Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
Topic: Introduction to Pathology	**Number of competencies: (03)**				**Number of procedures that require certification: (NIL)**				
PA1.1	**Describe the role of a pathologist in diagnosis and management of disease**	**K**	**K**	**Y**	**Departmental orientation**	**Written/ Viva voce**			
PA1.1.1	By the end of session 2nd phase MBBS student must be able to discuaa the role of pathologist in the diagnosis of disease broadly								
PA1.1.2	By the end of session 2nd phase MBBS student must be able to discuss the role of pathological diagnosis in the management of disease correctly								
PA1.2	**Enumerate common definitions and terms used in Pathology**	**K**	**K**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA 1.2.1	By the end of session 2nd phase MBBS student must be able to enumerate common terms used in Pathology .								
	By the end of session 2nd phase MBBS student must be able to define various common terms used in Pathology correctly.								
PA1.3	**Describe the history and evolution of Pathology**	**K**	**K**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA1.3.1	By the end of session 2nd phase MBBS student should be able to describe the history of Pathology correctly.								
PA1.3.2	By the end of session 2nd phase MBBS student should be able to discuss the evolution of Pathology in previous era precisely.								
Topic: Cell Injury and Adaptation	**Number of competencies: (08)**				**Number of procedures that require certification: (NIL)**				
PA2.1	**Demonstrate knowledge of the causes, mechanisms, types and effects of cell injury and their clinical significance**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA2.1.1	By the end of session 2nd phase MBBS student must be able to enumerate causes of cell injury precisely								
PA2.1.2	By the end of session 2nd phase MBBS student must be able to describe the different mechanisms of cell injury correctly								
PA2.1.3	By the end of session 2nd phase MBBS student must be able to discuss the various types of cell injuries accurately.								

PA2.1.4	By the end of session 2nd phase MBBS student must be able to discuss the effect of cell injury without error.								
PA2.1.5	By the end of session 2nd phase MBBS student must be able to discuss the clinical significance of cell injuries correctly								
PA2.2	**Describe the etiology of cell injury. Distinguish between reversible-irreversible injury: mechanisms; morphology of cell injury**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA2.2.1	By the end of session 2nd phase MBBS student must be able to discuss the etiology of cell injury accurately								
PA2.2.2	By the end of session 2nd phase MBBS student must be able to differentiate between reversible-irreversible cell injury accurately								
PA2.2.3	By the end of session 2nd phase MBBS student must be able to differentiate between reversible and irreversible cell injury accurately								
PA2.2.4	By the end of session 2nd phase MBBS student must be able to describe the morphology of cell in reversible and irreversible cell injury precisely.								
PA2.3	**Intracellular accumulation of fats, proteins, carbohydrates, pigments.**								
PA2.3.1	By the end of session 2nd phase MBBS student must be able to discuss intracellular accumulations correctly.								
PA2.3.2	By the end of session 2nd phase MBBS student must be able to list the causes of intracellular accumulations of fats precisely.								
PA2.3.3	By the end of session 2nd phase MBBS student must be able to list the causes of intracellular accumulations of proteins precisely								
PA2.3.4	By the end of session 2nd phase MBBS student must be able to list the causes of intracellular accumulations of carbohydrates precisely								
PA2.3.5	By the end of session 2nd phase MBBS student must be able to list the causes of intracellular accumulations of pigments precisely								
PA2.3.6	By the end of session 2nd phase MBBS student must be able describe the effects of intracellular accumulations correctly								
PA2.4	**Describe and discuss Cell death- types, mechanisms, necrosis,apoptosis (basic as contrasted with necrosis), autolysis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA2.4.1	By the end of session 2nd phase MBBS student must be able to define the cell deaths precisely.								

PA2.4.2	By the end of session 2nd phase MBBS student must be able to list the various types of cell deaths accurately.								
PA2.4.3	By the end of session 2nd phase MBBS student must be able to describe the mechanism of cell deaths precisely.								
PA2.4.4	By the end of session 2nd phase MBBS student must be able to define necrosis accurately.								
PA2.4.5	By the end of session 2nd phase MBBS student must be able to enumerate various types of necrosis with suitable examples correctly.								
PA2.4.6	By the end of session 2nd phase MBBS student must be able to enumerate various causes of necrosis precisely.								
PA2.4.7	By the end of session 2nd phase MBBS student must be able to define apoptosis precisely.								
PA2.4.8	By the end of session 2nd phase MBBS student must be able to describe the mechanism of apoptosis precisely.								
PA2.4.9	By the end of session 2nd phase MBBS student must be able to differentiate between necrosis and apoptosis correctly.								
PA2.4.10	By the end of session 2nd phase MBBS student must be able to define autolysis accurately.								
PA2.4.11	By the end of session 2nd phase MBBS student must be able to list the causes of autolysis accurately.								
PA2.4.12	By the end of session 2nd phase MBBS student must be able to describe the mechanism of autolysis precisely.								
PA2.5	**Describe and discuss pathologic calcifications, gangrene**								
PA2.5.1	By the end of session 2nd phase MBBS student must be able to define pathologic calcification correctly.								
PA2.5.2	By the end of session 2nd phase MBBS student must be able to enlist the types of pathologic calcification with suitable examples correctly.								
PA2.5.3	By the end of session 2nd phase MBBS student must be able to enlist the causes of pathologic calcification with suitable examples correctly.								
PA2.5.4	By the end of session 2nd phase MBBS student must be able to define the gangrene accurately								
PA2.5.5	By the end of session 2nd phase MBBS student must be able to enlist the types of gangrene correctly.								
PA2.5.6	By the end of session 2nd phase MBBS student must be able to enlist the causes of gangrene precisely.								
PA2.5.7	By the end of session 2nd phase MBBS student must be able to discuss the clinical significance of gangrene correctly								

PA2.6	**Describe and discuss cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA2.6.1	By the end of session 2nd phase MBBS student must be able to discuss cellular adaptations precisely.								
PA2.6.2	By the end of session 2nd phase MBBS student must be able to define cellular atrophy precisely.								
PA2.6.3	By the end of session 2nd phase MBBS student must be able to enlist causes of cellular atrophy accurately								
PA2.6.4	By the end of session 2nd phase MBBS student must be able to describe the mechanism of cellular atrophy precisely								
PA2.6.5	By the end of session 2nd phase MBBS student must be able to clinical significance of cellular atrophy precisely.								
PA2.6.6	By the end of session 2nd phase MBBS student must be able to enumerate the examples of cellular atrophy precisely								
PA2.6.7	By the end of session 2nd phase MBBS student must be able to define cellular hypertrophy precisely.								
PA2.6.8	By the end of session 2nd phase MBBS student must be able to enlist causes of cellular hypertrophy accurately								
PA2.6.9	By the end of session 2nd phase MBBS student must be able to describe the mechanism of cellular hypertrophy precisely								
PA2.6.10	By the end of session 2nd phase MBBS student must be able to clinical significance of cellular hypertrophy precisely								
PA2.6.11	By the end of session 2nd phase MBBS student must be able to enumerate the examples of cellular hypertrophy precisely								
PA2.6.12	By the end of session 2nd phase MBBS student must be able to define cellular hyperplasia precisely.								
PA2.6.13	By the end of session 2nd phase MBBS student must be able to enlist causes of cellular hyperplasia accurately								
PA2.6.14	By the end of session 2nd phase MBBS student must be able to describe the mechanism of cellular hyperplasia precisely								
PA2.6.15	By the end of session 2nd phase MBBS student must be able to clinical significance of hyperplasia correctly								
PA2.6.16	By the end of session 2nd phase MBBS student must be able to enumerate the examples of cellular hyperplasia precisely								
PA2.6.17	By the end of session 2nd phase MBBS student must be able to define metaplasia precisely.								
PA2.6.18	By the end of session 2nd phase MBBS student must be able to enlist causes of metaplasia accurately								
PA2.6.19	By the end of session 2nd phase MBBS student must be able to describe the mechanism of metaplasia precisely								

PA2.6.20	By the end of session 2nd phase MBBS student must be able to discuss clinical significance of cellular metaplasia precisely								
PA2.6.21	By the end of session 2nd phase MBBS student must be able to enumerate the examples of cellular metaplasia precisely								
PA2.6.22	By the end of session 2nd phase MBBS student must be able to define dysplasia correctly.								
PA2.6.23	By the end of session 2nd phase MBBS student must be able to enlist causes of dysplasia accurately.								
PA2.6.24	By the end of session 2nd phase MBBS student must be able to describe the mechanism of dysplasia precisely								
PA2.6.25	By the end of session 2nd phase MBBS student must be able to clinical significance of cellular dysplasia correctly								
PA2.6.26	By the end of session 2nd phase MBBS student must be able to enumerate the examples of cellular dysplasia precisely								
PA2.7	**Describe and discuss the mechanisms of cellular aging and apoptosis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA2.7.1	By the end of session 2nd phase MBBS student must be able to define the cellular aging correctly								
PA2.7.2	By the end of session 2nd phase MBBS student must be able to discuss the mechanisms of cellular aging precisely								
PA2.7.3	By the end of session 2nd phase MBBS student must be able to describe cellular aging correctly								
PA2.8	**Identify and describe various forms of cell injuries, their manifestations and consequences in gross and microscopic specimens**	**S**	**SH**	**Y**	**DOAP session**	**Skill assessment**			
PA2.8.1	By the end of session 2nd phase MBBS student must be able to enumerate causes of cell injury precisely								
PA2.8.2	By the end of session 2nd phase MBBS student must be able to describe the mechanism of cell injury correctly								
PA2.8.3	By the end of session 2nd phase MBBS student must be able to discuss the various types of cell injuries accurately.								
PA2.8.4	By the end of session 2nd phase MBBS student must be able to discuss the effects of cell injury without error.								
PA2.8.5	By the end of session 2nd phase MBBS student must be able to discuss the clinical significance of cell injuries correctly								
PA2.8.6	By the end of session 2nd phase MBBS student must be able to identify various forms of cell injuries on gross specimens correctly								

PA2.8.7	By the end of session 2nd phase MBBS student must be able to interpret microscopic features of cell injury correctly on agiven glass slide								
Topic: Amyloidosis		**Number of competencies: (02)**			**Number of procedures that require certification: (NIL)**				
PA3.1	**Describe the pathogenesis and pathology of amyloidosis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA3.1.1	By the end of session 2nd phase MBBS student must be able to define the amyloidosis precisely.								
PA3.1.2	By the end of session 2nd phase MBBS student must be able to describe the pathogenesis of amyloidosis correctly.								
PA3.1.3	By the end of session 2nd phase MBBS student must be able to enumerate different types of amyloidosis correctly.								
PA3.2	**Identify and describe amyloidosis in a pathology specimen**	**S**	**SH**	**N**	**DOAP session**	**Skill assessment**			
PA3.2.1	By the end of session 2nd phase MBBS student must be able to discuss gross features of amyloidosis with at least five common examples								
PA3.2.2	By the end of session 2nd phase MBBS student must be able to demonstrate the amyloidosis in pathology specimen correctly.								
Topic: Inflammation		**Number of competencies:(04)**			**Number of procedures that require certification: (NIL)**				
PA4.1	**Define and describe the general features of acute and chronic nflammation including stimuli, vascular and cellular events**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA4.1.1	By the end of session 2nd phase MBBS student must be able to define the inflammation correctly.								
PA4.1.2	By the end of session 2nd phase MBBS student must be able to enumerate the types of inflammation precisely.								
PA4.1.3	By the end of session 2nd phase MBBS student must be able to describe the general features of acute inflammation correctly.								
PA4.1.4	By the end of session 2nd phase MBBS student must be able to describe the general features of chronic inflammation correctly								
PA4.1.5	By the end of session 2nd phase MBBS student must be able to describe the vascular events of acute inflammation precisely.								
PA4.1.6	By the end of session 2nd phase MBBS student must be able to describe the cellular events of acute inflammation precisely.								

PA4.2	**Enumerate and discuss mediators of inflammation**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA4.2.1	By the end of session 2nd phase MBBS student must be able to enumerate the mediators of acute inflammation accurately.								
PA4.2.2	By the end of session 2nd phase MBBS student must be able to describe the role of various chemical mediators in acute inflammation precisely								
PA4.3	**Define and describe chronic inflammation including causes, types, non-specific and granulomatous; and enumerate examples of each**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA4.3.1	By the end of session 2nd phase MBBS student must be able to define the chronic inflammation correctly.								
PA4.3.2	By the end of session 2nd phase MBBS student must be able to enlist the causes of chronic inflammation precisely.								
PA4.3.3	By the end of session 2nd phase MBBS student must be able to discuss general features of nonspecific chronic inflammation.								
PA4.3.4	By the end of session 2nd phase MBBS student must be able to define the chronic granulomatous inflammation correctly.								
PA4.3.5	By the end of session 2nd phase MBBS student must be able to enumerate the causes of chronic granulomatous inflammation precisely.								
PA4.4	**Identify and describe acute and chronic inflammation in gross and microscopic specimens**	**S**	**SH**	**Y**	**DOAP session**	**Skill assessment**			
PA4.4.1	By the end of session 2nd phase MBBS student must be able to define the inflammation precisely.								
PA4.4.2	By the end of session 2nd phase MBBS student must be able to enumerate the types of inflammation precisely.								
PA4.4.3	By the end of session 2nd phase MBBS student must be able to describe the general features of acute inflammation correctly.								
PA4.4.4	By the end of session 2nd phase MBBS student must be able to identify gross features of acute inflammation correctly.								
PA4.4.5	By the end of session 2nd phase MBBS student must be able to interpret the microscopic features of acute inflammation precisely.								
PA4.4.6	By the end of session 2nd phase MBBS student must be able to describe the general features of chronic inflammation correctly								

PA4.4.7	By the end of session 2nd phase MBBS student must be able to identify gross features of chronic inflammation correctly.								
PA4.4.8	By the end of session 2nd phase MBBS student must be able to interpret the microscopic features of chronic inflammation precisely.								
PA4.4.9	By the end of session 2nd phase MBBS student must be able to describe the general features of chronic granulomatous inflammation correctly								
PA4.4.10	By the end of session 2nd phase MBBS student must be able to identify gross features of chronic granulomatous inflammation correctly.								
PA4.4.11	By the end of session 2nd phase MBBS student must be able to interpret the microscopic features of chronic granulomatous inflammation precisely.								
Topic: Healing and repair Number of procedures that require certification:(NIL)									
PA5.1	**Define and describe the process of repair and regeneration including wound healing and its types**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce discussion**		**General Surgery**	
PA5.1.1	By the end of session 2nd phase MBBS student must be able to define tissue repair accurately.								
PA5.1.2	By the end of session 2nd phase MBBS student must be able to enumerate the examples of tissue repair accurately.								
PA5.1.3	By the end of session 2nd phase MBBS student must be able to define regeneration accurately.								
PA5.1.4	By the end of session 2nd phase MBBS student must be able to enumerate the examples of regeneration accurately.								
PA5.1.5	By the end of session 2nd phase MBBS student must be able to enumerate the types of wound healing accurately.								
PA5.1.6	By the end of session 2nd phase MBBS student must be able to describe the mechanism of wound healing precisely								
Topic: Hemodynamic disorders Number of competencies: (07) Number of procedures that require certification :(NIL)									
PA6.1	**Define and describe edema, its types, pathogenesis and clinical correlations**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA6.1.1	By the end of session 2nd phase MBBS student must be able to define edema correctly	K	K						
	By the end of session 2nd phase MBBS student must be able to classify edema correctly	K	K						
PA6.1.2	By the end of session 2nd phase MBBS student must be able to discuss pathogenesis of edema correctly with appropriate examples.	K	KH						

PA6.1.3	At the end of the session phase II student must be able to correlate the type of edema with various clinical scenarios correctly	K	KH						
PA6.2	**Define and describe hyperemia, congestion, hemorrhage**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA6.2.1	At the end of the session phase II student must be able to define hyperemia and congestion correctly	K	K						
PA6.2.2	At the end of the session phase II student must be able to define hemorrhage correctly	K	K,KH						
PA6.2.3	At the end of the session phase II student must be able to discuss pathogenesis of hyperemia correctly								
PA6.2.4	At the end of the session phase II student must be able to discuss pathology of congestion correctly								
PA6.2.3	At the end of the session phase II student must be able to discuss pathology of hemorrhage correctly								
PA6.3	**Define and describe shock, its pathogenesis and its stages**	**K**	**KH**	**Y**	**Lecture, Small group**	**Written/ Viva voce**		**General Surgery**	
PA6.3.1	**At the end of the session phase II student must be able to define shock correctly**								
PA6.3.2	At the end of the session phase II student must be able to classify and discuss various types of shock correctly	K	K						
PA6.3.3	At the end of the session phase II student must be able to describe pathogenesis of shock in detail								
PA6.3.4	At the end of the session phase II student must be able to describe stages of progression of shock correctly	K	K						
PA6.3.5	At the end of the session phase II student must be able to discuss stages of shock correctly	K	KH						
PA6.4	**Define and describe normal haemostasis and the etiopathogenesis and consequences of thrombosis**	**K**	**KH**	**Y**	**Lecture, Small group**	**Written/ Viva voce discussion**			
PA6.4.1	At the end of the session phase II student must be able to discuss normal haemostasis correctly								
PA6.4.2	At the end of the session phase II student must be able to discuss pathophysiology of thrombosis correctly								
PA6.4.3	At the end of the session phase II student must be able to differentiate between primary and secondary haemostasis correctly	K	K						
PA6.4.4	At the end of the session phase II student must be able to discuss clinical features of thrombosis .								
PA6.4.5	At the end of the session phase II student must be able to discuss fate of thrombus correctly	K	K,KH						

PA6.5	**Define and describe embolism and its causes and common types**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA6.5.1	At the end of the session phase II student must be able to define embolism correctly	K	K						
PA6.5.2	At the end of the session phase II student must be able to list the causes of embolism	K	K						
PA6.5.3	At the end of the session phase II student must be able to discuss pathogenesis of embolism	K	KH						
PA6.5.4	At the end of the session phase II student must be able to discuss clinical consequences of embolism correctly	K	K,KH						
PA6.6	**Define and describe Ischaemia/infarction its types, etiology,morphologic changes and clinical effects**	**K**	**KH**	**Y**	**Lecture, Small group**	**Written/ Viva voce discussion**			
PA6.6.1	At the end of the session phase II student must be able to define ischemia correctly	k	k						
PA6.6.2	At the end of the session phase II student will be able to differentiate between ischemia and infarction correctly	K	K						
PA6.6.3	At the end of the session phase II student must be able to enlist common causes of ischemia correctly								
PA6.6.4	At the end of the session phase II student must be able to discuss the pathogenesis of infarction	K	K,KH						
PA6.6.5	At the end of the session phase II student must be able to discuss the morphology of infarction								
PA6.6.6	At the end of the session phase II student must be able to discuss the clinical features of infarction								
PA6.7	**Identify and describe the gross and microscopic features of infarction in a pathologic specimen**	**S**	**SH**	**Y**	**DOAP session**	**Skill Assessment**			
PA6.7.1	At the end of the session phase II student must be able to identify infarction in a pathologic specimen correctly	k	kh						
PA6.7.2	At the end of the session phase II student must be able to discuss macroscopic features of infarction in a pathologic specimen correctly								
PA6.7.3	At the end of the session phase II student must be able to discuss microscopic features of infarction in a given slide correctly	S	SH						
Topic: Neoplastic disorders					**Number of procedures that require certification: (NIL)**				
PA7.1	**Define and classify neoplasia. Describe the characteristics of neoplasia including gross, microscopy, biologic, behaviour and spread. Differentiate between benign from maignant neoplams**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA7.1.1	At the end of the session phase II student will be able to define and classify neoplasia correctly with	K	K						

PA7.1.2	At the end of the session phase II student will be able to define properly the gross , microscopic, biological, morphological and behavioral characteristics	K	K						
PA7.1.3	At the end of the session phase II student will be able to understand the differences between benign and malignant neoplasms	K	K						
PA7.1.4	At the end of the session phase II student will be able to identify the type of neoplasm on the basis of given characteristics fairly well	K	KH						
PA7.2	**Describe the molecular basis of cancer**	**K**	**KH**	**Y**	**Lecture, Small groupdiscussio n**	**Written/ Viva voce**			
PA7.2.1	At the end of the session phase II student must be able to explain the important genes involved in carcinogenesis	K	K						
PA7.2.2	At the end of the session phase II student must be able to discuss role of oncogenes, tumor suppressor genes, genes for DNA repair and apoptotic genes correctly	K	KH						
PA7.2.3	At the end of the session phase II student must be able to exactly explain the role of various genes with appropriate examples	K	KH						
PA7.3	**Enumerate carcinogens and describe the process of carcinogenesis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA7.3.1	At the end of the session phase II student must be able enumerate various carcinogens precisely	K	K						
PA7.3.2	At the end of the session phase II student must be able to discuss the cellular interaction of these carcinogens and the process of carcinogenesis fairly	K	KH						
PA7.4	**Describe the effects of tumor on the host including paraneoplastic syndrome**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA7.4.1	At the end of the session phase II student must be able to explain the general clinical features of neoplasia	K	K						
PA7.4.2	At the end of the session phase II student must be able to define paraneoplastic syndrome correctly								
PA7.4.3	At the end of the session phase II student must be able to discuss paraneoplastic syndrome correctly with at least two important examples related to all tyoes f the same								
PA7.5	**Describe immunology and the immune response to cancer**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**			**Microbiology**

PA7.5.1	At the end of the session phase II student must be able to explain the mechanisms of host defence against tumors, immune surveillance and tumor escape correctly								
Topic: Basic diagnostic cytology Number of competencies:(03) Number of procedures that require certification:(NIL)									
PA8.1	**Describe the diagnostic role of cytology and its application in clinical care**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA8.1.1	At the end of the session phase II student must be able to discuss steps involved in FNAC correctly.			K	KH				
PA8.1.2	At the end of the session phase II student must be able to steps involved in processing and interpretation of body fluid for cytological examination								
PA8.2	**Describe the basis of exfoliative cytology including the technique & stains used**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce/ Skill assessment**		**General Surgery**	
PA8.2.1	At the end of the session phase II student must be able to Describe the basis of exfoliative cytology								
PA8.2.2	At the end of the session phase II student must be able to explain the steps involved in papaniculeu staining.								
PA8.2.3	At the end of the session phase II student will be able to justify pap smear	K	KH						
PA8.3	**Observe a diagnostic cytology and its staining and interpret the specimen**	**S**	**KH**	**Y**	**DOAP session**	**Skill assessment**			
PA8.3.1	At the end of the session phase II studentmust be able to enumerate steps involved in routine staing for FNA smear	S	KH						
PA8.3.2	At the end of the session phase II studentmust be able to discuss role of fixatives in cytology								
PA8.3.3	At the end of the session phase II studentmust be able to interpret common cytological smears.								
Topic: Immunopathology and AIDS Number of competencies: (07) Number of procedures that require certification :(NIL)									
PA9.1	**Describe the principles and mechanisms involved in immunity**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics**	**Microbiology**
PA9.1.1	At the end of the session phase II student must be able to describe the components of immune system systematically.	K	KH						
PA9.1.2	At the end of the session phase II student must be able to explain how the components of immune system works.								
PA9.2	**Describe the mechanism of hypersensitivity reactions**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			**Microbiology**

PA9.2.1	At the end of the session phase II student must be able to classify and discuss types hypersensitivity reactions emphasizing their mechanisms.	K	K						
PA9.2.1	At the end of the session phase II student will be able to identify the type of hypersensitivity reaction involved in common diseases correctly	K	KH						
PA9.3	**Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			**Microbiology**
PA9.3.1	At the end of the session phase II student must be able to describe MHC emphasizing its role in immunity and organ transplantation systematically	K	K						
PA9.3.2	At the end of the session phase II student must be able to explain the underlying mechanism in various types of transplant rejections	K	KH						
PA9.4	**Define autoimmunity. Enumerate autoimmune disorders**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA9.4.1	At the end of the session phase II student must be able to discuss the concept of immunological tolerance.								
PA9.4.2	At the end of the session phase II student must be able to define the autoimmunity clearly	K	K						
PA9.4.3	At the end of the session phase II student must be able to enumerate the common autoimmune disorders form various organ systems correctly.	K	K,KH						
PA9.5	**Define and describe the pathogenesis of systemic Lupus Erythematosus**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA9.5.1	At the end of the session phase II student must be able to list the diagnstic criteria for SLE.	K	K						
PA9.5.2	At the end of the session phase II student must be able to diagnose SLE based on the diagnstic criteria for SLE .								
PA9.5.3	At the end of the session phase II student must be able to discuss the etiology and pathogenesis of SLE correctly	K	K,KH						
PA9.6	**Define and describe the pathogenesis and pathology of HIV and AIDS**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	**Microbiology**
PA9.6	At the end of the session phase II student must be able to explain HIV with respect to its structure, antigens and its pathology clearly	K	K						
PA9.6	At the end of the session phase II student must be able to describe the pathogenesis of AIDS , its clinical presentation and various AIDs defining infections precisely	K	K						

PA9.6	At the end of the session phase II student must be able to differentiate and identify the HIV infection and AIDS in a given clinical scenario correctly	K	K,KH						
PA9.7	**Define and describe the pathogenesis of other common autoimmune diseases**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**			**General Medicine**
PA9.7.1	At the end of the session phase II student will be able to enumerate various autoimmune diseases clearly		K	K					
PA9.7.1	At the end of the session phase II student will be able to understand the pathogenesis of other common autoimmune diseases and will be able to identify the disease on clinical and lab findings correctly		K	KH					
Topic: Infections and Infestations Number of competencies: (04) Number of procedures that require certification:(NIL)									
PA10.1	**Define and describe the pathogenesis and pathology of malaria**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	**Microbiology**
PA10.1.1	At the end of this session the phase II student must be able to discuss various plasmodium responsible for different types of malaria correctly.								
PA10.1.2	At the end of this session the phase II student must be able to discuss the life cycle of malaria parasite correctly .								
PA10.1.3	At the end of this session the phase II student must be able to describe the pathogenesis of malaria correctly								
PA10.1.4	At the end of this session the phase II student must be able to describe the pathology of malaria correctly								
PA10.1.5	At the end of this session the phase II student must be able to discuss various laboratory features in malaria correctly .								
PA10.2	**Define and describe the pathogenesis and pathology of cysticercosis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	**Microbiology**
PA10.2.1	At the end of this session the phase II student must be able to discuss cysticercosis correctly.								
PA10.2.2	At the end of this session the phase II student must be able to describe the life cycle of taenia solium parasite correctly .								
PA10.2.3	At the end of this session the phase II student must be able to describe the pathogenesis of cysticercosis correctly.								
PA10.2.4	At the end of this session the phase II student must be able to describe the pathology of cysticercosis correctly.								
PA10.3	**Define and describe the pathogenesis and pathology of leprosy**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	**Microbiology**
PA10.3.1	At the end of this session the phase II student must be able to define leprosy accurately.								

PA10.3.2	At the end of this session the phase II student must be able to classify the various types of leprosy based on Ridley Joplin classification correctly								
PA10.3.3	At the end of this session the phase II student must be able to describe the pathogenesis of leprosy correctly.								
PA10.3.4	At the end of this session the phase II student must be able to describe the pathological features of various types of leprosy correctly.								
PA10.4	**Define and describe the pathogenesis and pathology of common bacterial, viral, protozoal and helminthic diseases**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	**Microbiology**
PA10.4.1	At the end of this session the phase II student should be able to classify various viral diseases accurately.								
PA10.4.2	At the end of this session the phase II student should be able to discuss the pathogenesis of common viral diseases correctly								
PA10.4.3	At the end of this session the phase II student should be able to classify various protozoal diseases accurately.								
PA10.4.4	At the end of this session the phase II student should be able to describe the pathogenesis of common protozoa diseases i.e. amaebiasis , giardiasis etc correctly								
PA10.4.5	At the end of this session the phase II student should be able to describe the pathology of common protozoa diseases correctly .								
PA10.4.6	At the end of this session the phase II student should be able to classify various bacterial diseases correctly.								
PA10.4.7	At the end of this session the phase II student should be able to describe the pathogenesis of common bacterial diseases i.e. dysentery ,cholera etc correctly								
PA10.4.8	At the end of this session the phase II student should be able to discuss the pathology of common bacterial diseases correctly.								
PA10.4.9	At the end of this session the phase II student should be able to classify various helminthic diseases i.e. ascariasis, echinococcus etc correctly.								
PA10.4.10	At the end of this session the phase II student should be able to describe the pathogenesis of common helminthic diseases correctly								
PA10.4.11	At the end of this session the phase II student should be able to discuss the pathology of common helminthic diseases correctly .								
Topic: Genetic and paediatric diseases		**Number of competencies: (03)**			**Number of procedures that require certification :(NIL)**				

PA11.1	**Describe the pathogenesis and features of common cytogenetic abnormalities and mutations in childhood**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics**	
PA11.1.1	At the end of this session the phase II student should be able to define common terms like Congenital anomalies, Malformations,Disruptions, Deformations, oligohydramnios,								
PA11.1.2	At the end of this session the phase II student should be able to discuss common causes of Fetal Growth Restriction briefly								
PA11.1.3	At the end of this session the phase II student should be able to discuss fetal hydrops and differentiate between Immune Hydrops Nonimmune Hydrops correctly								
PA11.1.4	At the end of this session the phase II student should be able to discuss briefly pathology and clinical features of Phenylketonuria								
PA11.1.5	At the end of this session the phase II student should be able to discuss briefly pathology and clinical features of Galactosemia								
PA11.1.6	At the end of this session the phase II student should be able to discuss briefly pathology and clinical features of Cystic Fibrosis (Mucoviscidosis)								
PA11.1.7	At the end of this session the phase II student should be able to classify the various types of cytogenetic abnormalities found in childhood								
PA11.1.8	At the end of this session the phase II student should be able to describe various types of genetic mutations found in childhood correctly								
PA11.2	**Describe the pathogenesis and pathology of various childhood tumours**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics**	
PA11.2.1	At the end of this session the phase II student should be able to enumerate various common benign and malignant tumours seen in childhood correctly.								
PA11.2.2	At the end of this session the phase II student should be able to describe the epidemiology and pathogenesis of neuroblastoma correctly								
PA11.2.3	At the end of this session the phase II student should be able to describe the pathology of neuroblastoma correctly .								
PA11.2.4	At the end of this session the phase II student should be able to discuss the epidemiology and etiology of Wilm's tumour correctly .								
PA11.2.5	At the end of this session the phase II student should be able to discuss the pathogenesis of Wilm's tumour correctly .								
PA11.2.6	At the end of this session the phase II student should be able to describe the pathology of Wilm's tumour correctly .								

PA11.3.7	**Describe the pathogenesis of common storage disorders in infancy and childhood**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics**	
PA11.3.7.1	At the end of this session the phase II student should be able to enumerate various glycogen storage disorders seen in childhood accurately.								
PA11.3.7.2	At the end of this session the phase II student should be able to describe the pathogenesis of various glycogen storage disorders correctly .								
PA11.3.7.3	At the end of this session the phase II student should be able to enumerate various lipid storage disorders seen in childhood accurately.								
PA11.3.7.4	At the end of this session the phase II student should be able to describe the pathogenesis of various lipid storage disorders correctly .								
Topic: Environmental and nutritional diseases Number of competencies:(03) Number of procedures that require certification:(NIL)									
PA12.1	**Enumerate and describe the pathogenesis of disorders caused by air pollution, tobacco and alcohol**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Community Medicine**	
PA12.1.1	At the end of this session the phase II student must be able to enumerate the various disorders caused by air pollution correctly								
PA12.1.2	At the end of this session the phase II student must be able to describe the pathogenesis of various disorders caused by air pollution correctly								
PA12.1.3	At the end of this session the phase II student must be able to enumerate the various disorders caused by the use of tobacco correctly .								
PA12.1.4	At the end of this session the phase II student must be able to describe the pathogenesis of various disorders caused by the use of tobacco correctly								
PA12.1.5	At the end of this session the phase II student must be able to enumerate the various disorders caused by alcohol consumption correctly .								
PA12.1.6	At the end of this session the phase II student must be able to describe the pathogenesis of various disorders caused by alcohol consumption correctly								
PA12.2	**Describe the pathogenesis of disorders caused by protein calorie malnutrition and starvation**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Biochemistry, Pediatrics**	
PA12.2.1	At the end of this session the phase II student must be able to define the protein energy malnutrition and starvation correctly .								

PA12.2.2	At the end of this session the phase II student must be able to describe the etiology of protein energy malnutrition correctly								
PA12.2.3	At the end of this session the phase II student must be able to differentiate between marasmus and kwashiorkor correctly.								
PA12.3	**Describe the pathogenesis of obesity and its consequences**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			**General Medicine**
PA12.3.1	At the end of this session the phase II student must be able to define the spectrum of obesity correctly .								
PA12.3.2	At the end of this session the phase II student must be able to describe the consequences of obesity correctly .								
Topic: Introduction to haematology		**Number of competencies: (05)**						**Number of procedures that require certification:(NIL)**	
PA13.1	**Describe hematopoiesis and extramedullary hematopoiesis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA13.1.1	At the end of this session the phase II student must be able to describe normal haematopoiesis correctly.								
PA13.1.2	At the end of this session the phase II student must be able to describe various conditions associated with extramedullary haematopoiesis correctly								
PA13.2	**Describe the role of anticoagulants in hematology**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			**General Medicine**
PA13.2.1	At the end of this session the phase II student must be able to discuss the role of various anticoagulants used in haematology laboratory correctly.								
PA13.2.2	At the end of this session the phase II student must be able to describe the mechanism of action of various anticoagulants used in haematology lab correctly								
PA13.3	**Define and classify anemia**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA13.3.1	At the end of this session the phase II student must be able to define anaemia correctly.								
PA13.3.2	At the end of this session the phase II student must be able to classify anaemias accurately.								
PA13.4	**Enumerate and describe the investigation of anemia**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	

PA13.4.1	At the end of this session the phase II student must be able to enumerate various investigations used in the diagnosis of anaemia accurately.								
PA13.4.2	At the end of this session the phase II student must be able to describe various investigations used in the diagnosis of anaemia correctly								
PA13.5	**Perform, Identify and describe the peripheral blood picture in anemia**	**S**	**SH**	**Y**	**DOAP session**	**Skill assessment**		**General Medicine**	
PA13.5.1	At the end of this session the phase II student must be able to enumerate steps involved in preparation of romanowski stained smear.								
PA13.5.2	At the end of this session the phase II student must be able to discuss RBC indices in anemia correctly and correlate this with peripheral blood finding								
PA13.5.3	At the end of this session the phase II student must be able to make a stained smear of peripheral blood for the study of anaemia								
PA13.5.4	At the end of this session the phase II student must be able to discuss the the salient features of anaemia in the peripheral blood smear correctly.								
Topic: Microcytic anemia		**Number of competencies: (03)**			**Number of procedures that require certification:(NIL)**				
PA14.1	**Describe iron metabolism**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Biochemistry**	
PA14.1.1	At the end of this session the phase II student must be able to describe iron metabolism correctly.								
PA14.2	**Describe the etiology, investigations and of microcytic hypochromic anemia**	**K**	**KH**		**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA14.2.1	At the end of this session the phase II student must be able to define microcytic hypochromic anaemia correctly.								
PA14.2.2	At the end of this session the phase II student must be able to enumerate the etiology of microcytic hypochromic anaemia accurately								
PA14.2.3	At the end of this session the phase II student must be able to describe various laboratory investigations to diagnose microcytic hypochromic anaemia correctly.								
PA14.2.4	At the end of this session the phase II student must be able to discuss various differential diagnosis of microcytic hypochromic anaemia correctly.								
PA14.3	**Identify and describe the peripheral smear in microcytic anemia**	**S**	**SH**	**Y**	**DOAP session**	**Skill assessment**		**General Medicine**	

PA14.3.1	At the end of this session the phase II student must be able to identify and describe salient features of microcytic hypochromic anaemia on peripheral blood smear correctly.								
Topic: Macrocytic anemia Number of competencies: (04) Number of procedures that require certification:(NIL)									
PA15.1	**Describe the metabolism of Vitamin B12 and the etiology and pathogenesis of B12 deficiency**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Biochemistry, General Medicine**	
PA15.1.1	At the end of this session the phase II student must be able to describe Vitamin B12 metabolism correctly.								
PA15.1.2	At the end of this session the phase II student must be able to enumerate the etiology of Vitamin B12 deficiency accurately.								
PA15.1.3	At the end of this session the phase II student must be able to describe the pathogenesis of Vitamin B12 deficiency accurately.								
PA15.2	**Describe laboratory investigations of macrocytic anemia**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA15.2.1	At the end of this session the phase II student must be able to define macrocytic anaemia correctly.								
PA15.2.2	At the end of this session the phase II student must be able to describe various laboratory investigations to diagnose macrocytic anaemia correctly.								
PA15.3	**Identify and describe the peripheral blood picture of macrocytic anemia**	**S**	**SH**	**Y**	**DOAP session**	**Skill assessment**			
PA15.3.1	At the end of this session the phase II student must be able to identify and describe salient features of macrocytic anaemia on peripheral blood smear correctly.								
PA15.4	**Enumerate the differences and describe the etiology and distinguishing features of megaloblastic and non-megaloblastic macrocytic anemia**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA15.4.1	At the end of this session the phase II student must be able to discuss etiology of other non megaloblastic anaemias correctly.								
PA15.4.2	At the end of this session the phase II student must be able to describe the differences between megaloblastic anaemia and non megaloblastic anaemias correctly								
PA15.4.3	At the end of this session the phase II student must be able to distinuish between megaloblastic anaemia and non megaloblastic anaemias correctly								
Topic: Hemolytic anemia Number of competencies: (07) Number of procedures that require certification: (01)									
PA16.1	**Define and classify hemolytic anemia**	**K**	**KH**	**Y**	**L,SGD**	**Written/ Viva**		**BIO**	

						voce		**GM**	
PA16.1.1	At the end of the session the phase II student must be able to define hemolytic anemia correctly	K	K						
PA16.1.2	At the end of the session the phase II student must be able to classify hemolytic anemia according to underlying mechanism with at least twomost common examples for each	K	K						
PA16.2	**Describe the pathogenesis and clinical features and hematologic indices of hemolytic anemia**	**K**	**KH**	**Y**	**L,SGD**	**Written/ Viva voce**		**BIO** **GM**	
PA16.2.1	At the end of the session the phase II student must be able to differentiate between mechanisms involved in extra vascular and intravascular hemolysis correctly	K	KH						
PA16.2.2	At the end of the session the phase II student must be able to discuss the lab findings in extra vascular and intravascular hemolysis with appropriate reasoning.	K	KH						
PA16.2.3	At the end of the session the phase II student must be able to judge the mechanism behind hemolysis from a given set of laboratory values and clinical description.	K	KH						
PA16.2.4	At the end of the session the phase II student must be able to discuss various hematological manifestations in hemolytic anemia broadly	K	KH						
PA16.2.5	At the end of the session the phase II student must be able to discuss various systemic manifestations in hemolytic anemia broadly with appropriate reasoning	K	KH						
PA16.2.6	At the end of the session the phase II student must be able to discuss the hematologic indices in hemolytic anemia correctly	K	KH						
PA16.2.7	At the end of the session the phase II student must be able to discuss the pathogenesis of hemolysis due to membrane defects using hereditary spherocytosis as prototypic example.	K	KH						
PA16.2.8	At the end of the session the phase II student must be able to able to explain the rationale behind osmotic fragility test in a suspected case of hereditary spherocytosis.	K	KH						
PA16.2.9	At the end of the session the phase II student must be able to explain the concept of hemolysis due to red cell enzyme defects using Glucose-6-Phosphate Dehydrogenase Deficiency as prototypic example.	K	KH						
PA16.3	**Describe the pathogenesis, features, hematologic indices and peripheral blood picture of sickle cell anemia and thalassemia**	**K**	**KH**	**Y**	**L,SGD**	**Written/ Viva voce**		**BIO** **GM**	
PA16.3.1	At the end of the session the phase II student must be able to discuss the pathogenesis of sickle cell anemia	K	KH						

PA16.3.2	At the end of the session the phase II student must be able to enumerate various clinical manifestations of sickle cell anemia correctly	K	K						
PA16.3.3	At the end of the session the phase II student must be able to rationalize clinical manifestations of sickle cell anemia correctly	K	KH						
PA16.3.4	At the end of the session the phase II student must be able to rationalize the association of sickle cell anemia with plasmodium falciparum malaria correctly	K	KH						
PA16.3.5	At the end of the session the phase II student must be able to discuss hematologic indices in sickle cell anemia with respect to severity of disease	K	KH						
PA16.3.6	At the end of the session the phase II student must be able to discuss blood pictures in sickle cell anemia with the help of neat labeled diagram	K	KH						
PA16.3.7	At the end of the session the phase II student must be able to able to explain the rationale behind sickling test in a suspected case of sickle cell anemia and correlate it with its pathogenesis.	K	KH						
PA16.3.8	At the end of the session the phase II student must be able to explain relationships of clinical phenotypes in thalassemias to underlying genotypes correctly	K	KH						
PA16.3.9	At the end of the session the phase II student must be able to discuss at least three major types of mutations in thalassemias with their outcomes	K	KH						
PA 16.3.10	At the end of the session the phase II student must be able to discuss the pathogenesis of thalassemias major	K	KH						
PA 16.3.11	At the end of the session the phase II student must be able to discuss clinical features of thalassemias with appropriate reasoning	K	KH						
PA 16.3.12	At the end of the session the phase II student must be able to differentiate thalassemia minor from other causes of microcytic	K	KH						
PA16.4	**Describe the etiology pathogenesis, hematologic indices and peripheral blood picture of Acquired hemolytic anemia**	**K**	**KH**		**L,SGD**	**Written/ Viva voce**		**BIO GM**	
PA16.4.1	At the end of the session the phase II student must be able to classify acquired causes of hemolytic anemia	K	K						
PA16.4.2	At the end of the session the phase II student must be able to list the molecular defect in paroxysmal nocturnal haemoglobinuria correctly	K	K						
PA16.4.3	At the end of the session the phase II student must be able to discuss the pathogenesis of paroxysmal nocturnal haemoglobinuria correctly	K	KH						
PA16.4.4	At the end of the session the phase II student must be able to discuss the key clinical features and risk factors of paroxysmal nocturnal haemoglobinuria correctly	K	KH						

PA16.4.5	At the end of the session the phase II student must be able to advise diagnostic tests in a suspected case of paroxysmal nocturnal haemoglobinuria	K	KH						
PA16.4.6	At the end of the session the phase II student must be able to Classify Immunohemolytic Anemias based on characters of responsible antibody	K	K						
PA16.4.7	At the end of the session the phase II student must be able to justify direct and indirect coombs antiglobulin test in suspected case of Immunohemolytic Anemias	K	KH						
PA16.4.8	At the end of the session the phase II student must be able to enlist at least 5 drugs responsible for drug induced Immunohemolytic Anemias correctly.	K	K						
PA16.4.9	At the end of the session the phase II student must be able to explain how antigenic drugs such as penicillin cause Immunohemolytic Anemias	K	KH						
PA16.4.10	At the end of the session the phase II student must be able to explain how tolerance breaking drug such alpha methyl DOPA cause Immunohemolytic Anemias	K	KH						
PA16.4.11	At the end of the session the phase II student must be able to discuss at least four major differential diagnosis of hemolysis due to mechanical trauma with appropriate reasoning	K	KH						
PA16.5	**Describe the peripheral blood picture in different hemolytic anaemias**	**K**	**KH**		**L,SGD**			**GM**	
PA16.5.1	At the end of the session the phase II student must be able to correctly explain the key morphological findings found in hemolytic anaemia.	K	K						
PA16.5.2	At the end of the session the phase II student must be able to appreciate the key morphological findings found in hemolytic anaemia from a given stained blood film.	K	KH						
PA16.5.3	At the end of the session the phase II student must be able to discuss the peripheral blood in hemolytic anemia with neat labeled diagram and correlate the same with findings in bone marrow reasonably.	K	KH						
PA16.5.4	At the end of the session the phase II student must be able to suggest further investigations based on the peripheral blood and bone marrow findings in hemolytic anemia to reach at specific diagnosis	K	KH						
PA16.6	**Prepare a peripheral blood smear and identify hemolytic anaemia from it**	**S**	**P**	**Y**	**DOAP**	**Skill assess**	**1**		
PA16.6.1	At the end of the session the phase II student must be able to list the steps involved in preparation of blood smear from a given sample correctly	K	K						

PA16.6.2	At the end of the session the phase II student must be able to prepare a blood film correctly	S	P						
PA16.6.3	At the end of the session the phase II student must be able to stain a blood film correctly	S	P						
PA16.6.4	At the end of the session the phase II student must be able to identify the key morphological findings which leads to diagnosis of hemolytic anemia .	K	K						
PA16.6.5	At the end of the session the phase II student must be able to suggest further investigations based on the clinical features and basic hematological parameter keeping in mind expected findings in various differential diagnosis for hemolytic anemias.	K	KH						
PA16.7	**Discribe the correct technique to perform a cross match**	**S**	**SH**	**Y**	**L,SGD**	**Written/ Viva voce**			
PA16.7.1	At the end of the session the phase II student must be able to explain cross matching correctly	K	K						
	At the end of the session the phase II student must be able to explain the reason for cross matching before blood transfusion correctly	K	KH						
	At the end of the session the phase II student must be able to enumerate steps of performance of cross matching accurately	K	K						
	At the end of the session the phase II student must be able to perform cross matching from given sample correctly	S	SH						
Topic: Aplastic anemia		**Number of competencies: (02)**				**Number of procedures that require certification:(NIL)**			
PA 17.1	**Enumerate the etiology, pathogenesis and findings in aplastic anemia**	**K**	**K**	**N**	**L /SGD**	**Written/ Viva**		**GM**	
PA 17.1.1	At the end of the session the phase II student must be able to demonstrate the concept of anaemia related to decreased red cell production	K	K						
PA 17.1.2	At the end of the session the phase II student must be able to discuss the acquired and inherited causes of pancytopenia related to decreased red cell production	K	KH						
PA 17.1.3	At the end of the session the phase II student must be able to list and classify the acquired and inherited causes of aplastic anemia	K	K						
PA 17.1.4	At the end of the session the phase II student must be able to establish the causes of aplastic anemia with its pathogenesis in brief	K	KH						
PA17.2	**Enumerate the indications and describe the findings in bone marrow aspiration and biopsy**	**K**	**K**	**N**	**L /SGD**	**Written/ Viva**		**GM**	

PA17.2.1	At the end of the session the phase II student must be able to discuss the bone marrow aspiration findings in patients who are suspected to have anaemia related to decreased red cell production	K	K						
PA17.2.2	At the end of the session the phase II student must be able to discuss the bone marrow biopsy findings in patients who are	K	K						
Topic: Leukocyte disorders		**Number of competencies: (02)**				**Number of procedures that require certification:(NIL)**			
PA18.1	Enumerate and describe the causes of leukocytosis leucopenia lymphocytosis and leukemoid reactions	K	KH	Y	**L /SGD**	**Written/ Viva**			
PA18.1.1	At the end of the session the phase II student must be able to define normal adult reference range of all 5 category of leukocytes	K	K						
PA18.1.2	At the end of the session the phase II student must be able to discuss normal reference range of all 5 category of leukocytes with respect to variation in age gender and other common physiological factors	K	KH						
PA18.1.3	At the end of the session the phase II student must be able to define leucocytosis correctly	K	K						
PA18.1.4	At the end of the session the phase II student must be able to classify leucocytosis with at least 5 common causes for each category correctly	K	KH						
PA18.1.5	At the end of the session the phase II student must be able to discuss the mechanism of leucocytosis with relevant examples	K	KH						
PA18.1.6	At the end of the session the phase II student must be able to discuss key features of morphological changes in WBC	K	K						
PA18.1.7	At the end of the session the phase II student must be able to define leucopenia correctly	K	K						
PA18.1.8	At the end of the session the phase II student must be able to classify leucopenia with at least 2 common causes for each category correctly	K	KH						
PA18.1.9	At the end of the session the phase II student must be able to discuss the mechanism of leucopenia with relevant examples	K	KH						
PA18.1.10	At the end of the session the phase II student must be able to analyze WBC count and morphology keeping in mind critical limit to advise for bone marrow evaluation	K	KH						
PA18.1.11	At the end of the session the phase II student must be able to differentiate between leukocytosis and leukemoid reaction correctly	K	KH						
PA18.1.12	At the end of the session the phase II student must be able to discuss further plan of action in leukemoid reaction correctly	K	KH						
PA18.2	**Describe the etiology, genetics, pathogenesis classification,**	**K**	**KH**	**Y**	**L**	**Written/ Viva**			

	features, hematologic features of acute and chronic leukemia				**/SGD**				
PA18.2.1	At the end of the session the phase II student must be able to discuss the molecular pathogenesis of leukemia in general	K	KH						
PA18.2.2	At the end of the session the phase II student must be able to classify white cell neoplasms as per World health organization 2016 revision.	K	K						
PA18.2.3	At the end of the session the phase II student must be able to discuss the clinical features of acute Lymphoblastic Leukemia/Lymphoma	K	KH						
PA18.2.4	At the end of the session the phase II student must be able to discuss the morphological features of acute Lymphoblastic Leukemia/Lymphoma	K	KH						
PA18.2.5	At the end of the session the phase II student must be able to discuss prognosis of acute Lymphoblastic Leukemia/Lymphoma	K	KH						
PA18.2.6	At the end of the session the phase II student must be able to suggest further investigations towards specific diagnosis/typing of acute Lymphoblastic leukemia .	K	KH						
PA18.2.7	At the end of the session the phase II student must be able to discuss differential diagnosis of acute Lymphoblastic leukemia	K	KH						
PA18.2.8	At the end of the session the phase II student must be able to discuss the clinical features of chronic Lymphoblastic Leukemia/Lymphoma	K	KH						
PA18.2.9	At the end of the session the phase II student must be able to discuss the morphological features of chronic Lymphoblastic Leukemia/Lymphoma	K	KH						
PA18.2.10	At the end of the session the phase II student must be able to discuss prognosis of chronic Lymphoblastic Leukemia/Lymphoma	K	KH						
PA18.2.11	At the end of the session the phase II student must be able to suggest further investigations towards specific diagnosis/typing of chronic Lymphoblastic leukemia .	K	KH						
PA18.2.12	At the end of the session the phase II student must be able to discuss the causes of persistent lymphocytosis in an elderly person.	K	KH						
PA18.2.13	At the end of the session the phase II student must be able to classify major subtypes of acute myeloid leukemia as per World health organization 2016 revision	K	KH						
PA18.2.14	At the end of the session the phase II student must be able to categorize various WHO category of acute myeloid leukemia based on prognosis.	K	KH						

PA18.2.15	At the end of the session the phase II student must be able to discuss at least two key morphological points for each WHO category of acute myeloid leukemia based on prognosis.	K	KH						
PA18.2.16	At the end of the session the phase II student must be able to discuss clinical features of acute myeloid leukemia correctly	K	KH						
PA18.2.17	At the end of the session the phase II student must be able to identify key diagnostic points to suspect acute myeloid discuss at least two key morphological points for each WHO category of acute myeloid leukemia based on prognosis.	K	KH						
PA18.2.18	At the end of the session the phase II student must be able to suggest further investigations towards specific diagnosis/typing of acute myeloid leukemia .	K	KH						
PA18.2.19	At the end of the session the phase II student must be able to discuss Myelodysplastic syndrome in brief.	K	KH						
PA18.2.20	At the end of the session the phase II student must be able to classify myeloproliferative neoplasms correctly with reference to molecular alteration.	K	KH						
PA18.2.21	At the end of the session the phase II student must be able to discuss the differential diagnosis of polycythemia .	K	KH						
PA18.2.22	At the end of the session the phase II student must be able to discuss differential diagnosis of thrombocytosis.	K	KH						
PA18.2.23	At the end of the session the phase II student must be able tomolecular pathogenesis and morphology of Chronic myeloid leukemia .	K	KH						
Topic: Lymph node and spleen Number of competencies: (07) Number of procedures that require certification:(NIL									
PA19.1	**Enumerate the causes and describe the differentiating features of lymphadenopathy**	**K**	**KH**	**Y**	**L /SGD**	**Written/ Viva**		**GS**	
OBJECTIVES									
PA19.1.1	At the end of the session the phase II student must be able to review the anatomy and physiology of lymphoid system correctly								
PA19.1.2	At the end of the session the phase II student must be able to explain the normal histology of lymph node correctly								
PA19.1.3	At the end of the session the phase II student must be able to Enumerate the causes of lymphadenopathy								
PA19.1.4	At the end of the session the phase II student must be able to classify the causes of lymphadenopathy into reactive, inflammatory and neoplastic in								
PA19.1.5	At the end of the session the phase II student must be able to Enumerate the causes and describe the differentiating features of lymphadenopathy								
PA19.2	**Describe the pathogenesis and pathology of tuberculous**	**K**	**KH**	**Y**	**L**	**Written/ Viva**		**GS**	

	lymphadenitis				**/SGD**				
			OBJECTIVES						
PA19.2.1	At the end of the session the phase II student must be able to describe the pathogenesis of tuberculous lymphadenitis correctly								
PA19.2.2	At the end of the session the phase II student must be able to describe the pathology of tuberculous lymphadenitis correctly								
PA19.3	**Identify and describe the features of tuberculous lymphadenitis in a gross and microscopic specimen**	**S**	**SH**	**Y**	**DOAP**	**Skill assessment**			
			OBJECTIVES						
PA19.3.1	At the end of the session the phase II student must be able to describe the gross features of tuberculous lymphadenitis correctly	K	KH						
PA19.3.2	At the end of the session the phase II student must be able to describe the microscopic features of tuberculous lymphadenitis correctly	K	KH						
PA19.3.3	At the end of the session the phase II student must be able to discuss the gross lymphnode findings a case of tuberculous lymphadenitiscorrectly	S	SH						
PA19.3.4	At the end of the session the phase II student must be able to interpret the microscopic findings of tuberculosis from a given FNA Smear/ Histopathological slide correctly	S	SH						
PA19.4.5	Describe and discuss the pathogenesis, pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma	K	KH	Y	**L /SGD**	**Written/ Viva**		GS	
			OBJECTIVES						
PA19.4.1	At the end of the session the phase II student must be able to discuss the pathogenesis of Hodgkin's lymphoma								
PA19.4.2	At the end of the session the phase II student must be able to discuss the pathology of Hodgkin's lymphoma								
PA19.4.3	At the end of the session the phase II student must be able to classify Hodgkin's lymphoma correctly								
PA19.4.4	At the end of the session the phase II student must be able to discuss 5 subtypes of Hodgkin's lymphoma correctly								
PA19.4.5	At the end of the session the phase II student must be able to discuss the pathogenesis of non Hodgkin's lymphoma								
PA19.4.6	At the end of the session the phase II student must be able to discuss the pathology of Non Hodgkin's lymphoma								
PA19.4.7	At the end of the session the phase II student must be able to differentiate between Hodgkin's lymphoma and Non Hodgkin's lymphoma accurately								
PA19.5	**Identify and describe the features of Hodgkin's lymphoma in a gross and microscopic specimen**	**S**	**SH**	**Y**	**DOAP**	**Skill assessment**		**GS**	
			OBJECTIVES						

PA19.5.1	At the end of the session the phase II student must be able to discuss the gross features of Hodgkin's lymphoma correctly	K	K						
PA19.5.2	At the end of the session the phase II student must be able to differentiate the gross features of Hodgkin's lymphoma from other causes of enlarged lymph nodes and solid organs correctly	K	KH						
PA19.5.3	At the end of the session the phase II student must be able to discuss the microscopic features of major subtypes of Hodgkin's lymphoma correctly	K	KH						
PA19.5.4	At the end of the session the phase II student must be able to arrive at diagnosis of Hodgkin's lymphoma from a given clinical description correctly and discuss its differential diagnosis	S	SH						
PA19.5.5	At the end of the session the phase II student must be able to arrive at diagnosis of Hodgkin's lymphoma from a given stained slide sets of Hodgkin's lymphoma correctly and discuss its differential diagnosis								
PA19.6	**Enumerate and differentiate the causes of splenomegaly**	**K**	**KH**	**Y**	**L /SGD**	**Written/ Viva**		**GS GM**	
OBJECTIVES									
PA19.6.1	At the end of the session the phase II student must be able to discuss the anatomy and physiological role of spleen correctly	K	K						
PA19.6.2	At the end of the session the phase II student must be able to discuss the histology of spleen correctly	K	K						
PA19.6.3	At the end of the session the phase II student must be able to enumerate common causes of splenomegaly correctly in given geographical area	K	K						
PA19.6.4	At the end of the session the phase II student must be able to discuss the differential diagnosis of splenomegaly correctly in given clinical setting.	K	KH						
PA19.7	Identify and describe the gross specimen of an enlarged spleen	S	SH	Y	DOAP	Skill assessment			
OBJECTIVES									
PA19.7.1	At the end of the session the phase II student must be able to discuss the various morphological findings in specimen of enlarged spleen								
Topic: Plasma cell disorders Number of competencies: (01) Number of procedures that require certification:(NIL)									
PA20.1	**Describe the features of plasma cell myeloma**	**S**	**SH**	**Y**	**DOAP**	**Skill assessment**			
OBJECTIVES									

PA20.1.1	At the end of the session the phase II student must be able to classify plasma cell neoplasms based on WHO Classification (2008)	K	K						
PA20.1.2	At the end of the session the phase II student must be able to discuss the differential diagnosis of plasmacytosis correctly	K	KH						
PA20.1.3	At the end of the session the phase II student must be able to discuss etiopathogenesis of monoclonal plasma cytosis correctly	K	KH						
PA20.1.4	At the end of the session the phase II student must be able to discuss diagnostic criteria of multiple myeloma correctly	K	KH						
PA20.1.5	At the end of the session the phase II student must be able to plan investigation in a given clinical scenario of plasma cell neoplasm	S	SH						
Topic: Hemorrhagic disorders				**Number of competencies: (05)**					
PA21.1	**Describe normal hemostasis**	DOMAIN	LEVEL	CORE					
		K	KH	Y					
PA21.1.1	At the end of the session the phase II student must be able to define haemostasis accurately.	K	K	Y					
PA21.1.2	At the end of the session the phase II student must be able to describe mechanism of normal haemostasis precisely.	K	KH	Y					
PA21.2	**Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and haemophilia's**	K	KH	Y					
PA21.2.1	At the end of the session the phase II student must be able to define bleeding disorders correctly.	K	K	Y					
PA21.2.2	At the end of the session the phase II student must be able to classify bleeding disorders according to who classification.	K	K	Y					
PA21.2.3	At the end of the session the phase II student must be able to enumerate etiology of bleeding disorders precisely.	K	K	Y					
PA21.2.4	At the end of the session the phase II student must be able to describe the pathogeneis of vascular causes of bleeding precisely.	K	KH	Y					
PA21.2.5	At the end of the session the phase II student must be able to describe the pathogenesis of bleeding due to platelet disorders precisely.	K	KH	Y					
PA21.2.6	At the end of the session the phase II student must be able to define ITP accurately	K	K	Y					
PA21.2.7	At the end of the session the phase II student must be able to describe mechanism of ITP precisely.	K	KH	Y					
PA21.2.8	At the end of the session the phase II student must be able to define hemophilias.	K	K	Y					
PA21.2.9	At the end of the session the phase II student must be able to describe mechanism of hemophilias precisely.	K	KH	Y					

PA21.3	**Differentiate platelet from clotting disorders based on the clinical and hematologic features**	S	SH	Y					
PA21.3.1	At the end of the session the phase II student must be able to **–** define platelet disorders correctly**.**	K	K	Y					
PA21.3.2	At the end of the session the phase II student must be able to – define coagulation disorders correctly.	K	K	Y					
PA21.3.3	At the end of the session the phase II student must be able to describe mechanism of coagulation disorder precisely.	K	KH	Y					
PA21.3.4	At the end of the session the phase II student must be able to differentiate between platelet and coagulation disorder on the basis of hematological features.	K	KH	Y					
PA21.3.5	At the end of the session the phase II student must be able to - enumerate the difference between the platelet and coagulation disorders on the basis of clinical findings accurately.	K	KH	Y					
PA21.3.6	At the end of the session the phase II student must be able to interpret the difference between platelet and coagulation disorders on the basis of clinico-hematological case accurately	S	SH	Y					
PA21.4	**Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of disseminated intravascular coagulation.**	K	KH	Y					
PA21.4.1	At the end of the session the phase II student must be able to define DIC accurately.	K	K	Y					
PA21.4.2	At the end of the session the phase II student must be able to enumerate the causes of DIC precisely.	K	K	Y					
PA21.4.3	At the end of the session the phase II student must be able to describe the mechanism of DIC precisely	K	KH	Y					
PA21.4.4	At the end of the session the phase II student must be able to enlist the laboratory findings in a case of DIC accurately.	K	KH	Y					
PA21.4.5	At the end of the session the phase II student must be able to elicit the diagnosis of DIC on the basis of laboratory finding accurately.	K	KH	Y					
PA21.5	**Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of Vitamin K deficiency**	K	KH	Y					
PA21.5.1	At the end of the session the phase II student must be able to define DIC accurately.	K	K	Y					
PA21.5.2	At the end of the session the phase II student must be able to enumerate the causes of DIC precisely.	K	K	Y					
PA21.5.3	At the end of the session the phase II student must be able to describe the mechanism of DIC precisely	K	KH	Y					
PA21.5.4	At the end of the session the phase II student must be able to enlist the laboratory findings in a case of DIC accurately.	K	K	Y					

PA21.5.5	At the end of the session the phase II student must be able to elicit the diagnosis of DIC on the basis of laboratory finding accurately.	K	KH	Y					
PA21.5.6	At the end of the session the phase II student must be able to Discuss the role of vitamin k deficiency in bleeding disorders.	K	KH	Y					
	Blood Banking and Transfusion								
PA22.1	**Classify and describe blood group systems (ABO and RH)**	K	KH	Y					
PA22.1.1	At the end of the session the phase II student must be able to discuss blood group system precisely	K	KH	Y					
PA22.1.2	At the end of the session the phase II student must be able to classify the different types of blood group systems.	K	K	Y					
PA22.2	**Enumerate the indications, describe the principles, enumerate and demonstrate the steps of compatibility testing**	S	SH	Y					
PA22.2.1	At the end of the session the phase II student must be able to enumerate the indications of blood transfusion accurately.	K	K	Y					
PA22.2.2	At the end of the session the phase II student must be able to describe principle of compatibility testing precisely.	K	KH	Y					
PA22.2.3	At the end of the session the phase II student must be able to enumerate the steps of blood grouping by different methods precisely.	K	KH	Y					
PA22.2.4	At the end of the session the phase II student must be able to enumerate the steps of cross matching accurately.	K	KH	Y					
PA22.2.5	At the end of the session the phase II student must be able to demonstrate the process of blood grouping by different methods precisely.	S	SH	Y					
PA22.2.6	At the end of the session the phase II student must be able to demonstrate the process of compatibility testing accurately.	S	SH	Y					
PA22.4	**Enumerate blood components and describe their clinical uses**	K	KH	Y					
PA22.4.1	At the end of the session the phase II student must be able to classify blood components accurately .	K	K	Y					
PA22.2.2	At the end of the session the phase II student must be able to describe the clinical use of blood components precisely.	K	KH	Y					
PA22.5	**Enumerate and describe infections transmitted by blood transfusion**	K	KH	Y					
PA22.5.1	At the end of the session the phase II student must be able to enumerate transfusion transmitted diseases accurately.	K	K	Y					
PA22.5.2	At the end of the session the phase II student must be able to describe the etiopathogenesis of transfusion transmitted diseases precisely.	K	KH	Y					
PA22.3.3	At the end of the session the phase II student must be able to elicit prevention from transfusion transmitted diseases precisely	K	KH	Y					

PA22.6	**Describe transfusion reactions and enumerate the steps in the investigation of a transfusion reaction**	K	KH	Y					
PA22.6.1	At the end of the session the phase II student must be able to define transfusion reactions accurately.	K	K	Y					
PA22.6.2	At the end of the session the phase II student must be able to classify transfusion reactions accurately.	K	K	Y					
PA22.6.3	At the end of the session the phase II student must be able to describe etiopathogenesis of transfusion reactions precisely.	K	KH	Y					
PA22.6.4	At the end of the session the phase II student must be able to enumerate the steps in the investigations required in case of transfusion reaction correctly.	K	KH	Y					
PA22.7	**Enumerate the indications and describe the principles and procedure of autologous transfusion**	K	KH	Y					
PA22.7.1	At the end of the session the phase II student must be able to define autologous transfusion accurately.	K	K	Y					
PA22.7.2	At the end of the session the phase II student must be able to enumerate the indications of autologous transfusion precisely.	K	K	Y					
PA22.7.3	At the end of the session the phase II student must be able to discuss principle of autologous transfusion precisely.	K	KH	Y					
PA22.7.4	At the end of the session the phase II student must be able to describe the procedure of autologous transfusion precisely.	K	KH	Y					
Clinical Pathology									
PA23.1	**Describe abnormal urinary findings in disease states and identify and describe common urinary abnormalities in a clinical specimen**	S	SH	Y					
PA23.1.1	At the end of the session the phase II student must be able to describe abnormal physical urine findings in diseased state accurately.	K	KH	Y					
PA23.1.2	At the end of the session the phase II student must be able to demonstrate abnormal physical urine findings in diseased state accurately.	S	SH	Y					
PA23.1.3	At the end of the session the phase II student must be able to describe abnormal chemical findings in diseased state accurately.	K	KH	Y					
PA23.1.4	At the end of the session the phase II student must be able to demonstrate abnormal chemical findings in diseased state accurately.	S	SH	Y					
PA23.1.5	At the end of the session the phase II student must be able to describe abnormal microscopic urine findings in diseased state accurately	K	KH	Y					
PA23.1.6	At the end of the session the phase II student must be able to demonstrate abnormal microscopic urine findings in diseased state accurately.	S	SH	Y					

PA23.2	**Describe abnormal findings in body fluids in various disease states**	K	KH	Y					
PA23.2.1	At the end of the session the phase II student must be able to classify body fluids accurately.	K	KH	Y					
PA23.2.2	At the end of the session the phase II student must be able to describe abnormal findings in different body fluids in various disease state precisely .	K	KH	Y					
PA23.3	**Describe and interpret the abnormalities in a panel containing semen analysis, thyroid function tests, renal function tests or liver function tests**	S	SH	Y					
PA23.3.1	At the end of the session the phase II student must be able to enumerate indications of semen analysis precisely.	K	K	Y					
PA23.3.2	At the end of the session the phase II student must be able to demonstrate the procedure of semen analysis precisely .	S	SH	Y					
PA23.3.3	At the end of the session the phase II student must be able to enumerate the indications of thyroid function tests precisely.	K	K	Y					
PA23.3.4	At the end of the session the phase II student must be able to enumerate the components of thyroid function test accurately.	K	K	Y					
PA23.3.5	At the end of the session the phase II student must be able to discuss thyroid function test precisely..	K	KH	Y					
PA23.3.6	At the end of the session the phase II student must be able to enumerate indications of renal function test precisely.	K	K	Y					
PA23.3.7	At the end of the session the phase II student must be able to enumerate the components of renal function test accurately.	K	K	Y					
PA23.3.8	At the end of the session the phase II student must be able to discuss renal function test precisely..	K	KH	Y					
PA23.3.9	At the end of the session the phase II student must be able to enumerate indications of liver function test precisely.	K	K	Y					
PA23.3.10	At the end of the session the phase II student must be able to enumerate the components of liver function test accurately.	K	K	Y					
PA23.3.11	At the end of the session the phase II student must be able to discuss liver function test precisely..	K	KH	Y					
PA23.3.12	At the end of the session the phase II student must be able to Interpret the abnormalities in panel containing semen analysis , kidney function test and thyroid function test accurately.	S	SH	Y					
Gastrointestinal Tract									
PA24.1	Describe the etiology, pathogenesis, pathology and clinical features of oral cancers	K	KH	N					
PA24.1.1	At the end of the session the phase II student must be able to enumerate the etiologies of oral cancer accurately .	K	K	N					
PA24.1.2	At the end of the session the phase II student must be able to describe pathogenesis of oral cancer precisely	K	KH	N					

PA24.1.3	At the end of the session the phase II student must be able to discuss clinical features of oral cancers precisely.	K	KH	N					
PA24.1.4	At the end of the session the phase II student must be able to enlist the pathological investigations required to diagnose oral cancer precisely.	K	K	N					
PA24.1.5	At the end of the session the phase II student must be able to describe pre-malignant conditions of oral cavity precisely.	K	KH	N					
PA24.2	**Describe the etiology, pathogenesis, pathology, microbiology, clinical and microscopic features of peptic ulcer disease**	K	KH	Y					
PA24.2.1	At the end of the session the phase II student must be able to enumerate etiology of peptic ulcer disease correctly.	K	K	Y					
PA24.2.2	At the end of the session the phase II student must be able to differentiate between gastric ulcer and duodenal ulcer precisely.	K	KH	Y					
PA24.2.3	At the end of the session the phase II student must be able to describe pathogeneis of peptic ulcer disease precisely.	K	KH	Y					
PA24.2.4	At the end of the session the phase II student must be able to discuss role of micro-organism involved in peptic ulcer disease precisely.	K	KH	Y					
PA24.2.5	At the end of the session the phase II student must be able to discuss clinical features of p;eptic ulcer disease precisely..	K	KH	Y					
PA24.2.6	At the end of the session the phase II student must be able to discuss microscopic features of peptic ulcer disease accurately	K	KH	Y					
PA24.3	**Describe and identify the microscopic features of peptic ulcer**	S	SH	Y					
PA24.3.1	At the end of the session the phase II student must be able to enumerate etiology of peptic ulcer disease correctly.	K	K	Y					
PA24.3.2	At the end of the session the phase II student must be able to differentiate between gastric ulcer and duodenal ulcer precisely..	K	KH	Y					
PA24.3.3	At the end of the session the phase II student must be able to describe pathogeneis of peptic ulcer disease precisely.	K	KH	Y					
PA24.3.4	At the end of the session the phase II student must be able to discuss role of micro-organism involved in peptic ulcer disease precisely.	K	KH	Y					
PA24.3.5	At the end of the session the phase II student must be able to discuss clinical features of p;eptic ulcer disease precisely.	K	KH	Y					
PA24.3.6	At the end of the session the phase II student must be able to discuss microscopic features of peptic ulcer disease accurately.	K	KH	Y					
PA24.3.7	At the end of the session the phase II student must be able to demonstrate the microscopic features of peptic ulcer disease accurately	S	SH	Y					

PA24.4	**Describe and etiology and pathogenesis and pathologic features of carcinoma of the stomach**	K	KH	Y					
PA24.4.1	At the end of the session the phase II student must be able to enumerate the etiological factors for carcinoma stomach precisely..	K	K	Y					
PA24.4.2	At the end of the session the phase II student must be able to describe pathogenesis of carcinoma stomach precisely.	K	KH	Y					
PA24.4.3	At the end of the session the phase II student must be able to describe gross findings of carcinoma stomach precisely.	K	KH	Y					
PA24.4.4	At the end of the session the phase II student must be able to describe the microscopic findings of carcinoma stomach precisely.	K	KH	Y					
PA24.5	**Describe and etiology and pathogenesis and pathologic features of Tuberculosis of the intestine**	K	KH	N					
PA24.5.1	At the end of the session the phase II student must be able to enumerate the etiological factors for tuberculosis of intestine precisely.	K	K	N					
PA24.5.2	At the end of the session the phase II student must be able to describe pathogenesis of tuberculosis of intestine precisely.	K	KH	N					
PA24.5.3	At the end of the session the phase II student must be able to describe gross findings of tuberculosis of intestine precisely.	K	KH	N					
PA24.5.4	At the end of the session the phase II student must be able to describe the microscopic findings of tuberculosis of intestine precisely.	K	KH	N					
PA24.6	Describe and etiology and pathogenesis and pathologic and distinguishing features of Inflammatory bowel disease	K	KH	Y					
PA24.6.1	At the end of the session the phase II student must be able to define inflammatory bowel disease accurately .	K	K	Y					
PA24.6.2	At the end of the session the phase II student must be able to enumerate the etiological factors of inflammatory bowel disease accurately .	K	K	Y					
PA24.6.3	At the end of the session the phase II student must be able to describe pathogeneis of inflammatory bowel disease precisely..	K	KH	Y					
PA24.6.4	At the end of the session the phase II student must be able to describe gross findings of inflammatory bowel disease precisely.	K	KH	Y					
PA24.6.5	At the end of the session the phase II student must be able to describe the microscopic findings of inflammatory bowel disease precisely.	K	KH	Y					
PA24.6.6	At the end of the session the phase II student must be able to differentiate between ulcerative colitis and crohn’s disease precisely	K	KH	Y					

PA24.7	**Describe the etiology, pathogenesis, pathology and distinguishing features of carcinoma of the colon**	K	KH	Y					
PA24.7.1	At the end of the session the phase II student must be able to enumerate the causes of carcinoma colon accurately.	K	K	Y					
PA24.7.2	At the end of the session the phase II student must be able to describe pathogenesis carcinoma colon precisely.	K	KH	Y					
PA24.7.3	At the end of the session the phase II student must be able to describe the gross features of carcinoma colon precisely.	K	KH	Y					
PA24.7.4	At the end of the session the phase II student must be able to describe the microscopic features of carcinoma colon precisely..	K	KH	Y					
PA24.7.5	At the end of the session the phase II student must be able to classify different types of carcinoma colon precisely.	K	KH	Y					
Topic: Hepatobiliary systemNumber of competencies: (06)									
PA25.1	Describe bilirubin metabolism, enumerate the etiology and pathogenesis of jaundice, distinguish between direct and indirect	DOMAIN K	LEVEL KH	CORE Y					
PA25.1.1	At the end of the session the phase II student must be able to define jaundice correctly	K	K	Y					
PA25.1.2	At the end of the session the phase II student must be able to describe bilirubin metabolism precisely.	K	KH	Y					
PA25.1.3	At the end of the session the phase II student must be able to enumerate the etiology of jaundice correctly	K	K	Y					
PA25.1.4	At the end of the session the phase II student must be able to classify jaundice correctly	K	K	Y					
PA25.1.5	At the end of the session the phase II student must be able to describe pathogenesis of jaundice precisely	K	KH	Y					
PA25.1.6	At the end of the session the phase II student must be able to differentiate between direct and indirect hyperbilirubinemia correctly	K	KH	Y					
PA25.2	Describe the pathophysiology and pathologic changes seen in hepatic failure and their clincial manifestations, complications and consequences	K	KH	Y					
PA25.2.1	At the end of the session the phase II student must be able to define hepatic failure correctly	K	K	Y					
PA25.2.2	At the end of the session the phase II student must be able to enumerate the causes behind hepatic failure precisely	K	K	Y					
PA25.2.3	At the end of the session the phase II student must be able to describe pathogenesis of hepatic failure precisely	K	KH	Y					
PA25.2.4	At the end of the session the phase II student must be able to describe the gross features of hepatic failure precisely	K	KH	Y					
PA25.2.5	At the end of the session the phase II student must be able to describe the microscopic features of hepatic failure precisely	K	KH	Y					

PA25.2.6	At the end of the session the phase II student must be able to enumerate the clinical feature of hepatic failure precisely	K	K	Y					
PA25.2.7	At the end of the session the phase II student must be able to discuss the complication of hepatic failure precisely	K	KH	Y					
PA25.2.8	At the end of the session the phase II student must be able to discuss the consequence of hepatic failure precisely	K	KH	Y					
PA25.3	Describe the etiology and pathogenesis of viral and toxic hepatitis: distinguish the causes of hepatitis based on the clinical and laboratory features. Describe the pathology complications and consequences of hepatitis	K	KH	Y					
PA25.3.1	At the end of the session the phase II student must be able to define hepatitis correctly	K	K	Y					
PA25.3.2	At the end of the session the phase II student must be able to enumerate the various etiologies of hepatitis precisely	K	K	Y					
PA25.3.3	At the end of the session the phase II student must be able to describe pathogenesis of viral hepatitis precisely	K	KH	Y					
PA25.3.4	At the end of the session the phase II student must be able to describe pathogenesis of toxic hepatitis precisely.	K	KH	Y					
PA25.3.5	At the end of the session the phase II student must be able to enumerate the clinical feature of hepatitis precisely	K	K	Y					
PA25.3.6	At the end of the session the phase II student must be able to to enumerate the laboratory findings of hepatitis correctly.	K	K	Y					
PA25.3.7	At the end of the session the phase II student must be able to differentiate the causes of hepatitis on the basis of clinicopathological findings precisely	K	KH	Y					
PA25.3.8	At the end of the session the phase II student must be able to discuss the complication of hepatitis precisely	K	KH	Y					
PA25.3.9	At the end of the session the phase II student must be able to discuss the consequence of hepatitis correctly	K	KH	Y					
PA25.4	Describe the pathophysiology, pathology and progression of alcoholic liver disease including cirrhosis	K	KH	Y					
PA25.4.1	At the end of the session the phase II student must be able to define alcoholic liver disease precisely.	K	K	Y					
PA25.4.2	At the end of the session the phase II student must be able to define cirrhosis correctly.	K	K	Y					
PA25.4.3	At the end of the session the phase II student must be able to describe pathophysiology of alcoholic liver disease precisely	K	KH	Y					
PA25.4.4	At the end of the session the phase II student must be able to enumerate the causes of cirrhosis precisely	K	K	Y					
PA25.4.5	At the end of the session the phase II student must be able to describe pathophysiology of cirrhosis precisely	K	KH	Y					
PA25.4.6	At the end of the session the phase II student must be able to classify cirrhosis precisely	K	K	Y					

PA25.4.7	At the end of the session the phase II student must be able to enumerate the clinical feature of cirrhosis correctly	K	K	Y					
PA25.4.8	At the end of the session the phase II student must be able to enumerate the investigation required in a case of cirrhosis correctly	K	K	Y					
PA25.4.9	At the end of the session the phase II student must be able to discuss the investigation required in a case of cirrhosis precisely	K	KH	Y					
PA25.5	**Describe the etiology, pathogenesis and complications of portal hypertension**	K	KH	Y					
PA25.5.1	At the end of the session the phase II student must be able to define portal hypertension accurately	K	K	Y					
PA25.5.2	At the end of the session the phase II student must be able to enumerate the various causes of portal hypertension correctly	K	K	Y					
PA25.5.3	At the end of the session the phase II student must be able to describe pathogenesis of portal hypertension precisely.	K	KH	Y					
PA25.5.4	At the end of the session the phase II student must be able to discuss complication of portal hypertension correctly	K	KH	Y					
PA25.6	**Interpret liver function and viral hepatitis serology panel. Distinguish obstructive from non-obstructive jaundice based on clinical features and liver function tests**	S	P	Y					
PA25.6.1	At the end of the session the phase II student must be able to enumerate the components of Liver Function Test correctly.	K	K	Y					
PA25.6.2	At the end of the session the phase II student must be able to enumerate the serological test required for viral hepatitis correctly	K	K	Y					
PA25.6.3	At the end of the session the phase II student must be able to describe clinical features of chronic liver disease precisely	K	KH	Y					
PA25.6.4	At the end of the session the phase II student must be able to describe the role of various components of Liver Function Test in jaundice.	K	KH						
PA25.6.5	At the end of the session the phase II student must be able to interpret the Liver Function Test precisely	S	SH	Y					
PA25.6.6	At the end of the session the phase II student must be able to describe the role of various components of serological markers in viral hepatitis.	K	KH						
PA25.6.7	At the end of the session the phase II student must be able to interpret the serological markers in viral hepatitis correctly	S	SH	Y					
PA25.6.8	At the end of the session the phase II student must be able to demonstrate the difference between obstructive from non obstructive jaundice on the basis of clinical features given in a case history precisely	s	SH	Y					

PA25.6.9	At the end of the session the phase II student must be able to demonstrate the difference between the obstructive from non obstructive jaundice on the basis of findings of Liver Function Tests given in a clinical case accurately.	S	P	Y					
	RESPIRATORY SYSTEM								
PA26.1	**Define and describe the etiology, types, pathogenesis, stages morphology and complications of pneumonia**	K	KH	Y					
PA26.1.1	At the end of the session the phase II student must be able to define pneumonia correctly	K	K	Y					
PA26.1.2	At the end of the session the phase II student must be able to enumerate the various causes of pneumonia correctly	K	K	Y					
PA26.1.3	At the end of the session the phase II student must be able to classify pneumonia correctly	K	K	Y					
PA26.1.4	At the end of the session the phase II student must be able to describe pathogenesis of pneumonia precisely	K	KH	Y					
PA26.1.5	At the end of the session the phase II student must be able to discuss various stages of pneumonia precisely	K	KH	Y					
PA26.1.6	At the end of the session the phase II student must be able to describe morphology of pneumonia in different stages precisely	K	KH	Y					
PA26.1.7	At the end of the session the phase II student must be able to discuss complications of pneumonia precisely	K	KH	Y					
PA26.2	**Describe the etiology, gross and microscopic appearance and complications of lung abscess**	K	KH	Y					
PA26.2.1	At the end of the session the phase II student must be able to define Lung abcess correctly	K	K	Y					
PA26.2.2	At the end of the session the phase II student must be able to enumerate the etiology of Lung abcess correctly	K	K	Y					
PA26.2.3	At the end of the session the phase II student must be able to describe gross feature of Lung abcess precisely	K	KH	Y					
PA26.2.4	At the end of the session the phase II student must be able to describe microscopic feature of Lung abcess precisely	K	KH	Y					
PA26.2.5	At the end of the session the phase II student must be able to discuss complications of Lung abcess precisely	K	KH	Y					
PA26.3	**Define and describe the etiology, types, pathogenesis, stages morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis.**	K	KH	Y					
PA26.3.1	At the end of the session the phase II student must be able to define Obstructive airway disease (OAD) correctly	K	K	Y					
PA26.3.2	At the end of the session the phase II student must be able to classify Obstructive airway disease (OAD) correctly	K	K	Y					
PA26.3.3	At the end of the session the phase II student must be able to enumerate causes of Obstructive airway disease (OAD) accurately	K	K	Y					

PA26.3.4	At the end of the session the phase II student must be able to describe pathogenesis of Obstructive airway disease (OAD) precisely	K	KH	Y					
PA26.3.5	At the end of the session the phase II student must be able to enumerate stages of Obstructive airway disease (OAD) correctly	K	K	Y					
PA26.3.6	At the end of the session the phase II student must be able to discuss morphology of Obstructive airway disease (OAD) in different stages precisely	K	KH	Y					
PA26.3.7	At the end of the session the phase II student must be able to discuss complication of Obstructive airway disease (OAD) correctly	K	KH	Y					
PA26.3.8	At the end of the session the phase II student must be able to elicit Obstructive airway disease (OAD) on the basis of clinical findings accurately	K	KH	Y					
PA26.4	Define and describe the etiology, types, pathogenesis, stages, morphology microscopic appearance and complications of tuberculosis.	K	KH	Y					
PA26.4.1	At the end of the session the phase II student must be able to define tuberculosis correctly	K	K	Y					
PA26.4.2	At the end of the session the phase II student must be able to enumerate etiology tuberculosis correctly	K	K	Y					
PA26.4.3	At the end of the session the phase II student must be able to classify tuberculosis correctly	K	K	Y					
PA26.4.4	At the end of the session the phase II student must be able to describe pathogenesis of tuberculosis precisely	K	KH	Y					
PA26.4.5	At the end of the session the phase II student must be able to enumerate stages of tuberculosis correctly	K	K	Y					
PA26.4.6	At the end of the session the phase II student must be able to discuss gross feature of tuberculosis precisely.	K	KH	Y					
PA26.4.7	At the end of the session the phase II student must be able to discuss microscopic feature of tuberculosis precisely.	K	KH	Y					
PA26.4.8	At the end of the session the phase II student must be able to discuss complicationsof tuberculosis correctly.	K	KH	Y					
PA26.5	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease.	K		Y					
PA26.5.1	At the end of the session the phase II student must be able to define Occupational lung disease correctly	K	K	Y					
PA26.5.2	At the end of the session the phase II student must be able to enumerate causes of Occupational lung disease accurately.	K	K	Y					
PA26.5.3	At the end of the session the phase II student must be able to list types of Occupational lung disease correctly.	K	K	Y					

PA26.5.4	At the end of the session the phase II student must be able to discuss the role of various exposures in Occupational lung disease precisely	K	KH	Y					
PA26.5.5	At the end of the session the phase II student must be able to discuss the role of environmental influences on Occupational lung disease precisely	K	KH	Y					
PA26.5.6	At the end of the session the phase II student must be able to describe pathogenesis of Occupational lung disease precisely.	K	KH	Y					
PA26.5.7	At the end of the session the phase II student must be able to discuss stages of Occupational lung disease precisely	K	KH	Y					
PA26.5.8	At the end of the session the phase II student must be able to describe gross feature of Occupational lung disease precisely	K	KH	Y					
PA26.5.9	At the end of the session the phase II student must be able to describe microscopic feature of Occupational lung disease precisely	K	KH	Y					
PA26.5.10	At the end of the session the phase II student must be able to discuss complications of Occupational lung disease precisely	K	KH	Y					
PA26.6	Define and describe the etiology, types, exposure, genetics, environmental influence, pathogenesis, stages, morphology, microscopic appearance ,metastases and complications of tumors of the lung and pleura	K	KH	Y					
PA26.6.1	At the end of the session the phase II student must be able to define tumors of the lung correctly.	K	K	Y					
PA26.6.2	At the end of the session the phase II student must be able to enumerate etiologies of tumors of the lung accurately	K	K	Y					
PA26.6.3	At the end of the session the phase II student must be able to classify tumors of the lung according to WHO classification.	K	K	Y					
PA26.6.4	At the end of the session the phase II student must be able to describe the role of various exposures in the development of tumors of the lung precisely.	K	KH	Y					
PA26.6.5	At the end of the session the phase II student must be able to describe the role of genetic changes in the development of tumors of the lung precisely.	K	KH	Y					
PA26.6.6	At the end of the session the phase II student must be able to describe the role of environmental influence in the development of tumors of the lung precisely.	K	KH	Y					
PA26.6.7	At the end of the session the phase II student must be able to describe pathogenesis of tumors of the lung precisely.	K	KH	Y					
PA26.6.8	At the end of the session the phase II student must be able to classify various stages of tumors of the lung correctly.	K	K	Y					

PA26.6.9	At the end of the session the phase II student must be able to describe gross feature of tumors of the lung precisely.	K	KH	Y					
PA26.6.10	At the end of the session the phase II student must be able to describe microscopic feature of tumors of the lung precisely.	K	KH	Y					
PA26.6.11	At the end of the session the phase II student must be able to enumerate various sites of metastasis of tumors of the lung correctly.	K	K	Y					
PA26.6.12	At the end of the session the phase II student must be able to describe pathophysiology of metastasis of tumors of the lung precisely.	K	KH	Y					
PA26.6.13	At the end of the session the phase II student must be able to discuss complication of tumors of the lung precisely.	K	KH	Y					
PA26.6.14	At the end of the session the phase II student must be able to define tumors of the pleura correctly.	K	K	Y					
PA26.6.15	At the end of the session the phase II student must be able to enumerate etiologies of tumors of the pleura accurately	K	K	Y					
PA26.6.16	At the end of the session the phase II student must be able to classify tumors of the pleura accurately.	K	K	Y					
PA26.6.17	At the end of the session the phase II student must be able to describe the role of various exposures in the development of tumors of the pleura precisely.	K	KH	Y					
PA26.6.18	At the end of the session the phase II student must be able to describe the role of genetic changes in the development of tumors of the pleura precisely.	K	KH	Y					
PA26.6.19	At the end of the session the phase II student must be able to describe the role of environmental influence in the development of tumors of the pleura precisely.	K	KH	Y					
PA26.6.20	At the end of the session the phase II student must be able to describe pathogenesis of tumors of the pleura precisely.	K	KH	Y					
PA26.6.21	At the end of the session the phase II student must be able to classify various stages of tumors of the pleura correctly.	K	K	Y					
PA26.6.22	At the end of the session the phase II student must be able to describe gross feature of tumors of the pleura precisely.	K	KH	Y					
PA26.6.23	At the end of the session the phase II student must be able to describe microscopic feature of tumors of the pleura precisely.	K	KH	Y					
PA26.6.24	At the end of the session the phase II student must be able to enumerate various sites of metastasis of tumors of the pleura correctly.	K	K	Y					
PA26.6.25	At the end of the session the phase II student must be able to describe pathophysiology of metastasis of tumors of the pleura precisely.	K	KH	Y					
PA26.6.26	At the end of the session the phase II student must be able to discuss complication of tumors of the pleura precisely.	K	KH	Y					

PA26.7	Define and describe the etiology, types, exposure, genetics, environmental influence, pathogenesis, morphology, microscopic appearance and complications of mesothelioma	K	KH	N					
PA26.7.1	At the end of the session the phase II student must be able to define mesothelioma correctly.	K	K	N					
PA26.7.2	At the end of the session the phase II student must be able to enumerate etiologies of mesothelioma accurately define arteriosclerosis correctly.	K	K	N					
PA26.7.3	At the end of the session the phase II student must be able to classify mesothelioma	K	K	N					
PA26.7.4	At the end of the session the phase II student must be able to describe the role of various exposures in the development of mesothelioma precisely	K	KH	N					
PA26.7.5	At the end of the session the phase II student must be able to describe the role of genetic changes in the development of mesothelioma precisely.	K	KH	N					
PA26.7.6	At the end of the session the phase II student must be able to describe the role of environmental influence in the development of mesothelioma precisely	K	KH	N					
PA26.7.7	At the end of the session the phase II student must be able to describe pathogenesis of mesothelioma precisely.	K	KH	N					
PA26.7.8	At the end of the session the phase II student must be able to describe gross feature of mesothelioma precisely.	K	KH	N					
PA26.7.9	At the end of the session the phase II student must be able to describe microscopic feature of mesothelioma precisely.	K	KH	N					
PA26.7.10	At the end of the session the phase II student must be able to dicuss complication of mesothelioma precisely.	K	KH	N					
	CARDIOVASCULAR SYSTEM								
PA27.1	**Distinguish arteriosclerosis from atherosclerosis. Describe the pathogenesis and pathology of various causes and types of arteriosclerosis**	**K**	**KH**	**Y**					
PA27.1.1	At the end of the session the phase II student must be able to define arteriosclerosis correctly.	K	K	Y					
PA27.1.2	At the end of the session the phase II student must be able to define atherosclerosis correctly.	K	K	Y					
PA27.1.3	At the end of the session the phase II student must be able to enumerate the causes of arteriosclerosis correctly.	K	K	Y					
PA27.1.4	At the end of the session the phase II student must be able to enumerate the causes of atherosclerosis correctly.	K	K	Y					
PA27.1.5	At the end of the session the phase II student must be able to describe pathogenesis of arteriosclerosis precisely.	K	KH	Y					
PA27.1.6	At the end of the session the phase II student must be able to describe pathogy of various causes of arteriosclerosis precisely.	K	KH	Y					

PA27.1.7	At the end of the session the phase II student must be able to classify arteriosclerosis correctly.	K	K	Y					
PA27.1.8	At the end of the session the phase II student must be able to differentiate arteriosclerosis from atherosclerosis correctly.	K	KH	Y					
PA27.2	**Describe the etiology, dynamics, pathology types and complications of aneurysms including aortic aneurysms**	**K**	**KH**	**Y**					
PA27.2.1	At the end of the session the phase II student must be able to define aneurysm correctly.	K	K	Y					
PA27.2.2	At the end of the session the phase II student must be able to enumerate etiologies of aneurysm accurately.	K	K	Y					
PA27.2.3	At the end of the session the phase II student must be able to describe the role of dynamics in the generation of aneurysm precisely.	K	KH	Y					
PA27.2.4	At the end of the session the phase II student must be able to enumerate various types of aneurysm correctly	K	K	Y					
PA27.2.5	At the end of the session the phase II student must be able to enumerate complications of aneurysm precisely.	K	K	Y					
PA27.2.6	At the end of the session the phase II student must be able to discuss the pathogenesis of aortic aneurysm precisely.	K	KH	Y					
PA27.3	**Describe the etiology, types, stages pathophysiology, pathology and complications of heart failure.**	**K**	**KH**	**Y**					
PA27.3.1	At the end of the session the phase II student must be able to define heart failure correctly.	K	K	Y					
PA27.3.2	At the end of the session the phase II student must be able to enumerate the etiology of heart failure accurately.	K	K	Y					
PA27.3.3	At the end of the session the phase II student must be able to classify heart failure correctly.	K	K	Y					
PA27.3.4	At the end of the session the phase II student must be able to describe pathophysiology of heart failure precisely	K	KH	Y					
PA27.3.5	At the end of the session the phase II student must be able to describe morphological features of heart failure precisely.	K	KH	Y					
PA27.3.6	At the end of the session the phase II student must be able to dicuss complication of heart failure precisely.	K	KH	Y					
PA27.4	**Describe the etiology, pathophysiology, pathology, gross and microscopic features, criteria and complications of rheumatic fever.**	K	KH	Y					
PA27.4.1	At the end of the session the phase II student must be able to define rheumatic fever correctly.	K	K	Y					
PA27.4.2	At the end of the session the phase II student must be able to enumerate the etiology of rheumatic fever correctly.	K	K	Y					
PA27.4.3	At the end of the session the phase II student must be able to describe pathophysiology of rheumatic fever precisely.	K	KH	Y					
PA27.4.4	At the end of the session the phase II student must be able to describe gross feature of rheumatic fever precisely.	K	KH	Y					

PA27.4.5	At the end of the session the phase II student must be able to describe microscopic feature of rheumatic fever precisely.	K	KH	Y					
PA27.4.6	At the end of the session the phase II student must be able to enumerate criterias of rheumatic fever correctly.	K	K	Y					
PA27.4.7	At the end of the session the phase II student must be able to discuss complications of rheumatic fever precisely.	K	KH	Y					
PA27.5	**Describe the epidemiology, risk factors, etiology, pathophysiology, pathology, presentations, gross and microscopic features, diagnostic tests and complications of ischemic heart disease.**	**K**	**KH**	**Y**					
PA27.5.1	At the end of the session the phase II student must be able to define ischemic heart disease correctly.	K	K	Y					
PA27.5.2	At the end of the session the phase II student must be able to describe epidemiology of ischemic heart disease precisely.	K	KH	Y					
PA27.5.3	At the end of the session the phase II student must be able to enumerate risk factors of ischemic heart disease correctly.	K	K	Y					
PA27.5.4	At the end of the session the phase II student must be able to enumerate the etiology of ischemic heart disease correctly.	K	K	Y					
PA27.5.5	At the end of the session the phase II student must be able to describe pathophysiology of ischemic heart disease precisely.	K	KH	Y					
PA27.5.6	At the end of the session the phase II student must be able to describe gross feature of ischemic heart disease precisely.	K	KH	Y					
PA27.5.7	At the end of the session the phase II student must be able to describe microscopic feature of ischemic heart disease precisely.	K	KH	Y					
PA27.5.8	At the end of the session the phase II student must be able to describe clinical feature of ischemic heart disease correctly.	K	KH	Y					
PA27.5.9	At the end of the session the phase II student must be able to enumerate diagnostic test require to diagnose ischemic heart disease correctly.	K	K	Y					
PA27.5.10	At the end of the session the phase II student must be able to discuss complications of ischemic heart disease precisely.	K	KH	Y					
PA27.6	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of infective endocarditis	K	KH	Y					
PA27.6.1	At the end of the session the phase II student must be able to define infective endocarditis correctly.	K	K	Y					
PA27.6.2	At the end of the session the phase II student must be able to enumerate the etiology of infective endocarditis correctly.	K	K	Y					
PA27.6.3	At the end of the session the phase II student must be able to describe pathophysiology of infective endocarditis precisely.	K	KH	Y					

PA27.6.4	At the end of the session the phase II student must be able to describe gross feature of infective endocarditis precisely.	K	KH	Y					
PA27.6.5	At the end of the session the phase II student must be able to describe microscopic feature of infective endocarditis precisely.	K	KH	Y					
PA27.6.6	At the end of the session the phase II student must be able to enumerate pathological test require to diagnose infective endocarditis correctly.	K	K	Y					
PA27.6.7	At the end of the session the phase II student must be able to discuss complications of infective endocarditis precisely.	K	KH	Y					
PA27.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of pericarditis and pericardial effusion	K	KH	Y					
PA27.7.1	At the end of the session the phase II student must be able to define pericarditis correctly.	K	K	Y					
PA27.7.2	At the end of the session the phase II student must be able to enumerate the various etiology of pericarditis correctly.	K	K	Y					
PA27.7.3	At the end of the session the phase II student must be able to describe pathophysiology of pericarditis precisely	K	KH	Y					
PA27.7.4	At the end of the session the phase II student must be able to describe gross feature of pericarditis precisely.	K	KH	Y					
PA27.7.5	At the end of the session the phase II student must be able to describe microscopic feature of pericarditis precisely.	K	KH	Y					
PA27.7.6	At the end of the session the phase II student must be able to describe the role of pathological investigations in the diagnosis of pericarditis precisely.	K	KH	Y					
PA27.7.7	At the end of the session the phase II student must be able to discuss complications of pericarditis correctly.	K	KH	Y					
PA27.7.8	At the end of the session the phase II student must be able to define pericardial effusion correctly.	K	K	Y					
PA27.7.9	At the end of the session the phase II student must be able to enumerate the various etiology of pericardial effusion correctly.	K	K	Y					
PA27.7.10	At the end of the session the phase II student must be able to describe pathophysiology of pericardial effusion precisely	K	KH	Y					
PA27.7.11	At the end of the session the phase II student must be able to describe gross feature of pericardial effusion precisely.	K	KH	Y					
PA27.7.12	At the end of the session the phase II student must be able to describe microscopic feature of pericardial effusion precisely.	K	KH	Y					
PA27.7.13	At the end of the session the phase II student must be able to describe the role of pathological investigations in the diagnosis of pericardial effusion precisely.	K	KH	Y					

PA27.7.14	At the end of the session the phase II student must be able to discuss complications of pericardial effusion correctly.	K	KH	Y					
PA27.8	**Interpret abnormalities in cardiac function testing in acute coronary syndromes**	**S**	**SH**	**Y**					
PA27.8.1	At the end of the session the phase II student must be able to define acute coronary syndromes correctly.	K	K	Y					
PA27.8.2	At the end of the session the phase II student must be able to enumerate the various etiology of acute coronary syndromes precisely.	K	K	Y					
PA27.8.3	At the end of the session the phase II student must be able to enumerate components of cardiac function test correctly.	K	K	Y					
PA27.8.4	At the end of the session the phase II student must be able to describe the role of cardiac markers in acute coronary syndrome.	K	KH	Y					
PA27.8.5	At the end of the session the phase II student must be able to interpret abnormalities in cardiac function test in acute coronary syndromes	S	SH	Y					
PA27.9	Classify and describe the etiology, types, pathophysiology pathology, gross and microscopic features, diagnosis and complications of cardiomyopathies	K	KH	N					
PA27.9.1	At the end of the session the phase II student must be able to define cardiomyopathies correctly.	K	K	N					
PA27.9.2	At the end of the session the phase II student must be able to classify cardiomyopathies correctly.	K	K	N					
PA27.9.3	At the end of the session the phase II student must be able to enumerate the various etiology of cardiomyopathies correctly.	K	K	N					
PA27.9.4	At the end of the session the phase II student must be able to classify types of cardiomyopathies correctly.	K	K	N					
PA27.9.5	At the end of the session the phase II student must be able to describe pathophysiology of cardiomyopathies precisely.	K	KH	N					
PA27.9.6	At the end of the session the phase II student must be able to to describe gross feature of cardiomyopathies precisely.	K	KH	N					
PA27.9.7	At the end of the session the phase II student must be able to describe microscopic feature of cardiomyopathies precisely	K	KH	N					
PA27.9.8	At the end of the session the phase II student must be able to discuss the role of pathological investigation in the diagnosis of cardiomyopathies precisely.	K	KH	N					
PA27.9.9	At the end of the session the phase II student must be able to discuss complications of cardiomyopathies precisely.	K	KH	N					
PA27.10	Describe the etiology, pathophysiology, pathology features and complications of syphilis on the cardiovascular system	K	KH	N					
PA27.10.1	At the end of the session the phase II student must be able to enumerate etiology of syphilis precisely.	K	K	N					

PA27.10.2	At the end of the session the phase II student must be able to describe pathophysiology of syphilis precisely.	K	KH	N					
PA27.10.3	At the end of the session the phase II student must be able to describe pathological features of syphilis on the cardiovascular system precisely.	K	KH	N					
PA27.10.4	At the end of the session the phase II student must be able to discuss complications of syphilis on the cardiovascular system correctly	K	KH	N					
	Urinary tract								
PA28.1	**Describe the normal histology of the kidney**	**K**	**K**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA28.1.1	1.By the end of session 2nd phase MBBS student must be able to describe gross structure and histology of normal kidney correctly.								
PA28.2	**Define, classify and distinguish the clinica l syndromes and describe the etiology, pathogenesis, pathology, morphology, clinical and laboratory and urinary findings, complications of renal failure**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**			
PA28.2.1	By the end of session 2nd phase MBBS student must be able to define renal failure correctly.								
PA28.2.2	By the end of session 2nd phase MBBS student must be able to classify the clinical syndromes associated with renal failure correctly								
PA28.2.3	By the end of session 2nd phase MBBS student must be able to describe etiology of renal failure correctly.								
PA28.2.4	By the end of session 2nd phase MBBS student must be able to describe pathogenesis of renal failure correctly								
PA28.2.5	By the end of session 2nd phase MBBS student must be able to describe pathological findings of renal failure correctly								
PA28.2.6	By the end of session 2nd phase MBBS student must be able to discuss clinical features of renal failure correctly								
PA28.2.7	By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of renal failure correctly.								
PA28.2.8	By the end of session 2nd phase MBBS student must be able to discuss complications of renal failure correctly.								
PA28.2.9	By the end of session 2nd phase MBBS student must be able to define nephritic and nephrotic syndrome correctly								

PA28.2.10	By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of nephritic and nephrotic syndrome correctly								
PA28.2.11	By the end of session 2nd phase MBBS student must be able to describe morphological findings in nephritic and nephrotic syndrome correctly								
PA28.2.12	By the end of session 2nd phase MBBS student must be able to discuss clinical features of nephritic and nephrotic syndrome correctly								
PA28.2.13	By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of nephritic and nephrotic syndrome correctly								
PA28.2.14	By the end of session 2nd phase MBBS student must be able to distinguish between nephritic and nephrotic syndrome correctly.								
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA28.3	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings, progression and complications of acute renal failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PA28.3.1	By the end of session 2nd phase MBBS student must be able to define acute renal failure correctly.								
PA28.3.2	By the end of session 2nd phase MBBS student must be able to describe etiology of acute renal failure correctly.								
PA28.3.3	By the end of session 2nd phase MBBS student must be able to list the precipitating factors of acute renal failure correctly.								
PA28.3.4	By the end of session 2nd phase MBBS student must be able to describe pathogenesis of acute renal failure correctly								
PA28.3.5	By the end of session 2nd phase MBBS student must be able to describe pathological findings of acute renal failure correctly								
PA28.3.6	By the end of session 2nd phase MBBS student must be able to describe laboratory urinary findings of acute renal failure correctly.								
PA28.3.7	By the end of session 2nd phase MBBS student must be able to describe progression of acute renal failure correctly								
PA28.3.8	By the end of session 2nd phase MBBS student must be able to discuss complications of acute renal failure correctly.								

PA28.4	**Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings progression and complications of chronic renal failure**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA28.4.1	1. By the end of session 2nd phase MBBS student must be able to define chronic renal failure correctly.								
PA28.4.2	2. By the end of session 2nd phase MBBS student must be able to describe etiology of chronic renal failure correctly.								
PA28.4.3	3. By the end of session 2nd phase MBBS student must be able to list the precipitating factors of chronic renal failure correctly.								
PA28.4.4	4. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of chronic renal failure correctly								
PA28.4.5	5. By the end of session 2nd phase MBBS student must be able to describe pathological findings of chronic renal failure correctly								
PA28.4.6	6. By the end of session 2nd phase MBBS student must be able to describe laboratory urinary findings of chronic renal failure correctly.								
PA28.4.7	7. By the end of session 2nd phase MBBS student must be able to describe progression of chronic renal failure correctly								
PA28.4.8	8. By the end of session 2nd phase MBBS student must be able to discuss complications of chronic renal failure correctly.								
PA28.5	Define and classify glomerular diseases. Enumerate and describe the etiology, pathogenesis, mechanisms of glomerular injury, pathology, distinguishing features and clinical manifestations of glomerulonephritis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
PA28.5.1	1. By the end of session 2nd phase MBBS student must be able to define glomerulonephritis correctly.								
PA28.5.2	2. By the end of session 2nd phase MBBS student must be able to classify glomerular diseases correctly.								
PA28.5.3	3. By the end of session 2nd phase MBBS student must be able to enumerate the causes of glomerulonephritis correctly.								
PA28.5.4	4. By the end of session 2nd phase MBBS student must be able to describe various mechanisms of glomerular injury correctly								
PA28.5.5	5. By the end of session 2nd phase MBBS student must be able to describe etiology of post-streptococcal glomerulonephritis correctly								
PA28.5.6	6. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of post-streptococcal glomerulonephritis correctly.								

PA28.5.7	7. By the end of session 2nd phase MBBS student must be able to describe pathological findings of post-streptococcal glomerulonephritis correctly								
PA28.5.8	8. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of post-streptococcal glomerulonephritis correctly.								
PA28.5.9	9.By the end of session 2nd phase MBBS student must be able to describe etiology of rapidly progressive glomerulonephritis correctly								
PA28.5.10	10. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of rapidly progressive glomerulonephritis correctly.								
PA28.5.11	11. By the end of session 2nd phase MBBS student must be able to describe pathological findings of rapidly progressive glomerulonephritis correctly								
PA28.5.12	12. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of rapidly progressive glomerulonephritis correctly.								
PA28.5.13	13.By the end of session 2nd phase MBBS student must be able to describe etiology of membranous nephropathy correctly								
PA28.5.14	14. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of membranous nephropathy correctly.								
PA28.5.15	15. By the end of session 2nd phase MBBS student must be able to describe pathological findings of membranous nephropathy correctly								
PA28.5.16	16. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of membranous nephropathy correctly.								
PA28.5.17	17.By the end of session 2nd phase MBBS student must be able to describe etiology of minimal change disease correctly								
PA28.5.18	18. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of minimal change disease correctly.								
PA28.5.19	19. By the end of session 2nd phase MBBS student must be able to describe pathological findings of minimal change disease correctly								
PA28.5.20	20. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of minimal change disease correctly.								

PA28.5.21	21.By the end of session 2nd phase MBBS student must be able to describe etiology of focal segmental glomerulosclerosis correctly								
PA28.5.22	22. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of focal segmental glomerulosclerosis correctly.								
PA28.5.23	23. By the end of session 2nd phase MBBS student must be able to describe pathological findings of focal segmental glomerulosclerosis correctly								
PA28.5.24	24. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of focal segmental glomerulosclerosis correctly.								
PA28.5.25	25.By the end of session 2nd phase MBBS student must be able to describe etiology of membranoproliferative glomerulonephritis correctly								
PA28.5.26	26. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of membranoproliferative glomerulonephritis correctly.								
PA28.5.27	27. By the end of session 2nd phase MBBS student must be able to describe pathological findings of membranoproliferative glomerulonephritis correctly								
PA28.5.28	28. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of membranoproliferative glomerulonephritis correctly								
PA28.5.29	29.By the end of session 2nd phase MBBS student must be able to describe etiology of chronic glomerulonephritis correctly								
PA28.5.30	30. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of chronic glomerulonephritis correctly.								
PA28.5.31	31. By the end of session 2nd phase MBBS student must be able to describe pathological findings of chronic glomerulonephritis correctly								
PA28.5.32	32. By the end of session 2nd phase MBBS student must be able to discuss clinical manifestations of chronic glomerulonephritis correctly								
PA28.5.33	33. By the end of session 2nd phase MBBS student must be able to discuss distinguishing features of various glomerulonephritis correctly								
PA28.6	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of IgA nephropathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	

PA28.6.1	1. By the end of session 2nd phase MBBS student must be able to define IgA nephropathy correctly								
PA28.6.2	2.By the end of session 2nd phase MBBS student must be able to describe etiology of IgA nephropathy correctly								
PA28.6.3	3. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of IgA nephropathy correctly.								
PA28.6.4	4. By the end of session 2nd phase MBBS student must be able to describe pathological findings of IgA nephropathy correctly								
PA28.6.5	5.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of IgA nephropathy correctly								
PA28.6.6	6.By the end of session 2nd phase MBBS student must be able to describe progression of IgA nephropathy correctly								
PA28.6.7	7.. By the end of session 2nd phase MBBS student must be able to discuss complications of IgA nephropathy correctly								
PA28.7	**Enumerate and describe the findings in glomerular manifestations of systemic disease**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA28.7.1	1.By the end of session 2nd phase MBBS student must be able to enumerate systemic diseases affecting glomerulus correctly								
PA28.7.2	2.By the end of session 2nd phase MBBS student must be able to describe glomerular manifestations in Lupus nephritis, Henoch Schonlein purpura, Bacterial endocarditis and Diabetes mellitus correctly								
PA28.8	Enumerate and classify diseases affecting the tubular Interstitium	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PA28.8.1	1.By the end of session 2nd phase MBBS student must be able to enumerate the diseases affecting the tubular interstitium correctly								
PA28.9	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of acute tubular necrosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PA28.9.1	1. By the end of session 2nd phase MBBS student must be able to define Acute tubular necrosis correctly								
PA28.9.2	2.By the end of session 2nd phase MBBS student must be able to describe etiology of Acute tubular necrosis correctly								
PA28.9.3	3. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Acute tubular necrosis correctly.								

PA28.9.4	4. By the end of session 2nd phase MBBS student must be able to describe pathological findings ofAcute tubular necrosis correctly								
PA28.9.5	5.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of Acute tubular necrosis correctly								
PA28.9.6	6.By the end of session 2nd phase MBBS student must be able to describe progression of Acute tubular necrosis correctly								
PA28.9.7	7.. By the end of session 2nd phase MBBS student must be able to discuss complications of Acute tubular necrosis correctly								
PA28.10	Describe the etiology, pathogenesis, pathology, laboratory findings, distinguishing features progression and complications of acute and chronic pyelonephritis and reflux nephropathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, General Surgery	
PA28.10.1	1. By the end of session 2nd phase MBBS student must be able to define Acute pyelonephritis correctly								
PA28.10.2	2.By the end of session 2nd phase MBBS student must be able to describe etiology of Acute pyelonephritis correctly								
PA28.10.3	3. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Acute pyelonephritis correctly.								
PA28.10.4	4. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Acute pyelonephritis correctly								
PA28.10.5	5.By the end of session 2nd phase MBBS student must be able to describe laboratory findings of Acute pyelonephritis correctly								
PA28.10.6	6.By the end of session 2nd phase MBBS student must be able to describe progression of Acute pyelonephritis correctly								
PA28.10.7	7.By the end of session 2nd phase MBBS student must be able to discuss complications of Acute pyelonephritis correctly								
PA28.10.8	8.By the end of session 2nd phase MBBS student must be able to define Chronic pyelonephritis correctly								
PA28.10.9	9.By the end of session 2nd phase MBBS student must be able to describe etiology of Chronic pyelonephritis correctly								
PA28.10.10	10. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Chronic pyelonephritis correctly.								
PA28.10.11	11. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Chronic pyelonephritis correctly								

PA28.10.12	12.By the end of session 2nd phase MBBS student must be able to describe laboratory findings of Chronic pyelonephritis correctly								
PA28.10.13	13.By the end of session 2nd phase MBBS student must be able to describe progression of Chronic pyelonephritis correctly								
PA28.10.14	14.By the end of session 2nd phase MBBS student must be able to discuss complications of Chronic pyelonephritis correctly								
PA28.10.15	15.By the end of session 2nd phase MBBS student must be able to differentiate between acute and chronic pyelonephritis correctly								
PA28.10.16	16.By the end of session 2nd phase MBBS student must be able to define Reflux nephropathy correctly								
PA28.10.17	17.By the end of session 2nd phase MBBS student must be able to describe etiology of Reflux nephropathy correctly								
PA28.10.18	18. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Reflux nephropathy correctly.								
PA28.10.19	19. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Reflux nephropathy correctly								
PA28.10.20	20.By the end of session 2nd phase MBBS student must be able to describe laboratory findings of Reflux nephropathy correctly								
PA28.10.21	21.By the end of session 2nd phase MBBS student must be able to describe progression of Reflux nephropathy correctly								
PA28.10.22	22.By the end of session 2nd phase MBBS student must be able to discuss complications of Reflux nephropathy correctly								
PA28.11	**Define classify and describe the etiology, pathogenesis pathology, laboratory, urinary findings, distinguishing features progression and complications of vascular disease of the kidney**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA28.11.1	1. By the end of session 2nd phase MBBS student must be able to classify the vascular diseases of kidney correctly								
PA28.11.2	2.By the end of session 2nd phase MBBS student must be able to define Nephrosclerosis correctly								
PA28.11.3	3.By the end of session 2nd phase MBBS student must be able to describe etiology of Nephrosclerosis correctly								
PA28.11.4	4. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Nephrosclerosis correctly.								

PA28.11.5	5. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Nephrosclerosis correctly								
PA28.11.6	6.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of Nephrosclerosis correctly								
PA28.11.7	7.By the end of session 2nd phase MBBS student must be able to describe progression of Nephrosclerosis correctly								
PA28.11.8	8.By the end of session 2nd phase MBBS student must be able to discuss complications ofNephrosclerosis correctly								
PA28.11.9	9.By the end of session 2nd phase MBBS student must be able to define Malignant Nephrosclerosis correctly								
PA28.11.10	10.By the end of session 2nd phase MBBS student must be able to describe etiology of Malignant Nephrosclerosis correctly								
PA28.11.11	11. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Malignant Nephrosclerosis correctly.								
PA28.11.12	12. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Malignant Nephrosclerosis correctly								
PA28.11.13	13.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of Malignant Nephrosclerosis correctly								
PA28.11.14	14.By the end of session 2nd phase MBBS student must be able to describe progression of Malignant Nephrosclerosis correctly								
PA28.11.15	15.By the end of session 2nd phase MBBS student must be able to discuss complications of Malignant Nephrosclerosis correctly								
PA28.11.16	16.By the end of session 2nd phase MBBS student must be able to differentiate between Benign and Malignant Nephrosclerosis correctly								
PA28.11.17	17.By the end of session 2nd phase MBBS student must be able to define Renal artery stenosis correctly								
PA28.11.18	18.By the end of session 2nd phase MBBS student must be able to describe etiology of Renal artery stenosis correctly								
PA28.11.19	19. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Renal artery stenosis correctly.								
PA28.11.20	20. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Renal artery stenosis correctly								

PA28.11.21	21.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of Renal artery stenosis correctly								
PA28.11.22	22.By the end of session 2nd phase MBBS student must be able to describe progression of Renal artery stenosis correctly								
PA28.11.23	23.By the end of session 2nd phase MBBS student must be able to discuss complications of Renal artery stenosis correctly								
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA28.12	**Define classify and describe the genetics, inheritance, etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features, progression and complications of cystic disease of the kidney**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine, Pediatrics**	
PA28.12.1	1. By the end of session 2nd phase MBBS student must be able to classify the cystic diseases of kidney correctly								
PA28.12.2	2.By the end of session 2nd phase MBBS student must be able to describe the genetics and inheritance of various cystic diseases of kidney with special emphasis on autosomal dominant and autosomal resistant polycystic kidney disease correctly								
PA28.12.3	3.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of various cystic diseases of kidney correctly								
PA28.12.4	4. By the end of session 2nd phase MBBS student must be able to describe morphological features of various cystic diseases of kidney correctly								
PA28.12.5	5.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of various cystic diseases of kidney correctly								
PA28.12.6	6.By the end of session 2nd phase MBBS student must be able to describe progression of various cystic diseases of kidney correctly								
PA28.12.7	7.By the end of session 2nd phase MBBS student must be able to discuss complications of various cystic diseases of kidneycorrectly								
PA28.12.8	8.By the end of session 2nd phase MBBS student must be able to differentiate between various cystic diseases of kidney correctly								

PA28.13	**Define classify and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features obstructive uropathy progression and complications of renal stone disease and**	**K**	**KH**	**Y**	**Lecture, Small group**	**Written/ Viva voce**		**General Surgery**	
PA28.13.1	1.By the end of session 2nd phase MBBS student must be able to define urolithiasis correctly								
PA28.13.2	2.By the end of session 2nd phase MBBS student must be able to enumerate causes ofurolithiasis correctly								
PA28.13.3	3.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of renal stone disease correctly.								
PA28.13.4	4. By the end of session 2nd phase MBBS student must be able to describe various types of renal stones correctly.								
PA28.13.5	5. By the end of session 2nd phase MBBS student must be able to describe pathological findings of renal stone disease correctly								
PA28.13.6	6.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of renal stone disease correctly								
PA28.13.7	7.By the end of session 2nd phase MBBS student must be able to describe progression of renal stone disease correctly								
PA28.13.8	8.By the end of session 2nd phase MBBS student must be able to discuss complications of renal stone disease correctly								
PA28.13.9	9.By the end of session 2nd phase MBBS student must be able to define obstructive uropathy correctly								
PA28.13.10	10.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of obstructive uropathy correctly.								
PA28.13.11	11. By the end of session 2nd phase MBBS student must be able to describe pathological findings of obstructive uropathy correctly								
PA28.13.12	12.By the end of session 2nd phase MBBS student must be able to describe laboratory and urinary findings of obstructive uropathy correctly								
PA28.13.13	13.By the end of session 2nd phase MBBS student must be able to describe progression of obstructive uropathy correctly								
PA28.13.14	14.By the end of session 2nd phase MBBS student must be able to discuss complications of obstructive uropathy correctly								
PA28.14	Classify and describe the etiology, genetics, pathogenesis, pathology, presenting features, progression and spread of renal Tumors	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	

PA28.14.1	1. By the end of session 2nd phase MBBS student must be able to classify various benign and malignant renal tumors correctly								
PA28.14.2	2.By the end of session 2nd phase MBBS student must be able to describe etiology of renal cell carcinoma correctly								
PA28.14.3	3.By the end of session 2nd phase MBBS student must be able to describe genetics of renal cell carcinoma correctly								
PA28.14.4	4. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of renal cell carcinoma correctly.								
PA28.14.5	5. By the end of session 2nd phase MBBS student must be able to describe pathological findings of renal cell carcinoma correctly								
PA28.14.6	6.By the end of session 2nd phase MBBS student must be able to describe presenting features of renal cell carcinoma correctly								
PA28.14.7	7.By the end of session 2nd phase MBBS student must be able to describe progression of renal cell carcinoma correctly.								
PA28.14.8	8.By the end of session 2nd phase MBBS student must be able to describe routes of spread of renal cell carcinoma correctly.								
PA28.14.9	9.By the end of session 2nd phase MBBS student must be able to describe etiology of Wilms tumor correctly								
PA28.14.10	10.By the end of session 2nd phase MBBS student must be able to describe genetics of Wilms tumor correctly								
PA28.14.11	11. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Wilms tumor correctly.								
PA28.14.12	12. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Wilms tumor correctly								
PA28.14.13	13.By the end of session 2nd phase MBBS student must be able to describe presenting features of Wilms tumor correctly								
PA28.14.14	14.By the end of session 2nd phase MBBS student must be able to describe progression of Wilms tumor correctly.								
PA28.14.15	15.By the end of session 2nd phase MBBS student must be able to describe routes of spread of Wilms tumor correctly.								
PA28.15	**Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of thrombotic angiopathies**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA28.15.1	1.By the end of session 2nd phase MBBS student must be able to enumerate various thrombotic microangiopathiescorrectly								

PA28.15.2	2.By the end of session 2nd phase MBBS student must be able to describe etiology of thrombotic thrombocytopenic purpura correctly								
PA28.15.3	3.By the end of session 2nd phase MBBS student must be able to describe genetics ofthrombotic thrombocytopenic purpura correctly								
PA28.15.4	4. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of thrombotic thrombocytopenic purpura correctly								
PA28.15.5	5. By the end of session 2nd phase MBBS student must be able to describepathological findings of thrombotic thrombocytopenic purpura in kidney correctly								
PA28.15.6	6.By the end of session 2nd phase MBBS student must be able to describe presenting features ofthrombotic thrombocytopenic purpura correctly								
PA28.15.7	7.By the end of session 2nd phase MBBS student must be able to describe progression of thrombotic thrombocytopenic purpura correctly								
PA28.15.8	8.By the end of session 2nd phase MBBS student must be able to describe etiology of Hemolytic Uremic syndrome correctly								
PA28.15.9	9.By the end of session 2nd phase MBBS student must be able to describe pathogenesis of Hemolytic Uremic syndrome correctly								
PA28.15.10	10. By the end of session 2nd phase MBBS student must be able to describe pathological findings of Hemolytic Uremic syndrome in kidney correctly								
PA28.15.11	11.By the end of session 2nd phase MBBS student must be able to describe presenting features of Hemolytic Uremic syndrome correctly								
PA28.15.12	12.By the end of session 2nd phase MBBS student must be able to describe progression of Hemolytic uremic syndrome correctly.								
PA28.16	**Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of urothelial tumors**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA28.16.1	1. By the end of session 2nd phase MBBS student must be able to classify various benign and malignant urothelial tumors correctly								
PA28.16.2	2.By the end of session 2nd phase MBBS student must be able to describe etiology of urothelial tumors correctly								
PA28.16.3	3.By the end of session 2nd phase MBBS student must be able to describe genetics of urothelial tumors correctly								
PA28.16.4	4. By the end of session 2nd phase MBBS student must be able to describe pathogenesis of urothelial tumors correctly.								

PA28.16.5	5. By the end of session 2nd phase MBBS student must be able to describe pathological findings of urothelial tumors correctly								
PA28.16.6	6.By the end of session 2nd phase MBBS student must be able to describe histological grading of urothelial neoplasms correctly								
PA28.16.7	7.By the end of session 2nd phase MBBS student must be able to describe presenting features of urothelial tumors correctly								
PA28.16.8	8.By the end of session 2nd phase MBBS student must be able to describe progression of urothelial neoplasms correctly.								
PA28.16.9	9.By the end of session 2nd phase MBBS student must be able to describe routes of spread of urothelial carcinoma correctly.								
Topic: Male Genital Tract		**Number of competencies: (05)**			**Number of procedures that require certification: (NIL)**				
PA29.1	**Classify testicular tumors and describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of testicular tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA29.1.1	1. By the end of session 2nd phase MBBS student must be able to classify various benign and malignant testicular tumors correctly								
PA29.1.2	2.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of testicular tumors correctly								
PA29.1.3	3. By the end of session 2nd phase MBBS student must be able to describe gross and microscopic features of various testicular tumors with special emphasis on Teratoma, Seminoma and yolk sac tumor correctly								
PA29.1.4	4.By the end of session 2nd phase MBBS student must be able to describe presenting features of various testicular tumors correctly								
PA29.1.5	5.By the end of session 2nd phase MBBS student must be able to describe diagnostic tests including tumor markers for various testicular neoplasms correctly.								
PA29.1.6	6.By the end of session 2nd phase MBBS student must be able to describe progression and routes of spread of various testicular neoplasms correctly.								
PA29.2	**Describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the penis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA29.2.1	1.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of carcinoma of penis correctly								
PA29.2.2	2. By the end of session 2nd phase MBBS student must be able to describe gross and microscopic features of carcinoma of penis correctly								

PA29.2.3	3.By the end of session 2nd phase MBBS student must be able to describe presenting features of carcinoma of penis correctly								
PA29.2.4	4.By the end of session 2nd phase MBBS student must be able to describe diagnostic tests for carcinoma penis correctly.								
PA29.2.5	5.By the end of session 2nd phase MBBS student must be able to describe progression and routes of spread of carcinoma penis correctly.								
PA29.3	**Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, urologic findings & diagnostic tests of benign prostatic hyperplasia**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA29.3.1	1.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of benign prostatic hyperplasia with special emphasis on hormonal dependency correctly								
PA29.3.2	2. By the end of session 2nd phase MBBS student must be able to describe gross and microscopic features of benign prostatic hyperplasia correctly								
PA29.3.3	3.By the end of session 2nd phase MBBS student must be able to describe presenting features of benign prostatic hyperplasia correctly								
PA29.3.4	4.By the end of session 2nd phase MBBS student must be able to describe diagnostic tests for benign prostatic hyperplasiacorrectly.								
PA29.3.5	5.By the end of session 2nd phase MBBS student must be able to describe urological findings of benign prostatic hyperplasia correctly.								
PA29.4	**Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the prostate**	**K**	**KH**	**Y**	**Lecture, Small group discussion**		**Written/ Viva voce**		**General Surgery**
PA29.4.1	1.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of carcinoma prostatewith special emphasis on role of hormones correctly								
PA29.4.2	2. By the end of session 2nd phase MBBS student must be able to describe gross and microscopic features of carcinoma prostate correctly								
PA29.4.3	3.By the end of session 2nd phase MBBS student must be able to describe presenting features of carcinoma prostate correctly								
PA29.4.4	4.By the end of session 2nd phase MBBS student must be able to describe diagnostic tests for carcinoma prostate correctly.								
PA29.4.5	5.By the end of session 2nd phase MBBS student must be able to describe progression and routes of spread of carcinoma prostate correctly.								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
PA29.5	**Describe the etiology, pathogenesis, pathology and progression of prostatitis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA29.5.1	1.By the end of session 2nd phase MBBS student must be able to describe etiopathogenesis of prostatitis correctly								
PA29.5.2	2. By the end of session 2nd phase MBBS student must be able to describe pathological features of prostatitis correctly								
PA29.5.3	3.By the end of session 2nd phase MBBS student must be able to describe presenting features of prostatitis correctly								
PA29.5.4	4.By the end of session 2nd phase MBBS student must be able to describe progression ofprostatitis correctly.								
Topic: Female Genital Tract		**Number of competencies: (09)**					**Number of procedures that require certification: (NIL)**		
PA30.1	**Describe the epidemiology, pathogenesis, etiology, pathology, screening, diagnosis and progression of carcinoma of the cervix**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.1.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of cervix accurately.		K						
PA30.1.2	By the end of this session, phase 2 MBBS student must be able to discuss etiology of cervical carcinoma accurately.		KH						
PA30.1.3	By the end of this session, phase 2 MBBS student must be able to discuss epidemiology of cervical carcinoma correctly.		KH						
PA30.1.4	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of cervical carcinoma correctly.		KH						
PA30.1.5	By the end of this session, phase 2 MBBS student must be able to discuss progression of cervical carcinoma accurately.		KH						
PA30.1.6	By the end of this session, phase 2 MBBS student must be able to describe pathology of cervical carcinoma accurately.		KH						
PA30.1.7	By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities used in diagnosis of cervical carcinoma correctly.		KH						
PA30.1.8	By the end of this session, phase 2 MBBS student must be able to discuss screening strategies used in screening of cervical carcinoma as per standard guidelines.		KH						
PA30.2	**By the end of this session, phase 2 MBBS student must be able to describe anatomy of cervix accurately.**		**K**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	

PA30.2.1	By the end of this session, phase 2 MBBS student must be able to discuss physiology of menstrual cycle accurately.		K						
PA30.2.2	By the end of this session, phase 2 MBBS student must be able to describe anatomy of normal endometrium correctly.		K						
PA30.2.3	By the end of this session, phase 2 MBBS student must be able to discuss etiology of endometrial carcinoma correctly.		KH						
PA30.2.4	By the end of this session, phase 2 MBBS student must be able to discuss pathogenesis of endometrial carcinoma accurately.		KH						
PA30.2.5	By the end of this session, phase 2 MBBS student must be able to enlist progression of endometrial carcinoma accurately.		KH						
PA30.2.6	By the end of this session, phase 2 MBBS student must be able to describe spread of endometrial carcinoma correctly.		KH						
PA30.2.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of endometrial carcinoma accurately.		KH						
PA30.2.8	By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities used in diagnosis of endometrial carcinoma as per standard clinical guidelines.		KH						
PA30.3	**By the end of this session, phase 2 MBBS student must be able to discuss etiology of cervical carcinoma accurately.**		**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.3.1	By the end of this session, phase 2 MBBS student must be able to classify tumours of uterus accurately.		K						
PA30.3.2	By the end of this session, phase 2 MBBS student must be able to describe etiology of leiomyoma correctly.		KH						
PA30.3.3	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of leiomyoma correctly.		KH						
PA30.3.4	By the end of this session, phase 2 MBBS student must be able to describe progression of leiomyoma correctly.		KH						
PA30.3.5	By the end of this session, phase 2 MBBS student must be able to describe pathology of leiomyoma accurately.		KH						
PA30.3.6	By the end of this session, phase 2 MBBS student must be able to describe etiology of leiomyosarcoma correctly.		KH						
PA30.3.7	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of leiomyosarcoma accurately.		KH						
PA30.3.8	By the end of this session, phase 2 MBBS student must be able to describe progression of leiomyosarcoma correctly.		KH						
PA30.3.9	By the end of this session, phase 2 MBBS student must be able to describe spread of leiomyosarcoma correctly.		KH						
PA30.3.10	By the end of this session, phase 2 MBBS student must be able to describe pathology of leiomyosarcoma accurately.		KH						

PA30.3.11	By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities for diagnosis of leiomyosarcoma as per clinical guidelines.		KH						
PA30.4	**By the end of this session, phase 2 MBBS student must be able to discuss epidemiology of cervical carcinoma correctly.**		**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.4.1	By the end of this session, phase 2 MBBS student must be able to discuss physiology of normal ovarian function correctly.		K						
PA30.4.2	By the end of this session, phase 2 MBBS student must be able to classify ovarian tumours accurately.		K						
PA30.4.3	By the end of this session, phase 2 MBBS student must be able to describe etiology of ovarian tumours correctly.		KH						
PA30.4.4	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of ovarian tumours correctly.		KH						
PA30.4.5	By the end of this session, phase 2 MBBS student must be able to discuss clinical course of ovarian tumours correctly.		KH						
PA30.4.6	By the end of this session, phase 2 MBBS student must be able to describe spread of ovarian tumours accurately.		KH						
PA30.4.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of ovarian tumours accurately.		KH						
PA30.4.8	By the end of this session, phase 2 MBBS student must be able to describe morphology of ovarian tumours accurately.		KH						
PA30.4.9	By the end of this session, phase 2 MBBS student must be able to discuss complications of ovarian tumours correctly.		KH						
PA30.5	**By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of cervical carcinoma correctly.**		**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.5.1	By the end of this session, phase 2 MBBS student must be able toclassify gestational trophoblastic neoplasms accurately.		K						
PA30.5.2	By the end of this session, phase 2 MBBS student must be able todescribe etiology of gestational trophoblastic neoplasms correctly.		KH						
PA30.5.3	By the end of this session, phase 2 MBBS student must be able todescribe pathogenesis of gestational trophoblastic neoplasms accurately.		KH						
PA30.5.4	By the end of this session, phase 2 MBBS student must be able todescribe clinical course of gestational trophoblastic neoplasms correctly.		KH						
PA30.5.5	By the end of this session, phase 2 MBBS student must be able todescribe spread of gestational trophoblastic neoplasms correctly.		KH						

PA30.5.6	By the end of this session, phase 2 MBBS student must be able todescribe pathology of gestational trophoblastic neoplasms accurately.		KH						
PA30.5.7	By the end of this session, phase 2 MBBS student must be able todescribe morphology of gestational trophoblastic neoplasms accurately.		KH						
PA30.5.8	By the end of this session, phase 2 MBBS student must be able todescribe complications of gestational trophoblastic neoplasms correctly.		KH						
PA30.6	**By the end of this session, phase 2 MBBS student must be able to discuss progression of cervical carcinoma accurately.**		**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.6.1	By the end of this session, phase 2 MBBS student must be able todiscuss cervical anatomy correctly.		K						
PA30.6.2	By the end of this session, phase 2 MBBS student should be able todescribe etiology of cervicitis correctly.		KH						
PA30.6.3	By the end of this session, phase 2 MBBS student should be able todescribe morphological features of cervicitis accurately.		KH						
PA30.7	**By the end of this session, phase 2 MBBS student must be able to describe pathology of cervical carcinoma accurately.**		**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.7.1	By the end of this session, phase 2 MBBS student must be able to define endometriosis accurately.		K						
PA30.7.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of endometriosis correctly.		KH						
PA30.7.3	By the end of this session, phase 2 MBBS student should be able to describe hormonal dependence of endometriosis correctly.		KH						
PA30.7.4	By the end of this session, phase 2 MBBS student should be able todiscuss features of endometriosis accurately.		KH						
PA30.7.5	By the end of this session, phase 2 MBBS student should be able to describe morphology of endometriosis accurately.		KH						
PA30.8	**By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities used in diagnosis of cervical carcinoma correctly.**		**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.8.1	By the end of this session, phase 2 MBBS student must be able to define adenomyosis accurately.		K						
PA30.8.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of adenomyosis correctly.		KH						
PA30.8.3	By the end of this session, phase 2 MBBS student should be able to describe morphological features of adenomyosis accurately.		KH						

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
PA30.9	**Describe the etiology, hormonal dependence and morphology of endometrial hyperplasia**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.9.1	By the end of this session, phase 2 MBBS student must be able to define endometrial hyperplasia accurately.		K						
PA30.9.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of endometrial hyperplasia correctly.		KH						
PA30.9.3	By the end of this session, phase 2 MBBS student should be able to describe hormonal dependence of endometrial hyperplasia correctly.		KH						
PA30.9.4	By the end of this session, phase 2 MBBS student should be able to describe morphology of endometrial hyperplasia accurately.		KH						
Topic: Breast		**Number of competencies: (04)**			**Number of procedures that require certification: (NIL)**				
PA31.1	**Classify and describe the types, etiology, pathogenesis, pathology and hormonal dependency of benign breast disease**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, General Surgery**	
PA31.1.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of breast correctly.		K						
PA31.1.2	By the end of this session, phase 2 MBBS student must be able to describe anatomy of breast correctly.		K						
PA31.1.3	By the end of this session, phase 2 MBBS student must be able to classify benign breast diseases accurately.		KH						
PA31.1.4	By the end of this session, phase 2 MBBS student must be able to describe types of benign breast diseases accurately.		KH						
PA31.1.5	By the end of this session, phase 2 MBBS student must be able to describe etiology of benign breast diseases correctly.		KH						
PA31.1.6	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of benign breast diseases correctly.		KH						
PA31.1.7	By the end of this session, phase 2 MBBS student must be able to describe hormonal dependency of benign breast diseases correctly.		KH						
PA31.1.8	By the end of this session, phase 2 MBBS student must be able to describe pathology of benign breast diseases accurately.		KH						

PA31.2	**Classify and describe the epidemiology, pathogenesis, classification, morphology, prognostic factors, hormonal dependency, staging and spread of carcinoma of the breast**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA31.2.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of breast correctly.		K						
PA31.2.2	By the end of this session, phase 2 MBBS student must be able to describe epidemiology of carcinoma of breast correctly.		KH						
PA31.2.3	By the end of this session, phase 2 MBBS student must be able to describe etiopathogenesis of carcinoma of breast accurately.		KH						
PA31.2.4	By the end of this session, phase 2 MBBS student must be able to classify carcinoma of breast accurately.		KH						
PA31.2.5	By the end of this session, phase 2 MBBS student must be able to describe morphology of carcinoma of breast accurately.		KH						
PA31.2.6	By the end of this session, phase 2 MBBS student must be able to enumerate prognostic factors of carcinoma of breast accurately.		KH						
PA31.2.7	By the end of this session, phase 2 MBBS student must be able to describe hormonal dependency of carcinoma of breast correctly.		KH						
PA31.2.8	By the end of this session, phase 2 MBBS student must be able to describe staging of carcinoma of breast correctly.		KH						
PA31.2.9	By the end of this session, phase 2 MBBS student must be able to describe spread of carcinoma of breast correctly.		KH						
	By the end of this session, phase 2 MBBS student must be able to enumerate prognostic factors of carcinoma of breast correctly.		KH						
PA31.3	**Describe and identify the morphologic and microscopic features of carcinoma of the breast**	**S**	**SH**	**N**	**DOAP session**	**Skill Assessment**		**General Surgery**	
PA31.3.1	By the end of this session, phase 2 MBBS student must be able to discuss anatomy of breast correctly.		K						
PA31.3.2	By the end of this session, phase 2 MBBS student must be able to describe morphology with microscopic features of carcinoma of breast accurately.		KH						
PA31.3.3	By the end of this session, phase 2 MBBS student must be able to present microscopic features of carcinoma of breast accurately.		S						
PA31.3.4	By the end of this session, phase 2 MBBS student must be able to identify morphology with microscopic features of carcinoma of breast accurately.		SH						

PA31.4	**Enumerate and describe the etiology, hormonal dependency and pathogenesis of gynecomastia**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics,General Medicine**	
PA31.4.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of male breast correctly.		K						
PA31.4.2	By the end of this session, phase 2 MBBS student must be able to define gynaecomastia accurately.		K						
PA31.4.3	By the end of this session, phase 2 MBBS student should be able to enumerate etiological factors of gynaecomastia correctly.		KH						
PA31.4.4	By the end of this session, phase 2 MBBS student should be able to describe hormonal dependency of gynaecomastia correctly.		KH						
PA31.4.5	By the end of this session, phase 2 MBBS student should be able todescribe pathogenesis of gynaecomastia accurately.		KH						
Topic: Endocrine system Number of competencies: (09) Number of procedures that require certification: (NIL)									
PA32.1	**Enumerate, classify and describe the etiology, pathogenesis, pathology and iodine dependency of thyroid swellings**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, Physiology, General Medicine., General Surgery**	
PA32.1.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of thyroid gland correctly.		K						
PA32.1.2	By the end of this session, phase 2 MBBS student must be able to describe physiology of thyroid hormone correctly.		K						
PA32.1.3	By the end of this session, phase 2 MBBS student must be able to enumerate causes of thyroid swellings accurately.		KH						
PA32.1.4	By the end of this session, phase 2 MBBS student must be able to classify thyroid swellings on functional basis accurately.		KH						
PA32.1.5	By the end of this session, phase 2 MBBS student must be able to describe etiology of thyroid swellings correctly.		KH						
PA32.1.6	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of thyroid swellings accurately.		KH						
PA32.1.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of thyroid swellings accurately.		KH						
PA32.1.8	By the end of this session, phase 2 MBBS student must be able to describe iodine dependency of thyroid swellings correctly.		KH						

PA32.2	**Describe the etiology, cause, iodine dependency, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicin**	
PA32.2.1	By the end of this session, phase 2 MBBS student must be able todefine thyrotoxicosis accurately.		K						
PA32.2.2	By the end of this session, phase 2 MBBS student must be able to describe etiology of thyrotoxicosis correctly.		KH						
PA32.2.3	By the end of this session, phase 2 MBBS student must be able to describe iodine dependency of thyrotoxicosis correctly.		KH						
PA32.2.4	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of thyrotoxicosis accurately.		KH						
PA32.2.5	By the end of this session, phase 2 MBBS student must be able to describe clinical features of thyrotoxicosis correctly.		KH						
PA32.2.6	By the end of this session, phase 2 MBBS student must be able to describe laboratory findings of thyrotoxicosis correctly.		KH						
PA32.2.7	By the end of this session, phase 2 MBBS student must be able to describe imaging/radiological findings of thyrotoxicosis correctly.		KH						
PA32.2.8	By the end of this session, phase 2 MBBS student must be able to describe clinical course of thyrotoxicosis correctly.		KH						
PA32.3	**Describe the etiology, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis/ hypothyroidism**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicine**	
PA32.3.1	By the end of this session, phase 2 MBBS student must be able to classify various hypothyroid conditions correctly.		K						
PA32.3.2	By the end of this session, phase 2 MBBS student must be able to describeetiology of hypothyroidism correctly.		KH						
PA32.3.3	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of hypothyroidism accurately.		KH						
PA32.3.4	By the end of this session, phase 2 MBBS student must be able to describe clinical features/manifestations of hypothyroidism correctly.		KH						
PA32.3.5	By the end of this session, phase 2 MBBS student must be able to describe laboratory features/findings of hypothyroidism correctly.		KH						
PA32.3.6	By the end of this session, phase 2 MBBS student must be able to describe imaging/radiological findings of hypothyroidism correctly.		KH						
PA32.3.7	By the end of this session, phase 2 MBBS student must be able to describe clinical course of hypothyroidism correctly.		KH						

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
PA32.4	**Classify and describe the epidemiology, etiology, pathogenesis, pathology, clinical laboratory features, complications and progression of diabetes mellitus**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicin**	
PA32.4.1	By the end of this session, phase 2 MBBS student must be able to classify diabetes mellitus accurately.		K						
PA32.4.2	By the end of this session, phase 2 MBBS student must be able to describe anatomy of pancreas correctly.		K						
PA32.4.3	By the end of this session, phase 2 MBBS student must be able to describe physiology of insulin hormone correctly.		K						
PA32.4.4	By the end of this session, phase 2 MBBS student must be able to describe epidemiology of diabetes mellitus correctly.		KH						
PA32.4.5	By the end of this session, phase 2 MBBS student must be able to describe etiology of diabetes mellitus correctly.		KH						
PA32.4.6	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of diabetes mellitus accurately.		KH						
PA32.4.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of diabetes mellitus accurately.		KH						
PA32.4.8	By the end of this session, phase 2 MBBS student must be able to describe clinical features of diabetes mellitus correctly.		KH						
PA32.4.9	By the end of this session, phase 2 MBBS student must be able to describe laboratory findings of diabetes mellitus correctly.		KH						
PA32.4.10	By the end of this session, phase 2 MBBS student must be able to describe complications of diabetes mellitus correctly.		KH						
PA32.4.11	By the end of this session, phase 2 MBBS student must be able to describe progression/clinical course of diabetes mellitus correctly.		KH						
PA32.5	**Describe the etiology, genetics, pathogenesis, manifestations, laboratory and morphologic features of hyperparathyroidism**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicin**	
PA32.5.1	By the end of this session, phase 2 MBBS student must be able todescribe anatomy of parathyroid gland correctly.		K						
PA32.5.2	By the end of this session, phase 2 MBBS student must be able todescribe physiology of parathyroid hormone correctly.		K						
PA32.5.3	By the end of this session, phase 2 MBBS student should be able to describe etiology of hyperparathyroidism correctly.		KH						

PA32.5.4	By the end of this session, phase 2 MBBS student should be able to describe genetics of hyperparathyroidism accurately.		KH						
PA32.5.5	By the end of this session, phase 2 MBBS student should be able to describe pathogenesis of hyperparathyroidism accurately.		KH						
PA32.5.6	By the end of this session, phase 2 MBBS student should be able to describe manifestations/clinical features of hyperparathyroidism correctly.		KH						
PA32.5.7	By the end of this session, phase 2 MBBS student should be able to describe laboratory findings of hyperparathyroidism correctly.		KH						
PA32.5.8	By the end of this session, phase 2 MBBS student should be able to describe morphological features of hyperparathyroidism accurately.		KH						
PA32.6	**Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreatic cancer**	**K**	**KH**	**N**	**Lecture, Small group**	**Written/ Viva voce**		**General Surgery**	
PA32.6.1	By the end of this session, phase 2 MBBS student must be able todescribe anatomy of pancreas correctly.		K						
PA32.6.2	By the end of this session, phase 2 MBBS student must be able to describe physiology of pancreatic hormones correctly.		K						
PA32.6.3	By the end of this session, phase 2 MBBS student should be able to describe etiology of pancreatic cancer correctly.		KH						
PA32.6.4	By the end of this session, phase 2 MBBS student should be able to describe pathogenesis of pancreatic cancer accurately.		KH						
PA32.6.5	By the end of this session, phase 2 MBBS student should be able to describe manifestations/clinical features of pancreatic cancer correctly.		KH						
PA32.6.6	By the end of this session, phase 2 MBBS student should be able to describe laboratory findings of pancreatic cancer correctly.		KH						
PA32.6.7	By the end of this session, phase 2 MBBS student should be able to describe morphological features of pancreatic cancer accurately.		KH						
PA32.6.8	By the end of this session, phase 2 MBBS student should be able to describe complications of pancreatic cancer correctly.		KH						
PA32.6.9	By the end of this session, phase 2 MBBS student should be able to describe metastasis/spread of pancreatic cancer correctly.		KH						

PA32.7	**Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of adrenal insufficiency**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicin**	
PA32.7.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of adrenal glands' hormones correctly.		K						
PA32.7.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of adrenal insufficiency correctly.		KH						
PA32.7.3	By the end of this session, phase 2 MBBS student should be able todescribe pathogenesis of adrenal insufficiency accurately.		KH						
PA32.7.4	By the end of this session, phase 2 MBBS student should be able todescribe clinical features/manifestations of adrenal insufficiency correctly.		KH						
PA32.7.5	By the end of this session, phase 2 MBBS student should be able todescribe laboratory findings of adrenal insufficiency correctly.		KH						
PA32.7.6	By the end of this session, phase 2 MBBS student should be able todescribe morphological features of adrenal insufficiency accurately.		KH						
PA32.7.7	By the end of this session, phase 2 MBBS student should be able todescribe complications of adrenal insufficiency correctly.		KH						
PA32.8	**Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of Cushing's syndrome**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicin**	
PA32.8.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of adrenal glands' hormones correctly.		K						
PA32.8.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of cushing's syndrome correctly.		KH						
PA32.8.3	By the end of this session, phase 2 MBBS student should be able to describepathogenesis of cushing's syndrome accurately.		KH						
PA32.8.4	By the end of this session, phase 2 MBBS student should be able to describemanifestations of cushing's syndrome correctly.		KH						
PA32.8.5	By the end of this session, phase 2 MBBS student should be able to describelaboratory findings of cushing's syndrome correctly.		KH						
PA32.8.6	By the end of this session, phase 2 MBBS student should be able to describemorphological features of cushing's syndrome accurately.		KH						

PA32.8.7	By the end of this session, phase 2 MBBS student should be able to describecomplications of cushing's syndrome correctly.		KH						
PA32.9	**Describe the etiology, pathogenesis, manifestations, laboratory and morphologic features of adrenal neoplasms**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, Physiology, General Medicine., General Surgery**	
PA32.9.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of adrenal glands' hormones correctly.		K						
PA32.9.2	By the end of this session, phase 2 MBBS student must be able to classify adrenal neoplasms accurately.		K						
PA32.9.3	By the end of this session, phase 2 MBBS student should be able to describe etiology of adrenal neoplasms correctly.		KH						
PA32.9.4	By the end of this session, phase 2 MBBS student should be able to describe pathogenesis of adrenal neoplasms accurately.		KH						
PA32.9.5	By the end of this session, phase 2 MBBS student should be able to describe manifestations of adrenal neoplasms correctly.		KH						
PA32.9.6	By the end of this session, phase 2 MBBS student should be able to describe laboratory findings of adrenal neoplasms correctly.		KH						
PA32.9.7	By the end of this session, phase 2 MBBS student should be able to describe morphological features of adrenal neoplasms accurately.		KH						
Topic: Bone and soft tissue Number of competencies: (05) Number of procedures that require certification: (NIL)									
PA33.1	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of osteomyelitis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, Orthopaedics**	**Microbiology,**
PA33.1.1	At the end of the session the phase II student must be able to define osteomyelitis accurately.								
PA33.1.2	At the end of the session the phase II student must be able to classify osteomyelitis correctly.								
PA33.1.3	At the end of the session the phase II student must be able to enumerate most common etiology of osteomyelitis correctly.								
PA33.1.4	At the end of the session the phase II student must be able to discuss the pathogenesis of osteomyelitis correctly.								
PA33.1.5	At the end of the session the phase II student must be able to elicit clinical manifestations of osteomyelitis correctly.								

PA33.1.6	At the end of the session the phase II student must be able to enumerate the radiological features of osteomyelitis correctly.								
PA33.1.7	At the end of the session the phase II student must be able to describe morphologic features of osteomyelitis accurately.								
PA33.1.8	At the end of the session the phase II student must be able to enumerate complications of osteomyelitis precisely.								
PA33.2	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Orthopaedics**	
PA33.2.1	At the end of the session the phase II student must be able to classify bone tumors correctly.								
PA33.2.2	At the end of the session the phase II student must be able to enumerate etiology of bone tumors accurately.								
PA33.2.3	At the end of the session the phase II student must be able to discuss pathogenesis of bone tumors accurately.								
PA33.2.4	At the end of the session the phase II student must be able to enlist clinical features of bone tumors correctly.								
PA33.2.5	At the end of the session the phase II student must be able to enumerate radiological features of bone tumors precisely.								
PA33.2.6	At the end of the session the phase II student must be able to discuss morphologic features of bone tumors correctly.								
PA33.2.7	At the end of the session the phase II student must be able to enumerate complications of bone tumors accurately.								
PA33.2.8	At the end of the session the phase II student must be able to discuss metastasis of bone tumors correctly.								
PA33.3	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Orthopaedics**	
PA33.3.1	At the end of the session the phase II student must be able to describe the etiology of soft tissue tumors								
PA33.3.2	At the end of the session the phase II student must be able to describe the pathogenesis of soft tissue tumors								
PA33.3.3	At the end of the session the phase II student must be able to describe the clinical features of soft tissue tumors								
PA33.3.4	At the end of the session the phase II student must be able to describe the radiological features of soft tissue tumors								
PA33.3.5	At the end of the session the phase II student must be able to describe the gross and microscopic features of common soft tissue tumors								
PA33.4	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of Paget's disease of the bone**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Orthopaedics**	

PA33.4.1	At the end of the session the phase II student must be able to describe the gross and microscopic features of Paget's disease of the bone								
PA33.4.2	At the end of the session the phase II student must be able to describe the pathogenesis of Paget's disease of the bone								
PA33.4.3	At the end of the session the phase II student must be able to describe the pathogenesis of Paget's disease of the bone								
PA33.4.4	At the end of the session the phase II student must be able to describe the clinical features of Paget's disease of the bone								
PA33.4.5	At the end of the session the phase II student must be able to describe the morphologic features and complications of Paget's disease of the bone								
PA33.5	**Classify and describe the etiology, immunology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of rheumatoid arthritis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA33.5.1	At the end of the session the phase II student must be able to define Rheumatoid arthritis correctly.								
PA33.5.2	At the end of the session the phase II student must be able to classify Rheumatoid arthritis accurately.								
PA33.5.3	At the end of the session the phase II student must be able to enumerate etiologies of Rheumatoid arthritis correctly.								
PA33.5.4	At the end of the session the phase II student must be able to discuss role of immunology in Rheumatoid arthritis precisely.								
PA33.5.5	At the end of the session the phase II student must be able to describe pathogenesis of Rheumatoid arthritis precisely.								
PA33.5.6	At the end of the session the phase II student must be able to enumerate clinical features of Rheumatoid arthritis correctly.								
PA33.5.7	At the end of the session the phase II student must be able to enlist radiological features of Rheumatoid arthritis accurately.								
PA33.5.8	At the end of the session the phase II student must be able to discuss laboratory features of Rheumatoid arthritis correctly.								
PA33.5.9	At the end of the session the phase II student must be able to enlist diagnostic criteria of Rheumatoid arthritis accurately.								
PA33.5.10	At the end of the session the phase II student must be able to discuss complications of Rheumatoid arthritis precisely.								
Topic: Skin		**Number of competencies: (04)**			**Number of procedures that require certification:(NIL)**				
PA34.1	Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Dermatology, Venereology & Leprosy	

PA34.1.1	At the end of the session the phase II student must be able to describe squamous cell carcinoma of skin precisely.								
PA34.1.2	At the end of the session the phase II student must be able to enumerate risk factors of squamous cell carcinoma of skin correctly.								
PA34.1.3	At the end of the session the phase II student must be able to discuss pathogenesis of squamous cell carcinoma of skin accurately.								
PA34.1.4	At the end of the session the phase II student must be able to enumerate gross features of squamous cell carcinoma of skin correctly.								
PA34.1.5	At the end of the session the phase II student must be able to enumerate microscopic features of squamous cell carcinoma of skin accurately.								
PA34.1.6	At the end of the session the phase II student must be able to discuss natural history of squamous cell carcinoma of skin accurately.								
PA34.2	**Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Dermatology, Venereology & Leprosy**	
PA34.2.1	At the end of the session the phase II student must be able to describe basal cell carcinoma of skin precisely.								
PA34.2.2	At the end of the session the phase II student must be able to enumerate risk factors of basal cell carcinoma of skin correctly.								
PA34.2.3	At the end of the session the phase II student must be able to discuss pathogenesis of basal cell carcinoma of skin accurately.								
PA34.2.4	At the end of the session the phase II student must be able to enumerate gross features of basal cell carcinoma of skin correctly.								
PA34.2.5	At the end of the session the phase II student must be able to enumerate microscopic features of basal cell carcinoma of skin correctly.								
PA34.2.6	At the end of the session the phase II student must be able to discuss natural history of basal cell carcinoma of skin accurately.								
PA34.3	**Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors morphology clinical features and metastases of melanoma**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Dermatology, Venereology & Leprosy**	
PA34.3.1	At the end of the session the phase II student must be able to enlist distinguishing features between a nevus and melanoma.								

PA34.3.2	At the end of the session the phase II student must be able to enumerate risk factors of melanoma correctly.								
PA34.3.3	At the end of the session the phase II student must be able to discuss pathogenesis of melanoma accurately.								
PA34.3.4	At the end of the session the phase II student must be able to enumerate gross features of melanoma correctly.								
PA34.3.5	At the end of the session the phase II student must be able to enumerate microscopic features of melanoma correctly.								
PA34.3.6	At the end of the session the phase II student must be able to discuss natural history of melanoma accurately.								
PA34.3.7	At the end of the session the phase II student must be able to discuss metastasis of melanoma correctly.								
PA34.4	**Identify, distinguish and describe common tumors of the skin**	**S**	**SH**	**N**	**DOAP session**	**Skill Assessment**		**Dermatology, Venereology & Leprosy**	
PA34.4.1	At the end of the session the phase II student must be able to enumerate common tumors of skin accurately.								
PA34.4.2	At the end of the session the phase II student must be able to describe gross features of common tumors of skin correctly.								
PA34.4.3	At the end of the session the phase II student must be able to discuss microscopic features of common tumors of skin precisely.								
Topic: Central Nervous System		**Number of competencies:(03)**						**Number of procedures that require certification: (01)**	
PA35.1	Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine,	Microbiology
PA35.1.1	At the end of the session the phase II student must be able to define meningitis accurately.								
PA35.1.2	At the end of the session the phase II student must be able to enumerate etiology of meningitis correctly.								
PA35.1.3	At the end of the session the phase II student must be able to describe pathogenesis of meningitis correctly.								
PA35.1.4	At the end of the session the phase II student must be able to discuss different types of meningitis accurately.								
PA35.1.5	At the end of the session the phase II student must be able to enumerate differentiating factors in meningitis accurately.								
PA35.1.6	At the end of the session the phase II student must be able to discuss CSF findings in meningitis precisely.								
PA35.2	**Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics**	
PA35.2.1	At the end of the session the phase II student must be able to classify CNS tumors according to WHO accurately.								

PA35.2.2	At the end of the session the phase II student must be able to enumerate etiology of CNS tumors precisely.								
PA35.2.3	At the end of the session the phase II student must be able to discuss genetic changes in tumors precisely.								
PA35.2.4	At the end of the session the phase II student must be able to discuss pathogenesis of CNS tumors correctly.								
PA35.2.5	At the end of the session the phase II student must be able to discuss clinical features of CNS tumors accurately.								
PA35.2.6	At the end of the session the phase II student must be able to enlist gross features of CNS tumors correctly.								
PA35.2.7	At the end of the session the phase II student must be able to describe microscopic features of CNS tumors accurately.								
PA35.2.8	At the end of the session the phase II student must be able to discuss sequelae of CNS tumors correctly.								
PA35.2.9	At the end of the session the phase II student must be able to enumerate complications of CNS tumors precisely.								
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA35.3	**Identify the etiology of meningitis based on given CSF parameters**	**S**	**P**	**Y**	**DOAP session**	**Skill Assessment**	**1**	**General Medicine,**	**Microbiology**
PA35.3.1	At the end of the session the phase II student must be able to enumerate most common causes of meningitis accurately.								
PA35.3.2	At the end of the session the phase II student must be able to enlist components of CSF analysis correctly.								
PA35.3.3	At the end of the session the phase II student must be able to describe CSF features for a given etiology of meningitis correctly.								
PA35.3.4	At the end of the session the phase II student must be able to identify the etiology of meningitis correctly from given set of CSF parameters.								
Topic: Eye Number of competencies: (01) Number of procedures that require certification:(NIL)									
PA36.1	**Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Ophthalmology**	
PA36.1.1	At the end of the session the phase II student must be able to enumerate etiology of retinoblastoma accurately.								
PA36.1.2	At the end of the session the phase II student must be able to discuss genetic changes in retinoblastoma precisely.								
PA36.1.3	At the end of the session the phase II student must be able to discuss pathogenesis in retinoblastoma precisely.								
PA36.1.4	At the end of the session the phase II student must be able to enlist clinical features in retinoblastoma.								

PA36.1.5	At the end of the session the phase II student must be able to enlist gross features of changes in retinoblastoma accurately.								
PA36.1.6	At the end of the session the phase II retinoblastoma student must be able to enumerate microscopic features of retinoblastoma correctly.								
PA36.1.7	At the end of the session the phase II student must be able to discuss squealae of retinoblastoma precisely.								
PA36.1.8	At the end of the session the phase II student must be able to enlist complications of retinoblastoma accurately.								
Column C: K- Knowledge, S – Skill, A - Attitude / professionalism, C- Communication.									
Column D: K – Knows, KH - Knows How, S - Shows how, P- performs independently,									
Column F: DOAP session – Demonstrate, Observe, Assess, Perform.									
Column H: If entry is P: indicate how many procedures must be done independently for certification/ graduation									
Integration									
Human Anatomy									
AN5.8	Define thrombosis, infarction & aneurysm	K	KH	N	Lecture	Written		Pathology,	Physiology
AN66.2	Describe the ultrastructure of connective tissue	K	KH	N	Lecture, Practical	Written		Pathology	
AN70.1	Identify exocrine gland under the microscope & distinguish between serous, mucous and mixed acini	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	
AN70.2	Identify the lymphoid tissue under the microscope & describe microanatomy of lymph node, spleen, thymus, tonsil and correlate the structure with function	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	
AN71.1	Identify bone under the microscope, Classify various types and describe the structure-function correlation of the same	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
AN71.2	**Identify cartilage under the microscope & describe various types and structure- function correlation of the same describe various types and structure-function correlation of the same**	**K/S**	**SH**	**Y**	**Lecture, Practical**	**Written/ skill assessment**		**Pathology**	
Physiology									
PY1.4	Describe apoptosis – programmed cell death	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PY2.5	Describe different types of anemia & Jaundice	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	Biochemistry

PY2.8	Describe the physiological basis of hemostasis and anticoagulants. Describe bleeding & clotting disorders (Hemophilia, purpura)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PY2.9	Describe different blood groups and discuss the clinical	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
	importance of blood grouping, blood banking and transfusion				discussion, ECE- Visit to blood bank				
PY2.11	Estimate Hb, RBC, TLC, RBC indices, DLC, Blood groups, BT/CT	S	SH	Y	DOAP sessions	Practical/OSPE / viva voce		Pathology	
PY2.12	Describe test for ESR, Osmotic fragility, Hematocrit. Note the findings and interpret the test results etc	K	KH	Y	Demonstration	Written/ Viva voce		Pathology	
PY2.13	Describe steps for reticulocyte and platelet count	K	KH	Y	Demonstration	Written/ Viva voce		Pathology	
PY3.6	Describe the pathophysiology of Myasthenia gravis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
Biochemistry									
BI2.4	Describe and discuss enzyme inhibitors as poisons and drugs and as therapeutic enzymes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
BI2.5	Describe and discuss the clinical utility of various serum enzymes as markers of pathological conditions	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	
BI2.6	Discuss use of enzymes in laboratory investigations (Enzyme-based assays)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	
BI2.7	Interpret laboratory results of enzyme activities & describe the clinical utility of various enzymes as markers of pathological conditions	K	KH	Y	Lecture, Small group discussion discussion /DOAP sessions	Written/ Viva voce		Pathology, General Medicine	
BI3.8	Discuss and interpret laboratory results of analytes associated with metabolism of carbohydrates.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	
BI5.2	Describe and discuss functions of proteins and structure-function relationships in relevant areas eg, hemoglobin and selected hemoglobinopathies	K	KH	Y	Lecture, Small group	Written/ Viva voce		Pathology, General Medicine	Physiology

BI6.11	Describe the functions of haem in the body and describe the processes involved in its metabolism and describe porphyrin metabolism	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	Physiology
BI6.12	Describe the major types of haemoglobin and its derivatives found in the body and their physiological/ pathological relevance	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	Physiology
BI6.13	Describe the functions of the kidney, liver, thyroid and adrenal glands.	K	KH		Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	Physiology, Human Anatomy
BI6.14	Describe the tests that are commonly done in clinical practice to assess the functions of kidney, liver, thyroid and adrenal glands	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	Physiology, Human Anatomy
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
BI6.15	Describe the abnormalities of kidney, liver, thyroid and adrenal glands	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, General Medicine	Physiology, Human Anatomy
BI7.7	Describe the role of oxidative stress in the pathogenesis of conditions such as cancer, complications of diabetes mellitus and atherosclerosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine,Pathology	
BI8.1	Discuss the importance of various dietary components and explain importance of dietary fibre	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Pediatrics, Pathology	
BI8.2	Describe the types and causes of protein energy malnutrition and its effects	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Pediatrics, Pathology	
BI8.4	Describe the causes (including dietary habits), effects and health risks associated with being overweight/obesity	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine,	
								Pathology	
BI8.5	Summarize the nutritional importance of commonly used items of food including fruits and vegetables (macro-molecules & its importance)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Community Medicine, General Medicine, Pediatrics	

BI10.1	Describe the cancer initiation, promotion oncogenes & oncogene activation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology, General Surgery, Pathology	
BI10.2	Describe various biochemical tumor markers and the biochemical basis of cancer therapy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology, General Surgery, Pathology	
BI10.3	Describe the cellular and humoral components of the immune system & describe the types and structure of antibody	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology, General Surgery, Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
BI10.4	Describe & discuss innate and adaptive immune responses, self/non-self recognition and the central role of T-helper cells in immune responses	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Pathology	
BI10.5	Describe antigens and concepts involved in vaccine development	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Pediatrics, Microbiology	
BI11.17	Explain the basis and rationale of biochemical tests done in the following conditions: diabetes mellitus, dyslipidemia, myocardial infarction, renal failure, gout, proteinuria, nephrotic syndrome, edema, jaundice, liver diseases, pancreatitis, disorders of acid-base balance, thyroid disorders	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Pathology	
Microbiology									
MI1.7	Describe the immunological mechanisms in health	K	KH	Y	Lecture	Written/ Viva voce			Pathology
MI1.8	Describe the mechanisms of immunity and response of the host immune system to infections diagnosis	K	KH	Y	Lecture	Written/ Viva voce		Pediatrics	Pathology
MI2.1	Describe the etiologic agents in rheumatic fever and their	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
MI2.2	Describe the and discuss the diagnostic modalities of Infective endocarditis classification etio-pathogenesis, clinical features	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
MI2.3	Identify the microbial agents causing Rheumatic heart disease & infective Endocarditis	S	SH	Y	DOAP session	Skill assessment		General Medicine	Pathology

MI2.4	List the common microbial agents causing anemia. Describe the morphology, mode of infection and discuss the pathogenesis, clinical course, diagnosis and prevention and treatment of the common microbial agents causing Anemia	K	KH	Y	Lecture, Small group discussion	Written/ viva voce		General Medicine	Pathology
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
MI2.5	Describe the etio-pathogenesis and discuss the clinical evolution and the laboratory diagnosis of kala azar, malaria, filariasis and other common parasites prevalent in India	K	KH	Y	Lecture, Small group discussion	Written/ viva voce		General Medicine	Pathology
MI2.7	Describe the epidemiology, the etio-pathogenesis, evolution, complications, opportunistic infections, diagnosis, prevention and the principles of management of HIV	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
MI3.1	Enumerate the microbial agents causing diarrhea and dysentery. Describe the epidemiology, morphology, pathogenesis, clinical features, and diagnostic modalities of these agents	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Pediatrics	Pathology
MI3.3	Describe the enteric fever pathogens and discuss the evolution of the clinical course, the laboratory diagnosis of the diseases caused by them	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pharmacology, Pathology
MI3.4	Identify the different modalities for diagnosis of enteric fever. Choose the appropriate test related to the duration of illness	S	KH	Y	DOAP session	Skill assessment		General Medicine	Pathology
MI3.6	Describe the etio-pathogenesis of Acid Peptic disease (APD) and the clinical course. Discuss the diagnosis and management of the causative agent of APD.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pharmacology, Pathology
MI3.7	Describe the epidemiology, the etio-pathogenesis and discuss	K	KH	Y	Lecture, Small group	Written/ Viva voce		General Medicine	Pathology
	the viral markers in the evolution of Viral hepatitis. Discuss the modalities in the diagnosis, and prevention of viral hepatitis				discussion				
MI3.8	Choose the appropriate laboratory test in the diagnosis of viral hepatitis	K	KH	Y	Lecture, Small group discussion, Case discussion	Written/ Viva voce/ OSPE		General Medicine	Pathology
MI5.1	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of meningitis	K	KH	Y	Lecture	Written/ Viva voce		General Medicine Pediatrics	Pathology
MI5.2	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of encephalitis.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine Pediatrics	Pathology

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
MI8.2	Describe the etio-pathogenesis of opportunistic infections (OI) and discuss the factors contributing to the occurrence of OI, and the laboratory diagnosis	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Pathology
MI8.3	Describe the role of oncogenic viruses in the evolution of virus associated malignancy	K	KH	Y	Lecture	Written		General Medicine	Pathology
Community Medicine									
CM8.1	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for communicable diseases	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Pediatrics	Microbiology, Pathology
			Forensic Medicine & Toxicology						
FM2.1	Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical death and Brainstem death	K	KH	Y	Lecture, Small group discussion	Written/viva voce			Pathology
FM2.2	Describe and discuss natural and unnatural deaths	K	KH	Y	Lecture, Small group discussion	Written/viva voce			Pathology
FM2.3	Describe and discuss issues related to sudden natural deaths	K	KH	Y	Lecture, Small group discussion	Written/viva voce			Pathology
FM2.5	Discuss moment of death, modes of death-coma, asphyxia and syncope	K	KH	Y	Lecture, Small group discussion	Written/viva voce			Pathology
FM2.11	Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination	K	KH	Y	Lecture, Small group discussion Autopsy, DOAP session	Written/viva voce/ OSPE			Pathology
FM2.12	Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination	K	KH	Y	Lecture, Small group discussion Autopsy, DOAP session	Written/viva voce/ OSPE			Pathology
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**

FM2.13	Describe and discuss obscure autopsy	K	KH	Y	Lecture, Small group discussion	Written/viva voce			Pathology
FM3.28	Describe evidences of abortion - living and dead, duties of	K	K/KH	Y	Lecture, Small group discussion	Written/viva voce		Obstetrics &	
	doctor in cases of abortion, investigations of death due to							Gynaecology,	
	criminal abortion							Pathology	
FM6.1	Describe different types of specimens and tissues to be collected both in the living and dead: body fluids (blood, urine, semen, faeces, saliva), skin, nails, tooth pulp, vaginal smear, viscera, skull, specimen for histo-pathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange Principle	K	K/KH	Y	Lecture, Small group discussion	Written/viva voce			Pathology
FM14.7	Demonstrate & identify that a particular stain is blood and identify the species of its origin	S	KH	Y	Lecture, Small group discussion	Log book/ skill station/ Viva voce		Forensic Medicicne, Physiology	
FM14.8	Demonstrate the correct technique to perform and identify ABO & RH blood group of a person	S	SH	Y	Lecture, Small group discussion discussion, DOAP session	Log book/ skill station/ Viva voce		Forensic Medicicne, Physiology	
Dermatology, Venereology & Leprosy									
DR12.7	Identify and distinguish fixed drug eruptions and Steven Johnson syndrome from other skin lesions	S	SH	Y	Bedside clinic	Skill assessment	1	General Medicine	Pathology, Microbiology
DR14.1	Describe the etiology, pathogenesis and clinical precipitating features and classification of Urticaria and angioedema	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Microbiology, Pathology
DR16.1	Identify and distinguish skin lesions of SLE	S	SH	Y	Bedside clinic discussion	Skill assessment	2	General Medicine	Pathology
DR16.2	Identify and distinguish Raynaud's phenomenon	S	SH	Y	Bedside clinic discussion	Skill assessment	2	General Medicine	Pathology
Anesthesiology									
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**

AS9.4	Enumerate blood products and describe the use of blood products in the preoperative period	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce		Pathology	General Surgery
				ENT					
EN1.2	Describe the pathophysiology of common diseases in ENT	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce		Pathology	
			Ophthalmology						
OP7.2	Describe and discuss the aetio-pathogenesis, stages of maturation and complications of cataract	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
OP8.1	Discuss the aetiology, pathology, clinical features and management of vascular occlusions of the retina	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Pathology	
Dentistry									
DE4.1	Discuss the prevalence of oral cancer and enumerate the common types of cancer that can affect tissues of the oral cavity	K	K	N	Lecture, Small group discussion	Viva voce		Pathology	ENT
DE4.2	Discuss the role of etiological factors in the formation of precancerous /cancerous lesions	K	KH	Y	Lecture, Small group discussion	Viva voce		Pathology	ENT
DE4.3	Identify potential pre-cancerous / cancerous lesions	S	SH	N	Observation, Bed side clinics	Skill assessment		Pathology	ENT
DE4.4	Counsel patients to risks of oral cancer with respect to tobacco, smoking, alcohol and other causative factors.	A/C	SH	Y	DOAP session	Document in Log book	2	Pathology	ENT
			General Medicine						
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM1.1	Describe and discuss the epidemiology, pathogenesis clinical evolution and course of common causes of heart disease including: rheumatic/ valvular, ischemic, hypertrophic inflammatory	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.2	Describe and discuss the genetic basis of some forms of heart failure	K	KH	N	Lecture, Small group discussion	Written		Pathology, Physiology	

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	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology, Microbiology	
IM1.4	Stage heart failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.5	Describe, discuss and differentiate the processes involved in R vs L heart failure, systolic vs diastolic failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.6	Describe and discuss the compensatory mechanisms involved in heart failure including cardiac remodelling and neurohormonal adaptations	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.7	Enumerate, describe and discuss the factors that exacerbate heart failure including ischemia, arrythmias, anemia, thyrotoxicosis, dietary factors drugs etc.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.8	Describe and discuss the pathogenesis and development of common arrhythmias involved in heart failure particularly atrial fibrillation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM1.9	Describe and discuss the clinical presentation and features, diagnosis, recognition and management of acute rheumatic fever	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM2.1	Discuss and describe the epidemiology, antecedents and risk factors for atherosclerosis and ischemic heart disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology, Community Medicine	
IM2.2	Discuss the aetiology of risk factors both modifiable and non-modifiable of atherosclerosis and IHD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM2.4	Discuss and describe the pathogenesis natural history,evolution and complications of atherosclerosis and IHD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM2.5	Define the various acute coronary syndromes and describe their evolution, natural history and outcomes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM3.1	Define, discuss, describe and distinguish community acquired pneumonia, nosocomial pneumonia and aspiration pneumonia	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Human Anatomy, Pathology, Microbiology	

IM3.3	Discuss and describe the pathogenesis, presentation, natural history and complications of pneumonia	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Pathology, Microbiology	
IM4.5	Describe and discuss the pathophysiology and manifestations of malignant causes of fever including hematologic and lymph node malignancies	K	KH	Y	Lecture, Small group discussion	written		Pathology, Microbiology	
IM4.12	Order and interpret diagnostic tests based on the differential diagnosis including: CBC with differential, 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 OBC	K	SH	Y	Bed side clinic, Skill assessment	Skill assessment		Pathology, Microbiology	
IM4.16	Enumerate the indications and describe the findings in tests of inflammation and specific rheumatologic tests, serologic testing for pathogens including HIV, bone marrow aspiration and biopsy	K	KH	N	Lecture, Small group discussion	written		Pathology	
IM4.17	Observe and assist in the performance of a bone marrow aspiration and biopsy in a simulated environment	S	SH	N	skills lab	log book documentation/ DOAP session		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM5.1	Describe and discuss the physiologic and biochemical basis of hyperbilirubinemia	K	K	Y	Lecture, Small group discussion	Written/Viva voce		Pathology, Physiology	
IM5.2	Describe and discuss the aetiology and pathophysiology of liver injury	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM5.3	Describe and discuss the pathologic changes in various forms of liver disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM5.4	Describe and discuss the epidemiology, microbiology, immunology and clinical evolution of infective (viral) hepatitis	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	
IM5.5	Describe and discuss the pathophysiology and clinical evolution of alcoholic liver disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
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	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	

IM5.7	Enumerate and describe the causes and pathophysiology of drug induced liver injury	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Pharmacology	
IM5.12	Choose and interpret appropriate diagnostic tests including: CBC, bilirubin, function tests, Hepatitis serology and ascitic fluid examination in patient with liver diseases	S	KH	Y	Bedside clinic, DOAP session	Skill assessment		Pathology	
IM5.14	Outline a diagnostic approach to liver disease based on hyperbilirubinemia, liver function changes and hepatitis serology	S	SH	Y	Bedside clinic, Small group discussion	viva voce/ written		Pathology, Microbiology	
IM6.5	Describe and discuss the pathogenesis, evolution and clinicalfeatures of common HIV related malignancies	K	KH	Y	Lecture, Small group discussion	short notes/ Viva voce		Pathology, Microbiology	
IM6.6	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related skin and oral lesions	K	KH	Y	Lecture, Small group discussion	short notes/ Viva voce		Pathology, Microbiology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM6.10	Choose and interpret appropriate diagnostic tests to diagnose and classify the severity of HIV-AIDS including specific tests of HIV, CDC	K	KH	Y	Bed side clinic, DOAP session, Small group discussion	written/ Skill assessment		Pathology, Microbiology	
IM6.19	Enumerate the indications of and discuss about prophylactic drugs used to prevent HIV related opportunistic infections	K/C	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	
IM7.1	Describe the pathophysiology of autoimmune disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM7.2	Describe the genetic basis of autoimmune disease	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM7.16	Enumerate the indications for and interpret the results of: CBC, anti CCP (Anti-cyclic citrullinated peptide), RA, ANA, DNA and other tests of autoimmunity	K	SH	Y	Bed side clinic, small group	Skill assessment/ written		Pathology	
IM8.1	Describe and discuss the epidemiology, aetiology and the prevalence of primary and secondary hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM8.2	Describe and discuss the pathophysiology of hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	

IM8.3	Describe and discuss the genetic basis of hypertension	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.4	Define and classify hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.5	Describe and discuss the differences between primary and secondary hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.7	Describe and discuss the clinical manifestations of the various aetiologies of secondary causes of hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM8.8	Describe, discuss and identify target organ damage due to hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM9.1	Define, describe and classify anemia based on red blood cell size and reticulocyte count	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM9.2	Describe and discuss the morphological characteristics, aetiology and prevalence of each of the causes of anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM9.6	Generate a differential diagnosis and prioritise based on clinical	S	SH	Y	Bed side clinic, DOAP session, Small group discussion	Skill assessment/ written		Pathology	
	features that suggest a specific aetiology								
IM9.7	Describe the appropriate diagnostic work up based on the presumed aetiology	S	SH	Y	Bed side clinic, DOAP session	Skill assessment/ written		Pathology	
IM9.8	Describe and discuss the meaning and utility of various components of the hemogram Describe and discuss the various tests for iron deficiency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.9		K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	

IM9.10	Order and interpret tests for anemia including hemogram, red cell indices, reticulocyte count, iron studies, B12 and folate.	S	SH	Y	Bed side clinic, DOAP session	Skill assessment/ written		Pathology	
IM9.11	Describe, perform and interpret a peripheral smear and stool occult blood	S	SH	P	Bed side clinic, DOAP session	Skill assessment/ written		Pathology	
IM9.12	Describe the indications and interpret the results of a bone marrow aspirations and biopsy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.13	Describe, develop a diagnostic plan to determine the aetiology of anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM9.18	Describe the indications for blood transfusion and the appropriate use of blood components	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce/ Skill assessment		Pathology	
IM10.1	Define, describe and differentiate between acute and chronic renal failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM10.2	Classify, describe and differentiate the pathophysiologic causes of acute renal failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.3	Describe the pathophysiology and causes of pre renal ARF, renal and post renal ARF	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.4	Describe the evolution, natural history and treatment of ARF	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.5	Describe and discuss the aetiology of CRF	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.6	Stage Chronic Kidney Disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.7	Describe and discuss the pathophysiology and clinical findings of uraemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	

IM10.8	Classify, describe and discuss the significance of proteinuria in CKD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.9	Describe and discuss the pathophysiology of anemia and hyperparathyroidism in CKD	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.10	Describe and discuss the association between CKD glycemia and hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.11	Describe and discuss the relationship between CAD risk factors and CKD and in dialysis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM10.16	Enumerate the indications for and interpret the results of: renal function tests, calcium, phosphorus, PTH, urine electrolytes, osmolality, Anion gap	K	KH	Y	DOAP session, Small group discussion	Skill assessment/ Written/Viva voce		Pathology	
IM10.17	Describe and calculate indices of renal function based on available laboratories including FENa (Fractional Excretion of Sodium) and CrCl (Creatinine Clearance)	S	SH	Y	DOAP session, Small group discussion	Skill assessment/ Written/Viva voce		Pathology	
IM11.2	Describe and discuss the epidemiology and pathogenesis and risk factors and clinical evolution of type 1 diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM11.3	Describe and discuss the epidemiology and pathogenesis and risk factors, economic impact and clinical evolution of type 2 diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM11.5	Describe and discuss the pathogenesis and temporal evolution of microvascular and macrovascular complications of diabetes	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM11.11	Order and interpret laboratory tests to diagnose diabetes and its complications including: glucoses, glucose tolerance test, glycosylated hemoglobin, urinary micro albumin, ECG, electrolytes, ABG, ketones, renal function tests and lipid profile	S	SH	Y	Bed side clinic, DOAP session, Small group	Skill assessment		Pathology	
IM11.12	Perform and interpret a capillary blood glucose test	S	P	Y	Bed side clinic, DOAP session, Small group	Skill assessment	2	Pathology, Biochemistry	

IM11.13	Perform and interpret a urinary ketone estimation with a dipstick	S	P	Y	Bed side clinic, DOAP session	Skill assessment	2	Pathology, Biochemistry	
IM11.22	Enumerate the causes of hypoglycaemia and describe the counter hormone response and the initial approach and treatment	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM12.1	Describe the epidemiology and pathogenesis of hypothyroidism and hyperthyroidism including the influence of iodine deficiency and autoimmunity in the pathogenesis of thyroid disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM12.3	Describe and discuss the physiology of the hypothalamo-pituitary - thyroid axis, principles of thyroid function testing and alterations in physiologic function	K	K	Y	Lecture, Small group discussion	short notes		Pathology, Physiology	
IM13.1	Describe the clinical epidemiology and inherited & modifiable risk factors for common malignancies in India	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Pathology, Biochemistry	
IM13.2	Describe the genetic basis of selected cancers	K	K	N	Lecture, Small group discussion	short note/ Viva voce		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM13.3	Describe the relationship between infection and cancers	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Pathology	
IM13.4	Describe the natural history, presentation, course, complications and cause of death for common cancers	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	
IM13.15	Describe the need, tests involved, their utility in the prevention of common malignancies	K	KH	Y	Bedside clinic, small group discussion	short note/ Viva voce		Pathology	
IM14.2	Describe and discuss the aetiology of obesity including modifiable and non-modifiable risk factors and secondary causes	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Pathology	
IM14.3	Describe and discuss the monogenic forms of obesity	K	K	N	Lecture, Small group discussion	short note/ Viva voce		Pathology	
IM14.4	Describe and discuss the impact of environmental factors including eating habits, food, work, environment and physical activity on the incidence of obesity	K	K	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology, Community Medicine	

IM14.5	Describe and discuss the natural history of obesity and its complications	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Pathology	
IM15.1	Enumerate, describe and discuss the aetiology of upper and lower GI bleeding	K	K	Y	Lecture, Small group discussion	short note/ Viva voce		Pathology	General Surgery
IM15.2	Enumerate, describe and discuss the evaluation and steps involved in stabilizing a patient who presents with acute volume loss and GI bleed	S	SH	Y	DOAP session, Small group discussion,Lecture	Written/ Viva voce/ Skill assessment		Pathology	General Surgery
IM15.3	Describe and discuss the physiologic effects of acute blood and volume loss	K	K	Y	Lecture, Small group discussion	Short note/ viva voce		Pathology, Physiology	General Surgery
IM15.9	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, PT and PTT, stool examination, occult blood, liver function tests, H.pylori test	S	SH	Y	Bedside clinic, DOAP session, Small group discussion	Skill assessment/ Short note/ Viva voce		Pathology	General Surgery
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
IM15.11	Develop document and present a treatment plan that includes	S	KH	Y	Lecture, Small group discussion	Short note/ viva voce		Pathology	General Surgery
	fluid resuscitation, blood and blood component transfusion and specific therapy for arresting blood loss								
IM15.12	Enumerate the indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion	K	K	Y	Lecture, Small group discussion	Short note/ viva voce		Pathology	General Surgery
IM15.13	Observe cross matching and blood / blood component transfusion	S	SH	Y	Bedside clinic	Short note/ Viva voce/		Pathology	General Surgery
IM16.4	Elicit and document and present an appropriate history that includes the natural history, dietary history, travel, sexual history and other concomitant illnesses	S	SH	Y	Bedside clinic skills lab	Skill assessment		Microbiology, Pathology	
IM16.8	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, and stool examination	S	SH	Y	Bedside clinic, Skills lab, Small group	Skill assessment/ Short note/ Viva voce		Microbiology, Pathology	
IM16.12	Enumerate and discuss the indications for further investigationsincluding antibodies, colonoscopy, diagnostic imaging and biopsy in the diagnosis of chronic diarrhea	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	General Surgery

IM16.15	Distinguish, based on the clinical presentation, Crohn's disease from ulcerative colitis	S	SH	Y	Lecture, Small group discussion	Short note/ Viva voce		Pathology	General Surgery
IM17.7	Enumerate the indications and describe the findings in the CSF in patients with meningitis	K	K	Y	Small group, Bedside clinic	Skill Assessment		Microbiology, Pathology	
IM17.8	Demonstrate in a mannequin or equivalent the correct technique for performing a lumbar puncture	S	SH	Y	DOAP session	Skill assessment		Microbiology, Pathology	
IM17.9	Interpret the CSF findings when presented with various parameters of CSF fluid analysis	S	SH	Y	Small group discussion, Bedside clinic	Skill assessment		Microbiology, Pathology	
IM18.2	Classify cerebrovascular accidents and describe the aetiology, predisposing genetic and risk factors pathogenesis of hemorrhagic and non hemorrhagic stroke	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
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	S	SH	Y	Bedside clinic	Skill assessment		Pathology	
IM22.1	Enumerate the causes of hypercalcemia and distinguish the features of PTH vs non PTH mediated hypercalcemia	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
IM22.2	Describe the aetiology, clinical manifestations, diagnosis and clinical approach to primary hyperparathyroidism	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	General Surgery
IM22.4	Enumerate the components and describe the genetic basis of the multiple endocrine neoplasia syndrome	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
IM25.7	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	K	SH	Y	Bed side clinic, Skill assessment	Skill assessment		Pathology,	
Obstetrics & Gynaecology									
OG10.2	Enumerate the indications and describe the appropriate use of blood and blood products, their complications and management	K	KH	Y	Lecture, Small group discussion			Pathology	

				Pediatrics					
PE11.1	Describe the common etiology, clinical features and management of obesity in children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Biochemistry, Pathology	
PE11.2	Discuss the risk approach for obesity and discuss the prevention strategies	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PE12.7	Describe the causes, clinical features, diagnosis and management of deficiency /excess of Vitamin D (Rickets and Hypervitaminosis D)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, Physiology, Pathology	
PE12.8	Identify the clinical features of dietary deficiency of Vitamin D	S	p	Y	Bedside clinics, Skills lab	Document in log book	3	Biochemistry, Physiology Pathology	
PE12.9	Assess patients with Vitamin D deficiency, diagnose, classify and plan management	S	SH	Y	Bed side clinics	Document in log book		Biochemistry, Physiology, Pathology	
PE12.13	Discuss the RDA , dietary sources of Vitamin K and their role in Health and disease	K	K	N	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, Physiology, Pathology	
PE12.14	Describe the causes, clinical features, diagnosis, management and prevention of Deficiency of Vitamin K	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, Physiology, Pathology	
PE13.1	Discuss the RDA, dietary sources of Iron and their role in health and disease	K	K	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Biochemistry	
PE13.2	Describe the causes, diagnosis and management of Fe deficiency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Biochemistry	
PE13.3	Identify the clinical features of dietary deficiency of Iron and make a diagnosis	S	SH	Y	Bed side clinics, Skill Lab	Document in log book		Pathology, Biochemistry	
PE13.4	Interpret hemogram and Iron Panel	S	P	Y	Bed side clinic, Small group discussion	Skill Assessment	5	Pathology, Biochemistry	
PE13.5	Propose a management plan for Fe Deficiency Anaemia	S	SH	Y	Bed side clinics, Skill lab	Skill Assessment		Pathology, Pharmacology	

PE21.2	Enumerate the etio-pathogenesis, clinical features, complications and management of Acute post streptococcal Glomerular Nephritis in children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE21.3	Discuss the approach and referral criteria to a child with Proteinuria	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PE21.5	Enumerate the etio-pathogenesis clinical features, complications and management of Acute Renal Failure in children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE21.6	Enumerate the etio-pathogenesis, clinical features, complications and management of Chronic renal Failure in Children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE21.7	Enumerate the etio-pathogenesis clinical features, complications and management of Wilms Tumor	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE21.11	Perform and interpret the common analytes in a Urine examination	S	SH	Y	Bed side clinic Labs, Skill lab	Skill assessment		Biochemistry, Pathology	
PE23.1	Discuss the Hemodynamic changes, clinical presentation, complications and management of Acyanotic Heart Diseases –VSD, ASD and PDA	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
PE23.2	Discuss the Hemodynamic changes, clinical presentation, complications and management of Cyanotic Heart Diseases –Fallot's Physiology	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
PE23.3	Discuss the etio-pathogenesis, clinical presentation and management of cardiac failure in infant and children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
PE23.4	Discuss the etio-pathogenesis, clinical presentation and management of Acute Rheumatic Fever in children	K	KH	Y	Lecture, Small group	Written/ Viva voce		Physiology, Pathology	
PE23.5	Discuss the clinical features, complications, diagnosis, management and prevention of Acute Rheumatic Fever	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
PE23.6	Discuss the etio-pathogenesis and clinical features and management of Infective endocarditis in children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology, Microbiology	
PE24.1	Discuss the etio-pathogenesis, classification, clinical presentation and management of diarrheal diseases in children	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology, Microbiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
PE24.2	Discuss the classification and clinical presentation of various types of diarrheal dehydration	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Microbiology	
PE25.1	Discuss the etio-pathogenesis, clinical presentation and management of Malabsorption in children and its causes including celiac disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE26.1	Discuss the etio-pathogenesis, clinical features and management of acute hepatitis in children	K	KH	Y	Lecture, Small group discussion activity	Written/ Viva voce		Pathology, Microbiology	
PE26.2	Discuss the etio-pathogenesis, clinical features and management of Fulminant Hepatic Failure in children	K	KH	Y	Lecture, Small group discussion activity	Written/ Viva voce		Pathology, Microbiology	
PE26.3	Discuss the etio-pathogenesis, clinical features and management of chronic liver diseases in children	K	KH	Y	Lecture, Small group discussion activity	Written/ Viva voce		Pathology, Microbiology	
PE26.4	Discuss the etio-pathogenesis, clinical features and management of Portal Hypertension in children	K	KH	Y	Lecture, Small group activity	Written/ Viva voce		Pathology	
PE26.9	Interpret Liver Function Tests, viral markers, ultra sonogram report	S	SH	Y	Bedside clinics, Skills lab	Skill Assessment		Pathology	
PE29.1	Discuss the etio-pathogenesis, clinical features, classification and approach to a child with anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
PE29.2	Discuss the etio-pathogenesis, clinical features and management of Iron Deficiency anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
PE29.3	Discuss the etiopathogenesis, clinical features and management of VIT B12, Folate deficiency anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
PE29.4	Discuss the etio-pathogenesis, clinical features and management of Hemolytic anemia, Thalassemia Major, Sickle cell anaemia, Hereditary spherocytosis, Auto-immune hemolytic anaemia and hemolytic uremic syndrome	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
PE29.6	Discuss the cause of thrombocytopenia in children: describe the clinical features and management of Idiopathic Thrombocytopenic Purpura (ITP)	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE29.7	Discuss the etiology, classification, pathogenesis and clinical features of Hemophilia in children	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE29.8	Discuss the etiology, clinical presentation and management of Acute Lymphoblastic Leukemia in children	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
PE29.9	Discuss the etiology, clinical presentation and management of lymphoma in children	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pathology	
			General Surgery						
SU2.1	Describe pathophysiology of shock, types of shock, principles of resuscitation including fluid replacement and monitoring	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology, Physiology	
SU3.1	Describe the indications and appropriate use of blood and blood products and complications of blood transfusion.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce.		Pathology	
SU5.1	Describe normal wound healing and factors affecting healing.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
SU9.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, Microbiology, Pathology	
SU22.2	Describe the etiopathogenesis of thyroidal swellings	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology,	
			Respiratory Medicine						
CT2.1	Define and classify obstructive airway disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
CT2.2	Describe and discuss the epidemiology, risk factors and evolution of obstructive airway disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**

CT2.4	Describe and discuss the physiology and pathophysiology of hypoxia and hypercapnia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
CT2.5	Describe and discuss the genetics of alpha 1 antitrypsin deficiency in emphysema	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology, Pathology	
CT2.6	Describe the role of the environment in the cause and exacerbation of obstructive airway disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology	
CT2.7	Describe and discuss allergic and non-allergic precipitants of obstructive airway disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pathology,	
CT2.11	Describe, discuss and interpret pulmonary function tests	S	SH	Y	Bed side clinic, DOAP session	Skill assessment		Physiology, Pathology	
Orthopaedics									
OR3.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of Bone and Joint infections	K/S	K/KH/SH	Y	Lecture, Small group discussion, Video assisted lecture	Written/ Viva voce/ OSCE		Pathology, Microbiology	General surgery
	a) Acute Osteomyelitis								
	b) Subacute osteomyelitis								
	c) Acute Suppurative arthritis								
	d) Septic arthritis & HIV infection								
	e) Spirochaetal infection								
	f) Skeletal Tuberculosis								
OR4.1	Describe and discuss the clinical features, investigation and principles of management of Tuberculosis affecting major joints (Hip, Knee) including cold abcess and caries spine	K	K/KH	Y	Lecture, Small group discussion, Case discussion	Written/ Viva voce/ OSCE		Pathology	General surgery
OR10.1	Describe and discuss the aetiopathogenesis, clinical features, Investigations and principles of management of benign and malignant bone tumours and pathological fractures	K	K/KH	Y	Lecture, Small group discussion, Video assisted interactive lecture	Written/ Viva voce OSCE		Pathology	General surgery, Radiotherapy
Radiotherapy									

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Suggested Teaching Learning methods	Suggested Assessment methods	Number required to certify P	Vertical integration	Horizontal Integration
RT1.3	Enumerate, describe and discuss classification and staging of cancer (AJCC, FIGO etc.)	K	KH	Y	Lecture	Written/ Viva voce		Pathology	General Surgery, General Medicine
RT4.5	Describe and discuss role of radiation in management of common malignancies in India (region specific)	K	KH	Y	Lecture and Bed side clinic	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.6	Describe and discuss radiotherapy for benign disease	K	KH	Y	Lecture	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT4.7	Counsel patients regarding acute and late effects of radiation and supportive care	K/A/S	KH	Y	Bed side clinic, Group discussion	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
RT5.1	Describe and discuss cancer prevention, screening, vaccination, cancer registry	K	K	Y	Group discussion	Written/ Viva voce		Pathology	General Surgery, Obstetrics & Gynaecology
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
Topic: Female Genital Tract		Number of competencies: (09)					Number of procedures that require certification: (NIL)		
PA30.1	**Describe the epidemiology, pathogenesis, etiology, pathology, screening, diagnosis and progression of carcinoma of the cervix**	**K**	**KH**	**Y**	**Lecture, Small group discussion**		**Written/ Viva voce**		**Obstetrics & Gynaecology**
PA30.1.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of cervix accurately.		K						
PA30.1.2	By the end of this session, phase 2 MBBS student must be able to discuss etiology of cervical carcinoma accurately.		KH						
PA30.1.3	By the end of this session, phase 2 MBBS student must be able to discuss epidemiology of cervical carcinoma correctly.		KH						
PA30.1.4	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of cervical carcinoma correctly.		KH						

PA30.1.5	By the end of this session, phase 2 MBBS student must be able to discuss progression of cervical carcinoma accurately.		KH						
PA30.1.6	By the end of this session, phase 2 MBBS student must be able to describe pathology of cervical carcinoma accurately.		KH						
PA30.1.7	By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities used in diagnosis of cervical carcinoma correctly.		KH						
PA30.1.8	By the end of this session, phase 2 MBBS student must be able to discuss screening strategies used in screening of cervical carcinoma as per standard guidelines.		KH						
PA30.2	**Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the endometrium**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.2.1	By the end of this session, phase 2 MBBS student must be able to discuss physiology of menstrual cycle accurately.		K						
PA30.2.2	By the end of this session, phase 2 MBBS student must be able to describe anatomy of normal endometrium correctly.		K						
PA30.2.3	By the end of this session, phase 2 MBBS student must be able to discuss etiology of endometrial carcinoma correctly.		KH						
PA30.2.4	By the end of this session, phase 2 MBBS student must be able to discuss pathogenesis of endometrial carcinoma accurately.		KH						
PA30.2.5	By the end of this session, phase 2 MBBS student must be able to enlist progression of endometrial carcinoma accurately.		KH						
PA30.2.6	By the end of this session, phase 2 MBBS student must be able to describe spread of endometrial carcinoma correctly.		KH						
PA30.2.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of endometrial carcinoma accurately.		KH						
PA30.2.8	By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities used in diagnosis of endometrial carcinoma as per standard clinical guidelines.		KH						
PA30.3	**Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the leiomyomas and leiomyosarcomas**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.3.1	By the end of this session, phase 2 MBBS student must be able to classify tumours of uterus accurately.		K						
PA30.3.2	By the end of this session, phase 2 MBBS student must be able to describe etiology of leiomyoma correctly.		KH						
PA30.3.3	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of leiomyoma correctly.		KH						

PA30.3.4	By the end of this session, phase 2 MBBS student must be able to describe progression of leiomyoma correctly.		KH						
PA30.3.5	By the end of this session, phase 2 MBBS student must be able to describe pathology of leiomyoma accurately.		KH						
PA30.3.6	By the end of this session, phase 2 MBBS student must be able to describe etiology of leiomyosarcoma correctly.		KH						
PA30.3.7	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of leiomyosarcoma accurately.		KH						
PA30.3.8	By the end of this session, phase 2 MBBS student must be able to describe progression of leiomyosarcoma correctly.		KH						
PA30.3.9	By the end of this session, phase 2 MBBS student must be able to describe spread of leiomyosarcoma correctly.		KH						
PA30.3.10	By the end of this session, phase 2 MBBS student must be able to describe pathology of leiomyosarcoma accurately.		KH						
PA30.3.11	By the end of this session, phase 2 MBBS student must be able to discuss diagnostic modalities for diagnosis of leiomyosarcoma as per clinical guidelines.		KH						
PA30.4	**Classify and describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of ovarian tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.4.1	By the end of this session, phase 2 MBBS student must be able to discuss physiology of normal ovarian function correctly.		K						
PA30.4.2	By the end of this session, phase 2 MBBS student must be able to classify ovarian tumours accurately.		K						
PA30.4.3	By the end of this session, phase 2 MBBS student must be able to describe etiology of ovarian tumours correctly.		KH						
PA30.4.4	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of ovarian tumours correctly.		KH						
PA30.4.5	By the end of this session, phase 2 MBBS student must be able to discuss clinical course of ovarian tumours correctly.		KH						
PA30.4.6	By the end of this session, phase 2 MBBS student must be able to describe spread of ovarian tumours accurately.		KH						
PA30.4.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of ovarian tumours accurately.		KH						
PA30.4.8	By the end of this session, phase 2 MBBS student must be able to describe morphology of ovarian tumours accurately.		KH						
PA30.4.9	By the end of this session, phase 2 MBBS student must be able to discuss complications of ovarian tumours correctly.		KH						
PA30.5	**Describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of gestational trophoblastic neoplasms**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	

PA30.5.1	By the end of this session, phase 2 MBBS student must be able toclassify gestational trophoblastic neoplasms accurately.		K						
PA30.5.2	By the end of this session, phase 2 MBBS student must be able todescribe etiology of gestational trophoblastic neoplasms correctly.		KH						
PA30.5.3	By the end of this session, phase 2 MBBS student must be able todescribe pathogenesis of gestational trophoblastic neoplasms accurately.		KH						
PA30.5.4	By the end of this session, phase 2 MBBS student must be able todescribe clinical course of gestational trophoblastic neoplasms correctly.		KH						
PA30.5.5	By the end of this session, phase 2 MBBS student must be able todescribe spread of gestational trophoblastic neoplasms correctly.		KH						
PA30.5.6	By the end of this session, phase 2 MBBS student must be able todescribe pathology of gestational trophoblastic neoplasms accurately.		KH						
PA30.5.7	By the end of this session, phase 2 MBBS student must be able todescribe morphology of gestational trophoblastic neoplasms accurately.		KH						
PA30.5.8	By the end of this session, phase 2 MBBS student must be able todescribe complications of gestational trophoblastic neoplasms correctly.		KH						
PA30.6	**Describe the etiology and morphologic features of cervicitis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.6.1	By the end of this session, phase 2 MBBS student must be able todiscuss cervical anatomy correctly.		K						
PA30.6.2	By the end of this session, phase 2 MBBS student should be able todescribe etiology of cervicitis correctly.		KH						
PA30.6.3	By the end of this session, phase 2 MBBS student should be able todescribe morphological features of cervicitis accurately.		KH						
PA30.7	**Describe the etiology, hormonal dependence, features and morphology of endometriosis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.7.1	By the end of this session, phase 2 MBBS student must be able to define endometriosis accurately.		K						
PA30.7.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of endometriosis correctly.		KH						
PA30.7.3	By the end of this session, phase 2 MBBS student should be able to describe hormonal dependence of endometriosis correctly.		KH						

PA30.7.4	By the end of this session, phase 2 MBBS student should be able todiscuss features of endometriosis accurately.		KH						
PA30.7.5	By the end of this session, phase 2 MBBS student should be able to describe morphology of endometriosis accurately.		KH						
PA30.8	**Describe the etiology and morphologic features of adenomyosis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.8.1	By the end of this session, phase 2 MBBS student must be able to define adenomyosis accurately.		K						
PA30.8.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of adenomyosis correctly.		KH						
PA30.8.3	By the end of this session, phase 2 MBBS student should be able to describe morphological features of adenomyosis accurately.		KH						
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA30.9	**Describe the etiology, hormonal dependence and morphology of endometrial hyperplasia**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Obstetrics & Gynaecology**	
PA30.9.1	By the end of this session, phase 2 MBBS student must be able to define endometrial hyperplasia accurately.			K					
PA30.9.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of endometrial hyperplasia correctly.			KH					
PA30.9.3	By the end of this session, phase 2 MBBS student should be able to describe hormonal dependence of endometrial hyperplasia correctly.			KH					
PA30.9.4	By the end of this session, phase 2 MBBS student should be able to describe morphology of endometrial hyperplasia accurately.			KH					
	Topic: Breast Number of competencies: (04) Number of procedures that require certification: (NIL)								
PA31.1	**Classify and describe the types, etiology, pathogenesis, pathology and hormonal dependency of benign breast disease**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, General Surgery**	
PA31.1.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of breast correctly.		K						
PA31.1.2	By the end of this session, phase 2 MBBS student must be able to describe anatomy of breast correctly.		K						
PA31.1.3	By the end of this session, phase 2 MBBS student must be able to classify benign breast diseases accurately.		KH						

PA31.1.4	By the end of this session, phase 2 MBBS student must be able to describe types of benign breast diseases accurately.		KH						
PA31.1.5	By the end of this session, phase 2 MBBS student must be able to describe etiology of benign breast diseases correctly.		KH						
PA31.1.6	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of benign breast diseases correctly.		KH						
PA31.1.7	By the end of this session, phase 2 MBBS student must be able to describe hormonal dependency of benign breast diseases correctly.		KH						
PA31.1.8	By the end of this session, phase 2 MBBS student must be able to describe pathology of benign breast diseases accurately.		KH						
PA31.2	**Classify and describe the epidemiology, pathogenesis, classification, morphology, prognostic factors, hormonal dependency, staging and spread of carcinoma of the breast**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA31.2.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of breast correctly.		K						
PA31.2.2	By the end of this session, phase 2 MBBS student must be able to describe epidemiology of carcinoma of breast correctly.		KH						
PA31.2.3	By the end of this session, phase 2 MBBS student must be able to describe etiopathogenesis of carcinoma of breast accurately.		KH						
PA31.2.4	By the end of this session, phase 2 MBBS student must be able to classify carcinoma of breast accurately.		KH						
PA31.2.5	By the end of this session, phase 2 MBBS student must be able to describe morphology of carcinoma of breast accurately.		KH						
PA31.2.6	By the end of this session, phase 2 MBBS student must be able to enumerate prognostic factors of carcinoma of breast accurately.		KH						
PA31.2.7	By the end of this session, phase 2 MBBS student must be able to describe hormonal dependency of carcinoma of breast correctly.		KH						
PA31.2.8	By the end of this session, phase 2 MBBS student must be able to describe staging of carcinoma of breast correctly.		KH						
PA31.2.9	By the end of this session, phase 2 MBBS student must be able to describe spread of carcinoma of breast correctly.		KH						
PA31.2.10	By the end of this session, phase 2 MBBS student must be able to enumerate prognostic factors of carcinoma of breast correctly.		KH						
PA31.3	**Describe and identify the morphologic and microscopic features of carcinoma of the breast**	**S**	**SH**	**N**	**DOAP session**	**Skill Assessment**		**General Surgery**	

PA31.3.1	By the end of this session, phase 2 MBBS student must be able to discuss anatomy of breast correctly.		K						
PA31.3.2	By the end of this session, phase 2 MBBS student must be able to describe morphology with microscopic features of carcinoma of breast accurately.		KH						
PA31.3.3	By the end of this session, phase 2 MBBS student must be able to present microscopic features of carcinoma of breast accurately.		S						
PA31.3.4	By the end of this session, phase 2 MBBS student must be able to identify morphology with microscopic features of carcinoma of breast accurately.		SH						
PA31.4	**Enumerate and describe the etiology, hormonal dependency and pathogenesis of gynecomastia**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics, General Medicine**	
PA31.4.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of male breast correctly.			K					
PA31.4.2	By the end of this session, phase 2 MBBS student must be able to define gynaecomastia accurately.			K					
PA31.4.3	By the end of this session, phase 2 MBBS student should be able to enumerate etiological factors of gynaecomastia correctly.			KH					
PA31.4.4	By the end of this session, phase 2 MBBS student should be able to describe hormonal dependency of gynaecomastia correctly.			KH					
PA31.4.5	By the end of this session, phase 2 MBBS student should be able todescribe pathogenesis of gynaecomastia accurately.			KH					
Topic: Endocrine system Number of competencies: (09) Number of procedures that require certification: (NIL)									
PA32.1	**Enumerate, classify and describe the etiology, pathogenesis, pathology and iodine dependency of thyroid swellings**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, Physiology, General Medicine, General Surgery**	
PA32.1.1	By the end of this session, phase 2 MBBS student must be able to describe anatomy of thyroid gland correctly.			K					
PA32.1.2	By the end of this session, phase 2 MBBS student must be able to describe physiology of thyroid hormone correctly.			K					
PA32.1.3	By the end of this session, phase 2 MBBS student must be able to enumerate causes of thyroid swellings accurately.			KH					
PA32.1.4	By the end of this session, phase 2 MBBS student must be able to classify thyroid swellings on functional basis accurately.			KH					

PA32.1.5	By the end of this session, phase 2 MBBS student must be able to describe etiology of thyroid swellings correctly.			KH					
PA32.1.6	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of thyroid swellings accurately.			KH					
PA32.1.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of thyroid swellings accurately.			KH					
PA32.1.8	By the end of this session, phase 2 MBBS student must be able to describe iodine dependency of thyroid swellings correctly.			KH					
PA32.2	**Describe the etiology, cause, iodine dependency, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicine**	
PA32.2.1	By the end of this session, phase 2 MBBS student must be able todefine thyrotoxicosis accurately.		K						
PA32.2.2	By the end of this session, phase 2 MBBS student must be able to describe etiology of thyrotoxicosis correctly.		KH						
PA32.2.3	By the end of this session, phase 2 MBBS student must be able to describe iodine dependency of thyrotoxicosis correctly.		KH						
PA32.2.4	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of thyrotoxicosis accurately.		KH						
PA32.2.5	By the end of this session, phase 2 MBBS student must be able to describe clinical features of thyrotoxicosis correctly.		KH						
PA32.2.6	By the end of this session, phase 2 MBBS student must be able to describe laboratory findings of thyrotoxicosis correctly.		KH						
PA32.2.7	By the end of this session, phase 2 MBBS student must be able to describe imaging/radiological findings of thyrotoxicosis correctly.		KH						
PA32.2.8	By the end of this session, phase 2 MBBS student must be able to describe clinical course of thyrotoxicosis correctly.		KH						
PA32.3	**Describe the etiology, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis/hypothyroidism**	**K**	**KH**	**Y**	**Lecture, Small group**	**Written/ Viva voce**		**Physiology, General Medicine**	
PA32.3.1	By the end of this session, phase 2 MBBS student must be able to classify various hypothyroid conditions correctly.		K						
PA32.3.2	By the end of this session, phase 2 MBBS student must be able to describeetiology of hypothyroidism correctly.		KH						
PA32.3.3	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of hypothyroidism accurately.		KH						
PA32.3.4	By the end of this session, phase 2 MBBS student must be able to describe clinical features/manifestations of hypothyroidism correctly.		KH						

PA32.3.5	By the end of this session, phase 2 MBBS student must be able to describe laboratory features/findings of hypothyroidism correctly.		KH						
PA32.3.6	By the end of this session, phase 2 MBBS student must be able to describe imaging/radiological findings of hypothyroidism correctly.		KH						
PA32.3.7	By the end of this session, phase 2 MBBS student must be able to describe clinical course of hypothyroidism correctly.		KH						
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA32.4	**Classify and describe the epidemiology, etiology, pathogenesis, pathology, clinical laboratory features, complications and progression of diabetes mellitus**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicine**	
PA32.4.1	By the end of this session, phase 2 MBBS student must be able to classify diabetes mellitus accurately.		K						
PA32.4.2	By the end of this session, phase 2 MBBS student must be able to describe anatomy of pancreas correctly.		K						
PA32.4.3	By the end of this session, phase 2 MBBS student must be able to describe physiology of insulin hormone correctly.		K						
PA32.4.4	By the end of this session, phase 2 MBBS student must be able to describe epidemiology of diabetes mellitus correctly.		KH						
PA32.4.5	By the end of this session, phase 2 MBBS student must be able to describe etiology of diabetes mellitus correctly.		KH						
PA32.4.6	By the end of this session, phase 2 MBBS student must be able to describe pathogenesis of diabetes mellitus accurately.		KH						
PA32.4.7	By the end of this session, phase 2 MBBS student must be able to describe pathology of diabetes mellitus accurately.		KH						
PA32.4.8	By the end of this session, phase 2 MBBS student must be able to describe clinical features of diabetes mellitus correctly.		KH						
PA32.4.9	By the end of this session, phase 2 MBBS student must be able to describe laboratory findings of diabetes mellitus correctly.		KH						
PA32.4.10	By the end of this session, phase 2 MBBS student must be able to describe complications of diabetes mellitus correctly.		KH						
PA32.4.11	By the end of this session, phase 2 MBBS student must be able to describe progression/clinical course of diabetes mellitus correctly.		KH						
PA32.5	**Describe the etiology, genetics, pathogenesis, manifestations, laboratory and morphologic features of hyperparathyroidism**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicine**	

PA32.5.1	By the end of this session, phase 2 MBBS student must be able todescribe anatomy of parathyroid gland correctly.		K						
PA32.5.2	By the end of this session, phase 2 MBBS student must be able todescribe physiology of parathyroid hormone correctly.		K						
PA32.5.3	By the end of this session, phase 2 MBBS student should be able to describe etiology of hyperparathyroidism correctly.		KH						
PA32.5.4	By the end of this session, phase 2 MBBS student should be able to describe genetics of hyperparathyroidism accurately.		KH						
PA32.5.5	By the end of this session, phase 2 MBBS student should be able to describe pathogenesis of hyperparathyroidism accurately.		KH						
PA32.5.6	By the end of this session, phase 2 MBBS student should be able to describe manifestations/clinical features of hyperparathyroidism correctly.		KH						
PA32.5.7	By the end of this session, phase 2 MBBS student should be able to describe laboratory findings of hyperparathyroidism correctly.		KH						
PA32.5.8	By the end of this session, phase 2 MBBS student should be able to describe morphological features of hyperparathyroidism accurately.		KH						
PA32.6	**Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreatic cancer**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Surgery**	
PA32.6.1	By the end of this session, phase 2 MBBS student must be able todescribe anatomy of pancreas correctly.		K						
PA32.6.2	By the end of this session, phase 2 MBBS student must be able to describe physiology of pancreatic hormones correctly.		K						
PA32.6.3	By the end of this session, phase 2 MBBS student should be able to describe etiology of pancreatic cancer correctly.		KH						
PA32.6.4	By the end of this session, phase 2 MBBS student should be able to describe pathogenesis of pancreatic cancer accurately.		KH						
PA32.6.5	By the end of this session, phase 2 MBBS student should be able to describe manifestations/clinical features of pancreatic cancer correctly.		KH						
PA32.6.6	By the end of this session, phase 2 MBBS student should be able to describe laboratory findings of pancreatic cancer correctly.		KH						
PA32.6.7	By the end of this session, phase 2 MBBS student should be able to describe morphological features of pancreatic cancer accurately.		KH						

PA32.6.8	By the end of this session, phase 2 MBBS student should be able to describe complications of pancreatic cancer correctly.		KH						
PA32.6.9	By the end of this session, phase 2 MBBS student should be able to describe metastasis/spread of pancreatic cancer correctly.		KH						
PA32.7	**Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of adrenal insufficiency**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicine**	
PA32.7.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of adrenal glands' hormones correctly.		K						
PA32.7.2	By the end of this session, phase 2 MBBS student should be able to describe etiology of adrenal insufficiency correctly.		KH						
PA32.7.3	By the end of this session, phase 2 MBBS student should be able todescribe pathogenesis of adrenal insufficiency accurately.		KH						
PA32.7.4	By the end of this session, phase 2 MBBS student should be able todescribe clinical features/manifestations of adrenal insufficiency correctly.		KH						
PA32.7.5	By the end of this session, phase 2 MBBS student should be able todescribe laboratory findings of adrenal insufficiency correctly.		KH						
PA32.7.6	By the end of this session, phase 2 MBBS student should be able todescribe morphological features of adrenal insufficiency accurately.		KH						
PA32.7.7	By the end of this session, phase 2 MBBS student should be able todescribe complications of adrenal insufficiency correctly.		KH						
PA32.8	**Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of Cushing's syndrome**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Physiology, General Medicine**	
PA32.8.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of adrenal glands' hormones correctly.		K						
	By the end of this session, phase 2 MBBS student should be able to describe etiology of cushing's syndrome correctly.		KH						
	By the end of this session, phase 2 MBBS student should be able to describepathogenesis of cushing's syndrome accurately.		KH						
	By the end of this session, phase 2 MBBS student should be able to describemanifestations of cushing's syndrome correctly.		KH						

	By the end of this session, phase 2 MBBS student should be able to describelaboratory findings of cushing's syndrome correctly.		KH						
	By the end of this session, phase 2 MBBS student should be able to describemorphological features of cushing's syndrome accurately.		KH						
	By the end of this session, phase 2 MBBS student should be able to describecomplications of cushing's syndrome correctly.		KH						
PA32.9	**Describe the etiology, pathogenesis, manifestations, laboratory and morphologic features of adrenal neoplasms**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, Physiology, General Medicine, General Surgery**	
PA32.9.1	By the end of this session, phase 2 MBBS student must be able to describe physiology of adrenal glands' hormones correctly.		K						
PA32.9.2	By the end of this session, phase 2 MBBS student must be able to classify adrenal neoplasms accurately.		K						
PA32.9.3	By the end of this session, phase 2 MBBS student should be able to describe etiology of adrenal neoplasms correctly.		KH						
PA32.9.4	By the end of this session, phase 2 MBBS student should be able to describe pathogenesis of adrenal neoplasms accurately.		KH						
PA32.9.5	By the end of this session, phase 2 MBBS student should be able to describe manifestations of adrenal neoplasms correctly.		KH						
PA32.9.6	By the end of this session, phase 2 MBBS student should be able to describe laboratory findings of adrenal neoplasms correctly.		KH						
PA32.9.7	By the end of this session, phase 2 MBBS student should be able to describe morphological features of adrenal neoplasms accurately.		KH						
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
Topic: Bone and soft tissue		Number of competencies: (05)			Number of procedures that require certification: (NIL)				
PA33.1	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of osteomyelitis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Human Anatomy, Orthopaedics**	**Microbiology**

PA33.1.1	At the end of the session the phase II student must be able to define osteomyelitis accurately.								
PA33.1.2	At the end of the session the phase II student must be able to classify osteomyelitis correctly.								
PA33.1.3	At the end of the session the phase II student must be able to enumerate most common etiology of osteomyelitis correctly.								
PA33.1.4	At the end of the session the phase II student must be able to discuss the pathogenesis of osteomyelitis correctly.								
PA33.1.5	At the end of the session the phase II student must be able to elicit clinical manifestations of osteomyelitis correctly.								
PA33.1.6	At the end of the session the phase II student must be able to enumerate the radiological features of osteomyelitis correctly.								
PA33.1.7	At the end of the session the phase II student must be able to describe morphologic features of osteomyelitis accurately.								
PA33.1.8	.At the end of the session the phase II student must be able to enumerate complications of osteomyelitis precisely								
PA33.2	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Orthopaedics	
PA33.2.1	At the end of the session the phase II student must be able to classify bone tumors correctly.								
PA33.2.2	At the end of the session the phase II student must be able to enumerate etiology of bone tumors accurately.								
PA33.2.3	At the end of the session the phase II student must be able to discuss pathogenesis of bone tumors accurately.								
PA33.2.4	At the end of the session the phase II student must be able to enlist clinical features of bone tumors correctly.								
PA33.2.5	At the end of the session the phase II student must be able to enumerate radiological features of bone tumors precisely.								
PA33.2.6	At the end of the session the phase II student must be able to discuss morphologic features of bone tumors correctly.								
PA33.2.7	At the end of the session the phase II student must be able to enumerate complications of bone tumors accurately.								
PA33.2.8	At the end of the session the phase II student must be able to discuss metastasis of bone tumors correctly.								
PA33.3	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Orthopaedics**	
PA33.3.1	At the end of the session the phase II student must be able to classify soft tissue tumors correctly.								
PA33.3.2	At the end of the session the phase II student must be able to enumerate most common etiologies of soft tissue tumors precisely.								

PA33.3.3	At the end of the session the phase II student must be able to discuss pathogenesis of soft tissue tumors correctly.								
PA33.3.4	At the end of the session the phase II student must be able to enlist clinical features of soft tissue tumors correctly.								
PA33.3.5	At the end of the session the phase II student must be able to enumerate radiological features of soft tissue tumors precisely.								
PA33.3.6	At the end of the session the phase II student must be able to discuss morphologic features of soft tissue tumors accurately.								
PA33.3.7	At the end of the session the phase II student must be able to enlist complications of soft tissue tumors accurately.								
PA33.3.8	At the end of the session the phase II student must be able to discuss metastasis of soft tissue tumors correctly.								
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA33.4	**Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of Paget's disease of the bone**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Orthopaedics**	
PA33.4.1	At the end of the session the phase II student must be able to classify Paget's disease of the bone correctly.								
PA33.4.2	At the end of the session the phase II student must be able to enumerate etiology of Paget's disease of the bone precisely.								
PA33.4.3	At the end of the session the phase II student must be able to discuss pathogenesis of Paget's disease of the bone precisely.								
PA33.4.4	At the end of the session the phase II student must be able to enlist clinical features of Paget's disease of the bone correctly.								
PA33.4.5	At the end of the session the phase II student must be able to enumerate radiological features of Paget's disease of the bone precisely.								
PA33.4.6	At the end of the session the phase II student must be able to discuss morphologic features of Paget's disease of the bone correctly.								
PA33.4.7	At the end of the session the phase II student must be able to enumerate complications of Paget's disease of the bone accurately.								
PA33.4.8	At the end of the session the phase II student must be able to discuss metastasis of Paget's disease of the bone correctly.								

PA33.5	**Classify and describe the etiology, immunology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of rheumatoid arthritis**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**General Medicine**	
PA33.5.1	At the end of the session the phase II student must be able to define Rheumatoid arthritis correctly.								
PA33.5.2	At the end of the session the phase II student must be able to classify Rheumatoid arthritis accurately.								
PA33.5.3	At the end of the session the phase II student must be able to enumerate etiologies of Rheumatoid arthritis correctly.								
PA33.5.4	At the end of the session the phase II student must be able to discuss role of immunology in Rheumatoid arthritis precisely.								
PA33.5.5	At the end of the session the phase II student must be able to describe pathogenesis of Rheumatoid arthritis precisely.								
PA33.5.6	At the end of the session the phase II student must be able to enumerate clinical features of Rheumatoid arthritis correctly.								
PA33.5.7	At the end of the session the phase II student must be able to enlist radiological features of Rheumatoid arthritis accurately.								
PA33.5.8	At the end of the session the phase II student must be able to discuss laboratory features of Rheumatoid arthritis correctly.								
PA33.5.9	At the end of the session the phase II student must be able to enlist diagnostic criteria of Rheumatoid arthritis accurately.								
PA33.5.10	At the end of the session the phase II student must be able to discuss complications of Rheumatoid arthritis precisely.								
Topic: Skin	**Number of competencies: (04)**				**Number of procedures that require certification:(NIL)**				
PA34.1	**Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Dermatology, Vener eology & Leprosy**	
PA34.1.1	At the end of the session the phase II student must be able to describe squamous cell carcinoma of skin precisely.								
PA34.1.2	At the end of the session the phase II student must be able to enumerate risk factors of squamous cell carcinoma of skin correctly.								
PA34.1.3	At the end of the session the phase II student must be able to discuss pathogenesis of squamous cell carcinoma of skin accurately.								
PA34.1.4	At the end of the session the phase II student must be able to enumerate gross features of squamous cell carcinoma of skin correctly.								

PA34.1.5	At the end of the session the phase II student must be able to enumerate microscopic features of squamous cell carcinoma of skin accurately.								
PA34.1.6	At the end of the session the phase II student must be able to discuss natural history of squamous cell carcinoma of skin accurately.								
PA34.2	**Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Dermatology, Venere ology & Leprosy**	
PA34.2.1	At the end of the session the phase II student must be able to describe basal cell carcinoma of skin precisely.								
PA34.2.2	At the end of the session the phase II student must be able to enumerate risk factors of basal cell carcinoma of skin correctly.								
PA34.2.3	At the end of the session the phase II student must be able to discuss pathogenesis of basal cell carcinoma of skin accurately.								
PA34.2.4	At the end of the session the phase II student must be able to enumerate gross features of basal cell carcinoma of skin correctly.								
PA34.2.5	At the end of the session the phase II student must be able to enumerate microscopic features of basal cell carcinoma of skin correctly.								
PA34.2.6	At the end of the session the phase II student must be able to discuss natural history of basal cell carcinoma of skin accurately.								
PA34.3	**Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors morphology clinical features and metastases of melanoma**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Dermatology, Venereology & Leprosy**	
PA34.3.1	At the end of the session the phase II student must be able to enlist distinguishing features between a nevus and melanoma.								
PA34.3.2	At the end of the session the phase II student must be able to enumerate risk factors of melanoma correctly.								
PA34.3.3	At the end of the session the phase II student must be able to discuss pathogenesis of melanoma accurately.								
PA34.3.4	At the end of the session the phase II student must be able to enumerate gross features of melanoma correctly.								
PA34.3.5	At the end of the session the phase II student must be able to enumerate microscopic features of melanoma correctly.								
PA34.3.6	At the end of the session the phase II student must be able to discuss natural history of melanoma accurately.								
PA34.3.7	At the end of the session the phase II student must be able to discuss metastasis of melanoma correctly.								

PA34.4	**Identify, distinguish and describe common tumors of the skin**	**S**	**SH**	**N**	**DOAP session**	**Skill Assessment**		**Dermatology, Venereology & Leprosy**	
PA34.4.1	At the end of the session the phase II student must be able to enumerate common tumors of skin accurately.								
PA34.4.2	At the end of the session the phase II student must be able to describe gross features of common tumors of skin correctly.								
PA34.4.3	At the end of the session the phase II student must be able to discuss microscopic features of common tumors of skin precisely.								
Topic: Central Nervous System		**Number of competencies:(03)**					**Number of procedures that require certification: (01)**		
PA35.1	**Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis**	**K**	**KH**	**Y**	**Lecture, Small group discussion**		**Written/ Viva voce**		**General Medicine**
PA35.1.1	At the end of the session the phase II student must be able to define meningitis accurately.								
PA35.1.2	At the end of the session the phase II student must be able to enumerate etiology of meningitis correctly.								
PA35.1.3	At the end of the session the phase II student must be able to describe pathogenesis of meningitis correctly.								
PA35.1.4	At the end of the session the phase II student must be able to discuss different types of meningitis accurately.								
PA35.1.5	At the end of the session the phase II student must be able to enumerate differentiating factors in meningitis accurately.								
PA35.1.6	At the end of the session the phase II student must be able to discuss CSF findings in meningitis precisely.								
PA35.2	**Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors**	**K**	**KH**	**Y**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Pediatrics**	
PA35.2.1	At the end of the session the phase II student must be able to classify CNS tumors according to WHO accurately.								
PA35.2.2	At the end of the session the phase II student must be able to enumerate etiology of CNS tumors precisely.								
PA35.2.3	At the end of the session the phase II student must be able to discuss genetic changes in tumors precisely.								
PA35.2.4	At the end of the session the phase II student must be able to discuss pathogenesis of CNS tumors correctly.								
PA35.2.5	At the end of the session the phase II student must be able to discuss clinical features of CNS tumors accurately.								
PA35.2.6	At the end of the session the phase II student must be able to enlist gross features of CNS tumors correctly.								
PA35.2.7	At the end of the session the phase II student must be able to describe microscopic features of CNS tumors accurately.								

PA35.2.8	At the end of the session the phase II student must be able to discuss sequelae of CNS tumors correctly.								
PA35.2.9	At the end of the session the phase II student must be able to enumerate complications of CNS tumors precisely.								
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
PA35.3	**Identify the etiology of meningitis based on given CSF parameters**	**S**	**P**	**Y**	**DOAP session**	**Skill Assessment**	**1**	**General Medicine**	**Microbiology**
PA35.3.1	At the end of the session the phase II student must be able to enumerate most common causes of meningitis accurately.								
PA35.3.2	At the end of the session the phase II student must be able to enlist components of CSF analysis correctly.								
PA35.3.3	At the end of the session the phase II student must be able to describe CSF features for a given etiology of meningitis correctly.								
PA35.3.4	At the end of the session the phase II student must be able to identify the etiology of meningitis correctly from given set of CSF parameters.								
Topic: Eye		**Number of competencies: (01)**					**Number of procedures that require certification:(NIL)**		
PA36.1	**Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma**	**K**	**KH**	**N**	**Lecture, Small group discussion**	**Written/ Viva voce**		**Ophthalmology**	
PA36.1.1	At the end of the session the phase II student must be able to enumerate etiology of retinoblastoma accurately.								
PA36.1.2	At the end of the session the phase II student must be able to discuss genetic changes in retinoblastoma precisely.								
PA36.1.3	At the end of the session the phase II student must be able to discuss pathogenesis in retinoblastoma precisely.								
PA36.1.4	At the end of the session the phase II student must be able to enlist clinical features in retinoblastoma.								
PA36.1.5	At the end of the session the phase II student must be able to enlist gross features of changes in retinoblastoma accurately.								
PA36.1.6	At the end of the session the phase II retinoblastoma student must be able to enumerate microscopic features of retinoblastoma correctly.								
PA36.1.7	At the end of the session the phase II student must be able to discuss squealae of retinoblastoma precisely.								
PA36.1.8	At the end of the session the phase II student must be able to enlist complications of retinoblastoma accurately.								