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Topic: Heart Failure			
IM1.1	Describe and discuss the epidemiology, pathogenesis clinical evolution and course of common causes of heart disease including: rheumatic/ valvular, ischemic, hypertrophic inflammatory	4	200-201 237-252
IM1.2	Describe and discuss the genetic basis of some forms of heart failure	4	217-237
IM1.3	Describe and discuss the aetiology microbiology pathogenies and clinical evolution of rheumatic fever, criteria, degree of rheumatic activity and rheumatic valvular heart disease and its complications including infective endocarditis	4	237-245 252
IM1.4	Stage heart failure	4	279
IM1.5	Describe ,discuss and differentiate the processes involved in R Vs L heart failure, systolic vs diastolic failure	4	256-257
IM1.6	Describe and discuss the compensatory mechanisms involved in heart failure including cardiac remodelling and neurohormonal adaptations	4	258-263
IM1.9	Describe and discuss the clinical presentation and features, diagnosis, recognition and management of acute rheumatic fever	4	237-238
IM1.11	Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and estimate its severity including: measurement of pulse, blood pressure and respiratory rate, jugular venous forms and pulses, peripheral pulses, conjunctiva and fundus, lung, cardiac examination including palpation and auscultation with identification of heart sounds and murmurs, abdominal distension and splenic palpation	4	194-217
IM1.12	Demonstrate peripheral pulse, volume, character, quality and variation in various causes of heart failure	4	255
IM1.13	Measure the blood pressure accurately, recognise and discuss alterations in blood pressure in valvular heart disease and other causes of heart failure and cardiac tamponade	4	255-264
IM1.17	Order and interpret diagnostic testing based on the clinical diagnosis including 12 lead ECG, Chest radiograph, blood cultures	4	199-217
IM1.19	Enumerate the indications for and describe the findings of heart failure with the following conditions including: 2D echocardiography, brain natriuretic peptide, exercise testing, nuclear medicine testing and coronary angiogram	4	256-262
IM1.21	Describe and discuss and identify the clinical features of acute and subacute endocarditis, echocardiographic findings, blood culture and sensitivity and therapy	4	252-255
IM1.24	Describe and discuss the pharmacology of drugs including indications, contraindications in the management of heart failure including diuretics, ACE inhibitors, Beta blockers, aldosterone antagonists and cardiac glycosides	4	258
Topic: Acute Myocardial Infarction			
IM2.1	Discuss and describe the epidemiology, antecedents and risk factors for atherosclerosis and ischemic heart disease	4	276
IM2.2	Discuss the aetiology of risk factors both modifiable and non modifiable of atherosclerosis and IHD	4	281
IM2.5	Define the various acute coronary syndromes and describe their evolution, natural history and outcomes	4	272
IM2.9	Distinguish and differentiate between stable and unstable angina and AMI based on the clinical presentation	4	278
IM2.10	Order, perform and interpret an ECG	4	277-278
IM2.11	Order and interpret a Chest X-ray and markers of acute myocardial infarction	4	277-278

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Topic: Pneumonia			
IM3.1	Define, discuss, describe and distinguish community acquired pneumonia, nosocomial pneumonia and aspiration pneumonia	5	340-342
IM3.2	Discuss and describe the aetiologies of various kinds of pneumonia and their microbiology depending on the setting and immune status of the host	5	340
IM3.3	Discuss and describe the pathogenesis, presentation, natural history and complications of pneumonia	5	340
IM3.5	Perform, document and demonstrate a physical examination including general examination and appropriate examination of the lungs that establishes the diagnosis, complications and severity of disease	5	340-342
IM3.6	Generate document and present a differential diagnosis based on the clinical features, and prioritise the diagnosis based on the presentation	5	342
IM3.7	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X-ray PA view, Mantoux, sputum gram stain, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing and ABG	5	347-349
IM3.8	Demonstrate in a mannequin and interpret results of an arterial blood gas examination	5	319
IM3.9	Demonstrate in a mannequin and interpret results of a pleural fluid aspiration	5	320
IM3.11	Describe and enumerate the indications for further testing including HRCT, Viral cultures, PCR and specialised testing	5	107, 350
IM3.14	Perform and interpret a sputum gram stain and AFB	5	331
Topic: Fever and Febrile Syndromes			
IM4.1	Describe and discuss the febrile response and the influence of host immune status, risk factors and comorbidities on the febrile response	1	22-25
IM4.2	Describe and discuss the influence of special populations on the febrile response including: the elderly, immune suppression, malignancy and neutropenia, HIV and travel	1	25-28
IM4.3	Discuss and describe the common causes, pathophysiology and manifestations of fever in various regions in India including bacterial, parasitic and viral causes (e.g. Dengue, Chikungunya, Typhus)	1	23-25
IM4.5	Describe and discuss the pathophysiology and manifestations of malignant causes of fever including hematologic and lymph node malignancies	1	27
IM4.6	Discuss and describe the pathophysiology and manifestations of malaria	3	131-135
IM4.8	Discuss and describe the pathophysiology, aetiology and clinical manifestations of fever of unknown origin (FUO) including in a normal host, neutropenic host, nosocomial host and a host with HIV disease	1	26
IM4.10	Perform a systematic examination that establishes the diagnosis and severity of presentation that includes: general skin mucosal and lymph node examination, chest and abdominal examination (including examination of the liver and spleen)	1	27-28
IM4.15	Perform and interpret a malarial smear	3	133
IM4.22	Describe and discuss the pharmacology, indications, adverse reactions, interactions of antimalarial drugs and basis of resistance	3	134-135
IM4.23	Prescribe drugs for malaria based on the species identified, prevalence of drug resistance and national programs	3	134-135
Topic: Liver disease			
IM5.3	Describe and discuss the pathologic changes in various forms of liver disease	5	399-402
IM5.4	Describe and discuss the epidemiology, microbiology, immunology and clinical evolution of infective (viral) hepatitis	5	404-406
IM5.5	Describe and discuss the pathophysiology and clinical evolution of alcoholic liver disease	5	410-411
IM5.12	Choose and interpret appropriate diagnostic tests including: CBC, bilirubin, function tests, Hepatitis serology and ascitic fluid examination in patient with liver diseases.	5	402
IM5.15	Assist in the performance and interpret the findings of an ascitic fluid analysis	5	415-416
IM5.16	Describe and discuss the management of hepatitis, cirrhosis, portal hypertension, ascites spontaneous, bacterial peritonitis and hepatic encephalopathy	5	409-414
IM5.18	Enumerate the indications for hepatic transplantation	5	428-429
Topic: HIV			
IM6.2	Define and classify HIV AIDS based on the CDC criteria	3	123
IM6.3	Describe and discuss the relationship between CDC count and the risk of opportunistic infections	3	124-128
IM6.4	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related opportunistic infections	3	124-128

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IM6.5	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related malignancies	3	127
IM6.9	Choose and interpret appropriate diagnostic tests to diagnose and classify the severity of HIV-AIDS including specific tests of HIV, CDC	3	128
IM6.16	Discuss and describe the principles of HAART, the classes of antiretrovirals used, adverse reactions and interactions	3	129-130
Topic: Rheumatologic problems			
IM7.3	Classify cause of joint pain based on the pathophysiology	11	764
IM7.4	Develop a systematic clinical approach to joint pain based on the pathophysiology	11	765-766
IM7.5	Describe and discriminate acute, subacute and chronic causes of joint pain	11	766-767
IM7.6	Discriminate, describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain	11	773
IM7.10	Describe the systemic manifestations of rheumatologic disease	11	768-769
IM7.19	Develop an appropriate treatment plan for patients with rheumatologic diseases	11	770-773
Topic: Hypertension			
IM8.1	Describe and discuss the epidemiology, aetiology and the prevalence of primary and secondary hypertension	4	182-183
IM8.2	Describe and discuss the pathophysiology of hypertension	4	182-183
IM8.4	Define and classify hypertension	4	183
IM8.5	Describe and discuss the differences between primary and secondary hypertension	4	183
Topic: Anemia			
IM9.1	Define, describe and classify anemia based on red blood cell size and reticulocyte count	7	438-439
IM9.2	Describe and discuss the morphological characteristics, aetiology and prevalence of each of the causes of anemia	7	439-446
IM9.6	Describe the appropriate diagnostic work up based on the presumed aetiology	7	440-441
IM9.8	Describe and discuss the various tests for iron deficiency	7	440-442
IM9.9	Order and interpret tests for anemia including hemogram, red cell indices, reticulocyte count, iron studies, B_{12} and folate	7	442-443
Topic: Acute Kidney Injury and Chronic renal failure			
IM10.1	Define, describe and differentiate between acute and chronic renal failure	8	500, 504
IM10.2	Classify, describe and differentiate the pathophysiologic causes of acute renal failure	8	500-501
IM10.3	Describe the pathophysiology and causes of pre renal ARF, renal and post renal ARF	8	500-501
IM10.4	Describe the evolution, natural history and treatment of ARF	8	503
IM10.5	Describe and discuss the aetiology of CRF	8	504
IM10.6	Stage Chronic Kidney Disease	8	504
IM10.9	Describe and discuss the pathophysiology of anemia and hyperparathyroidism in CKD	5	505
IM10.10	Describe and discuss the association between CKD glycemia and hypertension	5	505
IM10.12	Elicit document and present a medical history that will differentiate the aetiologies of disease, distinguish acute and chronic disease, identify predisposing conditions, nephrotoxic drugs and systemic causes	5	505
IM10.25	Identify and describe the priorities in the management of ARF including diet, volume management, alteration in doses of drugs, monitoring and indications for dialysis	5	507
IM10.26	Describe and discuss supportive therapy in CKD including diet, anti hypertensives, glycemic therapy, dyslipidemia, anemia, hyperkalemia, hyperphosphatemia and secondary hyperparathyroidism	5	507
IM10.27	Describe and discuss the indications for renal dialysis	5	507
Topic: Diabetes Mellitus			
IM11.1	Define and classify diabetes	10	718
IM11.2	Describe and discuss the epidemiology and pathogenesis and risk factors and clinical evolution of type 1 diabetes	10	718
IM11.3	Describe and discuss the epidemiology and pathogenesis and risk factors economic impact and clinical evolution of type 2 diabetes	10	726
IM11.4	Describe and discuss the genetic background and the influence of the environment on diabetes	10	719

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IM11.7	Elicit document and present a medical history that will differentiate the aetiologies of diabetes including risk factors, precipitating factors, lifestyle, nutritional history, family history, medication history, co-morbidities and target organ disease	10	720
IM11.8	Perform a systematic examination that establishes the diagnosis and severity that includes skin, peripheral pulses, blood pressure measurement, fundus examination, detailed examination of the foot (pulses, nervous and deformities and injuries)	10	719-720
IM11.9	Describe and recognise the clinical features of patients who present with a diabetic emergency	10	720
IM11.10	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology		
IM11.11	Order and interpret laboratory tests to diagnose diabetes and its complications including: glucoses, glucose tolerance test, glycosylated hemoglobin, urinary micro albumin, ECG, electrolytes, ABG, ketones, renal function tests and lipid profile	10	720
IM11.17	Outline a therapeutic approach to therapy of T2Diabetes based on presentation, severity and complications in a cost effective manner	10	727-728
IM11.18	Describe and discuss the pharmacology, indications, adverse reactions and interactions of drugs used in the prevention and treatment of target organ damage and complications of Type II Diabetes including neuropathy, nephropathy, retinopathy, hypertension, dyslipidemia and cardiovascular disease	10	728
IM11.19	Demonstrate and counsel patients on the correct technique to administer insulin	10	729
IM11.22	Enumerate the causes of hypoglycaemia and describe the counter hormone response and the initial approach and treatment	10	721-722
IM11.23	Describe the precipitating causes, pathophysiology, recognition, clinical features, diagnosis, stabilisation and management of diabetic ketoacidosis	10	734
IM11.24	Describe the precipitating causes, pathophysiology, recognition, clinical features, diagnosis, stabilisation and management of Hyperosmolar non ketotic state	10	737
Topic: Thyroid dysfunction			
IM12.1	Describe the epidemiology and pathogenesis of hypothyroidism and hyperthyroidism including the influence of iodine deficiency and autoimmunity in the pathogenesis of thyroid disease	10	691, 695
IM12.2	Describe and discuss the genetic basis of some forms of thyroid dysfunction	10	691
IM12.3	Describe and discuss the physiology of the hypothalamopituitary - thyroid axis, principles of thyroid function testing and alterations in physiologic function	10	691
IM12.4	Describe and discuss the principles of radio iodine uptake in the diagnosis of thyroid disorders	10	694
IM12.6	Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and severity including systemic signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of the thyroid and lymph nodes and cardiovascular findings	10	694, 698
IM12.8	Generate a differential diagnosis based on the clinical presentation and prioritise it based on the most likely diagnosis	10	698-699
IM12.9	Order and interpret diagnostic testing based on the clinical diagnosis including CBC, thyroid function tests and ECG and radio iodine uptake and scan	10	693-700
IM12.11	Interpret thyroid function tests in hypo and hyperthyroidism	10	691, 693, 694, 699, 700
IM12.12	Describe and discuss the iodisation programs of the government of India		
IM12.13	Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs	10	694, 695, 698
IM12.15	Describe and discuss the indications of thionamide therapy, radio iodine therapy and surgery in the management of thyrotoxicosis	10	694, 695
Topic: Obesity			
IM14.1	Define and measure obesity as it relates to the Indian population	2	63
IM14.2	Describe and discuss the aetiology of obesity including modifiable and non-modifiable risk factors and secondary causes	2	63-65
IM14.4	Describe and discuss the impact of environmental factors including eating habits, food, work, environment and physical activity on the incidence of obesity	2	64
IM14.5	Describe and discuss the natural history of obesity and its complications	2	65-66
IM14.6	Elicit and document and present an appropriate history that includes the natural history, dietary history, modifiable risk factors, family history, clues for secondary causes and motivation to lose weight	2	65-66

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IM14.7	Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities	2	64
IM14.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	2	63-64
IM14.15	Describe and enumerate and educate patients, health care workers and the public on measures to prevent obesity and promote a healthy lifestyle	2	65-66
Topic: GI Bleeding			
IM15.1	Enumerate, describe and discuss the aetiology of upper and lower GI bleeding	6	384, 394-395
IM15.2	Enumerate, describe and discuss the evaluation and steps involved in stabilizing a patient who presents with acute volume loss and GI bleed	6	384
IM15.4	Elicit and document and present an appropriate history that identifies the route of bleeding, quantity, grade, volume loss, duration, etiology, comorbid illnesses and risk factors	6	385, 395
Topic: Diarrheal disorder			
IM16.1	Describe and discuss the aetiology of acute and chronic diarrhea including infectious and non infectious causes	6	385
IM16.2	Describe and discuss the acute systemic consequences of diarrhea including its impact on fluid balance	6	386
IM16.3	Describe and discuss the chronic effects of diarrhea including malabsorption	6	387
IM16.5	Perform, document and demonstrate a physical examination based on the history that includes general examination, including an appropriate abdominal examination	6	386, 387
IM16.6	Distinguish between diarrhea and dysentery based on clinical features	6	387
Topic: Headache			
IM17.1	Define and classify headache and describe the presenting features, precipitating factors, aggravating and relieving factors of various kinds of headache	9	617-618
IM17.2	Elicit and document and present an appropriate history including aura, precipitating aggravating and relieving factors, associated symptoms that help identify the cause of headaches	9	617
IM17.3	Classify migraine and describe the distinguishing features between classical and non classical forms of migraine	9	617
IM17.4	Perform and demonstrate a general neurologic examination and a focused examination for signs of intracranial tension including neck signs of meningitis	9	618
IM17.5	Generate document and present a differential diagnosis based on the clinical features, and prioritise the diagnosis based on the presentation	9	617-618
IM17.8	Demonstrate in a mannequin or equivalent the correct technique for performing a lumbar puncture	9	619
IM17.12	Describe the indications, pharmacology, dose, side effects of prophylactic therapy in migraine	9	618
IM17.13	Describe the pharmacology, dose, adverse reactions and regimens of drugs used in the treatment of bacterial, tubercular and viral meningitis	9	639-641
IM17.14	Counsel patients with migraine and tension headache on lifestyle changes and need for prophylactic therapy	9	619
Topic: Cerebrovascular accident			
IM18.1	Describe the functional and the vascular anatomy of the brain	9	601-603
IM18.2	Classify cerebrovascular accidents and describe the aetiology, predisposing genetic and risk factors pathogenesis of hemorrhagic and non hemorrhagic stroke	9	599-600
IM18.3	Elicit and document and present an appropriate history including onset, progression, precipitating and aggravating relieving factors, associated symptoms that help identify the cause of the cerebrovascular accident	9	605-606
IM18.10	Choose and interpret the appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA)	9	607-608
IM18.11	Describe the initial supportive management of a patient presenting with a cerebrovascular accident (CVA)	9	608-609
IM18.14	Describe the initial management of a hemorrhagic stroke	9	608-609, 612
IM18.15	Enumerate the indications for surgery in a hemorrhagic stroke	9	612
Topic: Movement disorders			
IM19.1	Describe the functional anatomy of the locomotor system of the brain		
IM19.2	Classify movement disorders of the brain based on distribution, rhythm, repetition, exacerbating and relieving factors	9	622-623

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IM19.3	Elicit and document and present an appropriate history including onset, progression precipitating and aggravating relieving factors, associated symptoms that help identify the cause of the movement disorders	9	622-623
IM19.7	Choose and interpret diagnostic and imaging tests in the diagnosis of movement disorders	9	624
IM19.8	Discuss and describe the pharmacology, dose, side effects and interactions used in the drug therapy of Parkinson's syndrome	9	625-626
IM19.9	Enumerate the indications for use of surgery and botulinum toxin in the treatment of movement disorders	9	625
Topic: Mineral, Fluid Electrolyte and Acid base Disorder			
IM22.1	Enumerate the causes of hypercalcemia and distinguish the features of PTH vs non PTH mediated hypercalcemia	8	511
IM22.3	Describe the approach to the management of hypercalcemia	8	511
IM22.5	Enumerate the causes and describe the clinical features and the correct approach to the diagnosis and management of the patient with hyponatremia	8	509-510
IM22.6	Enumerate the causes and describe the clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hyponatremia	8	510
IM22.7	Enumerate the causes and describe the clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hypokalemia	8	510-511
IM22.8	Enumerate the causes and describe the clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hyperkalemia	8	511-512
IM22.9	Enumerate the causes and describe the clinical and laboratory features of metabolic acidosis	8	513
IM22.10	Enumerate the causes of describe the clinical and laboratory features of metabolic alkalosis	8	514
IM22.11	Enumerate the causes and describe the clinical and laboratory features of respiratory acidosis	8	513
IM22.12	Enumerate the causes and describe the clinical and laboratory features of respiratory alkalosis	8	514
IM22.13	Identify the underlying acid based disorder based on an ABG report and clinical situation	8	514-515
Topic: Nutritional and Vitamin Deficiencies			
IM23.1	Discuss and describe the methods of nutritional assessment in an adult and calculation of caloric requirements during illnesses	2	49
IM23.2	Discuss and describe the causes and consequences of protein caloric malnutrition in the hospital	2	50-57
IM23.3	Discuss and describe the aetiology, causes, clinical manifestations, complications, diagnosis and management of common vitamin deficiencies	2	52-58
Topic: Geriatrics			
IM24.1	Describe and discuss the epidemiology, pathogenesis, clinical evolution, presentation and course of common diseases in the elderly	13	830-832
IM24.2	Perform multidimensional geriatric assessment that includes medical, psycho-social and functional components	13	830
IM24.3	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of acute confusional states	13	833
IM24.4	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vascular events in the elderly	13	833
IM24.6	Describe and discuss the aetiopathogenesis causes, clinical presentation, difference in discussion presentation identification, functional changes, acute care, stabilization, management and rehabilitation of dementia in the elderly	13	833
IM24.7	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of personality changes in the elderly	13	832
IM24.13	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of falls in the elderly	9	833
Topic: Miscellaneous Infections			
IM25.1	Describe and discuss the response and the influence of host immune status, risk factors and comorbidities on zoonotic diseases (e.g. Leptospirosis, Rabies) and non-febrile infectious disease (e.g. Tetanus)	3	119-120, 99-100, 75-76
IM25.2	Discuss and describe the common causes, pathophysiology and manifestations of these diseases	3	119-120, 99-100, 75-76