and coordination defects Relate cerebellum to balance and posture	Dissection-09	1.5	OSPE/VI VA

LAB WORK					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
ANATOMY					
1.	Cerebellar cortex	Identify the histological layers of cerebellar cortex under the microscope	Demonstration	1.5	OSPE

			/ Practical		
PHYSIOLOGY					
2.	Examination of cerebellum	Illicit cerebellar signs in a standardized patient	Demonstration / Practical	1.5	OSPE

SMALL GROUP DISCUSSIONS					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
BIOCHEMISTRY					
2.	Sphingolipidoses	Define Sphingolipidoses	SGDs	1.5	MCQs/SAQs
	Sphingolipidoses	Identify common Sphingolipidoses and enzyme defects			
		Correlate lipid accumulation with neurological manifestations			
		Define Sphingolipidoses			

THEME-6 HEADACHE					
S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Dural venous sinus	Differentiate between paired and unpaired venous sinuses Discuss the structure and drainage of individual venous sinuses	LGIS -18	1	MCQs/SAQs OSPE/VI VA
2.	Ventricular System	Discuss the structure of choroidal plexus and the formation of CSF in ventricles	LGIS -19	1	MCQs/SAQs OSPE/VI VA
PHYSIOLOGY					
3.	Pain Sensation Pathways	Describe pain receptors and type of stimuli causing pain. Describe types of pain. Explain in detail the pathway for pain.	LGIS -32	1	MCQs/SAQs OSPE/VI VA
4.	Pain suppression (analgesia) System in the brain and Spinal cord	Define analgesia Explain pain suppression system in the brain and spinal cord. Describe Gate control theory and Brain Opiate system Describe clinical abnormalities of pain: Primary and Secondary Hyperalgesia	LGIS -33	1	MCQs/SAQs OSPE/VI VA
5.	Headache,	Define referred pain and describe its mechanism. Describe the clinical significance of referred pain with	LGIS -34	1	MCQs/SAQs

	Referred Pain	examples. Enumerate the causes of referred pain. Enlist the causes of intra-cranial and extra-cranial headache and correlate with the underlying mechanism of pain.			OSPE/VI VA
6.	Thermal Sensations	Describe thermal receptors and their excitation Describe mechanism of stimulation of thermal receptors Describe transmission of thermal signals in the nervous system	LGIS -35	1	MCQs/ SAQs OSPE/VI VA
7.	Functions of Specific Cortical Areas (Concept of Dominant Hemisphere)	Name the association areas of brain. Briefly describe their location and function? Draw the diagram of cerebral cortex to show the different functional areas	LGIS -36	1	MCQs/ SAQs OSPE/VI VA
8.	Language and Speech-I	Define and classify speech Describe how the brain performs the function of speech. Describe Broca's area in the brain, and its function. Describe wernicke's area in the brain, and its function.	LGIS -37	1	MCQs/ SAQs OSPE/VI VA
9.	Language and Speech-II	Describe the speech pathways for perceiving a heard word and then speaking the same word & perceiving a written word and repeating it and correlate it with their clinical significance Describe the effects of damage to Broca's area and Wernicke's area Describe disorders related to speech.	LGIS -38	1	MCQs/ SAQs OSPE/VI VA
10.	Learning and Memory-I	Define and classify memory and explain its basic mechanism. Describe the mechanism of synaptic facilitation and synaptic inhibition Describe consolidation of memory, and briefly describe one of its most important features.	LGIS -39	1	MCQs/ SAQs OSPE/VI VA
11.	Learning and Memory-II	Describe Codifying of new memories Role of specific parts of the brain in the memory process Explain disorders related to memory.	LGIS -40	1	MCQs/ SAQs OSPE/VI VA
12.	Activating-Driving Systems of the Brain	Describe bulboreticular facilitatory area. Explain continuous stimulation from lower brain by four neurohormonal systems. Explain continuous stimulation from lower brain by four neurohormonal systems.	LGIS -41	1	MCQs/ SAQs OSPE/VI VA
13.	Limbic System	Describe the principal components of the limbic system: hippocampus, amygdala, prefrontal cortex, and nucleus accumbens), the pathways connecting them and their functions. Discuss the anatomy of memory and emotion in relation to the limbic system Describe Functions of limbic system	LGIS -42	1	MCQs/ SAQs OSPE/VI VA
14.	Hypothalamus	Describe the connection of hypothalamus with different areas of brain. Describe the vegetative and endocrine functions of hypothalamus. Describe the behavioral functions of hypothalamus.	LGIS -43	1	MCQs/ SAQs OSPE/VI VA
15.	Brain Waves	Describe brain waves.	LGIS	1	MCQs/

	and Sleep-I	Describe the clinical significance of EEG. Define sleep. Describe its various types and characteristics.	-44		SAQs OSPE/VI VA
16.	Brain Waves and Sleep-II	Describe basic theories of sleep. Describe genesis of n-REM and REM sleep. Enumerate the neurotransmitters involved in sleep. Describe various sleep disorders.	LGIS -45	1	MCQs/ SAQs OSPE/VI VA
17.	Seizures and Epilepsy	Define seizure and epilepsy. Classify seizures & epilepsies Enumerate causes of seizure and epilepsy. Discuss the clinical features of patient presents with epilepsy. Discuss the significance of electrophysiologic studies imaging and other investigations in epilepsy. Describe briefly about pharmacologic treatment.	LGIS -46	1	MCQs/ SAQs OSPE/VI VA
18.	CSF formation, circulation and functions	Describe regulation of cerebral blood flow Describe formation, flow, and absorption of cerebrospinal fluid Describe Blood–Cerebrospinal Fluid and Blood-Brain Barriers	LGIS -47	1	MCQs/ SAQs OSPE/VI VA
BIOCHEMISTRY					
19.	Prostaglandins and pain	Define Prostaglandins Describe the role of Prostaglandins in initiation of pain	LGIS -4	1	MCQs/ SAQs OSPE/VI VA
PATHOLOGY					
20.	Neurodegenerative Diseases	Define neurodegenerative diseases Classify major neurodegenerative disorders Describe the pathogenesis of common neurodegenerative diseases Identify key pathological features (gross and microscopic) Correlate pathology with clinical manifestations Describe basic diagnostic approaches, complications and disease progression	LGIS -1	1	MCQs/ SAQs OSPE/VI VA
21.	Inflammation of brain	Describe the inflammatory processes related to meninges & brain parenchyma Describe the pathogenic mechanisms of meningitis and encephalitis	LGIS -2	1	MCQs/ SAQs OSPE/VI VA
GENERAL MEDICINE					
22.	Epilepsy	Explain the types of epilepsy Describe the investigations and enlist anti-epileptic drugs	LGIS -5	1	MCQs/ SAQs OSPE/VI VA
23.	Hydrocephalus	Describe the etiology, pathogenesis and clinical features of hydrocephalus	LGIS -6	1	MCQs/ SAQs OSPE/VI VA
RADIOLOGY					
24.	Radiological Anatomy of CNS	Identify normal CNS anatomy on CT and MRI Correlate radiological findings with clinical presentations (e.g., headache, seizures, focal deficits) Recognize ventricles, cisterns, and sulci in conditions like	LGIS -1	1	MCQs/ SAQs OSPE/VI VA

		hydrocephalus and cerebral edema			
		Identify intracranial hemorrhages on imaging (e.g., epidural, subdural, intracerebral)			
		Describe imaging features of ischemic stroke and space-occupying lesions			
		Differentiate normal vs abnormal findings in emergency settings			
		Select appropriate imaging modality based on clinical scenario (CT vs MRI)			
NEUROSURGERY					
25.	Brain injuries	Describe the types, clinical presentations and investigations of a patient with head injury	LGIS -1	1	MCQs/ SAQs OSPE/VI VA
26.	Brain and spinal tumors	Explain the types, clinical features and investigations of brain and spinal tumors	LGIS -2	1	MCQs/ SAQs OSPE/VI VA

DIRECTED SELF LEARNING

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
3.	CSF & Brain Metabolism	Describe formation, circulation, and absorption of CSF. Explain functions of CSF (protection, nutrition, waste removal). Correlate abnormalities with conditions like Hydrocephalus Describe metabolic requirements of brain tissue. Explain dependence on glucose and oxygen. Discuss regulation of cerebral metabolic rate. Correlate impaired metabolism with clinical conditions (e.g., hypoxia)	DSL	1	MCQs/ SAQs

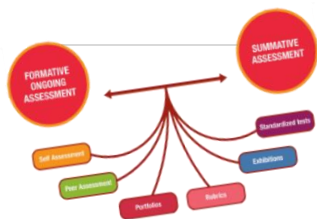
DISSECTION

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
GROSS ANATOMY					
1.	Ventricles of Brain	Identify the parts of the ventricular system Describe lateral, third, and fourth ventricles Trace circulation of cerebrospinal fluid (CSF) Identify communication between ventricles (foramina and aqueduct) Explain production and absorption of CSF Correlate ventricular blockage with hydrocephalus	Dissection-10	1.5	OSPE/VI VA

LAB WORK

S.No	Topic	Learning objectives	Teaching strategies	Hours	Assessment
PHYSIOLOGY					
1.	Neurological examination of upper and lower limbs	Examine a standardized patient for neurological system of upper and lower limbs	Demonstration / Practical	1.5	OSPE
2.	EEG	Define electroencephalography (EEG). Describe basic principle of EEG recording. Identify normal EEG wave patterns (alpha, beta, theta, delta). Explain placement of electrodes (10–20 system). Recognize changes in EEG during sleep and wakefulness. Correlate EEG patterns with clinical conditions (e.g., *Epilepsy*). Demonstrate basic interpretation of EEG recordings.	Demonstration / Practical	1.5	OSPE

Subject	LGIS	Practical/ Demo	SGD	DSL	Dissection	Total Hours
ANATOMY (Histology, Embryology)	19	7.5	6	–	15	47.5
PHYSIOLOGY	47	10.5	4.5	8	–	70
BIOCHEMISTRY	4	–	3	2	–	9
PATHOLOGY	2	–	–	–	–	2
PHARMACOLOGY	2	–	–	–	–	2
COMMUNITY MEDICINE	1	–	–	–	–	1
FORENSIC MEDICINE	1	–	–	–	–	1
PRIME (Leadership)	1	–	–	–	–	1
PRIME (Professionalism)	3	–	–	–	–	3
Pakistan Studies / Ideology & Constitution	4	–	–	–	–	4
Medical Education	1	–	–	–	–	1
Surgery	2	–	–	–	–	2
General Medicine	6	–	–	–	–	6
Radiology	1	–	–	–	–	1
TOTAL	94	18	13.5	10	15	150.5



12.Examination and Methods of Assessment:

Assessment Framework

The MBBS program employs a comprehensive assessment system designed to monitor student progress, evaluate competency, and drive learning through structured feedback. This system integrates ongoing formative evaluations with final summative examinations.

1. Types of Assessment

- **Formative Assessment (20% of block weightage):** These are **ongoing, low-stakes evaluations** conducted during and at the end of each module. Their primary purpose is to provide **timely feedback** to students and faculty, helping to identify gaps, reinforce learning, and guide improvement before final summative tests.
- **Summative Assessment (80% of block weightage):** These are **high-stakes, cumulative examinations** administered by the constituent university at the end of the academic year. They are designed to **formally evaluate** a student's comprehensive understanding and mastery of the entire block's or year's curriculum, determining progression.

2. Assessment Tools

A variety of tools are used to measure different domains of learning:

- **Written Examinations:** To assess theoretical knowledge and applied understanding through **Multiple-Choice Questions (MCQs)** and **Short Essay Questions (SEQs)**.
- **Practical & Clinical Examinations:** To evaluate hands-on skills and clinical reasoning using the **Objective Structured Practical Examination (OSPE)** and **Objective Structured Clinical Examination (OSCE)** formats.
- **Assignments & Projects:** To develop and assess higher-order skills like critical thinking, research, synthesis, and communication through **presentations, research projects, and reflective portfolios**.

3. Feedback Mechanism

A structured feedback loop is integral to the educational process. At the conclusion of each module, students will complete a **standardized Module Evaluation Form** (available in hard copy or online). This form solicits structured feedback on key areas including:

- Course Content & Organization
- Adequacy of Learning Resources
- Effectiveness of Teaching Methods
- Student Engagement & Motivation
- Fairness and Relevance of Assessment Methods

This feedback is systematically analyzed by the DME and relevant committees to inform continuous quality improvement of the curriculum and teaching practices.



13. Learning Opportunities and Resources

S.No	Subject	Recommended Books
1	Gross Anatomy	• <i>Clinical Anatomy by Regions</i> by Richard S. Snell (Latest Edition) • <i>Gray's Anatomy for Students</i> (Latest Edition) • <i>K.L. Moore, Clinically Oriented Anatomy</i> (Latest Edition) • <i>Netter's Atlas of Human Anatomy</i> (Latest Edition) • <i>Last's Anatomy</i> (Latest Edition)
2	Histology	• <i>Textbook of Histology</i> by Junqueira (Latest Edition) • <i>diFiore's Atlas of Histology with Functional Correlations</i> (Latest Edition) • <i>Atlas of Human Histology</i> by Wheaters (Latest Edition) • <i>Textbook of Histology</i> by Laiq Hussain (Latest Edition)
3	Embryology	• <i>Langman's Medical Embryology</i> (Latest Edition) • <i>The Developing Human</i> by Keith L. Moore (Latest Edition)
4	Physiology	• <i>Textbook of Medical Physiology</i> by Guyton and Hall (Latest Edition) • <i>Ganong's Review of Medical Physiology</i> (Latest Edition)
5	Biochemistry	• <i>Harper's Illustrated Biochemistry</i> (Latest Edition) • <i>Lippincott's Illustrated Review: Biochemistry</i> (Latest Edition)
6	Pharmacology	• <i>Katzung's Basic and Clinical Pharmacology</i> (Latest Edition)
7	Pathology	• <i>Robbins Basic Pathology</i> (Latest Edition)
8	Community Medicine	• <i>Essential Community Medicine</i> (Latest Edition) • <i>K. Park Textbook of Preventive and Social Medicine</i> (Latest Edition)
9	General Medicine	• <i>Davidson's Principles and Practice of Medicine</i> (Latest Edition)
10	Radiology	• <i>David Sutton's Textbook of Radiology and Imaging</i> (Latest Edition)
11	Neurosurgery	• <i>Greenberg's Textbook of Neurosurgery</i> • <i>Rangacharya's Principles of Neurosurgery</i>

14. Tentative Timetables

		MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K) Neurosciences 1A Module Time Table Class 2nd Year MBBS 2026 Theme 1 (Numbness And Tingling)					
Week- 01						Venue: 2nd Year Lecture Hall	
Day / Date		Time					
		08:00AM - 09:00AM	09:00 AM - 10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	Prayer Break 1:00 PM - 01:30 PM
MONDAY 27-04-2026	LGIS DME Topic: Introduction to Neurosciences 1 A Module Fac: Dr. M Junaid Khan	LGIS PHY-1 Topic: Organization of the Nervous System Fac: Prof. Dr. Ayyaz Ahmed	LGIS PHY-2 Topic: Basic Functions of Synapses-I Fac: Prof. Dr. Ayyaz Ahmed		LGIS ANT-1 Topic: Overview of nervous system Fac: Prof. Dr. Col Shafqat Ali	Practical A (ANT)-1 B -SDL C (PHY)-1	
TUESDAY 28-04-2026	LGIS BIO-1 Topic: Phosphosphingolipids-I Fac: Dr. Zahira Bashir	LGIS PHY-3 Topic: Basic Functions of Synapses-II Fac: Prof. Dr. Ayyaz Ahmed	LGIS PHY-4 Topic: Functions of Neurotransmitters Fac: Prof. Dr. Ayyaz Ahmed		LGIS ANT-2 (Embryology) Topic: Forebrain, midbrain and hindbrain Fac: Prof. Dr. Col Shafqat Ali	Practical B (ANT)-1 C -SDL A (PHY)-1	
WEDNESDAY 29-04-2026	LGIS PHY-5 Topic: Electrical Events during Neuronal Excitation Fac: Dr. Barkat Ullah Khan Awan	SGD A -SDL B (BIO)-1 C (PHY)-1	LGIS PHY-6 Topic: Electrical Events during Neuronal Inhibition Fac: Dr. Barkat Ullah Khan Awan		LGIS Pak Studies-1 Fac: Hafiz Ghulam Yasin	Practical C (ANT)-1 A -SDL B (PHY)-1	
THURSDAY 30-04-2026	LGIS BIO-2 Topic: Phosphosphingolipids-II Fac: Dr. Zahira Bashir	SGD B -SDL C (BIO) A (PHY)-1	LGIS PHY-7 Topic: Sensory Receptors Fac: Prof. Dr. Saadia Zainab		SDL	LGIS PHY-8 Topic: Coding of Sensory Information Fac: Prof. Dr. Saadia Zainab	
Friday 01-05-2026 (Online Classes)		Labour Day					
SGD		Practicals					
BIO-1: Topic: Myelin Sheath and Sphingomyelin PHY-1: Topic: Somatic Sensations & Ascending tracts		Histo (ANT)-1: Topic: microscopic structure of Peripheral nerve, Sensory ganglia, Autonomic ganglia PHY-1: Topic: Examination of Sensations					
Dr. M Junaid Khan Department of Medical Education						Principal Brig(R) Prof. Dr. Abdul Halim	



MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 1 (Numbness And Tingling)



Week- 02							Venue: 2nd Year Lecture Hall	
Day / Date	Time							
	08:00AM - 09:00AM	09:00 AM - 10:30 AM		11:00 AM - 12:00 PM	12:00 PM - 01:00 PM		01:30 PM - 03: 00 PM	
MONDAY 04-05-2026	BLOCK-D EXAM (THEORY)							
TUESDAY 05-05-2026	BLOCK-D EXAM (PRACTICAL)							
WEDNESDAY 06-05-2026								
THURSDAY 07-05-2026	DSL (PHY)-1 Topic: Adaptation of receptors (Tonic and Phasic Receptors) Fac: Dr. Shafan Khan Venue Library	SGD C -SDL A (BIO)-1 B (PHY)-1	Break 10:30-11:0 AM	LGIS PHY-9 Topic: Transmission and Processing of Signals in CNS Fac: Prof. Dr. Saadia Zainab	SDL	Prayer Break	LGIS PHY-10 Topic: Types of nerve fibers, its regeneration and degeneration Fac: Prof. Dr. Saadia Zainab	
Friday 08-05-2026 (Online Classes)	LGIS PHY-11 Topic: Transmission in the Dorsal column-medial Lemniscal system Fac: Prof. Dr. Saadia Zainab	DSL (PHY)-2 Topic: Pacinian corpuscles hyperplasia Fac: Dr. Shafan Khan Venue Library		LGIS PHY-12 Topic: Somatosensory Cortex Fac: Prof. Dr. Saadia Zainab	12:00 PM - 12:30 PM SDL			
SGD								
BIO-1: Topic: Myelin sheath and Sphingomyelin PHY-1: Topic: Somatic Sensations & Ascending tracts								
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 2 (Paraplegia)



Week- 03						Venue: 2nd Year Lecture Hall
Day / Date	Time					
	08:00AM - 09:00AM	09:00 AM - 10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	01:30 PM - 03: 00 PM
MONDAY 11-05-2026	DSL PHY-3 Topic: Transmission of Sensory signals in the Anterolateral pathway-I Fac: Dr Shafan Khan	LGIS G.MED.- 1 Topic: Peripheral neuropathies Fac: Dr. Ibrar Saleem		Sports Week		
TUESDAY 12-05-2026	DSL PHY-4 Topic: Transmission of Sensory signals in the Anterolateral pathway-II Fac: Dr. Amna Khalid	LGIS ANT-3 Topic: External features of Spinal Cord Fac: Prof. Dr. Col Shafqat Ali				
WEDNESDAY 13-05-2026	LDR-1 Topic: Leadership Models and Styles Fac: Miss Sana Razziq	LGIS PHY-13 Topic: Organization of Spinal Cord & General Principles Fac: Fac: Prof. Dr. Ayyaz Ahmed				
THURSDAY 14-05-2026	LGIS PHY-14 Topic: Motor functions of Spinal cord I: Stretch Reflex Fac: Fac: Prof. Dr. Ayyaz Ahmed	LGIS ANT-4 Topic: Internal structure of Spinal Cord Fac: Prof. Dr. Col Shafqat Ali				
Friday 15-05-2026 (Online Classes)	LGIS PHY-15 Topic: Motor functions of Spinal cord II: Stretch Reflex Fac: Fac: Prof. Dr. Ayyaz Ahmed	SDL		LGIS PHY-16 Topic: Motor functions of Spinal cord III: Golgi Tendon Reflex, Withdrawal Reflexes Fac: Fac: Prof. Dr. Ayyaz Ahmed	12:00 PM - 12:30 PM SDL	

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Department of Medical Education

Principal
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 2 (Paraplegia)



Week- 04			Venue: 2nd Year Lecture Hall			
Day / Date	Time					
	08:00AM - 09:00AM	09:00 AM -10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	01:30 PM - 03: 00 PM
MONDAY 18-05-2026	DSL (PHY)-5 Topic: Brown Sequard Syndrome Fac: Dr. Shafan Khan Venue Library	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS PHY-17 Topic: Brain Stem functions Fac: Dr. Sana Majeed	LGIS ANT-5 Topic: Ascending Tracts Fac: Prof. Dr. Col Shafqat Ali	Practical A (ANT)-2 B -SDL C (PHY)-2
TUESDAY 19-05-2026	LGIS PHY-18 Topic: Support of the body against gravity, Reflexes of Posture And Locomotion Fac: Dr. Sana Majeed	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		SDL	LGIS ANT-6 Topic: Descending Tracts Fac: Prof. Dr. Col Shafqat Ali	Practical B (ANT)-2 C -SDL A (PHY)-2
WEDNESDAY 20-05-2026	LGIS PHY-19 Topic: Vestibular Sensations and Maintenance of Equilibrium Fac: Dr. Sana Majeed	A (ANT) Dissection-3 B -SDL C (PHY) SGD-2		LGIS G.MED.- 2 Topic: Heml-section of spinal cord Fac: Dr. Ibrar Saleem	LGIS Pak Studies-2 Fac: Hafiz Ghulam Yasin	Practical C (ANT)-2 A -SDL B (PHY)-2
THURSDAY 21-05-2026	PRO-2 Topic: Power Dynamics Fac: Miss Sana Raziq	B (ANT) Dissection-3 C -SDL A (PHY) SGD-2		LGIS ANT-7 Topic: Spinal cord Fac: Prof. Dr. Col Shafqat Ali	LGIS PHY-20 Topic: Lesions of the Spinal Cord: Upper and Lower Motor Neuron lesion-I Fac: Dr. Sana Majeed	LGIS ANT-8 Topic: Spinal cord Fac: Prof. Dr. Col Shafqat Ali
Friday 22-05-2026 (Online Classes)	DSL (PHY)-6 Topic: Withdrawal and Stretch Reflexes Fac: Dr. Shafan Khan Venue Library	C (ANT) Dissection-3 A -SDL B (PHY) SGD-2		LGIS PHY-21 Topic: Lesions of the Spinal Cord: Upper and Lower Motor Neuron lesion-II Fac: Dr. Sana Majeed	12:00 PM - 12:30 PM SDL	
SGD		Practicals		Anatomy Dissection		
PHY-2: Topic: Spinal Reflexes		Histo (ANT)-2: Topic: Histology of Spinal Cord PHY-2: Topic: Examination of deep tendon reflexes-1		Topic -1: Spinal Cord Topic -2: Ascending Tracts Topic -3: Descending Tracts		

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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026



 Week- 00						 Venue: 2nd Year Lecture Hall	
Day / Date							
MONDAY 25-05-2026 to Friday 29-05-2026	EID-UL-ADHA						
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026



Week- 00						Venue: 2nd Year Lecture Hall	
Day / Date							
MONDAY 01-06-2026 to Friday 12-06-2026 (2 weeks)		SUMMER VACATIONS					

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Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 3 (Syncope)



Week- 05		Venue: 2nd Year Lecture Hall						
Day / Date		Time						
		08:00AM - 09:00AM	09:00 AM - 10:30 AM	11:00 AM - 12:00 PM		12:00 PM - 01:00 PM	01:30 PM - 03: 00 PM	
MONDAY 15-06-2026		LGIS PHY-22 Topic: Involuntary function of brain, Functions of reticular activating system, Coma and brain death Fac: Prof. Dr. Ayyaz Ahmed	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid	BREAK 10:30 AM - 11:00 AM	LGIS PHY-23 Topic: General Organization of the Autonomic Nervous System Fac: Prof. Dr. Ayyaz Ahmed	LGIS ANT-9 Topic: External features of brain stem Fac: Prof. Dr. Col Shafqat Ali	Prayer Break 1:00 PM - 01:30 PM	Practical A (ANT) Dissection-6 B -SDL C (PHY)-3
TUESDAY 16-06-2026		LGIS F. MED -1 Topic: Brain death Fac: Dr. Tarish Ashfaq	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS PHY-24 Topic: The Autonomic Nervous System 1 Fac: Prof. Dr. Ayyaz Ahmed	LGIS ANT-10 Topic: Internal structures of brain stem Fac: Prof. Dr. Col Shafqat Ali		Practical B (ANT) Dissection-6 C -SDL A (PHY)-3
WEDNESDAY 17-06-2026		LGIS PHY-25 Topic: The Autonomic Nervous System 2 Fac: Prof. Dr. Ayyaz Ahmed	A (ANT) Dissection-7 B -SDL C (PHY) SGD-3		SDL	LGIS Pak Studies-2 Fac: Hafiz Ghulam Yasin		Practical C (ANT) Dissection-6 A -SDL B (PHY)-3
THURSDAY 18-06-2026		LGIS PHY-26 Topic: Cortical Control of Motor Functions Fac: Prof. Dr. Ayyaz Ahmed	B (ANT) Dissection-7 C -SDL A (PHY) SGD-3		LGIS ANT-11 Topic: Cerebrum Fac: Prof. Dr. Col Shafqat Ali	LGIS Pharma-1 Topic: Drugs acting on sympathetic & parasympathetic nervous system Fac: Dr. Salma Salim		LGIS ANT-12 Topic: Diencephalon Fac: Prof. Dr. Col Shafqat Ali
Friday 19-06-2026 (Online Classes)		LGIS PHY-27 Topic: Functions of Descending Tracts Fac: Prof. Dr. Ayyaz Ahmed	C (ANT) Dissection-7 A -SDL B (PHY) SGD-3		LGIS Community Med. -1 Topic: Epidemiology of cerebrovascular diseases Fac: Prof. Dr. Ijaz Ali	12:00 PM - 12:30 PM SDL		
SGD		Practicals				Anatomy Dissection		
PHY-3: Reticular Activating system & Autonomic Nervous System		PHY-3: Topic: Examination of deep tendon reflexes-2				Topic -4: Medulla Topic -5: Pons Topic -6: Midbrain Topic -7: Thalamus, Hypothalamus		
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 4 (Hemiplegia)



Week- 06							Venue: 2nd Year Lecture Hall	
Day / Date	Time							
	08:00AM - 09:00AM	09:00 AM -10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	Prayer Break 1:00 PM - 01:30 PM	01:30 PM - 03: 00 PM	
MONDAY 22-06-2026	PRO-3 Topic: Dealing with Patients Fac: Miss Aqsa Rehman	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		SDL	LGIS ANT-13 Topic: Blood supply of brain Fac: Prof. Dr. Col Shafqat Ali		Practical A (ANT)-3 B -SDL C (PHY)-4	
TUESDAY 23-06-2026	DSL (PHY)-7 Topic: Functions of Pyramidal and Extrapyramidal Tracts Fac: Dr. Shafan Khan Venue Library	LGIS ANT-14 Topic: Development of cerebrum Fac: Prof. Dr. Col Shafqat Ali		LGIS G.MED.- 3 Topic: Stroke Fac: Prof. Dr. M. Nadeem	LGIS ANT-15 Topic: Cerebral cortex Fac: Prof. Dr. Col Shafqat Ali		Practical B (ANT)-3 C -SDL A (PHY)-4	
WEDNESDAY 24-06-2026	LGIS PHY-28 Topic: Cerebellum I: Basic Circuit and Connections Fac: Dr. Sana Majeed	LGIS BIO-3 Topic: Lipid Storage Diseases Fac: Dr. Zahira Bashir		DSL (BIO)-1 Topic: Complex lipids in nerve conduction Fac: Dr. Anum Muneeb Venue Library	LGIS Pak Studies-2 Fac: Hafiz Ghulam Yasin		Practical C (ANT)-3 A -SDL B (PHY)-4	
THURSDAY 25-06-2026	Ashura Holidays							
Friday 26-06-2026 (Online Classes)								
		Practicals			Anatomy Dissection			
		Histo (ANT)-3: Topic:Cerebral cortex PHY-4: Topic: Examination of motor functions of the brain and spinal cord			Topic -8: Cerebral Hemisphere			
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 5 (Tremors)



Week- 07							Venue: 2nd Year Lecture Hall
Day / Date	Time						
	08:00AM - 09:00AM	09:00 AM -10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	Prayer Break 1:00 PM - 01:30 PM	01:30 PM - 03: 00 PM
MONDAY 29-06-2026	LGIS PHY-29 Topic: Cerebellum II: Functions and Disorders Fac: Dr. Sana Majeed	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS PHY-30 Topic: Basal Ganglia I: Pathways and connections Fac: Dr. Sana Majeed	LGIS ANT-16 Topic: Basal nuclei Fac: Prof. Dr. Col Shafqat Ali		Practical A (ANT)-4 B -SDL C (PHY)-5
TUESDAY 30-06-2026	DSL (BIO)-2 Topic: Gangliosides and Cerebroside Fac: Dr. Anna Khurshid Venue Library	LGIS PHY-31 Topic: Basal Ganglia II: Functions and Diseases Fac: Dr. Sana Majeed		LGIS Pharma-2 Topic: Drugs used in Parkinson's disease Fac: Dr. Saman Omer	LGIS ANT-17 Topic: Cerebellum Fac: Prof. Dr. Col Shafqat Ali		Practical B (ANT)-4 C -SDL A (PHY)-5
WEDNESDAY 01-07-2026	LGIS G.MED.- 4 Topic: Parkinson's disease Fac: Dr.Saira Mussarat	A (ANT)-4 B (BIO)-2 C (PHY) Practical -6		SDL	LGIS Pak Studies-3 Fac: Hafiz Ghulam Yasin		Practical C (ANT)-4 A -SDL B (PHY)-5
THURSDAY 02-07-2026	LGIS Surgery (Neurosurgery)-1 Topic: Brain Injuries Fac: Prof. Dr. Mumtaz Ahmed	B (ANT)-4 C (BIO)-2 A (PHY) Practical -6		LGIS ANT-18 Topic: Dural venous sinus Fac: Prof. Dr. Col Shafqat Ali	LGIS PHY-32 Topic: Pain Sensation Pathways Fac: Prof. Dr. Saadia Zainab		LGIS PHY-33 Topic: Pain suppression (analgesia) System in the brain and Spinal cord Fac: Prof. Dr. Saadia Zainab
Friday 03-07-2026 (Online Classes)	LGIS PHY-34 Topic: Headache, Referred Pain Fac: Prof. Dr. Saadia Zainab	C(ANT)-4 A (BIO)-2 B (PHY) Practical -6		LGIS PHY-35 Topic: Thermal Sensations Fac: Prof. Dr. Saadia Zainab	12:00 PM - 12:30 PM SDL		
SGD		Practicals			Anatomy Dissection		
ANT-1: Topic: Revision BIO-2: Topic: Sphingolipodosis		Histo (ANT)-4: Topic: Cerebellar cortex PHY-5: Topic: Examination of cerebellum PHY-6: Topic: Neurological examination of upper and lower limbs (Examination of CNS)			Topic -9: Cerebellum		
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 6 (Headache)



Week- 08						Venue: 2nd Year Lecture Hall
Day / Date	Time					01:30 PM - 03: 00 PM
	08:00AM - 09:00AM	09:00 AM - 10:30 AM	BREAK 10:30 AM - 11:30 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	
MONDAY 06-07-2026	LGIS PHY-36 Topic: Functions of Specific Cortical Areas (Concept of Dominant Hemisphere) Fac: Dr. Sana Majeed	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS PHY-37 Topic: Language and Speech-I Fac: Dr. Barkatullah Khan Awan	LGIS ANT-19 Topic: Ventricular System Fac: Prof. Dr. Col Shafiqat Ali	Prayer Break 1:00 PM - 01:30 PM
TUESDAY 07-07-2026	PRO-4 Topic: Dealing with Patients (Role Play) Fac: Miss Aqsa Rehman	LGIS PHY-38 Topic: Language and Speech-II Fac: Dr. Sana Majeed		LGIS Radiology-1 Topic: Radiological Anatomy of CNS Fac: Prof. Brig® Dr. Irfan ul Haq	LGIS PHY-39 Topic: Learning and Memory-I Fac: Prof. Dr. Saadia Zainab	
WEDNESDAY 08-07-2026	LGIS PHY-40 Topic: Learning and Memory-II Fac: Prof. Dr. Saadia Zainab	LGIS BIO-4 Topic: Prostaglandins and pain Fac: Dr. Zahira Bashir		LGIS PHY-41 Topic: Activating Driving Systems of the Brain Fac: Prof. Dr. Saadia Zainab	LGIS Pak Studies-4 Fac: Hafiz Ghulam Yasin	
THURSDAY 09-07-2026	LGIS Surgery (Neurosurgery)-2 Topic: Brain and spinal tumors Fac: Prof. Dr. Mumtaz Ahmed	LGIS PHY-42 Topic: Limbic System Fac: Prof. Dr. Saadia Zainab		SDL	LGIS G.MED.- 5 Topic: Epilepsy Fac: Dr. Ibrar Saleem	
Friday 10-07-2026 (Online Classes)	LGIS PHY-44 Topic: Brain Waves and Sleep-I Fac: Dr. Barkatullah Khan Awan	LGIS PATHO-1 Topic: Neurodegenerative Diseases Fac: Dr. Farzana Habib		LGIS PHY-45 Topic: Brain Waves and Sleep-II Fac: Dr. Barkatullah Khan Awan	12:00 PM - 12:30 PM SDL	
Practicals			Anatomy Dissection			
Histo (ANT)-5: Topic: Revision PHY-7: Topic: EEG			Topic -10: Ventricles of Brain			

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Principal
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MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)
Neurosciences 1A Module
Time Table Class 2nd Year MBBS 2026
Theme 6 (Headache)



Week- 09							Venue: 2nd Year Lecture Hall
Day / Date	Time						
	08:00AM - 09:00AM	09:00 AM -10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	Prayer Break 1:00 PM - 01:30 PM	01:30 PM - 03: 00 PM
MONDAY 13-07-2026	LGIS PATHO-2 Topic: Inflammation of brain Fac: Prof. Dr. Sara Najeeb	LGIS PHY-46 Topic: Seizures and Epilepsy Fac: Dr. Barkatullah Khan Awan		LGIS PHY-47 Topic: CSF formation, circulation and functions Fac: Dr. Barkatullah Khan Awan	DSL (PHY) 8 Topic: CSF & Brain Metabolism Fac: Dr. Shafan Khan Venue Library		LGIS G.MED.- 6 Topic: Hydrocephalus Fac: Dr. Ibrar Saleem
TUESDAY 14-07-2026							
WEDNESDAY 15-07-2026	Youm-e-Shuhada-e-Kashmir						
THURSDAY 16-07-2026			BREAK 10:30 AM - 11:00 AM			Prayer Break	
Friday 17-07-2026 (Online Classes)					12:00 PM - 12:30 PM		

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15. For inquiry and troubleshooting



Please contact
DME

16.Course Feedback Form

Course Title: _____

Semester/Module _____ Dates: _____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

- | | | | |
|--|----------------------------|----------------------------|--------------------------|
| A. Were objectives of the course clear to you? | Y ☐ | N ☐ | |
| B. The course contents met with your expectations | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| C. The lecture sequence was well-planned | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| D. The contents were illustrated with | | | ☐ |
| 1. Too few examples | | 5. Adequate examples | |
| E. The level of the course was | | | ☐ |
| 1. Too low | | 5. Too high | |
| F. The course contents compared with your expectations | | | ☐ |
| 1. Too theoretical | | 5. Too empirical | |
| G. The course exposed you to new knowledge and practices | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| H. Will you recommend this course to your colleagues? | | | ☐ |
| 1. Not at all | | 5. Very strongly | |

THE CONDUCT OF THE MODLUE

- | | | | |
|--|----------------------------|----------------------------|--------------------------|
| A. The lectures were clear and easy to understand | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| B. The teaching aids were effectively used | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| C. The course material handed out was adequate | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| D. The instructors encouraged interaction and were helpful | | | ☐ |
| 1. Strongly disagree | | 5. Strongly agree | |
| E. Were objectives of the course realized? | Y ☐ | N ☐ | ☐ |

F. Please give overall rating of the course

90% - 100% ()

60% - 70% ()

80% - 90% ()

50% - 60% ()

70% - 80% ()

below 50% ()

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

17. Scan To Submit End of Module Feedback



<https://forms.gle/gayHqfmunLkERpXj9>

18.Students Diary/Notes

[illegible]

PROGRESS: _____

ACHIEVEMENT: _____