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
PATHOLOGY									
Topic: Introduction to Pathology	**Number of competencies: (03)**						**Number of procedures that require certificatio**		
PA1.1	Describe the role of a pathologist in diagnosis and management of disease	K	K	Y	Departmental Orientation	Written/ Viva voce			
1.1.1	At the end of session, phase II M.B.B.S student must be able to discuss briefly role of a pathologist in								
1.1.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly the role of a pathologist in management of disease.								
PA 1.2	Enumerate common definitions and terms used in Pathology	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			
1.2.1	At the end of session, phase II M.B.B.S student must be able to Define Correctly common terms like etiology, pathogenesis, complications, prognosis.								
PA1.3	Describe the history and evolution of Pathology	K	K	N	Lecture, Small group discussion	Written/ Viva voce			
1.3.1	At the end of session, phase II M.B.B.S student should be able to describe briefly history and evolution of								
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			
2.1.1	At the end of session, phase II M.B.B.S student must be able to Correctly enumerate various causes of cell injury.								
2.1.2	At the end of session, phase II M.B.B.S student must be able to briefly discuss various causes of cell injury.								
2.1.3	At the end of session, phase II M.B.B.S student must be able to discuss accurately effects of various								
2.1.4	At the end of session, phase II M.B.B.S student must be able to discuss In detail mechanism of injury of cell								
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			
2.2.1	At the end of session, phase II M.B.B.S student must be able to describe mechanism of reversible cell injury correctly.								

2.2.2	At the end of session, phase II M.B.B.S student must be able to discuss Correctly events leading to irreversible cell injury.								
2.2.3	At the end of session, phase II M.B.B.S student must be able to accurately differentiate between mechanism of reversible and irreversible cell injury								
2.2.4	At the end of session, phase II M.B.B.S student must be able to enumerate correctly biochemical changes								
PA2.3	Intracellular accumulation of fats, proteins, carbohydrates, pigments	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
2.3.1	At the end of session, phase II M.B.B.S student must be able to enumerate correctly causes of intracellular accumulation of fat.								
2.3.2	At the end of session, phase II M.B.B.S student must be able to enumerate correctly causes of intracellular accumulation of protein.								
2.3.3	At the end of session, phase II M.B.B.S student must be able to enumerate correctly causes of intracellular accumulation of carbohydrates.								
2.3.4	At the end of session, phase II M.B.B.S student must be able to enumerate accurately causes of intracellular accumulation of pigments.								
2.3.5	At the end of session, phase II M.B.B.S student must be able to discuss briefly various types of pigment accumulation in health and disease.								
2.3.6	At the end of session, phase II M.B.B.S student must be able to describe accurately etiopathogenesis and morphology of fatty liver.								
2.3.7	At the end of session, phase II M.B.B.S student must be able to briefly discuss causes of intracellular and extracellular hyaline deposits.								
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			
2.4.1	At the end of session, phase II M.B.B.S student must be able to enumerate and discuss correctly types of cell death.								
2.4.2	At the end of session, phase II M.B.B.S student must be able to define Necrosis correctly								
2.4.3	At the end of session, phase II M.B.B.S student must be able enlist different types of necrosis correctly.								
2.4.4	At the end of session, phase II M.B.B.S student must be able to discuss briefly the pathogenesis of necrosis.								
2.4.5	At the end of session, phase II M.B.B.S student must be able to describe in detail morphology of different types of necrosis.								

2.4.6	At the end of session, phase II M.B.B.S student must be able to discuss in detail pathogenesis and morphology of apoptosis.								
2.4.7	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between apoptosis and necrosis.								
2.4.8	At the end of session, phase II M.B.B.S student must be able to define autolysis precisely.								
2.4.9	At the end of session, phase II M.B.B.S student must be able to explain mechanism of autolysis with examples.								
PA2.5	Describe and discuss pathologic calcifications, gangrene	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
2.5.1	At the end of session, phase II M.B.B.S student must be able to define calcification acuurately.								
2.5.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly different types of calcification.								
2.5.3	At the end of session, phase II M.B.B.S student must be able to correctly describe pathogenesis and morphology of different types of calcification.								
2.5.4	At the end of session, phase II M.B.B.S student must be able to define gangrene correctly.								
2.5.5	At the end of session, phase II M.B.B.S student must be able discuss briefly types of gangrene.								
2.5.6	At the end of session, phase II M.B.B.S student must be able to describe correctly pathogenesis of different types of gangrene with examples.								
2.5.7	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between dry and wet gangrene.								
PA2.6	Describe and discuss cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
2.6.1	At the end of session, phase II M.B.B.S student must be able to define cellular adaptation correctly.								
2.6.2	At the end of session, phase II M.B.B.S student must be able to enumerate and define various cellular adaptations with examples								
2.6.3	At the end of session, phase II M.B.B.S student must be able to discuss briefly causes and pathogenesis of various cellular adaptations.								
2.6.4	At the end of session, phase II M.B.B.S student must be able to discuss briefly clinical significance of different types of cellular adaptations.								

2.6.5	At the end of session, phase II M.B.B.S student must be able to differentiate between different types of cellular adaptations with appropriate examples.								
PA2.7	Describe and discuss the mechanisms of cellular aging and apoptosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
2.7.1	At the end of session, phase II M.B.B.S student must be able to discuss briefly mechanism of cell aging.								
2.7.2	At the end of session, phase II M.B.B.S student must be able to discuss precisely cell cycle and role of telomeres in cellular ageing.								
PA2.8	Identify and describe various forms of cell injuries, their manifestations and consequences in gross and microscopic specimens	S	SH	N	DOAP session	Skill assessment			
2.8.1	At the end of session, phase II M.B.B.S student should be able to identify and describe correctly morphology (gross and microscopic) of coagulative necrosis.								
2.8.2	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe morphology (gross and microscopic) of liquefactive necrosis.								
2.8.3	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe morphology (gross and microscopic) of caseous necrosis.								
2.8.4	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe morphology (gross and microscopic) of fat necrosis.								
2.8.5	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe morphology (gross and microscopic) of fibrinoid necrosis.								
2.8.6	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe morphology of apoptosis.								
2.8.7	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe morphology of specimen of gangrene.								
2.8.8	At the end of session, phase II M.B.B.S student should be able to correctly identify and describe morphology of specimens of hypertrophy, atrophy, hyperplasia.								
2.8.9	At the end of session, phase II M.B.B.S student should be able to describe briefly morphology (gross and microscopic) of calcification with relevant stains.								

2.8.10	At the end of session, phase II M.B.B.S student should be able to briefly describe morphology (gross and microscopic) of intracellular accumulation of fat with relevant stains.								
2.8.11	At the end of session, phase II M.B.B.S student should be able to briefly describe morphology (gross and microscopic) of intracellular accumulation of hyaline								
2.8.12	At the end of session, phase II M.B.B.S student should be able to briefly describe morphology (gross and microscopic) of intracellular accumulation of protein								
Topic: Inflammation		**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 voice			
3.1.1	At the end of session, phase II M.B.B.S student must be able to define and classify Amyloidosis precisely.								
3.1.2	At the end of session, phase II M.B.B.S student must be able to describe correctly the physical & chemical characteristics of amyloid.								
3.1.3	At the end of session, phase II M.B.B.S student must be able to describe briefly the etiopathogenesis of different types of amyloid.								
3.1.4	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between primary and secondary amyloid.								
PA3.2	Identify and describe amyloidosis in a pathology specimens	S	SH	N	DOAP session	Skill assesment			
3.2.1	At the end of session, phase II M.B.B.S student should be able to discuss correctly staining characteristics of amyloid.								
3.2.2	At the end of session, phase II M.B.B.S student should be able to correctly Identify and describe the gross & microscopic finding of amyloidosis of Kidney.								
3.2.3	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross & microscopic findings of amyloidosis of Spleen correctly.								
3.2.4	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross & microscopic finding of amyloidosis of Heart correctly.								
3.2.5	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross & microscopic findings of amyloidosis of Lung correctly.								
3.2.6	At the end of session, phase II M.B.B.S student should be able to accurately discuss the diagnosis of amyloidosis.								
Topic: Inflammation		**Number of competencies: (04)**				**Number of procedures that requires certification: (NI**			

PA4.1	Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
4.1.1	At the end of session, phase II M.B.B.S student must								
4.1.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate types of inflammation								
4.1.3	At the end of session, phase II M.B.B.S student must be able to enumerate correctly cardinal signs of Acute Inflammation								
4.1.4	At the end of session, phase II M.B.B.S student must be able to discuss pathogenesis of acute inflammation in detail.								
4.1.5	At the end of session, phase II M.B.B.S student must be able to discuss briefly causes of Acute Inflammation.								
4.1.6	At the end of session, phase II M.B.B.S student must be able to appropriately describe microscopic changes characteristic of acute inflammation								
4.1.7	At the end of session, phase II M.B.B.S student must be able to discuss in detail vascular events in acute inflammation								
4.1.8	At the end of session, phase II M.B.B.S student must be able to discuss In detail cellular events in acute inflammation.								
4.1.9	At the end of session, phase II M.B.B.S student must be able to define chemotaxis, phagocytosis, opsonisation precisely.								
PA4.2	Enumerate and describe the mediators of acute inflammation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
4.2.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate chemical Mediators of inflammation.								
4.2.2	At the end of session, phase II M.B.B.S student must be able to describe appropriately role of important chemical mediators of inflammation								
4.2.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate sequelae and outcome of acute inflammation								
PA4.3	Define and describe chronic inflammation including causes, types, non-specific, granulomatous, enumerate examples of each	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
4.3.1	At the end of session, phase II M.B.B.S student must be able to define chronic inflammation precisely								
4.3.2	At the end of session, phase II M.B.B.S student must be able to discuss in brief the types of chronic inflammation								

4.3.3	At the end of session, phase II M.B.B.S student must be able to describe in detail pathogenesis of chronic inflammation.								
4.3.4	At the end of session, phase II M.B.B.S student must be able to discuss appropriately characteristics of chronic inflammation.								
4.3.5	At the end of session, phase II M.B.B.S student must be able to briefly describe microscopic features of non-specific chronic Inflammation								
4.3.6	At the end of session, phase II M.B.B.S student must be able to define granuloma precisely.								
4.3.7	At the end of session, phase II M.B.B.S student must be able to discuss granulomatous Inflammation with appropriately relevant examples								
4.3.8	At the end of session, phase II M.B.B.S student must be able to discuss accurately gross and microscopic features of granulomatous inflammation.								
PA4.4	Identify and describe acute and chronic inflammation in gross and microscopic specimens Lower level	S	SH	Y	DOAP session	Skill ass.ment			
4.4.1	At the end of session, phase II M.B.B.S student must be able to identify and describe the gross and microscopic features of acute inflammation in a								
4.4.2	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross and microscopic features of chronic inflammation in a specimen and slide of chronic cholecystitis								
4.4.3	At the end of session, phase II M.B.B.S student should be able to identify and gross and microscopic features of granulomatous inflammation in a specimen and hitopathology slide of Tuberculosis of lymph node.								
4.4.4	At the end of session, phase II M.B.B.S student should be able to discuss gross and microscopic features of granulomatous inflammation in a specimen and slide of Tuberculosis of lung.								
Topic: Healing and repair		**Number of competencies: (01)**						**Number of procedure that require certification:**	
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		General Surgery	
5.1.1	At the end of session, phase II M.B.B.S student must be able to define precisely regeneration and repair.								
5.1.2	At the end of session, phase II M.B.B.S student must be able to classify tissues on basis of proliferative capacity correctly.								
5.1.3	At the end of session, phase II M.B.B.S student must be able to discuss accurately steps of wound healing.								

5.1.4	At the end of session, phase II M.B.B.S student must be able to discuss accurately steps of fracture healing.								
5.1.5	At the end of session, phase II M.B.B.S student must be able to discuss briefly types of wound healing.								
5.1.6	At the end of session, phase II M.B.B.S student must be able to discuss correctly factors affecting wound and fracture healing .								
5.1.7	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between healing by primary and secondary intention.								
5.1.8	At the end of session, phase II M.B.B.S student must be able to enumerate correctly the complications and outcome of repair .								
Topic: Hemodynamic disorders		**Number of competencies: (07)**					**Number of procedures that requires certification**		
PA6.1	Define and describe edema, its types, pathogenesis and clinical correlations	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gen Medicin e	
6.1.1	At the end of session, phase II M.B.B.S student must be able to discuss physiology of hemodynamics								
6.1.2	At the end of session, phase II M.B.B.S student must be able to define Oedema precisely.								
6.1.3	At the end of session, phase II M.B.B.S student must be able to describe accurately pathogenesis of oedema.								
6.1.4	At the end of session, phase II M.B.B.S student must be able to correctly describe different types of oedema.								
6.1.5	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between transudate and exudate.								
PA6.2	Define and describe hyperemia, congestion, hemorrhage	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
6.2.1	At the end of session, phase II M.B.B.S student must be able to define hyperemia and congestion precisely.								
6.2.2	At the end of session, phase II M.B.B.S student must be able to briefly describe hyperemia with examples.								
6.2.3	At the end of session, phase II M.B.B.S student must be able to discuss appropriately The pathophysiology of congestion.								
6.2.4	At the end of session, phase II M.B.B.S student must be able to briefly describe gross and microscopic findings of congestion in various organs.								
6.2.5	At the end of session, phase II M.B.B.S student must be able to define hemorrhage accurately								

6.2.6	At the end of session, phase II M.B.B.S student must be able to briefly discuss the causes of hemorrhage.								
PA6.3	Define and describe shock, its pathogenesis and its stages	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		General Surgery	
6.3.1	At the end of session, phase II M.B.B.S student must be able to define and classify shock on basis of etiology correctly.								
6.3.2	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis of different types of shock in detail.								
6.3.3	At the end of session, phase II M.B.B.S student must be able to describe correctly the effects and pathogenesis of different stages of shock.								
6.3.4	At the end of session, phase II M.B.B.S student must be able to correctly describe morphological changes of shock in various organs.								
PA6.4	Define and describe normal haemostasis and the etiopathogenesis and consequences of thrombosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
6.4.1	At the end of session, phase II M.B.B.S student must be able to describe normal haemostasis (Lower level of learning for this								
6.4.2	At the end of session, phase II M.B.B.S student must be able to define thrombus correctly.								
6.4.3	At the end of session, phase II M.B.B.S student must be able to discuss the pathophysiology of thrombus formation accurately.								
6.4.4	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between arterial and venous thrombus.								
6.4.5	At the end of session, phase II M.B.B.S student must be able to discuss fate of thrombus correctly.								
6.4.6	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between antemortem and postmortem clot.								
PA6.5	Define and describe embolism and its causes and common types	**K**	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
6.5.1	At the end of session, phase II M.B.B.S student must be able to define embolism precisely.								
6.5.2	At the end of session, phase II M.B.B.S student must be able to enumerate correctly different types of emboli.								
6.5.3	At the end of session, phase II M.B.B.S student must be able to define Thromboembolism precisely								

6.5.4	At the end of session, phase II M.B.B.S student must be able to enumerate examples of of arterial, venous thromboemboli correctly.								
6.5.5	At the end of session, phase II M.B.B.S student must be able to define pulmonary thromboembolism precisely.								
6.5.6	At the end of session, phase II M.B.B.S student must be able to discuss briefly the etiopathogenesis of pulmonary thromboembolism.								
6.5.7	At the end of session, phase II M.B.B.S student must be able to discuss the consequences of pulmonary thromboembolism accurately.								
6.5.8	At the end of session, phase II M.B.B.S student must be able to briefly discuss- fat embolism.								
6.5.9	At the end of session, phase II M.B.B.S student must be able to briefly discuss amniotic fluid embolism.								
6.5.10	At the end of session, phase II M.B.B.S student must be able to discuss decompression sickness briefly.								
PA6.6	Define and describe Ischaemia/Infarction its types, etiology, morphologic changes and clinical effects	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
6.6.1	At the end of session, phase II M.B.B.S student must be able to define Ischaemia and infarction precisely.								
6.6.2	At the end of session, phase II M.B.B.S student must be able to enumerate causes of Ischaemia and infarction with examples correctly.								
6.6.3	At the end of session, phase II M.B.B.S student must be able to discuss accurately factors attributing to severity of ischaemic injury.								
6.6.4	At the end of session, phase II M.B.B.S student must be able to briefly describe changes in different organs.								
PA6.7	Identify and describe the gross and microscopic features of infarction in a pathologic specimen	S	SH	Y	DOAP session	Skill Assessment			
6.7.1	At the end of session, phase II M.B.B.S student should be able to identify and describe gross and microscopic changes in infarction of the heart accurately.								
6.7.2	At the end of session, phase II M.B.B.S student should be able to identify and describe gross and microscopic changes in lung infarction accurately.								
6.7.3	At the end of session, phase II M.B.B.S student should be able to identify and describe gross and microscopic changes in kidney infarction accurately.								

6.7.4	At the end of session, phase II M.B.B.S student should be able to identify and describe gross and microscopic changes in brain infarction accurately.								
Topic: Neoplastic disorders		**Number of competencies: (05)**				**Number of procedures that require certificatio**			
PA7.1	Define and classify neoplasia. Describe the characteristics of neoplasia including gross, microscopy, biologic, behavior and spread. Differentiate between benign from malignant neoplasm	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
7.1.1	At the end of session, phase II M.B.B.S student must be able to Define neoplasia precisely.								
7.1.2	At the end of session, phase II M.B.B.S student must be able to classify neoplasia correctly.								
7.1.3	At the end of session, phase II M.B.B.S student must be able to discuss briefly gross and microscopic features of various tumors								
7.1.4	At the end of session, phase II M.B.B.S student must be able to briefly Describe behavior and characteristics of various tumors.								
7.1.5	At the end of session, phase II M.B.B.S student must be able to briefly describe spread of various tumors								
7.1.6	At the end of session, phase II M.B.B.S student must be able to accurately differentiate between benign and malignant neoplasms.								
PA7.2	Describe the molecular basis of cancer	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
7.2.1	At the end of session, phase II M.B.B.S student must be able to discuss the theory of carcinogenesis in detail.								
7.2.2	At the end of session, phase II M.B.B.S student must be able to discuss the basic concept of molecular carcinogenesis in detail.								
7.2.3	At the end of session, phase II M.B.B.S student must be able to define and describe molecular hallmarks of cancer correctly.								
7.2.4	At the end of session, phase II M.B.B.S student must be able to enumerate various growth promoting oncogenes accurately								
7.2.5	At the end of session, phase II M.B.B.S student must be able to describe the mechanism of action of various growth promoting oncogenes with appropriate examples of associated human tumors.								
7.2.6	At the end of session, phase II M.B.B.S student must be able to enumerate and describe tumor suppressor genes correctly.								

7.2.7	At the end of session, phase II M.B.B.S student must be able to describe the mechanism of action of various tumor suppressor genes with appropriate examples of associated human tumors								
PA7.3	Enumerate carcinogens and describe the process of carcinogenesis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
7.3.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate various carcinogens.								
7.3.2	At the end of session, phase II M.B.B.S student must be able to enumerate and discuss in detail the stages in carcinogenesis.								
7.3.3	At the end of session, phase II M.B.B.S student must be able to describe process of carcinogenesis in detail.								
PA7.4	Describe the effects of tumor on the host including paraneoplastic syndrome	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
7.4.1	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical, local and systemic effects of tumor on host.								
7.4.2	At the end of session, phase II M.B.B.S student must be able to define precisely paraneoplastic syndromes.								
7.4.3	At the end of session, phase II M.B.B.S student must be able to enumerate various paraneoplastic syndromes correctly.								
7.4.4	At the end of session, phase II M.B.B.S student must be able to briefly discuss the mechanism of various paraneoplastic syndromes.								
7.4.5	At the end of session, phase II M.B.B.S student must be able to briefly discuss various clinical syndromes with associated underlying cancer.								
PA7.5	Describe immunology and the immune response to cancer	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Microbiology
7.5.1	At the end of session, phase II M.B.B.S student must be able to discuss briefly cell survival of tumor cells.								
7.5.2	At the end of session, phase II M.B.B.S student must be able to accurately describe immune evading mechanisms of tumor cells.								
Topic : Basic diagnostic cytology		**Number of competencies: (03)**					**Number of procedures that requires certificatio**		
PA8.1	Describe the diagnostic role of cytology and its application in clinical care	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gen Surg	

8.1.1	At the end of session, phase II M.B.B.S student must be able to correctly describe the procedure of FNAC.								
8.1.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the advantages of FNAC.								
8.1.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the limitations of FNAC.								
PA8.2	Describe the basis of exfoliative cytology including the techniques & stains used	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gen Surg	
8.2.1	At the end of session, phase II M.B.B.S student must be able to discuss briefly the role of cytology in diagnosis of disease.								
8.2.2	At the end of session, phase II M.B.B.S student must be able to discuss the various techniques of exfoliative cytology briefly.								
8.2.3	At the end of session, phase II M.B.B.S student must be able to enumerate correctly the different stains used in cytology.								
8.2.4	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the steps of PAP staining.								
PA8.3	Observe a diagnostic cytology and its staining and interpret the specimen	S	KH	Y	DOAP Session	Skill Assment			
8.3.1	At the end of session, phase II M.B.B.S student must be able to observe and interpret the cytology reports correctly.								
Topic: Immunopathology and AIDS	**Number of competencies: (07)**					**Number of procedures that requires certification:(**			
PA9.1	Describe the principles and mechanisms involved in immunity	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	Microbiology
9.1.1	At the end of session, phase II M.B.B.S student must be able to define immunity and enumerate its types correctly.								
9.1.2	At the end of session, phase II M.B.B.S student must be able to discuss the types of immunity correctly.								
9.1.3	At the end of session, phase II M.B.B.S student must be able to discuss briefly various cells of immune system.								
PA9.2	Describe the mechanism of hypersensitivity reactions	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Microbiology
9.2.1	At the end of session, phase II M.B.B.S student must be able to define precisely hypersensitivity reactions.								

9.2.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate and define various types of hypersensitivity reactions with examples.								
9.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe the mechanism of various types of hypersensitivity reactions.								
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
9.3.1	At the end of session, phase II M.B.B.S student must be able to briefly describe the HLA system.								
9.3.2	At the end of session, phase II M.B.B.S student must be able to appropriately discuss the immune principles involved in transplant.								
9.3.3	At the end of session, phase II M.B.B.S student must be able to discuss the mechanism of transplant rejection in detail.								
9.3.4	At the end of session, phase II M.B.B.S student must be able to briefly describe graft versus host disease.								
PA9.4	Define autoimmunity. Enumerate autoimmune disorders	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gene Med	
9.4.1	At the end of session, phase II M.B.B.S student must be able to define autoimmunity precisely.								
9.4.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the various autoimmune disorders.								
PA9.5	Define and describe the pathogenesis of systemic Lupus Erythematosus	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gene Med	
9.5.1	At the end of session, phase II M.B.B.S student must be able to define systemic Lupus Erythematosus precisely.								
9.5.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the autoantibodies in Systemic Lupus Erythematosus.								
9.5.3	At the end of session, phase II M.B.B.S student must be able to discuss accurately the pathogenesis of Systemic Lupus Erythematosus								
9.5.4	At the end of session, phase II M.B.B.S student must be able to briefly describe the morphologic changes in various organs in Systemic Lupus Erythematosus.								
9.5.5	At the end of session, phase II M.B.B.S student must be able to discuss briefly the various stages of severity of Lupus nephritis.								

PA9.6	Define and describe the pathogenesis and pathology of HIV and AIDS	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gene Medi	Microbiology
9.6.1	At the end of session, phase II M.B.B.S student must be able to define AIDS correctly and describe its epidemiology.								
9.6.2	At the end of session, phase II M.B.B.S student must be able to accurately describe the etiology of AIDS.								
9.6.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate various routes of transmission of AIDS.								
9.6.4	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis of AIDS in detail.								
9.6.5	At the end of session, phase II M.B.B.S student must be able to discuss briefly the clinical manifestations of AIDS.								
9.6.6	At the end of session, phase II M.B.B.S student must be able to discuss briefly the lab diagnosis of AIDS.								
9.6.7	At the end of session, phase II M.B.B.S student must be able to discuss accurately the opportunistic infections found in HIV infection								
9.6.8	At the end of session, phase II M.B.B.S student must be able to discuss the neoplasms found in HIV infection correctly.								
PA9.7	Define and describe the pathogenesis of other common autoimmune diseases	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Gene Medi	
9.7.1	At the end of session, phase II M.B.B.S student must be able to Define Sjogren syndrome precisely.								
9.7.2	At the end of session, phase II M.B.B.S student must be able to discuss accurately the etiopathogenesis of Sjogren syndrome.								
9.7.3	At the end of session, phase II M.B.B.S student must be able to briefly describe the morphology and clinical features of Sjogren syndrome.								
9.7.4	At the end of session, phase II M.B.B.S student must be able to define Scleroderma precisely.								
9.7.5	At the end of session, phase II M.B.B.S student must be able to discuss correctly the etiopathogenesis of scleroderma.								
9.7.6	At the end of session, phase II M.B.B.S student must be able to clinical features and morphology of scleroderma briefly.								
Topic: Infections and infestations		**Number of competencies: (04)**					**Number of procedures that require certification:(NI**		

PA10.1	Define and describe the pathogenesis and pathology of malaria	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
10.1.1	At the end of session, phase II M.B.B.S student must be able to define malaria precisely and enumerate all causative malarial parasites.								
10.1.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly The life cycle of plasmodium and pathogenesis of malaria.								
10.1.3	At the end of session, phase II M.B.B.S student must be able to describe correctly clinical features of malarial infection.								
10.1.4	At the end of session, phase II M.B.B.S student must be able to discuss various lab findings in malarial infection accurately.								
PA10.2	Define and describe the pathogenesis and pathology of Cysticercosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
10.2.1	At the end of session, phase II M.B.B.S student must be able to define cysticercosis precisely and enumerate causative agents.								
10.2.2	At the end of session, phase II M.B.B.S student must be able to discuss pathogenesis of T. Solium and T. saginata infection correctly.								
10.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe morphology and clinical findings of cysticercosis.								
PA10.3	Define and describe the pathogenesis and pathology of leprosy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
10.3.1	At the end of session, phase II M.B.B.S student must be able to define Leprosy precisely.								
10.3.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis of leprosy.								
10.3.3	At the end of session, phase II M.B.B.S student must be able to compare and contrast between tuberculoid and lepromatous leprosy appropriately.								
10.3.4	At the end of session, phase II M.B.B.S student must be able to discuss correctly the types of lepra reactions.								
PA10.4	Define and describe the pathogenesis and pathology of common bacterial, viral, protozoal and helminthic disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology

10.4.1	At the end of session, phase II M.B.B.S student must be able to correctly describe pathogenesis and pathology of diphtheria infection.								
10.4.2	At the end of session, phase II M.B.B.S student must be able to correctly describe pathogenesis and pathology of pertussis infection.								
10.4.3	At the end of session, phase II M.B.B.S student must be able to define and describe pathogenesis of syphilis correctly								
10.4.4	At the end of session, phase II M.B.B.S student must be able to discuss stages and associated morphology of syphilis correctly.								
10.4.5	At the end of session, phase II M.B.B.S student must be able to describe briefly pathogenesis and pathology of chlamydial infections.								
10.4.6	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of measles.								
10.4.7	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of mumps								
10.4.8	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of polio virus infection.								
10.4.9	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of zika virus infection.								
10.4.10	At the end of session, phase II M.B.B.S student must be able to discuss correctly pathogenesis and pathology of novel coronavirus infection.								
10.4.11	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of leishmaniasis.								
10.4.12	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of trypanosomiasis.								
10.4.13	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of chagas disease.								
10.4.14	At the end of session, phase II M.B.B.S student must be able to discuss correctly pathogenesis and pathology of Hydatid disease.								
10.4.15	At the end of session, phase II M.B.B.S student must be able to discuss correctly pathogenesis and pathology of schistosomiasis.								
10.4.16	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of filariasis.								
10.4.17	At the end of session, phase II M.B.B.S student must be able to discuss briefly pathogenesis and pathology of onchocerciasis.								
Topic: Genetic and pediatric diseases		**Number of competencies:(03)**						**number of procedures that require certification: (N**	

PA11.1	Describe the pathogenesis and features of common cytogenetic abnormalities and mutation in childhood	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
11.1.1	At the end of session, phase II M.B.B.S student must be able to enumerate the common cytogenetic abnormalities and mutation in childhood correctly.								
11.1.2	At the end of session, phase II M.B.B.S student must be able to correctly Describe the genetics and pathogenesis of Down's syndrome.								
11.1.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the clinical features of Down's syndrome.								
11.1.4	At the end of session, phase II M.B.B.S student must be able to correctly describe the genetics and pathogenesis of Turner syndrome.								
11.1.5	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the clinical features of Turner syndrome.								
11.1.6	At the end of session, phase II M.B.B.S student must be able to correctly describe the genetics and pathogenesis of Patau syndrome.								
11.1.7	At the end of session, phase II M.B.B.S student must be able to correctly Enumerate the clinical features of Patau syndrome.								
11.1.8	At the end of session, phase II M.B.B.S student must be able to correctly describe the genetics and pathogenesis of Klinefelter's syndrome.								
11.1.9	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the clinical features of klinefelter's syndrome.								
PA11.2	Describe the pathogenesis and pathology of tumor and tumor like conditions in infancy and childhood	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
11.2.1	At the end of session, phase II M.B.B.S student must be able to define and classify appropriately the common tumour and tumour like conditions in infancy and childhood.								
11.2.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the pathogenesis of Neuroblastoma.								
11.2.3	At the end of session, phase II M.B.B.S student must be able to correctly Discuss the morphological features of Neuroblastoma.								
11.2.4	At the end of session, phase II M.B.B.S student must be able to correctly describe the pathogenesis of Retinoblastoma.								
11.2.5	At the end of session, phase II M.B.B.S student must be able to correctly Discuss the morphological features of Retinoblastoma.								

11.2.6	At the end of session, phase II M.B.B.S student must be able to correctly Describe the pathogenesis of Wilm's tumour.								
11.2.7	At the end of session, phase II M.B.B.S student must be able to correctly Discuss the morphological features of Wilm's tumour.								
11.2.8	At the end of session, phase II M.B.B.S student must be able to correctly Describe the pathogenesis of Ewing's sarcoma.								
11.2.9	At the end of session, phase II M.B.B.S student must be able to correctly Discuss the morphological features of Ewing's sarcoma.								
PA11.3	Describe the pathogenesis of common storage disorders in infancy and childhood	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
11.3.1	At the end of session, phase II M.B.B.S student must be able to define and enumerate various common storage disorders precisely.								
11.3.2	At the end of session, phase II M.B.B.S student must be able to classify the common storage disorders (lysosomal and glycogen) correctly.								
11.3.3	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis and clinical features of Gaucher's disease.								
11.3..4	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis and clinical features of Nieman pick disease type A and B.								
11.3.5	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis and clinical features of Tay- sach's disease.								
11.3.6	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis and clinical feature and morphology of Von Gierke disease.								
11.3.7	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis, morphology and clinical features of Pompe disease.								
Topic: Environmental and nutritional diseases		**Number of competencies: (03)**					**Number of procedures that require certifi**		
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
12.1.1	At the end of session, phase II M.B.B.S student must be able to define and enumerate environmental diseases correctly.								
12.1.2	At the end of session, phase II M.B.B.S student must be able to discuss the health effects of outdoor air pollutants correctly.								

12.1.3	At the end of session, phase II M.B.B.S student must be able to discuss carbon monoxide poisoning correctly								
12.1.4	At the end of session, phase II M.B.B.S student must be able to discuss the various indoor air pollutants correctly.								
12.1.5	At the end of session, phase II M.B.B.S student must be able to discuss the effects of tobacco smoke constituents on health correctly.								
12.1.6	At the end of session, phase II M.B.B.S student must be able to describe briefly the various disorders caused due to tobacco.								
12.1.7	At the end of session, phase II M.B.B.S student must be able to discuss the metabolism of ethanol in detail.								
12.1.8	At the end of session, phase II M.B.B.S student must be able to enumerate correctly the adverse effects of ethanol (alcoholism).								
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	
12.2.1	At the end of session, phase II M.B.B.S student must be able to enumerate correctly the disorders caused by protein calorie malnutrition.								
12.2.2	At the end of session, phase II M.B.B.S student must be able to describe the pathogenesis of protein calorie malnutrition correctly.								
12.2.3	At the end of session, phase II M.B.B.S student must be able to define starvation correctly								
12.2.4	At the end of session, phase II M.B.B.S student must be able to enumerate the disorders caused by starvation correctly.								
12.2.5	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis of anorexia nervosa.								
12.2.6	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis of bulimia.								
PA12.3	Describe the pathogenesis of obesity and its consequences	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
12.3.1	At the end of session, phase II M.B.B.S student must be able to define precisely obesity.								
12.3.2	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis of obesity accurately.								
12.3.3	At the end of session, phase II M.B.B.S student must be able to enumerate and describe in brief the consequences of obesity.								

12.3.4	At the end of session, phase II M.B.B.S student must be able to describe briefly the consequences of obesity in association to cancer.								
Topic: Introduction to hematology		**Number of competencies: (05)**				**Number of procedure that require certifica**			
PA13.1	Describe hematopoiesis and extramedullary hematopoiesis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicin e	
13.1.1	At the end of session, phase II M.B.B.S student must be able to briefly describe hematopoiesis and differentiation of stem cells to blood cells.								
13.1.2	At the end of session, phase II M.B.B.S student must be able to describe briefly extramedullary hematopoiesis.								
13.1.3	At the end of session, phase II M.B.B.S student must be able to describe steps of erythropoiesis in detail.								
13.1.4	At the end of session, phase II M.B.B.S student must be able to briefly describe nutritional requirements of erythropoiesis.								
13.1.5	At the end of session, phase II M.B.B.S student must be able to discuss accurately normal hemogram values & red cell indices.								
PA13.2	Describe the role of anticoagulants in hematology	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicin e	
13.2.1	At the end of session, phase II M.B.B.S student must be able to discuss briefly importance & requirement of anticoagulants in hematology.								
13.2.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate different types of vacutainers used in hematology.								
13.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe the different types of anticoagulants required in hematology.								
13.2.4	At the end of session, phase II M.B.B.S student must be able to enlist tests that require EDTA as anticoagulant correctly.								
13.2.5	At the end of session, phase II M.B.B.S student must be able to discuss correctly types of EDTA used as anticoagulants.								
13.2.6	At the end of session, phase II M.B.B.S student must be able to discuss briefly the role of heparin as anticoagulants.								
13.2.7	At the end of session, phase II M.B.B.S student must be able to discuss appropriately the role of anticoagulants in coagulation tests.								
13.2.8	At the end of session, phase II M.B.B.S student must be able to discuss briefly the role of heparin as anticoagulant in hematology.								

13.2.9	At the end of session, phase II M.B.B.S student must be able to briefly describe the mechanism of anticoagulation of various anticoagulants in								
13.2.10	At the end of session, phase II M.B.B.S student must be able to discuss accurately the artifacts induced by anticoagulants in hematology.								
PA13.3	Define and classify anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
13.3.1	At the end of session, phase II M.B.B.S student must be able to define anemia precisely and describe the clinical grading of anemia.								
13.3.2	At the end of session, phase II M.B.B.S student must be able to classify anemia correctly on the basis of pathophysiology and morphology.								
13.3.3	At the end of session, phase II M.B.B.S student must be able to briefly discuss pathophysiology and clinical features of anemia.								
PA13.4	Enumerate and describe the investigation of anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
13.4.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate different investigations that aid in diagnosis of anemia.								
13.4.2	At the end of session, phase II M.B.B.S student must be able to correctly Describe the changes in hematological values in a case of anemia.								
13.4.3	At the end of session, phase II M.B.B.S student must be able to discuss the common morphological abnormalities of red cells in different types of anemia accurately.								
PA13.5	Perform, Identify and describe the peripheral blood picture in anemia (Lower level of learning for this competency has been covered in PA13.4)	S	SH	Y	DOAP session	Skill Assessment		General Medicine	
13.5.1	At the end of session, phase II M.B.B.S student must be able to correctly demonstrate the correct technique of peripheral blood smear preparation.								
13.5.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate and demonstrate correctly the steps of Leishman staining of a peripheral blood smear.								
13.5.3	At the end of session, phase II M.B.B.S student must be able to explain the mechanism of fixation and staining in Leishman stain correctly.								
13.5.4	At the end of session, phase II M.B.B.S student must be able to Identify and describe the peripheral blood picture in anemia accurately.								

Topic: Microcytic anemia		Number of competencies: (03)							Number of procedure that require certifica
PA14.1	Describe the metabolism	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry	
14.1.1	At the end of session, phase II M.B.B.S student must be able to discuss in detail iron metabolism in the human body.								
14.1.2	At the end of session, phase II M.B.B.S student must be able to discuss in detail the pathogenesis of Iron deficiency anemia.								
PA14.2	Describe the etiology, investigation and differential diagnosis of microcytic hypochromic anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
14.2.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate causes of Iron deficiency anemia.								
14..2.2	At the end of session, phase II M.B.B.S student must be able to discuss the clinical features of Iron deficiency anemia correctly.								
14.2.3	At the end of session, phase II M.B.B.S student must be able to discuss the laboratory findings in Iron deficiency anemia in detail.								
14.2.4	At the end of session, phase II M.B.B.S student must be able to discuss appropriately the different modes of treatment of Iron deficiency anemia.								
14.2.5	At the end of session, phase II M.B.B.S student must be able to define and classify sideroblastic anemia precisely.								
14.2.6	At the end of session, phase II M.B.B.S student must be able to discuss briefly the pathogenesis of sideroblastic anemia								
14.2.7	At the end of session, phase II M.B.B.S student must be able to correctly describe the lab findings of sideroblastic anemia.								
14.2.8	At the end of session, phase II M.B.B.S student must be able to classify and enumerate causes of anemia of chronic disease correctly.								
14.2.9	At the end of session, phase II M.B.B.S student must be able to correctly compare and contrast between the laboratory findings in cases of iron deficiency anemia, sideroblastic anemia, thalassemia minor and anemia of chronic Disease.								
PA14.3	Identify and describe the peripheral smear in microcytic anemia (Lower level of learning for this competency has been covered in PA14.2)	S	SH	Y	DOAP session	Skill Assessment		General Medicine	

14.3.1	At the end of session, phase II M.B.B.S student must be able to enlist and describe the microscopic findings in peripheral blood in microcytic anemia accurately.								
14.3.2	At the end of session, phase II M.B.B.S student must be able to Identify correctly and describe the abnormalities seen in the peripheral smear in a case of microcytic anemia.								
Topic: Macrocytic anemia		**Number of competencies: (04)**				**Number of procedure that require certificati**			
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	
15.1.1	At the end of session, phase II M.B.B.S student must be able to describe metabolism of vitamin B12 in detail.								
15.1.2	At the end of session, phase II M.B.B.S student must be able to describe Folate metabolism in detail.								
15.1.3	At the end of session, phase II M.B.B.S student must be able to correctly Compare & contrast salient features of vitamin B12 & folate metabolism.								
15.1.4	At the end of session, phase II M.B.B.S student must be able to classify megaloblastic anemia on the basis of etiology correctly.								
15.1.5	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical features in megaloblastic anemia.								
PA15.2	Describe laboratory investigations of macrocytic anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
15.2.1	At the end of session, phase II M.B.B.S student must be able to describe the general and special laboratory investigations in macrocytic anemia in detail.								
15.2.2	At the end of session, phase II M.B.B.S student must be able to describe briefly pernicious anemia.								
PA15.3	Identify and describe the peripheral blood picture of macrocytic anemia (Lower level of learning for this competency has been covered in PA15.2)	S	SH	Y	DOAP session	Skill assessment			
15.3.1	At the end of session, phase II M.B.B.S student must be able to enlist different microscopic abnormalities seen in peripheral blood in macrocytic anemia correctly								

15.3.2	At the end of session, phase II M.B.B.S student must be able to identify and describe correctly the peripheral blood picture in a given case of macrocytic anemia.								
PA15.4	Enumerate the difference and describe the etiology and distinguishing features of megaloblastic and non-	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicin	
15.4.1	At the end of session, phase II M.B.B.S student must be able to enumerate the differences between megaloblastic anemia and non–megaloblastic macrocytic anemia in the basis of etiology, clinical features and laboratory findings correctly								
Topic: Hemolytic anemia		**Number of competencies: (07)**						**Number of procedures that requires certifica**	
PA16.1	Define and classify hemolytic anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
16.1.1	At the end of session, phase II M.B.B.S student must be able to define and classify hemolytic anemia precisely.								
PA16.2	Describe the pathogenesis and clinical features and hematologic indices of hemolytic anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
16.2.1	At the end of session, phase II M.B.B.S student must be able to describe the clinical features of hemolytic anemia correctly.								
16.2.2	At the end of session, phase II M.B.B.S student must be able to enumerate and describe different investigations used for laboratory evaluation of hemolytic anemia correctly.								
16.2.3	At the end of session, phase II M.B.B.S student must be able to compare and contrast between clinical features and laboratory findings in extravascular & intravascular hemolysis correctly.								
PA16.3	Describe the pathogenesis, features, hematologic indices and peripheral blood picture of sickle cell anemia and thalassemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
16.3.1	At the end of session, phase II M.B.B.S student must be able to define spherocytic anemia precisely.								

16.3.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the pathogenesis and clinical features of spherocytic anemia.								
16.3.3	At the end of session, phase II M.B.B.S student must be able to describe the hematological indices & peripheral blood picture in Spherocytosis accurately.								
16.3.4	At the end of session, phase II M.B.B.S student must be able to briefly discuss hereditary elliptocytosis and hereditary stomatocytosis.								
16.3.5	At the end of session, phase II M.B.B.S student must be able to correctly describe the etiopathogenesis & clinical features of G6PD deficiency.								
16.3.6	At the end of session, phase II M.B.B.S student must be able to describe the lab findings in a case of G6PD deficiency correctly.								
16.3.7	At the end of session, phase II M.B.B.S student must be able to define sickle cell anemia and sickle cell trait precisely.								
16.3.8	At the end of session, phase II M.B.B.S student must be able to describe the pathogenesis of sickle cell anemia correctly.								
16.3.9	At the end of session, phase II M.B.B.S student must be able to discuss the clinical features & laboratory findings in sickle cell anemia in detail.								
16.3.10	At the end of session, phase II M.B.B.S student must be able to define and classify thalassemia precisely.								
16.3.11	At the end of session, phase II M.B.B.S student must be able to discuss the pathophysiology of anemia in thalassemia in detail.								
16.3.12	At the end of session, phase II M.B.B.S student must be able to briefly discuss Hb Bart's or hydrops foetalis.								
16.3.13	At the end of session, phase II M.B.B.S student must be able to briefly discuss HbH disease.								
16.3.14	At the end of session, phase II M.B.B.S student must be able to briefly discuss alpha-thalassemia trait.								
16.3.15	At the end of session, phase II M.B.B.S student must be able to discuss the molecular pathogenesis of B thalassemia in detail.								
16.3.16	At the end of session, phase II M.B.B.S student must be able to describe the clinical features and laboratory findings of beta-thalassemia major accurately								
16.3.17	At the end of session, phase II M.B.B.S student must be able to describe the clinical features and laboratory findings of beta-thalassemia minor correctly.								

PA16.4	Describe the etiology pathogenesis, hematologic indices and peripheral blood picture of Acquired hemolytic anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry ,General Medicine	
16.4.1	At the end of session, phase II M.B.B.S student must be able to enumerate causes of acquired hemolytic anemia correctly.								
16.4.2	At the end of session, phase II M.B.B.S student must be able to define and classify immunohemolytic anemia precisely.								
16.4.3	At the end of session, phase II M.B.B.S student must be able to briefly discuss the etiopathogenesis & clinical features of warm and cold antibody-Alloimmune hemolytic anemia.								
16.4.4	At the end of session, phase II M.B.B.S student must be able to describe the laboratory findings of warm and cold antibody- alloimmune hemolytic anemia correctly								
16.4.5	At the end of session, phase II M.B.B.S student must be able to briefly describe microangiopathic hemolytic anemia								
16.4.6	At the end of session, phase II M.B.B.S student must be able to define paroxysmal nocturnal hemoglobinuria and describe the etiopathogeneis correctly								
16.4.7	At the end of session, phase II M.B.B.S student must be able to discuss the clinical features and laboratory findings of Paroxysmal nocturnal hemoglobinuria correctly.								
PA16.5	Describe the peripheral blood picture in different hemolytic anemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
16.5.1	At the end of session, phase II M.B.B.S student must be able to enumerate & describe the salient red cell morphologic abnormalities in different types of hemolytic anemia correctly.								
PA16.6	Prepare a peripheral blood smear and identify hemolytic anemia from it (Lower level of learning for this competency has been covered in PA16.2, 16.5)	S	P	Y	DOAP session	Skill assessment			
16.6.1	At the end of session, phase II M.B.B.S student must be able to correctly demonstrate preparation of peripheral blood smear.								
16.6.2	At the end of session, phase II M.B.B.S student must be able to identify & describe correctly the peripheral blood findings in a given case of hemolytic anemia.								

PA16.7	Describe the correct technique to perform a cross match	S	SH	Y	Lecture, Small group discussion	Written/ Viva voce			
16.7.1	At the end of session, phase II M.B.B.S student must be able to precisely define cross-matching and its types.								
16.7.2	At the end of session, phase II M.B.B.S student must be able to discuss the principle of crossmatching accurately.								
16.7.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the steps of major crossmatching- immediate spin crossmatch and AHG phase crossmatch.								
16.7.4	At the end of session, phase II M.B.B.S student must be able to discuss briefly minor crossmatch.								
Topic: Aplastic Anemia		**Number of competencies: (02)**						**Number of procedure that require certification**	
PA17.1	Enumerate the etiology, pathogenesis and findings in aplastic anemia	K	K	N	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
17.1.1	At the end of session, phase II M.B.B.S student should be able to define and classify aplastic anemia precisely on etiological basis.								
17.1.2	At the end of session, phase II M.B.B.S student should be able to describe clinical features and lab findings of aplastic anemia correctly.								
17.1.3	At the end of session, phase II M.B.B.S student should be able to discuss in brief myelothisic anemia								
17.1.4	At the end of session, phase II M.B.B.S student should be able to discuss in brief pure red cell aplasia.								
17.1.5	At the end of session, phase II M.B.B.S student should be able to discuss in brief principles of aplastic anemia.								
PA17.2	Enumerate the indication and describe the findings in bone marrow aspiration and biopsy	K	K	N	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
17.2.1	At the end of session, phase II M.B.B.S student should be able to enumerate indications of bone marrow biopsy and aspiration correctly.								
17.2.2	At the end of session, phase II M.B.B.S student should be able to briefly discuss findings in bone marrow in various disorders.								
Topic: Leukocyte disorders		**Number of competencies: (02)**						**Number of procedure that require certificati**	
PA18.1	Enumerate and describe the causes of leucocytosis leucopenia lymphocytosis and leukemoid reactions	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

18.1.1	At the end of session, phase II M.B.B.S student must be able to define leukocytosis and Classify leukocytic disorder precisely								
18.1.2	At the end of session, phase II M.B.B.S student must be able to discuss the mechanism of leukocytosis with causes correctly.								
18.1.3	At the end of session, phase II M.B.B.S student must be able to define and enumerate the causes of lymphocytosis correctly.								
18.1.4	At the end of session, phase II M.B.B.S student must be able to define and enumerate the causes of leucopenia correctly								
18.1.5	At the end of session, phase II M.B.B.S student must be able to define neutropenia and discuss its pathogenesis with causes correctly.								
18.1.6	At the end of session, phase II M.B.B.S student must be able to describe the morphology and clinical features of neutropenia correctly.								
18.1.7	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis of Infectious mononucleosis correctly.								
18.1.8	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical features and laboratory findings of infectious mononucleosis.								
18.1.9	At the end of session, phase II M.B.B.S student must be able to define leukamoid reaction and enumerate its types precisely.								
18.1.10	At the end of session, phase II M.B.B.S student must be able to enlist the causes of leukemoid reaction and discuss the lab findings correctly.								
18.1.11	At the end of session, phase II M.B.B.S student must be able to Compare the features of Leukemoid reaction and CML correctly.								
PA18.2	Describe the etiology, genetics, pathogenesis classification, features, hematologic features of acute and chronic leukemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
18.2.1	At the end of session, phase II M.B.B.S student must be able to define leukemia and enumerate the different types of leukemia precisely.								
18.2.2	At the end of session, phase II M.B.B.S student must be able to discuss the etiology and pathogenesis of acute leukemia in detail.								
18.2.3	At the end of session, phase II M.B.B.S student must be able to classify AML as per FAB classification and WHO classification correctly.								
18.2.4	At the end of session, phase II M.B.B.S student must be able to describe the clinical features, lab findings and prognosis of AML correctly.								
18.2.5	At the end of session, phase II M.B.B.S student must be able to define and classify ALL precisely and discuss the pathogenesis.								

18.2.6	At the end of session, phase II M.B.B.S student must be able to describe the clinical and morphologic features of ALL correctly.								
18.2.7	At the end of session, phase II M.B.B.S student must be able to discuss briefly the prognosis of ALL.								
18.2.8	At the end of session, phase II M.B.B.S student must be able to compare features of AML and ALL accurately.								
18.2.9	At the end of session, phase II M.B.B.S student must be able to define chronic leukemia precisely.								
18.2.10	At the end of session, phase II M.B.B.S student must be able to define and discuss pathogenesis of Chronic lymphocytic leukemia correctly.								
18.2.11	At the end of session, phase II M.B.B.S student must be able to describe clinical features, lab findings, immunophenotype and prognosis of Chronic lymphocytic leukemia correctly.								
18.2.12	At the end of session, phase II M.B.B.S student must be able to define chronic myeloid leukemia precisely .								
18.2.13	At the end of session, phase II M.B.B.S student must be able to discuss pathogenesis of chronic myeloid leukemia in detail.								
18.2.14	At the end of session, phase II M.B.B.S student must be able to describe clinical features , lab findings, prognosis of chronic myeloid leukemia correctly.								
18.2.15	At the end of session, phase II M.B.B.S student must be able to correctly compare features of Chronic myeloid leukemia and leukemoid reaction.								
Topic: Lymph node and spleen		**Number of competencies: (07)**						**Number of procedure that require certificati**	
PA19.1	Enumerate the causes and describe the differentiating features , hematologic features of acute and chronic leukemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
19.1.1	At the end of session, phase II M.B.B.S student must be able to define acute and chronic leukemia correctly.								
19.1.2	At the end of session, phase II M.B.B.S student must be able to classify Leukemia correctly.								
19.1.3	At the end of session, phase II M.B.B.S student must be able to accurately describe the hematologic features of chronic and acute leukemia.								
19.1.4	At the end of session, phase II M.B.B.S student must be able to correctly Enumerate the causes responsible for leukemia.								
19.1.5	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis of acute and chronic leukemia.								

PA19.2	Describe the pathogenesis and pathology of tuberculous lymphadenitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
19.2.1	At the end of session, phase II M.B.B.S student must be able to describe etiopathogenesis of tuberculous lymphadenitis in detail.								
PA19.3	Identify and describe the features of tuberculous lymphadenitis in a gross and microscopic specimen (Lower level of learning for this competency has been covered in PA19.2)	S	SH	Y	DOAP session	Skill assessment			
19.3.1	At the end of session, phase II M.B.B.S student must be able to describe correctly clinical features of tuberculosis lymphadenitis.								
19.3.2	At the end of session, phase II M.B.B.S student must be able to describe in detail morphological features of tuberculous lymphadenitis.								
PA19.4	Describe and discuss the pathogenesis, pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
19.4.1	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between features of Hodgkin and non-Hodgkin lymphoma.								
19.4.2	At the end of session, phase II M.B.B.S student must be able to describe pathogenesis of hodgkin's lymphoma in detail.								
19.4.3	At the end of session, phase II M.B.B.S student must be able to describe pathogenesis of various non-hodgkin's lymphoma briefly.								
PA19.5	Identify and describe the features of Hodgkin's lymphoma in a gross and microscopic specimen (Lower level of learning for this competency has been covered in PA19.4)	S	SH	Y	DOAP session	Skill Assessment		General Surgery	
19.5.1	At the end of session, phase II M.B.B.S student must be able to correctly describe gross and microscopic features of Hodgkin's lymphoma.								
19.5.2	At the end of session, phase II M.B.B.S student must be able to correctly identify gross and microscopic features of Hodgkin's lymphoma in a given case.								

PA19.6	Enumerate and differentiate the cause of splenomegaly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
19.6.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate causes of splenomegaly.								
19.6.2	At the end of session, phase II M.B.B.S student must be able to differentiate features on the basis of degree of splenomagaly accurately.								
19.6.3	At the end of session, phase II M.B.B.S student must be able to correctly describe mohphological features of splenomagaly.								
PA19.7	Identify and describe the gross specimen of an enlarged spleen (Lower level of learning for this competency has been covered in PA19.6)	S	SH	Y	DOAP session	Skill Assessment			
19.7.1	At the end of session, phase II M.B.B.S student must be able to correctly Identify gross specimen of an enlarged spleen.								
19.7.2	At the end of session, phase II M.B.B.S student must be able to correctly describe gross specimen of an enlarged spleen.								
Topic: Plasma cell disorders		**Number of competencies: (01)**				**Number of procedure that require certifica**			
PA20.1	Describe the features of plasma cell myeloma	S	SH	Y	DOAP session	Skill Assessment			
20.1.1	At the end of session, phase II M.B.B.S student must be able to precisely define and classify plasma cell tumor.								
20.1.2	At the end of session, phase II M.B.B.S student must be able to describe the pathogenesis of plasma cells dyscrasias accurately.								
20.1.3	At the end of session, phase II M.B.B.S student must be able to enumerate the clinical features and complications of plasma cell Dyscrasias correctly.								
20.1.4	At the end of session, phase II M.B.B.S student must be able to correctly discuss the diagnostic criteria for plasma cells dyscrasias								
20.1.5	At the end of session, phase II M.B.B.S student must be able to briefly discuss Waldenstrom's macroglobulinemia.								
20.1.6	At the end of session, phase II M.B.B.S student must be able to describe briefly the distinguishing features between MGUS/AMM/MM								

20.1.7	At the end of session, phase II M.B.B.S student must be able to correctly identify and describe morphology of a case of plasma cell myeloma.								
Topic: Hemorrhagic disorders		**Number of competencies: (05)**				**Number of Procedure that require certificat**			
PA21.1	Describe normal hemostasis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
21.1.1	At the end of session, phase II M.B.B.S student must be able to define Hemostasis precisely.								
21.1.2	At the end of session, phase II M.B.B.S student must be able to discuss the sequence of events leading to hemostasis at the site of vascular injury correctly.								
21.1.3	At the end of session, phase II M.B.B.S student must be able to discuss appropriately the role of platelets in hemostssis.								
21.1.4	At the end of session, phase II M.B.B.S student must be able to describe the coagulation cascade in detail.								
21.1.5	At the end of session, phase II M.B.B.S student must be able to discuss the tests used to evaluate different aspects of hemostasis accurately.								
PA21.2	Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and haemophilia's	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
21.2.1	At the end of session, phase II M.B.B.S student must be able to classify the bleeding disorders on the basis of their causes correctly.								
21.2.2	At the end of session, phase II M.B.B.S student must be able to enlist causes of thrombocytopenia correctly.								
21.2.3	At the end of session, phase II M.B.B.S student must be able to Discuss the pathogenesis, clinical features and morphology of ITP in detail.								
21.2.4	At the end of session, phase II M.B.B.S student must be able to discuss in detail the etiology and pathogenesis of Hemophilia in detail.								
21.2.5	At the end of session, phase II M.B.B.S student must be able to describe the clinical features and lab findings of hemophilia accurately.								
PA21.3	Differentiate platelet from clotting disorders based on the clinical and hematologic features	S	SH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
21.3.1	At the end of session, phase II M.B.B.S student must be able to enlist bleeding disorders due to platelet disorders and clotting factor disorders correctly.								

21.3.2	At the end of session, phase II M.B.B.S student must be able to compare bleeding disorders due to platelet disorders and clotting factor disorders based on clinical features and lab findings accurately.								
PA21.4	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of disseminated intravascular coagulation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
21.4.1	At the end of session, phase II M.B.B.S student must be able to define disseminated intravascular coagulation precisely.								
21.4.2	At the end of session, phase II M.B.B.S student must be able to enumerate its causes correctly.								
21.4.3	At the end of session, phase II M.B.B.S student must be able to explain pathogenesis of disseminated intravascular coagulation correctly.								
21.4.4	At the end of session, phase II M.B.B.S student must be able to correctly Describe clinical features of disseminated intravascular coagulation.								
21.4.5	At the end of session, phase II M.B.B.S student must be able to discuss lab findings and diagnosis of disseminated intravascular coagulation correctly.								
PA21.5	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of Vitamin K deficiency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
21.5.1	At the end of session, phase II M.B.B.S student must be able to briefly describe role of Vitamin K in hemostasis.								
21.5.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate causes of Vitamin K deficiency.								
21.5.3	At the end of session, phase II M.B.B.S student must be able to discuss clinical features of Vitamin K deficiency in neonates and adults briefly.								
21.5.4	At the end of session, phase II M.B.B.S student must be able to discuss lab findings and diagnosis of Vitamin K deficiency correctly.								
Topic: Blood banking and transfusion		**Number of competencies: (07)**				**Number of procedures that require certific**			
PA22.1	Classify and describe blood group systems (ABO and RH)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
22.1.1	At the end of session, phase II M.B.B.S student must be able to classify different blood group system precisely.								

22.1.2	At the end of session, phase II M.B.B.S student must be able to briefly describe importance of Rh factor.								
22.1.3	At the end of session, phase II M.B.B.S student must be able to briefly describe Bombay blood group and its clinical importance.								
22.1.4	At the end of session, phase II M.B.B.S student must be able to describe ABO & Rh incompatibility correctly								
22.1.5	At the end of session, phase II M.B.B.S student must be able to discuss different methods of blood grouping correctly.								
22.1.6	At the end of session, phase II M.B.B.S student must be able to enumerate steps of ABO grouping & Rh typing and demonstrate the same accurately.								
PA22.2	Enumerate the indications, describe the principle, enumerate and demonstrate the steps of compatibility testing	S	SH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
22.2.1	At the end of session, phase II M.B.B.S student must be able to mention indications & principles of major and minor cross matching.								
22.2.2	At the end of session, phase II M.B.B.S student must be able to discuss correctly the steps of major andminor crossmatching (Level of learning of this competency has been addressed in Pa16.7).								
22.2.3	At the end of session, phase II M.B.B.S student must be able to describe Coombs test, its principle & usage correctly.								
22.2.4	At the end of session, phase II M.B.B.S student must be able to describe criteria for Donor selection & rejection correctly.								
22.2.5	At the end of session, phase II M.B.B.S student must be able to describe Precautions to be taken during transfusion appropriately.								
PA22.4	Enumerate blood components and describe their clinical uses	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
22.4.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate different blood components.								
22.4.2	At the end of session, phase II M.B.B.S student must be able to briefly enumerate anticoagulants used in blood banks.								

22.4.3	At the end of session, phase II M.B.B.S student must be able to briefly discuss different blood bags and their uses.								
22.4.4	At the end of session, phase II M.B.B.S student must be able to briefly discuss storage and shelf life of different blood components.								
22.4.5	At the end of session, phase II M.B.B.S student must be able to correctly describe indications and clinical uses of different blood components.								
PA22.5	Enumerate and describe infections transmitted by blood transfusion	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Microbiology
22.5.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate different infections transmitted through blood transfusion.								
22.5.2	At the end of session, phase II M.B.B.S student must be able to enumerate disease tested for before transfusion and mention the methods of testing correctly.								
PA22.6	Describe transfusion reactions and enumerate the steps in the investigation of a transfusion reaction	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
22.6.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate transfusion reactions.								
22.6.2	At the end of session, phase II M.B.B.S student must be able to describe correctly types of transfusion reactions.								
22.6.3	At the end of session, phase II M.B.B.S student must be able to correctly discuss the clinical features of transfusion reactions.								
22.6.4	At the end of session, phase II M.B.B.S student must be able to correctly enumerate immediate steps to be taken following transfusion reaction								
22.6.5	At the end of session, phase II M.B.B.S student must be able to enumerate precisely steps in investigating blood transfusion reactions including documentation check, serological investigations, tests for haemolysis and microbiological tests.								
PA22.7	Enumerate the indications and describe the principles and procedure of autologous transfusion	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
22.7.1	At the end of session, phase II M.B.B.S student must be able to precisely define autologous blood transfusion correctly.								
22.7.2	At the end of session, phase II M.B.B.S student must be able to enumerate correctly advantages and indications for autologous blood transfusion.								
Topic: Clinical Pathology		**Number of competencies : (03)**					**Number of procedures that require certificatio**		

PA23.1	Describe abnormal urinary findings in disease states and identify and describe common urinary abnormalities in a clinical specimen (Lower level of learning for this competency has been covered in Phase !, BI 11.3, 11.4)	S	SH	Y	DOAP session	Skill assessment			
23.1.1	At the end of session, phase II M.B.B.S student must be able to correctly mention different methods of collection of urine and preservation.								
23.1.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate disease conditions associated with variation in total urine volume.								
23.1.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate disease conditions associated with variation in urine pH.								
23.1.4	At the end of session, phase II M.B.B.S student must be able to enumerate disease conditions associated with variation in urine colour accurately.								
23..5	At the end of session, phase II M.B.B.S student must be able to correctly enumerate disease conditions associated with variation in urine odour								
23.1.6	At the end of session, phase II M.B.B.S student must be able to enumerate correctly disease conditions associated with variation in urine clarity/appearance.								
23.1.7	At the end of session, phase II M.B.B.S student must be able to enumerate accurately disease conditions associated with variation in urine specific gravity.								
23.1.8	At the end of session, phase II M.B.B.S student must be able to precisely define glycosuria.								
2..1.9	At the end of session, phase II M.B.B.S student must be able to correctly enumerate pathological conditions associated with glycosuria.								
23.1.10	At the end of session, phase II M.B.B.S student must be able to accurately Demonstrate the test for glycosuria.								
23.1.11	At the end of session, phase II M.B.B.S student must be able to precisely define ketonuria.								
23.1.12	At the end of session, phase II M.B.B.S student must be able to enumerate pathological conditions associated with ketonuria correctly.								
23.1.13	At the end of session, phase II M.B.B.S student must be able to accurately demonstrate the test for ketonuria.								
23.1.14	At the end of session, phase II M.B.B.S student must be able to define precisely proteinuria.								

23.1.15	At the end of session, phase II M.B.B.S student must be able to correctly Enumerate pathological conditions associated with proteinuria.								
23.1.16	At the end of session, phase II M.B.B.S student must be able to accurately demonstrate the test for proteinuria.								
23.1.17	At the end of session, phase II M.B.B.S student must be able to precisely define haematuria,								
23.1.18	At the end of session, phase II M.B.B.S student must be able to correctly enumerate pathological conditions associated with haematuria.								
23.1.19	At the end of session, phase II M.B.B.S student must be able to accurately Demonstrate the test for haematuria.								
23.1.20	At the end of session, phase II M.B.B.S student must be able to describe correctly principles of chemical tests and Dipsticks tests for determination of Sugar, Ketone bodies, Proteins and Blood in urine.								
23.1.21	At the end of session, phase II M.B.B.S student must be able to describe briefly urinary microscopic findings with reference to cells, crystals and casts in disease states.								
23.1.22	At the end of session, phase II M.B.B.S student must be able to correctly interpret urinary findings in Nephritic syndrome, Nephrotic syndrome, Diabetic Ketacidosis, Urinary tract infection.								
PA23.2	Describe abnormal findings in body fluids in various disease states	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
23.2.1	At the end of session, phase II M.B.B.S student must be able to mention correctly different body fluids, method of collection and preservation.								
23.2.2	At the end of session, phase II M.B.B.S student must be able to mention difference between transudate and exudates correctly.								
23.2.3	At the end of session, phase II M.B.B.S student must be able to mention correctly changes in body fluid parameters in tuberculosis.								
23.2.4	At the end of session, phase II M.B.B.S student must be able to mention briefly changes in body fluid parameters in malignancy.								
23.2.5	At the end of session, phase II M.B.B.S student must be able to mention correctly changes of body fluid parameters in pyogenic infections.								
23.2.6	At the end of session, phase II M.B.B.S student must be able to correctly identify etiology of pleural effusion and ascitis by interpreting given body fluid parameters.								

PA23.3	Describe and interpret the abnormalities in a panel containing semen analysis, thyroid function tests, renal function tests or liver function tests (Lower level of learning for this competency has been covered in phase I BI.11.17)	S	SH	Y	DOAP session	Skill Assessment			
23.3.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate indications for semen analysis.								
23.3.2	At the end of session, phase II M.B.B.S student must be able to Interpret semen analysis report accurately.								
23.3.3	At the end of session, phase II M.B.B.S student must be able to correctly interpret renal function tests, thyroid function tests or liver function tests in given cases.								
Topic: Gastrointestinal tract		**Number of competencies: (07)**				**Number of procedures that require certificat**			
PA24.1	Describe the etiology, pathogenesis, pathology and clinical features of oral cancers	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Dentistry	
24.1.1	At the end of session, phase II M.B.B.S student must be able to precisely define leukoplakia.								
24.1.2	At the end of session, phase II M.B.B.S student must be able to define erythroplakia precisely.								
24.1.3	At the end of session, phase II M.B.B.S student must be able to correctly describe etiopathogenesis and morphology of leukoplakia.								
24.1.4	At the end of session, phase II M.B.B.S student must be able to enumerate correctly various precancerous lesions of oral cavity.								
24.1.5	At the end of session, phase II M.B.B.S student must be able to correctly discuss etiopathogenesis of squamous cell carcinoma of oral cavity.								
24.1.6	At the end of session, phase II M.B.B.S student must be able to discuss correctly morphology and spread of squamous cell carcinoma of oral cavity.								
24.1.7	At the end of session, phase II M.B.B.S student must be able to classify salivary gland tumours precisely.								
24.1.7	At the end of session, phase II M.B.B.S student must be able to discuss etiopathegenesis and morphology of pleomorphic adenoma in detail.								
24.1.8	At the end of session, phase II M.B.B.S student must be able to discuss etiopathogenesis and morphology of warthins tumour correctly								
24.1.9	At the end of session, phase II M.B.B.S student must be able to list odontogenic tumours correctly.								

24.1.10	At the end of session, phase II M.B.B.S student must be able to discuss barretts esophagus in detail								
24.1.11	At the end of session, phase II M.B.B.S student must be able to discuss etiopathogenesis and morphology of carcinoma of esophagus in detail								
24.1.12	At the end of session, phase II M.B.B.S student must be able to discuss briefly complications of carcinoma of esophagus								
PA24.2	Describe the etiology, pathogenesis, pathology, microbiology, clinical and microscopic features of peptic ulcer disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
24.2.1	At the end of session, phase II M.B.B.S student must be able to define precisely peptic ulcer disease.								
24.2.2	At the end of session, phase II M.B.B.S student must be able to describe etiopathogenesis of peptic ulcer disease in detail.								
24.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe gross and microscopic findings in peptic ulcer disease.								
24.2.4	At the end of session, phase II M.B.B.S student must be able to discuss appropriately role of H.pylori in peptic ulcer disease, gastritis and other stomach diseases.								
24.2.5	At the end of session, phase II M.B.B.S student must be able to correctly describe clinical features and complications of peptic ulcer disease.								
24.2.6	At the end of session, phase II M.B.B.S student must be able to define gastritis.								
24.2.7	At the end of session, phase II M.B.B.S student must be able to correctly Discuss types of gastritis.								
24.2.8	At the end of session, phase II M.B.B.S student must be able to briefly describe etiopathogenesis, morphology and clinical features of acute gastritis.								
PA24.3	Describe and identify the microscopic features of peptic ulcer.	S	SH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
24.3.1	At the end of session, phase II M.B.B.S student must be able to describe accurately the microscopic features of peptic ulcer								
PA24.4	Describe and etiology and pathogenesis and pathologic features of carcinoma of the stomach	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	

24.4.1	At the end of session, phase II M.B.B.S student must be able to describe in detail epidemiology, etiopathogenesis and clinical features of carcinoma of								
24.4.2	At the end of session, phase II M.B.B.S student must be able to accurately describe gross and microscopy of carcinoma stomach.								
24.4.3	At the end of session, phase II M.B.B.S student must be able to discuss correctly differences between benign and malignant gastric ulcer.								
PA24.5	Describe etiology, pathogenesis and pathological features of Tuberculosis of the intestine or intestinal tuberculosis.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
24.5.1	At the end of session, phase II M.B.B.S student must be able to discuss etiopathogenesis and clinical features of tuberculosis of intestine correctly.								
24.5.2	At the end of session, phase II M.B.B.S student must be able to discuss accurately the morphology of tuberculosis of intestine.								
24.5.3	At the end of session, phase II M.B.B.S student must be able to discuss briefly the complications of tuberculosis of intestine								
24.5.4	At the end of session, phase II M.B.B.S student must be able to enumerate differences between typhoid ulcer and tubercular intestine ulcer correctly.								
PA24.6	Describe and etiology and pathogenesis and pathologic and distinguishing features of Inflammatory bowel disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
24.6.1	At the end of session, phase II M.B.B.S student must be able to define inflammatory bowel disease precisely.								
24.6.2	At the end of session, phase II M.B.B.S student must be able to briefly Describe epidemiology and clinical features of Inflammatory bowel disease.								
24.6.3	At the end of session, phase II M.B.B.S student must be able to correctly discuss pathogenesis of Inflammatory bowel disease.								
24.6.4	At the end of session, phase II M.B.B.S student must be able to describe correctly the clinical features and and complications in ulcerative colitis.								
24.6.5	At the end of session, phase II M.B.B.S student must be able to describe gross and microscopic findings in ulcerative colitis correctly.								
24.6.6	At the end of session, phase II M.B.B.S student must be able to correctly describe clinical features and complications in Crohns' disease.								
24.6.7	At the end of session, phase II M.B.B.S student must be able to describe gross, microscopic findings in Crohns' disease correctly.								

PA24.7	Describe the etiology , pathogenesis , pathology and distinguishing features of carcinoma of the colon	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
24.7.1	At the end of session, phase II M.B.B.S student must be able to classify accurately tumours of colon.								
24.7.2	At the end of session, phase II M.B.B.S student must be able to briefly describe various polyps and adenomas of colon								
24.7.3	At the end of session, phase II M.B.B.S student must be able to discuss briefly Familial adenomatous polyposis								
24.7.4	At the end of session, phase II M.B.B.S student must be able to discuss various preneoplastic lesions of intestine briefly.								
24.7.5	At the end of session, phase II M.B.B.S student must be able to describe etio- pathogenesis of carcinoma of colon in detail.								
24.7.6	At the end of session, phase II M.B.B.S student must be able to discuss correctly multistep carcinogenesis in carcinoma colon.								
24.7.7	At the end of session, phase II M.B.B.S student must be able to discuss clinical features and morphological features of carcinoma colon correctly.								
24.7.7	At the end of session, phase II M.B.B.S student must be able to discuss staging, diagnosis and complications of carcinoma colon appropriately.								
Topic: Hepatobiliary system		**Number of competencies: (06)**					**Number of procedure that require certificati**		
PA25.1	Describe bilirubin metabolism, enumerate the etiology and pathogenesis of jaundice, distinguish between direct and indirect hyperbilirubinemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
25.1.1	At the end of session, phase II M.B.B.S student must be able to briefly describe production of bilirubin and how it is utilized by the body.								
25.1.2	At the end of session, phase II M.B.B.S student must be able to discuss etiopathogenesis of Jaundice in detail.								
25.1.3	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between Direct and Indirect Hyperbilirubinemia.								
25.1.4	At the end of session, phase II M.B.B.S student must be able to describe correctly Neonatal jaundice.								

PA25.2	Describe the pathophysiology and pathologic changes seen in hepatic failure and their clinical manifestations, complications and consequences	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
25.2.1	At the end of session, phase II M.B.B.S student must be able to enumerate and Discuss correctly causes of hepatic failure.								
25.2.2	At the end of session, phase II M.B.B.S student must be able to discuss pathophysiology of hepatic failure and fulminant hepatitis accurately.								
25.2.3	At the end of session, phase II M.B.B.S student must be able to describe gross and microscopic features in hepatic failure in detail.								
25.2.4	At the end of session, phase II M.B.B.S student must be able to discuss appropriately complications and consequences of hepatic failure.								
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	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
25.3.1	At the end of session, phase II M.B.B.S student must be able to Define hepatitis precisely.								
25.3.2	At the end of session, phase II M.B.B.S student must be able to discuss causes and pathogenesis of viral hepatitis correctly.								
25.3.3	At the end of session, phase II M.B.B.S student must be able to discuss clinical features and morphology of viral hepatitis correctly.								
25.3.4	At the end of session, phase II M.B.B.S student must be able to describe lab features of viral hepatitis correctly.								
25.3.5	At the end of session, phase II M.B.B.S student must be able to discuss correctly complications and consequences of viral hepatitis.								
25.3.6	At the end of session, phase II M.B.B.S student must be able to discuss appropriately Chronic Hepatitis and its types.								
25.3.7	At the end of session, phase II M.B.B.S student must be able to discuss correctly etiopathogenesis and clinical features of toxic hepatitis.								
25.3.8	At the end of session, phase II M.B.B.S student must be able to discuss briefly morphology of toxic hepatitis								

PA 25.4	Describe the pathophysiology, pathology and progression of alcoholic liver disease including cirrhosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
25.4.1	At the end of session, phase II M.B.B.S student must be able to define alcoholic liver disease precisely.								
25.4.2	At the end of session, phase II M.B.B.S student must be able to discuss in detail the etiopathogenesis, and stages of alcoholic liver disease.								
25.4.3	At the end of session, phase II M.B.B.S student must be able to discuss accurately morphology of different stages of alcoholic liver disease.								
25.4.4	At the end of session, phase II M.B.B.S student must be able to define and classify Cirrhosis precisely.								
25.4.5	At the end of session, phase II M.B.B.S student must be able to briefly discuss Post- Necrotic Cirrhosis.								
25.4.6	At the end of session, phase II M.B.B.S student must be able to discuss etiopathogenesis of cirrhosis in detail.								
25.4.7	At the end of session, phase II M.B.B.S student must be able to describe the clinical features and complications of cirrhosis accurately.								
25.4.8	At the end of session, phase II M.B.B.S student must be able to discuss gross and microscopic findings in cirrhosis correctly.								
PA25.5	Describe the etiology, pathogenesis and complications of portal hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
25.5.1	At the end of session, phase II M.B.B.S student must be able to define portal hypertension precisely.								
25.5.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate and discuss Pre-hepatic, hepatic and Post hepatic causes of Portal Hypertension.								
25.5.3	At the end of session, phase II M.B.B.S student must be able to discuss correctly etiopathogenesis of portal hypertension.								

25.5.4	At the end of session, phase II M.B.B.S student must be able to discuss accurately clinical features and consequences of Portal Hypertension.								
25.5.5	At the end of session, phase II M.B.B.S student must be able to discuss complications of portal hypertension briefly.								
PA25.6	Interpret liver function and viral hepatitis serology panel. Distinguish obstructive from non-obstructive jaundice based on clinical features and liver function tests (Lower level of learning for this competency has been covered in Phase 1, BI 11.17)	S	P	Y	DOAP session	Skill assessment	1	General Medicine, General Surgery	
25.6.1	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between obstructive and non-obstructive causes of jaundice.								
25.6.2	At the end of session, phase II M.B.B.S student must be able to correctly interpret LFT s with viral hepatitis serology.								
25.6.3	At the end of session, phase II M.B.B.S student must be able to relate and interpret the Liver function test to the different stages of Liver disease accurately.								
25.6.4	At the end of session, phase II M.B.B.S student must be able to correctly describe the Gross and microscopic findings of cirrhosis.								
25.6.5	At the end of session, phase II M.B.B.S student must be able to discuss the Gross and microscopic findings of chronic cholecystitis correctly.								
25.6.6	At the end of session, phase II M.B.B.S student must be able to briefly discuss different types of gallstones								
Topic: Respiratory System		**Number of competencies: (10)**				**Number of procedure that require certific**			
PA26.1	Define and describe the etiology, types, pathogenesis, stages morphology and complications of pneumonia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
26.1.1	At the end of session, phase II M.B.B.S student must be able to define pneumonia and enumerate the various types of pneumonia precisely.								
26.1.2	At the end of session, phase II M.B.B.S student must be able to discuss in detail the etiology and pathogenesis of pneumonia.								
26.1.3	At the end of session, phase II M.B.B.S student must be able to accurately describe the morphology and various stages of pneumonia.								
26.1.4	At the end of session, phase II M.B.B.S student must be able to describe briefly the various complications of pneumonia.								

PA26.2	Describe the etiology, gross and microscopic appearance and complications of lung abscess	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
26.2.1	At the end of session, phase II M.B.B.S student must be able to define lung abscess precisely.								
26.2.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly etiology of lung abscess.								
26.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe gross and microscopic appearance of lung abscess.								
26.2.4	At the end of session, phase II M.B.B.S student must be able to correctly describe the complications of lung abscess.								
PA26.3	Define and describe the etiology, types, pathogenesis, stages, morphology, complications, evaluation of Obstructive airway disease (OAD) and bronchiectasis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	Microbiology
26.3.1	At the end of session, phase II M.B.B.S student must be able to define obstructive airway disease (OAD) and enlist its various types precisely.								
26.3.2	At the end of session, phase II M.B.B.S student must be able to define emphysema precisely and enumerate its types								
26.3.3	At the end of session, phase II M.B.B.S student must be able to discuss in detail the etio-pathogenesis and morphology of emphysema.								
26.3.4	At the end of session, phase II M.B.B.S student must be able to discuss correctly the evaluation and complications of emphysema.								
26.3.5	At the end of session, phase II M.B.B.S student must be able to define chronic bronchitis precisely.								
26.3.6	At the end of session, phase II M.B.B.S student must be able to correctly describe the etio—pathogenesis and morphology of chronic bronchitis.								
26.3.7	At the end of session, phase II M.B.B.S student must be able to discuss correctly the evaluation and complications of chronic bronchitis.								
26.3.8	At the end of session, phase II M.B.B.S student must be able to define asthma precisely and enumerate its types								
26.3.9	At the end of session, phase II M.B.B.S student must be able to discuss in detail the etio-pathogenesis and morphology of asthma.								

26.3.10	At the end of session, phase II M.B.B.S student must be able to discuss correctly the evaluation and complications of asthma.								
26.3.11	At the end of session, phase II M.B.B.S student must be able to define bronchiectasis precisely and enumerate its types								
26.3.12	At the end of session, phase II M.B.B.S student must be able to discuss in detail the etio-pathogenesis and morphology of bronchiectasis.								
26.3.13	At the end of session, phase II M.B.B.S student must be able to discuss correctly the evaluation and complications of bronchiectasis.								
PA26.4	Define and describe the etiology, types, pathogenesis, stages, morphology microscopic appearance and complications of tuberculosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
26.4.1	At the end of session, phase II M.B.B.S student must be able to define tuberculosis precisely.								
26.4.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the etiology, and modes of transmission of tuberculosis								
26.4.3	At the end of session, phase II M.B.B.S student must be able to discuss in detail the pathogenesis and stages of tuberculosis.								
26.4.4	At the end of session, phase II M.B.B.S student must be able to describe the types of tuberculosis with relevant morphology appropriately.								
26.4.5	At the end of session, phase II M.B.B.S student must be able to describe the microscopic appearance of tuberculosis accurately.								
26.4.6	At the end of session, phase II M.B.B.S student must be able to correctly discuss the complications and fate of primary and secondary tuberculosis.								
PA26.5	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Community Medicine	
26.5.1	At the end of session, phase II M.B.B.S student must be able to define chronic interstitial lung diseases and enlist its various types precisely.								
26.5.2	At the end of session, phase II M.B.B.S student must be able to define occupational lung disease precisely.								

26.5.3	At the end of session, phase II M.B.B.S student must be able to correctly enumerate various oocupational lung diseases based on casautive agents and exposure.								
26.5.4	At the end of session, phase II M.B.B.S student must be able to correctly describe the pathogenesis and stages of coal workers pneumoconiosis.								
26.5.5	At the end of session, phase II M.B.B.S student must be able to describe morphology and complications of coal workers Pneumoconiosis correctly								
26.5.6	At the end of session, phase II M.B.B.S student must be able to briefly describe the pathogenesis of silicosis.								
26.5.7	At the end of session, phase II M.B.B.S student must be able to briefly describe the morphology and course of silicosis.								
26.5.8	At the end of session, phase II M.B.B.S student must be able to briefly describe pathogenesis of asbestos related diseases.								
26.5.9	At the end of session, phase II M.B.B.S student must be able to correctly describe the morphology and course of asbestos related diseases.								
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	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
26.6.1	At the end of session, phase II M.B.B.S student must be able to discuss the etio- pathogenesis of Lung cancer including genetic, environmental influence correctly.								
26.6.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the various types of lung cancer.								
26.6.3	At the end of session, phase II M.B.B.S student must be able to describe the morphology and microscopic appearance of various subtypes of lung cancer accurately.								
26.6.4	At the end of session, phase II M.B.B.S student must be able to describe the staging, and metastasis of lung cancer correctly								
26.6.5	At the end of session, phase II M.B.B.S student must be able to describe the complications of lung cancer correctly including paraneoplastic syndromes								

PA26.7	Define and describe the etiology, types, exposure, genetics environmental influence, pathogenesis, morphology, microscopic appearance and complications of mesothelioma	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Community Medicine	
26.7.1	At the end of session, phase II M.B.B.S student must be able to define mesothelioma.								
26.7.2	At the end of session, phase II M.B.B.S student must be able to describe the etiology, genetic and environmental influence in pathogenesis correctly.								
26.7.3	At the end of session, phase II M.B.B.S student must be able to correctly describe the morphology and microscopic types of mesothelioma.								
26.7.4	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical course and complications of mesothelioma.								
Topic: Cardiovascular system		**Number of competencies: (10)**				**Number of procedure that require certifica**			
PA27.1	Distinguish arteriosclerosis from atherosclerosis. Describe the pathogenesis and pathology of various causes and types of arteriosclerosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
27.1.1	At the end of session, phase II M.B.B.S student must be able to precisely Define and describe arteriosclerosis.								
27.1.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly the etiopathogenesis and types of arteriosclerosis.								
27.1.3	At the end of session, phase II M.B.B.S student must be able to define and describe in detail the etiopathogenesis and morphology of atherosclerosis.								
27.1.4	At the end of session, phase II M.B.B.S student must be able to discuss Lipid metabolism correctly. (Lower level of learning for this competency has been covered in Phase 1, BI 4.3, 4.4)								
PA27.2	Describe the etiology, dynamics, pathology types and complications of aneurysms including aortic aneurysms	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
27.2.1	At the end of session, phase II M.B.B.S student must be able to define and classify aneurysm correctly.								

27.2.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly the etiopathogenesis of different types of aneurysms.								
27.2.3	At the end of session, phase II M.B.B.S student must be able to enlist accurately complications of aneurysms including aortic aneurysms.								
PA27.3	Describe the etiology, types, stages pathophysiology, pathology and complications of heart failure	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, physiology	
27.3.1	At the end of session, phase II M.B.B.S student must be able to define heart failure correctly and discuss its types with relevant pathological morphology.								
27.3.2	At the end of session, phase II M.B.B.S student must be able to correctly Describe stages of heart failure and its pathology.								
27.3.3	At the end of session, phase II M.B.B.S student must be able to enumerate and Discuss complications of heart failure Correctly								
PA27.4	Describe the etiology, pathophysiology, pathology, gross and microscopic features, criteria and complications of rheumatic fever	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
27.4.1	At the end of session, phase II M.B.B.S student must be able to correctly describe rheumatic heart disease and its etiopathogenesis.								
27.4.2	At the end of session, phase II M.B.B.S student must be able to discuss in detail morphology of rheumatic heart disease.								
27.4.3	At the end of session, phase II M.B.B.S student must be able to discuss complication of rheumatic heart disease including valvular pathological changes correctly.								
27.4.4	At the end of session, phase II M.B.B.S student must be able to correctly describe extra cardiac involvement of rheumatic fever.								
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	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
27.5.1	At the end of session, phase II M.B.B.S student must be able to correctly describe epidemiology and risk factors of ischemic heart disease.								
27.5.2	At the end of session, phase II M.B.B.S student must be able to describe etiopathogenesis of IHD in detail.								

27.5.3	At the end of session, phase II M.B.B.S student must be able to describe in detail the morphology and clinical presentation of IHD.								
27.5.4	At the end of session, phase II M.B.B.S student must be able to discuss briefly complications of IHD.								
27.5.5	At the end of session, phase II M.B.B.S student must be able to discuss accurately the lab diagnosis of myocardial infarction.								
PA27.6	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of infective endocarditis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
27.6.1	At the end of session, phase II M.B.B.S student must be able to correctly describe infective endocarditis and its pathophysiology.								
27.6.2	At the end of session, phase II M.B.B.S student must be able to discuss gross and microscopic features of infective endocarditis correctly.								
27.6.3	At the end of session, phase II M.B.B.S student must be able to briefly describe the diagnosis and complication of infective endocarditis.								
27.6.4	At the end of session, phase II M.B.B.S student must be able to describe differences in vegetation of rheumatic heart disease and infective endocarditis correctly.								
PA27.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of pericarditis and pericardial effusion	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
27.7.1	At the end of session, phase II M.B.B.S student must be able to correctly describe pericarditis and its various types with causes.								
27.7.2	At the end of session, phase II M.B.B.S student must be able to briefly describe the morphological pathology of pericarditis.								
27.7.3	At the end of session, phase II M.B.B.S student must be able to discuss complications of pericardial effusion briefly.								
PA27.8	Interpret abnormalities in cardiac function testing in acute coronary syndromes (Lower level of learning	S	SH	Y	DOAP session	Skill Assessment		General Medicine,	
27.8.1	At the end of session, phase II M.B.B.S student must be able to discuss correctly diagnosis of acute coronary syndromes.								
27.8.2	At the end of session, phase II M.B.B.S student must be able to enumerate and Describe relevant serum cardiac markers in ischemic heart disease accurately.								

27.8.3	At the end of session, phase II M.B.B.S student must be able to discuss differential diagnosis of biochemical markers in relation to stroke and ischemic heart disease accurately.								
PA27.9	Classify and describe the etiology, types, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of cardiomyopathies	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Physiology	
27.9.1	At the end of session, phase II M.B.B.S student must be able to define precisely and classify cardiomyopathies on the basis of etiology.								
27.9.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the etiopathogenesis of different types of cardiomyopathies.								
27.9.3	At the end of session, phase II M.B.B.S student must be able to briefly describe morphology (gross and microscopy) of cardiomyopathies.								
27.9.4	At the end of session, phase II M.B.B.S student must be able to discuss diagnosis of cardiomyopathy and its complications correctly.								
PA27.10	Describe the etiology, pathophysiology, pathological features and complications of syphilis on the cardiovascular system	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
27.10.1	At the end of session, phase II M.B.B.S student must be able to briefly describe etiology and pathophysiology of cardiovascular syphilis (in relation to heart and aorta).								
27.10.2	At the end of session, phase II M.B.B.S student must be able to briefly describe morphologic pathology of syphilis of CVS.								
27.10.3	At the end of session, phase II M.B.B.S student must be able to briefly describe complications of syphilis of CVS.								
Topic: Urinary Tract		**Number of competencies: (16)**				**Number of procedure that require certifica**			
PA28.1	Describe the normal histology of the kidney Recap . Lower level of competency already achieved in phase I Py7.1,	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
28.1.1	At the end of session, phase II M.B.B.S student must be able to correctly Describe the structure of nephron correctly								
28.1.2	At the end of session, phase II M.B.B.S student must be able to describe the normal histologic structures of glomeruli, tubules, interstitium and blood vessels correctly								
28.1.3	At the end of session, phase II M.B.B.S student must be able to correctly describe the ultrastructure of glomerular filtration membrane								

PA28.2	Define, classify and distinguish the clinical 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			
28.2.1	At the end of session, phase II M.B.B.S student must be able to define renal failure and classify on the basis of pathophysiology precisely								
28.2.2	At the end of session, phase II M.B.B.S student must be able to define Nephrotic syndrome and enumerate its causes precisely								
28.2.3	At the end of session, phase II M.B.B.S student must be able to correctly Describe the etiopathogenesis and clinical findings of nephrotic syndrome.								
28.2.4	At the end of session, phase II M.B.B.S student must be able to correctly Describe the urinary and laboratory findings of nephrotic syndrome								
28.2.5	At the end of session, phase II M.B.B.S student must be able to define Nephritic syndrome and enumerate its causes precisely.								
28.2.6	At the end of session, phase II M.B.B.S student must be able to correctly Describe the etiopathogenesis and clinical findings ofnephritic syndrome.								
28.2.7	At the end of session, phase II M.B.B.S student must be able to correctly describe the urinary and laboratory findings of nephritic syndrome.								
PA28.3	Define and describe the etiology, precipitation 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	
28.3.1	At the end of session, phase II M.B.B.S student must be able to define acute renal failure precisely and discuss the etiopathogenesis								
28.3.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical presentation, urinary and laboratory findings in acute renal failure								
28.3.3	At the end of session, phase II M.B.B.S student must be able to enlist the complications of acute renal failure correctly								
PA28.4	Define and describe the etiology, precipitation 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	
28.4.1	At the end of session, phase II M.B.B.S student must be able to define chronic renal failure and discuss the etiopathogenesis correctly								

28.4.2	At the end of session, phase II M.B.B.S student must be able to describe the clinical presentation, urinary and laboratory findings in chronic renal failure correctly								
28.4.3	At the end of session, phase II M.B.B.S student must be able to enlist the 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 manifestation of glomerulonephritis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
28.5.1	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis of glomerular injury in detail								
28.5.2	At the end of session, phase II M.B.B.S student must be able to classify Glomerulonephritis correctly								
28.5.3	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation of acute post-infectious glomerulonephritis correctly								
28.5.4	At the end of session, phase II M.B.B.S student must be able to describe urinary , laboratory findings and disease \progression of Acute post-infectious glomerulonephritis correctly								
28.5.5	At the end of session, phase II M.B.B.S student must be able to correctly Describe the gross and relevant microscopic (light immunofluorescence/ electron) findings of Acute post infectious glomerulonephritis								
28.5.6	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation of Rapidly progressive Glomerulonephritis correctly								
28.5.7	At the end of session, phase II M.B.B.S student must be able to correctly Describe the gross and relevant microscopic (light, immunofluorescence/ electron) findings of Rapidly Progressive Glomerulonephritis								
28.5.8	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation of Membranous Nephropathy correctly								
28.5.9	At the end of session, phase II M.B.B.S student must be able to describe the urinary and laboratory findings and disease progression of rapidly Progressive Glomerulonephritis correctly								

28.5.10	At the end of session, phase II M.B.B.S student must be able to correctly Describe the gross and relevant microscopic (light, immunofluorescence/ electron) findings of Membranous Nephropathy								
28.5.11	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation of Minimal change disease correctly								
28.5.12	At the end of session, phase II M.B.B.S student must be able to describe urinary and laboratory findings and disease progression of minimal change disease correctly								
28.5.13	At the end of session, phase II M.B.B.S student must be able to correctly describe the gross and relevant microscopic (light, immunofluorescence/electron) findings of Minimal change disease								
28.5.14	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation of Focal segmental Glomerulosclerosis correctly								
28.5.15	At the end of session, phase II M.B.B.S student must be able to describe the urinary and laboratory findings and disease progression of focal segmental glomerulosclerosis correctly								
28.5.16	At the end of session, phase II M.B.B.S student must be able to correctly describe the gross and relevant microscopic (light, immunofluorescence/electron) findings of Focal segmental glomerulosclerosis								
28.5.17	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation, of Membranoproliferative Gomerulonephritis correctly								
28.5.18	At the end of session, phase II M.B.B.S student must be able to describe the urinary, laboratory findings and disease progression of Membranoproliferative Gomerulonephritis correctly								
28.5.19	At the end of session, phase II M.B.B.S student must be able to correctly describe the gross and relevant microscopic (light, immunofluorescence/electron) findings of Membranoproliferative Glomerulonephritis								
28.5.20	At the end of session, phase II M.B.B.S student must be able to briefly discuss dense deposit disease.								
28.5.21	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, clinical presentation, urinary and laboratory findings and disease progression of chronic glomerulonephritis correctly								

28.5.22	At the end of session, phase II M.B.B.S student must be able to describe the gross and relevant microscopic (light, immunofluorescence/electron) findings of chronic glomerulonephritis correctly								
28.5.23	At the end of session, phase II M.B.B.S student must be able to discuss briefly Hereditary Glomerulonephritis								
PA28.6	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complication of lgA nephropathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
28.6.1	At the end of session, phase II M.B.B.S student must be able to define IgA nephropathy precisely and briefly describe its etiopathogenesis								
28.6.2	At the end of session, phase II M.B.B.S student must be able to discuss briefly the clinical presentation and disease progression of IgA nephropathy								
28.6.3	At the end of session, phase II M.B.B.S student must be able to discuss the urinary and laboratory findings of IgA nephropathy correctly								
PA28.7	Enumerate and describe the findings in glomerular manifestation of systemic disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
28.7.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate the different systemic disorders with glomerular manifestations								
28.7.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the gross and microscopic features of Diabetic Nephropathy								
28.7.3	At the end of session, phase II M.B.B.S student must be able to describe the gross and microscopic features of Lupus Nephritis correctly								
PA28.8	Enumerate and classify disease affecting the tubular interstitium	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
28.8.1	At the end of session, phase II M.B.B.S student must be able to precisely enumerate and classify various tubular interstitial diseases on the basis of etiology								
28.8.2	At the end of session, phase II M.B.B.S student must be able to briefly discuss various causes induced tubulointerstitial nephritis								
28.8.3	At the end of session, phase II M.B.B.S student must be able to describe briefly Myeloma Nephropathy								

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	
28.9.1	At the end of session, phase II M.B.B.S student must be able to define acute tubular necrosis precisely								
28.9.2	At the end of session, phase II M.B.B.S student must be able to discuss the etiopathogenesis of acute tubular necrosis appropriately								
28.9.3	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical, morphological, urinary and laboratory findings in acute tubular necrosis								
28.9.4	At the end of session, phase II M.B.B.S student must be able to enumerate the complications and describe the disease progression of acute tubular necrosis correctly								
28.9.5	At the end of session, phase II M.B.B.S student must be able to correctly differentiate between Ischemic and Toxic acute tubular necrosis								
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 Medicine	
28.10.1	At the end of session, phase II M.B.B.S student must be able to discuss the etiopathogenesis of acute Pyelonephritis correctly								
28.10.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the clinical, morphological, urinary and laboratory findings in acute Pyelonephritis								
28.10.3.	At the end of session, phase II M.B.B.S student must be able to correctly enumerate complications of acute pyelonephritis								
28.10.4	At the end of session, phase II M.B.B.S student must be able to discuss the etiopathogenesis of chronic Pyelonephritis correctly								
28.10.5	At the end of session, phase II M.B.B.S student must be able to describe the clinical, morphological, urinary and laboratory findings in chronic Pyelonephritis correctly								
28.10.6	At the end of session, phase II M.B.B.S student must be able to briefly discuss Reflux nephropathy								
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	

28.11.1	At the end of session, phase II M.B.B.S student must be able to define hypertension and classify on basis of etiology precisely								
28.11.2	At the end of session, phase II M.B.B.S student must be able to discuss the etiopathogenesis of primary and secondary hypertension correctly								
28.11.3	At the end of session, phase II M.B.B.S student must be able to describe the clinical, morphological, urinary and laboratory findings of benign Nephrosclerosis correctly								
28.11.4	At the end of session, phase II M.B.B.S student must be able to describe the clinical, morphological, urinary and laboratory findings in malignant nephrosclerosis/accelerated hypertension correctly								
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	
28.12.1	At the end of session, phase II M.B.B.S student must be able to classify cystic diseases of kidney precisely								
28.12.2	At the end of session, phase II M.B.B.S student must be able to define and correctly describe the genetics, inheritance, etiopathogenesis, clinical and morphological findings in Polycystic kidney disease-Adult								
28.12.3	At the end of session, phase II M.B.B.S student must be able to define and correctly describe the genetics, inheritance, etiopathogenesis, clinical and morphological findings in Polycystic kidney disease-Infantile								
28.12.4	At the end of session, phase II M.B.B.S student must be able to briefly describe Medullary cystic disease								
28.12.5	At the end of session, phase II M.B.B.S student must be able to briefly describe multicystic renal dysplasia								
28.12.6	At the end of session, phase II M.B.B.S student must be able to briefly describe acquired cystic disease								
PA28.13	Define classify and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features progression and complications of renal stone disease and obstructive uropathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
28.13.1	At the end of session, phase II M.B.B.S student must be able to enumerate causes of Obstructive uropathy correctly								

28.3.2	At the end of session, phase II M.B.B.S student must be able to enumerate different types of urinary calculi and discuss the etiopathogenesis of calculus formation correctly								
28.13.3	At the end of session, phase II M.B.B.S student must be able to describe clinical and urinary findings in renal stone disease correctly								
28.13.4	At the end of session, phase II M.B.B.S student must be able to enumerate the complications of urinary calculi correctly								
28.13.5	At the end of session, phase II M.B.B.S student must be able to describe briefly the etiopathogenesis and morphological findings in Hydronephrosis								
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	
28.14.1	At the end of session, phase II M.B.B.S student must be able to classify renal tumors pecisely								
28.14.2	At the end of session, phase II M.B.B.S student must be able to discuss the genetics and etiology of renal cell carcinoma correctly								
28.14.3	At the end of session, phase II M.B.B.S student must be able to discuss the presenting clinical features of renal cell carcinoma and describe the different morphological variants correctly								
28.14.4	At the end of session, phase II M.B.B.S student must be able to discuss the progression and spread of renal cell carcinoma correctly								
28.14.5	At the end of session, phase II M.B.B.S student must be able to describe the etiology, genetics and clinical presentation of Wilm's Tumor correctly								
28.14.6	At the end of session, phase II M.B.B.S student must be able to describe the morphological (gross and microscopic) features of Wilm's tumor correctly								
PA28.15	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of thrombotic angiopathies	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
28.15.1	At the end of session, phase II M.B.B.S student must be able to discuss etiopathogenesis and genetics in thrombotic microangiopathies correctly								
28.15.2	At the end of session, phase II M.B.B.S student must be able to describe the clinical presentation and morphological features of thrombotic microangiopathies correctly								
PA28.16	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of urothelial tumors	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	

28.16.1	At the end of session, phase II M.B.B.S student must be able to classify urothelial tumors precisely.								
28.16.2	At the end of session, phase II M.B.B.S student must be able to describe the etiopathogenesis, morphology and clinical presentation of Urothelial carcinoma correctly								
28.16.3	At the end of session, phase II M.B.B.S student must be able to discuss briefly the histologic grading and staging of urothelial tumors								
Topic: Male Genital Tract		**Number of competencies : (05)**				**Number of procedure that require certifica**			
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	
29.1.1	At the end of session, phase II M.B.B.S student must be able to classify testicular tumors precisely								
29.1.2	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis and morphology of various subtypes of testicular tumors correctly								
29.1.3	At the end of session, phase II M.B.B.S student must be able to describe the spread, progression and diagnostic tests of testicular Tumours 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	
29.2.1	At the end of session, phase II M.B.B.S student must be able to discuss the pathogenesis of premalignant lesions of carcinoma penis.								
29.2.2	At the end of session, phase II M.B.B.S student must be able to correctly describe the morphology, clinical presentation of carcinoma penis.								
29.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe the progression and spread of carcinoma penis.								
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	
29.3.1	At the end of session, phase II M.B.B.S student must be able to discuss the etiology, pathogenesis and hormonal dependency of benign prostatic hyperplasia correctly.								

29.3.2	At the end of session, phase II M.B.B.S student must be able to describe the clinical presentation and morphology of benign prostatic hyperplasia correctly.								
29.3.3	At the end of session, phase II M.B.B.S student must be able to describe the diagnostic tests and management of benign prostatic hyperplasia appropriately								
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	
29.4.1	At the end of session, phase II M.B.B.S student must be able to describe the incidence, etiology and pathogenesis of carcinoma of prostate correctly.								
29.4.2	At the end of session, phase II M.B.B.S student must be able to describe the morphology of carcinoma of prostate correctly.								
29.4.3	At the end of session, phase II M.B.B.S student must be able to discuss the clinical course, grading, staging, progression and spread of carcinoma of prostate correctly.								
PA29.5	Describe the etiology, pathogenesis, pathology and progression of prostatitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
29.5.1	At the end of session, phase II M.B.B.S student must be able to enlist the various types of prostatitis correctly.								
29.5.2	At the end of session, phase II M.B.B.S student must be able to describe the etiology, pathogenesis and morphology of various subtypes of prostatitis correctly								
Topic: Female Genital Tract		**Number of competencies: (09)**				**Number of procedures that require certifica**			
PA30.1	Describe the epidemiology, pathogenesis, pathology, etiology, screening, diagnosis and progression of carcinoma of the cervix	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
30.1.1	At the end of session, phase II M.B.B.S student must be able to correctly describe epidemiology of carcinoma of cervix.								
30.1.2	At the end of session, phase II M.B.B.S student must be able to describe etiopathogenesis of carcinoma of cervix in detail.								
30.1.3	At the end of session, phase II M.B.B.S student must be able to briefly describe cervical screening and diagnostic features (Bethesda classification)								
30.1.4	At the end of session, phase II M.B.B.S student must be able to describe progression of carcinoma of cervix correctly								

PA30.2	Describe the pathogenesis, etiology, pathology, diagnosis, progression and spread of carcinoma of the endometrium	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
30.2.1	At the end of session, phase II M.B.B.S student must be able to briefly describe the etiology of carcinoma of endometrium (FIGO).								
30.2.2	At the end of session, phase II M.B.B.S student must be able to correctly describe pathogenesis of carcinoma of endometrium.								
30.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe morphological features of carcinoma of endometrium.								
30.2.4	At the end of session, phase II M.B.B.S student must be able to correctly describe progression and spread of carcinoma of endometrium.								
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	
30.3.1	At the end of session, phase II M.B.B.S student must be able to describe etiology of Leiomyoma and Leiomyosaricoma briefly.								
30.3.2	At the end of session, phase II M.B.B.S student must be able to enumerate various leiomyomas on the basis of their location precisely.								
30.3.3	At the end of session, phase II M.B.B.S student must be able to briefly describe pathogenesis of Leiomyomas and leiomyosarcomas.								
30.3.4	At the end of session, phase II M.B.B.S student must be able to correctly describe morphological features of Leiomyomas and Leiomyosarcomas.								
30.3.5	At the end of session, phase II M.B.B.S student must be able to describe progress and spread of tumor leiomyomas and Leiomyosarcomas correctly								
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	
30.4.1	At the end of session, phase II M.B.B.S student must be able to classify ovarian tumor precisely.								
30.4.2	At the end of session, phase II M.B.B.S student must be able to briefly describe etiology of ovarian tumors.								
30.4.3	At the end of session, phase II M.B.B.S student must be able to briefly describe pathogenesis of ovarian tumors.								
30.4.4	At the end of session, phase II M.B.B.S student must be able to correctly describe morphological features of various ovarian tumors.								

30.4.5	At the end of session, phase II M.B.B.S student must be able to correctly enumerate clinical features of various ovarian tumors.								
30.4.6	At the end of session, phase II M.B.B.S student must be able to describe routes of spread of various ovarian tumors correctly.								
30.4.7	At the end of session, phase II M.B.B.S student must be able to correctly enumerate complications of various ovarian tumors.								
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	
30.5.1	At the end of session, phase II M.B.B.S student must be able to classify gestational trophoblastic diseases and neoplasms precisely								
30.5.2	At the end of session, phase II M.B.B.S student must be able to discuss Correctly the etiopathogenesis of complete and partial hydatidiform mole								
30.5.3	At the end of session, phase II M.B.B.S student must be able to describe the clinical features of complete and partial hydatidiform mole correctly								
30.5.4	At the end of session, phase II M.B.B.S student must be able to describe the morphological features of complete and partial hydatidiform mole correctly								
30.5.5	At the end of session, phase II M.B.B.S student must be able to compare and contrast between complete and partial hydatidiform mole correctly								
30.5.6	At the end of session, phase II M.B.B.S student must be able to describe the etio-pathogeneis of choriocarcinoma correctly								
30.5.7	At the end of session, phase II M.B.B.S student must be able to briefly describe the clinical features and spread of choriocarcinoma								
30.5.8	At the end of session, phase II M.B.B.S student must be able to briefly describe morphological features and complications of choriocarcinoma								
PA30.6	Describe the etiology and morphologic features of cervicitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
30.6.1	At the end of session, phase II M.B.B.S student must be able to briefly describe etiology of cervicitis.								
30.6.2	At the end of session, phase II M.B.B.S student must be able to precisely enumerate causative organisms.								
30.6.3	At the end of session, phase II M.B.B.S student must be able to differentiate Acute cervicitis from Chronic cervictits accurately.								

30.6.4	At the end of session, phase II M.B.B.S student must be able to correctly Describe morphological features of cervicitis.								
PA30.7	Describe the etiology, hormonal dependence, features and morphology of endometriosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
30.7.1	At the end of session, phase II M.B.B.S student must be able to correctly describe the etiology of endometriosis.								
30.7.2	At the end of session, phase II M.B.B.S student must be able to describe hormonal features of endometriosis correctly.								
30.7.3	At the end of session, phase II M.B.B.S student must be able to describe morphologic features of endometriosis correctly.								
30.7.4	At the end of session, phase II M.B.B.S student must be able to describe clinical presentation of endometriosis correctly.								
PA30.8	Describe the etiology and morphologic features of adenomyosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
30.8.1	At the end of session, phase II M.B.B.S student must be able to define Adenomyosis precisely.								
30.8.2	At the end of session, phase II M.B.B.S student must be able to correctly describe etiology of adenomyosis.								
30.8.3	At the end of session, phase II M.B.B.S student must be able to describe morphological features of adenomyosis correctly								
30.8.4	At the end of session, phase II M.B.B.S student must be able to describe clinical presentation of adenomyosis correctly								
PA30.9	Describe the etiology, hormonal dependence and morphology of endometrial hyperplasia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Obstetrics & Gynaecology	
30.9.1	At the end of session, phase II M.B.B.S student must be able to define endometrial hyperplasia precisely.								
30.9.2	At the end of session, phase II M.B.B.S student must be able to classify endometrial hyperplasia.precisely								
30.9.3	At the end of session, phase II M.B.B.S student must be able to correctly describe hormonal dependence basing endometrial hyperplasia.								
30.9.4	At the end of session, phase II M.B.B.S student must be able to correctly describe morphological features of endometrial hyperplasia.								

30.9.5	At the end of session, phase II M.B.B.S student must be able to describe clinical presentation of endometrial hyperplasia briefly.								
Topic: Breast		**Number of competencies: (04)**						**Number of procedure that require certification: (**	
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	
31.1.1	At the end of session, phase II M.B.B.S student must be able to classify and correctly describe the various types of Benign epithelial lesions of breast.								
31.1.1	At the end of session, phase II M.B.B.S student must be able to discuss the morphology and microscopic appearance of various subtypes of benign epithelial lesions of breast Correctly.								
31.1.2	At the end of session, phase II M.B.B.S student must be able to discuss correctly various types of stromal tumours and their clinical presentation.								
31.1.3	At the end of session, phase II M.B.B.S student must be able to describe the morphology and microscopic appearance of stromal tumours Correctly.								
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	
31.2.1	At the end of session, phase II M.B.B.S student must be able to discuss the epidemiology and risk factors of breast carcinoma.								
31.2.2	At the end of session, phase II M.B.B.S student must be able to discuss the etiology and pathogenesis of breast carcinoma								
31.2.3	At the end of session, phase II M.B.B.S student must be able to discuss the classification of breast carcinoma correctly .								
31.2.4	At the end of session, phase II M.B.B.S student must be able to discuss staging, grading of breast carcinoma accurately								
31.2.5	At the end of session, phase II M.B.B.S student must be able to discuss spread and prognostic factors of breast carcinoma								
PA31.3	Describe and identify the morphologic and microscopic features of carcinoma of the breast (Lower level of learning for this competency has been covered in PA 31.2)	S	SH	N	DOAP session	Skill assessment		General Surgery	

31.3.1	At the end of session, phase II M.B.B.S student should be able to correctly identify and describe the morphology and microscopic features of various types of breast carcinoma								
PA31.4	Enumerate and describe the etiology, hormonal dependency and pathogenesis of gynecomastia	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pediatrics,	
31.4.1	At the end of session, phase II M.B.B.S student should be able to define Gynaecomastia precisely.								
31.4.2	At the end of session, phase II M.B.B.S student should be able to discuss the etiology and pathogenesis of gynaecomastia correctly.								
31.4.3	At the end of session, phase II M.B.B.S student should be able to describe the morphology and microscopy of gynaecomastia briefly.								
Topic: Endocrine system	**Number of competencies: (09)**					**Number of procedures that require certification : (N**			
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	
32.1.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate thyroid swellings.								
32.1.2	At the end of session, phase II M.B.B.S student must be able to classify thyroid swellings precisely.								
31.1.3	At the end of session, phase II M.B.B.S student must be able to correctly Describe etiopathogenesis of thyroid swelling.								
31.1.4	At the end of session, phase II M.B.B.S student must be able to briefly describe iodine dependency of thyroid swellings.								
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	
32.2.1	At the end of session, phase II M.B.B.S student must be able to define hyperthyroidism precisely.								

32.2.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate causes of hyperthyroidism								
32.2.3	At the end of session, phase II M.B.B.S student must be able to correctly describe etiopathogenesis of Hyperthroidism.								
32.2.4	At the end of session, phase II M.B.B.S student must be able to briefly describe clinical manifestation and imaging features of thyrotoxicosis.								
PA32.3	Describe the etiology, pathogenesis, manifestations, laboratory and imaging features and course of hypothyroidism	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
32.3.1	At the end of session, phase II M.B.B.S student must be able to define hypothyroidism precisely								
32.3.2	At the end of session, phase II M.B.B.S student must be able to describe etiopathogenesis of hypothyroidism correctly.								
32.3.3	At the end of session, phase II M.B.B.S student must be able to describe clinical features, lab diagnosis of hypothyroidism correctly.								
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	
32.4.1	At the end of session, phase II M.B.B.S student must be able to define diabetes mellitus precisely.								
32.4.2	At the end of session, phase II M.B.B.S student must be able to describe epidermiology of Diabetes mellitus correctly								
32.4.3	At the end of session, phase II M.B.B.S student must be able to classify types of diabetes Mellitus precisely.								
32.4.4	At the end of session, phase II M.B.B.S student must be able to correctly describe Etiopathogenesis of various types of Diabetes Mellitus.								
32.4.5	At the end of session, phase II M.B.B.S student must be able to correctly describe clinical features of Diabetes Mellitus.								
32.4.6	At the end of session, phase II M.B.B.S student must be able to describe short term, long term complication and progression of diabetes Mellitus correctly								

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	
32.5.1	At the end of session, phase II M.B.B.S student should be able to precisely classify types of hyperparathyroidism.								
32.5.2	At the end of session, phase II M.B.B.S student should be able to describe etiopathogenesis of hyperparathyroidism correctly.								
32.5.3	At the end of session, phase II M.B.B.S student should be able to describe genetics involved in hyperparathyroidism correctly.								
32.5.4	At the end of session, phase II M.B.B.S student should be able to describe Morphologic features of parathyoidism correctly.								
32.5.5	At the end of session, phase II M.B.B.S student should be able to enumerate clinical manifestation of parathyoidism. correctly								
32.5.6	At the end of session, phase II M.B.B.S student should be able to describe Lab diagnosis of parathyroidism correctly.								
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	
32.6.1	At the end of session, phase II M.B.B.S student should be able to precisely classify pancreatic cancer								
32.6.2	At the end of session, phase II M.B.B.S student should be able to describe etiology of pancreatic cancer briefly.								
32.6.3	At the end of session, phase II M.B.B.S student should be able to briefly describe pathogenesis of pancreatic cancer.								
32.6.4	At the end of session, phase II M.B.B.S student should be able to briefly enumerate clinical manifestation of pancreatic cancer.								
32.6.5	At the end of session, phase II M.B.B.S student should be able to correctly describe morphologic features of pancreatic cancer.								
32.6.6	At the end of session, phase II M.B.B.S student should be able to describe lab diagnosis of pancreatic cancer briefly.								
32.6.7	At the end of session, phase II M.B.B.S student should be able to enumerate correctly complications and metastases of pancreatic cancer.								

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	
32.7.1	At the end of session, phase II M.B.B.S student should be able to correctly classify various types of adrenal insufficiency.								
32.7.2	At the end of session, phase II M.B.B.S student should be able to correctly describe etiopathogenesis of adrenal insufficiency.								
32.7.3	At the end of session, phase II M.B.B.S student should be able to correctly enumerate clinical manifestation of adrenal insufficiency.								
32.7.4	At the end of session, phase II M.B.B.S student should be able to correctly describe morphologic features of adrenal insufficiency.								
32.7.5	At the end of session, phase II M.B.B.S student should be able to correctly Describe lab diagnosis of adrenal insufficiency.								
32.7.6	At the end of session, phase II M.B.B.S student should be able to correctly describe complications of adrenal insufficiency.								
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	
32.8.1	At the end of session, phase II M.B.B.S student should be able to correctly classify causes of cushing's syndrome.								
32.8.2	At the end of session, phase II M.B.B.S student should be able to correctly describe etiology of cushing's syndrome.								
32.8.3	At the end of session, phase II M.B.B.S student should be able to correctly describe clinical manifestation of cushing syndrome.								
32.8.4	At the end of session, phase II M.B.B.S student should be able to correctly describe morphological features of cushing syndrome.								
32.8.5	At the end of session, phase II M.B.B.S student should be able to correctly describe Complications of cushing syndrome.								

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	
32.9.1	At the end of session, phase II M.B.B.S student should be able to correctly classify adrenal Neoplasms.								
32.9.2	At the end of session, phase II M.B.B.S student should be able to correctly describe etiopathogenesis of adrenal neoplasms.								
32.9.3	At the end of session, phase II M.B.B.S student should be able to correctly enumerate clinical manifestations of various adrenal neoplasms.								
32.9.4	At the end of session, phase II M.B.B.S student should be able to correctly describe morphology of adrenal neoplasms.								
32.9.5	At the end of session, phase II M.B.B.S student should be able to correctly Describe lab diagnosis of adrenal neoplasms.								
Topic: Bone and soft tissue		**Number of competencies: (05)**					**Number of procedure that require certification:**		
PA33.1	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of osteomyelitis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Orthopaedics	Microbiology
33.1.1	At the end of session, phase II M.B.B.S student should be able to Precisely classify osteomyelitis.								
33.1.2	At the end of session, phase II M.B.B.S student should be able to discuss etiopathogenesis, clinical and radiological features of acute osteomyelitis correctly.								
33.1.3	At the end of session, phase II M.B.B.S student should be able to discuss gross and microscopic features of acute osteomyelitis correctly.								
33.1.4	At the end of session, phase II M.B.B.S student should be able to discuss complications of acute osteomyelitis.								
33.1.5	At the end of session, phase II M.B.B.S student should be able to discuss etiopathogenesis, clinical and radiological features of chronic osteomyelitis correctly.								
33.1.6	At the end of session, phase II M.B.B.S student should be able to discuss gross and microscopic features of chronic osteomyelitis briefly.								

33.1.7	At the end of session, phase II M.B.B.S student should be able to discuss complications of chronic osteomyelitis.								
33.1.8	At the end of session, phase II M.B.B.S student should be able to briefly discuss etiopathogenesis and clinical features of tubercular osteomyelitis.								
33.1.9	At the end of session, phase II M.B.B.S student should be able to briefly Discuss morphology of tubercular osteomyelitis.								
PA33.2	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Orthopaedics	
33.2.1	At the end of session, phase II M.B.B.S student should be able to precisely classify bone tumours.								
33.2.2	At the end of session, phase II M.B.B.S student should be able to briefly describe etiopathogenesis, clinical features, radiological findings of giant cell tumour								
33.2.3	At the end of session, phase II M.B.B.S student should be able to briefly describe morphologic features of Giant cell tumour								
33.2.4	At the end of session, phase II M.B.B.S student should be able to briefly describe etiopathogenesis, clinical features, radiological findings of ewings sarcoma								
33.2.5	At the end of session, phase II M.B.B.S student should be able to briefly describe morphologic features of Ewings sarcoma								
33.2.6	At the end of session, phase II M.B.B.S student should be able to briefly describe etiopathogenesis, clinical features, radiological findings of Osteosarcoma								
33.2.7	At the end of session, phase II M.B.B.S student should be able to briefly describe morphologic features of osteosarcoma								
33.2.8	At the end of session, phase II M.B.B.S student should be able to briefly describe etiopathogenesis, clinical features, radiological findings of chondrosarcoma								
33.2.9	At the end of session, phase II M.B.B.S student should be able to briefly describe morphologic features of chondrosarcoma								
33.2.10	At the end of session, phase II M.B.B.S student should be able to correctly discuss complications of bone tumours.								
33.2.11	At the end of session, phase II M.B.B.S student should be able to discuss metastasis of common bone tumours correctly.								

PA33.3	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Orthopaedics	
33.3.1	At the end of session, phase II M.B.B.S student should be able to classify soft tissue tumours correctly.								
33.3.2	At the end of session, phase II M.B.B.S student should be able to describe etiopathogenesis, clinical features, radiological findings of common soft tissue tumours briefly								
33.3.3.	At the end of session, phase II M.B.B.S student should be able to briefly discuss gross and microscopic features of common soft tissue tumours.								
33.3.4	At the end of session, phase II M.B.B.S student should be able to briefly discuss complications of soft tissue tumours.								
33.3.5	At the end of session, phase II M.B.B.S student should be able to briefly discuss metastasis of common soft tissue tumours.								
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	
33.4.1	At the end of session, phase II M.B.B.S student should be able to define precisely Pagets' disease of bone.								
33.4.2	At the end of session, phase II M.B.B.S student should be able to discuss stages of Pagets' disease of Bone correctly.								
33.4.3	At the end of session, phase II M.B.B.S student should be able to discuss etiology and pathogenesis of Pagets' disease of Bone correctly.								
33.4.4	At the end of session, phase II M.B.B.S student should be able to discuss gross and microscopic features of Pagets' Discuss radiological features of Pagets' disease of Bone correctly.								
33.4.5	At the end of session, phase II M.B.B.S student should be able to briefly discuss clinical features and complications of Pagets' disease of 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	
33.5.1	At the end of session, phase II M.B.B.S student should be able to define and classify Rheumatoid arthritis precisely.								

33.5.2	At the end of session, phase II M.B.B.S student should be able to discuss etiology, pathogenesis and immunology of Rheumatoid arthritis correctly								
33.5.3	At the end of session, phase II M.B.B.S student should be able to dicuss gross and microscopic features of Rheumatoid arthritis correctly								
33.5.4	At the end of session, phase II M.B.B.S student should be able to briefly discuss radiological features and lab findings of Rheumatoid arthritis								
33.5.5	At the end of session, phase II M.B.B.S student should be able to briefly discuss clinical features and complications of Rheumatoid arthritis.								
33.5.6	At the end of session, phase II M.B.B.S student should be able to discuss diagnostic criteria of Rhematoid arthritis correctly.								
Topic: Skin	**Number of competencies: (04)**							**Number of procedure that require certification: (I**	
PA34.1	Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Dermatology, Venereology & Leprosy	
34.1.1	At the end of session, phase II M.B.B.S student should be able to enumerate the risk factors of squamous cell carcinoma of skin Correctly								
34.1.2	At the end of session, phase II M.B.B.S student should be able to describe the pathogenesis of squmaous cell carcinoma of skin Correctly								
34.1.3	At the end of session, phase II M.B.B.S student should be able to discuss the gross and microscopic findings of squamous cell CA of skin correctly								
PA34.2	Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Dermatology, Venereology & Leprosy	
34.2.1	At the end of session, phase II M.B.B.S student should be able to enumerate the risk factors of basal cell carcinoma of skin Correctly.								
34.2.2	At the end of session, phase II M.B.B.S student should be able to describe the pathogenesis of Basal cell carcinoma of skin Correctly.								
34.2.3	At the end of session, phase II M.B.B.S student should be able to discuss the gross and microscopic findings of Basal cell CA of skin correctly.								

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	
34.3.1	At the end of session, phase II M.B.B.S student should be able to describe the distinguishing features between a nevus and melanoma correctly.								
34.3.2	At the end of session, phase II M.B.B.S student should be able to correctly describe the etiopathogenesis and prognostic features of melanoma.								
34.3.3	At the end of session, phase II M.B.B.S student should be able to briefly enumerate the clinical features of melanoma.								
34.3.4	At the end of session, phase II M.B.B.S student should be able to discuss the gross and microscopic features of Melanoma accurately.								
PA34.4	Identify, distinguish and describe common tumors of the skin (Lower level of learning for this competency has been covered in PA 34.1-34.3)	S	SH	N	DOAP session	Skill assessment		Dermatology, Venereology & Leprosy	
34.4.1	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross and microscopic features of Basal cell carcinoma accurately.								
34.4.2	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross and microscopic features of Squamous cell carcinoma accurately.								
34.4.3	At the end of session, phase II M.B.B.S student should be able to identify and describe the gross and microscopic features of Malignant Melanoma accurately.								
Topic: Central Nervous System		**Number of competencies: (03)**					**Name of procedures that require certificatior**		
PA35.1	Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
35.1.1	At the end of session, phase II M.B.B.S student should be able to define meningitis precisely and enumerate its types.								
35.1.2	At the end of session, phase II M.B.B.S student should be able to discuss correctly etiopathogenesis of all types.								

35.1.3	At the end of session, phase II M.B.B.S student should be able to correctly discuss clinical features, lab findings and microscopy of various types of meningitis.								
35.1.4	At the end of session, phase II M.B.B.S student should be able to correctly Describe and compare CSF findings in each type of meningitis.								
PA35.2	Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
35.2.1	At the end of session, phase II M.B.B.S student should be able to correctly classify intracranial tumors.								
35.2.2	At the end of session, phase II M.B.B.S student should be able to define glioma and enumerate types of gliomas precisely with molecular genetics.								
35.2.3	At the end of session, phase II M.B.B.S student should be able to discuss microscopy and clinical features of gliomas								
35.2.4	At the end of session, phase II M.B.B.S student should be able to enumerate precisely neuronal tumors with genetics.								
35.2.5	At the end of session, phase II M.B.B.S student should be able to briefly discuss clinical features, microscopy, prognosis of neuronal tumors.								
35.2.6	At the end of session, phase II M.B.B.S student should be able to briefly Discuss medulloblastoma.								
35.2.7	At the end of session, phase II M.B.B.S student should be able to define meningiomas and enumerate its types briefly.								
35.2.8	At the end of session, phase II M.B.B.S student should be able to briefly discuss clinical features and morphology of meningioma.								
35.2.9	At the end of session, phase II M.B.B.S student should be able to enlist all nerve sheath tumors and describe their morphology correctly.								
35.2.10	At the end of session, phase II M.B.B.S student should be able to briefly discuss clinical features of nerve sheath tumors and associated syndromes.								
PA35.3	Identify the etiology of meningitis based on given CSF parameters (Lower level of learning for this competency has been covered in PA 35.1)	S	P	Y	DOAP sessions	Skill Assessment	1	General Medicine	Microbiology
35.3.1	At the end of session, phase II M.B.B.S student must be able to correctly enumerate most common causes of meningitis.								
35.3.2	At the end of session, phase II M.B.B.S student must be able to correctly enumerate components of CSF analysis.								

35.3.3	At the end of session, phase II M.B.B.S student must be able to correctly describe CSF features for a given etiology of meningitis.								
35.3.4	At the end of session, phase II M.B.B.S student must be able to correctly identify the etiology of meningitis from a given set of CSF parameters.								
Topic: Eye		**Number of competencies: (01)**						**Number of procedure that require certification**	
PA36.1	Describe the etiology, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Ophthal mology	
36.1.1	At the end of session, phase II M.B.B.S student should be able to correctly discuss etiopathogenesis of retinoblastoma.								
36.1.2	At the end of session, phase II M.B.B.S student should be able to correctly describe clinical features and lab findings of retinoblastoma.								
36.1.3	At the end of session, phase II M.B.B.S student should be able to correctly discuss sequelae of retinoblastoma.								
36.1.4	At the end of session, phase II M.B.B.S student should be able to correctly Enumerate complications and prognosis of retinoblastoma								
	Column C: K-Knowledge, S-Skill, A-Attitude/professionalism, C-Communication.								
	Column D: K-Knows, KH- Knows How, S- Show How, P- performs independency,								
	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								