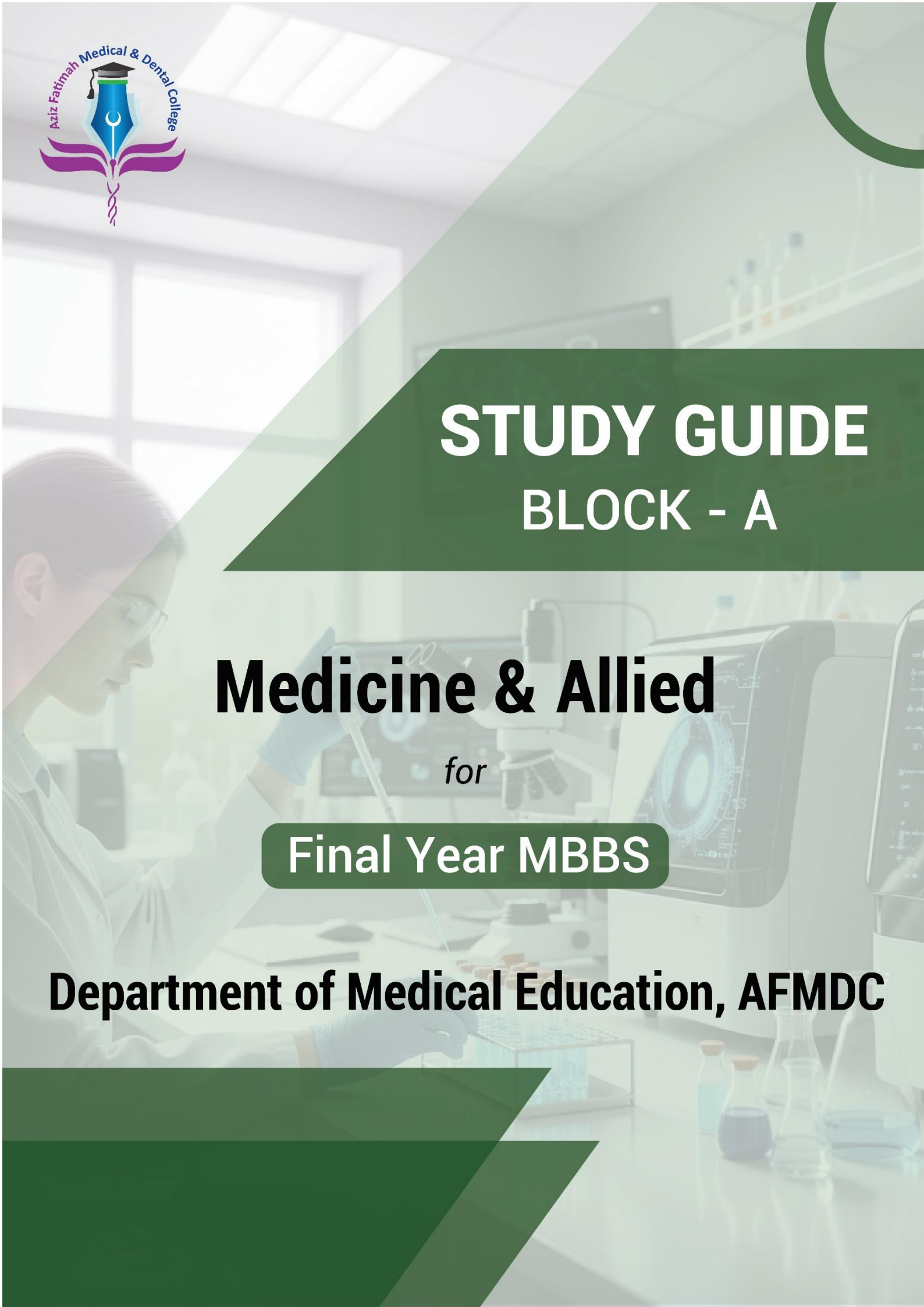

STUDY GUIDE

BLOCK - A

Medicine & Allied

for

Final Year MBBS

Department of Medical Education, AFMDC

Table of Contents

1. Introduction to Study Guide

The study guide serves several crucial purposes:

1. **Communicating information on the organization and management of the module:**

This aids students in identifying the appropriate point of contact in case they encounter any difficulties during the semester.

2. **Defining the objectives expected to be achieved by the end of the module:**

It outlines clear learning goals, ensuring that students understand what is expected of them academically.

3. **Identifying the learning strategies employed to achieve module objectives:**

These strategies may encompass various methods such as lectures, small group sessions, clinical skills practice, demonstrations, tutorials, and case-based learning.

4. **Providing a list of learning resources:**

Students are offered a comprehensive list of resources, including books, computer-assisted learning programs, web links, and journals. These resources empower students to maximize their learning potential.

5. **Highlighting information on the contribution of continuous assessment and semester examinations:**

This section emphasizes the significance of ongoing assessments and final exams in determining a student's overall performance in the module.

6. **Including information on assessment methods:**

Details about the various assessment methods employed to evaluate students' progress in achieving the objectives are outlined.

7. **Focusing on examination policies, rules, and regulations:**

This section clarifies the policies and regulations governing examinations, ensuring that students are well-informed about the rules they must adhere to during their assessments.

By providing students with this comprehensive guide, educational institutions aim to enhance their learning experience, facilitate effective academic management, and foster compliance with academic standards and regulations.

2. Implementation Team for 5th Professional MBBS

Academic Year In charge	**Prof. Dr. Rizwan Rasool**	
Head of Medical Education	Dr. Ayesha Sadiq	
Block Coordinator	Block A Prof. Dr. Masood Javed	Block B: Prof. Dr. Nazia Mussarat
Subject leads	Prof. Dr. Masood Javed Prof. Dr Hina Ayesha Prof. Dr. Asrar Ahmad Prof. Dr. Nazia Musarrat	Medicine Pediatrics Surgery Gynae & Obs.
Assessment coordinator	Dr. Ayesha Sadiq	
Timetable coordinator	Miss Huma Afzal	

3. Introduction of BLOCK A

1. Medicine

The medicine clerkship strengthens students' competence in diagnosing and managing a wide range of adult medical conditions. It enhances clinical reasoning, interpretation of investigations, and formulation of management plans for acute and chronic diseases.

2. Pediatrics

The pediatrics clerkship introduces students to the care of infants, children, and adolescents. It focuses on growth and development, common pediatric illnesses, preventive care, and family-centered clinical practice.

MEDICINE I

4. Medicine I

4.1 Module Outcomes

- Identify characteristic signs, symptoms, and clinical patterns, and formulate accurate differential diagnoses of common medical diseases.
- Take a comprehensive and focused medical history from adult patients and caregivers.
- Perform a system based and clinically relevant physical examination for major medical presentations.
- Interpret essential laboratory and imaging investigations to support diagnostic decision-making.
- Develop and outline management plans for acute and chronic medical conditions.
- Communicate effectively and empathetically with patients, families, and the healthcare team.
- Demonstrate professionalism, ethical conduct, and collaborative teamwork in medical care settings.

4.2 Learning Objectives

4.2.1 Knowledge

MEDICINE I

CENTRAL NERVOUS SYSTEM DISEASES		
Code	**Topic**	**Learning Objectives**
M1-003	Headache	**1.** Classify types of headache. **2.** Identify red-flag signs requiring urgent evaluation. **3.** Formulate an initial management plan, including acute treatment and preventive strategies.
M1-004	Stroke and Transient Ischemic Attack (TIA)	**1.** Explain the pathophysiology, risk factors, and mechanisms of ischemic and hemorrhagic stroke. **2.** Identify key clinical features. **3.** Enlist investigations, including imaging and laboratory workup. **4.** Outline acute management plan with secondary prevention strategies.
M1-005	Epilepsy and Seizure Disorders	**1.** Define seizure, Pseudo seizures, and epilepsy. **2.** Classify seizures based on clinical features. **3.** Identify causes and precipitating factors. **4.** Enlist investigation reports. **5.** Develop treatment plans including counseling on driving. **6.** Describe medico legal considerations regarding signing a driving license certificate for epileptic patient (Integrate with forensic medicine).
M1-006	Neuropathy and Myopathy	**1.** Identify clinical patterns suggestive of peripheral neuropathies and myopathies.

		2. Enlist initial investigations. **3.** Plan workup and treatment options.
M1-007	Meningitis and Encephalitis	**1.** Describe common infectious and non-infectious etiologies. **2.** Diagnose based on clinical presentation and investigation findings. **3.** Outline management plan. **4.** Describe prognosis.
M1-008	Parkinsonism and Movement Disorders	**1.** Distinguish Parkinson's disease from other causes of Parkinsonism and movement disorders. **2.** Outline principles of management, including pharmacologic therapy and multidisciplinary care.
M1-009	Demyelinating Disorders	**1.** Explain common clinical presentations and patterns of demyelinating disease. **2.** Interpret fundamental investigations. **3.** Outline management principles for acute relapses, disease-modifying therapy, and symptom control.
M1-010	Neurological Emergencies	(Status epilepticus, raised intracranial pressure, Guillain–Barré syndrome, myasthenic crisis) **1.** Identify life-threatening neurological emergencies. **2.** Outline steps of immediate management and referral to critical care.
M1-011	Localizing lesions in the central nervous system	**1.** Explain the clinical features that differentiate upper motor neuron lesions from lower motor neuron lesions. **2.** Integrate clinical history and neurological examination to localize lesions. **3.** Suggest appropriate investigations based on suspected lesion site.

M1-012	Neurodegenerative disorders	**1.** Classify common neurodegenerative diseases. **2.** Describe the key clinical features of major neurodegenerative disorders. **3.** Enlist investigations used in the evaluation of neurodegenerative disorders. **4.** Outline the principles of management, including pharmacological and supportive care.
M1-013	Cerebellar disorders	**1.** Classify cerebellar diseases (e.g., degenerative, vascular, neoplastic, infective, toxic, congenital). **2.** Describe the key clinical features of cerebellar dysfunction. **3.** Enlist investigations used in the evaluation of cerebellar disorders. **4.** Outline the principles of management of cerebellar diseases, including cause-specific and supportive care.
M1-014	Neuromuscular disorders	**1.** Classify neuromuscular disorders. **2.** Describe the key clinical features of muscular dystrophy, myasthenia gravis, and Lambert–Eaton myasthenic syndrome. **3.** Differentiate between myasthenia gravis and Lambert–Eaton myasthenic syndrome based on clinical presentation. **4.** Enlist investigations used in the evaluation of these neuromuscular disorders. **5.** Outline management plan for muscular dystrophy, **6.** myasthenia gravis, and Lambert–Eaton myasthenic **7.** syndrome
M1-015	Brain death	**1.** Discuss diagnostic criteria of brain death.

		2. Discuss breaking bad news.
M1-016	Spinal Cord Lesions	**1.** Enlist types of spinal cord lesions. **2.** Describe clinical presentation. **3.** Enlist diagnostic modalities. **4.** Differentiate between spastic and flaccid paralysis. **5.** Discuss management plan.
M1-017	Space Occupying Lesion (Brain Abscess & tumors)	**1.** Enlist causes of brain abscess and SOL. **2.** Enlist causes of ring enhancing lesions on CT brain. **3.** Discuss investigations and management plan.

CARDIOVASCULAR DISEASES		
Code	**Topic**	**Learning Objectives**
M1-021	Hypertension	**1.** Classify hypertension. **2.** Identify clinical features. **3.** Enlist the risk factors. **4.** List appropriate investigations. **5.** Outline management plans. **6.** Assess prognosis, complications, and preventive measures.
M1-022	Coronary Artery Disease (CAD)	**1.** Describe clinical features of angina, myocardial infarction, and acute coronary syndromes. **2.** Enlist risk factors and preventive strategies. **3.** Formulate differential diagnoses for ischemic chest pain. **4.** Enlist important investigations for diagnosis and severity assessment **5.** Outline the management plans including medical therapy, PCI, and CABG

		6. Anticipate prognosis and long-term follow-up.
M1-023	Heart Failure	**1.** Classify types of heart failure. **2.** Identify clinical features of heart failure. **3.** Explain underlying etiology, predisposing factors, and pathophysiology. **4.** Formulate differential diagnoses for dyspnea, edema, and exercise intolerance. **5.** Enlist relevant investigations to confirm diagnosis. **6.** Outline management plan. **7.** Discuss prognosis, complications, and long-term monitoring.
M1-024	Cardiac Arrhythmias	**1.** Classify arrhythmias **2.** Explain pathophysiology and clinical features of tachy- and brady-arrhythmia. **3.** Formulate differential diagnoses. **4.** Enlist investigations for diagnosis and monitoring. **5.** Develop a management plan. **6.** Assess prognosis and potential complications.
M1-025	Cardiac arrest	**1.** Describe pathophysiology. **2.** Identify immediate assessment priorities. **3.** Enlist potential underlying causes. **4.** Assess prognosis and outcome determinants.
M1-026	Diseases of Heart Valves	**1.** Identify clinical features of mitral, aortic, tricuspid, and pulmonary valve diseases. **2.** Explain pathophysiology and potential complications. **3.** Outline management plan.
M1-027	Infective endocarditis	**1.** Describe clinical features. **2.** Describe diagnostic criteria. **3.** Outline investigations and management plan.
M1-028	Rheumatic Fever	**1.** Identify clinical features of rheumatic fever

	and Rheumatic Heart Disease	and. heart disease. **2.** Explain the pathophysiology and progression **3.** Diagnostic criteria for RF **4.** Identify the complications. **5.** Formulate differential diagnoses for suspected cases. **6.** Enlist appropriate investigations to confirm diagnosis and assess severity. **7.** Outline medical and surgical management strategies. **8.** Discuss prognosis and long-term follow-up considerations
M1-029	Diseases of Myocardium	**1.** Identify clinical features of myocarditis, cardiomyopathy, and cardiac tumors. **2.** Differentiate dilated from hypertrophic cardiomyopathy. **3.** Formulate differential diagnoses. **4.** Enlist investigations to confirm diagnosis. **5.** Outline management plans. **6.** Assess prognosis and follow-up.
M1-030	Diseases of Pericardium	**1.** Identify clinical features of acute pericarditis, constrictive pericarditis, and cardiac tamponade. **2.** Explain etiology and pathophysiology. **3.** Enlist investigations for diagnosis. **4.** Outline management plans. **5.** Assess complications and prognosis
M1-031	Diseases of Aorta	**1.** Identify clinical features of aortic aneurysm, dissection, coarctation, and Marfan syndrome. **2.** Explain risk factors and underlying etiology. **3.** Formulate differential diagnoses. **4.** Enlist investigations for diagnosis and risk stratification.

		5. Develop management plans including medical, interventional, and surgical approaches. **6.** Describe complications and prognosis
M1-032	Congenital Heart Disease (CHD)	**1.** Identify clinical features of cyanotic and acyanotic CHD. **2.** Explain pathophysiology. **3.** List investigations. **4.** Plan management strategies. **5.** Assess long-term outcomes and prognosis
M1-033	Peripheral Vascular Disease	**1.** Describe clinical features of peripheral vascular disease. **2.** List risk factors. **3.** Formulate differential diagnoses for limb pain, swelling, or ulceration. **4.** Outline investigations and management plans with prognosis and follow-up.
M1-034	Cardiogenic Shock	**1.** Identify clinical features and hemodynamic changes. **2.** Describe the underlying pathophysiology. **3.** Formulate differential diagnoses for hypotension and shock state. **4.** Enlist important investigations. **5.** Plan emergency management. **6.** Assess prognosis and factors affecting outcomes

RESPIRATORY DISEASES		
Code	**Topic**	**Learning Objectives**
M1-038	Common respiratory symptoms	**1.** Explain the pathophysiological basis of cough, sputum, dyspnea, hemoptysis, and chest pain. **2.** Describe their clinical significance.

M1-039	Pneumonia	**1.** Describe etiology and risk factors of community- and hospital-acquired pneumonia. **2.** Diagnose based on characteristic clinical features. **3.** Enlist potential complications. **4.** Outline essential investigations and their diagnostic value. **5.** Plan management and indications for hospitalization. **6.** Discuss preventive measures.
M1-040	Tuberculosis	**1.** Identify typical and atypical clinical presentations. **2.** Explain diagnostic criteria. **3.** Outline standard treatment regimens and principles of drug-resistant TB management. **4.** Discuss major preventive strategies.
M1-041	Bronchial Asthma	**1.** Explain pathophysiology, triggers, and classification. **2.** Identify features of stable disease and acute exacerbation. **3.** Outline acute and chronic management plan using step-wise therapy. **4.** Discuss preventive approaches and patient education.
M1-042	Chronic Obstructive Pulmonary Disease (COPD)	**1.** Identify risk factors. **2.** Explain underlying pathophysiology. **3.** Describe common clinical features and complications. **4.** Outline diagnostic evaluation. **5.** Plan management of stable COPD and acute exacerbations including preventive care.
M1-043	Pleural Effusion	**1.** Enlist causes of transudative and exudative

		effusions. **2.** Describe characteristic clinical features and radiographic findings. **3.** Outline diagnostic work-up including thoracentesis. **4.** Plan management according to underlying cause.
M1-044	Pneumothorax	**1.** Describe types and mechanisms of pneumothorax. **2.** Identify hallmark clinical findings and life-threatening features. **3.** Outline emergency and definitive management, including indications for chest tube insertion.
M1-045	Lung Cancer	**1.** Identify major risk factors. **2.** Describe typical clinical presentations. **3.** Summarize the diagnostic approach. **4.** Outline general management principles for major tumor types. **5.** Discuss preventive strategies including screening.
M1-046	Occupational Lung Diseases	**1.** Identify common occupational exposures and associated lung disorders. **2.** Interstitial lung disease **3.** Recognize early symptoms and diagnostic features. **4.** Describe preventive strategies and workplace safety measures.
M1-047	Pulmonary Embolism	**1.** Enlist major risk factors. **2.** Describe clinical presentations. **3.** Outline diagnostic evaluation. **4.** Summarize initial stabilization, treatment principles, and prevention.

M1-048	Respiratory failure and ARDS	**1.** Define respiratory failure and acute respiratory distress syndrome (ARDS). **2.** Describe the key clinical features of respiratory failure and ARDS. **3.** Enlist investigations used in the evaluation of respiratory failure and ARDS. **4.** Outline the principles of management of respiratory failure and ARDS.
M1-049	Bronchiectasis Lung abscess	**1.** Describe the key clinical features of bronchiectasis. **2.** Enlist investigations used in the evaluation of bronchiectasis. **3.** Outline the principles of management of bronchiectasis. **4.** Identify potential complications. **5.** Enlist the causes of lung abscess. **6.** Diagnose based on clinical presentations and investigations. **7.** Outline the management plan.
M1-050	Pulmonary Hypertension And cor pulmonale	**1.** Define and differentiate pulmonary hypertension and cor pulmonale. **2.** Explain the pathophysiological relationship between pulmonary hypertension and the development of cor pulmonale. **3.** Describe the key clinical features of pulmonary hypertension and cor pulmonale. **4.** Enlist investigations used in the evaluation of pulmonary hypertension and cor pulmonale. **5.** Outline the principles of management of pulmonary hypertension and cor pulmonale.

RHEUMATIC DISEASES		
Code	**Topic**	**Learning Objectives**
M1-054	Introduction to autoimmune diseases	**1.** Classify major rheumatologic disorders. **2.** Describe key immune mechanisms involved in autoimmune and inflammatory joint diseases.
M1-055	Rheumatoid Arthritis	**1.** Describe etiology and immunopathogenesis. **2.** Identify characteristic clinical features and extra- articular manifestations. **3.** Outline essential investigations and core management principles.
M1-056	Systemic Lupus Erythematosus (SLE)	**1.** Describe diagnostic criteria and major organ system involvement. **2.** Outline principles of management, including monitoring and prevention of flares.
M1-057	Osteoarthritis	**1.** Explain the pathophysiology of degenerative joint disease. **2.** Identify major risk factors and characteristic clinical presentation. **3.** Discuss treatment options for symptom relief and functional improvement.
M1-058	Crystal Arthropathies	**1.** Discuss pathophysiology of hyperuricemia and crystal- induced inflammation. **2.** Describe diagnostic features of gout. **3.** Differentiate gout from pseudo gout. **4.** Outline management of acute attacks and long-term urate-lowering therapy.
M1-059	Progressive systemic sclerosis	**1.** Identify key clinical manifestations. **2.** Enlist and interpret essential investigations. **3.** Outline management plan.
M1-060	Polymyositis and	**1.** Describe clinical features of inflammatory

	Dermatomyositis	myopathies. **2.** Interpret diagnostic tests. **3.** Outline management plan.
M1-061	Mixed connective tissue disorders	**1.** Define and classify mixed connective tissue disorders. **2.** Describe the key clinical features. **3.** Enlist appropriate investigations. **4.** Outline the principles of management.
M1-062	Seronegative Spondyloarthropathies	**1.** Classify Seronegative Spondyloarthropathies **2.** Identify hallmark clinical features and characteristic radiologic findings of Ankylosing spondylitis. **3.** Outline management strategies.
M1-063	Vasculitis Syndromes	**1.** Classify vasculitis. **2.** Describe the diagnostic approach including clinical, laboratory, and imaging components. **3.** Summarize general management principles.
M1-064	Juvenile Idiopathic Arthritis	**1.** Describe major clinical variants and typical presentations in children. **2.** Outline management principles.
M1-065	Drugs in Rheumatology	**1.** Explain mechanisms of action of DMARDs, corticosteroids, and biologic agents. **2.** Describe their indications and major adverse effects.

RENAL DISEASES		
Code	**Topic**	**Learning Objectives**
M1-069	Glomerular diseases	**1.** Discuss etiology and pathophysiology. **2.** Identify clinical presentations.

		3. Outline relevant investigations. **4.** Summarize management plan.
M1-070	Nephrotic Syndrome	**1.** Identify key clinical features. **2.** Enlist complications. **3.** Outline relevant investigations to confirm diagnosis. **4.** Describe treatment strategies.
M1-071	Acute Kidney Injury (AKI)	**1.** Define AKI and classify types. **2.** Identify causes of AKI. **3.** Enlist relevant investigations. **4.** Outline management plan.
M1-072	Chronic Kidney Disease (CKD)	**1.** Classify CKD. **2.** Describe disease progression and complications. **3.** Outline relevant investigations. **4.** Explain management principles including indications for dialysis.
M1-073	Renal Tubular Disorders	**1.** Explain major tubular disorders such as renal tubular acidosis (RTA) and Fanconi syndrome. **2.** Diagnose based on key clinical features and laboratory findings. **3.** Outline relevant investigations.
M1-074	Hypertension and Kidney	**1.** Discuss secondary hypertension due to renal causes. **2.** Outline relevant investigations. **3.** Summarize plan of management.
M1-075	Urinary Tract Infections (UTI)	**1.** Describe clinical presentations of lower and upper UTIs. **2.** Outline relevant investigations. **3.** Describe management strategies.
M1-076	Renal Replacement Therapy	**4.** Outline principles of hemodialysis, peritoneal dialysis, and transplantation. **5.** Identify indications.

		6. Outline relevant investigations for initiation and monitoring.

DERMATOLOGY		
Code	**Topic**	**Learning Objectives**
M1-080	Skin lesions	**1.** Describe the morphological features of following skin lesions: Macule, Papule, Nodule, Plaque, Wheal, Vesicles and bullae, Pustule, Cyst, Scale, Crust, Fissuring, Erosion, Ulceration, Excoriation, Lichenification, Annular lesions, Discoid lesions, Atrophy, scar, and keloid. **2.** Describe and differentiate dermatological features including desquamation, burrow, come done, telangiectasia, reticulate, petechiae, purpura, and ecchymosis.
M1-081	Scabies	**1.** Describe the etiology and mode of transmission of Sarcoptes scabiei. **2.** Identify clinical presentation of scabies **3.** Differentiate scabies from other pruritic dermatoses. **4.** Outline the treatment of scabies including preventive measures.
M1-082	Pediculosis	**1.** Explain the etiology and types of lice infestation. **2.** Describe clinical presentation. **3.** Differentiate pediculosis from dandruff, scabies, and seborrheic dermatitis. **4.** Outline treatment strategies with preventive measures.
M1-083	Eczema/dermatitis	**1.** Classify dermatitis.

		2. Enlist the common forms of endogenous and exogenous eczema.
M1-084	Atopic Dermatitis	**1.** Describe the etiology and predisposing factors of atopic dermatitis. **2.** Identify the clinical features. **3.** Differentiate atopic dermatitis from seborrheic dermatitis, scabies, and contact dermatitis on basis of clinical features. **4.** Outline treatment and preventive strategies.
M1-085	Seborrheic dermatitis	**1.** Explain the etiology and role of Malassezia, sebum, immune factors. **2.** Identify clinical features of seborrheic dermatitis. **3.** Differentiate seborrheic dermatitis from psoriasis, atopic dermatitis, and pediculosis. **4.** Outline treatment and preventive strategies for relapse control.
M1-086	Contact dermatitis	**1.** Differentiate between irritant and allergic contact dermatitis in terms of etiopathogenesis, and clinical features. **2.** Identify the clinical features of contact dermatitis. **3.** Differentiate contact dermatitis from atopic dermatitis, urticaria, and scabies. **4.** Outline treatment plan and preventive measures.
M1-087	Urticaria	**1.** Describe the etiology and pathophysiology of urticaria. Identify clinical features. **2.** Differentiate urticaria from contact dermatitis, scabies, and drug reactions on basis of sign and symptoms. **3.** Outline emergency management for angioedema/anaphylaxis.

M1-088	Bullous disorders	**1.** Define bullous disorders. **2.** Classify immune-mediated bullous disorders. Explain the pathogenesis of: **i.** Pemphigus vulgaris **ii.** Bullous pemphigoid **iii.** Dermatitis herpetiformis **3.** Describe the clinical presentation and lesion morphology of each disorder. **4.** Differentiate between these disorders on the basis of site, blister type, and mucosal involvement. **5.** Enlist appropriate diagnostic tests. Outline management plan. **6.** Enlist potential complications and their preventive measures. **7.** Define epidermolysis bullosa. **8.** Explain the underlying molecular and genetic mechanisms leading to skin fragility in EB. **9.** Describe the clinical features and complications associated with EB. **10.** Outline the diagnostic approaches and principles of management.
M1-089	Acne vulgaris	**1.** Explain the etiopathogenesis of acne vulgaris. **2.** Identify the clinical features and types of acne lesions. Differentiate acne vulgaris from other acneiform eruptions. Outline the treatment plan including preventive and long-term management strategies. **3.** Explain mechanism of action and adverse effects of drugs used in acne.
M1-090	Psoriasis	**1.** Describe the etiopathogenesis of psoriasis. Identify the clinical features and common variants.

		2. Outline treatment modalities with preventive and lifestyle strategies.
M1-091	Lichen Planus	**1.** Describe the etiopathogenesis of lichen planus. Identify the classical clinical features. **2.** Enlist the differential diagnosis of lichen planus. Outline the treatment plan. **3.** Discuss preventive and long-term considerations, including malignant transformation risk.
M1-092	Erythema Multiforme and erythema nodosum	**1.** Differentiate erythema multiforme and erythema nodosum in terms of etiology, clinical features, morphology, distribution, associated conditions, and principles of management.
M1-093	Acute bacterial skin infections	**1.** Describe the role of Staphylococcus aureus as a causative organism in skin infections. **2.** Describe the clinical patterns including impetigo, bullous impetigo, boils (abscesses), bacterial folliculitis, and infected eczema. **3.** Outline the diagnostic considerations, complications, and management principles. **4.** Identify acute bacterial skin infections caused by Streptococcus pyogenes. **5.** Describe their clinical patterns including non-bullous impetigo, ecthyma, and erysipelas. **6.** Identify the role of group A β-hemolytic streptococci (and occasionally groups B, C, G) as causative organisms. **7.** Outline the clinical course, complications, and management including systemic antibiotics.
M1-094	Chronic bacterial skin infections	**1.** Describe the etiological agent and routes of infection of cutaneous tuberculosis. **2.** Identify the major clinical forms of cutaneous

		tuberculosis. Outline the diagnostic approach and treatment. **3.** Describe the causative organism, transmission, and pathogenesis of leprosy. **4.** Identify the clinical spectrum of leprosy and cardinal signs of diagnosis. **5.** Explain the complications and deformities resulting from nerve involvement in leprosy. **6.** Outline the diagnostic approach and management principles
M1-095	Viral skin infections	**1.** Describe the etiology and types of warts. Identify the clinical presentation of warts. **2.** Enlist the differential diagnosis. **3.** Outline the management options with preventive measures. Explain the etiology and mode of transmission of molluscum contagiosum virus. **4.** Identify the clinical features and distribution of molluscum contagiosum lesions. **5.** Differentiate mollascum contagiosum from warts, milia, and basal cell carcinoma on basis of clinical features. **6.** Discuss treatment options and prevention strategies. **7.** Explain the etiopathogenesis of herpes zoster (Shingles) including reactivation of varicella-zoster virus. **8.** Describe the clinical features, dermatomal distribution, and prodromal symptoms. **9.** Differentiate herpes zoster from HSV, contact dermatitis, and impetigo on basis of clinical features. **10.** Outline management and prevention strategies.

		Identify the etiology and types of herpes simplex. **11.** Discuss the clinical presentation of primary and recurrent HSV infections. **12.** Discuss differential diagnosis of herpes simplex. **13.** Outline the management plan.
M1-096	Fungal skin infection	**1.** Describe the etiology of tinea. **2.** Discuss the clinical features of different types of tinea. Differentiate tinea from eczema, psoriasis, seborrheic dermatitis, and candidiasis. **3.** Outline the diagnostic approach, treatment options, and preventive measures. **4.** Explain the etiology of Pityriasis Versicolor and predisposing factors. **5.** Describe the clinical presentation. Differentiate pityriasis versicolor from vitiligo. **6.** Outline diagnostic tests and management plan.
M1-097	Protozoal skin infection	**1.** Classify the types of leishmaniasis. **2.** Describe the clinical features of cutaneous, mucocutaneous, and visceral leishmaniasis. Enlist its complications. **3.** Outline the diagnostic methods, treatment options and preventive measures.
M1-098	Pigmentation Disorders	**1.** Define vitiligo and describe its epidemiology. Explain the underlying pathogenetic mechanisms. Describe its clinical features. **2.** Make differential diagnosis of hypo pigmented skin lesions. Discuss the management options. **3.** Outline the psychosocial impact of vitiligo. **4.** Define melasma and describe its etiology and epidemiology. Describe the clinical features

		with its treatment options. **5.** Describe adverse effects of de-melanizing agents. Define albinism and explain its genetic basis. **6.** Describe the clinical features. **7.** Outline management plan.
M1-099	Role of sunscreen	**1.** Describe the role of sunscreen in protecting skin. **2.** Explain the importance of Sun Protection Factor (SPF) and choosing an appropriate SPF for daily use. **3.** Describe the correct method of applying sunscreen, including quantity, timing, and reapplication.
M1-100	Nail disorders	**1.** Describe the clinical features of onychomycosis and paronychia. **2.** Describe nail changes in psoriasis and lichen planus. Identify common traumatic nail changes. **3.** Describe systemic associations of nail changes. **4.** Describe the importance of emollients and early antifungal treatment in nail care.
M1-101	Hair disorders	**1.** Define alopecia areata. **2.** Explain the etiological and immunological basis of alopecia areata. **3.** Describe the clinical features and patterns of presentation. **4.** Outline the differential diagnosis. **5.** Discuss the management options for alopecia areata. Define and classify androgenic alopecia. **6.** Explain the hormonal and genetic factors contributing to androgenic alopecia.

		7. Describe the clinical features and diagnostic criteria. Outline the management plan. **8.** Define hirsutism and differentiate it from hypertrichosis. Identify the common causes of hirsutism. **9.** Outline the diagnostic workup for hirsutism. **10.** Discuss medical, cosmetic, and lifestyle-based management strategies.

4.2.2 Clinical Rotations

MEDICINE I

HISTORY TAKING AND GENERAL PHYSICAL EXAMINATION		
Code	**Topic**	**Learning Objectives**
M1-001	History taking skills	Demonstrate history-taking skills covering: **1.** Patient biodata, rapport building, identity confirmation, and consent. **2.** Presenting complaint including onset, duration, severity, and associated factors. **3.** Structured history of the present illness with relevant characteristics and contextual details. **4.** Brief review of systems using focused screening questions **5.** Past medical and surgical history including previous illnesses, hospitalizations, and procedures. **6.** Drug history including prescribed medications, herbal supplements, allergies. **7.** Family history. **8.** Social history including occupation, lifestyle habits, exposure risks, socioeconomic history, and psychosocial factors.
M1-002	General physical	Perform general physical examination:

	examination	**1.** Preparation of the patient, maintaining privacy, comfort, proper exposure, and hand hygiene **2.** Assess for build, nourishment, level of consciousness, posture, distress, facies, body movements, and hygiene **3.** Measurement of vital signs **4.** Pulse for rate, rhythm, volume, character, radio-radial delay, and radio-femoral delay **5.** Head and face for pallor, icterus, cyanosis, xanthelasma, corneal arcus, rash, and facial symmetry Eye for conjunctival pallor, scleral icterus, pupillary responses, and ocular movements **6.** Oral cavity for mucosal color, hydration, tongue **7.** changes, and dental hygiene **8.** Neck examination including thyroid inspection, tracheal position, and assessment of jugular venous pressure **9.** Lymph node examination of cervical, axillary, epitrochlear, and inguinal regions for size, tenderness, mobility, consistency, and fixation **10.** Skin for color changes, pallor, cyanosis, jaundice, pigmentation, rashes, scars, edema, and dehydration signs **11.** Nails for clubbing, koilonychia, leukonychia, and capillary refill time **12.** Hands for tremors, palmar erythema, asterixis, warmth, and peripheral perfusion **13.** Assessment of the chest for shape, symmetry, deformities, tracheal alignment, respiratory rate, breathing pattern, and use of accessory

		muscles **14.** Cardiovascular screening for peripheral pulses, peripheral perfusion, and peripheral edema. **15.** Respiratory screening through observation of chest expansion and symmetry **16.** Abdominal screening including inspection and light palpation for tenderness, organomegaly, or masses. **17.** Basic neurological screening including mental status, orientation, gait, muscle bulk, and gross motor function. **18.** Leg examination including edema. **19.** Appropriate documentation and communication of findings while maintaining patient dignity and comfort throughout the examination

CENTRAL NERVOUS SYSTEM DISEASES		
Code	**Topic**	**Learning Objectives**
M1-018	History taking	**1.** Take a comprehensive neurological history, including onset, progression, associated symptoms, risk factors, and functional impact.
M1-019	Clinical examination	**1.** Perform clinical examination of I–XII cranial nerves, motor and sensory systems, cerebellar tests, higher mental functions, meningeal irritation signs, and raised intracranial pressure. **2.** Demonstrate approach to assessing and stabilizing an acute stroke patient. **3.** Interpret common lab investigations (CBC, electrolytes, renal and liver function tests,

		coagulation profile, CSF analysis and CNS imaging (CT, MRI), correlating findings with clinical presentation to support diagnosis and management.
M1-020	Counselling	**1.** Counsel patients and families with professionalism, empathy, and cultural sensitivity.

CARDIOVASCULAR DISEASES		
Code	**Topic**	**Learning Objectives**
M1-035	History taking	**1.** Take a focused history of chest pain, dyspnea, palpitations, syncope, edema, and functional limitations. **2.** Record past medical, surgical, drug, allergy, personal, and social history relevant to cardiovascular conditions.
M1-036	Clinical examination	**1.** Assess general appearance, hands (color, temperature, clubbing, splinter hemorrhages, Jane way lesions, Osler's nodes, and tendon xanthomas). **2.** Measure and interpret pulse, blood pressure, and JVP Inspect the precordium for scars, pacemaker sites, and visible pulsations. **3.** Palpate apex beat, parasternal heave, and thrills. **4.** Auscultate heart sounds and murmurs, pericardial rub, lungs for fine crackles or pleural effusion at bases. **5.** Palpate abdomen for hepatosplenomegaly or pulsatile liver and check for ascites, ankle, and sacral edema.

		6. Auscultate for bruits over the abdomen and femoral arteries. **7.** Inspect lower limbs for temperature, color, capillary refill, ulceration, varicosities, and scars. **8.** Perform ECG with correct lead placement and interpret the findings. **9.** Observe and assist in echocardiography and interpret the report. **10.** Interpret laboratory investigations, including cardiac enzymes, lipid profile, coagulation profile, electrolytes, renal function tests, thyroid function tests, and inflammatory markers, in relation to common CVS conditions.
M1-037	Counselling	**1.** Counsel patients and families with professionalism, empathy, and cultural sensitivity.

RESPIRATORY DISEASES		
Code	**Topic**	**Learning Objectives**
M1-051	History taking	**1.** Obtain focused respiratory history (symptom analysis: cough, sputum, dyspnea, chest pain, hemoptysis).
M1-052	Clinical examination	**1.** Perform inspection, palpation, percussion, and auscultation of chest. **2.** Identify and interpret abnormal breath sounds (rhonchi, crackles, bronchial breathing). **3.** Interpret examination findings in pleural effusion, consolidation, pneumothorax, COPD, asthma.

		4. Demonstrate correct use of a peak flow meter and incentive spirometer. **5.** Interpret spirometry graphs (normal, obstructive, restrictive patterns). **6.** Interpret basic chest X-rays (effusion, consolidation, collapse, pneumothorax). **7.** Demonstrate steps of oxygen therapy administration and nebulization. **8.** Demonstrate use of inhalers and spacers to patients. **9.** Observe/assist in initial management of respiratory emergencies (asthma attack, pneumothorax).
M1-053	Counselling	**1.** Counsel patients on smoking cessation and lifestyle modifications.

RHEUMATIC DISEASES		
Code	**Topic**	**Learning Objectives**
M1-066	History Taking	**1.** Take a detailed history of joint pain, stiffness, swelling, and systemic symptoms
M1-067	Clinical examination	**1.** Perform general examination with focus on musculoskeletal system. **2.** Conduct systematic examination of small and large joints for tenderness, swelling, and deformity. **3.** Assess range of motion and functional status of joints. **4.** Identify clinical signs of rheumatoid arthritis, SLE, gout, and osteoarthritis. **5.** Interpret basic rheumatologic investigations such as ESR, CRP, ANA, RF, and anti-CCP.

M1-068	Counselling	**1.** Counsel patients empathetically and professionally on following points: **2.** Chronic and relapsing nature of rheumatic diseases in layman language to patients. **3.** Importance of medication adherence, expected benefits, and potential side effects. **4.** Lifestyle modifications. **5.** Impact of disease on daily activities, work, and mental health, offering appropriate support and referrals. **6.** Need for periodic follow-up, laboratory monitoring, and screening for drug toxicity.

RENAL DISEASES		
Code	**Topic**	**Learning Objectives**
M1-077	History Taking	**1.** Take a structured renal history, focusing on urinary output changes, hematuria, edema, flank pain, dysuria, and relevant systemic or constitutional symptoms.
M1-078	Clinical examination	**1.** Perform a general physical examination with emphasis on assessing volume status, pallor, and edema. **2.** Examine the abdomen for renal masses, tenderness, and bladder distension. **3.** Identify clinical signs of chronic kidney disease such as pallor, scratch marks, and edema. **4.** Interpret urinalysis results, renal function tests (RFTs), and electrolyte profiles, and renal imaging studies, including ultrasound of kidneys, ureters, and bladder (KUB).

		5. Observe/assist in dialysis procedures and indications for initiation.
M1-079	Counselling	**1.** Counsel patients and caregivers on following points: **2.** Chronic nature of renal diseases. **3.** Importance of medication adherence, diet, fluid management, and lifestyle modifications. **4.** Need for regular follow-up, laboratory monitoring, and timely reporting of warning signs. **5.** understanding dialysis or transplantation options, including **6.** Indications and expectations.

DERMATOLOGY		
Code	**Topic**	**Learning Objectives**
M1-102	History taking	**1.** Take history of the patients with acne vulgaris, eczema, psoriasis, fungal infections, bacterial infections, scabies, urticaria, warts, vitiligo, herpes zoster, or pediculosis.
M1-103	Identification of skin lesions	**1.** Identify and differentiate skin lesions in patients.
M1-104	Use of Magnification in Dermatological Examination	**1.** Demonstrate the use of magnifying glass in examination of a patient with dermatological disease.
M1-105	Use of Wood's lamp in Dermatological Examination	**1.** Demonstrate the use of Wood's lamp in examination of a patient with dermatological diseases.
M1-106	Skin biopsy	**1.** Observe the steps of performing a skin biopsy.

M1-107	Microscopic Examination for Fungal Infections	**1.** Demonstrate the preparation and microscopic examination of skin/nail scrapings for fungal infection.
M1-108	Skin Scraping for Scabies	**2.** Perform the preparation and microscopic examination of skin scrapings for scabies mite.
M1-109	Skin Therapeutic procedures	**1.** Observe and describe the steps of common therapeutic procedures including electro surgery, cryosurgery, phototherapy, and Intralesional injections.
M1-110	Phototherapy	**1.** Assist in the preparation and patient counseling for phototherapy.
M1-111	Use of topical medication	**1.** Counsel patients regarding proper use of topical medication, particularly topical anti-scabies medication and topical steroids.
M1-112	Safe Use of Topical Skin Products	**1.** Counsel patients regarding hazards of whitening creams and topical self-medication.
M1-113	Counselling	**1.** Demonstrate the ability to counsel patients with stigmatizing skin conditions with empathy, focusing on disease understanding, treatment adherence, and psychosocial support.

Medicine-II

5. Medicine-II

5.1 Module Outcomes

- Identify characteristic signs, symptoms, and clinical patterns, and formulate accurate differential diagnoses of common medical diseases.
- Take a comprehensive and focused medical history from adult patients and caregivers.
- Perform a system based and clinically relevant physical examination for major medical presentations.
- Interpret essential laboratory and imaging investigations to support diagnostic decision-making.
- Develop and outline management plans for acute and chronic medical conditions.
- Communicate effectively and empathetically with patients, families, and the healthcare team.
- Demonstrate professionalism, ethical conduct, and collaborative teamwork in medical care settings.

5.2 Learning Objectives

5.2.1 Knowledge

MEDICINE II

ENDOCRINE DISORDERS		
Code	**Topic**	**Learning Objectives**
M2-001	Diabetes Mellitus and Hypoglycemia	**1.** Classify diabetes mellitus into Type 1 diabetes, Type 2 diabetes, MODY, and secondary diabetes. **2.** Explain the pathophysiology of insulin resistance. **3.** Describe the diagnostic criteria and approach for diagnosing a case of diabetes mellitus. **4.** Describe the acute and chronic complications of diabetes mellitus. **5.** Outline the management plan.
M2-002	Thyroid Disorders	**1.** Describe the clinical features of hypothyroidism and hyperthyroidism. **2.** Explain the different forms of thyroiditis and their clinical significance. **3.** Classify goiter with causes and clinical implications. **4.** Describe the types, clinical features, and prognosis of thyroid cancers. **5.** Outline the investigations for thyroid disorders. **6.** Discuss disease-specific management approaches, including medical, surgical, and radioactive iodine therapy.
M2-003	Pituitary and Hypothalamic Disorders	**1.** Describe the causes, clinical features, and consequences of hypopituitarism and pituitary adenomas. **2.** Explain the clinical features, causes, and

		complications of acromegaly, gigantism, and prolactinoma. **3.** Describe the types, causes, and clinical presentation of diabetes insipidus. **4.** Explain the pathophysiology, causes, and clinical features of SIADH. **5.** Discuss hypothalamic syndrome, including its causes, clinical manifestations, and implications.
M2-004	Adrenal Disorders	**1.** Describe the causes, clinical features, and investigations for Addison's disease and adrenal crisis. **2.** Describe the etiology, clinical features, and investigations for Cushing's syndrome and Cushing's disease. **3.** Explain the clinical features, diagnosis, and management of Pheochromocytoma. **4.** Describe primary hyperaldosteronism (Conn's syndrome), including its causes and clinical manifestations.
M2-005	Disorders of Calcium and Bone Metabolism	**1.** Describe the causes and clinical features of hyperparathyroidism and hypoparathyroidism. **2.** Explain the causes, and clinical manifestations of vitamin D disorders, including osteomalacia and rickets. **3.** Describe osteoporosis, including its risk factors, diagnosis, prevention, and management. **4.** Explain the etiology, clinical features, and complications of Paget's disease of bone.
M2-006	Reproductive Endocrinology	**1.** Describe the causes and clinical features of precocious and delayed puberty. **2.** Explain the etiology, clinical features, and

		complications of polycystic ovary syndrome (PCOS). **3.** Describe hypogonadism in males and females, including its causes and clinical manifestations. **4.** Explain the causes and clinical features of gynecomastia. **5.** Discuss the endocrine causes of infertility and their role in reproductive dysfunction.
M2-007	Multiple endocrine neoplasia	**1.** Describe the types, clinical features, and genetic basis of multiple endocrine neoplasia (MEN 1 and MEN 2).
M2-008	Paraneoplastic endocrine syndromes	**1.** Describe paraneoplastic endocrine syndromes, including their causes and clinical manifestations.
M2-009	Endocrine hypertension	**1.** Explain the causes, pathophysiology, and clinical features of endocrine hypertension.
M2-010	Endocrine emergencies	**1.** Describe the clinical features, precipitating factors, and initial management of thyroid storm. **2.** Explain the presentation, causes, and management of myxedema coma. **3.** Describe adrenal crisis, including its causes, clinical features, and emergency management. **4.** Explain the acute management of diabetic emergencies including Diabetic ketoacidosis and severe hypoglycemia.

GASTROINTESTINAL DISEASES		
Code	**Topic**	**Learning Objectives**
M2-014	Diseases of Oral Cavity	**1.** Describe the etiology of oral cavity diseases including infective, traumatic, autoimmune,

		neoplastic, and nutritional causes. **2.** Explain the pathophysiology of local tissue damage and immune response in oral diseases. **3.** Identify the clinical features of oral cavity disorders. **4.** Outline the investigations.
M2-015	Acute Gastroenteritis	**1.** Explain the pathophysiology acute gastroenteritis. **2.** Identify the clinical features and complications. **3.** Outline the investigations and management plan.
M2-016	Chronic Diarrhea	**1.** Describe the common causes of chronic diarrhea. **2.** Explain the pathophysiology. **3.** Identify the clinical features and complications. **4.** Outline the investigations and management plan.
M2-017	Dysphagia	**1.** Describe the etiology of dysphagia including structural and functional causes. **2.** Explain the pathophysiology of dysphagia. **3.** Identify the clinical features. **4.** Outline the investigations to reach the diagnosis.
M2-018	Gastroesophageal Reflux Disease (GERD)	**1.** Describe the etiology of GERD. **2.** Explain the pathophysiology. **3.** Identify the clinical features of GERD. **4.** Outline the investigations and management plan.
M2-019	Peptic Ulcer Disease & Dyspepsia	**1.** Describe the etiology of peptic ulcer disease. **2.** Explain the pathophysiology. **3.** Identify the clinical features and potential complications. **4.** Outline the management plan.

M2-020	Irritable Bowel Syndrome (IBS)	**1.** Describe the etiology of IBS. **2.** Explain the pathophysiology. **3.** Identify the clinical features. **4.** Outline the investigations and management plan.
M2-021	Malabsorption Syndromes	**1.** Describe the etiology of malabsorption syndromes. **2.** Explain the pathophysiology. **3.** Identify the clinical features and complications. **4.** Outline the investigations and management plan.
M2-022	Inflammatory Bowel Disease (IBD)	**1.** Define inflammatory bowel disease. **2.** Describe the etiology and pathophysiological mechanisms. **3.** Differentiate between ulcerative colitis and Crohn's disease. **4.** Identify clinical manifestations of IBD and complications. **5.** Formulate differential diagnosis. **6.** Interpret relevant investigations used in the diagnosis. **7.** Outline management plan.
M2-023	Gastrointestinal Tuberculosis	**1.** Explain the pathophysiology. **2.** Identify the clinical features and complications. **3.** Outline the investigations and management plan.
M2-024	Gastrointestinal Malignancies	**1.** Enlist common gastrointestinal cancers. **2.** Identify key risk factors and alarm symptoms. **3.** Outline the investigations, basic principles of management, and prognosis of gastrointestinal cancers.

HEPATOBILIARY DISEASES		
Code	**Topic**	**Learning Objectives**
M2-028	Approach to a Patient with Jaundice	**1.** Classify jaundice based on pathophysiology. **2.** Identify key clinical features associated with jaundice. **3.** Formulate differential diagnosis. **4.** Interpret investigations of a patient with jaundice. **5.** Outline general principles of management.
M2-029	Acute Liver Failure	**1.** Identify common causes of acute liver failure. **2.** Explain the pathophysiological basis of acute liver failure. **3.** Identify clinical presentation and potential complications. **4.** Interpret laboratory investigations used in assessment. **5.** Outline initial and definitive management plan. **6.** Describe Paracetamol poisoning
M2-030	Chronic Liver Disease	**1.** Enlist etiology leading to chronic liver disease. **2.** Describe the progression from chronic liver injury to cirrhosis. **3.** Describe clinical features and complications of chronic liver disease. **4.** Interpret investigations used in diagnosis and staging. **5.** Plan strategies for management and complication prevention.
M2-031	Hepatitis B and C	**1.** Describe the clinical presentation of Hepatitis B and Hepatitis C. **2.** Enlist and interpret laboratory investigations for Hepatitis B and C.

		3. Outline the treatment plan for Hepatitis B and Hepatitis C. **4.** Enlist potential complications of Hepatitis B and Hepatitis C.
M2-032	Portal Hypertension	**1.** Explain the pathophysiology of portal hypertension. **2.** Identify causes and clinical manifestations of portal hypertension. **3.** Interpret relevant diagnostic investigations. **4.** Outline medical and interventional management plan.
M2-033	Variceal Bleeding	**1.** Describe clinical presentation of variceal bleeding. **2.** Explain the underlying mechanism leading to variceal rupture. **3.** Enlist the diagnostic procedures. **4.** Outline emergency and preventive management plan.
M2-034	Ascites	**1.** Identify common causes of ascites. **2.** Explain the pathophysiological mechanisms involved in ascites formation. **3.** Enlist investigations with interpretation. **4.** Plan the management.
M2-035	Hepatic Encephalopathy	**1.** Explain the pathophysiology of hepatic encephalopathy. **2.** Identify clinical features and grading of encephalopathy. **3.** Enlist the precipitating factors. **4.** Discuss the principles of management and prevention.
M2-036	Hepatocellular Carcinoma	**1.** Identify risk factors for hepatocellular carcinoma. **2.** Describe clinical features suggestive of HCC.

		3. Enlist and interpret screening and diagnostic investigations. **4.** Outline management options with prognosis.
M2-037	Pancreatitis (Acute & Chronic)	**1.** Identify etiological factors of pancreatitis. **2.** Explain the underlying pathophysiology. **3.** Describe characteristic clinical features and complications. **4.** Interpret relevant laboratory and imaging investigations. **5.** Outline management plan.
M2-038	Obstructive and cholestatic jaundice	**1.** Identify risk factors. **2.** Outline differential diagnosis of obstructive jaundice. **3.** Describe signs and symptoms. **4.** Enlist appropriate diagnostic investigations.
M2-039	Metabolic Dysfunction–Associated Steatotic Liver Disease (MASLD)	**1.** Explain the pathophysiological basis and clinical features of MASLD **2.** Interpret investigations used for diagnosis and staging. **3.** Plan the management.
M2-040	Alcoholic Liver Disease	**1.** Describe the spectrum of alcoholic liver disease. **2.** Identify clinical features. **3.** Interpret relevant investigations. **4.** Outline principles of management.
M2-041	Autoimmune Hepatitis	**1.** Identify clinical features of autoimmune hepatitis. **2.** Enlist diagnostic investigations with interpretation. **3.** Outline principles of management.
M2-042	Wilson's Disease	**1.** Describe the pathophysiology. **2.** Describe clinical presentation. **3.** Outline diagnostic tests with interpretation.

		4. Plan management strategies.
M2-043	Hemochromatosis	**1.** Explain the mechanism of iron overload. **2.** Describe clinical presentation. **3.** Interpret diagnostic investigations. **4.** Outline management principles.
M2-044	Alpha-1 Antitrypsin Deficiency	**1.** Explain the genetic basis of the disease. **2.** Describe clinical presentation. **3.** Describe diagnostic investigations with management plan.
M2-045	Congential hyperbilirubinemia	**1.** Explain the pathophysiology. **2.** Describe characteristic clinical presentation. **3.** Interpret laboratory findings. **4.** Outline plan of patient management.
M2-046	Liver Disease in Pregnancy	**1.** Identify liver disorders specific to pregnancy. **2.** Describe clinical features requiring urgent evaluation. **3.** Enlist and interpret appropriate investigations. **4.** Outline management plan.
M2-047	Parasitic Infections of the Liver	**1.** Identify common parasitic liver diseases. **2.** Liver abscess **3.** Describe clinical presentation. **4.** Select relevant diagnostic investigations. **5.** Outline principles of treatment.

INFECTIOUS DISEASES		
Code	**Topic**	**Learning Objectives**
M2-050	Approach to a Patient with Fever	**1.** Define fever and describe its common patterns. **2.** Explain the pathophysiology of fever. **3.** Differentiate between acute, subacute, and chronic fever. **4.** Describe the concept and causes of pyrexia of

		unknown origin (PUO). **5.** Identify common infectious and non-infectious causes of fever. **6.** Outline diagnostic approach and management of a patient with fever.
M2-051	Malaria	**1.** Describe the epidemiology and modes of transmission of malaria. **2.** Differentiate between uncomplicated and severe malaria. **3.** Describe diagnostic methods for malaria. **4.** Outline principles of treatment and prevention of malaria. **5.** Identify complications of malaria.
M2-052	Dengue Fever	**1.** Describe the epidemiology and transmission of dengue fever. **2.** Differentiate between dengue fever, dengue hemorrhagic fever, and dengue shock syndrome. **3.** Identify warning signs and complications of dengue. **4.** Outline principles of management of dengue fever.
M2-053	Enteric Fever (Typhoid Fever)	**1.** Describe the etiology and transmission of enteric fever. **2.** Describe the clinical features and stages of enteric fever. **3.** Outline the diagnostic approach to enteric fever and principles of antibiotic therapy in enteric fever. **4.** Identify complications and preventive strategies.
M2-054	Amebiasis	**1.** Describe the etiology. **2.** Differentiate between intestinal and extra-

		intestinal manifestations. **3.** Explain the pathogenesis and complications of amebiasis. **4.** Describe diagnostic modalities and treatment of amebiasis.
M2-055	Covid-19	**1.** Describe the modes of transmission of COVID-19. **2.** Explain the pathophysiology and clinical spectrum of COVID-19. **3.** Outline diagnostic investigations and management. **4.** Describe infection prevention and control measures.
M2-056	HIV / AIDS	**1.** Describe modes of transmission. **2.** Identify common opportunistic infections associated with HIV. **3.** Describe diagnostic tests for HIV infection. **4.** Outline principles of antiretroviral therapy.
M2-057	Rabies	**1.** Describe the modes of transmission of rabies. **2.** Describe the clinical stages of rabies. **3.** Outline principles of post-exposure prophylaxis and preventive strategies for rabies.
M2-058	Tetanus	**1.** Describe the clinical presentation of tetanus. **2.** Enlist and interpret laboratory and diagnostic investigations. **3.** Outline the treatment plan. **4.** Enlist potential complications.

HEMATOLOGIC DISORDERS		
Code	**Topic**	**Learning Objectives**

M2-061	Iron Deficiency Anemia	**1.** Describe the etiology and risk factors of iron deficiency anemia **2.** Identify the clinical features. **3.** Outline the diagnostic criteria and principles of treatment including prevention of iron deficiency anemia.
M2-062	Megaloblastic Anemia	**1.** Enlist the causes of megaloblastic anemia. **2.** Identify the clinical features of megaloblastic anemia. **3.** Outline the diagnostic approach to megaloblastic anemia **4.** Describe principles of management of megaloblastic anemia
M2-063	Hemolytic Anemia	**1.** Classify hemolytic anemias **2.** Explain the pathophysiology of hemolytic anemia. **3.** Identify the clinical features. **4.** Outline diagnostic investigations and principles of management of hemolytic anemia.
M2-064	Aplastic Anemia	**1.** Describe the etiology and pathogenesis of aplastic anemia **2.** Identify the clinical features and diagnostic criteria for aplastic anemia. **3.** Outline management plan of aplastic anemia.
M2-065	Leukemias	**1.** Classify leukemias **2.** Identify the clinical features. **3.** Outline the diagnostic approach to leukemias **4.** Discuss principles of management of leukemias.
M2-066	Hodgkin Lymphoma	**1.** Identify the clinical features of Hodgkin lymphoma. **2.** Describe staging of Hodgkin lymphoma. **3.** Outline the diagnostic approach to Hodgkin

		lymphoma. **4.** Describe principles of management of Hodgkin lymphoma.
M2-067	Non-Hodgkin Lymphoma	**1.** Identify the clinical features of non-Hodgkin lymphoma. **2.** Outline the diagnostic evaluation of non-Hodgkin lymphoma. **3.** Describe principles of management of non-Hodgkin lymphoma.
M2-068	Bleeding Disorders	**1.** Classify bleeding disorders **2.** Identify the clinical features. **3.** Outline the diagnostic approach to bleeding disorders. **4.** Describe principles of management of bleeding disorders.
M2-069	Platelet Disorders	**1.** Describe causes of thrombocytopenia **2.** Explain the pathophysiology of platelet disorders **3.** Identify clinical manifestations of platelet disorders. **4.** Outline the diagnostic approach and management of platelet disorders.
M2-070	Plasma Cell Disorders	**1.** Classify plasma cell disorders. **2.** Identify the clinical features of plasma cell disorders **3.** Outline diagnostic criteria and management plan of plasma cell disorders.

POISONING		
Code	**Topic**	**Learning Objectives**
M2-073	General Principles	**1.** Define poisoning and classify its common

	of Poisoning Management	types. **2.** Describe routes of exposure and mechanisms of toxicity **3.** Outline a clinical approach to a poisoned patient. **4.** Explain risk assessment and triage in poisoning. **5.** Describe decontamination methods and their indications. **6.** Explain the role and limitations of antidotes. **7.** Describe principles of supportive and symptomatic management **8.** Outline medico-legal aspects related to poisoning.
M2-074	Wheat Pills (Aluminum Phosphide) Poisoning	**1.** Describe the sources of aluminum phosphide **2.** Explain the mechanism of toxicity. **3.** Identify clinical features and progression. **4.** Outline diagnostic considerations and principles of management. **5.** Describe prognosis and preventive strategies.
M2-075	Organophosphate Poisoning	**1.** Explain the mechanism of action and cholinergic toxidrome. **2.** Identify clinical features and complications. **3.** Outline diagnostic criteria and principles of antidotal therapy. **4.** Describe preventive measures for organophosphate exposure.
M2-076	Opioid Poisoning	**1.** Identify routes of exposure. **2.** Explain the mechanism of toxicity of opioids. **3.** Identify clinical features and complications of opioid poisoning **4.** Outline the diagnostic approach and principles of management and use of reversal agents.

PSYCHIATRY		
Code	**Topic**	**Learning Objectives**
M2-080	Introduction to Key Psychiatric Terms	**1.** Describe mood and affect. Describe and classify hallucination. Describe and classify delusion. **2.** Describe the abnormalities of speech in psychiatric disorders. **3.** Describe obsession and compulsion.
M2-081	Anxiety Disorder	**1.** Define generalized anxiety disorder (GAD) and describe common risk factors. **2.** Identify typical mental state examination findings of GAD. Differentiate GAD from eustress. **3.** Outline pharmacological and psychotherapeutic treatment of GAD. **4.** Identify hallmark symptoms of panic disorder based on Mental Status Examination. **5.** Differentiate panic attacks from angina, myocardial infarction, and asthma. **6.** Describe strategies for supporting patients with panic disorder. **7.** Define and classify phobias. **8.** Outline treatment approaches for phobias, including psychological therapies and pharmacological options.
M2-082	Depressive disorders	**1.** Classify depressive disorders. **2.** Describe risk factors of depressive disorders. **3.** Diagnose moderate depressive disorder on the basis of mental state examination findings. **4.** Outline management plan including

		pharmacological options and psychotherapy. **5.** Describe suicide and deliberate self-harm, including associated factors. **6.** Describe management of suicide and deliberate self-harm. Differentiate postpartum depression from postpartum blues. Formulate a management plan for postpartum blues and postpartum depression.
M2-083	Bipolar affective disorder	**1.** Describe Bipolar I and Bipolar II disorders according to standard diagnostic criteria. **2.** 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. **3.** Interpret mental state examination (MSE) findings in mania. **4.** Formulate a basic management plan for bipolar disorder.
M2-084	Obsessive–Compulsive and Related Disorders	**1.** Describe the etiology, risk factors, and underlying neurobiological, psychological, and social factors contributing to Obsessive–Compulsive Disorder (OCD). **2.** Enumerate the diagnostic criteria of OCD according to ICD- 11/DSM-5 TR. **3.** Identify the common clinical features and course of illness. **4.** Interpret the characteristic findings on mental state examination in OCD. **5.** Discuss the impact of OCD on daily functioning and quality of life. **6.** Outline the treatment options including pharmacological and psychological

		approaches. **7.** Define Body Dysmorphic Disorder (BDD) Differentiate from BDD from eating disorders **8.** Explain the clinical findings of a case of BDD based on mental state examination. **9.** Outline the management plan to treat BDD.
M2-085	Dissociative and somatoform disorders (conversion disorder)	**1.** Define and classify dissociative disorders **2.** Identify key clinical features of dissociative disorders Describe principles of management of dissociative disorders **3.** Define and classify somatoform disorders with emphasis on conversion disorder **4.** Identify key clinical features of conversion disorder **5.** Describe principles of management of conversion disorder
M2-086	Trauma- and Stressor-Related Disorders	**1.** Explain the characteristic mental state examination (MSE) findings in PTSD. **2.** Differentiate PTSD from acute stress disorder. Outline the management plan for PTSD. Define adjustment disorder. **3.** Identify the emotional and behavioral symptoms that occur within three months of an identifiable stressor.
M2-087	Schizophrenia and Psychotic Disorders	**1.** Define schizophrenia. **2.** Describe the positive and negative symptoms of schizophrenia. **3.** Outline the differential diagnosis of schizophrenia. **4.** Explain the characteristic mental state examination (MSE) findings in schizophrenia. **5.** Outline the management plan to treat a patient of schizophrenia.

M2-088	Personality Disorders	**1.** Define paranoid, schizoid, and schizotypal personality disorders. **2.** Describe the characteristic symptoms and behavioral patterns of each disorder. **3.** Interpret relevant findings on the mental state examination in these disorders. **4.** Differentiate Cluster a disorders from schizophrenia and delusional disorders. **5.** Outline the principles of management, including psychotherapy and pharmacotherapy where appropriate. **6.** Define antisocial, borderline, histrionic, and narcissistic, anxious avoidant, dependent, and obsessive compulsive personality disorders. **7.** Explain the clinical features and psychopathology of each disorder. **8.** Identify mental state examination findings typical of Cluster B and C personality disorders. **9.** Differentiate these disorders from mood disorders, substance use, and other psychiatric conditions. **10.** Summarize management strategies, including risk assessment, crisis intervention, and psychotherapy.
M2-089	Substance related disorders	**1.** Classify commonly abused substances (e.g., alcohol, opioids, cannabis, stimulants, sedatives, caffeine, and nicotine). **2.** Describe the clinical features and diagnostic criteria of substance-related disorders. **3.** Identify signs and symptoms of intoxication and withdrawal for common substances. **4.** Explain the psychological, social, and medical

		complications associated with substance use. **5.** Outline the approach to assessment, including history, examination, and mental state examination. **6.** Explain the principles of management for substance use disorders. **7.** Discuss preventive strategies and the role of psychoeducation in reducing substance use. **8.** Manage the patients of acute and chronic alcoholism.
M2-090	Eating disorders	**1.** Describe the characteristic clinical features of anorexia nervosa. **2.** Differentiate anorexia nervosa from hyperthyroidism and depression. **3.** Explain the typical mental state examination findings. **4.** Outline the management plan to treat a patient diagnosed with anorexia nervosa. **5.** Diagnose bulimia nervosa on the basis of signs and symptoms and mental state examination findings. **6.** Describe the binge–purge cycle. **7.** Outline management strategies, including pharmacotherapy and psychotherapy.
M2-091	Psychosexual disorders	**1.** Define and classify psychosexual disorders **2.** Identify key clinical features of psychosexual disorders Describe principles of management of psychosexual disorders
M2-092	Neurodevelopmental disorders	**1.** Describe the clinical signs and symptoms in children and adolescents with Attention Deficit Hyperactivity Disorder (ADHD). **2.** Analyze mental state examination (MSE) findings in individuals with ADHD.

		3. Explain the etiological factors contributing to the development of ADHD. **4.** Differentiate ADHD from normal childhood behavior. Formulate a management plan to treat individuals with ADHD. Describe the clinical presentation of Autism Spectrum Disorder (ASD) in children. **5.** Identify early signs of ASD. **6.** Interpret behavioral observations relevant to diagnosis during assessment. **7.** Develop a basic management plan for children with Autism **8.** Spectrum Disorder incorporating early intervention and multidisciplinary care.

5.2.2 Clinical Rotations

MEDICINE II

ENDOCRINE DISORDERS		
Code	**Topic**	**Learning Objectives**
M2-011	History Taking	**1.** Take a focused endocrine history for Diabetes mellitus, Hypothyroidism, Hyperthyroidism, Thyroid nodules, Pituitary adenomas, Cushing's syndrome, Adrenal insufficiency, a Hypogonadism.
M2-012	Clinical examination	**1.** Perform general physical examination. **2.** Examine: ➢ Neck for goiter, nodules, or thyroid enlargement (Thyroid disorders). ➢ Skin for pigmentation changes, stretch marks, hirsutism, edema (Adrenal disorders, Cushing's syndrome, Polycystic

		Ovary Syndrome). ➢ Musculoskeletal system for bone deformities, muscle weakness, or skeletal abnormalities (Vitamin D disorders, Osteoporosis, Paget's disease of bone). ➢ Genitalia and secondary sexual characteristics (Hypogonadism, Disorders of puberty). **3.** Observe/assist in management of acute endocrine emergencies including diabetic ketoacidosis and severe hypoglycemia. **4.** Interpret thyroid function tests, thyroid antibodies, and relevant imaging, blood glucose, electrolytes, renal function, and ketones for acute diabetic complications, adrenal function tests, cortisol, and imaging studies, reproductive endocrine investigations, bone metabolism markers, calcium, phosphate, vitamin D, and imaging studies.
M2-013	Counselling	**1.** Demonstrate effective patient counselling skills, including explaining the diagnosis, treatment options, lifestyle modifications, medication adherence, and follow-up plans for patients with endocrine disorders.

GASTROINTESTINAL DISEASES		
Code	**Topic**	**Learning Objectives**
M2-025	History taking	**1.** Take focused gastrointestinal history, including pain, diarrhea, dyspepsia, reflux, dysphagia, bleeding, weight loss, chronic illness, and red-flag symptoms.

M2-026	Clinical examination	**1.** Examine oral cavity. **2.** Assess hydration status using capillary refill time, skin turgor, pulse, and blood pressure, particularly in acute gastroenteritis and chronic diarrhea. **3.** Perform a complete abdominal examination (inspection, palpation, percussion, and auscultation). **4.** Demonstrate per rectal examination where indicated, including assessment for bleeding, masses, and tenderness. Identify clinical signs of anemia, malnutrition, and vitamin deficiencies during general and gastrointestinal examination. Interpret diagnostic investigations relevant to gastrointestinal diseases, including CBC, stool examination, occult blood testing, and relevant biochemical tests, ultrasound abdomen, and X-ray abdomen.
M2-027	Counselling	**1.** Counsel patients regarding disease nature, lifestyle modification, dietary advice, medication adherence, red-flag symptoms, and follow-up care.

HEPATOBILIARY DISEASES		
Code	**Topic**	**Learning Objectives**
M2-048	History taking	**1.** Take a focused hepatobiliary history, including jaundice, abdominal pain, pruritus, nausea, vomiting, dyspepsia, weight loss, bleeding tendencies, risk factors, chronic liver disease symptoms, and red-flag features.
M2-049	Clinical	**1.** Perform abdominal examination including

	examination	inspection, palpation, percussion, auscultation and document the findings. **2.** Interpret relevant tests including LFTs, INR/PT, viral markers, ceruloplasmin, serum ferritin, ultrasound abdomen, Doppler, CT/MRI, MRCP, and liver biopsy where indicated. **3.** Communicate disease nature, treatment plan, lifestyle advice, and follow-up requirements to patients and caregivers.

INFECTIOUS DISEASES		
Code	**Topic**	**Learning Objectives**
M2-059	History taking	**1.** Take history in patients with suspected infectious diseases (fever, malaria, dengue fever, enteric fever, amebiasis, COVID-19, HIV/AIDS, rabies).
M2-060	Clinical Examination and Investigations Counseling	**1.** Perform a thorough general physical examination and system-focused examination relevant to infectious diseases, including assessment of vital signs, hydration status, respiratory distress, abdominal findings, neurological status, and identification of red-flag signs (severe malaria, dengue warning signs, and septic features). Interpret relevant laboratory and diagnostic investigations such as complete blood count, peripheral smear and rapid tests for malaria, platelet trends, liver function tests, blood cultures, stool examination, oxygen saturation, imaging, and HIV diagnostic tests, and monitor disease

		severity and response to treatment. **2.** Counsel patients and attendants empathetically and professionally on the following points: ➢ Nature and expected course of infectious diseases in simple language. ➢ Importance of treatment adherence, completion of prescribed therapy, and potential adverse effects. ➢ Preventive measures including hygiene, sanitation, vector control, vaccination, and infection control practices. ➢ Indications for urgent review, follow-up planning, and referral when required.

HEMATOLOGIC DISORDERS		
Code	**Topic**	**Learning Objectives**
M2-071	History taking	**1.** Take history of patients with suspected hematological disorders (iron deficiency anemia, megaloblastic anemia, hemolytic anemia, aplastic anemia, leukemias, Hodgkin lymphoma, non-Hodgkin lymphoma, bleeding disorders, platelet disorders, plasma cell disorders).
M2-072	Clinical examination and Investigations Counselling	**1.** Perform general physical and system-focused examination, including assessment of pallor, jaundice, lymphadenopathy, hepatosplenomegaly, bone tenderness, petechiae, purpura, and signs of infection or bleeding. Interpret hematological investigations such as complete blood count, peripheral blood smear, reticulocyte count, iron

		studies, vitamin B12 and folate levels, hemolysis profile, coagulation tests, bone marrow examination, and relevant imaging, to assess disease severity and guide management. Counsel patients empathetically and professionally on the following points: ➢ Nature, chronicity, and prognosis of hematological disorders in simple, lay language. ➢ Importance of medication adherence, transfusion safety, and monitoring for treatment-related adverse effects. ➢ Dietary advice, infection prevention, bleeding precautions, and lifestyle modifications where relevant. ➢ Need for regular follow-up, laboratory monitoring, and timely referral to hematology services when indicated.

POISONING		
Code	**Topic**	**Learning Objectives**
M2-077	History taking	**1.** Take history in patients with suspected poisoning (general poisoning, aluminum phosphide, organophosphate, opioid poisoning).
M2-078	Clinical examination Counselling	**1.** Perform a rapid survey and physical examination, including assessment of airway, breathing, and circulation, level of consciousness, pupil size, secretions, vital signs, and identification of characteristic toxidromes.

		2. Interpret relevant investigations such as arterial blood gases, serum electrolytes, ECG, cholinesterase levels, toxicology screens, and other baseline tests to assess severity, guide antidotal therapy, and monitor response to treatment. **3.** Counsel patients and attendants empathetically and professionally.
M2-079	Medico legal aspect of poisoning (integrate with Forensic Medicine)	**1.** Identify routes of poison administration. **2.** Examine teeth for the effects of poisoning. **3.** Examine body orifices for sample collection for traces of poison. **4.** Apply law relevant to poisoning.

PSYCHIATRY		
Code	**Topic**	**Learning Objectives**
M2-093	History taking	**1.** Take a detailed psychiatric history from patients with common psychiatric disorders. **2.** (Depressive disorder, bipolar affective disorder, schizophrenia, generalized anxiety disorder, panic disorder, obsessive–compulsive disorder (OCD), alcoholism, ADHD, autism, personality disorders, acute suicidal ideation/attempt, acute aggression or violent behavior) **3.** Apply the non-pharmacological interventions in clinical settings (information care, breaking bad news, crisis intervention, disaster management, conflict resolution, progressive muscle relaxation & breathing exercises, and informed consent).

		4. Provide differential diagnosis based on history, MSE, and relevant investigations. **5.** Formulate a preliminary diagnosis and outline management plan.
M2-094	Mental state examination	**1.** Perform mental state examination (MSE), assessing appearance, behavior, speech, mood, thought, perception, cognition, insight, and judgment. **2.** Interpret findings of MSE in common psychiatric conditions.
M2-095	Suicide risk assessment	**1.** Conduct suicide risk assessment. **2.** Propose immediate management steps.
M2-096	Aggression/violence risk assessment	**1.** Identify and assess risk of aggression or violence in psychiatric patients. **2.** Propose immediate management steps.
M2-097	Rapport building	**1.** Establish rapport with patients and their families in a respectful, non-judgmental manner. **2.** Demonstrate empathetic listening and supportive communication in sensitive situations. **3.** Demonstrate respect for patient autonomy and confidentiality in psychiatric practice. **4.** Apply ethical principles in managing patients with impaired capacity or in involuntary treatment settings.

PEDIATRICS

6. Pediatrics

6.1 Module Outcomes

- Identify common pediatric illnesses and formulate the differential diagnoses. Obtain a comprehensive history from children and their caregivers.
- Perform a focused and systematic physical examination in infants, children, and adolescents. Develop and outline evidence-based management plans for common pediatric conditions.
- Communicate effectively and empathetically with patients and their families.
- Demonstrate professionalism, ethical conduct, and effective teamwork in pediatric healthcare settings.

6.2 Learning Objectives

6.2.1 Knowledge

PEDIATRICS

FUNDAMENTALS OF PEDIATRICS		
Code	**Topic**	**Learning Objectives**
Pe-001	Growth	**1.** List key anthropometric measurements used to assess growth. **2.** Interpret growth charts and percentiles. **3.** Identify red flags of abnormal growth. **4.** Discuss common factors influencing growth. **5.** Discuss Tanner staging of female and male puberty
Pe-002	Development	**6.** Describe major developmental milestones in gross motor, fine motor, vision, hearing and speech, and social behavior from neonate, 3, 6, 9, 12, 18 months, and 2–5 years. **7.** Identify delays or abnormalities in development. **8.** Describe key factors affecting development. **9.** Discuss counseling points for caregivers on activities that promote age-appropriate cognitive, motor, language, and social development.
Pe-003	Immunization	**10.** Differentiate between active and passive immunity. **11.** Explain the concept of herd immunity and its importance in preventing disease outbreaks. **12.** Enlist vaccines available for children other

		than EPI schedule. **13.** Describe the major types of vaccines live attenuated, killed/inactivated, toxoid, and conjugated and give common examples of each. **14.** Describe the EPI schedule, including vaccines given at birth and at each age-specific visit. **15.** Explain the purpose, target diseases, and key components of the EPI. **16.** Identify indications, contraindications, adverse effect and precautions for EPI vaccines. **17.** Demonstrate correct storage, handling, and administration of EPI vaccines. **18.** Explain counselling points of caregivers on the importance of completing the EPI schedule, vaccine safety, and management of minor post-vaccination reactions.
NUTRITION AND NUTRITIONAL DISORDERS		
Pe-004	Breastfeeding and weaning	**1.** Describe the benefits of breastfeeding mother. **2.** Identify indications, contraindications, and techniques for effective breastfeeding. **3.** Discuss factors causing lactation failure **4.** Explain appropriate timing, methods, and types of complementary feeding (weaning). **5.** List age-appropriate weaning foods and feeding practices. **6.** Discuss nutritional requirements during weaning and growth monitoring. **7.** Outline counseling points for

		caregivers on breastfeeding, weaning, and hygiene. **8.** Explain potential complications of improper breastfeeding or weaning and strategies for prevention
Pe-005	Integrated management of Childhood and Neonatal Illness (IMNCI)	**1.** Define IMNCI **2.** Discuss importance and key components of IMNCI **3.** Discuss IMNCI protocol under 2 months age regarding very severe disease, Jaundice, Diarrhea, HIV infection, Feeding problems and Low birth weight **4.** Discuss IMNCI protocol in 2 months age to five-year age regarding Pneumonia, Diarrhea, Fever, Ear problems, acute malnutrition, anemia and HIV infection
Pe-006	Obesity	**1.** Define and classify obesity. **2.** Identify clinical features and complication. **3.** Enlist the investigations. **4.** Calculate BMI and describe its role. **5.** Outline management plan (Dietary, pharmacological, prevention).
Pe-007	Rickets	**1.** Define and classify rickets. **2.** Describe the etiology and pathogenesis of rickets. **3.** List key clinical features and skeletal deformities. **4.** Identify relevant laboratory and radiological investigations. **5.** Formulate a differential diagnosis for bone deformities and growth disturbances. **6.** Outline management principles, including

		vitamin D and calcium supplementation and dietary. **7.** Explain potential complications, prognosis, and preventive strategies.
Pe-008	Marasmus/Severe wasting	**1.** Define marasmus and distinguish it from other forms of malnutrition. **2.** Identify key clinical features such as severe wasting and muscle loss. **3.** Select appropriate anthropometric and laboratory investigations. **4.** Outline management strategies, including nutritional rehabilitation and supportive care. **5.** Explain potential complications, prognosis, and follow-up care.
Pe-009	Kwashiorkor/Edematous malnutrition	**1.** Define kwashiorkor and distinguish it from marasmus. **2.** Identify key clinical features such as edema, hepatomegaly, and skin changes. **3.** Select relevant laboratory investigations. **4.** Outline management strategies, including therapeutic feeding, micronutrient supplementation, and monitoring. **5.** Explain potential complications, prognosis, and follow- up care

NEUROLOGIC DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-012	Pyogenic meningitis	**1.** Describe the etiology of pyogenic meningitis in different pediatric age groups. **2.** Explain the pathogenesis, including routes of

		infection and inflammatory changes in the meninges. **3.** Identify key clinical features in infants, children, and adolescents, including age-specific red flags and differential diagnosis. **4.** Outline the essential investigations, including CSF analysis, indications and contraindications of lumbar puncture, blood tests, cultures, and neuroimaging indications. **5.** Discuss the management, including antibiotic therapy, supportive care, and monitoring along with prevention strategies. **6.** List the potential complications. **7.** Describe factors influencing prognosis in pediatric meningitis.
Pe-013	Tuberculous meningitis	**1.** Describe the pathogenesis of tuberculous meningitis. **2.** Identify key clinical features and early warning signs, and outline the three clinical stages of disease progression. **3.** Discuss the diagnostic approach, including characteristic findings and criteria supporting the diagnosis. **4.** List essential investigations with interpretation. **5.** Outline the management plan. **6.** List major complications **7.** Describe prognostic factors.
Pe-014	Encephalitis	**1.** Describe the etiology of encephalitis **2.** Explain the pathogenesis with neurological consequences. **3.** Diagnose based on signs and symptoms and interpretation of lab investigations. **4.** Discuss the management

		5. List major complications and prognosis.
Pe-015	Cerebral malaria	**1.** Describe the etiology and pathogenesis of cerebral malaria. **2.** Diagnose based on key clinical features. **3.** Outline the important diagnostic tests. **4.** Identify the diagnostic criteria for cerebral malaria diagnosis. **5.** Outline the management plan. **6.** Identify major complications and factors affecting prognosis. **7.** Explain preventive strategies.
Pe-016	Febrile seizures	**1.** Define and classify febrile seizures. **2.** Describe the diagnostic criteria and exclusion conditions for febrile seizures. **3.** Explain the etiology and common triggers in children. **4.** Identify key signs and symptoms. **5.** Outline the necessary investigations, including when evaluation is required. **6.** Discuss the treatment approach, including immediate seizure control and supportive care. **7.** Explain risk factors for recurrence, long-term outlook, and overall prognosis for affected children.
Pe-017	Epilepsy	**1.** List the etiology and major risk factors associated with epilepsy in children. **2.** Classify seizures. **3.** Differentiate between generalized seizures, grand mal (tonic–clonic), petit mal (absence), myoclonic, and partial (focal) seizures using a clear tabulated comparison. **4.** Outline the clinical features and diagnostic approach for seizure.

		5. Discuss the management of epilepsy, including acute seizure control, long-term therapy, and monitoring. **6.** List the commonly used antiepileptic drugs, their indications, and side-effects.
Pe-018	Status epilepticus	**1.** Classify the types of status epilepticus. **2.** List the etiology and common precipitating factors in children. **3.** Discuss the pathophysiology, including mechanisms leading to prolonged seizures and neuronal injury. **4.** Outline the emergency management, including airway– breathing–circulation stabilization and stepwise pharmacologic treatment. **5.** Describe post-ictal management. **6.** List factors influencing the prognosis of pediatric status epilepticus.
Pe-019	Cerebral palsy	**1.** Define cerebral palsy **2.** Describe the etiology and pathogenesis of cerebral palsy, including prenatal, perinatal, and postnatal causes. **3.** Classify the types of cerebral palsy and patterns of motor involvement. **4.** Identify key signs and symptoms. **5.** Formulate a differential diagnosis, distinguishing cerebral palsy from progressive neuromuscular disorders, metabolic or genetic conditions. **6.** Outline the management plan. **7.** Explain the prevention strategies. **8.** Describe factors affecting prognosis.
Pe-020	Hydrocephalus	**1.** Describe the etiology and pathogenesis of hydrocephalus.

		2. Classify the types of hydrocephalus. **3.** Identify the clinical features. **4.** Formulate a differential diagnosis. **5.** Outline the diagnostic evaluation. **6.** Explain the management, including medical therapy, surgical interventions, and follow-up. **7.** Recognize potential complications and factors affecting long-term prognosis.
Pe-021	Brain abscess	**1.** Describe the etiology and pathogenesis of brain abscess, including routes of infection. **2.** Diagnose based on the clinical features and diagnostic evaluation. **3.** Formulate a differential diagnosis. **4.** Discuss the management, including antibiotic therapy, surgical drainage, and supportive care. **5.** List potential complications and factors influencing prognosis.
Pe-022	Microcephaly	**1.** Describe the etiology, and pathogenesis of microcephaly. **2.** Identify clinical features. **3.** Formulate a differential diagnosis. **4.** Outline the diagnostic evaluation. **5.** Discuss the management plan and factors affecting prognosis.
Pe-023	Coma in children	**1.** Identify the common causes of coma in children. **2.** Discuss the points of clinical evaluation. **3.** List the laboratory and radiological investigations to determine the underlying cause. **4.** Outline the management, including stabilization, treatment of underlying cause, and supportive care.

		5. Describe the factors affecting prognosis.
Pe-024	Cerebellar ataxia	**1.** Describe the etiology and pathogenesis of ataxia in children, distinguishing between cerebellar and non- cerebellar causes. **2.** Identify the clinical features of cerebellar ataxia. **3.** Formulate a differential diagnosis. **4.** Outline the diagnostic evaluation and outline the management plan. **5.** Describe factors affecting prognosis.

NEUROMUSCULAR DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-027	Duchenne muscular dystrophy	**1.** Describe the pathogenesis of Duchenne muscular dystrophy. **2.** Identify important signs and symptoms. **3.** Outline diagnostic tests and their interpretation. **4.** Discuss management strategies.
Pe-028	Myasthenia gravis	**1.** Describe the pathophysiology of myasthenia gravis. **2.** Identify key signs and symptoms. **3.** Outline the diagnostic approach and the management plan. **4.** Explain factors affecting prognosis and long-term outcomes in pediatric patients.
Pe-029	Floppy infants	**1.** Describe the causes of hypotonia in infants, differentiating paralytic and non-paralytic types. **2.** Identify key signs and symptoms. **3.** Outline the diagnostic evaluation.
Pe-030	Guillain - Barré	**1.** Describe the etiology and pathophysiology of

	Syndrome	GBS. **2.** Describe the clinical features and its stages. **3.** List and differentiate the major variants of GBS **4.** Formulate a differential diagnosis according to Acute Flaccid Pararlysis. **5.** Outline diagnostic evaluation. **6.** Discuss management and factors affecting prognosis.

CARDIOVASCULAR DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-032	Cyanotic heart disease	**1.** Classify cyanotic congenital heart diseases based on anatomical features. **2.** Tetralogy of Fallot (TOF) **3.** Describe the components and pathophysiology. **4.** Identify clinical features and outline the diagnostic evaluation. **5.** Discuss management, including surgical repair, medical stabilization, and management of hypoxemic (Tet) spells. **6.** List potential complications and describe the natural course and prognosis. **7.** Transposition of Great Arteries (TGA) **8.** Explain the pathophysiology, including parallel circulation and dependence on shunts. **9.** Describe signs and symptoms. **10.** Outline the diagnostic evaluation and management plan. **11.** Describe factors affecting prognosis and long-term outcomes.

Pe-033	Acyanotic congenital heart disease	**Ventricular Septal Defect (VSD)** **1.** Describe the pathophysiology and hemodynamic consequences based on the size of the defect. **2.** Identify clinical features according to defect size. **3.** Outline the diagnostic evaluation. **4.** List surgical indications. **Patent Ductus Arteriosus (PDA)** **5.** Describe the pathophysiology and its impact on circulation. **6.** Identify clinical features. **7.** Outline diagnostic evaluation and management plan. **8.** List potential complications and describe the prognosis. **Atrial Septal Defect (ASD)** **9.** Classify types of ASD. **10.** Explain pathophysiology and associated hemodynamic changes. **11.** Identify clinical features and relevant diagnostic evaluation. **12.** Discuss management, including indications for surgical or device closure and long-term outcomes.
Pe-034	Congestive cardiac failure (CCF)	**1.** Diagnose CCF based on the clinical signs and symptoms in children. **2.** Formulate the differential diagnosis of CCF. **3.** List common causes of CCF in the pediatric age group. **4.** Outline the diagnostic approach and necessary investigations for suspected CCF. **5.** Plan medical and supportive management of

		CCF in children. **6.** Identify the complications and indicators of poor prognosis in pediatric CCF. **7.** Explain the preventive strategies and long-term follow-up care for children with CCF.
Pe-035	Rheumatic fever (RF)	**1.** Identify the clinical features and major manifestations of rheumatic fever in children. **2.** Explain the pathophysiology and immunological basis of rheumatic fever. **3.** Apply the modified Jones criteria for the diagnosis of rheumatic fever. **4.** Identify common complications of RF. **5.** Outline the management plan, including secondary prophylaxis. **6.** Discuss preventive strategies to reduce the incidence of RF in pediatric populations.
Pe-036	Infective endocarditis (IE)	**1.** Diagnose infective endocarditis in children based on the clinical features and common presentations. **2.** Explain the pathophysiology and risk factors predisposing to infective endocarditis. **3.** Apply Modified Duke Criteria to identify suspected cases. **4.** Outline the investigations for diagnosis, including blood cultures and echocardiography. **5.** Plan the medical and surgical management of patient diagnosed with IE. **6.** Discuss potential complications and strategies for prevention in at-risk pediatric patients.
Pe-037	Myocarditis	**1.** Identify clinical features of myocarditis in children. **2.** List its common causes.

		3. Interpret relevant investigations for myocarditis. **4.** Formulate a management plan. **5.** Describe the complications and long-term follow-up considerations.
Pe-038	Supraventricular Tachycardia	**1.** Identify clinical features and presentations of pediatric supraventricular tachycardia. **2.** List the causes and explain its pathophysiology. **3.** Outline diagnostic approach, including investigations, ECG interpretation, and recent advances. **4.** Describe pacemaker use and formulate management plan.

RESPIRATORY DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-040	Pneumonia	**1.** Classify pneumonia based on anatomical involvement and etiology. **2.** Classify according to IMNCI **3.** Describe the etiology of bacterial pneumonia in different age groups. **4.** Identify the clinical features **5.** Outline investigations and management plan. **6.** Identify and describe the management of complications. **7.** Explain the prognosis and factors affecting recovery in pediatric bacterial pneumonia.
Pe-041	Asthma	**1.** Identify common triggers and risk factors. **2.** Explain the pathophysiology. **3.** Describe key clinical features.

		4. Outline the diagnostic approach. **5.** List important differential diagnoses. **6.** List complications **7.** Outline the steps of the management of an acute asthma attack. **8.** Outline the management of status asthmaticus as a medical emergency. **9.** Discuss long-term management of chronic asthma. **10.** Explain the prognosis and factors associated with good or poor outcomes. **11.** Describe key preventive strategies.
Pe-042	Croup	**1.** Identify the common etiological agents of croup. **2.** Explain the pathophysiology. **3.** Diagnose based on key clinical features. **4.** Select appropriate investigations. **5.** List differential diagnosis. **6.** Outline management plan. **7.** List possible complications. **8.** Identify warning signs, recurrence, and indications for urgent medical attention.
Pe-043	Acute epiglottitis	**1.** Explain the epidemiology and pathogenesis of acute epiglottitis. **2.** List common causative organisms. **3.** Identify clinical features suggestive of bacterial croup. **4.** List investigations with interpretations. **5.** Differentiate bacterial croup from other causes of upper airway obstruction. **6.** Develop a management plan for bacterial croup. **7.** Identify indications for airway intervention and

		intensive monitoring. **8.** Describe potential complications of bacterial croup.
Pe-044	Acute pharyngitis and tonsillitis	**1.** Identify common etiological agents of acute pharyngitis and tonsillitis. **2.** Describe the clinical features that help differentiate viral from bacterial causes. **3.** Select appropriate investigations when indicated. **4.** Formulate a management plan for viral and bacterial pharyngitis/tonsillitis. **5.** List complications associated with untreated streptococcal infection.
Pe-045	Bronchiolitis	**1.** Describe the common etiological agents and predisposing risk factors for bronchiolitis in infants and young children. **2.** Explain the pathophysiological changes. **3.** Identify key clinical features, including respiratory distress signs and indicators of severe disease. **4.** List investigations to confirm diagnosis. **5.** Formulate management plans, including criteria for hospitalization. **6.** Identify complications.
Pe-046	Pleural Effusion	**1.** Classify pleural effusions according to type and underlying pathology. **2.** Differentiate between the types of pleural effusion. **3.** Identify common causes of pleural effusion in children. **4.** Explain the impact of pleural effusion on lung function and respiratory physiology. **5.** Discuss the role and interpretation of

		radiological imaging in the diagnosis of pleural effusion. **6.** Plan the management, including medical and procedural interventions.
Pe-047	Cystic fibrosis	**1.** Describe the genetic basis, inheritance pattern, and pathophysiology of cystic fibrosis. **2.** Describe common clinical manifestations. **3.** Describe diagnostic criteria. **4.** Outline principles of multidisciplinary management. **5.** List differential diagnosis. **6.** List complications. **7.** Describe long-term care needs, prognosis, and preventive strategies.
Pe-048	Pneumothorax	**1.** Classify pneumothorax. **2.** List two important causes of spontaneous pneumothorax. **3.** Explain the pathophysiology. **4.** Identify key clinical features. **5.** Interpret chest X-ray findings. **6.** Outline definitive management. **7.** List potential complications and indicators for referral or ICU care.

ENDOCRINE SYSTEM		
Code	**Topic**	**Learning Objectives**
Pe-050	Congenital Hypothyroidism / Cretinism	**1.** List common etiological factors. **2.** Describe clinical features and early signs of severe congenital hypothyroidism. **3.** Interpret diagnostic tests, including serum TSH, T4, and confirmatory thyroid imaging.

		4. Formulate treatment plan with follow-up strategies to monitor growth, neurodevelopment, and thyroid function. **5.** Describe prognosis with early versus delayed treatment. **6.** Explain the principles of newborn screening programs for early detection.
Pe-051	Juvenile / Acquired Hypothyroidism	**1.** Identify common etiological factors. **2.** Diagnose based on clinical features and interpretation of laboratory investigations. **3.** Outline a management plan and discuss long-term prognosis and potential complications if untreated.
Pe-052	Hyperthyroidism	**1.** Identify common etiological factors of hyperthyroidism in children. **2.** Diagnose based on key signs and symptoms and interpretation of diagnostic investigations. **3.** Formulate management plan. **4.** Explain prognosis and follow-up strategies for pediatric hyperthyroidism.
Pe-053	Diabetes Mellitus	**1.** Identify the etiological factors and classify types of diabetes mellitus in pediatric age group. **2.** Explain the pathophysiology of insulin deficiency and/or resistance. **3.** Diagnose based on key clinical features and interpretation of appropriate diagnostic tests. **4.** Develop a management plan, including insulin replacement strategies, diet planning, and individualized monitoring schedules. **5.** Describe insulin regimens, sliding scale protocols, and adjustments based on glucose monitoring.

		6. Outline follow-up care plan, including growth monitoring, glycemic control, and patient/caregiver education. **7.** List acute and chronic complications. **8.** Explain prognosis and long-term outcomes with optimal management.
Pe-054	Diabetic Ketoacidosis (DKA)	**1.** Identify common precipitating factors for DKA in children. **2.** Describe clinical features of DKA. **3.** Interpret relevant laboratory investigations. **4.** Formulate treatment plan. **5.** List complications.
Pe-055	Short stature	**1.** Classify short stature based on causes. **2.** Describe the signs and symptoms. **3.** Interpret appropriate investigations. **4.** Formulate a management and follow-up plan.
Pe-056	Cushing's disease/ Cushing Syndrome	**1.** Identify the common etiological factors leading to Cushing's disease in children. **2.** Explain the pathophysiology of cortisol excess and its systemic effects. **3.** Describe characteristic clinical features. **4.** Interpret relevant investigations. **5.** Formulate a management plan depending on etiology. **6.** List complications. **7.** Plan follow-up strategies for growth, pubertal development, and recurrence monitoring.
Pe-057	Congenital Adrenal Hyperplasia (CAH)	**1.** Identify key clinical signs and symptoms of CAH. **2.** Interpret investigations to confirm diagnosis. **3.** Explain principles and indications of prenatal diagnosis for CAH. **4.** Formulate a management plan.

		5. Describe prognosis based on subtype, severity, and timeliness of treatment.

GASTROINTESTINAL & LIVER DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-062	Acute Diarrhea	**1.** Define acute diarrhea. **2.** Enumerate the common causes and etiologies of acute diarrhea in children. **3.** State common pathogens **4.** Classify severity of dehydration based on clinical assessment and guidelines. **5.** Describe the preventive strategies and outline the management plan of acute diarrhea.
Pe-063	Chronic Diarrhea	**1.** Define chronic diarrhea. **2.** Enumerate the common causes and etiologies of chronic diarrhea in children. **3.** List common pathogens. **4.** Classify dehydration based on clinical assessment and guidelines. **5.** State management plan to treat chronic diarrhea.
Pe-064	Celiac disease	**1.** Identify common etiological and predisposing factors, including genetic and environmental triggers. **2.** Diagnose based on characteristic clinical features and interpretation of diagnostic tests. **3.** Formulate a management plan. **4.** Explain long-term prognosis, potential complications, and strategies for follow-up care.
Pe-065	Inflammatory bowel	**1.** Identify the types of IBD in children and their

	disease Crohn's disease and ulcerative colitis)	etiological factors. **2.** Describe key clinical features of Crohn's disease and ulcerative colitis. **3.** List and interpret appropriate investigations. **4.** Formulate a management plan. **5.** Explain long-term prognosis, monitoring strategies, and potential complications.
Pe-066	Approach to vomiting in children	**1.** List common etiologies of vomiting in children. **2.** Identify associated red-flag features requiring urgent attention. **3.** Select and interpret relevant investigations, including basic labs, imaging, and targeted tests based on suspected etiology. **4.** Formulate a systematic differential diagnosis for pediatric vomiting. **5.** Develop a management plan. **6.** Explain strategies for monitoring response to treatment, preventing complications, and follow-up care.
Pe-067	Approach to the child with Hepatosplenomegaly	**1.** List common causes of hepatomegaly, splenomegaly and hepatosplenomegaly according to age group (neonates, infancy, and early childhood). **2.** Recognize key clinical features associated with hepatomegaly, splenomegaly and hepatosplenomegaly. **3.** Enlist and interpret appropriate investigations. **4.** Formulate a differential diagnosis for hepatomegaly / **5.** Visceromegaly based on age, clinical features, and investigation findings. **6.** Develop a management and follow-up plan

		depending on underlying etiology and indication to refer to specialized care.
Pe-068	Acute hepatitis	**1.** Identify common etiological factors of acute hepatitis in children. **2.** Describe the key clinical features and interpretation of appropriate laboratory investigations. **3.** Formulate a systematic differential diagnosis for pediatric acute hepatitis. **4.** Develop management plan, including indications for hospitalization or referral. **5.** Explain prognosis, potential complications, and strategies for follow-up and preventive measures, including vaccination and hygiene.
Pe-069	Hepatic encephalopathy in children	**1.** Identify common etiological factors leading to hepatic encephalopathy in children. **2.** Recognize key clinical features. **3.** Select and interpret relevant laboratory and imaging investigations. **4.** Formulate a differential diagnosis for altered mental status in pediatric patients. **5.** Develop management plan.
Pe-070	Pediatric Constipation	**1.** Identify common etiological factors. **2.** Describe key clinical features. **3.** Select and interpret appropriate investigations. **4.** Formulate a systematic differential diagnosis for chronic or severe constipation. **5.** Develop a management plan, including dietary modifications, behavioral strategies, laxatives or stool softeners, and treatment of underlying conditions. **6.** Explain prognosis, prevention strategies, and follow-up monitoring for recurrent or chronic

		constipation
Pe-071	Wilson Disease	**1.** Describe the etiology and genetic basis of Wilson disease. **2.** List the typical hepatic, neurological, and psychiatric manifestations. **3.** List key diagnostic investigations with interpretation for Wilson disease. **4.** Outline the principles of management, including medical and surgical options. **5.** Explain prognosis and long-term follow-up considerations

HEMATOLOGIC DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-073	Anemia	**1.** Define anemia and classify it based on red blood cell morphology and etiology. **2.** Identify common clinical features of anemia in children. **3.** Outline the investigations.
Pe-074	Congenital Hypoplastic Anemia	**1.** Define congenital hypoplastic anemia including Diamond-Blackfan anemia. **2.** Explain the pathophysiology leading to reduced red cell production. **3.** Identify characteristic clinical features. **4.** Outline diagnostic evaluation, including bone marrow examination and genetic testing. **5.** Discuss management strategies.
Pe-075	Microcytic Anemias	**Iron Deficiency Anemia** **1.** Describe the etiology. **2.** Explain the pathophysiology of iron deficiency leading to microcytosis.

		3. Diagnose iron deficiency anemia based on clinical features. **4.** Outline diagnostic tests. **5.** Formulate management plan. **Beta-Thalassemia** **1.** Define beta-thalassemia and differentiate between major and minor forms. **2.** Explain pathophysiology, including defective hemoglobin synthesis and ineffective erythropoiesis. **3.** Identify clinical features. **4.** Outline diagnostic tests and plan the management strategies. **Hereditary Spherocytosis** **1.** Define hereditary spherocytosis and its genetic basis. **2.** Explain pathophysiology leading to spherocytes and hemolysis. **3.** Recognize clinical features. **4.** Outline diagnostic tests and describe management. **Sickle Cell Anemia** **1.** Define sickle cell anemia and its genetic inheritance pattern. **2.** Explain pathophysiology, including sickling of red cells and vaso-occlusion. **3.** Identify clinical features **4.** Outline investigations and discuss management.
Pe-076	Megaloblastic Anemia	**1.** Define megaloblastic anemia and differentiate between vitamin B12 and folate deficiency. **2.** Explain pathophysiology of impaired DNA

		synthesis leading to macrocytosis. **3.** Identify clinical features. **4.** Outline diagnostic evaluation and formulate management.
Pe-077	Aplastic Anemia	**1.** Define aplastic anemia and its classification. **2.** Identify clinical features. **3.** Outline diagnostic tests. **4.** Discuss management strategies.
Pe-078	Enzymatic Defects (Red Cell Enzyme Deficiencies)	**1.** Define common enzymopathies causing hemolytic anemia. **2.** Explain pathophysiology of hemolysis due to enzymatic defects. **3.** Identify clinical features. **4.** Outline diagnostic tests. **5.** Discuss the management plan.
Pe-079	Hemophilia A & B	**1.** Define Hemophilia A and B and describe their inheritance (X-linked recessive). **2.** Identify the clinical features. **3.** Outline diagnostic tests. **4.** Formulate management strategies. **5.** Discuss genetic counseling and preventive measures.
Pe-080	Vitamin K Deficiency	**1.** Define vitamin K deficiency and its role in coagulation. **2.** Identify the clinical features in neonates. **3.** Outline diagnostic evaluation. **4.** Formulate management, including vitamin K supplementation and treatment of bleeding.
Pe-081	Approach to a child with Pancytopenia	**1.** Enlist the Causes and recall the pathophysiology of pancytopenia. **2.** Explain the etiological viruses and their role. **3.** Discuss the associated systemic disorders. **4.** Formulate management and identify

		complications of pancytopenia. **5.** State the role of prophylactic vaccinations.
Pe-082	Leukemia and lymphoma	**1.** Describe pathogenesis of malignancy, and tabulate its types. **2.** Enlist risk factors and pathophysiology. **3.** State complications. **4.** Describe signs and symptoms. **5.** Describe relevant investigations. **6.** Formulate management plan.
Pe-083	Idiopathic thrombocytopenic purpura (ITP)	**1.** Classify ITP according to duration (acute, persistent, and chronic). **2.** Describe the pathophysiology. **3.** List key clinical features and presenting symptoms. **4.** Identify relevant laboratory investigations. **5.** Formulate a differential diagnosis for thrombocytopenia. **6.** Outline management strategies. **7.** Explain prognosis and follow-up considerations.

RENAL DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-085	Nephrotic syndrome	**1.** Classify nephrotic syndrome into primary and secondary types. **2.** Describe the pathogenesis and underlying pathology. **3.** List key clinical features and presenting signs and symptoms. **4.** Identify common complications. **5.** Select relevant laboratory and imaging

		investigations. **6.** Outline principles of management, including pharmacologic and supportive care.
Pe-086	Acute renal failure	**1.** Define acute renal failure and classify its types (prerenal, intrinsic, and postrenal). **2.** Describe the pathophysiology and underlying causes in children. **3.** List key clinical features and presenting symptoms. **4.** Identify common complications. **5.** Enlist relevant laboratory and imaging investigations. **6.** Outline principles of management. **7.** Explain prognosis and follow-up considerations.
Pe-087	Chronic renal failure	**1.** Define chronic renal failure with its stages. **2.** Describe the pathophysiology and common causes in children. **3.** List key clinical features and presenting symptoms. **4.** Identify common complications. **5.** List relevant laboratory and imaging investigations. **6.** Outline principles of management. **7.** Explain prognosis, long-term outcomes, and follow-up monitoring.
Pe-088	Urinary tract infection	**1.** Describe common etiological agents of UTI in different age groups. **2.** List key clinical features and presenting symptoms. **3.** Identify risk factors and predisposing conditions. **1.** List appropriate laboratory and imaging

		investigations. **2.** Formulate a differential diagnosis for pediatric urinary symptoms. **3.** Outline principles of management, including antimicrobial therapy and supportive care. **4.** Explain potential complications, prognosis, and strategies for prevention and follow-up
Pe-089	Approach to a child with Hematuria	**1.** List the common causes of hematuria in children. **2.** Identify key clinical features and presenting symptoms. **3.** Select appropriate laboratory and imaging investigations. **4.** Outline principles of management.
Pe-090	Acute post-streptococcal glomerulonephritis	**1.** Describe the etiology and pathogenesis of APSGN. **2.** List key clinical features and presenting symptoms. **3.** Identify relevant laboratory and imaging investigations. **4.** Formulate a differential diagnosis for glomerulonephritis. **5.** Outline principles of management, including supportive care and pharmacologic therapy. **6.** Explain potential complications, prognosis, and follow- up considerations

NEONATOLOGY		
Code	**Topic**	**Learning Objectives**
Pe-092	Neonatal Sepsis	**1.** Define neonatal sepsis

		2. Enumerate different etiologies of neonatal sepsis **3.** Identify common pathogens & prenatal risk factors **4.** Discuss the complication of neonatal sepsis **5.** Formulate Management
Pe-093	Neonatal jaundice	**1.** Define and classify jaundice **2.** List different etiologies of neonatal jaundice **3.** Discuss the common interaction between different blood groups **4.** Tabulate the complication of neonatal jaundice **5.** Plan management.
Pe-094	Newborn examination and essential care	**1.** Identify common signs on newborn examination **2.** Essential newborn care including Vit K administration, cord care, vaccination, breast feeding, kangaroo care.
Pe-095	Common neonatal problems	**1.** Define Hypoglycemia, enumerate risk factors and formulate management. **2.** Identify common skin rashes and formulate management **3.** Define prematurity and complications **4.** Birth asphyxia, RDS, IDM, hypocalcemia, Low birth weight, SGA, LGA, and IUGR. **5.** Describe TORCHS infection and effects on newborn.
Pe-096	Newborn resuscitation	**1.** Recall transition period at birth **2.** Define essential care and golden minute **3.** Enumerate the steps in newborn resuscitation **4.** Identify theoretical basis for the steps in resuscitation **5.** Enumerate post-resuscitation care

INFECTIOUS DISEASES		
Code	**Topic**	**Learning Objectives**
Pe-098	Fever of Unknown Origin (PUO)	**1.** Define PUO and criteria for pediatric age groups. **2.** Describe clinical features. **3.** Interpret results to narrow differential diagnosis. **4.** Outline management plan and indications for specialist referral.
Pe-099	Cholera	**1.** Identify the causative organism and epidemiology. **2.** Describe pathophysiology and mechanism of severe dehydration. **3.** Describe key clinical features. **4.** Interpret laboratory findings. **5.** Outline management plan for dehydration due to cholera. **6.** Discuss preventive measures and vaccination
Pe-100	Bacillary dysentery	**1.** Identify the causative organism. **2.** Diagnose based on signs and symptoms and interpretation of stool microscopy and culture results **3.** Outline management plan. **4.** Explain transmission and preventive strategies
Pe-101	Giardiasis	**1.** Identify causative protozoan. **2.** Describe signs and symptoms. **3.** Interpret diagnostic investigations including stool examination for cysts/trophozoites **4.** Plan the treatment with preventive measures
Pe-102	Amebiasis	**1.** Identify causative organism. **2.** Describe signs and symptoms.

		3. List the investigations and interpretation to confirm diagnosis. **4.** Interpret imaging for liver abscess **5.** Outline treatment plan.
Pe-103	Worm Infestation	**1.** Roundworm **2.** Describe clinical features due to roundworm infestation. **3.** Diagnose based on signs and symptoms and diagnostic test. **4.** Outline treatment plan. **5.** Hookworm **6.** Describe clinical features due to hookworm infestation. **7.** Diagnose based on signs and symptoms and diagnostic test. **8.** Outline treatment plan. **9.** Pinworm **10.** Describe clinical features due to pinworm infestation. **11.** Diagnose based on signs and symptoms and diagnostic test. **12.** Outline treatment plan.
Pe-104	Poliomyelitis	**1.** Describe transmission routes of polio virus **2.** Diagnose based on clinical features. **3.** Describe vaccine types and immunization schedule. **4.** Outline supportive management for acute flaccid paralysis surveillance. **5.** List long-term complications and rehabilitation needs.
Pe-105	Diphtheria	**1.** Identify causative organism and modes of transmission **2.** Diagnose based on clinical features.

		3. Outline the management plan. **4.** Explain vaccination and preventive strategies.
Pe-106	Tetanus	**1.** Identify causative organism and explain pathophysiology. **2.** Recognize clinical features. **3.** Describe wound care, immunization, and antitoxin therapy. **4.** Discuss the management plan.
Pe-107	MMR	**1.** Recognize characteristic clinical features. **2.** Identify complications. **3.** List the laboratory investigation to confirm diagnosis. **4.** Describe treatment plan. **5.** Explain immunization schedule and outbreak control
Pe-108	Pertussis	**1.** Identify causative organism. **2.** Identify the stages of pertussis. **3.** List the diagnostic methods. **4.** Plan the management including immunization schedules and prophylaxis.
Pe-109	Chickenpox	**1.** Identify clinical features. **2.** List complications. **3.** List the laboratory investigations. **4.** Describe management plan with vaccination and prevention.
Pe-110	Malaria	**1.** Describe transmission of malaria. **2.** Identify clinical features. **3.** Interpret blood smears or rapid diagnostic tests **4.** Discuss treatment plan with preventive measures.
Pe-111	Typhoid	**1.** Identify causative organism and transmission routes. **2.** Recognize clinical features.

		3. Describe treatment plan. **4.** Explain preventive strategies.
Pe-112	Tuberculosis	**1.** Identify causative organism and routes of transmission. **2.** Describe pulmonary and extra pulmonary features. **3.** Interpret investigations to confirm diagnosis. **4.** Describe anti-tubercular therapy. **5.** Explain preventive measures.
Pe-113	Dengue Fever	**1.** Recognize clinical features with warning signs. **2.** Interpret laboratory tests. **3.** Describe supportive management plan with preventive measures.

METABOLIC DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-115	Galactossemia	**1.** Define galactossemia and its genetic basis. **2.** Identify key clinical features in newborns. **3.** Recognize complications related to liver, CNS, and eyes. **4.** Interpret screening tests and confirmatory investigations. **5.** Outline dietary management and lactose/galactose restriction. **6.** Identify emergency management needs in acute presentation **7.** Explain long-term monitoring and follow-up requirements **8.** Describe the importance of newborn screening and family counseling

Pe-116	Glycogen storage diseases	**1.** Define glycogen storage diseases and classify major types **2.** Identify key clinical features such as hypoglycemia, hepatomegaly, and muscle involvement **3.** Recognize type-specific patterns. **4.** Interpret basic investigations suggestive of GSD **5.** Outline principles of dietary and medical management **6.** Identify acute complications requiring urgent intervention **7.** Describe long-term monitoring and follow-up needs **8.** Explain the role of genetic counseling for affected families.

BONE AND JOINT DISORDER		
Code	**Topic**	**Learning Objectives**
Pe-118	Septic arthritis and Osteomyelitis	**1.** Define and discuss etiology of septic arthritis and osteomyelitis **2.** Identify key clinical features of septic arthritis and osteomyelitis **3.** Discuss differential diagnosis **4.** Interpret investigations suggestive of Septic arthritis and osteomyelitis **5.** Outline principles of management and monitoring. **6.** Describe Prognosis
Pe-119	Juvenile Idiopathic Arthritis	**1.** Define diagnostic criteria and classify JIA. **2.** Describe etiology and trigger of the disease.

		3. Discuss its pathophysiology. **4.** Discuss differential diagnosis **5.** Interpret base line and confirmatory investigations. **6.** Outline management plan **7.** Explain long-term monitoring and follow-up requirements **8.** Discuss prognosis and counseling of patient and parents
Pe-120	Systemic Lupus Erythematosus	**1.** Define diagnostic criteria of SLE. **2.** Describe etiology and trigger of the disease. **3.** Discuss pathophysiology. **4.** Discuss differential diagnosis **5.** Interpret baseline and confirmatory investigations. **6.** Outline management plan **7.** Explain long-term monitoring and follow-up requirements **8.** Discuss prognosis and counseling of patient and parents
Pe-121	Henoch-Schonlein Purpura (HSP)	**9.** Define HSP **10.** Discuss Pathogenesis and clinical findings. **11.** Interpret basic investigations for differential diagnosis **12.** Outline management plan and prognosis **13.** Identify acute complications requiring urgent intervention **14.** Discuss prognosis of the disease.

GENETIC DISORDER		
Code	**Topic**	**Learning Objectives**

Pe-123	Chromosomal Abnormalities	**1.** Discuss chromosomal abnormalities in number and structure **2.** Identify autosomal and sex chromosome abnormalities **3.** List the Single gene defect **4.** Discuss the characteristics of autosomal and X-linked dominant and recessive disorders **5.** Interpret karyotyping of trisomy 21 and turner syndrome.
Pe-124	Down Syndrome	**1.** Discuss types of defect regarding translocation, nondisjunction and mosaicism **2.** Describe its epidemiology and clinical features **3.** Interpret diagnostic and screening investigations **4.** Outline management plan **5.** Explain long-term monitoring and follow-up requirements **6.** Discuss prognosis and counseling of the parents
Pe-125	Turner Syndrome	**1.** Discuss epidemiology and type of defect **2.** Describe its clinical features and associated diseases **3.** Interpret diagnostic investigations **4.** Explain long-term monitoring and follow-up requirements **5.** Discuss prognosis and counseling of the parents

CHILD ABUSE AND PEDIATRIC TRAUMA		
Code	**Topic**	**Learning Objectives**
Pe-127	Medico legal	**1.** Estimate the age of child for consent.

	aspects (integrate with Forensic Medicine)	**2.** Diagnose a case of suspected child abuse and pediatric trauma presenting in the ER or OPD. **3.** Identify the form of abuse (physical, sexual, toxic, chemical/electrical, and psychological). **4.** Enlist appropriate investigations to confirm above suspicion. **5.** Interpret lab/radiological findings. **6.** Refer the case to medical officer for medico legal certification. **7.** Refer the case to appropriate agency for treatment and rehabilitation.

6.2.2 Clinical Rotations

PEDIATRICS

FUNDAMENTALS OF PEDIATRICS		
Code	**Topic**	**Learning Objectives**
Pe-010	History taking	**1.** Take a detailed pediatric history covering following points: ➢ Presenting illness (time of onset, site, duration, frequency, severity, progression, relieving and exacerbating factors, and any diurnal or seasonal variation). ➢ General symptoms (weight loss, appetite changes, fever, and activity level). ➢ Systemic review covering cardiovascular, respiratory, gastrointestinal, central nervous system, genitourinary, hematological, dermatological, and locomotor symptoms. ➢ Relevant past medical history, including previous illnesses, hospitalizations,

		surgeries, allergies, and transfusions. ➢ Complete birth history, including antenatal, natal, and postnatal events. ➢ Feeding history, including breastfeeding, weaning, and current dietary practices. ➢ Vaccination status according to the national EPI schedule. ➢ Developmental history across major domains (gross motor, fine motor, language, social). ➢ Schooling history, including performance, attendance, and behavioral concerns. ➢ Family and social history, including chronic illnesses, consanguinity, living environment, and caregiver details. ➢ Drug history (current medications, supplements, and any previous reactions).
Pe-011	Physical examination	**1.** Perform general physical examination in children, assessing appearance, consciousness, hydration, nutrition, vitals, and growth parameters (weight, height/length, head and mid-arm circumference), SMR, BCG Scar mark **2.** systematic head-to-toe examination, including: **3.** Head, eyes, ears, nose, throat (HEENT) **4.** Cardiovascular system (inspection, palpation, auscultation) **5.** Respiratory system (inspection, palpation, percussion, auscultation) **6.** Abdomen (inspection, palpation, percussion, auscultation) **7.** Central nervous system (higher mental function, motor and sensory system,

		cerebellum, cranial nerves, **8.** Musculoskeletal system **9.** Skin (rashes, lesions, hydration, capillary refill) **10.** Interpret growth measurements using age-appropriate growth charts. **11.** Identify abnormal findings and red flags requiring urgent evaluation. **12.** Perform the examination in a child-friendly, developmentally appropriate, and safe manner while maintaining infection control.

NEUROLOGIC DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-025	History Taking	**1.** Take a routine pediatric history focusing on CNS- specific points such as fits/seizures, syncope, dizziness, headaches, visual problems, numbness, unpleasant sensations, weakness, frequent falls, and incontinence.
Pe-026	CNS clinical examination	**2.** Examine and assess shape of skull, head circumference. **3.** Speech and higher mental functions in children. **4.** All cranial nerves, identifying abnormalities. **5.** Motor system, including bulk tone, power, reflexes, and involuntary movements. **6.** Sensory system, including pain, temperature, touch, vibration, and proprioception. **7.** Cerebellar function, including coordination, gait, and balance. **8.** Signs of meningeal irritation, including neck stiffness, Kernig and Brudzinski signs.

		9. Identify and grade coma. **10.** Interpret the reports of baseline labs, CSF analysis, cranial CT, and MRI. **11.** Counsel patients/attendants with empathy and respect. **12.** Maintain confidentiality and privacy of the patients **13.** Observe/assist in managing the outdoor, indoor, and emergency cases of neurologic disorders and document in logbook.

NEUROMUSCULAR DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-031	Neuromuscular examination	**1.** Perform a systematic neuromuscular examination in children, assessing muscle tone, strength, bulk, and reflexes. **2.** Identify abnormal motor patterns, including hypotonia, hypertonia, weakness, fasciculation's, and contractures. **3.** Identify specific clinical signs, such as Gower sign in Duchenne muscular dystrophy or fatigability in myasthenia gravis. **4.** Assess functional abilities, including gait, posture, fine motor skills, and coordination. **5.** Document findings accurately to guide diagnosis, monitoring, and management of neuromuscular disorders. **6.** Counsel patients/attendants with empathy and respect. **7.** Maintain confidentiality and privacy of the patients

		8. Observe/assist in managing the outdoor, indoor, and emergency cases of neuromuscular disorders and document in logbook.

CARDIOVASCULAR DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-039	CVS clinical examination	**1.** Perform a cardiovascular examination in children, including: **2.** Inspection: cyanosis, clubbing, chest wall deformities, visible pulsations, precordial bulge, and signs of heart failure. **3.** Palpation: apex beat location and character, thrills, heaves, peripheral pulses, pulse volume, and symmetry. **4.** Percussion: cardiac size and borders when applicable. **5.** Auscultation: heart sounds (S1, S2), additional sounds (S3, S4), murmurs (systolic, diastolic, and continuous), rubs, and clicks. **6.** Vital signs assessment: heart rate, blood pressure, respiratory rate, and pulse pressure. **7.** Demonstrate correct technique for recording a pediatric ECG, including electrode placement, skin preparation, and appropriate lead selection for different age groups. **8.** Identify normal pediatric ECG patterns and interpret common ECG abnormalities.

RESPIRATORY DISORDERS		
Code	**Topic**	**Learning Objectives**

Pe-049	Clinical examination of respiratory system	**1.** Perform clinical examination of respiratory system including **2.** Observe and narrate child's general appearance, respiratory rate, pattern, and use of accessory muscles and signs of respiratory distress (nasal flaring, chest in drawing, grunting, and cyanosis). **3.** Inspect chest for symmetry, shape, scars, deformities, or tracheal deviation. **4.** Palpate chest for tracheal position, chest expansion bilaterally, tactile vocal fremitus. **5.** Percuss the chest to identify normal, dull, or hyper- resonant areas. **6.** Auscultate all lung fields for breath sounds, added sounds, and asymmetry. **7.** Monitor oxygen saturation using pulse oximetry. **8.** Assess upper airway for nasal blockage, throat congestion, stridor, or oral abnormalities, and extra pulmonary signs (clubbing, edema, cyanosis, and lymphadenopathy). **9.** Interpret chest X-rays including steeple sign (croup), thumb sign (epiglottitis), silhouette sign (loss of normal cardiac or diaphragm border due to adjacent consolidation), honeycombing (cystic air spaces in interstitial lung disease), ground-glass opacity (ARDS or viral pneumonia), air-fluid level (lung abscess), hyperinflation (asthma, bronchiolitis), pneumothorax signs, tram-track appearance (bronchiectasis), cystic lesions (cystic fibrosis). **10.** Document the indoor, outdoor, and emergency cases in the clinical log book.

ENDOCRINE SYSTEM		
Code	**Topic**	**Learning Objectives**
Pe-058	Clinical examination of endocrine system	**1.** Measure and record anthropometric parameters: height, weight, BMI, head circumference (neonates/infants). **2.** Plot growth parameters on age- and sex-specific growth charts. **3.** Perform general inspection for endocrine-related features: skin, hair, fat distribution, and posture. **4.** Palpate thyroid gland for size, nodules, or tenderness. **5.** Assess vital signs relevant to endocrine health: blood pressure, pulse. **6.** Document normal findings in clinical logbooks.
Pe-059	Diabetes Mellitus	**1.** Measure and interpret capillary blood glucose levels. **2.** Observe/assist in administrating and adjusting insulin doses as per sliding scale. **3.** Demonstrate proper technique for insulin injection and blood glucose monitoring. **4.** Monitor for hypoglycemia and hyperglycemia, and interpret trends. **5.** Counsel patient/caregiver on diet, insulin administration, and management.
Pe-060	Hypothyroidism	**1.** Examine for the clinical signs of hypothyroidism: macroglossia, dry skin, hypotonia, growth retardation. **2.** Palpate thyroid gland.
Pe-061	Cushing's Disease	**1.** Assess for cushingoid features: moon face,

		buffalo hump, truncal obesity, striae. **2.** Measure blood pressure and growth parameters. **3.** Document subtle signs such as skin thinning, bruising, and muscle weakness.

GASTROINTESTINAL & LIVER DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-072	Clinical examination of GIT system	**1.** Inspect abdomen for shape, distension, scars, visible peristalsis, and skin changes. **2.** Palpate the abdomen to assess liver and spleen size, tenderness, masses, and organomegaly. **3.** Percuss to determine liver span, spleen size, and presence of fluid. **4.** Auscultate bowel sounds to assess frequency, character, and presence of abnormal sounds (hyperactive, absent, bruits). **5.** Examine the perianal area for fissures, hemorrhoids, or signs of malformations. **6.** Assess for signs of malnutrition and micronutrient deficiencies (skin, hair, nails). **7.** Interpret key laboratory values in context of pediatric GIT disorders: **8.** Liver function (AST, ALT, ALP, bilirubin, albumin, PT/INR) **9.** Pancreatic enzymes (amylase, lipase) **10.** Nutritional markers (CBC, iron studies, vitamins) **11.** Inflammatory markers (CRP, ESR) **12.** Disease-specific tests (anti-TTG, ceruloplasmin, viral serology, fecal

		calprotectin) **13.** Document and interpret findings in clinical logbooks.

HEMATOLOGIC DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-084	Clinical examination for blood disorders	**1.** Perform general physical examination, focusing on pallor, jaundice, petechiae, purpura, and lymphadenopathy. **2.** Examine for hepatosplenomegaly and signs of bleeding (mucosal, skin). **3.** Observe/assist in collection of blood samples for CBC, peripheral smear, and other relevant investigations. **4.** Interpret report of peripheral blood smears and other hematology tests. **5.** Monitor vital signs and clinical status for acute complications like anemia, infection, or bleeding. **6.** Interpret lab results of Complete Blood Count, red cell indices, white cell differential, platelet count, peripheral blood smear, reticulocyte count, iron studies, vitamin B12, folate levels, hemoglobin electrophoresis, PT, a PTT, INR, fibrinogen level, D- dimer, bone marrow aspiration, bone marrow biopsy, blood grouping, crossmatch, and antibody screening. **7.** Counsel caregivers regarding warning signs, medication administration, and follow-up monitoring. **8.** Verify patient identity, blood product, and

		compatibility before transfusion. **9.** Observe or assist in pediatric blood transfusion procedures. **10.** Monitor the patient during transfusion for any adverse reactions.

RENAL DISORDERS		
Code	**Topic**	**Learning Objectives**
Pe-091	Clinical examination of renal system	**1.** Perform general physical examination, including assessment of edema, blood pressure, growth parameters, and hydration status. **2.** Examine the abdomen and flanks for renal enlargement or tenderness. **3.** Measure and interpret vital signs, fluid balance, and weight changes. **4.** Demonstrate proper technique for urine dipstick testing and bedside urinalysis. **5.** Interpret lab investigations (renal function tests, serum creatinine, BUN, electrolytes, serum albumin, total protein, and urinalysis). **6.** Assist or observe procedures such as catheterization, dialysis access, or renal biopsy. **7.** Educate/counsel caregivers on monitoring urine output, adherence to treatment, and follow-up requirements.

NEONATOLOGY		
Code	**Topic**	**Learning Objectives**
Pe-097	Clinical examination of	**1.** Perform general inspection: posture, color, activity, and distress signs.

	neonate	**2.** Assess anthropometry & vital signs: heart rate, respiratory rate, temperature, and oxygen saturation. **3.** Examine head, eyes, ears, nose, mouth, and neck for congenital anomalies. **4.** Assess skin: jaundice, cyanosis, pallor, birthmarks, lanugo, mottling, and petechiae. **5.** Examine chest and cardiovascular system, including heart sounds and peripheral pulses. **6.** Palpate liver, spleen, kidneys, and hernias. **7.** Examine genitalia and anus for abnormalities. **8.** Assess musculoskeletal system: limb deformities, joint contractures, hip dysplasia, and clavicle fractures. **9.** Perform neurological assessment, including primitive and postural reflexes: Grasp reflex (palmar and plantar) ➢ Moro reflex ➢ Rooting reflex ➢ Stepping/Walking reflex ➢ Galant reflex ➢ Tonic neck reflex ➢ Glabellar reflex ➢ Landau reflex ➢ Parachute reflex ➢ Examine for spontaneous movements, muscle tone, and alertness.

INFECTIOUS DISEASES		
Code	**Topic**	**Learning Objectives**
Pe-114	Clinical	**1.** Perform a focused clinical examination

	assessment for infectious diseases	relevant to fever and infectious diseases. **2.** Assess hydration status using clinical markers (skin turgor, pulse, capillary refill, mucous membranes). **3.** Measure and record vital signs. **4.** Prepare and administer oral rehydration therapy (ORS) correctly. **5.** Observe/assist in set up and administer IV fluids according to pediatric protocols for dehydration or shock. **6.** Observe/assist in administering medications safely (antibiotics, antiparasitic, antimalarial, antivirals). **7.** Follow infection prevention and control measures. **8.** Identify and document clinical warning signs. **9.** Provide basic supportive care: tepid sponging, nutritional support, monitoring intake/output. **10.** Assist in administering vaccines according to EPI schedule. **11.** Interpret report of peripheral smear for malaria. **12.** Observe/assist in collection of throat swab or nasal swab correctly (diphtheria, pertussis). **13.** Educate caregivers on home care, hydration, hygiene, and warning signs requiring urgent care. **14.** Maintain proper documentation of clinical findings, management steps, and follow-up plans.

METABOLIC DISORDERS

Code	Topic	Learning Objectives
Pe-117	Clinical examination for metabolic disorders	**1.** Perform a focused clinical examination for dysmorphic features, developmental delay, and organomegaly. **2.** Assess nutritional status, growth parameters, and developmental milestones. **3.** Examine the liver and spleen for enlargement using proper pediatric techniques. **4.** Evaluate muscle tone, strength, and motor function in metabolic/myopathic presentations. **5.** Perform and document a thorough neurologic examination in infants and children. **6.** Assess hydration status and vital signs in acutely ill metabolic patients. **7.** Provide caregiver instructions on feeding techniques, dietary restrictions, and monitoring needs.

BONE AND JOINT DISORDER		
Code	**Topic**	**Learning Objectives**
Pe-122	Clinical examination for Joints and bone	**1.** Perform a focused joint and bone clinical examination. **2.** Look sign of discomfort, trauma, bruising, rash **3.** Feel for warmth, swelling and rash **4.** Check active and passive movements **5.** Check for joint function. **6.** Evaluate gait and balance. **7.** Perform and document the findings and counsel the patient and parents

GENETIC DISORDER		
Code	**Topic**	**Learning Objectives**
Pe-126	Clinical examination	**1.** Perform examination regarding clinical features of Down and Turner syndrome. **2.** Look for simian crease, cubitus valgus, lymphedema of hand and feet, epicanthic fold, brushfield spots, flat occiput short broad hands, and clinodactyly **3.** Check for hypotonia, thyroid, blood pressure, murmur for aortic stenosis or coarctation of aorta **4.** Evaluate gait and balance. **5.** Document all findings

7. Teaching & Learning Methodologies

- **Interactive Lectures**

  Interactive lecturing involves an increased interchange between teachers, students, and the lecture content. The use of interactive lectures can promote active learning, heighten attention and motivation, give feedback to the teacher and the student, and increase satisfaction for both.

- **Small group discussions**

  Small-group discussion is a student-centered methodology that allows students to actively involve and be partners in the teaching-learning process. Students interact with peers and instructors, discussing, and sharing ideas. They develop the ability to build consensus in a group.

- **Clinical Ward Rotation**

  During clinical rotations, students learn history taking and physical examination, recognize common clinical presentations, and get introduced to basic diagnostic procedures and treatment planning. They also develop professional behavior and communication skills essential for patient care.

- **Case based Learning**

  Case-based learning is a student-centered learning approach where students read and discuss complex situations and apply their knowledge to each situation. Students typically examine the case together as a team and address the problems within the realistic scenario to develop a reasonable conclusion.

- **Self-directed learning**

  Self-directed learning is an instructional strategy where the students with guidance from the teacher decide what and how they will learn. It can be done individually or with group, learning, but the overall concept is that students take honor ship of their learning

8. Assessment Methodologies

Theory

1. MCQ's

A multiple-choice question (MCQ) is composed of two parts: a stem that identifies the question or problem, and a set of alternatives or possible answers that contain a key that is the best answer to the question, and several distractors that are plausible but incorrect answers to the question.

Practical

1. OSCE

OSCE stands for "Objectively Structured Clinical Examination." OSCEs are very helpful in medical education because they allow a student to practice and demonstrate clinical skills in a standardized medical scenario.

2. OSVE

OSVE stands for "Objectively Structured Viva Examination". In the viva you have to answer questions and engage with your examiners.

3. SHORT CASE

A short case is a clinical examination format in which a student assesses a patient in a limited time, focusing on relevant history, physical examination, identification of key findings, and giving a provisional diagnosis.

4. LONG CASE

A long case is a comprehensive clinical examination in which a student takes detailed history, performs a complete physical examination, formulates differential diagnoses, and discusses investigation and management plans, usually within a longer time period.

5. EOR

End-of-Rotation (EOR) assessments are summative evaluations conducted at the conclusion of a clinical rotation or academic module. These assessments aim to measure the knowledge, skills, attitudes, and clinical competencies a student has acquired over the duration of the rotation.

ASSESSMENT POLICY AND TOS OF UHS

9. Exam Regulations by UHS

Regulations

1. Professional examination shall be open to any student who: -
   - **a.** Has been enrolled/registered and completed one academic year preceding the concerned professional examination in a constituent/affiliated college of the University.
   - **b.** Has his/her name submitted to the Controller of Examinations, for the purpose of examination, by the Principal of the college in which he / she is enrolled & is eligible as per all prerequisites of the examination?
   - **c.** Has his/her marks of internal assessment in all the Blocks/Clinical Clerkships sent to the Controller of Examinations through office of the Principal of the concerned college, at the end of each Block/Clinical Clerkships, as well as at the conclusion of the academic session along with the admission form for the professional examination.
   - **d.** Has been certified by the principal of his/her college:
     - **i.** of good character;
     - **ii.** of having attended not less than cumulative 75%* of the full course of lectures delivered, practical and clinical rotations conducted in the particular academic session, while maintaining 75 % attendance in each Block/Clinical Clerkship,
     - **iii.** of having appeared at the Block/Clinical Clerkship Examinations conducted by the college of enrolment with at least 50 % marks* in each Block/Clinical Clerkship examination, as well as in aggregate score of all Blocks/Clinical Clerkships examinations for the concerned year;
2. Written/Theory paper in all Professional Examinations in Modular Integrated MBBS or BDS Curricula shall consist of MCQs alone, with effect from Annual 2026 Examinations. (Ref: No. UHS/REG-25/2379, dated 17.11.2025)
3. The minimum number of marks required to pass the professional examination for each Block/Clinical Clerkship shall be fifty percent (50%) in Written and fifty percent (50%) in the 'Oral/Practical/Clinical' examinations and fifty percent (50%) in aggregate, independently and concomitantly, at one and the same time.
4. A candidate failing in one or more Blocks/Clinical Clerkships in the annual examination shall be provisionally allowed to join the next professional class till the commencement of supplementary examinations. The candidate, however, shall have to

pass the failed Block/s or Clinical Clerkship in this supplementary examination failing which he / she shall be detained in the professional year. Under no circumstances, a candidate shall be promoted to the next professional class till he/she has previously passed all the Blocks/Clinical Clerkships in the preceding professional examination.

If a student appears in the Supplementary Examination for the first time as he/she did not appear in the annual examination for any reason and failed in any Block/Clinical Clerkship in the Supplementary Examination, he/she will be detained in the same class and will not be promoted to the next class.

*Notification No.UHS/REG-25/2351 Dated 13-11-2025

5. Only one annual and one supplementary of each Professional Examination shall be allowed in a particular academic session. However, in exceptional situations, i.e., national calamities, war or loss of solved answer books in case of accident, special examination may be arranged after having observed due process of law. This will require permission of relevant authorities, i.e., Syndicate and Board of Governors.

6. Any student who fails to clear the First or Second Professional MBBS / First Professional BDS Examination, in four consecutive attempts, each, inclusive of both availed as well as un-availed attempts, after becoming eligible for the examination, and has been expelled on that account shall not be eligible for continuation of studies and shall not be eligible for admission as a fresh candidate in either MBBS or BDS.

7. The application for admission of each candidate to the professional examination shall be submitted to the Controller of Examination, through the Principal of the College, on the prescribed format, as per notified schedule, accompanied by the prescribed fee.

8. The candidates shall pay their fee through the principal of their respective Colleges, who shall forward the Examination Forms along with the duly paid challan of the examination fee generated from the Online Examination Form.

9. The continuous internal assessment through the Block/Clinical Clerkship, conducted by the college of enrollment, shall carry 20% weightage in the total allocated marks for the concerned Block/Clinical Clerkship in the Professional Examination conducted by the university. The score will be equally distributed to the Written and "Oral/Practical/Clinical" Examinations.

10. The marks of internal assessment through Blocks/Clinical Clerkships examination and attendance record shall be submitted to Controller of Examinations, along with question papers and keys for the Block/Clinical Clerkship examination, within two weeks of completion of each Blocks/Clinical Clerkships examination.

Further, parent-teacher meetings shall be arranged by the colleges after every Block/Clinical Clerkship examination to share feedback on the progress of students with their parents. Minutes of parent teacher meetings, academic timetables/schedule of Blocks/Clinical Clerkships and academic year study guides shall be submitted to the Department of Medical Education UHS, as well.

11. It is emphasized that fresh internal assessment or a revision of assessment for supplementary examination shall not be permissible. However, a revised internal assessment for the detained students can be submitted. The internal assessment award in a particular year will not be decreased subsequently detrimental to the detainee candidate. A proper record of the continuous internal assessment shall be maintained by the concerned department/s in the colleges.

12. The colleges may arrange remedial classes and one re-sit for each Block/Clinical Clerkship examination after fulfillment of prescribed requirements given below. The remedial classes and re-sit examination can be conducted during summer vacation/weekends, before or during preparatory leave for the concerned professional examination, subject to the following conditions:

Block/Clinical Clerkship Attendance	Remedial Classes
<75%, ≥ 50% (50-74%)	**1.** Principal of the college may conduct remedial classes and submit result to the Examination Department, UHS, independently. **2.** Principal of the college may conduct remedial classes for detained students, who have short attendance in the first Block/Clinical Clerkship of a professional year after detention. The college may submit record of the remedial classes to the Examination Department, UHS, independently.
<50%	**1.** Principal of the college may submit attendance record of such students to Department of Medical Education, UHS, and seeking permission for conduct of remedial Classes. The conduct of remedial classes in such cases shall be

	arranged only after permission from the Competent **2.** Authority in the university. **3.** The colleges shall also have to provide the university with the reasons submitted by the candidates for short attendance along with documentary evidence for the same duly verified by the principal. **4.** The following shall be considered as valid reasons for short attendance of the students for consideration of permission for remedial classes: **a.** Illness/accident/surgery of the student or sickness/death of an immediate relative/being afflicted by a natural/man-made calamity or disaster or detained students (missed the first Block/Clinical Clerkship of the year), students clearing their preceding professional examination in supplementary, or late **b.** admitted students who have been permitted for joining by UHS

Marks in Block/ Clinical Clerkship Examination	**Re-sit Examination**
<50% Marks/ Absence from Block /Clinical Clerkship Examination	**1.** Principal of the college may submit record of such students to Department of Medical Education, UHS, and seeking permission for conduct of re-sit examination. **2.** The conduct of re-sit examination in all cases shall be arranged only after permission from the Competent Authority in the university. **3.** The colleges shall also have to provide the university with the reasons submitted by the candidates for absence from the Block/Clinical Clerkship examination, along with documentary evidence for the same duly verified by the

	principal. **4.** The following shall be considered as valid reasons for absence of a student from Block/Clinical Clerkship examination, and for consideration of permission for re-sit examination: **a.** Illness/accident/surgery of the student or sickness/death of an immediate relative/being afflicted by a natural/man-made calamity or disaster or detained students (missed the first **b.** Block/Clinical Clerkship of the year), students clearing their preceding professional examination in supplementary, or late admitted students who have been permitted for joining by UHS

13. The following policy shall be applicable for transition of students From Traditional Subject-Based Scheme to the Modular Integrated Curriculum Scheme:

a. The students who fail in all subjects of the professional examination, either by taking the examination or due to non-appearance, and are detained in the respective professional year, shall follow the Modular Integrated Curriculum Scheme for their teaching and assessment.

b. The students who fail in one or more subjects but not all the subjects of a professional examination, either by taking the examination or due to non-appearance, and are detained in the respective professional year, shall attend classes with students following the Modular Integrated Curriculum Scheme, but they will be examined in the failed subject/s according to their parent scheme, i.e., the Traditional Subject-Based Curriculum Scheme.

10. Examination Rules AFMDC

- Students must report to examination hall/ venue at least 30 minutes before the exam.
- Exam will start sharp at time.
- Late comers arriving at the examination hall more than 15 minutes after the start of the paper will not be allowed to enter the examination hall.
- All students should wear Lab coats before appearing in the exam.
- Students are not allowed to take into the examination hall textbooks, notes or manuscript of any kind.
- Students must bring the necessary stationary items for exam with them e.g. pen/pencil/eraser/ball point/sharpener etc.
- Mobile phones and gadgets are strictly prohibited in examination hall. If any student found with Mobile Phone (Silent/Switched off/on) he/she will not be allowed to continue the exam.

11. Internal Assessment Policy (UHS)

It shall constitute 20% of the total assessment at the end of the academic year.

	Scoring Parameter	Weightage (percentage)
Theory 10 %	Attendance	75% attendance -1 % >85% attendance -2 %
	Block Exam	5 %
	Continuous assessment	3 %
Practical 10 %	Attendance	75% attendance -1 % >85% attendance -2 %
	Block Exam	5 %
	Clinical logbooks	3 %

12. Table of Specification (TOS)

FINAL YEAR MBBS

<table>
<tr><th colspan="8">MEDICINE CLERKSHIP</th></tr>
<tr><th colspan="3">Theory</th><th colspan="3">Clinical skills</th><th>Total Marks</th></tr>
<tr><td rowspan="2">Paper 1 MCQs</td><td rowspan="2">100 Marks</td><td rowspan="4">200 Marks</td><td>OSCE</td><td>10 stations x 5 marks= 50 marks</td><td rowspan="4">200 Marks</td><td rowspan="4">400 Marks</td></tr>
<tr><td>OSVE</td><td>02 Stations x 10 marks= 20 marks</td></tr>
<tr><td rowspan="2">Paper 2 MCQs</td><td rowspan="2">100 Marks</td><td>Short case</td><td>02 Short case x 30 marks = 60 marks</td></tr>
<tr><td>Long case</td><td>01 Long case x 70 marks = 70 marks</td></tr>
<tr><td colspan="2">Internal assessment (10%) Theory</td><td>50 marks</td><td colspan="2">Internal assessment (10%) Practical</td><td>50 marks</td><td>100 Marks</td></tr>
<tr><td colspan="8">Total=500 Marks</td></tr>
<tr><td colspan="8">Theory Examination
Paper 1 time duration will be 1hr 45mins. Paper 2 time duration will be 1hr 45mins. Clinical Examination
Time duration for each OSCE/OSVE station will be 06 minutes, short case will be 15 minutes and long case will be 30minutes.</td></tr>
</table>

<table>
<tr><th colspan="7">PAEDIATRICS CLERKSHIP</th></tr>
<tr><th colspan="2">Theory</th><th colspan="3">Clinical skills</th><th>Total Marks</th></tr>
<tr><td rowspan="4">MCQs (80)</td><td rowspan="4">80 Marks</td><td>OSCE</td><td>08 stations x 5 marks= 40 marks</td><td rowspan="4">80 Marks</td><td rowspan="4">160 Marks</td></tr>
<tr><td>OSVE</td><td>02 Stations x 5 marks= 10 marks</td></tr>
<tr><td>Short case</td><td>1 Short case x 10 marks = 10 marks</td></tr>
<tr><td>Long case</td><td>1 Long case x 20 marks = 20 marks</td></tr>
<tr><td>Internal assessment (10%) Theory</td><td>20 Marks</td><td colspan="2">Internal assessment (10%) Practical</td><td>20 Marks</td><td>40 Marks</td></tr>
<tr><td colspan="7">Total=200 Marks</td></tr>
</table>

Theory Examination Paper time duration will be 1hr 25min. **Clinical Examination** Time duration for each OSCE/OSVE station will be 06 minutes, short case will be 10 minutes and long case will be 20minutes.
GRAND TOTAL=1500 Marks

13. Frame work of Final Year MBBS Timetable 2025-26

DAY	1	2	3	4	5
	08:00 - 09:00	09:00 - 10:00	10:00 - 02:00	02:00 - 02:30	02:30 - 05:30
Monday	Medicine Lecture	Peads Lecture	Ward	Break	Evening Ward
Tuesday	Peads Lecture	Medicine Lecture	Ward		Evening Ward
Wednesday	Medicine Lecture	Peads Lecture	Ward		Evening Ward
Thursday	Psychiatry Lecture	Medicine Lecture	Ward		Evening Ward
DAY	1	2	3	4	5
	08:00 - 09:00	09:00 - 10:00	10:00 - 01:00	01:00 - 02:00	02:00 - 05:30
Friday	Dermatology Lecture	Medicine Lecture	Ward	Namaz Break/Break	Evening Ward
DAY	1	2	3	4	5
	08:00 - 09:00	09:00 - 10:00	10:00 - 02:00	02:00 - 02:30	02:30 - 05:30
Saturday	Peads Lecture	Medicine Lecture	Ward	Break	Evening Ward

14. Clinical Ward Rotation of Final Year MBBS 2025-26

Group Wise Distribution of Final Year MBBS for Ward Rotation for Session 2025-2026

Group A	Group B
11096, 15096, 18083	20060, 20096
21001 - 21034	21035 - 21072

Group C	Group D
21073 - 21112	21113 - 21155

Note: No change in any group is acceptable. Strict Compliance is required.

Group Wise Rotation of Block A - Final Year MBBS

Rotation	Group	Placement	Duration (6+6=12 Weeks)
Rotation 1	**A**	**Medicine**	**6 weeks**
	B	**Pediatrics**	
Rotation 2	**B**	**Medicine**	**6 weeks**
	A	**Pediatrics**	
Rotation	**Group**	**Placement**	**Duration (02+02=04 Weeks)**
Rotation 3	**A**	**Neurology**	**2 weeks**
	B	**Emergency Medicine**	
Rotation 4	**B**	**Neurology**	**2 weeks**
	A	**Emergency Medicine**	

RESOURCE BOOKS

16. Learning Resources

Medicine	**1. Davidson's Principles and Practice of Medicine – 24th ed – Elsevier – 2022** **2. Kumar & Clark's Clinical Medicine – Parveen Kumar & Michael Clark – 9th ed – Elsevier – 2017** **3. ABC of Dermatology – 7th ed – Wiley-Blackwell – 2021 (Dermatology)** Clinical Skills **1. Hutchison's Clinical Methods: An Integrated Approach to Clinical Practice – 24th ed – Elsevier – 2022** **2. MacLeod's Clinical Examination – 15th ed – Elsevier – 2023**
Pediatrics	**1.** Nelson Textbook of Pediatrics – Robert M. Klieg man & Joseph W. St. Geme III – 22nd ed – Elsevier **2.** Basis of Pediatrics – Pervez Akbar Khan – 11th ed