



**NUMS**  
NATIONAL UNIVERSITY  
OF MEDICAL SCIENCES



**MBBS Final Year  
Medicine & Allied  
National University of Medical Sciences  
Pakistan**

**Students Study Guide  
CMH Institute of Medical Sciences (CIMS)  
Bahawalpur**

**CALENDAR OF 1<sup>ST</sup> YEAR MBBS CLASS**  
**2020 / 2021**

Description	Date & Day				Deptt Responsibilities
<b>College Re-Opening</b>	7 June 2021 (Mon)				
<b>Clinical Rotation /Trg Hrs</b> 07 June To 05 Nov 2021 18x Weeks Trg Hrs		07 Jun to 16 July	26 July to 03 Sep	06 Sep to 15 Oct	<ul style="list-style-type: none"> <li>• 06 Weeks each Deptt</li> <li>• Time: 0800hrs onwards</li> <li>• All left over practicals trg to be completed</li> <li>• OSCE trg / Short &amp; Long Case</li> <li>• Annual Assessment for NUMS</li> </ul>
	<b>Medicine</b>	Batch A	Batch B	Batch C	
	<b>Surgery</b>	Batch B	Batch C	Batch A	
	<b>Paeds</b>	07-25 June Batch C	26 July to 13 Aug Batch A	06 Sep to 24 Sep Batch B	
<b>Gynae</b>	28 Jun to 16 July Batch C	16 Aug to 03 Sep Batch A	27 Sep to 15 Oct Batch B		
3x Weeks Revision classes		18-22 Oct	25-29 Oct	01-05 Nov	
	<b>Medicine</b>	Batch A	Batch B	Batch C	
	<b>Surgery</b>	Batch B	Batch C	Batch A	
	<b>Paeds</b>	18-19 Oct Batch C	25-26 Oct Batch A	01-02 Nov Batch B	
<b>Gynae</b>	20-22 Oct Batch C	27-29 Oct Batch A	03-05 Nov Batch B		
<b>Eid ul Azha Leave</b>	17-25 July 2021				
<b>Pre Send up Prep Leave</b>	06-14 Nov 2021 (09 Days)				
<b>Send up Exam (Theory)</b>	15 Nov 2021 (Mon) - 0900 hrs		Medicine I		Exam Cell
	19 Nov 2021 (Fri) - 0900 hrs		Medicine II		
	22 Nov 2021 (Mon) - 0900 hrs		Surgery I		
	26 Nov 2021 (Fri) - 0900 hrs		Surgery II		
	30 Nov 2021 (Tue) - 0900 hrs		Gynae		
	04 Dec 2021 (Sat) - 0900 hrs		Paeds		
<b>Viva/OSCE/Short &amp; Long Case</b>	06-10 Dec 2021				Respective Departments
<b>Prep Leave Annual Exam</b>	11 Dec to 13 Jan 2022 (34 Days)				
<b>NUMS Prof Exams</b>	14 Jan 2022				

**WEEKLY TIME TABLE**  
**FINAL YEAR MBBS CLASS (2020 / 2021)**

	MONDAY Time in hrs							TUESDAY Time in hrs							WEDNESDAY Time in hrs							THURSDAY Time in hrs							FRIDAY Time in hrs						
Batch A Medicine	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	J U M M A  B R E A K	7
Batch B Surgery	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5		7
Batch C Gynae & Obs	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5		7
Batch D Pediatrics	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5		7

**KEY**

 Behavioral Sciences  
 Theory Lectures

 Clinics  
 Self-Directed learning

## TEACHING HOURS

SUBJECTS	FINAL YEAR	TOTAL
<b>Medicine</b>	500	<b>*900 (at the end of final year)</b>
General Medicine		500
Psychiatry		50
Emergency Medicine		50
Dermatology		50
Cardiology		50
Neurology		50
Pulmonology		50
Nephrology		50
Gastroenterology		50
<b>Surgery</b>	500	<b>*900 (at the end of final year)</b>
General Surgery		*600
Anesthesiology and Critical Care		*50
Orthopedics and Traumatology		*100
Radiology		*50
Surgical Specialties: - Urology (Compulsory) - Neurosurgery/ Spine Surgery/ Pediatric Surgery/ Thoracic Surgery/ Plastic Surgery/ Burn/ Vascular Surgery		50 50
Gynecology and obstetrics	230	<b>*300 (at the end of final year)</b>
Pediatrics	230	<b>*300 (at the end of final year)</b>
Pediatrics		250
Neonatology		50
Behavioral Sciences & Professionalism		<b>*150 (at the end of final year)</b>
Communication Skills		
Professionalism	25	
Leadership and Management		
Medical and Islamic ethics		
Infection control		*25
Patient safety	10	<b>*25 (at the end of final year)</b>
Self-Directed Learning	100	<b>*500 (at the end of final year)</b>
Co-curricular activities	40	<b>*200 (at the end of final year)</b>

## **I. Introduction**

Medicine is a broad based specialty dedicated to providing primary and specialized care to adults. Therefore, it forms a key component of the undergraduate curriculum and is taught throughout the five years with increased emphasis in last three years. Its primary focus is on building knowledge, skills and attitudes of the students for the practice of medicine not only at the primary care level but to advance to postgraduate studies for clinical practice, medical education and research. Allocation of hours is as per latest PMDC regulations and fulfills the minimum requirement.

## **II. Mission**

To develop medical students, in accordance with the best practices; to prepare future doctors who can provide patient centered medical care with highest standards of professionalism. To identify and answer fundamental questions in the mechanisms, prevention and treatment of diseases, in the field of medicine.

## **III. The objectives of the program**

The program objective is to establish a foundation for independent practice after graduation as a general practitioner and involves the principal aspects of health improvement, preventive medicine, and acute and chronic care in the domain of medical disorders.

### **a) Knowledge**

- 1) Acquisition of the knowledge and the ability to apply it in approach to the common complaints and symptoms in medical diseases.
- 2) Knowledge of common medical diseases and the ability to apply it to primary medical care of the patients within the limits of general practitioner's duties.
- 3) Acquisition of the knowledge of simple procedures in outpatient setting that the general practitioner must be able to do.

### **b) Skill**

- 1) Ability to take clinical history and perform clinical examination in patients with medical disorders.
- 2) Ability to construct and execute a management plan for common medical diseases including emergencies.
- 3) Ability to do basic procedures required in the practice of medicine.
- 4) Ability to interpret results of common laboratory tests and imaging techniques in medicine.

## **IV. Program Outcome**

At the end of final year, student will be able to:

- a) Diagnose common Medical problems, suggest and interpret appropriate investigation, rationalize treatment plan and if appropriate, refer patient for specialist opinion/management.
- b) Suggest preventive measure for the common Public Health Problem in the community.
- c) Perform relevant procedures.
- d) Convey relevant information and explanations accurately to patients, families, colleagues and other professionals.
- e) Understand medical ethics and its application pertaining to medicine and maintain the confidentiality of the patient.
- f) Adapt research findings appropriately to the individual patient situation or relevant patient population.

#### **V. Competencies**

- a) Communication skills
- b) Critical thinking
- c) Problem solving
- d) Clinical skills
- e) Examination skills
- f) Procedural skills

#### **VI. Learning Strategies & Situations**

A variety of pedagogies are used in this course, including didactic teaching, team-based and evidence-based learning in class rooms and patient side environment. Students are encouraged to adopt and inculcate self-learning strategies during the course.

#### **VII. Learning Opportunities**

- a) Teaching Ward Rounds
- b) Case presentations
- c) Case based Discussion
- d) Short cases in OPD
- e) Bedside Discussion
- f) Small Group Discussion
- g) Workshops
- h) Self-learning Activities
- i) Skill Lab Activity

#### **VIII. Venues for learning opportunities**

- a) Outpatient clinic
- b) Emergency room
- c) Inpatient ward
- d) Tutorial room
- e) Libraries including audio-visuals

## **IX. Specific Learning Outcomes**

Learning outcomes specific to the medicine course have been tabulated below in the table of specification and matched with educational strategies.

### **Table of Specification (Themes /Topics /Learning Outcomes /Educational Strategies /Weightage) - Annex A**

#### **I. Implementation of curriculum**

\*The university will give details of all content including learning outcomes and table of specifications, distribution of which across the five years and rotations is upon the discretion of the medical college/institute. All institute to follow PM&DC minimum requirements i.e. 820 contact hours with 50% weighting to theory content and 50% to practical/skills

#### **II. Attendance & Discipline:**

- a) A record of attendance of medical students, /test results, end of module/rotation test result, workshop marks should be updated regularly.
- b) Each Head of unit would keep a log of all clinical activities
- c) Attendance of each student would be endorsed in his logbook as well.
- d) Overall 75% attendance is mandatory to appear in final professional exam.

#### **III. Assessment**

Assessment is an important aspect of any training program which not only includes assessment of students but also of the training program itself. The performance of each student would be marked and counted towards final internal assessment. The following tools/ methods would be used for this purpose:

##### **a) Theory**

- 1) Periodical class tests.
- 2) **End Modular/End of Rotation Exams:** At the end of each clinical rotation, a theory exam would be held concurrently for the entire class from the syllabus covered during this period.

##### **b) Practical**

- 1) **Log Book:** Each student would complete his log book and get it countersigned from HOD at the end of each rotation. Log book is maintained during the rotation.
- 2) **CBL performance:** Performance of each student would be marked and sent to Head of Clinical Training.
- 3) **End of Rotation Exams:** At the end of each clinical rotation, the whole group would have a clinical exam.
- 4) 4x scheduled workshops including BLS/ACLS (**only attendance is required to get marks**).

#### **IV. Evaluation of the Course**

- a) Student portfolio should be maintained in the department in which students should give their feedback either by name or anonymously.

- b) Faculty suggestions for improvement of training may be incorporated in the next rotation.

**V. Recommended Readings**

- a) Davidson's Principles and Practice of Medicine
- b) Current Medical Diagnosis and Treatment
- c) Oxford Handbook of Clinical Medicine
- d) Macleod Clinical Methods
- e) Hutchinson Clinical Methods

**VI. Reference Book**

- a) Harrison Clinical Methods

## **MEDICINE & ALLIED**

The table below gives details of all content, distribution of which across the three years and rotations is upon the discretion of the medical College/Institute:

Sr	Theme/ Topic	Course Content	Learning Outcomes		Instructional Strategies	Assessment
			At the end of each module, student will be able to:			
			Knowledge	Skill/ Attitude		
➤ <b>INTRODUCTION TO MEDICINE</b>						
1	<b>Symptomatology</b>	Symptomatology of following: <ul style="list-style-type: none"> <li>• CVS disease</li> <li>• Respiratory diseases</li> <li>• GI diseases</li> <li>• CNS diseases</li> <li>• Locomotor diseases</li> <li>• Renal diseases</li> <li>• common endocrine diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Correlate clinical findings to anatomical structures</li> <li>• Correlate clinical features to etiology in terms of congenital, traumatic, inflammatory, neoplastic or miscellaneous.</li> <li>• Discuss basic pharmacology of drugs being used in a medical unit</li> </ul>	<ul style="list-style-type: none"> <li>• Take the relevant history</li> <li>• Perform general physical examination</li> <li>• Perform systemic examination of different systems</li> <li>• Show empathy and sympathy while examining the patient</li> </ul>	CBL/ Bed side training/SDL	
2	<b>Common clinical presentations</b>	Approach to patient with: <ul style="list-style-type: none"> <li>• Fever</li> <li>• Headache</li> <li>• Cyanosis</li> <li>• Jaundice</li> <li>• chest pain</li> <li>• Unconsciousness</li> <li>• Dyspnea</li> <li>• Dyspepsia</li> <li>• Hematemesis</li> <li>• Bleeding per rectum</li> <li>• Malena</li> <li>• Vomiting</li> <li>• Diarrhoea</li> <li>• Fits</li> <li>• Anorexia and weight loss</li> <li>• Oedema</li> </ul>	<ul style="list-style-type: none"> <li>• list the investigations</li> <li>• Outline management plan</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise the right to consent and privacy of the patient</li> <li>• Present findings of the history and examination in logical order verbally as well as in written form</li> </ul>		

		<ul style="list-style-type: none"> <li>• Acute Poisoning</li> <li>• Ascites</li> <li>• Anemia</li> <li>• Critically ill patient</li> <li>• <b>PUO</b></li> </ul>				
➤ <b>NUTRITION/OBESITY/ CHOLESTEROL RELATED &amp; GENETIC DISORDERS</b>						
3	<b>Nutrition</b>	Vit B12 deficiency Folate deficiency Metabolic syndromes	<ul style="list-style-type: none"> <li>• Assess the patient with nutrition disorders</li> <li>• Propose investigation modalities Treatment options for nutritional deficiencies</li> </ul>	<ul style="list-style-type: none"> <li>• Take the relevant history</li> <li>• Perform general and relevant clinical examination</li> </ul>	CBL/ Bed side training/DL	
4	<b>Obesity</b>		<ul style="list-style-type: none"> <li>• Assess the patient with nutrition disorders</li> <li>• Discuss the investigation modalities and Treatment options</li> </ul>		CBL/ Bed side training/SDL	
5	<b>Cholesterol Related Disorders</b>	Dyslipidemia	<ul style="list-style-type: none"> <li>• Assess the patient with nutrition disorders</li> <li>• Discuss the investigation modalities for diagnosis</li> <li>• Discuss the Treatment options available</li> </ul>		CBL/ Bed side training/SDL	
6	<b>Genetic Disorders</b>	Hemoglobinopathies	<ul style="list-style-type: none"> <li>• Classify hemoglobinopathies on the</li> </ul>		Lecture & bedside teaching	

		<ul style="list-style-type: none"> <li>• Sickle cell syndromes</li> <li>• Thalassaemias</li> </ul>	<p>basis of defects in basic structure and formation</p> <ul style="list-style-type: none"> <li>• Identify characteristic features of each type of hemoglobinopathy</li> <li>• Establish clinical basis of diagnosis of various hemoglobinopathies and their</li> <li>• treatment modalities</li> </ul>		(Case presentation)	
➤ <b>POISONING/ANIMAL BITES</b>						
7	<b>Animal Bites</b>	Snake Bite- Diagnosis and management	<ul style="list-style-type: none"> <li>• Classify Snake bite, based on animal and time duration and type of wound.</li> <li>• List the immediate management and long term management</li> <li>• Discuss the antivenom type and dosing and the criteria of administering antivenom</li> <li>• Enumerate the various complications</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with snake bite</li> <li>• Counsel the patients and relatives regarding the correct response at home of the management of snake bite and regarding the immediate presentation of the patient to hospital</li> </ul>	CBL	

8	<b>Poisoning</b>	Paracetamol Poisoning- Diagnosis and management	<ul style="list-style-type: none"> <li>• Discuss the pharmacological effects of Paracetamol.</li> <li>• Diagnose paracetamol poisoning on the basis of clinical presentation</li> <li>• Apply the concepts of mode of reversal to the dosage and route of reversal medication</li> <li>• Enumerate the complication</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with poisoning</li> <li>• Counsel the patient to prevent self-harm</li> </ul>	CBL	
<b>➤ DERMATOLOGY</b>						
9	<b>Basic Dermatology</b>	<ul style="list-style-type: none"> <li>• Anatomy and Physiology of Skin related to Clinical Dermatology</li> <li>• skin lesions</li> </ul>	<ul style="list-style-type: none"> <li>• Apply concepts of anatomy and physiology of skin to clinical dermatology</li> <li>• give pathologic basis of skin lesions</li> <li>• Identify different types of skin lesions</li> <li>• characteristic differentiating features of various skin lesions</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with skin lesions</li> </ul>	Lecture & bedside teaching (Case presentation)	
10	<b>Allergy</b>	Pruritis <ul style="list-style-type: none"> <li>• Differential diagnosis</li> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Classify types of pruritis</li> <li>• Identify its characteristic lesions</li> <li>• Advise specific lab investigations</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with pruritis</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<ul style="list-style-type: none"> <li>• Discuss the steps of management</li> </ul>			
		<ul style="list-style-type: none"> <li>• Urticaria</li> <li>• Anaphylaxis</li> </ul>	<ul style="list-style-type: none"> <li>• Define urticaria</li> <li>• Diagnose urticarial illness on the basis of clinical features</li> <li>• Give causes of anaphylaxis</li> <li>• Advise specific lab investigations</li> <li>• Describe immediate management of urticaria.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with urticaria</li> </ul>	Lecture & bedside teaching (Case presentation)	
11	<b>Dermatitis</b>	Eczema	<ul style="list-style-type: none"> <li>• Classify eczema</li> <li>• Apply diagnostic criteria to clinical assessment of eczema</li> <li>• Develop management plan of eczema</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with eczema</li> </ul>	Lecture & bedside teaching (Case presentation)	
		Viral infections of skin	<ul style="list-style-type: none"> <li>• list common types of viral infections of skin</li> <li>• Establish diagnosis of viral skin infections based on clinical features and investigations.</li> <li>• Elaborate various management modalities of viral skin infections</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with viral infections of skin</li> </ul>	Lecture & bedside teaching (Case presentation)	

		Bacterial and Mycobacterial infections of skin	<ul style="list-style-type: none"> <li>list the types of Bacterial and Mycobacterial Infections</li> <li>Give clinical features and symptoms of bacterial and Mycobacterial infections</li> <li>Develop management plan to establish diagnosis and treat different infections</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with bacterial infections</li> </ul>	Lecture & bedside teaching (Case presentation)	
		Acne vulgaris	<ul style="list-style-type: none"> <li>Clinically assess Acne vulgaris</li> <li>Diagnose acne vulgaris based on clinical features and investigations</li> <li>Suggest treatment options for Acne vulgaris</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	CBL/SDL	
		Fungal infections of skin	<ul style="list-style-type: none"> <li>Differentiate between different fungal infections of the skin based on their clinical features and management plan</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with fungal infections of skin</li> </ul>	Lecture & bedside teaching (Case presentation)	
12	<b>Infestations</b>	<ul style="list-style-type: none"> <li>Scabies</li> <li>Pediculosis</li> </ul>	<ul style="list-style-type: none"> <li>Diagnose scabies and pediculosis based on clinical features and investigations</li> <li>Recommend specific treatment</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with infestations</li> </ul>	Lecture & bedside teaching (Case presentation)	

			options for scabies and pediculosis			
13	<b>Other disorders</b>	<ul style="list-style-type: none"> <li>• Psoriasis and Lichen planus</li> <li>• <b>Nodular ulcerative cutaneous lesions</b></li> <li>• Cutaneous signs of systematic disease</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the etiology and precipitating factors</li> <li>• Discuss general and specific treatment of psoriasis and Lichen planus</li> <li>• Describe the role of ultraviolet and PUVA therapy and its uses in Psoriasis</li> <li>• Propose systemic treatment of psoriasis and Lichen planus</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with psoriasis and Lichen planus</li> </ul>	Lecture & bedside teaching (Case presentation)	
14	<b>Disorders of hairs.</b>	Alopecia	<ul style="list-style-type: none"> <li>• Classify alopecia</li> <li>• Make clinical diagnosis by assessing symptoms.</li> <li>• list necessary investigations</li> <li>• Discuss management of the condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with alopecia</li> </ul>	Lecture & bedside teaching (Case presentation)	
15	<b>Sexually transmitted diseases</b>	Syphilis Gonorrhoea Chlamydia	<ul style="list-style-type: none"> <li>• Make clinical diagnosis by assessing symptoms.</li> <li>• list necessary investigations</li> <li>• Discuss management of the condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	
➤ <b>NEUROLOGY/MUSCLE DISORDERS</b>						

16	<b>Headache</b>	<ul style="list-style-type: none"> <li>Differential diagnosis of headache, Migraine, cluster, tension, analgesia-overuse, neuralgias, idiopathic intracranial hypertension, temporal arteritis</li> <li>Presentations and clinical features of various types of headache especially migraine</li> <li>Etiologies &amp; Pathogenesis</li> </ul>	<ul style="list-style-type: none"> <li>Assess the patient with headache.</li> <li>Discuss the investigation modalities for diagnosis</li> <li>Elaborate pharmacologic treatment for Acute condition and Prophylaxis</li> <li>Migraine.</li> <li>Suggest primary drugs used to prevent nausea related to migraine.</li> <li>Develop management plan for complications of migraine including life style modifications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with headache</li> </ul>	Lecture and bedside teaching/CBL	
17	<b>Unconsciousness</b>	Approach to an Unconscious Patient	<ul style="list-style-type: none"> <li>Generate differential diagnosis of the unconscious patient</li> <li>Identify signs and investigations to determine the cause</li> <li>Justify the utility of Glasgow Coma Scale (GCS)</li> <li>Outline the emergency management of patient</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of unconscious patient</li> <li>Manage an unconscious patient</li> </ul>	Lecture and bedside teaching/CBL	

18	<b>Gait/movements Disorders</b>	<ul style="list-style-type: none"> <li>• Parkinson's disease, essential tremor, Huntington's disease, tics, medication-induced dyskinesia</li> <li>• Distinguishing features of essential tremor from dystonic tremor, cerebellar tremor, parkinsonian tremor, and other tremor disorders</li> <li>• Pharmacological treatment for relief of symptoms and its complications</li> <li>• Non Pharmacological treatment including surgery and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Review the gait cycle</li> <li>• Classify gait disorders</li> <li>• Recognize common clinical features of gait disorders</li> <li>• Differentiate between clinical and laboratory features of essential tremor dystonic tremor, cerebellar tremor, parkinsonian tremor, and other tremor disorders</li> <li>• Recognize the spectrum of movement disorders, both hypo- and hyperkinetic</li> <li>• Generate differential diagnosis of PD</li> <li>• Describe the prevalence and etiology of Parkinson's disease</li> <li>• Recognize the clinical features and presentations of movement disorders</li> <li>• Outline the workup and management of</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with gait disorders</li> </ul>	Lecture and bedside teaching/CBL	
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			patients with gait disorders			
		<ul style="list-style-type: none"> <li>• Myasthenia Gravis</li> <li>• Muscle Dystrophy</li> </ul>	<ul style="list-style-type: none"> <li>• Provide pathophysiological basis of Myasthenia gravis.</li> <li>• Differentiate between Myasthenia and Dystrophy.</li> <li>• Give genetic basis of muscular dystrophy</li> <li>• Identify clinical features of Myasthenia Gravis</li> <li>• Diagnose various stages on time based characteristic features.</li> <li>• Develop management plan for Myasthenia Gravis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Myasthenia and Dystrophy.</li> </ul>	Lecture & bedside teaching (Case presentation)	
19	<b>Spinal cord disorders.</b>	<ul style="list-style-type: none"> <li>• Myelitis</li> </ul>	<ul style="list-style-type: none"> <li>• Assess the patient with Myelitis</li> <li>• Suggest investigation modalities for diagnosis</li> <li>• Evaluate treatment options for Myelitis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	
20	<b>Cerebrovascular accident</b>	<ul style="list-style-type: none"> <li>• Stroke</li> <li>• Transient ischemic attack (TIA)</li> </ul>	<ul style="list-style-type: none"> <li>• Classify stroke</li> <li>• Correlate pathophysiology of stroke to its</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<p>causes and risk factors</p> <ul style="list-style-type: none"> <li>• Outline early evaluation and management of stroke patients</li> <li>• Emphasize the importance of early symptom recognition and prompt reaction</li> <li>• Justify the role of thrombolytic therapy and administration of tPA</li> <li>• Explain the pathophysiological basis of Transient Ischemic Attack (TIA)</li> <li>• Evaluate stroke risk after transient ischemic attack (TIA)</li> <li>• Order Investigations for diagnosis of stroke</li> <li>• List the complications of stroke</li> <li>• Identify various prevention strategies pertaining to stroke</li> <li>• Outline management of ischemic and hemorrhagic stroke</li> </ul>	<p>of patient with stroke</p> <ul style="list-style-type: none"> <li>• Counsel the patient with stroke about physiotherapy</li> </ul>		
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21	<b>Seizures</b>	<ul style="list-style-type: none"> <li>• Epilepsy</li> <li>• various seizure types including adult vs pediatric seizures</li> <li>• Status Epilepticus</li> <li>• Epilepsy Management Issues</li> <li>• Medically refractory epilepsy and immunotherapy</li> <li>• Anticonvulsants in Specific Patient Populations such as Neonates, Children, Elderly, Women on contraceptive agents, Pregnant women, Patients with hepatic or renal insufficiency, (HIV)-infected patients</li> <li>• Seizure relapse after discontinuation of drug therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between different types of seizures including epilepsy</li> <li>• Explain pathophysiological basis of epilepsy</li> <li>• Identify the cause and trigger factors associated</li> <li>• Recognize the clinical features of seizures</li> <li>• Outline the management of Status Epilepticus</li> <li>• List the investigation of a patient with suspected epilepsy</li> <li>• Outline the acute and long term management of seizures, both medical and surgical</li> <li>• Evaluate the considerations in special populations such as pregnancy and old age</li> <li>• illustrate the Goals of management of epilepsy</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with seizures</li> </ul>	Lecture and bedside teaching/CBL	
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22	<b>Infections of CNS</b>	Meningitis/ Encephalitis/ Brain Abscess	<ul style="list-style-type: none"> <li>• Differentiate among the various infections of CNS based on</li> <li>• etiologies and clinical features and presentations</li> <li>• Outline the modalities for investigation and medical management of CNS infections</li> <li>• Identify Complications their treatment</li> <li>• Advocate preventive strategies for complications</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with infections of CNS</li> </ul>	Lecture & bedside teaching (Case presentation)	
23	<b>Other diseases</b>	Multiple Sclerosis	<ul style="list-style-type: none"> <li>• Provide pathophysiologic basis of the effects of Multiple Sclerosis (MS) on the body.</li> <li>• Diagnose MS on the basis of to Clinical features</li> <li>• Develop plan for the workup and management including therapeutic options, of a patient with MS</li> <li>• Propose plan for treatment of acute relapse, prevention of future relapses, treatment of</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with MS</li> <li>• Counsel the patient about prognosis of MS</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<p>complications and management of disability.</p> <ul style="list-style-type: none"> <li>• Provide pathophysiologic basis of the poor prognosis of MS</li> </ul>			
24	<b>Motor Neuron Disease/ Polyneuropathies</b>	<ul style="list-style-type: none"> <li>• Amyotrophic Lateral Sclerosis (ALS), Guillain–Barré Syndrome (GBS), Post-polio Syndrome (PPS), neuropathies, and brachial plexus injuries</li> <li>• lower motor neuron disease</li> <li>• upper motor neuron disease</li> <li>• Investigations and general management of these patient</li> <li>• Role of Plasma exchange or IV immunoglobulin in therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Correlate the phenomenon of degeneration and regeneration nerve and muscle and patterns of involvement in motor neuron disease</li> <li>• Describe the demographic, risk factors, etiology, pathophysiology, diagnosis, general progression and prognosis of Amyotrophic Lateral Sclerosis (ALS), Guillain–Barré Syndrome (GBS), Post-polio Syndrome (PPS), neuropathies, and brachial plexus injuries</li> <li>• Elaborate the pathophysiology, incidence, signs and symptoms, and typical</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with motor neuron diseases</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<p>progression of Guillain-Barre syndrome</p> <ul style="list-style-type: none"> <li>• Differentiate among lower motor neuron and upper motor neuron disease based on signs and symptoms and pathology</li> <li>• Describe the general investigations and interpretation of nerve conduction studies, including motor and sensory studies of peripheral nerves and clinical electromyography</li> <li>• Discuss the differential diagnosis, management and prognosis of these diseases</li> </ul>			
25	<b>Dementia</b>	Neurodegenerative cognitive impairment, Alzheimer's disease (AD) and related dementias	<ul style="list-style-type: none"> <li>• Distinguish neurodegenerative cognitive impairment, Alzheimer's disease (AD) and related dementias from age-related normal</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with dementia</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<p>cognitive changes.</p> <ul style="list-style-type: none"> <li>• Apply standard diagnostic criteria for mild cognitive impairment, dementia, and Alzheimer’s disease</li> <li>• Apply standard guidelines for the laboratory investigation of patients with dementia or suspected dementia.</li> <li>• Relate the etiology and risk factors of conditions leading to dementia to its pathophysiology and progression</li> <li>• Discuss the short and long term management of disease.</li> <li>• Review the standard pharmacotherapy for cognitive deficits experienced by patients with mild cognitive impairment &amp; dementia.</li> <li>• Describe non-pharmacological interventions</li> </ul>			
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			for management of behavioral disturbances ensuring Compassionate Palliative & End-of-Life Care for People with Dementia			
<b>➤ GASTROENTEROLOGY</b>						
26	<b>Dyspepsia/ Indigestion</b>	Dyspepsia/ GERD/ Peptic Ulcer	<ul style="list-style-type: none"> <li>Identify the causes of Dyspepsia, GERD and Peptic Ulcer</li> <li>Generate differential diagnosis of Dyspepsia, GERD and Peptic Ulcer</li> <li>Establish definitive diagnosis based on laboratory investigations Develop treatment plan for Dyspepsia, GERD and Peptic Ulcer</li> <li>Evaluate prognosis of the patient of Dyspepsia, GERD and Peptic Ulcer</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with dyspepsia</li> <li>Counseling of patients with GERD &amp; Peptic ulcer about the outcomes of diseases and how to prevent them</li> </ul>	Lecture & bedside teaching (case presentation)	
27	<b>Gastrointestinal Bleeding</b>	Differential diagnosis of <ul style="list-style-type: none"> <li>Upper GI Bleeding</li> <li>Lower GI Bleeding</li> </ul>	<ul style="list-style-type: none"> <li>Differentiate between upper and lower GI bleeding</li> <li>Assess the patient on the</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient.</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	

		<p>Clinical assessment, and signs and symptoms  Management  Risk factors for death in Upper GI bleeding  Prognosis</p>	<p>basis of signs and symptoms</p> <ul style="list-style-type: none"> <li>• Outline the management plan</li> <li>• Outline the risk factors for death in Upper GI bleeding</li> <li>• Assess the Prognosis</li> </ul>			
28	<b>Diarrhea</b>	<ul style="list-style-type: none"> <li>• Acute and chronic diarrhea</li> <li>• Inflammatory Bowel Disease <ul style="list-style-type: none"> <li>• Ulcerative colitis</li> <li>• Crohn's disease</li> </ul> </li> <li>• Irritable Bowel Syndrome <ul style="list-style-type: none"> <li>• Clinical features, signs and symptoms</li> <li>• Management</li> </ul> </li> <li>• Malabsorption <ul style="list-style-type: none"> <li>• Sprue Tropical</li> <li>• Coeliac Disease</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between Acute and Chronic Diarrhoea on the basis of its etiology</li> <li>• Outline the risk factors for Acute and Chronic Diarrhoea</li> <li>• Assess the patient on the basis of signs and symptoms</li> <li>• Outline the investigations and management plan</li> <li>• Discuss the Prognosis</li> <li>• Discuss the prognosis</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with diarrhea</li> </ul>	Lecture & bedside teaching (Case presentation)	
29	<b>Tumours</b>	<p>Upper GI Malignancy  Lower GI Malignancy</p>	<ul style="list-style-type: none"> <li>• Classify Upper and lower GI tumours</li> <li>• Differentiate between benign and malignant tumours on the basis of its etiology and clinical features</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with GI tumours</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<ul style="list-style-type: none"> <li>List risk factors</li> <li>Outline investigations and management of tumours</li> </ul>			
<ul style="list-style-type: none"> <li><b>LIVER &amp; PANCREAS</b></li> </ul>						
30	<b>Chronic Liver disease</b>	Ascites and Management	<ul style="list-style-type: none"> <li>Elaborate the causes of Ascites</li> <li>Outline the management and prognosis</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with CLD</li> <li>Counsel a cirrhotic patient</li> </ul>	Lecture & bedside teaching (Case presentation)	
		Cirrhosis of Liver	<ul style="list-style-type: none"> <li>Describe the causes, pathology and clinical features of Hepatic Cirrhosis</li> <li>Explain the pathogenic mechanism of Hepatic Fibrosis</li> <li>Discuss the Management and prognosis of the condition</li> </ul>			
		Portal Hypertension/ Sequelae <ul style="list-style-type: none"> <li>Aetiology and pathogenesis</li> <li>Clinical features</li> <li>Investigations and management</li> </ul> Complications of Portal Hypertension	<ul style="list-style-type: none"> <li>Classify Portal Hypertension according to site of vascular obstruction</li> <li>Evaluate Management and prognosis of the condition</li> </ul>			

		Hepatic Encephalopathy	<ul style="list-style-type: none"> <li>Correlate the causes and pathology of hepatic encephalopathy to its clinical features</li> <li>Outline the management and prognosis</li> </ul>			
31	<b>Hepatitis</b>	Hepatitis B and C Infections Other Forms of Hepatitis (A, D and E) <b>Autoimmune Hepatitis</b>	<ul style="list-style-type: none"> <li>Classify viral Hepatitis</li> <li>Differentiate between different types of Hepatitis</li> <li>Interpret investigations for diagnosis of Hepatitis B and C</li> <li>Discuss their modes of transmission</li> <li>Outline the treatment plan and prognosis</li> <li>List the Complications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with hepatitis</li> </ul>	Lecture & bedside teaching (Case presentation)	
32	<b>Pancreatitis</b>	Acute Pancreatitis Chronic Pancreatitis	<ul style="list-style-type: none"> <li>Elaborate the pathophysiology of Acute and Chronic Pancreatitis</li> <li>Diagnose the patient on the basis of Signs, symptoms and investigations</li> <li>Outline the Treatment plan</li> <li>List its Complications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with pancreatitis</li> </ul>	Lecture & bedside teaching (Case presentation)	

33	<b>Investigation &amp; Imaging of GI, Liver and Pancreatic disorder</b>		Interpret investigations for diagnosis of GI, Liver and Pancreatic disorder		Lecture & bedside teaching	
34	<b>Other hepatobiliary/pancreatic disorders</b>	<ul style="list-style-type: none"> <li>• Hemochromatosis</li> <li>• Wilson Diseases</li> <li>• SBP/HRS</li> <li>• Metabolic Diseases of the liver</li> <li>• Liver abscess</li> <li>• HCC</li> <li>• CA pancreas/ Ampullary Carcinoma</li> <li>• Abdominal tuberculosis</li> <li>• Dysphagia and its evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of Signs, symptoms and investigations</li> <li>• Outline the Treatment plan</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture &amp; bedside teaching</li> <li>• (Case presentation)</li> </ul>	
➤ <b>RHEUMATOLOGY/BONES</b>						
35	<b>Inflammation of joints</b>	<b>Rheumatoid arthritis</b>	<ul style="list-style-type: none"> <li>• Discuss etiology, Symptoms and signs of the disease</li> <li>• Diagnose the patient on the basis of presenting complaints and clinical examination</li> <li>• Interpret relevant Investigations and laboratory findings.</li> <li>• Recognize complications and their</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			management options			
		<b>Osteoarthritis</b>	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of presenting complaints and clinical examination</li> <li>• Determine causes of osteoarthritis established through Investigations and laboratory findings.</li> <li>• Manage complications of the disease</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with joint disease</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	
		Seronegative Poly Arthritis	<ul style="list-style-type: none"> <li>• Define diagnostic criteria for Seronegative Poly Arthritis</li> <li>• Correlate etiology of the disease to its presentation.</li> <li>• Diagnose the patient on the basis of presenting complaints and clinical examination</li> <li>• Propose appropriate Investigations and laboratory findings to establish diagnosis.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Poly Arthritides</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	

			<ul style="list-style-type: none"> <li>• Manage complications of the disease</li> </ul>			
		Arthritis/ ankylosing spondylitis	<ul style="list-style-type: none"> <li>• Diagnose the disease on the basis of clinical Presentation and investigations.</li> <li>• Correlate clinical signs with radiological findings.</li> <li>• Suggest appropriate diagnostic modalities and treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Arthritis/ ankylosing spondylitis</li> </ul>	Lecture & bedside teaching (Case presentation)	
		Gout	<ul style="list-style-type: none"> <li>• Give pathological basis of Gout</li> <li>• Differentiate between acute and chronic disease based on presentation, investigations and treatment options</li> <li>• Diagnose the disease based on clinical presentation and investigations.</li> <li>• Discuss the association of disease with other diseases</li> <li>• Manage the complications of disease</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with gout</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	

		Polymyalgia rheumatica	<ul style="list-style-type: none"> <li>Define Polymyalgia rheumatica</li> <li>Develop therapeutic plan for the disease after diagnosing based on clinical presentation of various stages, and investigations diagnosing</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with Polymyalgia rheumatica</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	
36	<b>Systemic disorders involving joints</b>	SLE	<ul style="list-style-type: none"> <li>Define diagnostic criteria Seronegative SLE</li> <li>Suggest therapeutic options and investigations after establishing diagnosis based on etiology, clinical Presentation and investigations Manage complications.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with SLE</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	
		<ul style="list-style-type: none"> <li>MCTD</li> <li>Vasculitis (Small, Medium and Large)</li> <li>Dermatomyositis/Polymyositis</li> <li>Scleroderma/Raynaud Phenomenon and Syndrome</li> </ul>	<ul style="list-style-type: none"> <li>Suggest therapeutic options and investigations after establishing diagnosis based on etiology, clinical Presentation and investigations</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL	

		<ul style="list-style-type: none"> <li>• Systemic Sclerosis</li> <li>• Sjorgen syndrome/Keratoconjunctiv es Sicca</li> </ul>				
<p>➤ <b>ENDOCRINOLOGY</b></p>						
37	<b>Disorders of Pituitary gland and Hypothalamus</b>	Acromegaly/Growth hormone deficiency.	<ul style="list-style-type: none"> <li>• Define criteria for diagnosing acromegaly, clinical presentation of acromegaly/ growth hormone deficiency.</li> <li>• Identify pathophysiology of central precocious puberty, acromegaly and growth hormone deficiency.</li> <li>• Discuss functions of anterior and posterior pituitary hormones and hypothalamic hormones.</li> <li>• Suggest investigations for diagnosis by oral glucose tolerance test and GH levels.</li> <li>• Propose surgical ,medical and radiotherapy management .</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with acromegaly</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

		Diabetes insipidus/SIADH	<ul style="list-style-type: none"> <li>Correlate pathophysiology of diabetes insipidus/SIADH to its clinical manifestations and</li> <li>Relate the effects Devise plan for diagnosis and clinical management of SIADH/diabetes insipidus.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with diabetes insipidus</li> </ul>	Lecture & bedside teaching (Case presentation)	
		Hypopituitarism/Addison's disease.	<ul style="list-style-type: none"> <li>Correlate pathophysiological basis of various etiological factors in to clinical manifestations of the disease</li> <li>Determine diagnostic criteria for hypopituitarism /acromegaly.</li> <li>Outline the management of the disease.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with Addison's disease</li> </ul>	Lecture & bedside teaching (Case presentation)	
		Acute Addisonian crisis	<ul style="list-style-type: none"> <li>Outline the management of the disease</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation)	
38	<b>Disorders of thyroid gland</b>	Hyperthyroidism	<ul style="list-style-type: none"> <li>Correlate pathophysiological basis of various etiological factors to</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<p>clinical manifestations of hypothyroidism</p> <ul style="list-style-type: none"> <li>• Devise plan for diagnosis, drug therapy, radioactive iodine and surgical management of hyperthyroidism</li> </ul>	with hyperthyroidism		
		Hypothyroidism.	<ul style="list-style-type: none"> <li>• Correlate pathophysiological basis of various etiological factors to clinical manifestations of hypothyroidism.</li> <li>• Classify hypothyroidism.</li> <li>• Interpret investigations for diagnosis including thyroid function tests.</li> <li>• Outline management including drug therapy and regular follow up.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with hypothyroidism</li> </ul>	Lecture & bedside teaching (Case presentation)	
39	<b>Disorders of Parathyroid gland</b>	Parathyroid disorders.	<ul style="list-style-type: none"> <li>• Identify the hormones produced by the parathyroid and their functions.</li> <li>• Correlate pathophysiological</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<p>cal basis of various etiological factors to clinical manifestations of parathyroid endocrine disorder.</p> <ul style="list-style-type: none"> <li>• Devise plan for diagnosis and clinical management of each parathyroid disorder.</li> </ul>	parathyroid disorder		
40	<b>Disorders of Adrenal Gland</b>	<ul style="list-style-type: none"> <li>• Cushing Syndrome</li> <li>• Pheochromocytoma</li> <li>• Aldosterone &amp; related conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Justify abnormalities in the hormones produced by the adrenal glands and their functions resulting in Cushing Syndrome / Pheochromocytoma Aldosterone &amp; related conditions</li> <li>• Propose management of Cushing Syndrome after establishing clinical diagnosis.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Cushing Syndrome</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
41	<b>MEN-I and II</b>	<b>MEN-I and II</b>	<ul style="list-style-type: none"> <li>• Outline management plan of MEN-I and II</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
➤ <b>DIABETES MELLITUS</b>						

42	<b>Diabetes mellitus</b>	<ul style="list-style-type: none"> <li>• Diabetes mellitus type -1</li> <li>• Diabetes mellitus type-2</li> <li>• <b>Acute Complication of Diabetes Mellitus- DKA/HHS/Hypo glycemia</b></li> <li>• Chronic complications of diabetes mellitus</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between type 1 and type 2 diabetes on the basis of pathophysiology, etiology,</li> <li>• Prevalence and incidence, risk factors, manifestations and complications.</li> <li>• Identify abnormalities in investigations for blood sugar levels including HbA1c.</li> <li>• Propose diagnostic tests used for screening, diagnosis and monitoring of diabetes mellitus.</li> <li>• Emphasize implications of insulin and oral hypoglycemic agents used to treat patients of DM-1&amp; II.</li> <li>• Identify maternal and fetal risks or complications associated with diabetes in pregnancy.</li> <li>• Identify the warning signs of insulin-</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with diabetes mellitus</li> <li>• Advise best practices of self-care management of diabetes related to diet planning, sick day management and exercise.</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
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			<p>dependent and non-insulin-dependent diabetes mellitus.</p> <ul style="list-style-type: none"> <li>• Compare prevalence of diabetes mellitus among different ethnic groups.</li> <li>• Identify risk factors for developing diabetes and its complications.</li> <li>• Devise Management plan for acute Complication of Diabetes Mellitus- DKA/HHS/Hypo glycemia</li> </ul> <p>Describe the major microvascular, macrovascular and neuropathic complications of diabetes and self-care behavior that are important in their prevention.</p>			
➤ <b>PSYCHIATRY &amp; MENTAL HEALTH</b>						
43	<b>Introduction to Psychiatry</b>	Phenomenology	<ul style="list-style-type: none"> <li>• Give overview regarding Phenomenology and Psychiatry disorders</li> </ul>		Lecture & bedside teaching (Case presentation) /SDL	

			<ul style="list-style-type: none"> <li>Classify Psychiatry disorders</li> <li>Elaborate epidemiological and etiological basis of psychiatric disorders</li> <li>Outline diagnostic plan for Psychiatry disorders</li> </ul>			
44	<b>Anxiety Disorders</b>	<ul style="list-style-type: none"> <li>Acute anxiety states</li> <li>Panic disorders</li> <li>Generalized anxiety disorders</li> <li>Psychic Traumatic disorders</li> <li>Obsessive-compulsive disorders</li> <li>Phobic disorders</li> </ul>	<ul style="list-style-type: none"> <li>Classify Anxiety Disorders</li> <li>Discuss the Management of Anxiety Disorders</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with anxiety disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
45	<b>Mood Disorders</b>	<ul style="list-style-type: none"> <li>Major depressive episodes</li> <li>Stress Related Disorders</li> <li>Unipolar</li> <li>Bipolar</li> <li>Dysthymic</li> <li>Atypical</li> <li>Manic episodes</li> </ul>	<ul style="list-style-type: none"> <li>Diagnose mood Disorder on the basis of etiology</li> <li>Discuss its Management and prognosis</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with mood Disorder</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/CBL	
		Schizophrenia	<ul style="list-style-type: none"> <li>Diagnose Schizophrenia based on signs and symptoms</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination</li> </ul>	Lecture & bedside teaching (Case presentation)	

			<ul style="list-style-type: none"> <li>• Devise a plan for treatment of disease, side effects of the treatment and its withdrawal.</li> <li>• Assess prognosis of the disease</li> </ul>	of a patient with Bipolar Disorder	/SDL/ CBL	
46	<b>Other disorders</b>	Dissociative Disorders	<ul style="list-style-type: none"> <li>• Give an overview of dissociative disorders</li> <li>• Discuss common presentation</li> <li>• Give management options for these disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with dissociative disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/CBL	
		Mental and Behavioural Disorder due to General Medical Condition	<ul style="list-style-type: none"> <li>• Classify different medical conditions and its related psychological disorders</li> <li>• Diagnose the patient on history and signs and symptoms</li> <li>• Outline treatment options for these disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with different medical conditions and its related psychological disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
47	<b>Psychopharmacology</b>	overview of drugs used to treat psychiatric disorders and classification of drugs	<ul style="list-style-type: none"> <li>• Classify drugs used to treat psychiatric disorders</li> <li>• Elaborate mode of action of drugs used in psychiatry</li> </ul>		CBL/Lecture & bedside teaching (Case presentation) /SDL	

			<ul style="list-style-type: none"> <li>• and their side effects</li> </ul>			
48	<b>Drug Abuse</b>	Substance Misuse and Abuse	<ul style="list-style-type: none"> <li>• Elaborate the different groups of drugs of abuse and misuse</li> <li>• Suggest the laboratory investigations needed for Management</li> <li>• Evaluate the prognosis of substance abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with substance abuse</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
➤ <b>HAEMATOLOGY AND TRANSFUSION MEDICINE</b>						
49	<b>Anemias Pancytopenia clinical approach</b>	<ul style="list-style-type: none"> <li>• Iron deficiency</li> <li>• Megaloblastic B-12 deficiency</li> <li>• Folic acid deficiency</li> <li>• Anaemia of chronic disorder</li> <li>• Haemolytic anaemia</li> <li>• Hereditary Acquired</li> <li>• Aplastic anemia</li> <li>• Aetiology and presentation Causes &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between various types of anemia based on etiology, underlying pathology, symptoms and signs</li> <li>• Evaluate the patient on the basis of signs and symptoms and differential diagnosis</li> <li>• Interpret appropriately ordered laboratory investigation to reach a final diagnosis</li> <li>• Devise plan for treatment of disease</li> <li>• and complications of the condition</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with anemia</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			<p>if it remains untreated</p> <ul style="list-style-type: none"> <li>• Monitor treatment of anemia</li> </ul>			
50	<b>Transfusion</b>	Transfusion – Blood groups and blood transfusion. Reactions & Management	<ul style="list-style-type: none"> <li>• Elaborate the generic prerequisites and modes of transfusion.</li> <li>• Correlate the pathophysiology of blood reactions to the Requirement &amp; safety protocol</li> <li>• Follow through step by step management of different types of transfusion reactions</li> </ul>	<ul style="list-style-type: none"> <li>• Follow the protocol of blood transfusion</li> </ul>	CBL/Lecture & bedside teaching (Case presentation) /SDL	
51	<b>Generalized Lymphadenopathy</b>	Differential diagnosis of Generalized Lymphadenopathy	<ul style="list-style-type: none"> <li>• Outline the approach to a patient with generalized lymphadenopathy to identify its cause.</li> <li>• Establish final Diagnosis, after generating differential diagnosis, based on clinical presentation and investigations</li> <li>• Suggest different treatment modalities to treat the condition</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with lymphadenopathy</li> </ul>	CBL/Lecture & bedside teaching (Case presentation) /SDL	

52	<b>*Haemoglobinopathies.</b>  *Also included in genetic disorders	<ul style="list-style-type: none"> <li>Sickle cell syndromes</li> <li>Thalassaemias</li> </ul>	<ul style="list-style-type: none"> <li>Classify hemoglobinopathies based on abnormalities in structure and formation of Hb..</li> <li>Differentiate between different hemoglobinopathies based on characteristic features, signs and symptoms treatment modalities, and diagnostic approach.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with hemoglobinopathies</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
53	<b>Bleeding Disorders</b>	ITP/ Bleeding Disorders/ DIC	<ul style="list-style-type: none"> <li>Correlate abnormalities in physiology of coagulation with.</li> <li>etiology, Symptoms and signs of ITP/ Bleeding Disorders/ DIC</li> <li>Devise plan for investigating, diagnosing and treating Bleeding disorders and their complications.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of a patient with Bleeding Disorders</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
➤ <b>CARDIOVASCULAR SYSTEM</b>						
54	<b>Hypertension</b>	Hypertension: Causes, Types, Diagnosis and Management.	<ul style="list-style-type: none"> <li>Define diagnostic criteria for hypertension.</li> <li>Provide pathophysiology</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with hypertension.</li> <li>Perform clinical</li> </ul>	Lecture & bedside teaching/SDL	

			<p>cal basis of hypertension.</p> <ul style="list-style-type: none"> <li>Propose Life style modifications and non-pharmacological options for patients with hypertension.</li> <li>Diagnose primary hypertension from secondary hypertension</li> <li>Rationalize the need for achieving recommended BP goals in treatment of hypertension.</li> <li>Classify antihypertensive drugs</li> <li>Choose appropriate antihypertensive drug considerign their indications for use.</li> <li>Recognize types of hypertension, hypertensive urgency and emergency.</li> </ul>	<p>examination of a patient with hypertension.</p>		
55	<b>Ischaemic heart disease</b>	ACS/MI: Diagnosis, complications and Management	<ul style="list-style-type: none"> <li>Define</li> <li>Acute coronary syndrome (ACS)</li> <li>Angina</li> <li>Unstable angina pectoris (UA)</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with ACS/MI</li> <li>Perform clinical examination</li> </ul>	Lecture/CBL/SDL/ Bedside training	

			<ul style="list-style-type: none"> <li>• Non-ST segment elevation myocardial infarction(NSTEMI)</li> <li>• ST segment elevation myocardial infarction</li> <li>• Provide pathophysiological basis of cardiac ischemia.</li> <li>• Diagnose ACS and MI.</li> <li>• List complications of MI</li> <li>• Analyze the pharmacological management in the treatment of ACS.</li> <li>• Differentiate between male and female signs and symptoms of ACS.</li> <li>• Examine ACS modifiable and non-modifiable risk factors.</li> <li>• Discuss coronary revascularization procedures and nursing care.</li> </ul>	of a patient with ACS/MI		
56	<b>Heart failure</b>	LVF CCF Cor-pulmonale	<ul style="list-style-type: none"> <li>• Define Heart failure</li> <li>• Provide pathophysiological</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> </ul>	Lecture/SDL/ Bedside training	

			<p>cal basis of Heart failure.</p> <ul style="list-style-type: none"> <li>• Diagnose Heart failure.</li> <li>• List complications of Heart failure</li> <li>• Analyze the pharmacological management in the treatment of Heart failure</li> </ul>	<ul style="list-style-type: none"> <li>• Perform clinical examination of a patient with Heart failure</li> </ul>		
57	<b>Endocardial diseases</b>	Infective endocarditis.	<ul style="list-style-type: none"> <li>• Identify signs/symptoms of infective endocarditis.</li> <li>• Differentiate between types of IE in relation to its pathophysiology</li> <li>• Diagnose suspected and confirmed IE on the basis of criteria used</li> <li>• Manage infective endocarditis</li> <li>• List its complications</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with infective endocarditis</li> <li>• Perform clinical examination of a patient with infective endocarditis</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
58	<b>Pericardial diseases</b>	Constrictive pericarditis Pericardial effusion	<ul style="list-style-type: none"> <li>• Differentiate between types of Pericarditis on the basis of its etiology and pathophysiology</li> <li>• Identify acute and chronic complications of Pericarditis</li> <li>• Identify the clinical manifestation</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with Pericarditis/ Pericardial effusion</li> <li>• Perform clinical examination of a patient with Pericarditis/ Pericardial effusion</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			<p>of Pericarditis with diagnostic approach of Pericarditis.</p> <ul style="list-style-type: none"> <li>• State principles of management of Pericarditis.</li> <li>• List common causes and understand mechanism of pericardial effusion</li> <li>• Recognize early signs of pericardial tamponade</li> <li>• Justify the role of echocardiography in the diagnosis of pericardial effusion</li> </ul>			
59	<b>Cyanotic heart disease.</b>	<p>Congenital heart diseases (brief).  Atrial Septal Defect  Ventricular Septal Defect  Patent Ductus Arteriosus  Fallot's tetralogy  Other causes of cyanosis</p>	<ul style="list-style-type: none"> <li>• Identify common etiologies and risk factors for cyanotic heart defects.</li> <li>• Diagnose cyanotic heart defects based on clinical manifestations and appropriate diagnostic methods</li> <li>• Explain the pathophysiology, manifestations, diagnosis and management of acyanotic</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with cyanotic heart defects</li> <li>• Perform clinical examination of a patient with cyanotic heart defects</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			<p>congenital cardiac anomalies.</p> <ul style="list-style-type: none"> <li>• Elaborate the pathophysiology, manifestations, diagnosis and management of obstructive congenital anomalies.</li> <li>• Explain the pathophysiology, manifestations, diagnosis and management of cyanotic heart disease.</li> <li>• Identify the implications of cardiac anomalies for respiratory care.</li> </ul>			
60	<b>Valvular Heart Disease</b>	<p>Mitral valve. disease Aortic valve disease</p> <ul style="list-style-type: none"> <li>• Causes of Valvular Heart Disease</li> <li>• Etiology, pathogenesis and hemodynamics of <b>Valvular Heart Disease</b></li> <li>• Clinical finding, treatment of <b>Valvular Heart Disease</b></li> </ul>	<ul style="list-style-type: none"> <li>• list causes of Valvular Heart Disease</li> <li>• Describe Etiology, pathogenesis and hemodynamics of mitral/aortic valve disease.</li> <li>• <b>Outline management plan</b></li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with valvular disease.</li> <li>• Perform clinical examination of a patient with valvular disease.</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

		<ul style="list-style-type: none"> <li>Assessment, diagnosis and management of the patient with <b>Valvular Heart Disease</b></li> </ul>				
		Rheumatic fever- Diagnosis and treatment.	<ul style="list-style-type: none"> <li>Illustrate clinical features of rheumatic fever</li> <li>Diagnose Rheumatic fever on the basis of its Pathogenesis</li> <li>Devise the prevention and treatment plan of rheumatic fever.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient with rheumatic fever</li> <li>Perform clinical examination of a patient with rheumatic fever</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
61	<b>Cardiomyopathies</b>	Cardiomyopathies - Brief review	<ul style="list-style-type: none"> <li>Identify signs/symptoms of <b>Cardiomyopathies</b>.</li> <li>List its relevant investigations, treatment plan and its complications</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
62	<b>Investigations</b>	ECG.	<ul style="list-style-type: none"> <li>Review the electrophysiology of the heart as it relates to the ECG</li> <li>Interpret normal ECGs.</li> <li>Identify common errors in ECG recording.</li> <li>Recognize common characteristics</li> </ul>	Perform ECG	Lecture/ CBL and bedside teaching	

			<p>of abnormal heart rhythms.</p> <ul style="list-style-type: none"> <li>• Identify abnormal heart rhythms.</li> <li>• Differentiate between life threatening and non-life-threatening EKG rhythms</li> <li>• Identify components of the ECG waveform.</li> <li>• Employ a systematic process to evaluate and analyze ECG rhythm strips.</li> <li>• Recognize common ECG dysrhythmias.</li> <li>• List the common causes, consequences and patient management strategies for ECG dysrhythmias.</li> <li>• Provide physiological basis of the rate, rhythm and axis of ECG.</li> </ul>			
		ETT, ECHO, CT-Angiography and cardiac catheterization-Overview	<ul style="list-style-type: none"> <li>• Plan patient preparation for ECG</li> <li>• Select clinical protocol</li> </ul>		CBL & bedside teaching	

			<ul style="list-style-type: none"> <li>• Explain the role of a pre-contrast scan</li> <li>• Outline a contrast administration protocol</li> <li>• Identify access site anatomy, including femoral artery and vein, internal jugular vein, and brachial artery</li> <li>• List disease conditions (and surgical correction) involving these anatomic structures</li> <li>• Appreciate atherosclerotic disease of the ileo-femoral system and knowledge of surgical revascularization anatomy, including Aorto-bifemoral graft, Fem-fem bypass, and Fem-pop bypass.</li> <li>• Demonstrate understanding of basic aspects of cardiac ultrasound, including</li> </ul>			
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			<p>physical principles, instrumentation, cardiovascular anatomy, cardiovascular physiology, and cardiovascular pathophysiology.</p> <ul style="list-style-type: none"> <li>• Give an overview of cardiac CT angiography acquisition.</li> <li>• List the indications and C/I of cardiac investigations</li> </ul>			
<b>➤ PULMONOLOGY</b>						
63	<b>Allergic Disorders of respiratory system</b>	Bronchial Asthma	<ul style="list-style-type: none"> <li>• Relate I abnormalities of physiology of ventilation &amp; respiration to obstructive pulmonary diseases</li> <li>• Discuss the incidence, etiology, risk factors associated with asthma, pathophysiology and progression of asthma</li> <li>• Debate the short and long term complications</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient with bronchial asthma</li> <li>• Perform clinical examination to pick up the signs of bronchial asthma</li> <li>• Explain the methods to use inhaler/spacer</li> <li>• Teach the patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			<p>of obstructive diseases</p> <ul style="list-style-type: none"> <li>• Evaluate the prognosis of disease</li> <li>• Establish diagnosis of asthma through a focused history and physical exam</li> <li>• Advise investigations and workup of patient</li> <li>• Describe the procedure of pulmonary function tests and enlist criteria for diagnosing asthma and grading severity</li> <li>• Advise medication keeping in mind their mechanism of drug action, particularly SABA and ICS, Benefits, risks, limitations, Use patterns, compliance, device use</li> <li>• Evaluate the different medication delivery methods (and relevant</li> </ul>	<p>how to use a nebulizer</p>		
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			<p>compliance / educational issues)</p> <ul style="list-style-type: none"> <li>• Advise management plan for patients with acute exacerbations</li> <li>• Justify Non-pharmacological treatment</li> <li>• List Complications of drug therapy</li> </ul>			
64	<b>Interstitial lung diseases</b>	<p>ILD/ DPLD/EAA/IPF</p> <ul style="list-style-type: none"> <li>• Definition of ILD/DPLD/EAA/IPF</li> <li>• Etiology and Pathophysiology of parenchymal and interstitial lung diseases</li> <li>• Classification of diffuse parenchymal lung disease</li> <li>• Diagnosis and management</li> <li>• Nonpharmacologic therapies, including lifestyle changes and multidisciplinary care interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Determine the evaluation plan of patients with DPLD including exposure history, signs and symptoms, and results of diagnostic tests.</li> <li>• Critique current treatment of the DPLDs and their side effects</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with ILD/DPLD</li> </ul>	Lecture & bedside teaching	
		Sarcoidosis	<ul style="list-style-type: none"> <li>• Review the epidemiology of sarcoidosis.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> </ul>	Lecture & bedside teaching	

			<ul style="list-style-type: none"> <li>Recognize diverse clinical presentations of sarcoidosis on the basis of its pathophysiology</li> <li>Describe the clinical predictors for disease progression and outcomes.</li> <li>Devise a diagnostic pathway from a differential diagnosis.</li> <li>Propose plan for drug therapy and investigating the disease.</li> </ul>	<ul style="list-style-type: none"> <li>Perform clinical examination of patient</li> </ul>	(Case presentation) /SDL	
65	<b>Inflammatory diseases</b>	Tuberculosis- Diagnosis, Treatment 9DS- TB, MDR- TB, XDR- TB	<ul style="list-style-type: none"> <li>Review etiology, pathogenesis, risk factors and clinical features of TB</li> <li>Identify the components of a clinical evaluation of a patient with TB</li> <li>Advise lab investigations like Chest X-ray, Montoux test</li> <li>Prioritize the objectives of TB case management</li> </ul>	<ul style="list-style-type: none"> <li>Identify the signs and symptoms of the pt with TB</li> <li>Take history of a patient</li> <li>Perform clinical examination of patient with TB</li> </ul>	Lecture and bed side teaching/ CBL	

			<ul style="list-style-type: none"> <li>• Outline control and prevention modalities</li> <li>• List drug therapy and side effects of first and 2<sup>nd</sup> line anti tuberculosis drugs</li> <li>• List DOTS</li> <li>• Define diagnostic criteria of MDR TB</li> <li>• Devise treatment of multidrug resistant (MDR) and extensively drug-resistant tuberculosis (XDR TB)</li> <li>• Evaluate the prognosis of TB and treatment of opportunistic infections</li> <li>• List the aims of treatment of recommended doses of first-line anti-TB drugs for adults;</li> <li>• Develop treatment regimens for new and previously treated patients taking</li> </ul>			
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			<p>into consideration</p> <ul style="list-style-type: none"> <li>• Significance of standard regimens for defined patient groups, including</li> <li>• Special populations like pregnant women, children, and HIV infected patients.</li> <li>• Manage drug therapy and its complications.</li> </ul>			
		<p>Pneumonia</p> <ul style="list-style-type: none"> <li>• Definition, Etiological classification and risk factors predisposing to pneumonia</li> <li>• Pathophysiology and progression of disease</li> <li>• Clinical features and presentation of disease</li> <li>• Clinical evaluation and Investigations for diagnosis</li> <li>• Assessment of disease severity- CURB65</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnose Pneumonia on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose plan for prevention and follow up</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with pneumonia</li> </ul>	Lecture & bedside teaching	

		<ul style="list-style-type: none"> <li>• List of differential diagnosis</li> <li>• Management of disease and its complications</li> <li>• Antibiotic therapy and Supportive treatment</li> <li>• Pneumonias in specific populations: Immunocompromised and hospital acquired pneumonias</li> </ul>				
		Lung Abscess	<ul style="list-style-type: none"> <li>• Provide pathophysiological basis of lung abscess due to various etiological factors.</li> <li>• Diagnose lung abscess based on clinical presentation</li> <li>• Generate differential diagnosis based on clinical assessment of patient</li> <li>• Suggest appropriate lab investigations including chest X ray, sputum examination and</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with lung abscess</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			<p>hematological studies.</p> <ul style="list-style-type: none"> <li>• Devise plan for drug therapy, drainage and surgical intervention for management of lung abscess.</li> </ul>			
66	<b>Obstructive airway diseases</b>	COPD	<ul style="list-style-type: none"> <li>• Provide pathophysiological basis of COPD due to various etiological factors.</li> <li>• Diagnose lung abscess based on clinical presentation</li> <li>• Generate differential diagnosis based on clinical assessment of patient</li> <li>• Suggest appropriate lab investigations including chest X ray, sputum examination and hematological studies.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with lung abscess</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
67	<b>Respiratory Emergencies</b>	Adult respiratory distress syndrome. Pulmonary thromboembolism /Acute cor pulmonale.	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation relating to its</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient</li> </ul>	Lecture & bedside teaching/SDL	

			<p>etiology and pathophysiology</p> <ul style="list-style-type: none"> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> </ul>	<p>with pneumonia</p> <ul style="list-style-type: none"> <li>• Provide emergency treatment</li> </ul>		
		Respiratory Failure	<ul style="list-style-type: none"> <li>• Define diagnostic criteria of respiratory failure of varied etiology.</li> <li>• Differentiate between acute, chronic, and postoperative respiratory failure on the basis of</li> <li>• pathophysiology</li> <li>• Recognize the signs and symptoms of respiratory failure.</li> <li>• Apply alveolar gas equation to evaluate respiratory failure.</li> <li>• Recognize the changes in blood gases that accompany respiratory failure and</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with respiratory failure</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL/CBL	

			<p>other investigations</p> <ul style="list-style-type: none"> <li>Review major treatment strategies for respiratory failure and their monitoring.</li> </ul>			
68	<b>Tumours</b>	<p>Carcinoma Lung</p> <ul style="list-style-type: none"> <li>Etiology and risk factors for development of ca lung</li> <li>Pathophysiology and classification of lung cancers</li> <li>alternate treatment modalities like stenting and laser therapy</li> </ul>	<ul style="list-style-type: none"> <li>Elaborate plan for diagnosis of common types of lung cancers</li> <li>based on clinical presentations and</li> <li>Radiological appearance.</li> <li>Describe the grading and staging systems for lung Carcinomas</li> <li>Propose plan for chemotherapy, surgical interventions and radiotherapy for management of lung carcinomas</li> <li>Suggest alternate treatment modalities like stenting and laser therapy</li> <li>Evaluate prognosis and need for</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with Ca lung</li> </ul>	Lecture and bedside teaching	

			palliative care and			
69	<b>Miscellaneous</b>	Pneumothorax: Causes/ Diagnosis/ Management	<ul style="list-style-type: none"> <li>Classify pneumothorax based on etiological factors</li> <li>Provide Pathophysiological basis of clinical manifestations and differential diagnosis of pneumothorax.</li> <li>Develop plan for diagnosing and managing a patient of pneumothorax, including emergency treatment</li> <li>Identify measures for prevention of recurrence</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with pneumothorax</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
		Bronchiectasis	<ul style="list-style-type: none"> <li>Analyze the etiology and pathogenesis of bronchiectasis</li> <li>Diagnose bronchiectasis based on clinical features radiological and lab investigations</li> <li>Generate Differential diagnosis of bronchiectasis</li> <li>Develop plan for diagnosing</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient with bronchiectasis</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

			<p>and managing a patient of bronchiectasis, including drug therapy, surgical intervention and physiotherapy</p> <ul style="list-style-type: none"> <li>• Assess prognosis required measures for prevention</li> </ul>			
		Pulmonary Embolism	<ul style="list-style-type: none"> <li>• Elaborate, epidemiology and risk factors and preventive measures for pulmonary embolism</li> <li>• Recognize the clinical features and presenting symptoms of pulmonary embolism</li> <li>• Evaluate various modalities of investigations for diagnosis and differential diagnosis</li> <li>• Develop plan for pharmacological and surgical management of a patient with pulmonary embolism</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of patient with pulmonary embolism</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
		Pleural effusion types & causes	<ul style="list-style-type: none"> <li>• Apply basic concepts of important anatomic</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical</li> </ul>	CBL & bedside teaching	

			<p>features and physiologic function of the visceral and parietal pleural membranes to explain occurrence of pleural effusions</p> <ul style="list-style-type: none"> <li>• Differentiate between transudative and exudative effusions based on etiology, pathophysiology and risk factors.</li> <li>• Diagnose effusion based on clinical features and investigations.</li> <li>• Manage effusion appropriate to the underlying cause</li> </ul>	<p>examination of patient with pleural effusion.</p>		
70	<b>Examination of Chest</b>	Chest Auscultation	<ul style="list-style-type: none"> <li>• Justify Significance of chest auscultation in clinical examination</li> <li>• Apply basic concepts of anatomy and physiology of heart and lungs and related structures in relation to auscultation</li> <li>• Correlate biological</li> </ul>	<ul style="list-style-type: none"> <li>• Perform the correct procedure for carrying out chest auscultation</li> <li>• recognize normal breath sounds</li> <li>• identify Adventitious lung sounds: Wheezes, Crackles, Squeak,</li> </ul>	Lecture and bed side teaching	

			changes of the aging processes to the altered physical findings on chest and lung examination	Pleural rub and Stridor.		
71	<b>Investigations</b>	Chest X- ray Arterial blood Gases	<ul style="list-style-type: none"> <li>Identify anatomical features of heart and lungs on a chest x-ray</li> <li>interpret Arterial Blood Gases findings</li> <li>Learn the concept of atelectasis and the ability to recognize it on a chest x-ray</li> <li>justify reasons that make lung cancer unresectable</li> </ul>	<ul style="list-style-type: none"> <li>Appreciate the appearance of pulmonary edema and the differences between cardiogenic and noncardiogenic causes</li> <li>Recognize atelectasis on a chest x-ray</li> <li>Appreciate the difference findings of atelectasis and pneumonia</li> <li>Recognize pleural effusions and pneumothorax appear on CXR</li> <li>Recognize the signs of COPD</li> <li>Recognize the signs of a benign</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	

				<p>pulmonary nodule</p> <ul style="list-style-type: none"> <li>• Recognize the signs of COPD</li> <li>• Recognize the signs of a benign pulmonary nodule</li> </ul>		
72	<b>Therapy</b>	Oxygen Therapy: Various means & implications	<ul style="list-style-type: none"> <li>• Differentiate between ventilation, internal respiration, and external respiration.</li> <li>• Identify the major muscles of respiration.</li> <li>• Identify factors affecting external and internal respiration.</li> <li>• Define hypoxemia and hypoxia.</li> <li>• Identify the indications dangers, problems and contraindications for oxygen therapy</li> <li>• elaborate preventive measures for injury when working with oxygen.</li> <li>• Differentiate between low flow and high flow oxygen</li> </ul>		CBL	

			<p>delivery systems.</p> <ul style="list-style-type: none"> <li>Identify different oxygen delivery devices.</li> <li>Evaluate physiological basis of pulse oximetry, its.</li> <li>indications and limitations</li> </ul>			
		<p>Ventilator Techniques different modes and terms used in mechanical ventilation such as IPPV, PCV, PEEP, CPAP, BIPAP, NIPPV etc</p>	<ul style="list-style-type: none"> <li>Emphasize primary objective of airway maintenance</li> <li>list the indications for mechanical ventilation(MV)</li> <li>Identify ventilation strategies.</li> <li>alternative modes of MV and the basic principles of non-invasive ventilation</li> </ul>		CBL	
➤ <b>NEPHROLOGY, DIALYSIS &amp; TRANSPLANT</b>						
73	<b>Inflammatory Diseases</b>	<p>Urinary tract infections</p> <hr/> <p>Glomerulonephritis</p> <hr/> <p>Nephrotic syndrome Nephritic syndrome Renal TB</p>	<ul style="list-style-type: none"> <li>Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>Advise relevant investigations</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination of patient</li> <li>Counsel the patient</li> </ul>	Lecture & bedside teaching/SDL /CBL	

			<ul style="list-style-type: none"> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> </ul>	with renal failure		
74	<b>Miscellaneous</b>	Renal artery stenosis Renal tubular Acidosis Nephrolithiasis	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan</li> <li>• Propose preventive measures and follow up</li> </ul>			
75	<b>Renal failure</b>	AKI (Acute renal failure) CKD(Chronic renal failure)	<ul style="list-style-type: none"> <li>• Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology</li> <li>• Advise relevant investigations</li> <li>• Devise management plan and follow up</li> </ul>			
76	<b>Treatment</b>	Dialysis	<ul style="list-style-type: none"> <li>• List the different causes</li> </ul>			

			requiring dialysis <ul style="list-style-type: none"> <li>Enumerate steps of dialysis and its preparation</li> </ul>			
		Renal Transplant	<ul style="list-style-type: none"> <li>List the different causes requiring renal transplant</li> </ul>			
<p>➤ <b>INFECTIONS</b></p>						
77	<b>Diagnosis and management of common infectious diseases</b>	Typhoid/ Paratyphoid Fevers- Diagnosis and management	<ul style="list-style-type: none"> <li>Discuss the etiology and Enumerate the Symptoms and signs of the disease</li> <li>Elaborate Modes of transmission and the causative organism</li> <li>Identify Susceptible individuals</li> <li>Diagnose various stages of disease based on clinical and characteristic features.</li> <li>Suggest Diagnostic modalities and treatment options.</li> <li>Propose prevention options including vaccination.</li> </ul>	<ul style="list-style-type: none"> <li>Take history of a patient</li> <li>Perform clinical examination</li> <li>Establish diagnosis through a focused history and physical exam</li> <li>Counsel the patients about importance of hygiene and how to prevent contamination of food and by limiting vector and its breeding places</li> </ul>	Lecture & bedside teaching	
		Dengue Hemorrhagic Fever – Diagnosis and management				
		Malaria- Diagnosis and management				

78	<b>Septicemia</b>	Sepsis/ Septicemia Meningococcaemia – Diagnosis and management	<ul style="list-style-type: none"> <li>• Define Sepsis</li> <li>• Classify sepsis according to criteria</li> <li>• identify the organ involved and stage of the disease based on Clinical Presentation</li> <li>• Evaluate Diagnostic modalities, treatment options and.</li> <li>• complications of the disease</li> <li>• Propose drug treatment of sepsis and measures to prevent its progression</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with sepsis</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
79	<b>HIV/AIDS</b>	Acquired immune deficiency syndrome	<ul style="list-style-type: none"> <li>• Relate the etiology of AIDS to its Symptoms and signs</li> <li>• identify the modes of transmission</li> <li>• identify individuals susceptible to the disease</li> <li>• Diagnose the disease and its stage on the basis of clinical presentation, and laboratory findings</li> <li>• Evaluate various diagnostic modalities and</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /CBL/SDL	

			treatment options.			
80	<b>*Common disease syndromes caused by different bacteria and their drug therapy.</b>	<ul style="list-style-type: none"> <li>• Pneumococci</li> <li>• Staphylococci.</li> <li>• Streptococci.</li> <li>• Hemophilis influenzae.</li> <li>• Shigella.</li> <li>• Gonococci.</li> <li>• Pseudomonas.</li> <li>• Cholera.</li> <li>• Amoebiasis/Giar diasis</li> </ul>	*Already taught in different modules with respective system	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
➤ <b>ONCOLOGY , DISEASES OF LYMPH NODES &amp; BONE MARROW</b>						
81	<b>White blood cells tumours</b>	Lymphoma	<ul style="list-style-type: none"> <li>• Corelate abnormalities in the immune system and its processes to occurrence of lymphoma and its associated clinical presentation.</li> <li>• Identify organs associated with Lymphoma.</li> <li>• Delineate the diagnostic criteria of various stages on time based Characteristic features.</li> <li>• Propose diagnostic modalities and treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical examination of a patient with Lymphoma</li> </ul>	Lecture & bedside teaching (Case presentation) /SDL	
82	<b>Bone marrow tumors</b>	<ul style="list-style-type: none"> <li>• Acute Leukemia</li> <li>• Chronic Leukemia</li> </ul>	<ul style="list-style-type: none"> <li>• Classify various forms of acute and chronic Leukemia.</li> </ul>	<ul style="list-style-type: none"> <li>• Take history of a patient</li> <li>• Perform clinical</li> </ul>	Lecture & bedside teaching	

			<ul style="list-style-type: none"> <li>• Differentiate between Symptoms and signs, and characteristic features of acute and chronic Leukemia</li> <li>• Diagnose various stages of leukemia</li> <li>• Propose appropriate Investigations, diagnostic modalities and treatment options.</li> </ul>	examination of a patient with bone marrow tumors	(Case presentation) /SDL	
		Multiple Myeloma	<ul style="list-style-type: none"> <li>• Define the pathological basis of Multiple myeloma</li> <li>• Classify various stages based on clinical presentation</li> <li>• Justify the role of laboratory investigations and various treatment options</li> </ul>		Lecture & bedside teaching (Case presentation) /SDL	
		Myeloproliferative Disorders	<ul style="list-style-type: none"> <li>• Classify various forms of Myeloproliferative disorders based on Clinical Presentation.</li> <li>• Diagnoses various stages of the disease.</li> </ul>		Lecture & bedside teaching (Case presentation) /SDL	

			<ul style="list-style-type: none"> <li>Propose appropriate Investigations diagnostic modalities and treatment options.</li> </ul>			
➤	<b>CRITICAL CARE &amp; EMERGENCY*</b>					
➤	<b>PHARMACOTHERAPEUTICS*</b>					
<p><b><u>*Both modules XVIII and XIX are vertically integrated throughout the curriculum and taught as a part of each module where required</u></b></p>						

**PROCEDURE TO BE PERFORMED/ OBSERVED/ ASSISTED**

**a) Perform:**

- 1) Injection I/V, I/M, S/C, intradermal
- 2) Oxygen therapy
- 3) Urinary catheterisation – collection and samples of blood

**b) Observe:**

- 1) Observe I/V lines/Fluids/Blood/Blood products, direct, branula, cut down, CVP
- 2) N/G passing and feeding
- 3) Foley's catheter/Red rubber catheter, IOP record maintenance
- 4) Endotracheal tube placement
- 5) Endotracheal suction/maintenance of airway/nursing on side etc.
- 6) Aspiration of fluids (Pleural, Pericardial, Peritoneal, Knee)
- 7) Lumbar puncture
- 8) O<sub>2</sub> therapy
- 9) Nebulisation
- 10) ECG taking/reading basics
- 11) X-ray chest reading
- 12) Barium series
- 13) I/V urograms
- 14) Bone and joint X-ray reading for medical problems (Rheumatoid arthritis, Osteoarthritis, Collapse vertebra, Caries spine, Multiple myeloma, Cervical rib etc.)
- 15) Preparing a patient for endoscopies, upper and lower GIT
- 16) Bone marrow aspiration/Terph

## Pre-Annual/Final Professional Examination (Theory)

### MEDICINE PAPER – I (2020)

Time Allowed	03 hrs. (Including MCQs)
<b>MCQs:</b>	
a) Time Allowed	(1 Hour 20 Mins)
b) Total Questions (70)	Single best out of 4 options
c) Marks (1 mark each x 70)	70 marks
<b>SAQs/SEQs:</b>	
a) Time Allowed	(01 hour 40 Mins)
b) Total Questions	09
c) Marks (07 marks each x 8)	56
d) 09 marks x 1 (Dermatology)	09
e) Internal Assessment	15
✓ Total Marks	150
✓ Pass Marks	75

Topics	Number of MCQs (70) Recall: 07 (10%) Application: 63 (1 mark each)	Number of SAQs/SEQs (09) (Application) (5 mark each)
Dermatology	10	1
Poisoning/animal bites	04	1
Nutrition/obesity/ Cholesterol related & Genetic disorders	04	
Neurology/muscle disorders	12	1
Gastroenterology	10	2
Liver/pancreas	08	1
Rheumatology/ bones	10	1
Endocrinology	06	1
Diabetes	06	1
<b>Total</b>	<b>70 (70)</b>	<b>09 (65)</b>

## Pre-Annual/Final Professional Examination (Theory)

### MEDICINE PAPER – II (2020)

Time Allowed	03 hrs. (Including MCQs)
<b><u>MCQs:</u></b>	
• Time Allowed	( 1 Hour 20 Mins )
• Total Questions (70)	Single best out of 4 options
• Marks (1 mark each x 70)	70 marks
<b><u>SAQs/SEQs:</u></b>	
• Time Allowed	(01 hour 40 Mins)
• Total Questions	09
• Marks (07 marks each x 8)	56
• 09 marks x 1 (Psychiatry)	09
• Internal Assessment	15
✓ Total Marks	150
✓ Pass Marks	75

Topics	Number of MCQs (70) Recall: 07 Application: 63 (1 mark each)	Number of SAQs/SEQs (09) (5 mark each)
Psychiatry & Mental Health	10	1
Haematology & Transfusion Medicine	06	1
Cardiovascular system	13	2
Pulmonology	13	1
Nephrology, Dialysis & Transplant	09	1
Infections	09	1
Oncology, Diseases of Lymph Nodes & Bone Marrow	04	1
Critical Care & emergency	06	1
Pharmacotherapeutics	-	-
<b>Total</b>	<b>70 (70)</b>	<b>09 (65)</b>

## Table of Specification for Practical Examination- Medicine 2020

Max Marks = 270

Internal Assessment = 30

✓ Grand Total = 300

✓ Pass Marks = 150

CYCLE I (OSCE)												CYCLE II (in ward)						
8 x Non-Observed Static Stations								04 x Observed Static Station				04 x Short Case				1 x Long Case Observed & Structured		
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4			
Procedural skills/Diagnostic skills								Exam skills		Communication skills		Management skills		Exam skills				
DP/TP	IATF	TP	IATF	IATF	TP	IATF	IATF	SI	SI	OC		TP		CE				HT, CE, Clinical reasoning
Patient Safety/ Infection control	Picture	Drug	ECG	X-Ray/ CT Scan	Instruments	Haem Data Interpretation	Endo Data Interpretation	Dermatology	Psychiatry	Counselling		Emergency Medicine/ BLS/ ACLS		Respiratory System	Abdomen	CNS	CVS	Focused History & Examination/ investigation plan & Management plan
10	10	10	10	10	10	10	10	10	10	10		10		20	20	20	20	70
80 Marks								40 Marks				80 Marks				70 Marks		

<p><b>5 minutes for each station</b>  <b>12 x 5 = 60 Minutes</b>  <b>For 25 students = 125 Minutes= 2hrs 5 minutes</b></p>	<p><b>5 minutes for each station</b>  <b>For 04 students: 20 minutes</b>  <b>For 25 students = 140 Minutes</b>  <b>= 2 hrs 20 minutes</b></p>	<p><b>Two parallel long case</b></p> <ul style="list-style-type: none"> <li>• <b>15 minutes for each student</b></li> <li>• <b>For 13 students: 15 x 13 = 3 hours 25 minutes</b></li> </ul>
<ul style="list-style-type: none"> <li>• Static station must include Rheumatology, Endocrinology, Nephrology, Haematology</li> <li>• Number of rest stations depends upon the number of students</li> </ul>		

**Communication:** **HT**=Focused History Taking, **OC**=other communication.

**Examination:** **CE** = Clinical examination, **SI**= Sign Identification.

**Procedural skills:** **DP**=Diagnostic Procedure, **TP**=Therapeutic Procedure, **IATF**=Identification of Abnormal Test Finding

### **INTERNAL ASSESSMENT CALCULATION FOR THEORY PAPER**

Internal Assessment	
Periodical class tests / End of module /rotation exam	<b>30 Marks</b>

### **INTERNAL ASSESSMENT CALCULATION FOR PRACTICAL**

Internal Assessment	
Log book/CBL performance/ End of module /rotation practical Exam/OSCE/ Workshop	<b>30 Marks</b>