

DATTA MEGHE INSTITUTE OF MEDICAL SCIENCES  
JAWAHARLAL NEHRU MEDICAL COLLEGE  
Sawangi (Meghe), Wardha

DEPARTMENT OF PATHOLOGY

PO - CO Mapping

Name of Topic - Introduction to Pathology

Number of Competencies - 03

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA1.1	Describe the role of a pathologist in diagnosis and management of disease	1		1	1		1	
PA1.2	Enumerate common definitions and terms used in Pathology	1			1			
PA1.3	Describe the history and evolution of Pathology	1			1			

**Name of Topic - Cell Injury and Adaptation**

**Number of Competencies - 08**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA2.1	Demonstrate knowledge of the causes, mechanisms, types and effects of cell injury and their clinical significance	2		1	2		2	
PA2.2	Describe the etiology of cell injury. Distinguish between reversible-irreversible injury: mechanisms; morphology of cell injury	2		1	2		2	
PA2.3	Intracellular accumulation of fats, proteins, carbohydrates, pigments	1		2	1		2	
PA2.4	Describe and discuss Cell death- types, mechanisms, necrosis, apoptosis (basic as contrasted with necrosis), autolysis	2		1	1			
PA2.5	Describe and discuss pathologic calcifications, gangrene	2		1	1		2	
PA2.6	Describe and discuss cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia	2		1	1		2	2
PA2.7	Describe and discuss the mechanisms of cellular aging and apoptosis	1		1	1		2	2
PA2.8	Identify and describe various forms of cell injuries, their manifestations and consequences in gross and microscopic specimens	2		1	2			

**Name of Topic - Amyloidosis****Number of Competencies - 02**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA3.1	Describe the pathogenesis and pathology of amyloidosis	2		2	1	2	2	2
PA3.2	Identify and describe amyloidosis in a pathology specimen			1	2	2	2	2

**Name of Topic - Inflammation****Number of Competencies - 04**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA4.1	Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events	2		1	2		1	1
PA4.2	Enumerate and describe the mediators of acute inflammation	3		2	2			1
PA4.3	Define and describe chronic inflammation including causes, types, non-specific and granulomatous; and enumerate examples of each	2		2	1			1
PA4.4	Identify and describe acute and chronic inflammation in gross and microscopic specimens	1		2	1			

**Name of Topic - Healing and repair**

**Number of Competencies - 01**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA5.1	Define and describe the process of repair and regeneration including wound healing and its types							

**Name of Topic - Hemodynamic disorders**

**Number of Competencies - 07**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA6.1	Define and describe edema, its types, pathogenesis and clinical correlations							
PA6.2	Define and describe hyperemia, congestion, hemorrhage							
PA6.3	Define and describe shock, its pathogenesis and its stages							
PA6.4	Define and describe normal haemostasis and the etiopathogenesis and consequences of thrombosis							
PA6.5	Define and describe embolism and its causes and common types							
PA6.6	Define and describe Ischaemia/infarction its types, etiology, morphologic changes and clinical effects							
PA6.7	Identify and describe the gross and microscopic features of infarction in a pathologic specimen							

**Name of Topic - Neoplastic disorders**

**Number of Competencies - 05**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA7.1	Define and classify neoplasia. Describe the characteristics of neoplasia including gross, microscopy, biologic, behaviour and spread. Differentiate between benign from malignant neoplasms	3	-	1	2	-	-	-
PA7.2	Describe the molecular basis of cancer	2	-	-	-	-	-	2
PA7.3	Enumerate carcinogens and describe the process of carcinogenesis	2	-	-	-	-	-	-
PA7.4	Describe the effects of tumor on the host including paraneoplastic syndrome	2	-	1	-	-	-	-
PA7.5	Describe immunology and the immune response to cancer	2	-	-	-	-	-	-

**Name of Topic - Basic diagnostic cytology**

**Number of Competencies - 03**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA8.1	Describe the diagnostic role of cytology and its application in clinical care	2		2	2			2
PA8.2	Describe the basis of exfoliative cytology including the technique & stains used	2		2	1			1
PA8.3	Observe a diagnostic cytology and its staining and interpret the specimen	2		2	2			1

**Name of Topic - Immunopathology and AIDS**

**Number of Competencies - 07**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA9.1	Describe the principles and mechanisms involved in immunity	1		1	2		1	
PA9.2	Describe the mechanism of hypersensitivity reactions	2		1	2		1	
PA9.3	Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection	2		1	3		1	
PA9.4	Define autoimmunity. Enumerate autoimmune disorders	2			2			
PA9.5	Define and describe the pathogenesis of systemic Lupus Erythematosus	2		1	2			
PA9.6	Define and describe the pathogenesis and pathology of HIV and AIDS	2		1	2			
PA9.7	Define and describe the pathogenesis of other common autoimmune diseases	2		1	2			

**Name of Topic - Infections and Infestations**

**Number of Competencies - 04**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA10.1	Define and describe the pathogenesis and pathology of malaria	2			1			
PA10.2	Define and describe the pathogenesis and pathology of cysticercosis	2		1	2			
PA10.3	Define and describe the pathogenesis and pathology of leprosy	2		2	2			
PA10.4	Define and describe the pathogenesis and pathology of common bacterial, viral, protozoal and helminthic diseases	3		2	2			

**Name of Topic - Genetic and paediatric diseases**

**Number of Competencies - 03**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA11.1	Describe the pathogenesis and features of common cytogenetic abnormalities and mutations in childhood	2		1	2			1
PA11.2	Describe the pathogenesis and pathology of tumor and tumour- like conditions in infancy and childhood	1		1	2		1	1
PA11.3	Describe the pathogenesis of common storage disorders in infancy and childhood	2		2	3		1	1

**Name of Topic - Environmental and nutritional diseases****Number of Competencies - 03**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA12.1	Enumerate and describe the pathogenesis of disorders caused by air pollution, tobacco and alcohol	3	1	2	2	3	3	3
PA12.2	Describe the pathogenesis of disorders caused by protein calorie malnutrition and starvation	3		1	2	3	3	3
PA12.3	Describe the pathogenesis of obesity and its consequences	3		1	2	2	2	2

**Name of Topic - Introduction to haematology****Number of Competencies - 05**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA13.1	Describe hematopoiesis and extramedullary hematopoiesis	3		1	3	2	2	2
PA13.2	Describe the role of anticoagulants in hematology	3		1	3	2	2	2
PA13.3	Define and classify anemia	3	1	1	1	2	2	2
PA13.4	Enumerate and describe the investigation of anemia	3	1		2	3	2	2
PA13.5	Perform, Identify and describe the peripheral blood picture in anemia	2		2	3	2	1	2



**Name of Topic - Microcytic anemia**

**Number of Competencies - 03**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA14.1	Describe iron metabolism	2		1	2	2	2	1
PA14.2	Describe the etiology, investigations and differential diagnosis of microcytic hypochromic anemia	3		1	2	3	2	1
PA14.3	Identify and describe the peripheral smear in microcytic anemia	3		1	2	3	2	2

**Name of Topic - Macrocytic anemia**

**Number of Competencies - 04**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA15.1	Describe the metabolism of Vitamin B12 and the etiology and pathogenesis of B12 deficiency	3	1	1	2	3	2	3
PA15.2	Describe laboratory investigations of macrocytic anemia	3		1	2	3	2	1
PA15.3	Identify and describe the peripheral blood picture of macrocytic anemia	3		1	3	3	2	2
PA15.4	Enumerate the differences and describe the etiology and distinguishing features of megaloblastic and non-megaloblastic macrocytic anemia	3		1	2	3	2	2

**Name of Topic - Hemolytic anemia**

**Number of Competencies - 07**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA16.1	Define and classify hemolytic anemia	3		1		3	2	2
PA16.2	Describe the pathogenesis and clinical features and hematologic indices of hemolytic anemia	3		1	1	3	2	3
PA16.3	Describe the pathogenesis, features, hematologic indices and peripheral blood picture of sickle cell anemia and thalassemia	3		1	2	3	2	3
PA16.4	Describe the etiology pathogenesis, hematologic indices and peripheral blood picture of Acquired hemolytic anemia	3	1	1	2	3	2	3
PA16.5	Describe the peripheral blood picture in different hemolytic anaemias	3		2	1	3	2	2
PA16.6	Prepare a peripheral blood smear and identify hemolytic anaemia from it	3		2	3	3	3	2
PA16.7	Discribe the correct technique to perform a cross match	2			3	3	1	1

**Name of Topic - Aplastic anemia**

**Number of Competencies - 02**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA 17.1	Enumerate the etiology, pathogenesis and findings in aplastic anemia	3		1	1	3	2	2
PA17.2	Enumerate the indications and describe the findings in bone marrow aspiration and biopsy	2		1	1	3	2	2

**Name of Topic - Leukocyte disorders**

**Number of Competencies - 02**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA18.1	Enumerate and describe the causes of leucocytosis leucopenia lymphocytosis and leukemoid reactions	3		2	2			
PA`18.2	Describe the etiology, genetics, pathogenesis classification, features, hematologic features of acute and chronic leukemia	3		1	3			

**Name of Topic - Lymph node and spleen**

**Number of Competencies - 07**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA19.1	Enumerate the causes and describe the differentiating features of lymphadenopathy	2	1	3		1		
PA19.2	Describe the pathogenesis and pathology of tuberculous lymphadenitis	3	1	3	2			
PA19.3	Identify and describe the features of tuberculous lymphadenitis in a gross and microscopic specimen	3	1	2	3			
PA19.4	Describe and discuss the pathogenesis, pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma	3		3	2			
PA19.5	Identify and describe the features of Hodgkin's lymphoma in a gross and microscopic specimen	2		2	2			
PA19.6	Enumerate and differentiate the causes of splenomegaly	3		2	3			
PA19.7	Identify and describe the gross specimen of an enlarged spleen	2		2				

**Name of Topic - Plasma cell disorders**

**Number of Competencies - 01**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA20.1	Describe the features of plasma cell myeloma	3		2		1		

**Name of Topic - Hemorrhagic disorders**

**Number of Competencies - 05**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA21.1	Describe normal hemostasis	3		2	2			
PA21.2	Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and haemophilia's	3		1	3			
PA21.3	Differentiate platelet from clotting disorders based on the clinical and hematologic features	3		2	2			
PA21.4	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of disseminated intravascular coagulation	3		2	3			
PA21.5	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of Vitamin K deficiency	3		2	3			

**Name of Topic - Blood Banking and Transfusion****Number of Competencies - 07**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA22.1	Classify and describe blood group systems (ABO and RH)	3		2	3			
PA22.2	Enumerate the indications, describe the principles, enumerate and demonstrate the steps of compatibility testing	3		2	2			
PA22.4	Enumerate blood components and describe their clinical uses	2		1	2			
PA22.5	Enumerate and describe infections transmitted by blood transfusion	3		2	3			
PA22.6	Describe transfusion reactions and enumerate the steps in the investigation of a transfusion reaction	2		2	3			
PA22.7	Enumerate the indications and describe the principles and procedure of autologous transfusion	3		3	3			

**Name of Topic - Clinical Pathology****Number of Competencies - 03**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA23.1	Describe abnormal urinary findings in disease states and identify and describe common urinary abnormalities in a clinical specimen	3		2		3		
PA23.2	Describe abnormal findings in body fluids in various disease states	3		2		3		1
PA23.3	Describe and interpret the abnormalities in a panel containing semen analysis, thyroid function tests, renal function tests or liver function tests	3		2		3		1

**name of topic - Gastrointestinal tract**

**Number of Competencies - 07**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA24.1	Describe the etiology, pathogenesis, pathology and clinical features of oral cancers	3		2	2			
PA24.2	Describe the etiology, pathogenesis, pathology, microbiology, clinical and microscopic features of peptic ulcer disease	3		3	2			
PA24.3	Describe and identify the microscopic features of peptic ulcer	2	1	2				
PA24.4	Describe and etiology and pathogenesis and pathologic features of carcinoma of the stomach	2	1	2				
PA24.5	Describe and etiology and pathogenesis and pathologic features of Tuberculosis of the intestine	3		1	2			
PA24.6	Describe and etiology and pathogenesis and pathologic and distinguishing features of Inflammatory bowel disease	2		3	1			
PA24.7	Describe the etiology, pathogenesis, pathology and distinguishing features of carcinoma of the colon	2		3	2			2

**name of topic - hepatobiliary system**

**Number of Competencies - 06**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA25.1	Describe bilirubin metabolism, enumerate the etiology and pathogenesis of jaundice, distinguish between direct and indirect hyperbilirubinemia	3		3	2			
PA25.2	Describe the pathophysiology and pathologic changes seen in hepatic failure and their clinical manifestations, complications and consequences	3		2	3			
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	3		1	2			1
PA25.4	Describe the pathophysiology, pathology and progression of alcoholic liver disease including cirrhosis	2		2	1			1
PA25.5	Describe the etiology, pathogenesis and complications of portal hypertension	3		2	1			
PA25.6	Interpret liver function and viral hepatitis serology panel. Distinguish obstructive from non-obstructive jaundice based on clinical features and liver function tests	3		3	2			1

**name of topic - respiratory system**

**Number of Competencies - 07**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA26.1	Define and describe the etiology, types, pathogenesis, stages, morphology and complications of pneumonia	3		1	2	3	2	2
PA26.2	Describe the etiology, gross and microscopic appearance and complications of lung abscess	3		1	2	3	2	2
PA26.3	Define and describe the etiology, types, pathogenesis, stages, morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis	3		1	2	3	2	2
PA26.4	Define and describe the etiology, types, pathogenesis, stages, morphology microscopic appearance and complications of tuberculosis	3		2	1	3	2	3
PA26.5	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease	3		2	2	3	2	3
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	3		1	2	3	2	3
PA26.7	Define and describe the etiology, types, exposure, genetics environmental influence, pathogenesis, morphology, microscopic appearance and complications of mesothelioma	3		1	2	3	2	3



**name of topic - Cardiovascular system**

**Number of Competencies - 10**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA27.1	Distinguish arteriosclerosis from atherosclerosis. Describe the pathogenesis and pathology of various causes and types of arteriosclerosis	3	2	2	2			2
PA27.2	Describe the etiology, dynamics, pathology types and complications of aneurysms including aortic aneurysms	3		1	2			
PA27.3	Describe the etiology, types, stages pathophysiology, pathology and complications of heart failure	3		2	3	3	2	2
PA27.4	Describe the etiology, pathophysiology, pathology, gross and microscopic features, criteria and complications of rheumatic fever	3	2	2	2	3	2	2
PA27.5	Describe the epidemiology, risk factors, etiology, pathophysiology, pathology, presentations, gross and microscopic features, diagnostic tests and complications of ischemic heart disease	3		2	1	3	2	2
PA27.6	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of infective endocarditis	2	2	3	3	3	2	2
PA27.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of pericarditis and pericardial effusion	3		2	3			
PA27.8	Interpret abnormalities in cardiac function testing in acute coronary syndromes	3	2	2	2	3	2	2
PA27.9	Classify and describe the etiology, types, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of cardiomyopathies	3		2	2			
PA27.10	Describe the etiology, pathophysiology, pathology features and complications of syphilis on the cardiovascular system	3		2	2			

**name of topic - urinary tract**

**Number of Competencies - 16**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA28.1	Describe the normal histology of the kidney	2		3	2			
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	3		2	1			
PA28.3	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings, progression and complications of acute renal failure	3		3	1			
PA28.4	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings progression and complications of chronic renal failure	2		2	1			
PA28.5	Define and classify glomerular diseases. Enumerate and describe the etiology, pathogenesis, mechanisms of glomerular injury, pathology, distinguishing features and clinical manifestations of glomerulonephritis	3		3	2			
PA28.6	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of IgA nephropathy	2		1	3			
PA28.7	Enumerate and describe the findings in glomerular manifestations of systemic disease	3		3	2			
PA28.8	Enumerate and classify diseases affecting the tubular interstitium	2		2	2			

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA28.9	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of acute tubular necrosis	2		2	1		1	
PA28.10	Describe the etiology, pathogenesis, pathology, laboratory findings, distinguishing features progression and complications of acute and chronic pyelonephritis and reflux nephropathy	3		2	2		1	
PA28.11	Define classify and describe the etiology, pathogenesis pathology, laboratory, urinary findings, distinguishing features progression and complications of vascular disease of the kidney	2		1	1			
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	2		2	1			
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	3		2	1		1	
PA28.14	Classify and describe the etiology, genetics, pathogenesis, pathology, presenting features, progression and spread of renal tumors	3				2	2	
PA28.15	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of thrombotic angiopathies	2		1	2		1	
PA28.16	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of urothelial tumors	2		1	2		1	

**name of topic - male genital tract**

**Number of Competencies - 05**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA29.1	Classify testicular tumors and describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of testicular tumors	3		2	2		1	1
PA29.2	Describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the penis	3		2	2		1	1
PA29.3	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, urologic findings & diagnostic tests of benign prostatic hyperplasia	3		1	1			
PA29.4	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the prostate	3		2	1		1	1
PA29.5	Describe the etiology, pathogenesis, pathology and progression of prostatitis	3		1	1			

**name of topic - Female Genital Tract**

**Number of Competencies - 09**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA30.1	Describe the epidemiology, pathogenesis, etiology, pathology, screening, diagnosis and progression of carcinoma of the cervix	2		1	2		1	1
PA30.2	Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the endometrium	2		1	1		1	1
PA30.3	Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the leiomyomas and leiomyosarcomas	3		1	2		1	
PA30.4	Classify and describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of ovarian tumors	2		1	1			1
PA30.5	Describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of gestational trophoblastic neoplasms	1		1	2			
PA30.6	Describe the etiology and morphologic features of cervicitis	2		1	1			
PA30.7	Describe the etiology, hormonal dependence, features and morphology of endometriosis	2		1	2			
PA30.8	Describe the etiology and morphologic features of adenomyosis	2		2	2			
PA30.9	Describe the etiology, hormonal dependence and morphology of endometrial hyperplasia	3		2	2			

**name of topic - breast**

**Number of Competencies - 04**

<b>Number</b>	<b>C.O</b>	<b>Clinician</b>	<b>Leader</b>	<b>Communicator</b>	<b>Life long learner</b>	<b>Professional</b>	<b>Critical thinker</b>	<b>Researcher</b>
PA31.1	Classify and describe the types, etiology, pathogenesis, pathology and hormonal dependency of benign breast disease	3		2	2	3	3	3
PA31.2	Classify and describe the epidemiology, pathogenesis, classification, morphology, prognostic factors, hormonal dependency, staging and spread of carcinoma of the breast	3		1	2	3	3	3
PA31.3	Describe and identify the morphologic and microscopic features of carcinoma of the breast	3			2	3	3	3
PA31.4	Enumerate and describe the etiology, hormonal dependency and pathogenesis of gynecomastia	3		1	1	3	3	3

**name of topic - Endocrine system**

**Number of Competencies - 09**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA32.1	Enumerate, classify and describe the etiology, pathogenesis, pathology and iodine dependency of thyroid swellings	3		1	1		1	1
PA32.2	Describe the etiology, cause, iodine dependency, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis	2		2	1			1
PA32.3	Describe the etiology, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis/ hypothyroidism	2		2	1			1
PA32.4	Classify and describe the epidemiology, etiology, pathogenesis, pathology, clinical laboratory features, complications and progression of diabetes mellitus	3		2	2		2	2
PA32.5	Describe the etiology, genetics, pathogenesis, manifestations, laboratory and morphologic features of hyperparathyroidism	2		1	1		2	1
PA32.6	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreatic cancer	1		2	1			1
PA32.7	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of adrenal insufficiency	2		2	1		1	1
PA32.8	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of Cushing's syndrome	2		1			1	
PA32.9	Describe the etiology, pathogenesis, manifestations, laboratory and morphologic features of adrenal neoplasms	2		1			1	

**name of topic -bone and soft tissue**

**Number of Competencies - 05**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA33.1	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of osteomyelitis	3		1	1			
PA33.2	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors	3		1	1			1
PA33.3	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors	3		1	1			1
PA33.4	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications of Paget's disease of the bone	3		1	1			
PA33.5	Classify and describe the etiology, immunology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of rheumatoid arthritis	3		1	1			1

Name of Topic - SKIN

Number of Competencies - 04



Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA34.1	Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	3	2	1	1	3	2	1
PA34.2	Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin	3	2	1	1	3	2	1
PA34.3	Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors morphology clinical features and metastases of melanoma	3	2	1	1	2	2	1
PA34.4	Identify, distinguish and describe common tumors of the skin	3	1	1	1	1	1	1

**Name of Topic - Central Nervous System**

**Number of Competencies - 03**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA35.1	Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis	3	2	2	2	2	1	
PA35.2	Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors	2	2	1	1	2	1	
PA35.3	Identify the etiology of meningitis based on given CSF parameters	2	2	2	1	2		

**Name of Topic - Eye**

**Number of Competencies - 01**

Number	C.O	Clinician	Leader	Communicator	Life long learner	Professional	Critical thinker	Researcher
PA36.1	Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma	3		2	2			