

# GENERAL MEDICINE ANNEXURE - 38

## APPENDIX - I

### CBME CURRICULUM - (UG) - MEDICINE

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#### 1 Heart Failure

	COMPETENCY The student should be able to		SLOs
IM1.1	Describe and Discuss the epidemiology, pathogenesis, clinical evolution and course of common causes of heart disease including Rheumatic/valvular, Ischemic, hypertrophic, inflammatory	IM1.1.1	Discuss approach to heart disease.
		IM1.1.2	Discuss broad classification of heart disease based on clinical evolution
		IM1.1.3	Discuss clinical course of each class
IM1.2	Describe and discuss genetic basis of heart failure.		
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	IM1.3.1	Discuss acute rheumatic fever.
		IM1.3.2	Discuss rheumatic valvular heart disease
		IM1.3.3	Discuss complications of rheumatic valvular heart disease
		IM1.3.4	Discuss Infective endocarditis.
IM1.4	Stage heart failure	IM1.4.1	Discuss heart failure with reduced ejection fraction
		IM1.4.2	Discuss heart failure with preserved ejection fraction
		IM1.4.3	Discuss acute decompensated heart failure
		IM1.4.4	Discuss advanced heart

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IM1.10	Elicit document and present an appropriate history that will establish the diagnosis, cause and severity of heart failure including: presenting complaints, precipitating and exacerbating factors, risk factors exercise tolerance, changes in sleep patterns, features suggestive of infective endocarditis	IM1.10.1	Elicit document and present history to establish the diagnosis of heart failure its cause and severity.
		IM1.10.2	Elicit document and present history of presenting complaints, precipitating and exacerbating factors, risk factors , exercise tolerance, changes in sleep patterns
		IM1.10.3	Elicit document and present history of features suggestive of infective endocarditis
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	IM1.11.1	Perform and demonstrate a measurement of pulse
		IM1.11.2	Perform and demonstrate peripheral pulses
		IM1.11.3	Perform and demonstrate conjunctiva and fundus
		IM1.11.4	Perform and demonstrate lung, cardiac palpation
		IM1.11.5	Perform and demonstrate auscultation with identification of heart sounds and murmurs
		IM1.11.6	Perform and

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			diagnosis and prioritise them based on the most likely diagnosis as first one
IM1.17	Order and interpret diagnostic testing based on the clinical group discussion diagnosis including 12 lead ECG, Chest radiograph, blood cultures	IM1.17.1	Order the investigations based on the clinical group discussion diagnosis including 12 lead ECG, Chest radiograph, blood cultures
		IM1.17.2	Interpret the investigations based on the clinical group discussion diagnosis including 12 lead ECG, Chest radiograph, blood cultures
IM1.18	Perform and interpret a 12 lead ECG	IM1.18.1	Perform a 12 lead ECG
		IM1.18.2	Interpret a 12 lead ECG
IM 1.19	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	IM 1.19.1	Enumerate the indications of doing 2D echocardiography in heart failure
		IM 1.19.2	Describe the ECHO findings in heart failure
		IM 1.19.3	Discuss the role of brain natriuretic peptide in diagnosis of heart failure
		IM 1.19.4	Discuss the role of exercise testing in heart failure
		IM 1.19.5	Discuss the role of nuclear medicine testing in heart failure
		IM 1.19.6	Discuss the role of coronary angiogram in heart failure
IM1.20	Determine the severity of valvular heart	IM1.20.1	Discuss the clinical

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		IM 1.23.3	Discuss the effect of lifestyle habits like smoking and alcohol
		IM 1.23.4	Role of vaccination
IM 1.24	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	IM 1.24.1	Describe the pharmacological mechanism of action of drugs
		IM 1.24.2	Discuss the indications and contraindications in management
IM 1.25	Enumerate the indications for valvuloplasty, valvotomy, coronary revascularization and cardiac transplantation		
IM 1.26	Develop document and present a management plan for patients with heart failure based on type of failure, underlying aetiology	IM 1.26.1	Develop an algorithm for management of heart failure
IM 1.27	Describe and discuss the role of penicillin prophylaxis in the prevention of rheumatic heart disease		
IM 1.28	Enumerate the causes of adult presentations of congenital heart disease and describe the distinguishing features between cyanotic and acyanotic heart disease	IM 1.28.1	Causes of congenital heart diseases presenting in adulthood
		IM 1.28.2	Enumerate the differentiating features of cyanotic and acyanotic congenital heart disease
IM 1.29	Elicit document and present an appropriate history, demonstrate correctly general examination relevant clinical findings, formulate document and present a management plan for an adult patient presenting with a common form of congenital heart disease	IM 1.29.1	History taking
		IM 1.29.2	General and system specific examination
IM 1.30	Administer an intramuscular injection		

	disease		
		IM2.1.2	Describe the role of atherosclerosis in Ischaemic heart disease
		IM2.1.3	Discuss Epidemiology of Atherosclerosis and Ischaemic Heart Disease
		IM2.1.4	Enumerate the antecedents and risk factors for Atherosclerosis and Ischaemic Heart Disease
IM2.2	Discuss the aetiology of risk factors both modifiable and non-modifiable of atherosclerosis and IHD	IM2.2.1	What are the non-modifiable risk factors of atherosclerosis and IHD
		IM2.2.2	Discuss the etiology of modifiable risk factors of atherosclerosis and ischemic heart disease
		IM2.2.3	Describe the etiology of non-modifiable risk factors of atherosclerosis and Ischemic heart disease
IM2.3	Discuss and describe the lipid cycle and the role of dyslipidemia in the pathogenesis of atherosclerosis	IM2.3.1	Describe the lipid cycle
		IM2.3.2	Define dyslipidemia
		IM2.3.3	Discuss the role of dyslipidemia in the pathogenesis of atherosclerosis
IM2.4	Discuss and describe the pathogenesis natural history, evolution and complications of atherosclerosis and IHD	IM2.4.1	Discuss the pathogenesis of atherosclerosis and IHD
		IM2.4.2	Describe the natural history and evolution of atherosclerosis and IHD
		IM2.4.3	Describe the complications of atherosclerosis and IHD
IM2.5	Define the various acute coronary syndromes and describe their evolution, natural history and outcomes	IM2.5.1	Enumerate the various acute coronary syndromes
		IM2.5.2	Define the various acute coronary syndromes
		IM2.5.3	Discuss the evolution

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			clinical presentation
		IM2.7.3	Document a physical examination including a vascular and cardiac examination that is appropriate for the clinical presentation
IM2.8	Generate document and present a differential diagnosis based on the clinical presentation and prioritise based on "cannot miss", most likely diagnosis and severity	IM2.8.1	Document a differential diagnosis based on the clinical presentation
		IM2.8.2	Present a differential diagnosis based on the clinical presentation
		IM2.8.3	Present a differential diagnosis prioritised based on "cannot miss", most likely diagnosis and severity
IM2.9	Distinguish and differentiate between stable and unstable angina and AMI based on the clinical presentation	IM2.9.1	Describe the clinical features of stable and unstable angina
		IM2.9.2	Discuss the clinical presentation of AMI
		IM2.9.3	Differentiate between stable and unstable angina and AMI based on the clinical presentation
IM2.10	Order, perform and interpret an ECG	IM2.10.1	Order an ECG in ACS
		IM2.10.2	Perform an ECG in ACS
		IM2.10.3	Interpret an ECG in ACS
IM2.11	Order and interpret a Chest X-ray and markers of acute myocardial infarction	IM2.11.1	Order a Chest X-ray for acute myocardial infarction
		IM2.11.2	Interpret a Chest X-ray of acute myocardial infarction
		IM2.11.3	Order markers of acute myocardial infarction
		IM2.11.4	Interpret markers of acute myocardial infarction
IM2.12	Choose and interpret a lipid profile and identify the desirable lipid profile in the clinical context	IM2.12.1	Interpret a lipid profile in the clinical context

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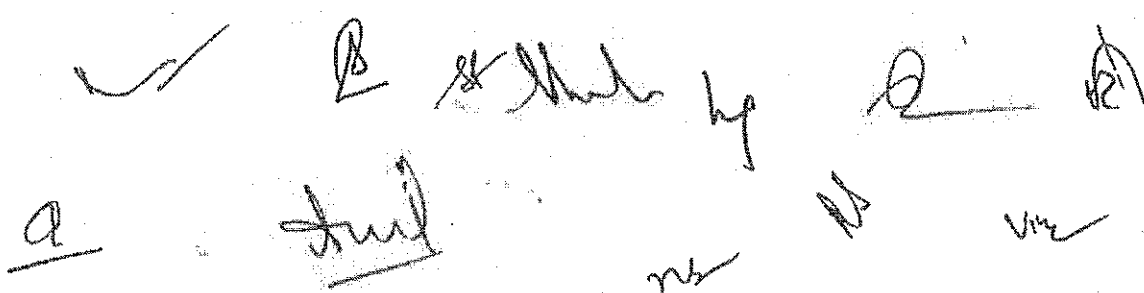
			the relatives of a patient having Acute MI and prognosis of the patient
IM2.17	Discuss and describe the indications and methods of cardiac rehabilitation	IM2.17.1	Discuss the indications of cardiac rehabilitation
		IM2.17.2	Describe various methods of cardiac rehabilitation
IM2.18	Discuss and describe the indications, formulations, doses, side effects and monitoring for drugs used in the management of dyslipidemia	IM2.18.1	Classify the categories of dyslipidemia in a tabular format
		IM2.18.2	classify the drugs used in management of dyslipidemias giving suitable example of each, including newer drugs
		IM2.18.3	Briefly describe the indications ,doses ,formulation and adverse of each class of drugs (including therapeutic monitoring)
IM2.19	Discuss and describe the pathogenesis, recognition and management of complications of acute coronary syndromes including arrhythmias, shock, LV dysfunction, papillary muscle rupture and pericarditis	IM2.19.1	Describe the types and etiopathogenesis of ACS
		IM2.19.2	Briefly describe the clinical manifestations of both electrical and mechanical complications and Acute and chronic complications of acute MI
		IM2.19.3	Discuss the management of electrical complications(VT,VF)and mechanical complications of acute MI
IM2.20	Discuss and describe the assessment and relief of pain in acute coronary syndromes	IM2.20.1	Enumerate the classes of anti-anginals drugs used in clinical practice with

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	COMPETENCY The student should be able to		SLOs
IM3.1	Define, discuss, describe and distinguish community acquired pneumonia, nosocomial pneumonia and aspiration pneumonia	IM3.1.1	Define CAP
		IM3.1.2	Define nosocomial Pneumonia
		IM3.1.3	Define aspiration

## 3 PNEUMONIA


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	Mantoux, sputum gram stain, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing and ABG		
		IM3.7.2	Interpret results of investigations for pneumonia
IM3.8	Demonstrate in a mannequin and interpret results of an arterial blood gas examination	IM3.8.1	Perform ABG in a mannequin
		IM3.8.2	Interpret ABG analysis
IM3.9	Demonstrate in a mannequin and interpret results of a pleural fluid aspiration	IM3.9.1	Perform pleural fluid aspiration in a mannequin
		IM3.9.2	Interpret results of pleural fluid analysis
IM3.10	Demonstrate the correct technique in a mannequin and interpret results of a blood culture	IM3.10.1	Demonstrate technique of obtaining a blood culture
		IM3.10.2	Interpret results of blood culture
IM3.11	Describe and enumerate the indications for further testing including HRCT, Viral cultures, PCR and specialised testing.	IM3.11.1	Enumerate additional investigations in a case of pneumonia
IM3.12	Select, describe and prescribe based on the most likely aetiology, an appropriate empirical antimicrobial based on the pharmacology and antimicrobial spectrum	IM3.12.1	Describe and prescribe empirical antimicrobial treatment in a case of pneumonia
IM3.13	Select, describe and prescribe based on culture and sensitivity appropriate empirical antimicrobial based on the pharmacology and antimicrobial spectrum.	IM3.13	Describe and prescribe antimicrobial treatment of pneumonia based on culture and sensitivity
IM3.14	Perform and Interpret a sputum gram stain and AFB		
IM3.15	Describe and enumerate the indications for hospitalisation in patients with pneumonia	IM3.15.1	Describe and enumerate investigations in CAP
		IM3.15.2	Describe hospital CURB-65
		IM3.15.3	Describe management of CAP
		IM3.15.4	Enumerate Indications for referral to ITU

			immune status of the host
		IM 4.1.4	Discuss the effects of co-morbidities on febrile response
		IM 4.1.5	Discuss how presence of risk factors and co-morbidities can change the final outcome
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	IM 4.2.1	Describe clinical presentation, management and outcome of febrile response in elderly
		IM 4.2.2	Describe clinical presentation, management and outcome of febrile response in immuno-compromised host
		IM 4.2.3	Describe clinical presentation, management and outcome of febrile response in malignancy
		IM 4.2.4	Describe clinical presentation, management and outcome of febrile response in febrile neutropenia
		IM 4.2.5	Describe clinical presentation, management and outcome of febrile response in HIV patients
		IM 4.2.6	Describe clinical presentation, management and outcome of febrile response in case of history of travel
IM 4.3	Discuss and describe the common causes, pathophysiology and manifestations of fever in various regions in India including bacterial, parasitic and viral causes (e.g.	IM 4.3.1	Discuss various prevalent infections in different parts of India

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		IM 4.5.3	Describe the clinical features ( fever and other manifestations )of malignancy particularly in haematological malignancies
		IM 4.5.4	Discuss the management of fever in malignancies
IM 4.6	Discuss and describe the pathophysiology and manifestations of malaria	IM 4.6.1	Discuss the epidemiology of malaria
		IM 4.6.2	Discuss the life cycle of plasmodium
		IM 4.6.3	Discuss the pathophysiology of malaria
		IM 4.6.4	Describe the clinical features of malaria
		IM 4.6.5	Discuss the investigations and treatment of malaria
		IM 4.6.6	Discuss the preventing measures and government programme related to malaria
IM4.7	Discuss and describe the pathophysiology and manifestations of the sepsis syndrome	IM 4.7.1	Define sepsis syndrome
		IM 4.7.2	Describe the pathophysiology of sepsis
		IM 4.7.3	Describe the etiology and risk factors associated with sepsis
		IM 4.7.4	Describe the various clinical manifestations of sepsis
		IM 4.7.5	Describe the investigations , treatment of sepsis syndrome
IM 4.8	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	IM 4.8.1	Become familiar with the definition of fever of known origin (FUO).

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			associated with occupation, travel, environment and medications on febrile response
		IM 4.9 .6	Discuss a case based scenario for a patient of fever
IM 4.10	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)	IM 4.10.1	Perform examination of skin and mucosa and correlation for making diagnosis
		IM4.10.2	Perform lymph node examination and clinical significance
		IM 4.10.3	Perform chest examination ( inspection, palpation, percussion and auscultation) and clinical significance
		IM 4.10.4	Perform abdominal examination ( inspection, palpation, percussion and auscultation) and clinical significance
		IM 4.10.5	Discuss the clinical significance of lymphadenopathy with hepatosplenomegaly
IM 4.11	Generate a differential diagnosis and prioritise based on clinical features that help distinguish between infective, inflammatory, malignant and rheumatologic causes	IM 4.11.1	Discuss relevant history suggestive of infective, inflammatory,
		IM 4.11.2	Discuss the relevant examination suggestive of infective, inflammatory, malignant and rheumatologic causes of fever
		IM 4.11.3	Discuss the differential diagnosis of fever based

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			diagnosis
		IM 4.12.7	Discuss the pleural and ascitic fluid analysis and their clinical significance
		IM 4.12.8	Discuss the importance of stool examination in making diagnosis
IM 4.13	Perform and interpret a sputum gram stain	IM 4.13.1	Discuss the indications of sputum gram stain
		IM 4.13.2	Discuss the methodology of obtaining sample
		IM 4.13.3	Discuss the storage and transportation of sample
		IM 4.13.4	Discuss the importance of gross examination of sputum
		IM 4.13.5	Discuss the specific staining method of examination of sputum samples
		IM 4.13.6	Interpretation of findings in relation to clinical scenario
IM 4.14	Perform and interpret a sputum AFB	IM 4.14.1	Discuss the indications of sputum AFB stain
		IM 4.14.2	Discuss the methodology of obtaining sample
		IM 4.14.3	Discuss the storage and transportation of sample
		IM 4.14.4	Discuss the specific staining method of examination of sputum samples
		IM 4.14.5	Interpretation of findings in relation to clinical scenario
IM 4.15	Perform and interpret a malarial smear	IM 4.15.1	Discuss the indications of peripheral smear of malaria
		IM 4.15.2	Discuss the method of collecting sample
		IM 4.15.3	Discuss the storage and transportation of sample
		IM 4.15.4	Discuss the specific staining method of

		IM 4.17.5	Describe the various methods of staining of Bone marrow
IM 4.18	Enumerate the indications for use of imaging in the diagnosis of febrile syndromes	IM 4.18.1	Enumerate the indications of Chest X ray in febrile syndrome
		IM 4.18.2	Enumerate the indications of CT and MRI body in febrile syndrome
		IM 4.18.3	Describe the various findings in Chest x ray and their interpretation in febrile syndrome
		IM 4.18.4	Describe the various findings in CT and MRI and their interpretation in febrile syndrome
IM 4.19	Assist in the collection of blood and wound cultures	IM 4.19.1	Enumerate Indications of blood and wound cultures
		IM 4.19.2	Discuss aseptic conditions for sample collection
		IM 4.19.3	Describe methodology to collect blood and wound cultures
		IM 4.19.4	Discuss the storage and transportation of sample
IM 4.20	Interpret a PPD (Mantoux)	IM 4.20.1	Discuss indications of PPD
		IM 4.20.2	Discuss the procedure of performing PPD test
		IM 4.20.3	Discuss the observation of PPD test
		IM 4.20.4	Discuss the clinical significance of PPD test including in special population like in HIV
IM 4.21	Develop and present an appropriate diagnostic plan based on the clinical presentation, most likely diagnosis in a prioritised and cost effective manner	IM 4.21.1	Prepare a clinical case scenario based on history and examination
		IM 4.21.2	Discuss the non-invasive and invasive investigations to reach the diagnosis

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			and immuno-compromised host
		IM 4.24.5	Discuss the appropriate treatment plan in immuno-competent host and immuno-compromised host
IM 4.25	Communicate to the patient and family the diagnosis and treatment	IM 4.25.1	Communicate to the patient and family about the diagnosis
		IM 4.25.2	Communicate to the patient and family about the severity of the disease
		IM 4.25.3	Communicate to the family regarding relevant investigations and treatment plan
		IM 4.25.4	Communicate about prognosis of the disease
IM 4.26	Counsel the patient on malarial prevention	IM 4.26.1	Counsel the patient about importance of malarial prevention
		IM 4.26.2	Counsel the patient about available pharmacological treatment for prevention of malaria
		IM 4.26.3	Counsel the patient about non-pharmacological measures for prevention of malaria
		IM 4.26.4	Discuss the government plans for the prevention of malaria

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IM5.3	Describe and discuss the pathologic changes in various forms of liver disease	IM5.3.1	Describe the pathologic changes in various forms of liver disease
		IM5.3.2	Discuss the clinical implications of pathologic changes in various forms of liver disease
IM5.4	Describe and discuss the epidemiology, microbiology, immunology, and clinical evolution of infective (viral) hepatitis	IM5.4.1	Describe and discuss the epidemiology, microbiology, immunology, and clinical evolution of infective (viral) hepatitis (Acute)
		IM5.4.2	Describe and Discuss the epidemiology, microbiology, immunology, and clinical evolution of infective (viral) hepatitis (Chronic)
IM5.5	Describe and discuss the pathophysiology and clinical evolution of alcoholic liver disease	IM5.5.1	Describe and Discuss the pathophysiology of alcoholic liver disease
		IM5.5.2	Discuss the clinical evolution of alcoholic liver disease
IM5.6	Describe and discuss the pathophysiology, clinical evolution and complications of cirrhosis and portal hypertension including ascites, spontaneous bacterial peritonitis, hepatorenal syndrome and hepatic encephalopathy	IM5.6.1	Describe the pathophysiology, clinical evolution and complications of cirrhosis and portal hypertension including ascites, spontaneous bacterial peritonitis, hepatorenal syndrome and hepatic encephalopathy
		IM5.6.2	2. Discuss the pathophysiology, clinical evolution and complications of cirrhosis and portal hypertension including ascites, spontaneous bacterial peritonitis, hepatorenal syndrome

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			presentation and includes clinical presentation, risk factors, drug use, sexual history, vaccination history and family history
IMS.10	Perform a systematic examination that establishes the diagnosis and severity that includes nutritional status, mental status, jaundice, abdominal distension ascites, features of portosystemic hypertension and hepatic encephalopathy	IMS.10.1	Perform a systematic examination that establishes the diagnosis that includes nutritional status, mental status, jaundice, abdominal distension ascites, features of portosystemic hypertension and hepatic encephalopathy
		IMS.10.2	2.Perform a systematic examination that establishes the severity including nutritional status, mental status, jaundice, abdominal distension ascites, features of portosystemic hypertension and hepatic encephalopathy
IMS.11	Generate a differential diagnosis and prioritize based on clinical features that suggest a specific aetiology for the presenting symptom	IMS.11.1	Generate a differential diagnosis based on clinical features that suggest a specific aetiology for the presenting symptom

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			Interpret the findings of an ascitic fluid analysis
IM5.16	Describe and discuss the management of hepatitis, cirrhosis, portal hypertension, ascites spontaneous, bacterial peritonitis, and hepatic encephalopathy	IM5.16.1	Describe the management of hepatitis, cirrhosis, and portal hypertension.
		IM5.16.2	Discuss the management of hepatitis, cirrhosis, and portal hypertension.
		IM5.16.3	Describe spontaneous ascites and, bacterial peritonitis
		IM5.16.4	Discuss spontaneous ascites and, bacterial peritonitis
		IM5.16.5	Describe hepatic encephalopathy
		IM5.16.6	Discuss Hepatic encephalopathy.
IM5.17	Enumerate the indications, precautions and counsel patients on vaccination for hepatitis	IM5.17.1	Enumerate the indications, on vaccination for hepatitis
		IM5.17.2	Enumerate the precautions on vaccination for hepatitis
		IM5.17.3	Counsel patients on vaccination for hepatitis
IM5.18	Enumerate the indications for hepatic transplantation	IM5.18.1	Enumerate the indications and contraindications for hepatic transplantation

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			counts
IM6.4	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related opportunistic infections	IM6.4.1	Define opportunistic infections
		IM6.4.2	Discuss the pathogenesis and evolution of Opportunistic infections in HIV
		IM6.4.3	Classify Opportunistic infections based on causative organisms: Viral, bacterial, fungal, parasitic
		IM6.4.4	Discuss the laboratory investigations used for the diagnosis of these Opportunistic infections
		IM6.4.5	Classify Opportunistic infections based organ system involvement- Pulmonary/ Neurological/Gastrointestinal.etc.
		IM6.4.6	Discuss the Common Opportunistic infections seen in HIV infection in India
		IM6.4.7	Describe the common clinical presentations of the Opportunistic infections
		IM6.4.8	Discuss the approach to Fever of Unknown origin or differential diagnosis of fever in HIV infection
IM6.5	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related malignancies	IM6.5.1	Describe the etio-pathogenesis of malignancies in HIV infection
		IM6.5.2	Classify HIV associated malignancies : AIDS defining malignancies (ADM) and Non AIDS defining malignancies (NADM)
		IM6.5.3	Enumerate the ADM and NADM in HIV
		IM6.5.4	Describe the common ADM and NADM seen in India and

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			National Programme
		IM6.9.3	Discuss the laboratory tests used for monitoring of patients with HIV infection
		IM6.9.4	Discuss the interpretation of the CD4 test and HIV 1 Plasma Viral load tests
		IM6.9.5	Discuss the concept of treatment failure in HIV with reference to laboratory assessment
		IM6.9.6	Choose and interpret diagnostic tests in the context of assessment of a patient with HIV
IM6.10	Choose and interpret appropriate diagnostic tests to diagnose Opportunistic infections including CBC, sputum examination and cultures, blood cultures, stool analysis, CSF analysis and Chest radiographs	IM6.10.1	Discuss the laboratory investigations of Opportunistic infections
		IM6.10.2	Interpret and identify abnormalities in laboratory investigations like- sputum AFB, CSF India Ink, Stool R/ME findings
		IM6.10.3	Discuss the choice of laboratory investigations and their interpretation in patients with HIV with varied clinical manifestations
IM6.11	Enumerate the indications and describe the findings for CT of the chest and brain and MRI	IM6.11.1	Enumerate the indications for Chest radiographs, CT Scan (chest, head, Abdomen, others), MRI in HIV infection
		IM6.11.2	Describe the findings in common Chest radiographs and CT and MRI
IM6.12	Enumerate the indications for and interpret the results of; pulse oximetry, ABG, Chest Radiograph	IM6.12.1	Enumerate the indications of pulse oximetry in patients with HIV infection
		IM6.12.2	Interpret the findings of pulse oximetry
		IM6.12.3	Enumerate the indications of arterial blood gas (ABG)

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			action and their pharmacokinetics
		IM6.16.4	Describe the common adverse effects of different classes of antiretroviral drugs
		IM6.16.5	Describe the common drug-drug interactions of different classes of antiretroviral drugs
		IM6.16.6	Discuss the principles of Antiretroviral treatment
		IM6.16.7	Discuss the eligibility of patients for ART initiation and the concept of universal ART
		IM6.16.8	Outline the clinical assessment and preparedness for ART initiation in patients with HIV infection
		IM6.16.9	Discuss the recommended first line Antiretroviral treatment for HIV in the National Programme
		IM6.16.10	Discuss ART adherence and describe the facilitators and barriers for adherence
		IM6.16.11	Outline the principles and diagnosis of antiretroviral treatment failure
		IM6.16.12	Describe the second line ART, third line ART regimen
		IM6.16.13	Discuss the clinical, laboratory, immunological and virological monitoring of patients on ART
IM6.17	Discuss and describe the principles and regimens used in post exposure prophylaxis	IM6.17.1	Define post exposure prophylaxis and discuss its principles
		IM6.17.2	Discuss the methods of HIV transmissions and their associated risk
		IM6.17.3	Discuss the possible methods of occupational exposure to HIV and their risk

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			HIV transmission through role play / simulated patient
IM6.20	Communicate diagnosis, treatment plan and subsequent follow up plan to patients	IM6.20.1	Communicate a HIV positive result to a client and perform post-test counselling through role play / simulated patient
		IM6.20.2	Discuss with a patient the treatment plan and process of initiation of ART through role play / simulated patient
		IM6.20.3	Communicate and discuss with the patient the follow up and monitoring plan after ART initiation through role play
IM6.21	Communicate with patients on the importance of medication adherence	IM6.21.1	Communicate with a patient on the importance of ART adherence through role play / simulated patient
		IM6.21.2	Assess ART adherence in a patient
		IM6.21.3	Identify and address the facilitators and barriers of adherence to ART in a patient through role play/ simulated patient
IM6.22	Demonstrate understanding of ethical and legal issues regarding patient confidentiality and disclosure in patients with HIV	IM6.22.1	Discuss the concept of patient confidentiality and disclosure in HIV
		IM6.22.2	Discuss the ethical issues associated with HIV infection
		IM6.22.3	Discuss the legal issues associated with HIV infection
		IM6.22.4	Discuss the components of the HIV/ AIDS (Prevention and Control) Act 2017, Govt. of India
IM6.23	Demonstrate a non-judgemental attitude to patients with HIV and to their lifestyles	IM6.23.1	Discuss the role of society and Community in HIV infection
		IM6.23.2	Demonstrate a non-judgemental attitude to patients with HIV and to

		IM7.5.3	Discuss causes approach to chronic joint pain
IM7.6	Discriminate, describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain	IM7.6.1	Differentiating features of arthralgia from arthritis
		IM7.6.2	Discuss inflammatory from non-inflammatory joint pain
IM7.7	Discriminate, describe and discuss distinguishing articular from periarticular complaints	IM7.7.1	Discuss various periarticular disorders
		IM7.7.2	Differentiating features between periarticular and articular disorders
IM7.8	Determine the potential causes of joint pain based on the presenting features of joint involvement	IM7.8.1	Discuss algorithmic approach to a patient of joint pain
IM7.9	Describe the common signs and symptoms of articular and periarticular diseases	IM7.9.1	Discuss signs and symptoms of osteoarthritis
		IM7.9.2	Discuss signs and symptoms of Gout and other crystal arthropathies
		IM7.9.3	Discuss signs and symptoms of periarticular disorders like bursitis, tendinitis, tenosynovitis
IM7.10	Describe the systemic manifestations of rheumatologic disease	IM7.10.1	Discuss extra articular manifestations of Rheumatoid Arthritis
		IM7.10.2	Discuss complications of Rheumatoid Arthritis
		IM7.10.3	Discuss extra articular manifestations of SLE
IM 7.11	Elicit document and present a medical history that will differentiate the	IM 7.11.1	Student should be able to present and document the

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			the indications and interpretation of RA
		IM 7.15.4	Student should be able to enumerate and discuss the indications and interpretation of ANA
		IM 7.15.5	Student should be able to enumerate and discuss the indications and interpretation of DNA
		IM 7.15.6	Student should be able to enumerate and discuss the indications and interpretation of other tests of autoimmunity
IM 7.16	Enumerate the indications for arthrocentesis	IM 7.16.1	Student should be able to enumerate and discuss the indications arthrocentesis
IM 7.17	Enumerate the indications and interpret plain radiographs of joints	IM 7.17.1	Student should be able to enumerate and discuss the indications of plain radiographs of joints
		IM 7.17.2	Student should be able to discuss the interpretation of plain radiographs of joints
IM 7.18	Communicate diagnosis, treatment plan and subsequent follow up plan to patients	IM 7.18.1	Student should be able to communicate the diagnosis to patients of rheumatologic disease
		IM 7.18.2	Student should be able to communicate the treatment plan to patients of rheumatologic disease
		IM 7.18.3	Student should be able to communicate the subsequent follow up plan to patients of rheumatologic disease
IM 7.19	Develop an appropriate treatment plan for patients with rheumatologic diseases	IM 7.19.1	Student should be able to discuss and develop an appropriate treatment plan for patients with

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		IM 7.23.2	Student should be able to describe the basis for disease modifying therapy in rheumatologic diseases
IM 7.24	Communicate and incorporate patient preferences in the choice of therapy	IM 7.24.1	Student should be able to communicate patient preferences in the choice of therapy
		7.24.2	Student should be able to incorporate patient preferences in the choice of therapy
IM 7.25	Develop and communicate appropriate follow up and monitoring plans for patients with rheumatologic conditions	IM 7.25.1	Student should be able to develop appropriate follow up and monitoring plans for patients with rheumatologic conditions
		IM 7.25.2	Student should be able to communicate appropriate follow up and monitoring plans for patients with rheumatologic conditions
IM 7.26	Demonstrate an understanding of the impact of rheumatologic conditions on quality of life, well-being, work and family	IM 7.26.1	Student should be able to demonstrate an understanding of the impact of rheumatologic conditions on quality of life.
		IM 7.26.2	Student should be able to demonstrate an understanding of the impact of rheumatologic conditions on well-being.
		IM 7.26.3	Student should be able to demonstrate an understanding of the impact of rheumatologic conditions on work and family
IM 7.27	Determine the need for specialist consultation	IM 7.27.1	Student should be able to determine the need for specialist consultation

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	<b>hypertension</b>	IM8.5	Describe and discuss the various secondary causes of hypertension including less common or miscellaneous causes of hypertension.
IM8.6	Define, describe, and discuss and recognize hypertensive urgency and emergency	IM8.6.1	Define, describe, and discuss hypertensive urgency and emergency.
		IM8.6.2	Differentiate between hypertensive urgency and emergency.
		IM8.6.3	Discuss various drugs used for hypertensive urgency and emergency and discuss their side effects profile.
IM8.7	Describe and discuss the clinical manifestations of the various aetiologies of secondary causes of hypertension	IM8.7.1	Discuss various etiologies for secondary hypertension.
		IM8.7.2	Define and discuss obesity and the metabolic syndrome.
		IM8.7.3	Discuss various rare monogenic causes of hypertension.
IM8.8	Describe, discuss, and identify target organ damage due to hypertension	IM8.8.1	Identify the target organ damage due to hypertension.
		IM8.8.2	Discuss basic lab tests for initial evaluation for target organs damage due to hypertension.
IM8.9	Elicit document and present a medical history that includes duration and levels, symptoms, comorbidities, lifestyle, risk factors, family history, psychosocial and environmental factors, dietary assessment, previous and concomitant therapy	IM8.9.1	Elicit, document, and present a medical history including duration, levels, symptoms, comorbidities, lifestyle, risk factors, family history, psychosocial and environmental factors, dietary session, previous

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IM8.13	Enumerate the indications for and interpret the results of: CBC, Urine routine, BUN, Cr, Electrolytes, Uric acid, ECG	IM8.13.1	Enumerate the indications for workup lab tests.
		IM8.13.2	Interpret- CBC, Urine Analysis, RFT, Uric Acid, Lipid Profile, RBS and ECG.
IM8.14	Develop an appropriate treatment plan for essential hypertension	IM8.14.1	Describe and discuss the various drugs available for essential hypertension.
		IM8.14.2	Discuss the treatment plan for essential hypertension.
		IM8.14.3	Describe and discuss the mechanism of action of antihypertensive drugs.
		IM8.14.4	Discuss the side effects profile of individual drugs for hypertension.
IM8.15	Recognize, prioritize, and manage hypertensive emergencies	IM8.15.1	Recognize hypertension-emergencies.
		IM8.15.2	Prioritise and manage hypertension emergencies.
		IM8.15.3	Discuss drugs available for hypertensive emergencies.
		IM8.15.4	Discuss management of hypertension in special conditions like stroke, ICH, pregnancy.
IM8.16	Develop and communicate to the patient lifestyle modification including weight reduction, moderation of alcohol intake, physical activity, and sodium intake	IM8.16.1	Develop communicative skills to the patients.
		IM8.16.2	Communicate about lifestyle modifications including BMI, ideal body weight, physical activity, sodium intake and moderation of alcohol intake.
IM8.17	Perform and Interpret a 12 lead ECG	IM8.17.1	Interpret ECG

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			reticulocyte count.
		IM9.1.5	Describe clinical manifestation, diagnostic approach to anemia based on reticulocyte count.
IM9.2	Describe and discuss the morphological characteristics, aetiology and prevalence of each of the causes of anemia	IM9.2.1	Describe morphological features of anemia based on underlying etiology.
		IM9.2.2	Discuss the etiology of anemia based on morphological features.
		IM9.2.3	List the prevalence of anemia based on its morphological features.
IM9.3	Elicit document and present a medical history that includes symptoms, risk factors including GI bleeding, prior history, medications, menstrual history, and family history	IM9.3.1	1. To take medical history for anemia and its types
		IM9.3.2	2.Document risk factors for anemia in history
IM9.4	Perform a systematic examination that includes : general examination for pallor, oral examination, DDAP session of hyper dynamic circulation, lymph node and splenic examination	IM9.4.1	Perform general physical examination in case on anemia including hyperdynamic circulation, pallor, oral examination, lymph node examination and related general examination
		IM9.4.2	Perform Systemic examination including splenic examination and related systemic examination
IM9.5	Generate a differential diagnosis and prioritize based on clinical features that suggest a specific aetiology	IM9.5.1	1.Generate differential diagnosis in order of priority based on history and examination
		IM9.5.2	2.Suggest most likely

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IM9.12	Describe, develop a diagnostic plan to determine the aetiology of anemia	IM9.12.1	Describe and develop and algorithm for diagnosis of anemia which will help determine underlying etiology.
		IM9.12.2	Describe bone marrow aspiration and biopsy and its role in diagnosis of anemia.
IM9.13	Prescribe replacement therapy with iron, B12, folate	IM9.13.1	Management of iron deficiency anemia
		IM9.13.2	Management of anemia due to B12 and folate deficiency
IM9.14	Describe the national programs for anemia prevention	IM9.14.1	Describe the national programs for anemia prevention
IM9.15	Communicate the diagnosis and the treatment appropriately to patients	IM9.15.1	Communicate diagnosis of anemia to the patient
		IM9.15.2	Explain importance of appropriate treatment and length of treatment
		IM9.15.3	Explain outcomes of not taking adequate treatment
IM9.16	Incorporate patient preferences in the management of anemia	IM9.16.1	Inclusion of patient preferences in management of anemia
IM9.17	Assist in a blood transfusion	IM9.17.1	Define transfusion biology.
		IM9.17.2	Describe various blood components.
		IM9.17.3	List and Discuss the indications of blood transfusion.
IM9.18	Describe the indications for blood transfusion and the appropriate use of blood components	IM9.18.1	Discuss indications of blood transfusion
		IM9.18.2	Discuss available blood components and their indications of use under different situation
		IM9.18.3	Discuss complications and

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10 Kidney Disease

	COMPETENCY		SLOs
	The student should be able to		
IM10.1	Define, describe, and differentiate between acute and chronic renal failure	IM10.1.1	Define acute renal failure as per guideline
		IM10.1.2	Describe epidemiology and pathophysiology of

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 The student should be able to  
 IM10.1.1  
 IM10.1.2  
 Define acute renal failure as per guideline  
 Describe epidemiology and pathophysiology of

			and treatment of AKI
IM10.5	Describe and discuss the aetiology of CRF	IM10.5.1	Define CRF as per guidelines.
		IM10.5.2	Define the clinical features and natural history of CRF
		IM10.5.3	Discuss the epidemiology of CRF.
		IM10.5.4	Describe the pathophysiology and etiology of CRF
IM10.6	Stage Chronic Kidney Disease	IM10.6.1	Describe the KIDGO classification of CKD
		IM10.6.2	Discuss stages of CKD
IM10.7	Describe and discuss the pathophysiology and clinical findings of uremia	IM10.7.1	Describe pathophysiology and biochemistry of uremia.
		IM10.7.2	Describe clinical manifestation of uremia
		IM10.7.3	Discuss biochemical manifestation of uremia including fluid and electrolyte imbalance, and neuromuscular abnormality.
IM10.8	Classify, describe, and discuss the significance of proteinuria in CKD	IM10.8.1	Describe approach to a patient with proteinuria.
		IM10.8.2	Discuss the evaluation of proteinuria in a patient with CKD.
		IM10.8.3	Management of proteinuria in CKD
IM10.9	Describe and discuss the pathophysiology of anemia and hyperparathyroidism in CKD	IM10.9.1	Discuss Pathophysiology and natural history of abnormal bone metabolism in CKD.
		IM10.9.2	Discuss Hyperparathyroidism and Bone manifestation of

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			hyperphostemia, Hyperparathyroidism, sleep apnea on CKD.
		IM10.11.5	Discuss abnormal cardiac function and heart failure in CKD.
		IM10.11.6	Discuss the effect of dialysis on cardiac functions in CKD.
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	IM10.12.1	Elicit and document history of azotemia in terms of clinical presentation including duration of disease, urine output and signs of uremia.
		IM10.12.2	Elicit past medical history in a patient with renal disorder considering co morbidities and pre-disposing conditions.
		IM10.12.3	Enumerate difference between acute and chronic kidney disease on basis of history.
IM10.13	Perform a systematic examination that establishes the diagnosis and severity including determination of volume status, presence of edema and heart failure, features of uremia and associated systemic disease	IM10.13.1	1. Demonstrate systematic examination that establishes the diagnosis and severity including determination of volume status, presence of edema and heart failure, features of uremia and associated systemic disease
		IM10.13.2	Perform systematic examination that establishes the diagnosis and severity including determination of volume status, presence of

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IM10.17	Describe and calculate indices of renal function based on available laboratories including FeNa (Fractional Excretion of Sodium) and CrCl (Creatinine Clearance)	IM10.17.1	Discuss the significance of renal indices measurement in kidney disease.
		IM10.17.2	Describe the calculation of fractional excretion of Na and creatinine clearance.
IM10.18	Identify the ECG findings in hyperkalemia	IM10.18.1	Describe the ECG findings of hyperkalemia.
		IM10.18.2	Interpret and ECG of hyperkalemia
IM10.19	Enumerate the indications and describe the findings in renal ultrasound	IM10.19.1	Enumerate indication of renal ultrasound.
		IM10.19.2	Discuss the feature of ultrasound suggestive of Acute kidney disease.
		IM10.19.3	Discuss features of ultrasound suggestive of chronic Kidney disease.
IM10.20	Describe and discuss the indications to perform arterial blood gas analysis: interpret the data	IM10.20.1	Discuss the basic concept of arterial blood gas analysis and acid base disorder.
		IM10.20.2	Discuss the indication of ABG analysis.
		IM10.20.3	Interpret the data of ABG analysis.
IM10.21	Describe and discuss the indications for and insert a peripheral intravenous catheter	IM10.21.1	Describe an intravenous catheter in terms of size, flow rate, colour coding.
		IM10.21.2	Discuss the indication of putting an intravenous catheter.
		IM10.21.3	Perform intravenous catheterization under aseptic conditions.
IM10.22	Describe and discuss the indications, demonstrate in a model, and assist in the	IM10.22.1	Discuss the indication of central venous or dialysis

			complications of CKD
IM 10.27	Describe and discuss the indications for renal dialysis	IM10.27.1	Enumerate indications of renal dialysis
IM 10.28	Describe and discuss the indications for renal replacement therapy	IM10.28.1	Discuss indications for renal replacement therapy
		IM10.28.2	Describe process and advantages of renal replacement therapy
IM 10.29	Describe discuss and communicate the ethical and legal issues involved in renal replacement therapy	IM10.29.1	Discuss ethical and legal issues in renal replacement therapy
		IM10.29.2	Communicate ethical and legal issues in renal replacement therapy
IM 10.30	Recognize the impact of CKD on patient's quality of life well-being work and family	IM10.30.1	Recognize the impact of CKD on quality of life of a patient of CKD
		IM10.30.2	Recognize the impact of CKD on quality of life of a primary caregiver of patient of CKD
		IM10.30.3	Impact of CKD on work and family of patient
IM 10.31	Incorporate patient preferences into the care of CKD	IM10.31.1	Discuss role of incorporating patient preferences in care of CKD

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			factors for type 2 diabetes
		IM 11.3.4	Describe the economic impact of type 2 diabetes
		IM 11.3.5	Describe the clinical evolution of diabetes highlighting the prediabetic stage and importance of insulin resistance
		IM 11.3.6	Discuss the clinical features of type 2 diabetes
IM 11.4	Describe and discuss the genetic background and the influence of the environment on diabetes	IM 11.4.1	Discuss the influence of genetics on diabetes
		IM 11.4.2	Describe and discuss the influence of environment on diabetes
IM 11.5	Describe and discuss the pathogenesis and temporal evolution of microvascular and macrovascular complications of diabetes	IM 11.5.1	Discuss the pathogenesis and temporal evolution of microvascular complications of diabetes
		IM 11.5.2	Differentiate between comorbidities and target organ damage with respect to development of microvascular complications of type 2 diabetes
		IM 11.5.3	Schedule time frame for monitoring of target organ damage
		IM 11.5.4	Correlate the evolution of microvascular complications namely retinopathy, nephropathy and neuropathy
		IM 11.5.5	Discuss the pathogenesis and temporal evolution of macrovascular complications of diabetes
IM 11.6	Describe and discuss the pathogenesis and precipitating factors, recognition and management of diabetic emergencies	IM 11.6.1	Enumerate various diabetic emergencies
		IM 11.6.2	Discuss the precipitating factors, clinical features and management of Diabetic ketoacidosis
		IM 11.6.3	Discuss the precipitating factors, clinical features and management of

		IM 11.8.2	Perform a systematic examination that establishes the diagnosis and severity that includes detailed examination of the foot (pulses, nervous and deformities and injuries)
		IM 11.8.3	Perform a systematic examination that establishes the diagnosis and severity that includes skin, peripheral pulses, blood pressure measurement and BMI.
		IM 11.8.4	Perform a systematic examination that establishes the diagnosis and severity that includes fundus examination
		IM 11.8.5	Perform a systematic examination that establishes the diagnosis and severity that includes detailed examination of the foot (pulses, nervous and deformities and injuries)
IM 11.9	Describe and recognise the clinical features of patients who present with a diabetic emergency	IM 11.9.1	Enumerate common diabetic emergencies
		IM 11.9.2	Describe and discuss how to recognize patients presenting with of Diabetic ketoacidosis based on clinical features
		IM 11.9.3	Describe and discuss how to recognize patients presenting with of Hyperglycaemic hyperosmolar non-ketotic coma (HONK) based on clinical features
		IM 11.9.4	Describe and discuss how to recognize patients presenting with of Hypoglycemia based on clinical features
IM 11.10	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology of diabetic emergency	IM11.10.1	Discuss and interpret the differential diagnosis on the basis of clinical features of a diabetic emergency
		IM11.10.2	Interpret and suggest probable diagnosis and etiology of diabetic emergency
IM 11.11	Order and interpret laboratory tests to	IM11.11.1	Enumerate and describe the

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		IM11.15.4	Describe presentation of HONK including history and clinical features
		IM11.15.5	Discuss the principles of management of HONK
IM 11.16	Discuss and describe the pharmacologic therapies for diabetes their indications, contraindications, adverse reactions and interactions	IM11.16.1	Discuss principal modes and sites of action of pharmacological treatments for type 2 diabetes.
		IM11.16.2	Discuss mechanism of action and Indications for use - Biguanides, sulfonylureas, thiazolidenediones
		IM11.16.3	Discuss mechanism of action and Indications for use - Incretin-based therapies
		IM11.16.4	Discuss alpha-glucosidase inhibitors, SGLT2 inhibitors
		IM11.16.5	Describe and discuss indications & contraindications of various therapies of diabetes as per patient characteristics and co-morbidities
		IM11.16.6	Discuss common adverse reactions and interactions among various therapies for diabetes
IM 11.17	Outline a therapeutic approach to therapy of T2Diabetes based on presentation, severity and complications in a cost effective manner	IM11.17.1	Outline therapeutic goals and self-assessment of glycaemic control
		IM11.17.2	Discuss diabetic diet and Lifestyle - Composition of the diet, weight management, exercise
		IM11.17.3	Discuss insulin therapy - Manufacture and formulation, Insulin dosing regimens
		IM11.17.4	Discuss special situations in diabetes - Surgery and diabetes / Pregnancy / Children and young adults / Ramadan
IM 11.18	Describe and discuss the pharmacology, indications, adverse reactions and interactions of drugs used in the prevention and treatment of target organ damage and	IM11.18.1	Describe and discuss pathophysiology and prevention of diabetes complications

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			as per above discussion
IM11.22	Enumerate the causes of hypoglycaemia and describe the counter hormone response and the initial approach and treatment	IM11.22.1	Discuss hypoglycaemia in diabetics - Causes and risk factors
		IM11.22.2	Describe clinical assessment of hypoglycaemia, investigations; awareness of hypoglycaemia
		IM11.22.3	Discuss management of hypoglycaemia - Emergency management, prevention
IM11.23	Describe the precipitating causes, pathophysiology, recognition, clinical features, diagnosis, stabilisation and management of diabetic ketoacidosis	IM11.23.1	Discuss diabetic Ketoacidosis - Pathogenesis
		IM11.23.2	Discuss diabetic Ketoacidosis - Clinical features,
		IM11.23.3	Discuss diabetic Ketoacidosis - Investigations and management
IM11.24	Describe the precipitating causes, pathophysiology, recognition, clinical features, diagnosis, stabilisation and management of Hyperosmolar non ketotic state	IM11.24.1	Discuss HONK - Pathogenesis
		IM11.24.2	Discuss HONK - Clinical features
		IM11.24.3	Discuss HONK - Investigations and management

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			pathogenesis of thyroid disease
IM12.2	Describe and discuss the genetic basis of some forms of thyroid dysfunction	IM12.2.1	Discuss the genetic basis of hypothyroidism, Graves' disease, autoimmune thyroid disease & thyroid cancer
IM12.3	Describe & discuss the physiology of the Hypothalamo-pituitary-thyroid axis, principles of thyroid function testing & alterations in physiologic function	IM12.3.1	Describe the physiology of the hypothalamopituitary-thyroid axis
		IM12.3.2	Discuss the principles of thyroid function testing
		IM12.3.3	Discuss the alterations of thyroid function tests in various physiological conditions like pregnancy, old age.
IM12.4	Describe & discuss the principles of radio iodine uptake in the diagnosis of thyroid disorders	IM12.4.1	Discuss the principles of radio iodine uptake in the diagnosis of thyroid disorders like Graves' disease, thyroiditis & thyroid adenomas
IM12.5	Elicit document & present an appropriate history that will establish the diagnosis of the cause of thyroid dysfunction and its severity	IM12.5.1	In the setting of an outpatient clinic or a ward the student should be able to elicit and document the appropriate history in patients of thyroid dysfunction (hypothyroidism and hyperthyroidism)
		IM12.5.2	The student should be able to make a differential diagnosis from the history and then establish the final diagnosis of the disease and assess its severity also.
IM 12.6	Perform & demonstrate a systemic examination based on the history that will establish the diagnosis & severity including systemic signs of thyrotoxicosis	IM12.6.1	Elicit the various points in history of suspected cases of hypothyroidism and thyrotoxicosis. Present

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		IM12.9.2	Interpret the findings of CBC & thyroid function tests for establishing the diagnosis
		IM12.9.3	Interpret the findings of ECG for establishing the diagnosis
		IM12.9.4	Interpret the findings of Radioiodine uptake and scan for establishing the diagnosis
IM12.10	Identify Atrial fibrillation, pericardial effusion and bradycardia on ECG	IM12.10.1	On an ECG identify the findings of Atrial fibrillation
		IM12.10.2	On an ECG identify the findings of pericardial effusion
		IM12.10.3	On an ECG identify the findings of Bradycardia
IM12.11	Interpret Thyroid function tests in hypo and hyperthyroidism	IM12.11.1	Interpret the given samples of lab reports of thyroid function tests of cases with varying degrees of hypothyroidism and hyperthyroidism.
IM12.12	Describe and discuss the iodination programs of the government of India	IM12.12.1	Describe the salient features of the National iodine deficiency disorder control programme of Govt of India.
		IM12.12.2	Discuss the role of the programme in controlling the incidence of iodine deficiency disorders in India
IM12.13	Describe the pharmacology, indications, adverse reactions, interactions of thyroxine and antithyroid drugs	IM12.13.1	Describe the pharmacology of thyroxine and various antithyroid drugs like carbimazole, methimazole and propylthiouracil
		IM12.13.2	Discuss the indications, contraindications and dosage of thyroxine &



13 Common Malignancies

	COMPETENCY The student should be able to		SLOs
IM13.1	Describe the clinical epidemiology and inherited & modifiable risk factors for common malignancies in India	IM13.1.1	Describe clinical Epidemiology of cancer
		IM13.1.2	Discuss modifiable and non-modifiable risk factors of common cancers in India
IM13.2	Describe the genetic basis of selected cancers	IM13.2.1	Discuss Principle of pharmacogenomics
		IM13.2.2	Discuss Cancer genetics
		IM13.2.3	Discuss role of cancer genes and human

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			challenges in end of life care
IM13.6	Describe and distinguish the difference between curative and palliative care in patients with cancer	IM13.6.1	Discuss difference in curative and palliative treatment.
		IM13.6.2	Discuss indication of curative treatment
		IM13.6.3	Discuss indication of palliative treatment
IM13.7	Elicit document and present a history that will help establish the aetiology of cancer and includes the appropriate risk factors, duration and evolution	IM13.7.1	Discuss Salient points of history in patients with suspected malignancy
		IM13.7.2	Discuss History of Risk factor/aetiology for identification of malignancy
		IM13.7.3	Discuss History of complications in suspected malignancy
IM13.8	Perform and demonstrate a physical examination that includes an appropriate general and local examination that excludes the diagnosis, extent spread and complications of cancer	IM13.8.1	Perform a General physical examination in a case of suspected malignancy
		IM13.8.2	Demonstrate Local examination of chest including examination of relevant lymph nodes
		IM13.8.3	Demonstrate Local examination of breast and relevant lymph node Perform examination of abdominal lump
		IM13.8.4	Demonstrate examination of Reticuloendothelial and musculoskeletal systems

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		IM13.11.3	Discuss Interpretation of tumor markers
IM13.12	Describe the indications and interpret the results of Chest X Ray, mammogram, skin and tissue biopsies and tumor markers used in common cancers	IM13.12.1	Discuss Interpretation of chest x-ray AP/lateral
		IM13.12.2	Discuss interpretation of bone x-ray for metastatic lesions
		IM13.12.3	Discuss Mammogram interpretation
		IM13.12.4	Discuss histopathological implications of tissue biopsies
		IM13.12.5	Interpretation and significance of Tumor marker in malignancy.
IM13.13	Describe and assess pain and suffering objectively in a patient with cancer	IM13.13.1	Discuss Visual analogue scale and other objective scale assessment in patients of cancer suffering from pain
IM13.14	Describe the indications for surgery, radiation and chemotherapy for common malignancies	IM13.14.1	Discuss Indication of chemotherapy in management of cancers.
		IM13.14.2	Discuss Indication of radiotherapy in management of cancers.
		IM13.14.3	Discuss Indication of surgery in management of cancers.
		IM13.14.4	Discuss combined modalities in management of cancers.
IM13.15	Describe the need, tests involved, their utility in the prevention of common malignancies	IM13.15.1	Discuss Need of screening for cancers
		IM13.15.2	Discuss When and whom to screen for malignancy.

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## 14 Obesity

	COMPETENCY The student should be able to		SLOs
IM14.1	Define and measure obesity as it relates to the Indian population.	IM14.1.1	Define obesity.
		IM14.1.2	Discuss methods of measuring obesity in Indian Population
IM14.2	Describe and discuss the aetiology of obesity including modifiable and non-modifiable risk factors and secondary causes	IM14.2.1	Describe etiology of obesity.
		IM14.2.2	Discuss modifiable and non-modifiable risk factors for obesity
		IM14.2.3	Discuss secondary risk factors for obesity.
IM14.3	Describe and discuss the monogenic forms of obesity	IM14.3.1	Describe monogenic forms of obesity.
		IM14.3.2	Discuss monogenic forms of obesity.
IM14.4	Describe and discuss the impact of environmental factors including eating habits, food, work, environment, and	IM14.4.1	Describe the impact of environmental factors including eating habits,

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		IM14.7.2	Document a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities
		IM14.7.3	Demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities
IM14.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritize based on the most likely diagnosis	IM14.8.1	Generate a differential diagnosis based on the presenting symptoms and clinical features.
		IM14.8.2	Document and prioritize differential diagnosis based on the most likely diagnosis.
IM14.9	Order and interpret diagnostic tests based on the clinical diagnosis including blood glucose, lipids, thyroid function tests etc.	IM14.9	Order and interpret diagnostic tests based on the clinical diagnosis including blood glucose, lipids, thyroid function tests etc.
		IM14.9	Interpret diagnostic tests based on the clinical diagnosis including blood glucose, lipids, thyroid function tests etc.
IM14.10	Describe the indications and interpret the results of tests for secondary causes of obesity	IM14.10.1	Describe the indications for secondary causes of obesity
		IM14.10.2	Interpret the results of tests for secondary causes of obesity
IM14.11	Communicate and counsel patient on behavioral, dietary and lifestyle modifications	IM14.11.1	Counsel patient on behavioral, dietary and lifestyle modifications.
		IM14.11.2	Communicate patient on behavioral, dietary and lifestyle modifications
IM14.12	Demonstrate an understanding of	IM14.12.1	Demonstrate an

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15 GI Bleeding

	COMPETENCY The student should be able to		SLOs
15.1	Enumerate, describe and discuss the aetiology of upper and lower GI bleeding	15.1.2	Enumerate the various causes of upper GI bleeding
		15.1.3	Describe the common causes of Lower GI bleeding at different ages
		15.1.4	discuss the etiology of common causes of upper GI bleed in adult age
15.2	Enumerate, describe and discuss the evaluation and steps involved in stabilizing a patient who presents with acute volume loss and GI bleed	15.2.1	Enumerate the initial steps involved in evaluation of a patient presenting with acute GI blood loss.
		15.2.1	Briefly describe the steps involved in stabilizing a patient with acute GI blood loss
15.3	Describe and discuss the physiologic effects of acute blood and volume loss	15.3.1	Describe the clinical evaluation of acute blood loss.
		15.3.2	Briefly discuss the

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15.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	15.8.1	Describe the important differential diagnosis based on history and important physical examination of a patient presenting with upper & lower GI bleeding.
		15.8.2	Arrange the list of differential diagnosis according to clinical features & examination.
15.9	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, PT and PTT, stool examination, occult blood, liver function tests, and H.pylori test.	15.9.1	Discuss the interpretation & relevance of CBC, coagulation profile, LFT and stool testing in case of upper GI bleeding.
		15.9.2	Describe the various tests for invasive & non-invasive testing of prevalence of H.pylori & also eradication of H. Pylori.
15.10	Enumerate the indications for endoscopy, colonoscopy and other imaging procedures in the investigation of Upper GI bleeding	15.10.1	Enumerate the indications for endoscopy, and common findings in case of upper GI bleeding
		15.10.2	Discuss the findings on colonoscopy and capsule endoscopy in case of GI bleeding
15.11	Develop, document and present a treatment plan that includes fluid resuscitation, blood and blood component transfusion, and specific therapy for arresting blood loss	15.11.1	Discuss the treatment plan for fluid resuscitation & blood component resuscitation in a patient having mild, moderate & massive GI bleeding (upper & lower) as a flowchart
		15.11.2	Describe the specific therapeutic options in blood component therapy for upper & lower GI bleeding.
15.12	Enumerate the indications for whole blood, component and platelet	15.12.1	Discuss the indications of whole blood, packed

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	Interventions and Surgery		indications for endoscopic interventions.
		15.16.2	Discuss the various endoscopic therapeutic options for treatment of moderate to massive upper GI bleeding & moderate to massive lower GI bleeding.
		15.16.3	Describe the various surgical procedures involved in massive upper GI bleeding & lower GI bleeding.
15.17	Determine appropriate level of specialist consultation	15.17.1	Discuss the various therapeutic strategies used in GI bleeding (medical/gastroenterological/surgical)
		15.17.2	Describe the role of therapeutic endoscopy, colonoscopy, interventional radiology and GI surgery in uncontrollable GI bleeding
15.18	Counsel the family and patient in an empathetic non-judgmental manner on the diagnosis and therapeutic options		Counsel on the various diagnostic and therapeutic options for GI bleed

16 Diarrhoeal Disorders

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IM 16.5	Perform, document and demonstrate a physical examination based on history that includes general examination, including an appropriate abdominal examination	IM 16.5.1	Perform a comprehensive and detailed general physical and systemic examination in a patient with diarrhoea
		IM 16.5.2	Demonstrate and interpret degree of dehydration
		IM 16.5.3	Discuss and interpret importance of blood pressure, pulse, urine output and ongoing stool losses
		IM 16.5.4	Enumerate and interpret the difference between infectious and non-infectious diarrhoea
		IM 16.5.5	Describe and discuss the impact of acute diarrhoea on fluid balance
IM 16.6	Distinguish between diarrhoea and dysentery based on clinical features	IM 16.6.1	Describe the clinical features of dysentery
		IM 16.6.2	Discuss the difference between diarrhoea and dysentery based on clinical features
IM 16.7	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	IM 16.7.1	Describe and interpret the presenting symptoms and clinical features of a diarrhoea case
		IM 16.7.2	Interpret the common differential diagnosis
		IM 16.7.3	Interpret the most likely diagnosis
IM 16.8	Choose and interpret diagnostic tests based on clinical diagnosis including complete blood count and stool examination	IM 16.8.1	Discuss and interpret complete blood count in diarrhoea
		IM 16.8.2	Discuss and interpret stool examination in diarrhoea
		IM 16.8.3	Choose and interpret the appropriate diagnostic tests for

			common parasitic cause of diarrhoea
		IM 16.13.3	Describe the pharmacology and side effects of the pharmacotherapy for common parasitic cause of diarrhoea
IM 16.14	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for bacterial and viral diarrhoea	IM 16.14.1	Enumerate the indications for pharmacotherapy for common bacterial and viral of diarrhoea
		IM 16.14.2	Describe the pharmacotherapy for common bacterial and viral of diarrhoea
		IM 16.14.3	Describe the pharmacology and side effects of the pharmacotherapy for common bacterial and viral of diarrhoea
IM 16.15	Distinguish based on the clinical presentation of Crohn's disease from ulcerative colitis	IM 16.15.1	Describe the clinical presentation of Crohn's disease
		IM 16.15.2	Describe the clinical presentation of Ulcerative colitis
		IM 16.15.3	Compare clinical presentation of Crohn's disease and Ulcerative colitis
IM 16.16	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for inflammatory bowel disease	IM 16.16.1	Enumerate the indications for pharmacotherapy for inflammatory bowel disease
		IM 16.16.2	Enumerate and describe the pharmacotherapy for inflammatory bowel disease including non-biological and biological agents
		IM 16.16.3	Describe the pharmacology and side effects of the

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	COMPETENCY The student should be able to		SLOs
IM 17.1	Define and classify headache and describe the presenting features, precipitating factors, aggravating and relieving factors of various kinds of headache	17.1.1	At the end of the session, the phase II student must be able to enumerate the classification and types of headaches correctly.
		17.1.2	At the end of the session, the phase II student must be able to differentiate between primary and secondary headaches correctly.
		17.1.3	At the end of the session, the phase II student must be able to describe the clinical features of various types of headaches correctly.
		17.1.4	At the end of the session, the phase II student must be able to discuss the clinical features of migraine, tension and cluster headache correctly.
		17.1.5	At the end of the session, the phase II student must be able to list the clinical features of raised intracranial pressure accurately.
IM 17.2	Elicit and document and present an appropriate history including aura, precipitating aggravating and relieving factors, associated symptoms that help identify the cause of headaches	17.2.1	At the end of the session, the phase II student must be able to elicit all components of the history of a patient of headache presenting in the OPD accurately
		17.2.2	At the end of the session, the phase II student must be able to record the salient/cardinal features history of a patient of headache accurately to

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			neurologic examination accurately and completely
		17.4.2	At the end of the session, the phase II student must be able to perform and demonstrate a focused neurologic examination to identify signs of raised intracranial tension accurately
		17.4.3	At the end of the session, the phase II student must be able to perform and demonstrate a focused neurologic examination to identify neck signs of meningitis accurately
		17.4.4	At the end of the session, the phase II student must be able to accurately identify and discuss the neurologic signs of different types of cerebral/brainstem herniation
IM 17.5	Generate document and present a differential diagnosis based on the clinical features and prioritise the diagnosis based on the presentation	17.5.1	At the end of the session, the phase III student must be able to make a list of differential diagnosis of causes of headache
		17.5.2	At the end of the session, the phase III student must be able to discuss the differential diagnosis of headache based on the history and examination findings accurately
		17.5.3	At the end of the session, the phase III student must be able to identify the clinical features in favour of and

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			against each etiology in the list of differential diagnosis by documenting the points in the notes
		17.5.4	At the end of the session, the phase III student must be able to identify and interpret the clinical findings of the case to narrow the diagnosis to the most likely cause correctly, as far as possible
IM 17.6	Choose and interpret diagnostic testing based on the clinical diagnosis including imaging	17.6.1	At the end of the session, the phase III student must be able to correctly identify which patient of headache must undergo diagnostic testing, based on the clinical diagnosis
		17.6.2	At the end of the session, the phase III student must be able to correctly identify which patient of headache must undergo imaging, based on the clinical diagnosis
		17.6.3	At the end of the session, the phase III student must be able to correctly choose the further diagnostic investigations for headache, based on the clinical diagnosis
		17.6.4	At the end of the session, the phase III student must be able to correctly choose the imaging modality for investigation of headache (CT scan versus MRI), based on the accuracy, availability,

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			cost and safety parameters
		17.6.5	At the end of the session, the phase III student must be able to correctly interpret the results of the investigations for headache, including imaging
IM 17.7	Enumerate the indications and describe the findings in the CSF in patients with meningitis	17.7.1	At the end of the session, the phase III student must be able to correctly list the indications for doing a lumbar puncture
		17.7.2	At the end of the session, the phase III student must be able to correctly list the contra-indications for doing a lumbar puncture
		17.7.3	At the end of the session, the phase III student must be able to correctly list the various parameters studied in a CSF sample in a case of meningitis
		17.7.4	At the end of the session, the phase III student must be able to correctly describe the normal CSF parameters and abnormal findings in CSF in patients of meningitis (bacterial, viral, tubercular)
IM 17.8	Demonstrate in a mannequin or equivalent the correct technique for performing a lumbar puncture	17.8.1	At the end of the session a phase IV student must be able to counsel the patient and attendants about lumbar puncture procedure and obtain their written consent correctly
		17.8.2	At the end of the session

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			the phase IV student must be able to correctly enumerate the steps of doing a lumbar puncture, including preparation, instruments, the procedure itself and post-procedure care
		17.8.3	At the end of the session the phase IV student must be able to enumerate and accurately identify the complications of lumbar puncture
		17.8.4	At the end of the session the phase IV student must have observed a lumbar puncture being done in a mannequin or patient
		17.8.5	At the end of the session the phase IV student must be able to demonstrate all the steps of a lumbar puncture on a mannequin
		17.8.6	At the end of the session the phase IV student must be able to document the lumbar puncture procedure in the notes accurately
		17.8.7	At the end of the session the phase IV student must be able to correctly describe collection, storage, handling and transportation of CSF samples to the laboratory for analysis.
IM 17.9	Interpret the CSF findings when presented with various parameters of CSF fluid analysis	17.9.1	At the end of the session a student of phase III must be able to list the various parameters analysed in CSF

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		17.9.2	At the end of the session a student of phase III must be able to correctly identify and discuss the abnormal CSF findings in a report
		17.9.3	At the end of the session a student of phase III must be able to correctly interpret the CSF report and arrive at a likely etiology in the context of the clinical case
IM17.10	Enumerate the indications for emergency care admission and immediate supportive care in patients with headache	17.10.1	At the end of the session, the phase III student must be able to correctly list the indications for emergency admission in a patient of headache
		17.10.2	At the end of the session, the phase III student must be able to accurately elicit a focused, short history and perform a relevant neurological examination to identify which patients of headache need emergency admission
		17.10.3	At the end of the session, the phase III student must be able to correctly describe the supportive care (resuscitation, secure airway, IV access, lowering ICP) during emergency admission in patients of headache
IM17.11	Describe the indications, pharmacology, dose, side effects of abortive therapy in migraine	17.11.1	At the end of the session, a phase IV student must be able to correctly discuss the indications and contraindications of

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			various drugs used for abortive therapy in migraine
		17.11.2	At the end of the session, a phase IV student must be able to list the drugs, their routes of administration and doses when used for abortive therapy in migraine
		17.11.3	At the end of the session, a phase IV student must be able to analyse and discuss the appropriate abortive therapy for an individual patient of migraine taking into account his/her disease pattern, choices, co-morbidities, toxicity, availability and cost
		17.11.4	At the end of the session, a phase IV student must be able to correctly counsel the patient regarding the dosing, precautions, and side-effects of abortive therapy
		17.11.5	At the end of the session, a phase IV student must be able to counsel the patient about the need to maintain a headache diary and how to prevent medication (NSAID) overuse
IM17.12	Describe the indications, pharmacology, dose, side effects of prophylactic therapy in migraine	17.12.1	At the end of the session, a phase IV student must be able to discuss the indications and contraindications of drugs used for prophylactic therapy in

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			migraine
		17.12.2	At the end of the session, a phase IV student must be able to correctly list the drugs, their routes of administration, duration and doses when used for prophylactic therapy in migraine
		17.12.3	At the end of the session, a phase IV student must be able to analyse and discuss the appropriate prophylactic therapy for an individual patient of migraine taking into account his/her disease pattern, choices, co-morbidities, toxicity, availability and cost
		17.12.4	At the end of the session, a phase IV student must be able to correctly counsel the patient regarding the dosing, precautions, compliance and side-effects of prophylactic therapy
		17.12.5	At the end of the session, a phase IV student must be able to counsel the patient about maintaining a headache diary
IM17.13	Describe the pharmacology, dose, adverse reactions and regimens of drugs used in the treatment of bacterial, tubercular and viral meningitis	17.13.1	At the end of the session, a phase III student must be able to correctly list the drugs, their routes of administration, duration and doses when used for treatment of bacterial, tubercular and viral meningitis

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		17.13.2	At the end of the session, a phase IV student must be able to correctly choose antibiotics for empirical treatment of bacterial meningitis in adults
		17.13.3	At the end of the session, a phase IV student must be able to describe penicillin allergy testing, side-effects and renal dose modification in a case of bacterial meningitis
		17.13.4	At the end of the session, a phase IV student must be able to discuss the correct use of Acyclovir for a patient of viral meningitis (dose, administration, precautions, duration)
		17.13.5	At the end of the session, a phase IV student must be able to correctly discuss the prescription writing for treatment of tubercular meningitis based on weight, as per national guidelines
		17.13.6	At the end of the session, a phase IV student must be able to discuss the monitoring of patients for toxicity of anti-tubercular drugs
		17.13.7	At the end of the session, a phase IV student must be able to discuss the management of a patient who develops hepatotoxicity due to anti-tubercular therapy
IM17.14	Counsel patients with migraine and	17.14.1	At the end of the

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	tension headache on lifestyle changes and need for prophylactic therapy		session, the phase IV student should be able to correctly list the aggravating/triggering factors for migraine and tension headache
		17.14.2	At the end of the session, the phase IV student should be able to correctly identify the precipitating/aggravating factors for migraine and tension headache, in a particular patient by talking to him/her
		17.14.3	At the end of the session, the phase IV student should be able to inform and counsel the patient about lifestyle changes to be made in order to avoid the precipitating factors of headache
		17.14.4	At the end of the session, the phase IV student should be able to correctly counsel the patient regarding need for and compliance with prophylactic therapy for preventing migraine and tension headache
		17.14.5	At the end of the session, a phase IV student must be able to counsel the patient about the need to maintain a headache diary

18 CVA

	COMPETENCY		SLOs
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The student should be able to			
IM18.1	Describe the functional and the vascular anatomy of the brain	IM18.1.1	Describe the functional anatomy of the brain
		IM18.1.2	Describe the vascular anatomy of the brain
IM18.2	Classify cerebrovascular accidents and describe the aetiology, predisposing genetic and risk factors pathogenesis of hemorrhagic and non-hemorrhagic stroke	IM18.2.1	Classify cerebrovascular accidents
		IM18.2.2	Describe the aetiology, of hemorrhagic and non hemorrhagic stroke
		IM18.2.3	Describe the predisposing factors of hemorrhagic and non hemorrhagic stroke
		IM18.2.4	Describe the risk factors of hemorrhagic and non hemorrhagic stroke
		IM18.2.5	Describe the pathogenesis of hemorrhagic and non hemorrhagic stroke
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	IM18.3.1	Elicit an appropriate history including onset, progression, precipitating and aggravating relieving factors, associated symptoms that help identify the cause of the cerebrovascular accident
		IM18.3.2	Document an appropriate history including onset, progression, precipitating and aggravating relieving factors, associated symptoms that help identify the cause of the cerebrovascular accident
			Present an appropriate history including onset, progression, precipitating and aggravating relieving factors, associated

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			symptoms that help identify the cause of the cerebrovascular accident
IM18.4	Identify the nature of the cerebrovascular accident based on the temporal evolution and resolution of the illness	IM18.4.1	Identify the nature of the cerebrovascular accident based on the temporal evolution
		IM18.4.2	Identify the nature of the cerebrovascular accident based on the resolution of the illness
IM18.5	Perform, demonstrate & document physical examination that includes general and a detailed neurologic examination as appropriate, based on the history	IM18.5.1	Perform, physical examination that includes general and a detailed neurologic examination as appropriate, based on the history
		IM18.5.2	Demonstrate physical examination that includes general and a detailed neurologic examination as appropriate, based on the history
		IM18.5.3	Document physical examination that includes general and a detailed neurologic examination as appropriate, based on the history
IM18.6	Distinguish the lesion based on upper vs lower motor neuron, side, site and most probable nature of the lesion	IM18.6.1	Distinguish the lesion based on upper vs lower motor neuron.
		IM18.6.2	Distinguish the lesion-based on side of involvement and possible site
		IM18.6.3	Distinguish the lesion based on site of the lesion
		IM18.6.4	Distinguish the lesion most probable nature of

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			the lesion
IM18.7	Describe the clinical features and distinguish, based on clinical examination, the various disorders of speech	IM18.7.1	Describe the clinical features of the various disorders of speech
		IM18.7.2	Describe and distinguish, based on clinical examination, the various disorders of speech
IM18.8	Describe and distinguish, based on the clinical presentation, the types of bladder dysfunction seen in CNS disease	IM18.8.1	Describe the clinical features of the various bladder disorders.
		IM18.8.2	Describe and distinguish, based on clinical examination, the various bladder disorders.
IM18.9	Choose and interpret the appropriate diagnostic and imaging test that will delineate the anatomy and underlying cause of the lesion	IM18.9.1	Choose the appropriate diagnostic and imaging test that will delineate the anatomy and underlying cause of the lesion
		IM18.9.2	Interpret the appropriate diagnostic and imaging test that will delineate the anatomy and underlying cause of the lesion
IM18.10	Choose and interpret the appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA)	IM18.10.1	Choose the appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA)
		IM18.10.2	Interpret the appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA)
IM18.11	Describe the initial supportive management of a patient presenting with a cerebrovascular accident (CVA)	IM18.11.1	Describe the initial supportive management of a patient presenting with a cerebrovascular accident (CVA)

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IM18.12	Enumerate the indications for and describe acute therapy of non-hemorrhagic stroke including the use of thrombolytic agents	IM18.12.1	Describe acute therapy of non-hemorrhagic stroke
		IM18.12.2	Enumerate the indications the use of thrombolytic agents of non-hemorrhagic stroke including
IM18.13	Enumerate the indications for and describe the role of anti-platelet agents in non-hemorrhagic stroke	IM18.13.1	Describe the role of anti-platelet agents in non-hemorrhagic stroke
		IM18.13.2	Enumerate the indications of anti-platelet agents in non-hemorrhagic stroke
IM18.14	Describe the initial management of a hemorrhagic stroke	IM18.14.1	Describe the initial management of a hemorrhagic stroke
IM18.15	Enumerate the indications for surgery in a hemorrhagic stroke	IM18.15.2	Enumerate the indications for surgery in a hemorrhagic stroke
IM18.16	Enumerate the indications describe and observe the multidisciplinary rehabilitation of patients with a CVA	IM18.16.1	Enumerate the indications of multidisciplinary rehabilitation of patients with a CVA
		IM18.16.2	Describe multidisciplinary rehabilitation of patients with a CVA
		IM18.16.3	Observe the multidisciplinary rehabilitation of patients with a CVA
IM18.17	Counsel patient and family about the diagnosis and therapy in an empathetic manner	IM18.17.1	Counsel patient and family about the diagnosis and therapy in an empathetic manner
		IM18.17.2	Counsel the family about the diagnosis and therapy in an empathetic manner

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19 Movement Disorders

	Competency The student should be able to		SLOs
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IM19.1	Describe the functional anatomy of the locomotor system of the brain	IM19.1.1	Describe the anatomical structures and pathways of transmission
		IM19.1.2	Describe the physiological processes of regulation and integration
IM19.2	Classify movement disorders of the brain based on distribution, rhythm, repetition, exacerbating and relieving factors	IM19.2.1	Enumerate hyperkinetic movement disorders
		IM19.2.2	Describe body distribution of hyperkinetic movement disorders
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	IM19.3.1	Elicit a detailed history of present illness and temporal evolution
		IM19.3.2	Identify pointers of underlying systemic or neurological illness
		IM19.3.3	Elicit family history in movement disorders.
		IM19.3.4	Elicit relevant drug history for movement disorders
IM19.4	Perform, demonstrate and document a physical examination that includes a general examination and a detailed neurologic examination using standard movement rating scales	IM19.4.1	Demonstrate physical signs of systemic illness and neurocutaneous markers
		IM19.4.2	Perform detailed neurological examination with focus on motor system and tests of coordination
IM19.5	Generate document and present a differential diagnosis and prioritise based on the history and physical examination	IM19.5.1	Present differential diagnosis for movement disorders
IM19.6	Make a clinical diagnosis regarding on the anatomical location, nature and cause of the lesion based on the clinical presentation and findings	IM19.6.1	Make a neuroanatomical diagnosis of a movement disorder
		IM19.6.2	Make a pathological diagnosis of a movement disorder
		IM19.6.3	Make an etiological diagnosis of a movement disorder
IM19.7	Choose and interpret diagnostic and imaging tests in the diagnosis of movement disorders	IM19.7.1	Interpret radiological imaging tests done in movement disorders
		IM19.7.2	Interpret electrophysiological tests

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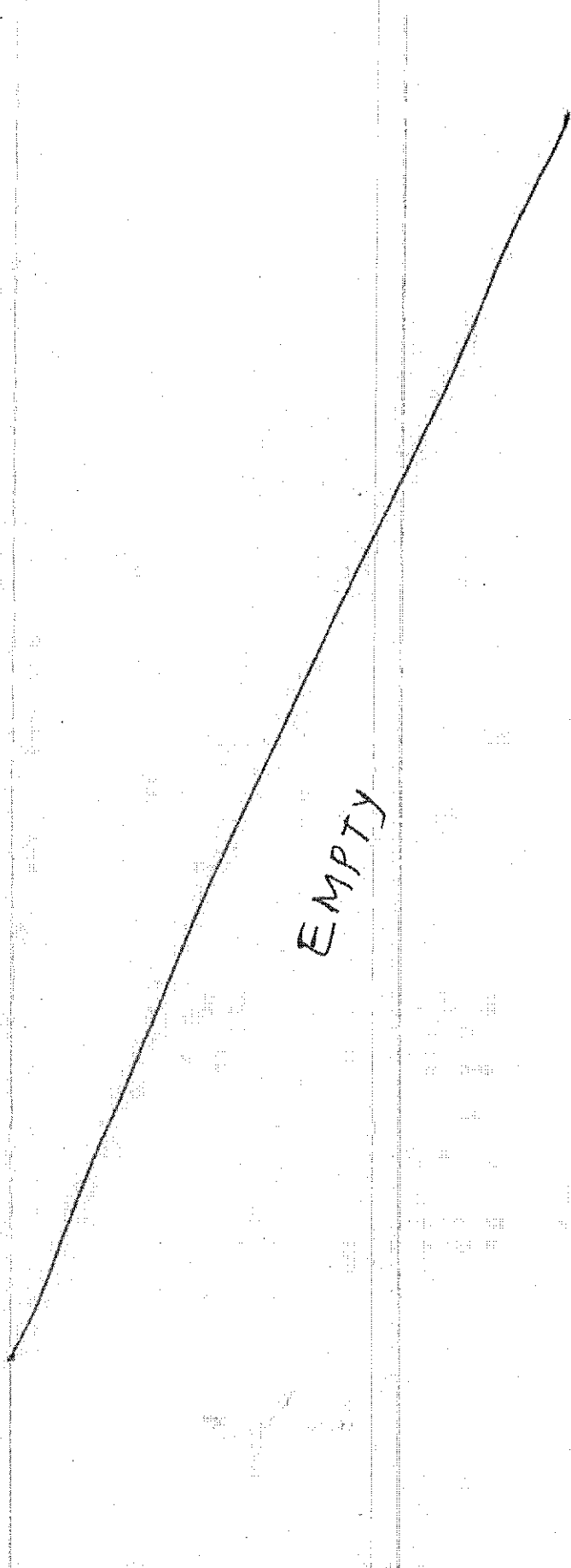
			done in movement disorders
IM19.8	Discuss and describe the pharmacology, dose, side effects and interactions used in the drug therapy of Parkinson's syndrome	IM19.8.1	Enumerate the various class of drugs used in Parkinson's disease and their action
		IM19.8.2	Describe the Typical dosing of drugs used in Parkinson's disease
		IM19.8.3	Discuss the Side effects and interaction of drugs used in Parkinson's disease
IM19.9	Enumerate the Indications for use of surgery and botulinum toxin in the treatment of movement disorders	IM19.9.1	Enumerate the Indications for use of surgery in the treatment of movement disorders
		IM19.9.2	Enumerate the Indications of botulinum toxin in the treatment of movement disorders

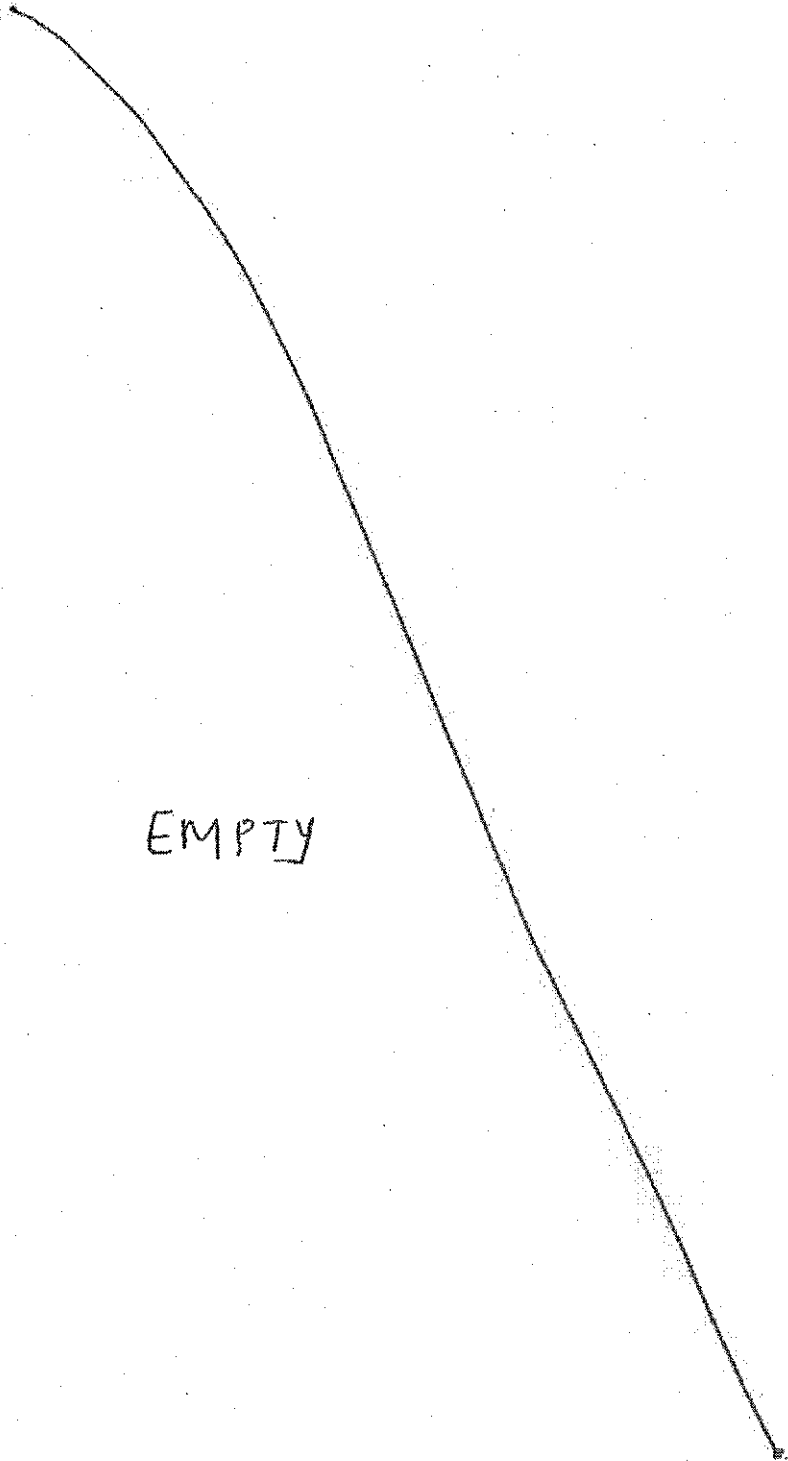
20 Envenomation

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	COMPETENCY The student should be able to		SLOs
IM20.1	Enumerate the local poisonous snakes and describe the distinguishing marks of each	IM20.1.1	Classify venomous snakes
		IM20.1.2	Differentiate venomous snakes as Neurotoxic, Hemotoxic or Myotoxic
		IM20.1.3	Differentiate Features of Poisonous and Non-poisonous snakes
IM20.2	Describe, demonstrate in a volunteer or a mannequin and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field	IM20.2.1	Explain/Demonstrate First Aid Treatment/ Field Management in a case of snake bite
		IM20.2.2	List DON'Ts to be done in the field in a case of snake bite
IM20.3	Describe the initial approach to the stabilisation of the patient who presents with snake bite	IM20.3.1	Enumerate the ABCDE approach of primary clinical assessment in a case of snake bite
		IM20.3.2	Describe the early clues of severe envenoming in a case of snake bite
		IM20.3.3	Discuss treatment of Hypotension, AKI and shock in a case of snake bite
		IM20.3.34	Discuss treatment of neurotoxic envenomation in a case of snake bite
		IM20.3.5	Discuss treatment of the bitten part in a case of snake bite
IM20.4	Elicit and document and present an appropriate history, the circumstance, time, kind of snake, evolution of symptoms in a patient with snake bite	IM20.4.1	How to elicit history in a patient who comes with alleged history of snake bite
IM20.5	Perform a systematic examination, document and present a physical examination that includes general examination, local examination, appropriate cardiac and neurologic examination	IM20.5.1	Demonstrate the ABCDE approach to a patient with snake bite
		IM20.5.2	Demonstrate General Physical examination to a patient with snake bite
		IM20.5.3	Discuss the Local

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			examination findings of a patient who presents with snake bite
		IM20.5.4	Discuss the systemic envenomation findings in a patient with snake bite
IM20.6	Choose and interpret the appropriate diagnostic testing in patients with snake bites	IM20.6.1	Enumerate the investigations to be done in a patient who comes with snake bite
		IM20.6.2	Describe role of dipstick test and urine for microscopy in patient that comes with snake bite
		IM20.6.3	Discuss role of 20-minute whole blood clotting test in patient with snake bite
IM20.7	Enumerate the indications and describe the pharmacology, dose, adverse reactions, hypersensitivity reactions of anti-snake venom	IM20.7.1	What is anti-venom?
		IM20.7.2	Describe the indications of use of Anti snake venom
		IM20.7.3	Describe the dose and administration of Anti snake venom
		IM20.7.4	List and discuss the adverse reactions of Anti snake venom
		IM20.7.5	Discuss treatment of Early anaphylactic and Pyrogenic Anti venom reactions
		IM20.7.6	Discuss treatment of Late (Serum sickness type) reactions
IM20.8	Describe the diagnosis, initial approach stabilisation and therapy of scorpion envenomation	IM20.8.1	Explain Symptoms and Signs of Scorpion envenomation
		IM20.8.2	Explain management of Scorpion envenomation
IM20.9	Describe the diagnosis Initial approach stabilisation and therapy of bee sting allergy	IM20.9.1	Enumerate normal and allergic reactions of Bee Stings
		IM20.9.2	Explain First aid, Treatment of local

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			reaction and anaphylaxis for Bee stings

21 Poisoning

	COMPETENCY		SLOs
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	The student should be able to		
IM21.1	Describe the initial approach to the stabilisation of the patient who presents with poisoning	IM21.1.1	Describe the initial steps of resuscitation in a patient of poisoning
		IM21.1.2	Describe the risk assessment to predict the course of clinical toxicity
		IM21.1.3	Enlist the initial investigations that are sent in a patient of poisoning
		IM21.1.4	Describe the various methods of decontamination and elimination of poison
		IM21.1.5	Enumerate the antidotes available based on type of poisoning
IM21.2	Enumerate the common plant poisons seen in your area and describe their toxicology, clinical features, prognosis and specific approach to detoxification	IM21.2.1	Enumerate the common plant poisons seen in their area
		IM21.2.2	Describe the toxicology of common plant poisons
		IM21.2.3	List the clinical features of common plant poisons
		IM21.2.4	Describe the specific approach of detoxification for common plant poisons.
		IM21.2.5	Discuss the prognosis of common plant poisons
IM21.3	Enumerate the common corrosives used in your area and describe their toxicology, clinical features, prognosis and approach to therapy	IM21.3.1	Enumerate the common corrosives used in their area
		IM21.3.2	Describe the toxicology of common corrosive poisoning
		IM21.3.3	

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			List the clinical features of common corrosive poisoning
		IM21.3.4	Describe the approach towards therapy of common corrosive poisoning
		IM21.3.5	Discuss the prognosis of common corrosives
IM21.4	Enumerate the commonly observed drug overdose in your area and describe their toxicology, clinical features, prognosis and approach to therapy	IM21.4.1	Enumerate the commonly observed drug overdose in their area
		IM21.4.2	Describe the toxicology of common drug overdose
		IM21.4.3	List the clinical features of common drug overdose
		IM21.4.4	Describe the approach towards therapy of common drug overdose
		IM21.4.5	Discuss the prognosis of common drug overdose
IM21.5	Observe and describe the functions and role of a poison center in suspected poisoning	IM21.5.1	Enumerate the functions of poison centre
		IM21.5.2	Describe the role of a poison centre in suspected poisoning
		IM21.5.3	Observe the functioning of a poison centre.
IM21.6	Describe the medico legal aspects of suspected suicidal or homicidal poisoning and demonstrate the correct procedure to write a medico legal report on a suspected poisoning	IM21.6.1	Describe the medicolegal aspects of suspected suicidal poisoning
		IM21.6.2	Describe the medicolegal aspects of suspected homicidal poisoning
		IM21.6.3	Demonstrate the correct procedure to write a medicolegal report on a suspected poisoning.

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IM21.7	Counsel family members of a patient with suspected poisoning about the clinical and medico legal aspects with empathy	IM21.7.1	Demonstrate the understanding of family members on the clinical condition of their patient
		IM21.7.2	Inform the family members regarding the clinical condition of patient
		IM21.7.3	Counsel the family members on various medicolegal aspects in a patient of suspected poisoning
IM21.8	Enumerate the indications for psychiatric consultation and describe the precautions to be taken in a patient with suspected suicidal ideation / gesture	IM21.8.1	Enumerate the indications for psychiatric consultation
		IM21.8.2	Describe the precautions to be taken in a patient with suspected suicidal ideation/gesture

22 Mineral and Acid-base Disorders

	Competency The student should be able to		SLOs
IM22.1	Enumerate the causes of hypercalcemia and distinguish the features of PTH vs non PTH mediated hypercalcemia.	IM22.1.1	Describe physiology of calcium homeostasis

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	<b>Objective</b>	IM22.1.2	Describe the pathological consequences of hypercalcemia.
		IM22.1.3	Enumerate the causes of hypercalcemia.
		IM22.1.4	Enumerate the clinical feature of hypercalcemia.
		IM22.1.5	Distinguish the features of PTH vs non PTH mediated hypercalcemia.
IM22.2		<b>Describe the etiology, clinical manifestations, diagnosis and clinical approach to primary hyperparathyroidism.</b>	IM22.2.1
	IM22.2.2		Describe the etiology of primary hyperparathyroidism.
	IM22.2.3		Enumerate the clinical manifestations of primary hyperparathyroidism.
	IM22.2.4		Discuss clinical approach to primary hyperparathyroidism.
	IM22.2.5		Discuss diagnosis of primary hyperparathyroidism.
	IM22.2.6		Describe surgery intervention in case primary hyperparathyroidism.
IM22.3	<b>Describe the approach to the management of hypercalcemia.</b>	IM22.3.1	Describe the pharmacology actions of drugs used in Hypercalcemia.
		IM22.3.2	Describe the management of Hypercalcemia.
IM22.4	<b>Enumerate the components and describe the genetic basis of the multiple</b>	IM22.4.1	Discuss pathogenesis of MEN syndrome

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	endocrine neoplasia syndromes.	IM22.4.2	Enumerate the components of the multiple endocrine neoplasia syndromes.
		IM22.4.3	Describe the genetic basis of the multiple endocrine neoplasia syndromes.
IM22.5	Enumerate the causes and describe the clinical features and the correct approach to the diagnosis and management of the patient with hyponatremia.	IM22.4.1	Enumerate the causes and clinical features of hyponatremia.
		IM22.4.2	Describe diagnostic approach of hyponatremia.
		IM22.4.3	Describe management of the patient with hyponatremia
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 hypernatremia.	IM22.6.1	Enumerate the causes and clinical features of hypernatremia.
		IM22.6.2	Describe the laboratory features and the correct approach to the diagnosis of hypernatremia.
		IM22.6.3	Describe the treatment of the patient with hypernatremia.
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.	IM22.7.1	Enumerate the causes and describe the clinical feature of hypokalemia.
		IM22.7.2	Describe the laboratory features and the correct approach to the diagnosis of hypokalemia.
		IM22.7.3	Describe the treatment of the patient with hypokalemia.
IM22.8	Enumerate the causes and describe the	IM22.8.1	Enumerate the causes

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	clinical and laboratory features and the correct approach to the diagnosis and management of the patient with hyperkalemia.		and describe the clinical features of hyperkalemia.
		IM22.8.2	Describe the laboratory features and the correct approach to the diagnosis of hyperkalemia.
		IM22.8.3	Describe the treatment of the patient with hypokalemia
IM22.9	Enumerate the causes and describe the clinical and laboratory features of metabolic acidosis.	IM22.9.1	Describe the physiology of metabolic acidosis
		IM22.9.2	Enumerate the causes and describe the clinical features of metabolic acidosis.
		IM22.9.3	Describe the laboratory features of metabolic acidosis
IM22.10	Enumerate the causes of describe the clinical and laboratory features of metabolic alkalosis	IM22.10.1	Describe of physiology of metabolic alkalosis.
		IM22.10.2	Enumerate the causes and describe the clinical features of metabolic alkalosis.
		IM22.10.3	Describe the laboratory features of metabolic alkalosis.
IM22.11	Enumerate the causes and describe the clinical and laboratory features of respiratory acidosis	IM22.11.1	Describe the physiology of respiratory acidosis
		IM22.11.2	Enumerate the causes and describe the clinical features of respiratory acidosis.
		IM22.11.3	Describes the laboratory features of respiratory acidosis.

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IM22.12	Enumerate the causes and describe the clinical and laboratory features of respiratory alkalosis	IM22.12.1	Describe the physiology of respiratory alkalosis.
		IM22.12.2	Enumerate the causes and describe the clinical features of respiratory alkalosis.
		IM22.12.3	Describe the laboratory features of respiratory alkalosis.
IM22.13	Identify the underlying acid base disorder based on an ABG report and clinical situation	IM22.13.1	Describe the physiology of acid base gas analysis.
		IM22.13.2	Identify the underlying acid-base disorder based on an ABG report.
		IM22.13.3	Describe different clinical situation in ABG.

23 Nutritional and Vitamin Deficiencies

	Competency The student should be able to		SLOs
IM 23.1	Discuss and describe the methods of nutritional assessment in an adult and calculation of caloric requirements during illnesses	IM 23.1.1	Discuss essential nutrient requirements and dietary reference intake.
		IM 23.1.2	Discuss nutritional status assessment in adults.

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		IM 23.1.3	Describe factors altering nutritional needs.
		IM 23.1.4	List and describe methods of calculation of calorie requirement in critical illness.
IM 23.2	Discuss and describe the causes and consequences of protein caloric malnutrition in the hospital	IM 23.2.1	Describe nutritional physiology.
		IM 23.2.2	Describe protein energy malnutrition and its variants.
		IM 23.2.3	Describe the diagnosis of protein energy malnutrition in hospitals.
		IM 23.2.4	Discuss the clinical manifestation and complication of PEM in hospitals.
IM 23.3	Discuss and describe the aetiology, causes, clinical manifestations, complications, diagnosis and management of common vitamin deficiencies	IM 23.3.1	Enumerate common vitamin deficiencies.
		IM 23.3.2	Describe the causes and etiologies of common vitamin deficiencies.
		IM 23.3.3	Describe the clinical manifestation of common vitamin deficiencies.
		IM 23.3.4	Discuss the complication of common vitamin deficiency.
		IM 23.3.5	Discuss the diagnostic modalities of common vitamin deficiencies.
		IM 23.3.6	Describe the treatment of common vitamin deficiencies.
IM 23.4	Enumerate the indications for enteral and parenteral nutrition in critically ill patients	IM 23.4.1	Define specialized nutritional support.
		IM 23.4.2	Enumerate the indication, provision and selection of enteral nutrition in critically ill

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			patients.
		IM 23.4.3	Enumerate the indication, provision and selection of parenteral nutrition in critically ill patients.
IM 23.5	Counsel and communicate to patients in a simulated environment with illness on an appropriate balanced diet	IM 23.5.1	Discuss diet counselling in health and disease and simulate patient counselling about balanced diet in various disease conditions
		IM 23.5.2	Communicate to patients in a simulated environment with illness on an appropriate balanced diet

24 Geriatrics

	Competency The student should be able to		SLOs
IM24.1	Describe and discuss the epidemiology, pathogenesis, clinical evolution, presentation, and course of common diseases in the elderly	IM24.1.1	Describe and discuss definition and classification of elderly
		IM24.1.2	Describe and discuss epidemiology of common disease in elderly
		IM24.1.3	Describe and discuss common diseases in

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			elderly pathogenesis, clinical presentation and course)
IM24.2	Perform multidimensional geriatric assessment that includes medical, psycho-social, and functional components	IM24.2.1	Perform clinical assessment of elderly
		IM24.2.2	Perform functional assessment of elderly/assessment of frailty
		IM24.2.3	Perform psychological assessment of elderly
		IM24.2.4	Perform social assessment of elderly
IM24.3	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of acute confusional states	IM24.3.1	Describe and discuss acute confusional states in elderly population
		IM24.3.2	Describe and discuss causes, etiopathogenesis and presentation and functional events of acute confusional states in elderly
		IM24.3.3	Describe and discuss emergency management of acute confusional state
		IM24.3.4	Describe and discuss rehabilitation / long term management of elderly with acute confusional state
IM24.4	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vascular events in the elderly	IM24.4.1	Describe and discuss vascular events in elderly population
		IM24.4	Describe and discuss causes, etiopathogenesis and presentation, functional alteration of vascular events in elderly
		IM24.4	Describe and discuss emergency /Acute management of Vascular event in elderly
		IM24.4	Describe and discuss stabilization, rehabilitation / long term management of elderly

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IM24.5	Describe and discuss the aetiopathogenesis clinical presentation identification, functional changes, acute care, stabilization, management, and rehabilitation of depression in the elderly		with vascular events
		IM24.5.1	Describe and discuss causes of depression in elderly
		IM24.5.2	Describe and discuss clinical presentation of depression in elderly and functional changes
		IM24.5.3	Discuss identification of reversible causes of depression elderly
		IM24.5.4	Describe and discuss acute care and management of depression in elderly
		IM24.5.5	Describe and discuss rehabilitation of depression in elderly
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	IM24.6.1	Describe and discuss causes of dementia in elderly
		IM24.6.2	Describe and discuss clinical presentation of dementia in elderly and functional changes
		IM24.6.3	Discuss identification of reversible causes of dementia in elderly
		IM24.6.4	Describe and discuss acute care and management of dementia in elderly
		IM24.6.5	5.Rehabilitation of dementia in elderly
IM24.7	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of personality changes in the elderly	IM24.7.1	Describe and discuss causes of personality changes in elderly
		IM24.7.2	Describe and discuss clinical presentation of personality changes in elderly and functional changes
		IM24.7.3	Discuss identification of reversible causes of personality changes a in elderly

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		IM24.7.4	Describe and discuss acute care and management of personality changes in elderly
		IM24.7.5	Describe and discuss rehabilitation of in personality changes in elderly
IM24.8	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of osteoporosis in the elderly	IM24.8.1	Describe and discuss causes and risk factors of in osteoporosis elderly
		IM24.8.2	Describe and discuss clinical presentation of osteoporosis in elderly and functional changes
		IM24.8.3	Describe and discuss immediate care, stabilization and long-term management of osteoporosis in elderly
		IM24.8.4	Describe and discuss rehabilitation of elderly with osteoporosis
IM24.9	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of CVA in the elderly	IM24.9.1	Describe and discuss causes and risk factors of CVA in elderly
		IM24.9.2	Describe and discuss clinical presentation of CVA in elderly and functional changes
		IM24.9.3	Describe and discuss acute care, stabilization, and management of CVA in elderly
		IM24.9.4	Describe and discuss rehabilitation of elderly with CVA
IM24.10	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of COPD in the elderly	IM24.10.1	Describe and discuss causes /pathogenesis of COPD in elderly
		IM24.10.2	Describe and discuss clinical presentation of COPD in elderly and functional changes

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		IM24.10.3	Discuss identification of reversible/ treatable causes of COPD in elderly such as risk factors for exacerbation
		IM24.10.4	Describe and discuss acute care, stabilization and management of in elderly with COPD
		IM24.10.5	Describe and discuss rehabilitation of elderly with COPD and prevention of exacerbations and complications
IM24.11	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery	IM24.11.1	Describe and discuss common causes of surgery in elderly
		IM24.11.2	Describe and discuss clinical presentation of common causes of surgery elderly and functional changes
		IM24.11.3	Describe and discuss acute care, stabilization, and management of in elderly undergoing surgery
		IM24.11.4	Describe and discuss rehabilitation of elderly undergoing surgery
IM24.12	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of degenerative joint disease	IM24.12.1	Describe and discuss aetiopathogenesis of degenerative joint disease in elderly
		IM24.12.2	Describe and discuss clinical presentation of degenerative joint disease in elderly and functional changes
		IM24.12.3	Describe and discuss identification of preventable causes of degenerative joint disease in elderly

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		IM24.12.4	Describe and discuss acute care, stabilization, and management of degenerative joint disease in elderly
		IM24.12.5	Describe and discuss rehabilitation of degenerative joint disease in elderly
IM24.13	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management, and rehabilitation of falls in the elderly	IM24.13.1	Describe and discuss causes of falls in elderly
		IM24.13.2	Describe and discuss clinical presentation/outcomes of falls in elderly and functional changes
		IM24.13.3	Discuss identification of risk factors for falls in elderly
		IM24.13.4	Describe and discuss acute care, stabilization, and management of falls in elderly
		IM24.13.5	Describe and discuss rehabilitation of elderly after falls
IM24.14	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of common fractures in the elderly	IM24.14.1	Describe and discuss common fractures in elderly
		IM24.14.1	Describe and discuss clinical presentation of Common fractures in elderly and functional changes
		IM24.14.2	Describe and discuss identification of factors preventing fractures in elderly
		IM24.14.3	Describe and discuss acute care, stabilization, and management of elderly with fractures
		IM24.14.4	Describe and discuss rehabilitation of in

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IM24.15	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vision and visual loss in the elderly		elderly with fractures
		IM24.15.1	Describe and discuss causes of in visual loss in the elderly
		IM24.15.2	Describe and discuss clinical presentation of visual loss in the elderly and functional changes
		IM24.15.3	Describe and discuss identification of reversible causes of visual loss in elderly
		IM24.15.4	Describe and discuss acute care, stabilization and management of visual loss in the elderly
		IM24.15.5	Describe and discuss rehabilitation of vision and visual loss in the elderly
IM24.16	Describe and discuss the principles of physical and social rehabilitation, functional assessment, role of physiotherapy and occupational therapy in the management of disability in the elderly	IM24.16.1	Describe and discuss basic principles of functional assessment in elderly.
		IM24.16.2	Describe and discuss principals of social and physical rehabilitation of elderly
		IM24.16.3	Describe and discuss concept of fragility and aging
		IM24.16.4	Describe and discuss role of physiotherapy and occupational therapy in elderly
IM24.17	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of hearing loss in the elderly	IM24.17.1	Describe and discuss causes and pathogenesis of hearing loss in the elderly in
		IM24.17.2	Describe and discuss clinical presentation of hearing loss in the elderly and functional changes
		IM24.17.3	Discuss identification of reversible causes of hearing loss in the

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			elderly
		IM24.17.4	Describe and discuss acute care, stabilization and management of hearing loss in the elderly
		IM24.17.5	Describe and discuss rehabilitation of hearing loss in the elderly
IM24.18	Describe the impact of the demographic changes in ageing on the population	IM24.18.1	Describe the impact of the demographic changes in ageing on the population
IM24.19	Enumerate and describe the social problems in the elderly including isolation, abuse, change in family structure and their impact on health.	IM24.19.1	Enumerate social problems in the elderly including isolation, abuse, change in family structure and their impact on health.
		IM24.19.2	Describe social problems in the elderly including isolation, abuse, change in family structure and their impact on health.
IM24.20	Enumerate and describe social interventions in the care of elderly including domiciliary discussion services, rehabilitation facilities, old age homes and state interventions	IM24.20.1	Enumerate social interventions in the care of elderly including domiciliary discussion services, rehabilitation facilities, old age homes and state interventions
		IM24.20.2	Describe social interventions in the care of elderly including domiciliary discussion services, rehabilitation facilities, old age homes and state interventions
IM24.21	Enumerate and describe ethical issues in the care of the elderly	IM24.21.1	Enumerate and describe ethical issues concerning care of elderly
		IM24.21.2	Discuss end of life care
		IM24.21.3	Enumerate and describe

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			medicolegal aspects and laws of our countries and others
IM24.22	Describe and discuss the aetiopathogenesis, clinical presentation, complications, assessment, and management of nutritional disorders in the elderly	IM24.22.1	Describe and discuss causes of nutritional disorders in elderly
		IM24.22.2	Discuss pathogenesis of nutritional disorders in elderly
		IM24.22.3	Describe and discuss clinical presentation of nutritional disorders in elderly and related complications
		IM24.22.4	Describe and discuss diagnosis and assessment of nutritional disorders in elderly
		IM24.22.5	Describe and discuss management and rehabilitation of elderly with nutritional disorders

25 Miscellaneous Infections

	Competency The student should be able to		SLOs
IM25.1	Describe and discuss the response and influence of host immune status, risk factors and comorbidities on zoonotic diseases (e.g. Leptospirosis, Rabies) and non-febrile infectious disease (e.g. Tetanus)	IM25.1.1	What is the response and influence of host immunity on zoonotic diseases (e.g. leptospirosis, Rabies)?
		IM25.1.2	Enumerate the various risk factors for zoonotic diseases
		IM25.1.3	Response and influence of host immunity in a patient with comorbidities in zoonotic diseases
		IM25.1.4	What is the response and influence of host immunity on non-febrile

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			infectious disease (e.g. tetanus)?
		IM25.1.5	What are the risk factors for non-febrile infectious diseases?
		IM25.1.6	Response and influence of host immunity in a patient with comorbidities in non-febrile infectious diseases
IM25.2	Discuss and describe the common causes, pathophysiology and manifestations of these diseases	IM25.2.1	What are the common causative agents of zoonotic and non-febrile infectious diseases?
		IM25.2.2	Describe the pathophysiology of zoonotic diseases
		IM25.2.3	Describe the pathophysiology of non-febrile infectious diseases
		IM25.2.4	Describe the clinical manifestation and complications of zoonotic diseases
		IM25.2.5	Describe the clinical manifestation and complications of non-febrile infectious diseases
IM25.3	Describe and discuss the pathophysiology and manifestations of these diseases	IM25.3.1	Describe the pathophysiology of zoonotic diseases
		IM25.3.2	What are the clinical manifestations of zoonotic diseases?
		IM25.3.3	Describe the pathophysiology of non-febrile infectious diseases
		IM25.3.4	What is the clinical manifestation of non-febrile infectious diseases?
IM25.4	Elicit document and present a medical history that helps delineate the aetiology	IM25.4.1	Elicit and document detailed medical history

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	of these diseases that includes the evolution and pattern of symptoms, risk factors, exposure through occupation and travel		of the patient including demographic profile, symptoms, clinical course of the disease, past history and travel history.
		IM25.4.2	Enumerate common causes of zoonotic diseases and their route of infection
		IM25.4.3	How to differentiate zoonotic and non-febrile infectious diseases from other common infections from history?
		IM25.4.4	Enumerate infections associated with travel
		IM25.4.5	Enumerate common infections associated with occupation
		IM25.4.6	What are the risk factors for zoonotic and non-febrile infectious diseases?
IM25.5	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)	IM25.5.1	Perform general physical examination including skin, hair, mucosa, nail and hygiene
		IM25.5.2	Demonstrate and record vitals of the patient and assess severity of the patient based on vitals
		IM25.5.3	Demonstrate how to perform systemic examination of chest
		IM25.5.4	Demonstrate how to perform systemic examination of abdomen
		IM25.5.5	Discuss differential diagnosis based on examination findings
IM25.6	Generate a differential diagnosis and prioritise based on clinical features that help distinguish between infective,	IM25.6.1	What are the differentiating clinical features of infective,

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	<b>Inflammatory, malignant and rheumatologic causes</b>		inflammatory, malignant and rheumatologic diseases?
		IM25.6.2	Enumerate differential diagnosis and priorities according to clinical features of the patient
IM25.7	<b>Order and interpret diagnostic tests based on the differential diagnosis including: CBC with differential, blood biochemistry, peripheral smear, urinary analysis with sediment, Chest X ray, blood and urine cultures, sputum gram stain and cultures, sputum AFB and cultures, CSF analysis, pleural and body fluid analysis, stool routine and culture and QBC</b>	IM25.7.1	Enumerate the relevant blood investigations based on differential diagnosis
		IM25.7.2	How will you interpret these blood investigations like CBC, peripheral smear etc.?
		IM25.7.3	What other Radiological investigations are required and how they can be useful in making a diagnosis
		IM25.7.4	Enumerate other microbiological investigations required in for diagnosis
		IM25.7.5	What are the body fluid analysis investigations and how are they useful in making a particular diagnosis?
IM25.8	<b>Enumerate the indications for use of newer techniques in the diagnosis of these infections</b>	IM25.8.1	What are the newer methods or investigations for diagnosis of these infections?
		IM25.8.2	Enumerate the indications for these newer investigations
IM25.9	<b>Assist in the collection of blood and other specimen culture</b>	IM25.9.1	Explain the steps for taking a venous blood sample

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		IM25.9.2	What types of vials are used for different type samples?
		IM25.9.3	How will you label a blood sample?
		IM25.9.4	How will you discard a used needle/syringe?
		IM25.9.5	What instructions will you give to the patient for obtaining urine culture specimen?
IM25.10	Develop and present an appropriate diagnostic plan based on the clinical presentation, most likely diagnosis in a prioritised and cost effective manner	IM25.10.1	Prepare a diagnostic plan to reach a most likely diagnosis including routine and specific investigation
		IM25.10.2	Prioritised your investigation in order of preference and in a cost effective manner
		IM25.10.3	What are the indications for invasive and costly investigations?
IM25.11	Develop an appropriate empiric treatment plan based on the patient's clinical and immune status pending definitive diagnosis	IM25.11.1	What is the rationale of an empiric treatment?
		IM25.11.2	What clinical and immune status parameters you will take into consideration before forming an empirical treatment plan?
		IM25.11.3	What empirical treatment plan you will develop till the time a definitive diagnosis is made?
		IM25.11.4	How will you monitor a patient on empirical treatment?
IM25.12	Communicate to the patient and family the diagnosis and treatment of identified infection	IM25.12.1	Counsel the patient and family about identified infection
		IM25.12.2	Counsel the patient and family about severity of

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			the disease
		IM25.12.3	Communicate the treatment plan for the identified infection, its cost, duration and other possible treatment available
		IM25.12.4	Counsel the family about the prognosis of identified infection
IM25.13	Counsel the patient and family on prevention of various infections due to environmental issues	IM25.13.1	Educate the family and patient about the infections associated with environmental issues
		IM25.13.2	Counsel the patient and family about the risk factors
		IM25.13.3	Counsel the patient and family about the need of prevention of these infections
		IM25.13.4	Counsel patient and family on prevent these infections

26 Role of Physician in Community

	COMPETENCY The student should be able to		SLOs
IM26.1	Enumerate and describe professional qualities and roles of a physician	IM26.1.1	Enumerate professional qualities of a physician
		IM26.1.2	Enumerate the roles of a physician
		IM26.1.3	Describe roles of the a physician
		IM26.1.4	Discuss qualities of a physician
IM26.2	Describe and discuss the commitment to lifelong learning as an important part of physician growth	IM26.2.1	Define lifelong learner
		IM26.2.2	Discuss how a physician is a lifelong learner
		IM26.2.3	Describe how lifelong learning plays an important part in physicians growth

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IM26.3	Describe and discuss the role of non-maleficence as a guiding principle in patient care	IM26.3.1	Enumerate the principles of patient care
		IM26.3.2	Define Non maleficence
		IM26.3.3	Enlist few examples of non-maleficence
		IM26.3.4	Discuss the role of non-maleficence as a guiding principle in patient care
IM26.4	Describe and discuss the role of autonomy and shared responsibility as a guiding principle in patient care	IM26.4.1	Enumerate the principles of patient care
		IM26.4.2	Define Autonomy
		IM26.4.3	Enlist few examples of autonomy
		IM26.4.4	Discuss the role of autonomy as a guiding principle in patient care
IM26.5	Describe and discuss the role of beneficence of a guiding principle in patient care	IM26.5.1	Enumerate the principles of patient care
		IM26.5.2	Define Beneficence
		IM26.5.3	Enlist few examples of beneficence
		IM26.5.4	Discuss the role of beneficence as a guiding principle in patient care
IM26.6	Describe and discuss the role of a physician in health care system	IM26.6.1	Enumerate the roles of a physician
		IM26.6.2	Describe roles of the a physician in health care system
IM26.7	Describe and discuss the role of justice as a guiding principle in patient care	IM26.7.1	Enumerate the principles of patient care
		IM26.7.2	Define Justice
		IM26.7.3	Enlist few examples of Justice
		IM26.7.4	Discuss the role of Justice as a guiding principle in patient care
IM26.8	Identify discuss medicolegal, socioeconomic and ethical issues as it pertains to organ donation	IM26.8.1	List medicolegal issues in relation to organ donation
		IM26.8.2	Enumerate socio economic issues related to organ donation

		IM26.8.1	Enlist Ethical issues related to organ donation
		IM26.8.2	Describe Medicolegal issues related to organ donation
		IM26.8.3	Discuss Ethical and socioeconomic issues related to organ donation
IM26.9	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as it pertains to rights, equity and justice in access to health care	IM26.9.1	Define rights, equity and justice in access to health care
		IM26.9.2	Enumerate medicolegal, sociocultural, economic and ethical issues related to rights, equity and justice in access to health care
		IM26.9.3	Discuss medicolegal, sociocultural, economic and ethical issues related to rights, equity and justice in access to health care
		IM26.9.3	Defend medicolegal, sociocultural, economic and ethical issues related to rights, equity and justice in access to health care
IM26.10	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to confidentiality in patient care	IM26.10.1	Define confidentiality in patient care
		IM26.10.2	Identify medicolegal, socio-cultural and ethical issues pertaining to confidentiality in patient care
		IM26.10.3	Discuss Medicolegal, socio-cultural and ethical issues pertaining to confidentiality in patient care
		IM26.10.4	Defend Medicolegal, socio-cultural and ethical

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			issues pertaining to confidentiality in patient care
IM26.11	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to patient autonomy, patient rights and shared responsibility in health care	IM26.11.1	Define Autonomy
		IM26.11.2	List patients' rights and shared responsibilities in health care
		IM26.11.3	Describe medicolegal, socio-cultural and ethical issues pertaining to patient autonomy.
		IM26.11.4	Discuss Medicolegal, socio-cultural and ethical issues pertaining to patient rights and shared responsibility in health care
IM26.12	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to decision making in health care including advanced directives and surrogate decision making	IM26.12.1	Define Advanced directives
		IM26.12.1	Define surrogate decision making
		IM26.12.2	List medicolegal, socio-cultural and ethical issues Pertaining to decision making in health care
		IM26.12.3	Discuss medicolegal, socio-cultural and ethical issues Pertaining to decision making in health care
IM26.13	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to decision making in emergency care including situations where patients do not have the capability or capacity to give consent	IM26.13.1	Define Consent
		IM26.13.2	Identify situations where patients do not have the capability or

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			capacity to give consent
		IM26.13.3	Discuss medicolegal, socio-cultural and ethical issues pertaining to decision making in emergency care
<b>IM26.14</b>	<b>Identify, discuss and defend medicolegal, socio-cultural and ethical issues as it pertains to research in human subjects</b>	<b>IM26.14.1</b>	Identify medicolegal, issues as pertaining to research in human subjects
		IM26.14.2	Enumerate socio-cultural issues related to research in human subjects
		IM26.14.3	List ethical issues related to research in human subjects
		IM26.14.4	Discuss medicolegal, socio-cultural and ethical issues Pertaining to research in human subjects
<b>IM26.15</b>	<b>Identify, discuss and defend, medicolegal, socio-cultural and ethical issues as they pertain to consent for surgical procedures</b>	<b>IM26.15.1</b>	Define informed consent
		IM26.15.2	Identify medicolegal issues related to consent for surgical procedures
		IM26.15.3	Enumerate socio-cultural issues pertaining to consent for surgical procedures
		IM26.15.4	List ethical issues pertaining to consent for surgical procedures
<b>IM26.16</b>	<b>Identify, discuss and defend medicolegal, socio-cultural, professional and ethical issues as it pertains to the physician patient relationship (including fiduciary duty)</b>	<b>IM26.16.1</b>	Identify, discuss and defend medicolegal issues as it pertains to the physician patient relationship
		IM26.16.2	Identify, discuss and defend socio-cultural issues as it pertains to the physician patient relationship
		IM26.16.3	Identify, discuss and

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			defend ethical issues as it pertains to the physician patient relationship
		IM26.16.4	Identify, discuss and defend professional issues as it pertains to the physician patient relationship
IM26.17	Identify, discuss physician's role and responsibility to society and the community that she/ he serves	IM26.17.1	Identify physician's role towards society and community
		IM26.17.2	List responsibilities of a physician to society and community
		IM26.17.3	Discuss physician's role in society and community
IM26.18	Identify, discuss and defend medicolegal, socio-cultural, professional and ethical issues in physician- industry relationships	IM26.18.1	What do you understand by "Physician-Industry relationship"?
		IM26.18.2	Discuss the medicolegal aspects of physician-industry relationship with appropriate examples
		IM26.18.3	How does the industry influence the professionalism of a physician?
		IM26.18.4	Discuss the socio-cultural trend affecting the physician-industry relationship
IM26.19	Demonstrate ability to work in a team of peers and superiors	IM26.19.1	Demonstrate ability of consulting your senior regarding management of a complicated case
		IM26.19.2	Demonstrate ability to work as a team leader in an emergency situation
		IM26.19.3	Demonstrate ability of assisting your senior for an invasive bedside / emergency procedure
IM26.20	Demonstrate ability to communicate to patients in a patient, respectful, non-	IM26.20.1	Demonstrate the ability to communicate with a

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	threatening, non-judgemental and empathetic manner		patient recently diagnosed with an incurable disease
		IM26.20.2	Demonstrate the ability to communicate with a patient of PLHA who has been working as a CSW
IM26.21	Demonstrate respect to patient privacy	IM26.21.1	Demonstrate the ability of attending a female patient in outpatient department
IM26.22	Demonstrate ability to maintain confidentiality in patient care	IM26.22.1	Demonstrate the ability to attend a case of recently diagnosed STD / Leprosy patient
		IM26.22.2	Demonstrate the ability to care for an HIV patient who is accompanied by her mother-in-law
		IM26.22.3	Demonstrate the ability to care for a patient with history of suicidal attempt
IM26.23	Demonstrate a commitment to continued learning	IM26.23.1	Enumerate the methods of continued learning and demonstrate the role of being a perpetual student with examples
IM26.24	Demonstrate respect in relationship with patients, fellow team members, superiors and other health care workers	IM26.24.1	Demonstrate the ability to attend an illiterate patient portraying respect in the conversation
IM26.25	Demonstrate responsibility and work ethics while working in the health care team	IM26.25.1	Demonstrate a clinical case scenario displaying the act of responsibility while working in a healthcare team
		IM26.25.2	Demonstrate a clinical case scenario that represents various sides of work ethics among the health care team members
IM26.26	Demonstrate ability to maintain required documentation in health care (including	IM26.26.1	Demonstrate the ability of making a case file of a

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	correct use of medical records)		MI patient in emergency ward
		IM26.26.2	Demonstrate the process of referring a patient to a higher centre
IM26.27	Demonstrate personal grooming that is adequate and appropriate for health care responsibilities	IM26.27.1	Demonstrate the components of personal grooming and hygiene to be provided from the end of health care providers
		IM26.27.2	Demonstrate the components of aseptic precautions to be taken care of during invasive procedures
IM26.28	Demonstrate adequate knowledge and use of information technology that permits appropriate patient care and continued learning	IM26.28.1	Demonstrate the ability to use telemedicine
		IM26.28.2	Demonstrate the ability to use Medical databases to search content for recent advances in a given topic
IM26.29	Communicate diagnostic and therapeutic options to patient and family in a simulated environment	IM26.29.1	Demonstrate the ability to communicate diagnostic and therapeutic options in a patient of ischemic cardiomyopathy
		IM26.29.1	Demonstrate the ability to communicate diagnostic and therapeutic options in a patient of malignancy
		IM26.29.2	Demonstrate the ability to communicate diagnostic and therapeutic options in a patient of autoimmune disease
IM26.30	Communicate care options to patient and family with a terminal illness in a simulated environment	IM26.30.1	Demonstrate the ability to break a bad news (terminal illness) to a patient/ family

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		IM26.30.2	Demonstrate the ability to break a communicate care options in terminal illness to patient/ family
IM26.31	Demonstrate awareness of limitations and seeks help and consultations appropriately	IM26.31.1	Demonstrate the ability to consult and seek help from a superior colleague for a difficult case
		IM26.31.2	Demonstrate the ability to consult and seek help from another department
IM26.32	Demonstrate appropriate respect to colleagues in the profession	IM26.32.1	Demonstrate the ability to deal with professional envy
		IM26.32.2	Demonstrate the ability to deal with healthcare concerns of a colleague
IM26.33	Demonstrate an understanding of the implications and the appropriate procedures and response to be followed in the event of medical errors	IM26.33.1	Demonstrate the ability to discuss errors with colleagues/ superiors and identify possible rectifications
		IM26.33.2	Demonstrate the ability to explain errors to patient/ relatives
		IM26.33.3	Demonstrate the ability to report errors and handle court cases
IM26.34	Identify conflicts of interest in patient care and professional relationships and describe the correct response to these conflicts	IM.26.34.1	Discuss and identify conflict of interest in patient care and professional relationship.
		IM.26.34.2	Identify conflict of interest in patient care and professional relationship.
		IM.26.34.3	Describe correct response to these conflicts.
IM26.35	Demonstrate empathy in patient	IM.26.35.1	Discuss empathy

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	encounters		towards patients.
		IM.26.35.2	Demonstrate empathy in patient encounter in real life scenarios like breaking bad news using role play.
IM26.36	Demonstrate ability to balance personal and professional priorities	IM.26.36.1	Discuss balance between personal life and professional priorities.
		IM.26.36.2	Demonstrate ability to balance personal and professional priorities through panel discussion/ role play
IM26.37	Demonstrate ability to manage time appropriately	IM.26.37.1	Discuss importance of time management
		IM.26.37.2	Demonstrate ability to manage time through skit/role play.
IM26.38	Demonstrate ability to form and function in appropriate professional networks	IM.26.38.1	Discuss the importance of professional network
		IM.26.38.2	Demonstrate ability to form and function in appropriate professional network through skit/ mock seminars
IM26.39	Demonstrate ability to pursue and seek career advancement	IM.26.39.1	Demonstrate ability to pursue and seek career advancement
IM26.40	Demonstrate ability to follow risk management and medical error reduction practices where appropriate.	IM.26.40.1	Discuss risk management and medical error.
		IM.26.40.2	Demonstrate risk management and medical error reduction

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			through role play.
IM26.41	Demonstrate ability to work in a mentoring relationship with junior colleagues	IM.26.41.1	Discuss importance of mentoring in medical practice
		IM.26.41.2	Demonstrate mentoring relationship with junior colleague through skit.
IM26.42	Demonstrate commitment to learning and scholarship	IM.26.42.1	Discuss commitment to learn
		IM.26.42.2	Discuss scholarships available for medical students.
		IM.26.42.3	Demonstrate role of scholarship through a short seminar.
		IM.26.42.4	Demonstrate commitment to learning via skit
IM26.43	Identify, discuss, and defend medicolegal, sociocultural, economic and ethical issues as they pertain to in vitro fertilization donor insemination and surrogate motherhood	IM.26.43.1	Identify medicolegal, sociocultural, and ethical issues pertaining to donor insemination and surrogate motherhood.
		IM.26.43.2	Discuss medicolegal, sociocultural, and ethical issues pertaining to donor insemination and surrogate motherhood
		IM.26.43.3	Defend medicolegal, sociocultural, and ethical issues pertaining to donor insemination and surrogate motherhood
IM26.44	Identify, discuss and defend medicolegal, socio-cultural professional and issues	IM.26.44.1	Identify medicolegal, sociocultural, and ethical

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	pertaining to ethical medical negligence		issues pertaining to ethical medical negligence
		IM.26.44.2	Discuss medicolegal, sociocultural, and ethical issues pertaining to ethical medical negligence
		IM.26.44.3	Defend medicolegal, sociocultural, and ethical issues pertaining to ethical medical negligence
IM26.45	Identify, discuss, and defend medicolegal, socio-cultural professional and ethical issues pertaining to malpractice.	IM.26.45.1	Identify medicolegal, sociocultural, and ethical issues pertaining to malpractice.
		IM.26.45.2	Discuss medicolegal, sociocultural, and ethical issues pertaining to ethical malpractice.
		IM.26.45.3	Defend medicolegal, sociocultural, and ethical issues pertaining to malpractice
IM26.46	Identify, discuss, and defend medicolegal, socio-cultural professional and ethical issues in dealing with impaired physicians	IM.26.46.1	Identify medicolegal, sociocultural, and ethical issues pertaining to impaired physicians.
		IM.26.46.2	Discuss medicolegal, sociocultural, and ethical issues pertaining to impaired physicians
		IM.26.46.3	Defend medicolegal, sociocultural and ethical

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			issues pertaining to impaired physicians
IM26.47	Identify, discuss, and defend medicolegal, socio-cultural, and ethical issues as they pertain to refusal of care including do not resuscitate and withdrawal of life support	IM.26.47.1	Identify medicolegal, socio-cultural, and ethical issues as they pertain to refusal of care including do not resuscitate and withdrawal of life support
		IM.26.47.2	Discuss medicolegal, socio-cultural, and ethical issues as they pertain to refusal of care including do not resuscitate and withdrawal of life support
		IM.26.47.3	Defend/Justify medicolegal, socio-cultural, and ethical issues as they pertain to refusal of care including do not resuscitate and withdrawal of life support
IM26.48	Demonstrate altruism	IM.26.48.1	Demonstrate altruism
IM26.49	Administer informed consent and appropriately address patient queries to a patient being enrolled in a research protocol in a simulated environment	IM.26.49.1	Describe informed consent for a research and address patient queries of patient/participant being enrolled
		IM.26.49.2	Demonstrate informed consent and appropriately address

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			patient queries to a patient being enrolled in a research protocol in a simulated environment
		IM.26.49.3	Administer informed consent and appropriately address patient queries to a patient being enrolled in a research protocol in a simulated environment

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APPENDIX - III

UG LOGBOOK (MEDICINE) - (PAGES 1-13)

LOGBOOK

DEPARTMENT OF MEDICINE

(COMPETENCY BASED CURRICULUM)

Name of student: .....

Batch: .....

University registration number .....

PERSONAL DETAILS

Name: \_\_\_\_\_

Roll No. & Batch: \_\_\_\_\_

Date of Admission to MBBS Course: \_\_\_\_\_

Registration No. (College/University ID): \_\_\_\_\_

Present Address: \_\_\_\_\_

Permanent Address \_\_\_\_\_

Student's Contact No: \_\_\_\_\_

Student's Email Id: \_\_\_\_\_

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## GENERAL INSTRUCTIONS

1) The logbook is a record of the academic / co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.

2) The student is responsible for getting the entries in the logbook verified by the Faculty in charge regularly.

3) Entries in the logbook will reflect the activities undertaken in the department & have to be scrutinized by faculty.

4) The logbook is a record of various activities by the student like:

- Overall participation & performance
- Attendance
- Participation in sessions
- Record of completion of pre-determined activities.
- Acquisition of selected competencies

5) The logbook is the record of work done by the candidate in that department / specialty and should be verified by the college before submitting the application of the students for the University examination.

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Self-Declaration Form

I am Mr./Ms/ ..... Son/Daughter of Sh. ....

Roll No. .... University Reg. No. ....

Resident:

Contact No. (Student) ..... Contact No. (Parents) .....

1.As per MCI Guidelines Regulations on GME 1997 in Gazette of India Amendment Notification No. MCI-34(41)/2019-Med./161726 (dated 06.11.2019) Chapter VI Assessment:

a)11.1.1.(a)(1): Attendance requirements are 75% in theory and 80% in practical/clinical. In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.

b)11.1.1.(b)(5): Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40% marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject. Internal assessment marks will reflect as separate head of passing at the summative examination.

3.If I have not fulfilled the above criteria, Institute will not forward/recommend my name to appear for University Examination.

4.If I am detained due to lack of attendance or failing in internal assessment, I cannot appear in university supplementary examination unless I improve my performance. If I Fail to improve my performance then I will be not be eligible to appear in university exam with my batch.

SIGNATURE OF STUDENT

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## INDEX

S.No	COMPETENCIES	PAGE NO
1.	COMPETENCIES REQUIRING CERTIFICATION	
2.	COMPETENCIES REQUIRING DOCUMENTATION	
3.	CERTIFIABLE PROCEDURAL SKILLS & OTHERS	
4.	RECORD OF CLINICAL CASES PRESENTED/ATTENDED PHASE II	
5.	RECORD OF CLINICAL CASES PRESENTED/ATTENDED PHASE III (Part I)	
6.	RECORD OF CLINICAL CASES PRESENTED/ATTENDED PHASE III (Part2)	

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Abbreviations:

Attempt at activity by learner:

- F - First attempt (or) only attempt
- R - Repeat of a previously done activity
- Re- Remedial activity based on the determination by the teacher

Rating - Use one of three grades:

- B - Below expectations (B)
- M- Meets expectations (M)
- E - Exceeds expectations (E)

Decision of the teacher

- C - Activity is completed, therefore closed and can be certified, if needed
- R- Activity needs to be repeated without any further intervention
- Re - Activity needs remedial action (usually done after repetition did not lead to satisfactory completion)

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**COMPETENCIES REQUIRING LOG BOOK DOCUMENTATION**

	Date Completed dd.mm.yy	Attempt at activity F/R/Re	Rating B/M/E	Decision of faculty C/R/Re	Initial of faculty and date	Feedback Received Initial of learner
IM 1.30 Administer an intramuscular injection with an appropriate explanation to the patient.						
IM 4.13 Perform and interpret a sputum gram stain.						
IM 4.14 Perform and interpret a sputum AFB.						
IM 4.15 Perform and interpret a malarial smear.						
IM 4.17 Observe and assist in the performance of a bone marrow aspiration and biopsy in a simulated environment. (DOAP)						
IM 4.19 Assist in the collection of blood and wound cultures.						
IM 4.20 Interpret a PPD (Mantoux)						
IM 5.15 Assist in the performance and interpret the findings of an ascitic fluid analysis. (DOAP)						
IM 9.19 Assist in a blood transfusion.						
IM 10.20 Describe and discuss the indications to perform arterial blood gas analysis: interpret the data						
IM 21.5 Observe and describe the functions and role of a poison center in suspected poisoning						
IM 25.9 Assist in the collection of blood and other specimen cultures						

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**COMPETENCIES REQUIRING LOG BOOK DOCUMENTATION**

	Date Completed dd.mm.yy	Attempt at activity F/R/Re	Rating B/M/E	Decision of faculty C/R/Re	Initial of faculty and date	Feedback Received Initial of learner
IM3.8 Demonstrate in a mannequin and interpret results of an arterial blood gas examination. (DOAP)						
IM3.9 Demonstrate in a mannequin and interpret results of a pleural fluid aspiration. (DOAP)						
IM10.21 Describe and discuss the indications for and insert a peripheral intravenous catheter. (DOAP)						
IM 17.19 Demonstrate in a model the correct technique to perform a lumbar puncture.						
IM3.10, Demonstrate the correct technique in a mannequin and interpret results of a blood culture. (DOAP)						
IM20.2 Describe, demonstrate in a volunteer or a mannequin and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field. (DOAP)						
IM23.5 Counsel and communicate to patients in a simulated environment with illness on an appropriate balanced diet. (DOAP)						
IM4.17 Observe and assist in the performance of a bone marrow aspiration and biopsy in a simulated environment. (DOAP)						
IM26.29 Communicate diagnostic and therapeutic options to patient and family in a simulated environment. (DOAP)						

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**COMPETENCIES WITH CERTIFIABLE PROCEDURAL SKILLS**

	Date Completed dd.mm.yy	Attempt at activity F/R/Re	Rating B/M/E	Decision of faculty C/R/Re	Initial of faculty and date	Feedback Received Initial of learner
IM 26.30 Communicate care options to patient and family with a terminal illness in a simulated environment. (DOAP)						
IM 26.49 Administer informed consent and appropriately address patient queries to a patient being enrolled in a research protocol in a simulated environment. (DOAP)						

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**COMPETENCIES WITH CERTIFIABLE PROCEDURAL SKILLS**

	Date Completed dd.mm.yy	Attempt at activity F/R/Re	Rating B/M/E	Decision of faculty C/R/Re	Initial of faculty and date	Feedback Received Initial of learner
Venipuncture (I)						
Intramuscular injection (I)						
Intradermal injection (D)						
Subcutaneous injection (I)						
Intra Venous (IV) injection (I)						
Setting up IV infusion and calculating drip rate (I)						
Blood transfusion (O)						
Urinary catheterization (D)						
Basic life support (D)						
Oxygen therapy (I)						
Aerosol therapy / nebulization (I)						
Ryle's tube insertion (D)						
Lumbar puncture (O)						
Pleural and ascitic aspiration (O)						
Cardiac resuscitation (D)						
Peripheral blood smear interpretation (I)						
Bedside urine analysis (D)						

I- Independently performed on patients,  
 O- Observed in patients or on simulations,  
 D- Demonstration on patients or simulations and performance under supervision in Patients

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RECORD OF CLINICAL CASE PRESENTATION IN PHASE 2

S. NO	Date	Patient Name & ID	Diagnosis	Case Presented/Attended Write P/A	Instructor's Signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

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RECORD OF CLINICAL CASE PRESENTAION IN PHASE 3 PART I

S. NO	Date	Patient Name & ID	Diagnosis	Case Presented/Attended Write P/A	Instructor's Signature
1					
2					
3					
4					
5					
6					
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9					
10					

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RECORD OF CLINICAL CASE PRESENTATION IN PHASE 3 PART 2

S. NO	Date	Patient Name & ID	Diagnosis	Case Presented/Attended Write P/A	Instructor's Signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

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ASSESSMENT - UG

## THEORY EXAMINATION ( 200 MARKS)

## PAPER I (100 MARKS)

## PART I

20 MCQs 20 marks  
(NO negative marks)

## PART II

1 LONG QUESTION 10 MARKS  
6 SHORT NOTES 6 X 5 = 30 MARKS  
(Not more than 200 words)

## PART III

1 LONG QUESTION 10 MARKS  
6 SHORT NOTES 6 X 5 = 30 MARKS  
(AT LEAST ONE AETCOM QUESTION)  
(Not more than 200 words)

## PAPER II (100 MARKS)

## PART I

20 MCQs 20 marks  
(NO negative marks)

## PART II

1 LONG QUESTION 10 MARKS  
6 SHORT NOTES 6 X 5 = 30 MARKS  
(Not more than 200 words)

S. Anuradha

B.K. Shil urtoo

D

Gayender Singh

**PART III**

1 LONG QUESTION

10 MARKS

6 SHORT NOTES

6 X 5 = 30 MARKS

(Not more than 200 words)

-TB

- DERMATOLOGY

- PSYCHIATRY

OF THE 6 SHORT NOTES, 5 QUESTIONS FROM TB, DERMATOLOGY AND PSYCHIATRY

1 AETCOM QUESTION

*Self notes*

*B* *B*

*S. Arumaha*  
*Gopalan*

## PRACTICAL EXAMINATION

1. ONE LONG CASE 80 MARKS  
     Long Case 70 marks  
     AETCOM 10 marks
2. ONE SHORT CASE 40 MARKS
3. ANALYTICAL OSCE 40 MARKS

8 STATIONS OF 5 MARKS EACH

1 ECG

1 CXR

1 ABG

1 CSF / OTHER CLINICAL INVESTIGATION INTERPRETATION

1 PRESCRIPTION WRITING

1 MICROSCOPIC PICTURE / SLIDE

1 DERMATOLOGY PICTURE

1 AETCOM

4. TABLE VIVA 2 VIVA  
2 X 20 = 40 MARKS

1 VIVA – DRUGS AND INSTRUMENTS

1 VIVA - EMERGENCIES

*Sub urto*

*BA*

*S. Anuradha*

*1. Gayendran*

## Internal Assessment Marks for General Medicine

Table 5: Distribution of Internal assessment marks across phases

Phase	Theory	Practical/ Clinical
Phase 2	20	20
Phase 3 Part 1	40	40
Phase 3 Part 2	60	60
Sent Up	60	60
Log Book	20	20
Total	200	200

S. Annasabha

BA

stuf intoo

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01/01/2009

P